EXCAVATION OF AN EARLY IRON AGE VILLAGE ON WORTHY DOWN, WINCHESTER.

BY THE LATE REGINALD W. HOOLEY, F.G.S.

1. DESCRIPTION OF SITE.

(Prepared for publication by M. L. Tildesley.)

Worthy Down was formerly the site of the Winchester Race Course, and the area excavated is situated a little east of the Grand Stand,[1] three miles N.W. of Winchester. The Down is now used by the Royal Air Force as an aerodrome.

During the opening of the currency-bar pit described in the *Antiquaries Journal*, I, 321, Mr. O. G. S. Crawford, F.S.A., suggested tapping the surface of the Down with an iron ram to test the surrounding area; and, permission to excavate having been obtained from the Air Ministry, several ditches and pits were discovered by that method in May, 1921. There was no inequality on the surface, but the abnormally dry summer that followed scorched the grass and made some of them visible, the more so because pegs had been inserted along their courses. During the summer an area of about 17 acres was tapped in the same manner, and other ditches and pits discovered.

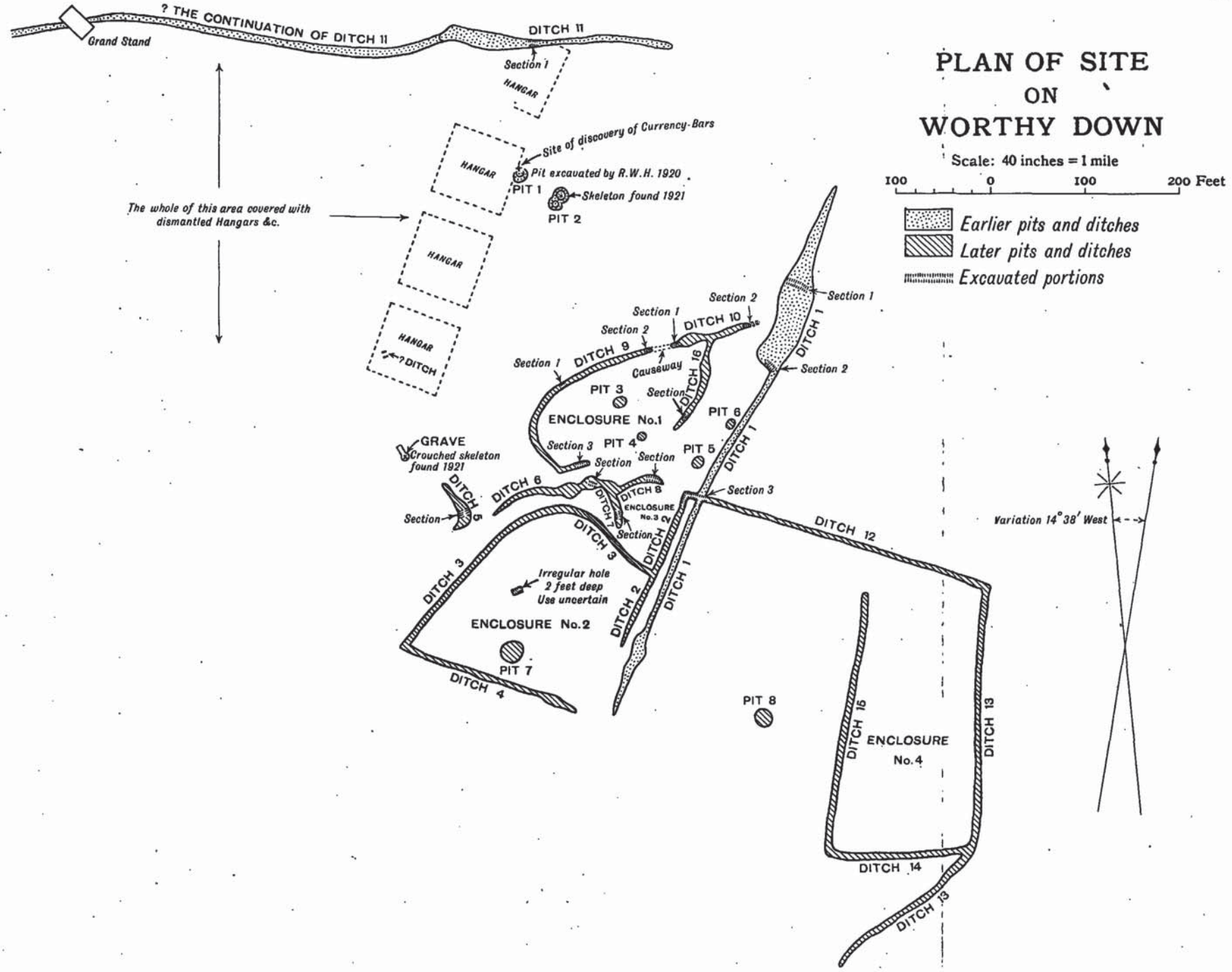
A letter to the local newspapers, calling for volunteers to do the digging, met with a good response, and during the summer and autumn five pits were emptied and fourteen sections cut in the ditches, entirely by voluntary labour.

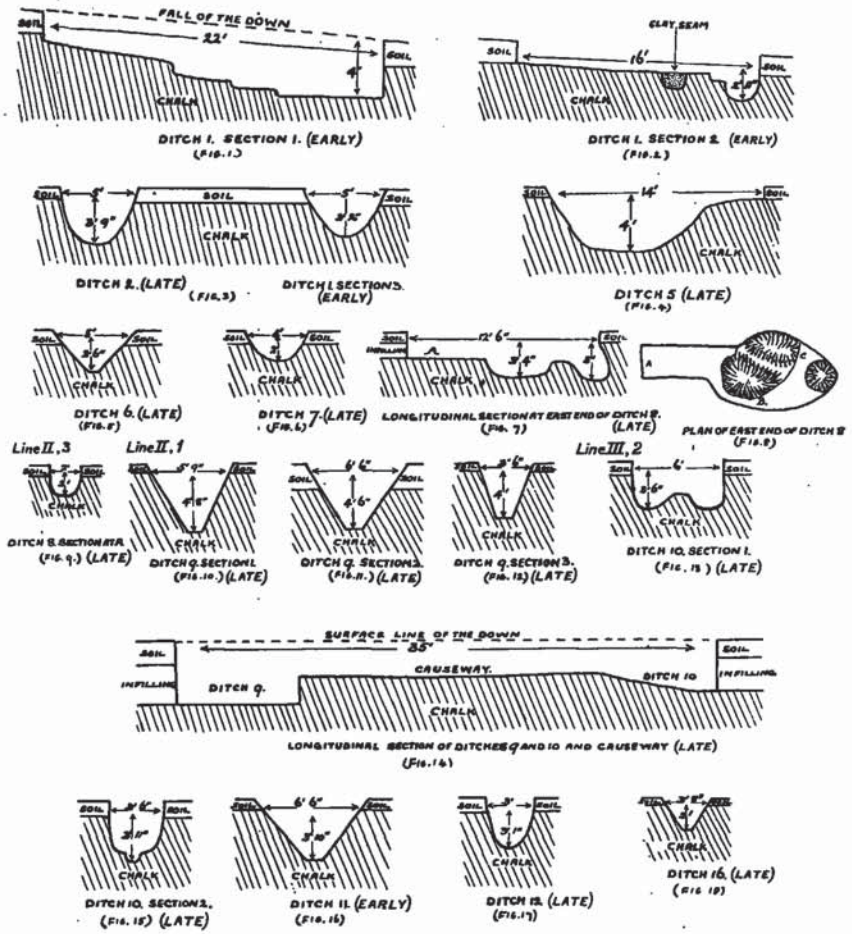
The names of the workers should be recorded: Messrs. G. A. Weeks, C. D. Small, S. M. L. Ware, W. J. Clarke, H. Payne, Legh S. Powell, A. G. Brown, R. F. Miller, I. Cox, H. Blackwell, G. Blackwell, E. J. Moody, F. Macey, F. W. Ray, W. S. Davey, and the Rev. Victor Tanner. Mr. O. G. S. Crawford visited the site from time to time during the operations, and Mr. Heywood Sumner, F.S.A., on three occasions, both gentlemen giving valuable practical assistance. We were helped on single days by others.

The plan of the site as established by tapping is shown in Plate I, the pits and sections subsequently excavated being indicated by hachures. Excavation showed that Ditches Nos. 9 and 10 extended further than had been discovered by the ram, but how far they went was left untested by the spade.

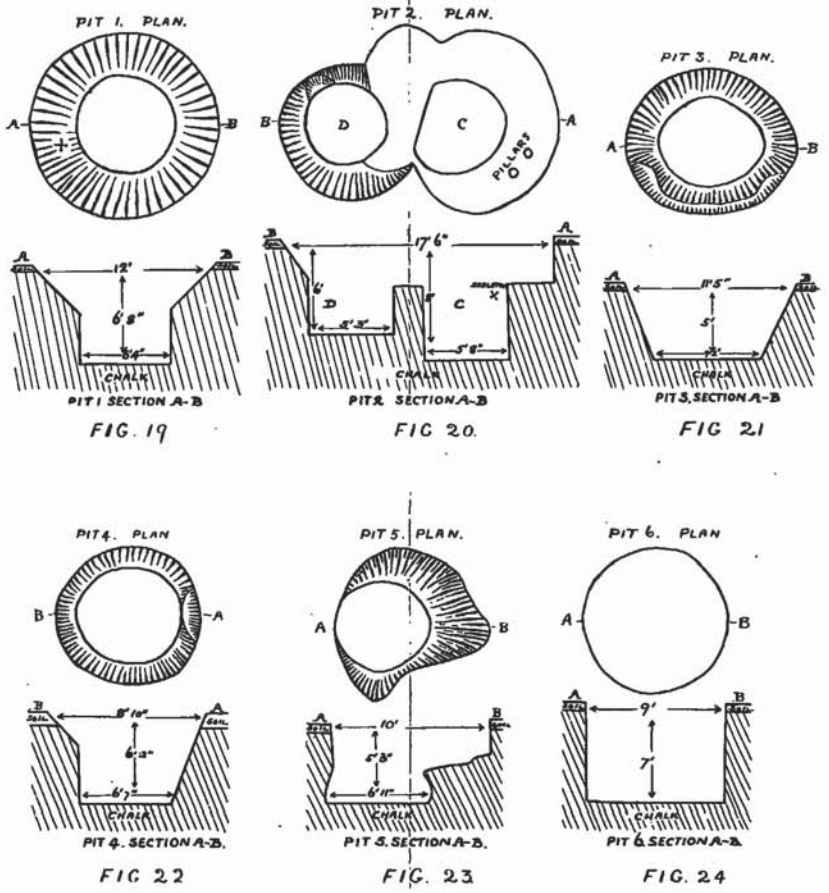
The area occupied at different periods on Worthy Down seems to have been far larger than that shown on the plan; for instance, the western end of Ditch No. 11 was traced 439 yards further, passing under the Grand Stand, towards the entrance

[1] 6 in. O.S. Hants, XLI, N.W.


PLAN OF SITE
ON
WORTHY DOWN
Scale: 40 inches = 1 mile
100 0 100 200 Feet
Earlier pits and ditches
Later pits and ditches
Excavated portions
? THE CONTINUATION OF DITCH 11
DITCH 11
Grand Stand
Section 1
HANGAR
HANGAR
HANGAR
HANGAR
? DITCH
The whole of this area covered with dismantled Hangars &c.
Site of discovery of Currency-Bars
Pit excavated by R.W.H. 1920
PIT 1
Skeleton found 1921
PIT 2
Section 1
Section 2
DITCH 10
DITCH 9
Causeway
DITCH 16
PIT 3
ENCLOSURE No.1
PIT 4
PIT 5
PIT 6
DITCH 1
Section 1
Section 2
Section 3
GRAVE
Crouched skeleton found 1921
DITCH 5
DITCH 6
DITCH 8
ENCLOSURE No.3
DITCH 7
DITCH 3
DITCH 2
DITCH 12
Irregular hole 2 feet deep Use uncertain
ENCLOSURE No.2
PIT 7
DITCH 4
PIT 8
DITCH 15
ENCLOSURE No.4
DITCH 13
DITCH 14
Variation 14° 38′ West



SECTIONS OF THE DITCHES



PLANS AND SECTIONS OF THE PITS

of the Transport Road from the Winchester and Sutton Scotney Road, to Worthy Down Aerodrome. The surface of the Down to the east also shows what appear to be degraded banks, and members of the Air Force said that a ditch containing sherds was opened during work by German prisoners.

Ditches Nos. 1 and 11 proved—as will be shown later—to be older than any of the others, being apparently portions of ditches once enclosing Pit No. 1 (currency-bar pit) and Pit No. 2. Although every effort was made by the use of the ram, and by watching for any difference in the grass during the summer, no trace of other ditches and pits connected and contemporary with the older Ditches Nos. 1 and 11 and Pits Nos. 1 and 2 could be found.

Ditch No. 2 had been cut through Ditch No. 1 after the latter had been filled in, and otherwise had no connection with it. Excavation showed that this ditch (No. 2), as well as Ditches Nos. 5 to 10 and Pits Nos. 3 to 6, belonged to a later period; and though Ditches Nos. 3, 4, 13, 14, and 15 were not opened, there is little doubt, from their position, that they also formed part of this later series, which is seen to define one oblong and three irregular enclosures. Beyond the S.W. end of Ditch No. 13, which extends from the S.E. angle of enclosure No. 4 and terminates abruptly, a bank and palisading may have formed a boundary, for at no great distance from it a much degraded bank stretches westward. The plan, with its irregular areas marked out with ditches and its pits, recalls the plans of the villages "of Roman age but of British construction" excavated by Pitt-Rivers at Woodcuts[1] and Rotherley,[2] and of the village at Casterley Camp whose construction is assigned by Mr. and Mrs. Cunnington to probably the first half of the first century A.D.[3]

Ditches.—It will be seen from Plate II, giving the ditches in section at all the points excavated, that both the earlier and later settlements had V-shaped and U-shaped ditches, the depths varying. The shallowest were thought to be perhaps drainage ditches, but careful observation revealed no sign of decayed vegetable matter, mud or silt on sides or bottom; also the great capacity of chalk downs for absorbing moisture may have rendered drainage unnecessary, though similar shallow ditches at Woodcuts and Rotherley were assigned to drainage on the authority of Pitt-Rivers. Nor was there any evidence that they were trenches for the foundation of wattle-and-daub walls. No explanation could be found of the irregular and hummocky floor, cut into rude platforms with much-worn edges, which was found

[1] Pitt-Rivers: *Excavations on Cranborne Chase*, I (1887).
[2] *Ibid*, II (1888).
[3] *Wilts. Arch. Mag.*, xxxviii, pp. 81 ff.

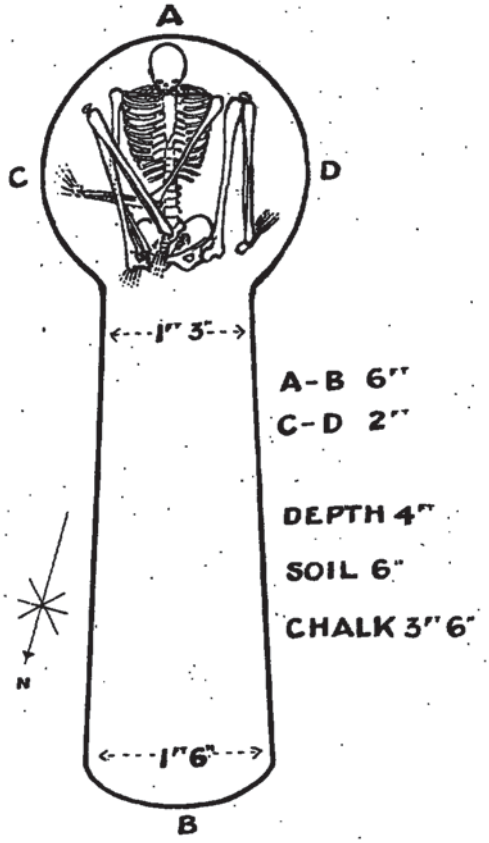
in the " swelling " at the northern end of Ditch No. 1 (Fig. 1). A similar peculiarity was, however, observed in a ditch at Knap Hill Camp by Mrs. Cunnington.[1] The hole, 3 feet deep, cut obliquely into the eastern end of Ditch No. 8 (Figs. 7 and 8), may have held a large prop to support two other posts in the holes B and C, the whole forming a strut to palisading, which, on the high, open Down, must have been subjected to considerable wind-pressure. Whether or no this was its original use, it had certainly been used for a hearth, as witnessed the charcoal and burnt earth at bottom, lying beneath and around the base and portions of the sides of a large hand-made cooking-pot of black paste with crushed flint (Fig. 69), which is assigned to the later period of settlement. Ditch No. 9, deepest of those excavated (Figs. 10 to 12), doubtless served as part of the defences of enclosure No. 1, which would be entered by the causeway between Ditches Nos. 9 and 10 (Fig. 14).

Pits.—The currency-bar pit, opened in 1920,[2] is denoted No. 1 on the Plan (Plate I), and in the pit-plans and sections (Plate II). It contained five layers of burnt flints, animal bones, and sherds, at intervals from a depth of 2½ feet to the bottom of the pit (6 feet 8 inches down). Five other pits were excavated in 1921 (Nos. 2 to 6). They had all been cut out of the solid chalk, but no tool-marks were visible. Their walls were clean and unweathered, and, pieces of daub with wattle marks occurring in all, it is probable that each was protected by a wattle-and-daub roof. They were all too small to have been dwelling-pits, and were probably for storage. That they were not refuse pits seems clear, for the whole of the bones, pottery, and other objects obtained from them would not fill a wheelbarrow.

Pit No. 2, 3 feet deep, was found to contain twin pits, C and D, sunk in its floor and descending respectively 5 feet and 3 feet further into the chalk (Fig. 20), their bottoms being left rough and uneven. No grain was found in these twin pits though carefully searched for. Two staddle-shaped pillars of chalk-daub, 1 foot 5 inches high, 8 inches diameter at base, and 1 foot 1 inch apart, stood on the floor of Pit 2 to the N.E. of Pit 2 C. In Pit 2 C, 4 feet from the surface and 1 foot below the floor of Pit 2, a headless skeleton was discovered, with bones in articular order. It lay on its back, with right hand on left shoulder, left hand above the lumbar vertebræ, and legs bent over to the left. The decapitated body appeared to have been cast unceremoniously into the pit, which must already have been filled in to this level. But the fact that all the pottery fragments found in these twin pits were Middle La Tène in type indicates that the skeleton also dates from this period (Report on skeletal remains by Sir Arthur Keith given in Appendix).

[1] *Wilts. Arch. Mag.*, xxxvii, 42. A neolithic site.
[2] Account in *Antiq. Journ.*, 1, 321.

The remaining pits, Nos. 3 to 6 (Figs. 21 to 24), are assigned to the later period of occupation by the sherds and other objects found in them. In Pit No. 3, 1½ feet from the bottom, was a hearth of large flints which, with the surrounding chalk, rubble, and earth, showed evidences of fire, including much charcoal. A layer of charcoal and sooty deposit covered the floor of Pit No. 4 also. Pit No. 5 was of irregular form, and showed no signs of fire; nor did Pit No. 6, only half of which, however, was excavated, owing to the lateness of the season.



PLAN OF GRAVE
WITH CROUCHED SKELETON

Fig. 25.

Grave.—To the west of the enclosures was a grave, 6 feet long by 4 feet deep, very symmetrically cut in the form of a trench, 1 foot 6 inches wide at the northern end, tapering to 1 foot 3 inches in its 4 feet of length, and then opening up into

a circle 2 feet in diameter. In this circular hole was placed the closely-contracted skeleton of a man, lying on back, shoulders to S.S.E., but head bent forward to rest on breast; limbs disposed as indicated in Fig. 25. No object but a piece of hand-made pottery was found in the grave, and this might have dated equally well from either the earlier or the later period of occupation. Nor, though close-contraction precedes extension in order of time, can the close contraction of the body be taken as indicating that it belonged to the earlier of these two periods, since examples from Rotherley show this method of burial persisting right into the Roman period (*Excavations on Cranborne Chase*, II, 1888, Plate CXXVII). Other instances of the singular form of this grave might perhaps help to indicate the period, but failing these the date of the burial remains uncertain as between Middle and Late La Tène. The possibility that it belonged to the Belgæ whose pottery was found on the site (see p. 192) may however be ruled out, as the Belgæ practised cremation.[1] (See Appendix for Sir Arthur Keith's report on remains.)

Objects Found.—The various objects yielded by excavation on the Worthy Down site are preserved in Winchester City Museum. They will be considered under three headings according as they were found actually within the earlier or later pits and ditches, or in the surface-soil anywhere on the site.

---

2. DESCRIPTION OF FINDS.

(Prepared for publication by G. C. Dunning.)

Early Pits and Ditches.

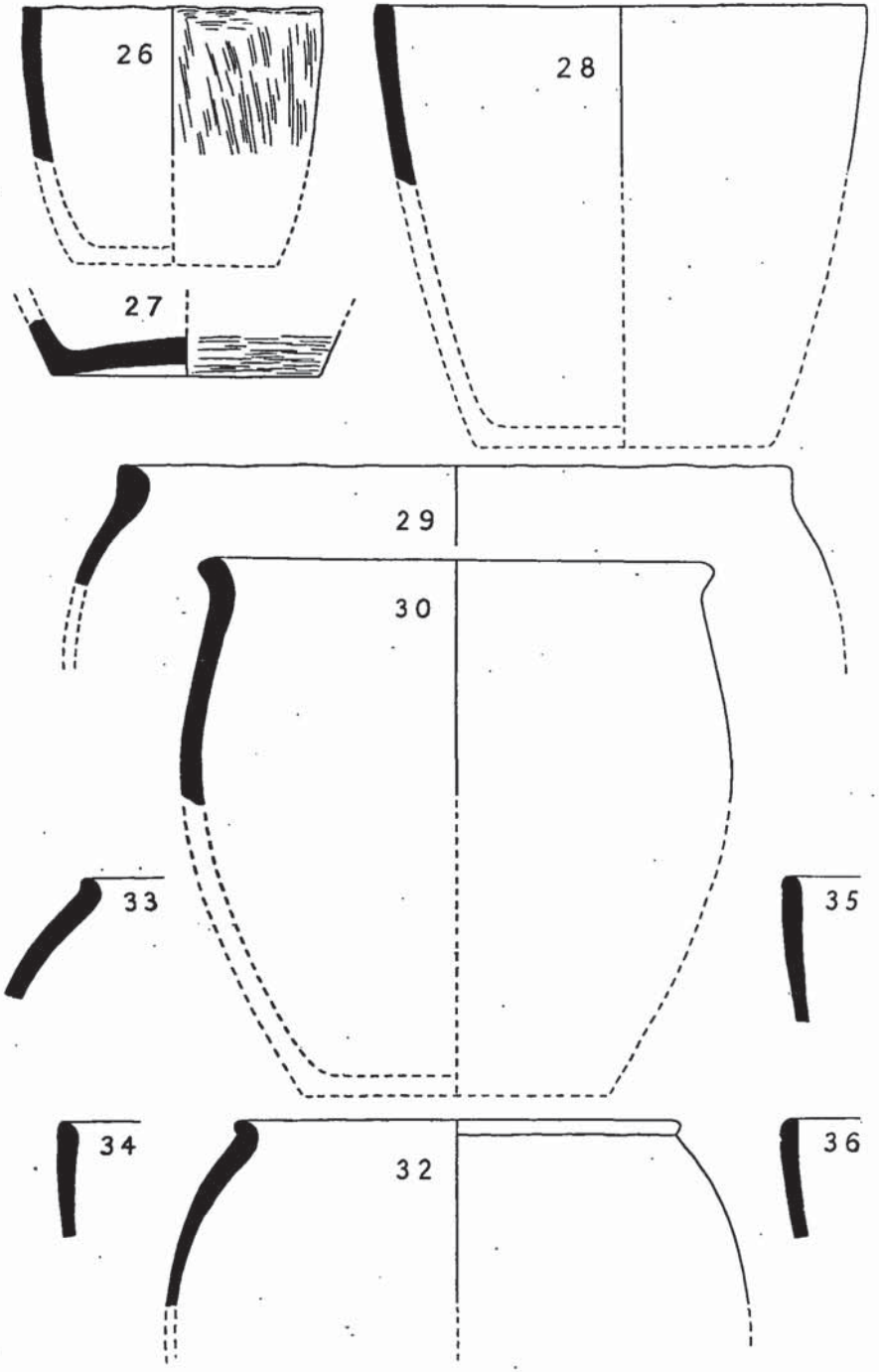
Pottery.

Fig. 26.—Straight-sided bowl of fine grey sandy paste with sparing flint, uneven reddish-brown surface, striated vertically. Rim diam., 4.9 inches. Floor of Pit No. 1. *Antiq. Journ.*, I, 324.

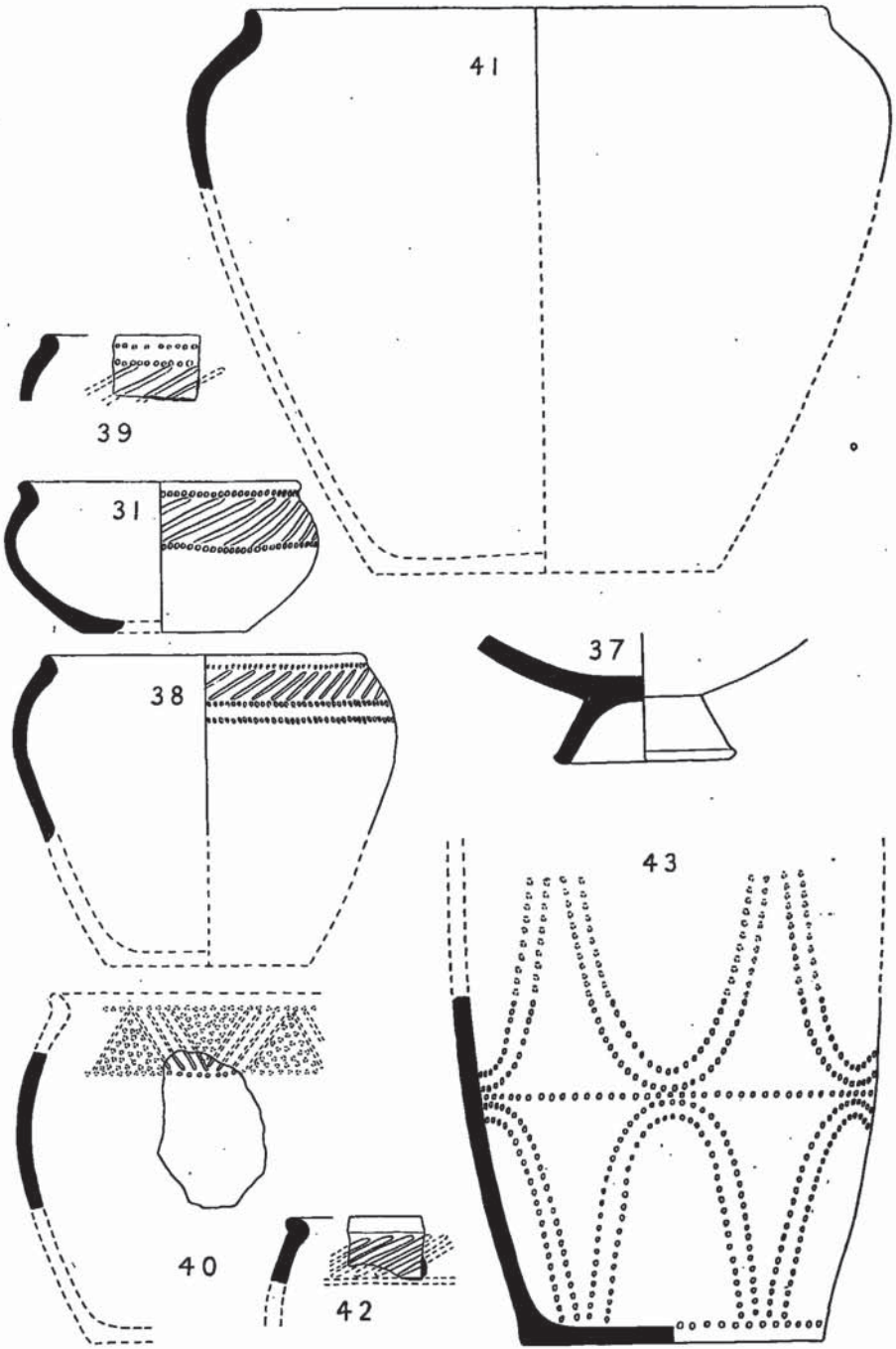
Fig. 27.—Base, slightly concave; paste and surface similar to Fig. 26. Inside coated with white deposit, resulting from boiling chalky water. Diam., 4.3 inches. Pit No. 1. *Antiq. Journ.*, I, 324.

Fig. 28.—Straight-sided pot with flat rim, soft brown sandy paste with sparing flint, surface tooled. Rim diam., 8.1 inches.

[1] British Museum. *Guide to Early Iron Age Antiquities*, 1925, pp. 7, 8, 113.



Figs. 26-36. POTTERY FROM THE EARLY PITS ($\frac{1}{3}$)



Figs. 37-43. EARLY POTTERY FROM THE LATER PITS AND DITCHES ($\frac{1}{3}$)

Pit No. 1, depth 18 inches. *Antiq. Journ.*, I, 324. Compare Hengistbury, Class C, *Report*, Pl. XIX, 9.

Fig. 29.—Thickened upright rim, hard grey sandy paste with free fine grit speckling well-tooled surface. Rim diam., 11 inches. Pit No. 1, depth 2 feet 6 inches. *Antiq. Journ.*, I, 324. Similar rim section in small bowl attributed to La Tène II, from St. Catherine's Hill, Winchester.

Fig. 30.—Globular vessel with outbent squared rim, hard grey sandy paste, light red coating outside, with well-tooled, weathered surface. White deposit inside, similar to that on Fig. 27. Rim diam., 8.5 inches; max. diam., 9 inches. Pit No. 2, depth 4 feet. For profile and lip, compare La Tène I pots from Fifield Bavant, *Wilts. Arch. Mag.*, XL, 473, Pl. V, 2, 5, 6.

Fig. 31.—Bowl with outbent rounded rim, hard brownish-grey paste with free fine grit, highly-tooled surface. Decorated round rim and shoulder with line of closely set dots, enclosing sloping grooves. Rim diam., 4.7 inches; max. diam., 5.2 inches; height, 2.5 inches. Pit No. 2, depth 2 feet 6 inches.

Fig. 32.—Incipient bead-rim pot, hard grey gritty paste, highly-tooled surface. Rim diam., 7.3 inches. Pit No. 2, depth 2 feet 6 inches.

Fig. 33.—Incipient bead-rim, less pronounced than Fig. 32, same paste, smooth surface. Pit No. 2, depth 2 feet 6 inches.

Figs. 34, 35, and 36.—Rim sections; for type see Fig. 28; hard brown-grey paste with free grit, tooled surface. Fig. 34, rim diam., 6.5 inches. Fig. 35, two slight grooves round rim; diam., 5.8 inches. Fig. 36, single deep groove; diam., 5.7 inches. Pit No. 2, depth 2 feet 6 inches.

Clay Objects.

Fig. 44.—Part of triangular loom-weight, perforated through the angles, reddish-brown clay. Pit No. 1, depth 3 feet. *Antiq. Journ.*, I, 321.

Many lumps of coarse daub with circular holes made by the wattle, also fragments of hard bright-red clay, with impressions of vegetable fibres in the paste. Pits Nos. 1 and 2, Ditch No. 1; at different levels.

Iron Objects.

Fig. 45.—Wedge for splitting wood, head turned over from repeated hammering. Length, 3.7 inches. Pit No. 2.

Fig. 46.—Punch or awl. Length, 3.8 inches. Pit No. 2, depth, 3 to 4 feet.

Glass Object.

Fig. 48.—Part of large light blue glass bead or ring, fissured surface, probably filled with white streaks. Diam., 1.6 inches. Pit No. 2, depth 3 feet. This bead is of type current in the first century B.C., see Déchelette, *Manuel d'Archéologie*, II, 1321.

Bone Objects.

Fig. 49.—Conical handle, with wide, deep groove round butt end, narrow incised groove at other end. When found the square socket contained a fragment of an iron shaft. Length, 2 inches. Pit No. 2, depth 3 feet.

Stone Objects.

Fig. 50.—Broken hone of fine grained greenstone, used for sharpening rounded objects. Pit No. 2, C, depth 2 feet.

Large triangular quartzite pebble, with rust streaks near one border from use in sharpening iron objects. Floor of Pit No. 2.

Fossil echinus. Pit No. 2. Fossil echini have been found on Iron Age sites at Casterley Camp, All Cannings Cross, and Wilsford Down. *Wilts. Arch. Mag.*, XXXVIII, 79; *Catalogue*, Devizes Museum, II, 93.

Quartzite pebbles, polished, probably used in smoothing pottery. Pit No. 2.

Many small, flat, flint pebbles, probably used as sling stones. Pits Nos. 1 and 2.

Numerous flint pot-boilers in Pits Nos. 1 and 2.

Early Objects from Later Pits and Ditches.

Pottery.

Fig. 37.—Hollow conical pedestal base, probably of low, wide bowl, hard grey sandy paste, soapy brown surface. Diam., 3 inches. Pit No. 3, 3 to 4 feet. Compare earlier base from Park Brow, Sussex, *Antiq. Journ.*, IV, 352, Fig. 8.

Fig. 38.—Bowl with incipient bead-rim, hard light brown-grey gritty paste, well-tooled surface. Decorated round rim and shoulder with rows of oblong tool marks, enclosing lightly-impressed sloping grooves. Rim diam., 5.4 inches; max. diam., 6.3 inches. Pit No. 4, depth 18 inches.

Fig. 39.—Fragment of thickened rounded rim, hard grey paste, sparing fine grit. Decorated round rim with two rows of dots, and sloping grooves below. Pit No. 4, depth 2 feet.

Fig. 40.—Fragment with soapy surface, very hard fine grey sandy paste. Decorated on upper part with chevrons of four grooves between row of dots, the spaces filled with dots. Floor of Pit No. 5.

Fig. 41.—Large high-shouldered bowl with upright rounded rim, hard grey sandy paste with fine grit, speckled soapy surface. Rim diam., 9.7 inches; max. diam., 11.6 inches. Floor of Pit No. 5.

Fig. 42.—Incipient bead-rim, hard brown sandy paste with fine grit. Decorated with deep sloping grooves above girth groove. Ditch No. 8.

Fig. 43.—Base and side of straight-sided pot, hard grey paste with sparing fine grit, well-tooled grey-brown surface. Zoned dotted decoration of festoons between rows of dots round side and base. Base diam., 5 inches. Ditch No. 9, Section 3. For profile and decoration, compare La Tène II pots from Park Brow and Findon Park, Sussex, *Arch.*, LXXVI, 21, Figs. 14 and 15; *Antiq. Journ.*, VIII, 456, Fig. 9a.

Two fragments of the rim and side of a pot of All Cannings Cross type (late Hallstatt period) were found in Ditch No. 9, Section 1. The paste is black with fine grit, hæmatite-coated, with highly-tooled surface.

Iron Object.

Fig. 47.—Bar with rounded end worn to a bevel. This seems too heavy for a currency-bar, and may have been part of a pick with turned-over open socket. Length, 4.7 inches. Floor of Pit No. 4. Compare tip of bar of La Tène II period, Findon Park, Sussex, *Antiq. Journ.*, VIII, 452, Fig. 10, C.

Later Objects from Later Pits and Ditches.

Pottery.

Fig. 51.—Wheel-made bowl with outbent rim, tall neck with cordon, high shoulder, and beaded hollow foot, hard light grey sandy paste. Rim diam., 4.5 inches; max. diam., 5.5 inches; height, 4.1 inches. Pit No. 3, depth 4 to 5 feet. Local Belgic type assigned to first half of first century A.D. Compare May, *Silchester Pottery*, 190, Pl. LXXVIII, 5.

Fig. 52.—Wheel-made high-shouldered bowl with short thickened neck, hard grey very sandy paste, bitumen-coated, upper part smoothed, matt below. Rim diam., 6.4 inches. Pit No. 3, depth 4 to 5 feet. Mr. R. S. Newall, F.S.A., has found pottery of this type in Hanging Langford Camp.

Fig. 53.—Wheel-made bowl, similar to Fig. 52, hard grey sandy paste, brown coating, smooth surface. Rim diam., 4.5 inches. Pit No. 3, depth 3 feet.

Fig. 54.—Fragment of storage jar with small neck, cordon and double girth grooves on upper part, surface between matt with chevrons of three lines and zig-zags, hard grey sandy paste, reddish-brown coating. Pit No. 3, depth 4 to 5 feet.

Fig. 55.—Plate of Belgic *terra nigra* ware, upright rounded lip, double-curved side, hard white gritty paste with thin bitumen coating. Rim diam., 7.9 inches. Pit No. 3, depth 2 feet. Compare May, *op. cit.*, 176, Pl. LXXIV, 186.

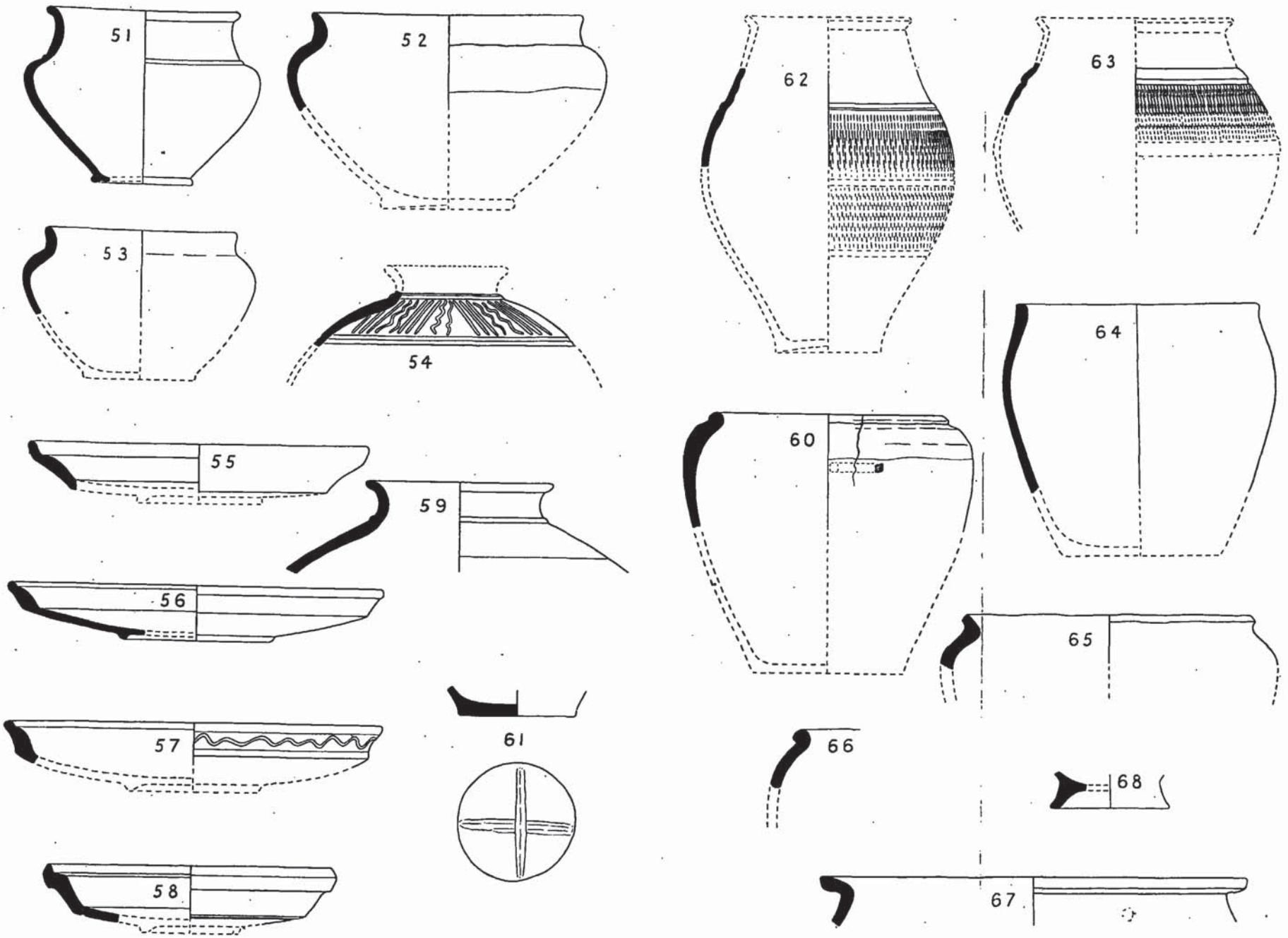
Fig. 56.—Plate of Belgic ware, outbent rounded rim with groove inside, low ring foot, hard grey sandy paste with brown coating. Rim diam., 8.7 inches; height, 1.3 inches. Pit No. 3, depth 2 feet.

Fig. 57.—Plate of Belgic ware, similar to Fig. 56, reddish-brown sandy paste with thick grey coating, matt band round side with zig-zag line. Rim diam., 8.7 inches. Pit No. 3, depth 3 feet.

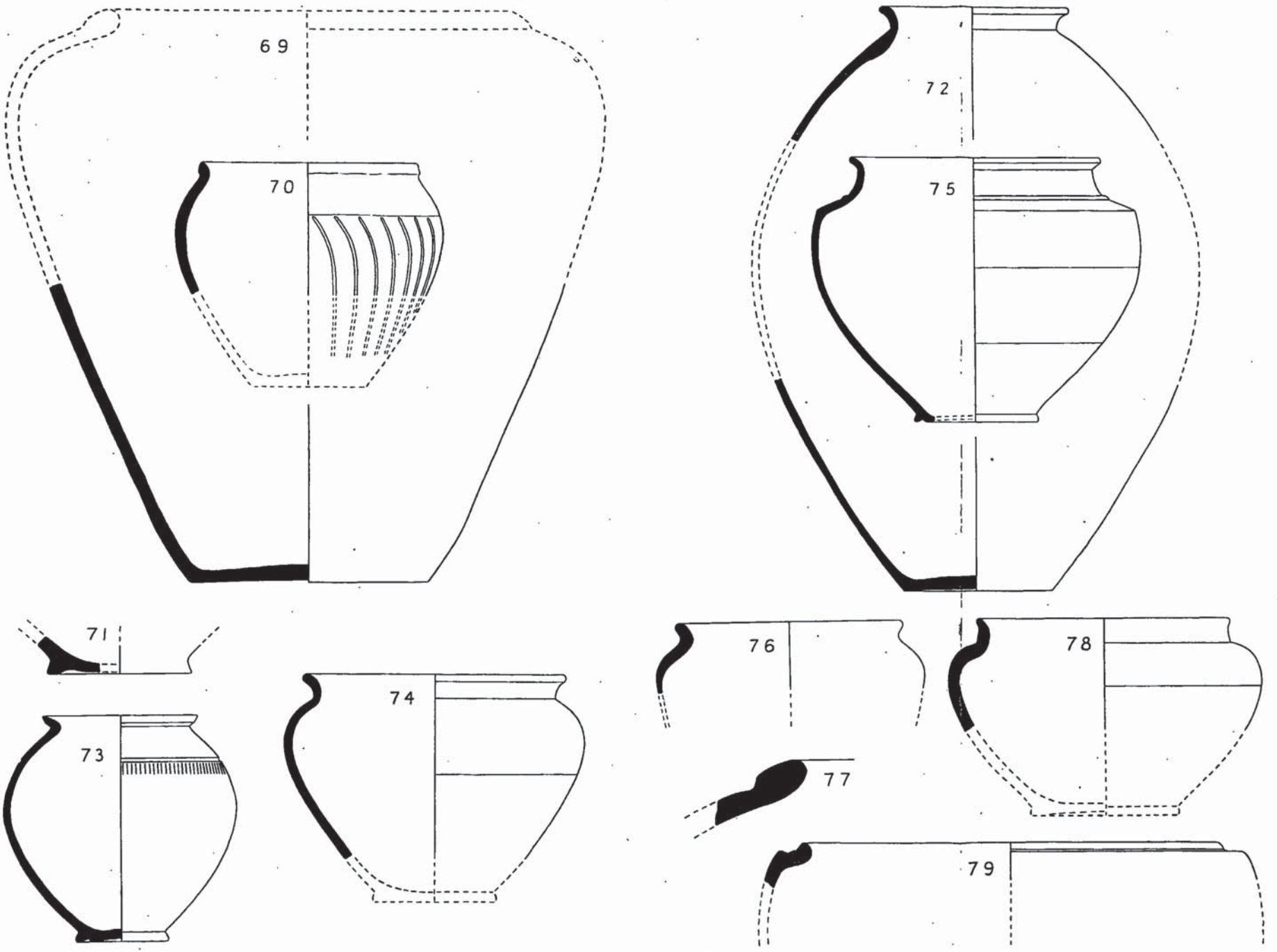
Fig. 58.—Plate of Belgic ware, upright thickened lip offset from side, hard grey sandy paste with bitumen coating. Rim diam., 6.8 inches. Pit No. 3, depth 3 to 4 feet. Resembles May, *op. cit.*, 176, Pl. LXXIV, 185.

Fig. 59.—Upper part of wheel-made storage jar with outbent rounded rim and cordon below neck, hard grey sandy paste, smooth black surface, matt below. Rim diam., 4.4 inches. Pit No. 3, depth 3 to 4 feet.

Fig. 60.—Hand-made bead-rim bowl, tooled from rim to shoulder, matt below, hard grey sandy paste with sparing fine grit. A crack in the side was repaired by means of an iron rivet. Rim diam., 5.7 inches. Pit No. 3, depth 3 to 4 feet.



Figs. 51-68. POTTERY FROM THE LATER PITS ($\frac{1}{3}$)



Figs. 69-79. POTTERY FROM THE LATER DITCHES ($\frac{1}{3}$)

Fragment of another hand-made bead-rim from the same pit contains charcoal and vegetable matter in the paste. Similar bead-rim ware has been found at Broomsgrove, *Wilts. Arch. Mag.*, XXVII, 294; Casterley, *ibid.*, XXXVIII, 88; and in Wansdyke, Pitt-Rivers, *Excavations*, III, Pl. CCXXII, 15.

A bead-rim fragment of grey gritty paste has two holes near the rim; these were evidently for a suspending cord, as the upper edges of the holes are worn away.

Fig. 61.—Hand-made base with cross burnished on under surface, grey sandy paste with sparing grit, thick black coating. Diam., 2.8 inches. Pit No. 3, upcast. Crosses are of fairly frequent occurrence on the bases of Iron Age pots, and were probably proprietary marks. For summary, see *Sussex Arch. Coll.*, LXVIII, 41.

Figs. 62 and 63.—Fragments of "butt-shaped" vases of Mont Beuvray ware, with bands of roulette-hatching, bordered by grooves and plain bands, fine hard cream-coloured sandy paste with polished surface. Six fragments were found, five in Pit No. 3, one in Ditch No. 9, Section 1. Forms restored after May, *op. cit.*, 169, Pl. LXX, 150. Similar imported ware of the latter part of the first century B.C. has been found associated with Belgic ware and bead-rim bowls at Oare, Casterley, Rotherley, and Hengistbury Head. *Report*, p. 58, for references.

Fig. 64.—Hand-made bowl with rounded rim, hard grey gritty paste, uneven tooled surface. Rim diam., 5.7 inches. Pit No. 4, depth 3 to 4 feet.

Fig. 65.—Hand-made bowl with thin rim bevelled inside, hard red paste with coarse grit, black coating with uneven tooled surface. Rim diam., 6.8 inches. Pit No. 5, depth 2 feet.

Fig. 66.—Hand-made bead-rim, hard grey paste with free coarse grit, thick red coating with black surface. Pit No. 5, depth 18 inches.

Fig. 67.—Wheel-made sharply outbent square rim, hard light red sandy paste, thick red coating with dull grey surface. Rim diam., 10 inches. Pit No. 5, depth 18 inches. Probably deep bowl. For type, see May, *op. cit.*, 194, Pl. LXXIX, 11.

Fig. 68.—Hand-made hollow pedestal base, hard grey sandy paste. Diam., 2.8 inches. Pit No. 5, depth 18 inches.

Fig. 69.—Base and side of hand-made cooking-pot, probably with bead-rim (see p. 188, Fig. 77), very hard coarse black paste with free large grit, uneven grey-brown tooled surface, showing grit. Base diam., 5.6 inches. Found on charcoal hearth at bottom of Ditch No. 8.

Fig. 70.—Hand-made bowl with thin rim, hard black sandy paste, surface smooth on upper part, matt below with burnished vertical lines. Rim diam., 5.2 inches. Ditch No. 8.

Fig. 71.—Low pedestal base, soft brown sandy paste with black coating. Diam., 3.3 inches. Ditch No. 8.

Fig. 72.—Fragments of wheel-made storage jar with outbent rounded rim, softish grey sandy paste, thick brown coating, uneven grey surface. Rim diam., 4.5 inches; max. diam., 10.5 inches; height, 14 inches. Ditch No. 9, Section 1, depth 2 feet. A similar jar was found with bead-rim bowls in a pottery kiln at Broomsgrove. *Catalogue*, Devizes Museum, II, 86, Pl. XVIII, 3.

Fig. 73.—Wheel-made globular beaker with sharply outbent thin rim and beaded hollow foot, soft light red sandy paste, smooth surface, decorated on upper part with deep groove and band of roulette-hatching. Rim diam., 3.6 inches; max. diam., 5.4 inches; height, 5.3 inches. Ditch No. 9, Section 1, depth 4 feet. For pot of similar form, see May, *op. cit.*, 190, Pl. LXXVIII, 2.

Fig. 74.—Wheel-made high-shouldered bowl with outbent rounded rim, paste same as Fig. 72, grey surface, smooth to shoulder, matt below. Rim diam., 6.2 inches. Ditch No. 9, Section 1, depth 4 feet.

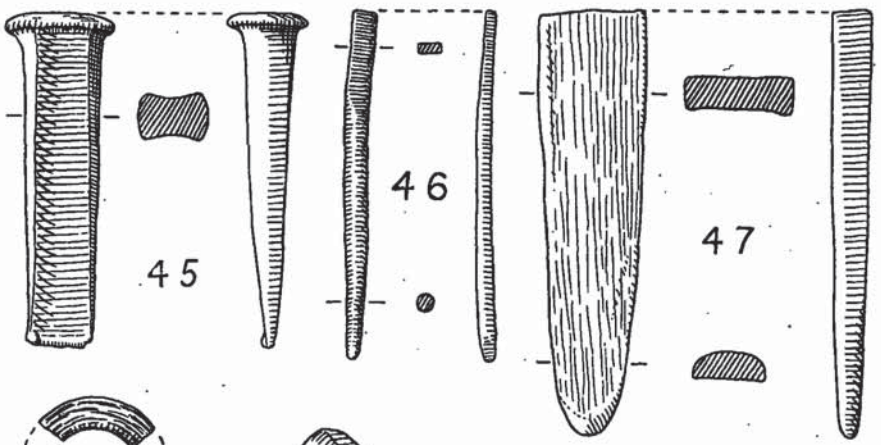
Fig. 75.—Wheel-made bowl with thin outbent rim, cordon below neck, carinated shoulder, and beaded hollow foot, hard light brown sandy paste with thick grey coating, surface smooth with matt band below shoulder. Rim diam., 6 inches; max. diam., 7.8 inches; height, 6.3 inches. Ditch No. 9, Section 1, depth 2 feet. Belgic type of first half of first century A.D. found in pottery kilns at Silchester, May, *op. cit.*, 194, Pl. LXXIX, 12.

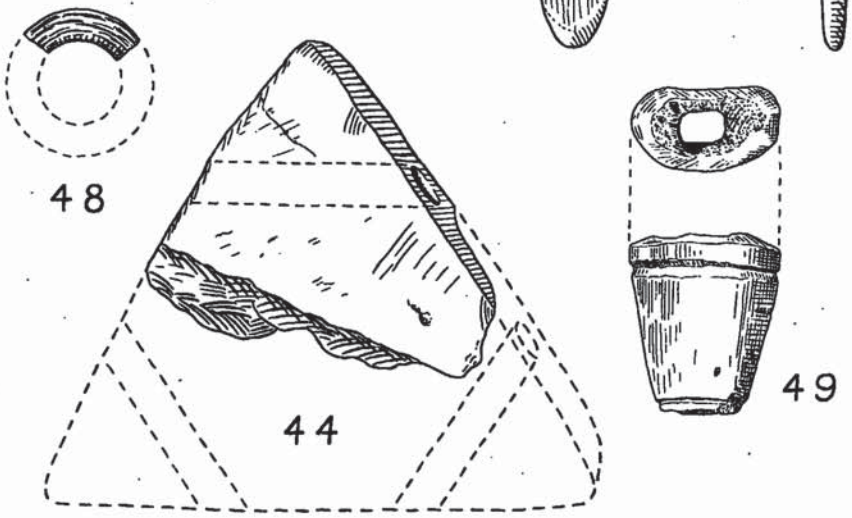
Fig. 76.—Wheel-made bowl with thick outbent rim, hard light brown sandy paste, black coating. Rim diam., 5.4 inches. Ditch No. 9, Section 2.

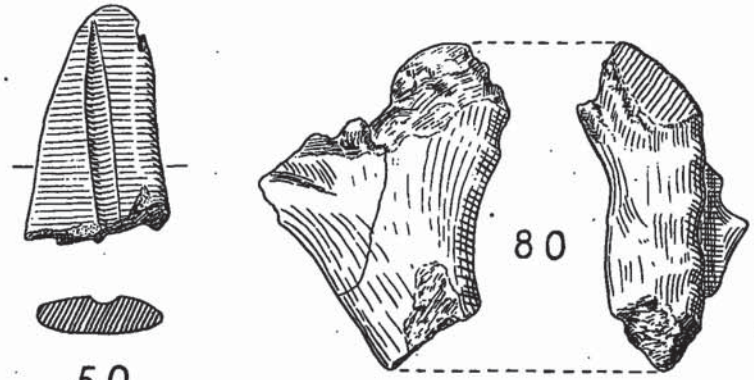
Fig. 77.—Hand-made bead-rim of large cooking-pot, very hard coarse light red paste, with large flint grit showing on tooled surface, sooty deposit on inside. Rim diam., 13 inches. Ditch No. 9, Section 2.

Fig. 78.—Wheel-made bowl, same type as Fig. 52, hard brown sandy paste, black coating, surface tooled to shoulder, matt below. Rim diam., 6 inches. Ditch No. 10, Section 1.

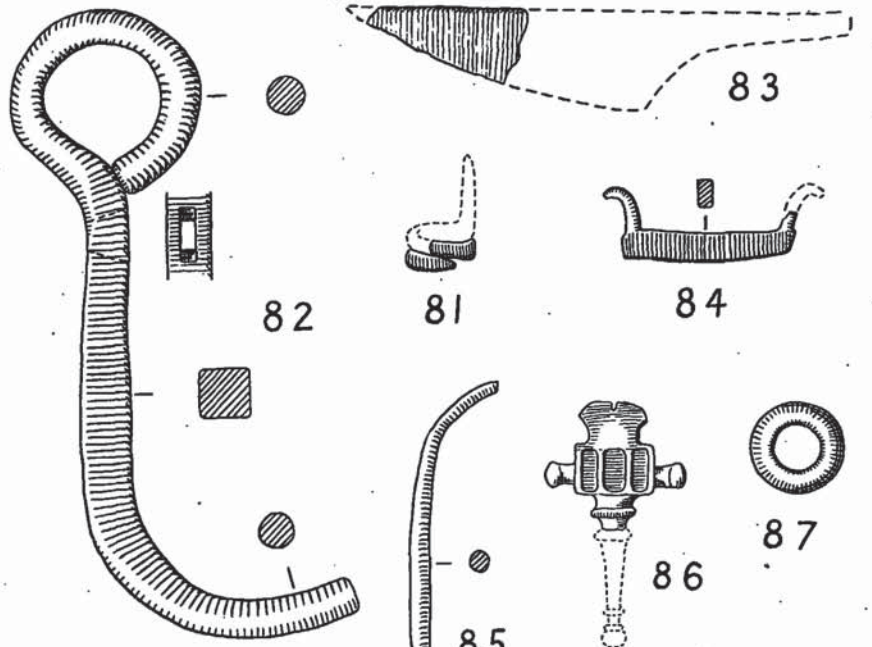
Fig. 79.—Large wheel-made bowl with ledge for reception of a lid and carinated shoulder, hard light brown sandy paste with black coating. Rim diam., 10 inches. Ditch No. 10, Section 1.

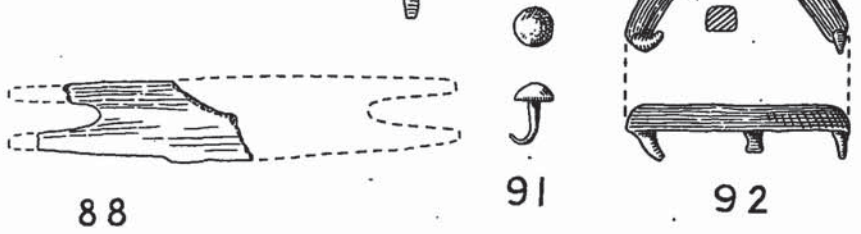


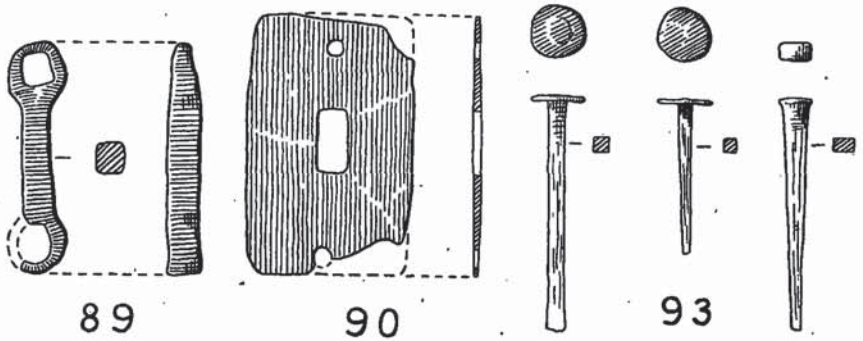




Figs. 44-50. OBJECTS FROM THE EARLY PITS ($\frac{1}{2}$)







Figs. 80-88. OBJECTS FROM THE LATER PITS AND DITCHES (Fig. 86 eq.sc., rest $\frac{1}{2}$)
Figs. 89-93. OBJECTS FROM THE SURFACE SOIL. ($\frac{1}{2}$)

Clay Objects.

Fig. 80.—Sagger for supporting pottery in the kiln, coarse grey clay with flint grit. Ditch No. 8.

In Pit No. 3 and Ditch No. 9, Section 3, were found several pieces of burnt clay with a circular hole, round which is fused iron slag, probably the remains of a *tuyère*, or funnel, to protect the nozzle of a bellows.

Half a spindle-whorl, made from the base of a wheel-turned pot, was found in Pit No. 3.

Lumps of coarse daub with wattle marks were found in all the later pits. The only piece from the later ditches was found near the bottom of Ditch No. 2, at the junction with Ditch No. 1; this piece is of soft black clay with hard red surface, showing impressions of vegetable fibres.

Iron Objects.

Fig. 81.—Part of ox-goad. Pit No. 3, depth 2 feet.

Fig. 82.—Object of uncertain use, perhaps a pot-hook, slotted below the ring. Length, 7.2 inches. Pit No. 4, depth 4 feet. Resembles smaller pot-hooks from the Romano-British village at Woodcuts. Pitt-Rivers, *Excavations*, I, Pl. XXIV, 5, 13.

Fig. 83.—Point of knife-blade, of common Early Iron Age and Romano-British type. Pit No. 4, depth 2 feet.

Fig. 84.—Cleat for clamping wood or leather.

Fig. 85.—Awl. Length, 4.1 inches.

Iron slag was found in all the later pits and ditches. Specimens were sent to Mr. J. Myers, who kindly reports that "they are essentially ferrous silicate slags with high iron content, because, in the primitive method used, the iron must flux off the gangue or silicious portion of the ore. The slags prove definitely that the iron was reduced directly."

Bronze Object.

Fig. 86.—Head of tinned bronze brooch with deep grooves and side projections. Pit No. 3, depth 5 feet. Hod Hill type, dated A.D. 40 by Mr. Reginald A. Smith. See *B.M. Guide to Roman Britain*, 1922, p. 51.

Glass Object.

Fig. 87.—Pale yellowish-green glass bead. Diam., 1 inch. Pit No. 4, upcast.

Bone Objects.

Fig. 88.—Part of bobbin or netting-needle. Pit No. 6. Ten similar needles, slotted at one end, of uncertain age, were found in the Kennet, at Reading (Reading Museum).

Ends of metacarpal bones of ox, sawn from the shaft for use as handles. Pits Nos. 5 and 6.

Metacarpal bone with highly-polished surface, used in smoothing pottery. Floor of Pit No. 6.

Stone Objects.

Many fragments of broken saddle-shaped querns of tertiary sandstone were found in the later pits and ditches.

Globular flint hammerstone. Diam., 3 inches. Floor of Pit No. 5.

Fossil echini, four in Pit No. 3, two in Pit No. 4.

Many small flint pebbles, probably used as sling stones, found in all the later pits.

Flint pot-boilers were found in all the later pits, occasionally in the ditches.

Surface Finds.

Pottery.

Three small fragments of plain Samian ware. Pits Nos. 4 and 6, Ditch No. 1, Section 1.

Fragment of Castor ware with raised scale decoration. Ditch No. 8.

Fragment of upright rim with flutings, white paste with cream slip. Third to fourth century.

Fragment of Saxon pottery, decorated with stamped rosette and grooves. Pit No. 5.

Iron Objects.

Fig. 89.—Part of bridle-bit. Romano-British. Ditch No. 8. Similar bit found at Woodcuts. Pitt-Rivers, *Excavations*, I, Pl. XXV, 3.

Fig. 90.—Lock-plate with two nail holes. 2.9 by 1.8 inches. Romano-British. Ditch No. 9, Section 2. Similar lock-plate found at Woodcuts. Pitt-Rivers, *op. cit.*, I, Pl. XXIV, 2.

Figs. 91 and 92.—Four hob-nails, found associated with two heel-pieces, each with three tangs. Romano-British. Ditch No. 9, Section 2. For hob-nails found at Woodcuts, see Pitt-Rivers, *op. cit.*, I, Pl. XXXI, 8—12.

Fig. 93.—Fourteen Romano-British nails were obtained from the surface soil over Pits Nos. 3, 5, and 6, and Ditches Nos. 9 and 10. Most are square in section, with large disc heads; one is of oblong section to prevent the wood splitting.

According to Mr. J. Myers, "the nails have been most beautifully made. The metal is almost carbonless, and is remarkably free from slag; the section, when etched, shows crystal boundaries, which are equi-axed and rather large. In iron which has been subjected to forging these boundaries usually evince a strong tendency to elongation, so that it is extremely likely that here the size and character of the crystalline structure are a result of re-heating. It may be thought that the re-heating might have been accidental, not deliberate; yet the forging was so skilful, that the ancient craftsman must be credited with knowing the benefits to be derived from re-heating metal previously worked."

For nails found at Woodcuts, see Pitt-Rivers, *op. cit.*, I, Pl. XXX, 4, 5, 18, 19.

Coin.

Bronze coin of Constantine I, dated A.D. 310 by Mr. W. J. Andrew, F.S.A. Pit No. 3.

Shells.

Oyster and mussel shells. Pit No. 3.

CONCLUSIONS.

Although excavation of the Worthy Down site was incomplete, enough was done to indicate the date and nature of the settlement.

Hallstatt Period.

Casual occupation of the site, about 500 B.C., is shown by the presence of two sherds of All Cannings Cross type, in Ditch No. 9.

La Tene II Period.

Pits Nos. 1 and 2 and Ditches Nos. 1 and 11 are dated to this period. The pottery is all hand-made, baked fairly hard, with sand or fine grit in the paste, brown or grey surface, highly tooled, often soapy. One pot only (Fig. 43) shows the festoon decoration characteristic of pottery of this period at Park Brow and Findon Park, Sussex; the other sherds are decorated with rows of dots and sloping grooves, and appear to belong to the latter part of this period, dated about 100—50 B.C. This date

is confirmed by a large blue glass bead (Fig. 48), of type common in the first century B.C. It is notable that no close parallel for the decorated sherds is to be found among the wealth of pottery from the Glastonbury Lake Village, which covers the period of the earlier pits on Worthy Down. This cultural difference might be taken to indicate a different origin, or perhaps a tribal division in the population of Wessex in the Early Iron Age.

Small sherds of the early period were found in Pits Nos. 3 4, and 5, and Ditches Nos. 8 and 9; they hardly show that these pits and ditches belong to the earlier period, and were probably scooped up in the soil when the later pits and ditches were filled in. Three iron objects belong to this period, but the absence of iron-slag from the early pits and ditches seems to prove that iron was not reduced from the ore locally. Part of a loom-weight shows that weaving was practised.

La Tene III Period.

Pits Nos. 3 to 6 and the remainder of the ditches opened, Nos. 5 to 10 and 16 were dug by people, presumably the Belgæ,[1] using pottery of Belgic type. Coarse hand-made pottery was still used, but of different type from that in the early pits; the paste is harder, sandy, or with large grit, and usually grey or black. During this period the potter's-wheel was introduced. The characteristic bead-rim bowl appears, and high-shouldered pots similar to vessels found in kilns at Silchester. The paste is brown or grey, sandy, and better fired, often with a slip of finer clay or coating of bitumen. The surface is usually finished by polishing round the upper part, the rest being left matt; cordons are frequent below the neck.

Plates of Belgic type and imported Mont Beuvray ware date the beginning of the later occupation to the second half of the first century B.C., and the latest object is a brooch of Hod Hill type, dated A.D. 40. The later pits and ditches may therefore be dated 50 B.C.—A.D. 40.

Iron slag and fragments of a clay *tuyère* show that iron ore was reduced on the site, and a clay sagger or kiln support points to pottery-making. Bones of the following animals were found in the later pits and ditches:—Horse, ox (*Bos longifrons*), sheep, pig, and dog (two breeds).

Romano-British Period.

Objects of this period were found only in the surface soil above the filling of the pits and ditches. An iron lock-plate and nails from different parts of the site show that the later pits and ditches were filled in before the erection of wooden huts on the site.

[1] For discussion of the Belgic Invasion of Britain, see Bushe Fox, *Swarling Report*, p. 33.

REPORT ON THE HUMAN REMAINS FOUND BY MR. REGINALD W. HOOLEY, AT WORTHY DOWN, 1921.

BY PROF. SIR ARTHUR KEITH,
ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The remains sent to me by Mr. Hooley represent two men —an imperfect skeleton in which the skull and upper cervical vertebræ were missing, found in No. 2 Pit, but which I have marked as No. 1 skeleton, and a complete skeleton, including skull, all in perfect condition of preservation, obtained at the south end of a trench-like grave—this latter skeleton being described here as No. 2. The bones have the grey colour and porcelain-like resonance of remains which have been long embedded in chalk or a chalky soil.

During recent years I have had many opportunities of examining human remains from Romano-British graves in the south and west of England, and a few which are believed to be immediately pre-Roman in date. The results of my enquiry I hope to publish in full, but I may anticipate my publication by mentioning here that the conclusion I have come to is that, throughout the Roman period, and at least in late Celtic times, England, from Kent to Cornwall, was occupied by a uniform people, of whom skeleton No. 2 may be accepted as a representative. This people I suppose to be the folk spoken of in former times as Kelts—Rice Holmes' Kelts. Among this people, particularly in Kent and in London, of the Roman period one finds a sprinkling of a round-headed type, identical with the French people now living south of the Seine, which I suppose to represent the invading Belgae. They can be distinguished from the round-headed people of the beaker culture.

Skeleton No. 2 is that of a man of about 50 years of age—so I judge from the condition of the sutures of his skull and the state of his jaws and teeth. He was probably about 5ft. 6½ins. in height (1690 mm.); the oblique length of his right thigh bone is 467 mm.; his right leg bone 381 mm. (total length); his humerus only 325 mm., his arms being short in comparison to his stature. The maximum length of his skull is 187 mm.; its maximum width, which is situated high on the parietal area of the skull, 140 mm.; the width is thus almost 75% of the length: he falls on the border line between the long and medium skulls. The roof of the skull is relatively low-pitched, the height above the ear-holes being 115 mm.; if measured to the bregma, only 110 mm. The height of bregma from the basion is 130 mm.; the occipital condyles project below the level of the tips of the mastoid

processes. The capacity of the skull is 1420 cc., about 60 cc. below the average for modern Englishmen. The average capacity of the South British of the Roman period was about the same as it is to-day.

The forehead recedes more than is usual in the South British of the Roman period, while the supra-occipital ridges are prominent and strongly developed. The slope of the forehead may be estimated in this way: the maximum length of the skull is measured from the furthest back point on the occipital bone to the glabella—the projection above the root of the nose. If the forehead is prominent above, it will be found that the distance from the hindmost occipital point to the upper frontal point—taken midway between the frontal eminences—is greater than the glabello-occipital length; if the forehead recedes the distance is less. In this case—skeleton No. 2—the upper frontal distance is 181 mm., 6 mm. less than the maximal distance. The maximum width of the frontal bone is 121 mm. These skull measurements —excepting the receding forehead—are representative of the South British of the Roman period, and, as I have reason to believe, of the people of the pre-Roman centuries.

The more I get to know about the recognition of human races, the greater is the importance I attach to the conformation of the face. In skeleton No. 2 the features are regular and well proportioned. The greatest width of the face, measured over the zygomatic arches, is 134 mm.; the total length of the face, measured from root of nose to lower border of chin, is 129 mm.; a face moderately long and moderate in width. The cheek bones are not prominent; the distance between the lower ends of the malo-maxillary sutures is 94 mm. The forehead, as we have seen, recedes somewhat, and is provided with strong, well-developed supra-orbital ridges; it is of rather less than moderate width, being only 95 mm. wide, but the width just above the orbit is also moderate, being 103 mm., showing that there was no prominent lateral projection of the supra-orbital ridges. The orbits are of moderate size, the height of the right being 33 mm., its width 40 mm.

The nose is characteristic; it is narrow, long, straight, and of moderate prominence. Its height is 53 mm.; its width 23 mm.; the margins of the nasal apertures are sharply marked. The upper face, from root of nose to a point on the alveolar margin of the upper jaw is 73 mm.—also long. The angles of the lower jaw, as seen below and in front of the ears, are well apart, 104 mm. The face is of the regular, sharp, rather oval type. The chin is prominent and well formed. There is an easy way of estimating the projection of the chin by laying the mandible so that its lower borders rest on a flat surface, and then

measuring how much the eminence of the chin projects in front of the alveolus carrying the middle incisor teeth. In this case the chin projects 16 mm. in front of the alveolus. The chin is deep, as well as prominent; its depth from alveolar to lower border being 38 mm. The picture one gets is of the well-featured, rather sharp-faced Englishman of the type so common in all parts of England at the present time.

Noteworthy is the condition of his teeth and jaws. The state of the teeth is so bad that one turns to inspect the state of his joints, expecting them to show rheumatic changes. All the joints of his limbs are free from change; only between two of the cervical and two of the lumbar vertebræ are any rheumatic changes to be seen. Yet all the molar teeth on his upper jaw have been lost from disease; there are traces of old root-abscesses; the pre-molar teeth of the left side are lost, one being represented by a carious stump. Three of the upper incisor teeth have been lost long before death. It is not unlikely they may have been knocked out by an accident or injury. The lower incisors, opposite this gap, are unworn, and the subject of pyorrhœa. The lower canine and first pre-molar have been lost from disease. The last molar or wisdom tooth has never been formed; the first lower molar of the right side is half destroyed by caries. The jaws are of moderate size; there has been no overcrowding of the teeth. It is clear that the food had been well prepared. The ascending ramus of the lower jaw has a width of only 29 mm.

The limb-bones require no special description. The femur shows no high degree of flattening on its upper part; the width below the small trochanter is 34 mm.; its back to front diameter 25 mm. The tibia shows a considerable degree of flattening. At the nutrient foramen the back to front diameter is 39 mm.; its side to side diameter 24 mm., giving 61.5 as an index of flattening. Squatting facets are evident at the ankle joint, but they are not extensive or well marked.

No. 1 skeleton is that of a short man, probably about 5ft. 2in. (1580 mm.), the oblique length of the femur being 408 mm. The bones show the same features as those of skeleton No. 2. There are no points calling for remark, save that the lumbar vertebræ show distinct signs of rheumatic changes.

These two skeletons were presented to the Royal College of Surgeons of England by Mr. R. W. Hooley, in April, 1923.