

THE EXCAVATIONS AT QUARLEY HILL. 1938.

By C. F. C. HAWKES, M.A., F.S.A.

THIS Report on the excavations of 1938 at Quarley Hill must begin with the expression of my thanks to the Research Committee and Council of the Hampshire Field Club for having invited me to undertake them, when in the spring of that year its field programme had to be re-cast after the lamented death of Miss Dorothy Liddell. The undertaking was liberally financed from the funds of the Club, and with this I must acknowledge the vigorous interest and encouragement unfailingly bestowed by our then President, Colonel Karlake, and the assistance rendered in many ways by our Hon. Secretary, Mr. F. Warren, and our Local Secretary for Andover, Colonel W. A. Payn. Dr. J. P. Williams-Freeman placed from the first his intimate knowledge of the Hill and its neighbourhood at my service, and both he and Colonel Karlake were constant visitors during the progress of the work. All gratitude is due to the owner of the site, Colonel A. W. Sofer-Whitburn, for his willing consent to the excavations, and to him and to Mrs. Sofer-Whitburn my wife and I have to record our thanks for much further kindness. The site being scheduled under the Ancient Monuments Act, the permission of H. M. Inspectorate to excavate has also to be acknowledged. In the carrying out of the excavations my wife worked with me throughout, especially in supervising the important operations at the junction of Ditches 2 and 3 and the termination of Ditch 4. The photographic record of all the work is hers, and she has further supplied the drawings of the pottery and flints illustrating this Report. Valuable assistance in the field was rendered by Mr. J. W. Brailsford, Mr. J. D. M. Stuart, Miss Jean Stuart, Miss Anne Welsford and Miss M. Barton; among visitors to the site I have especially to acknowledge the advice and help of Dr. G. Bersu, HON. F.S.A., Mr. C. W. Phillips, F.S.A., Mr. Stuart Piggott, F.S.A., and Mrs. Stuart Piggott, and also of Mr. O. G. S. Crawford, F.S.A., Mr. Percy Farrer, and Dr. J. F. S. Stone, who have further given indispensable help subsequently in the preparation of the archaeological map of the district here published as Fig. 1, and its accompanying paragraphs of text. Dr. F. E. Zeuner, of the University of London Institute of Archaeology, has kindly contributed a most valuable report on soil samples, and thanks are also due to Dr. J. Wilfrid Jackson, F.S.A., F.G.S., for reporting on the human and animal bones, to Mr. A. L. Kennard, A.L.S., F.G.S., for his report on samples of the mollusca, and to Mr. Geoffrey Tandy and Miss F. L. Stephens of the Department

of Botany, British Museum (Natural History), for their determinations of the wood charcoal. For the photographs reproduced on Pls. I and II I am indebted respectively to Dr. Stone and Mr. Phillips. The eight workmen employed did their part with keenness and energy, and it was possible to carry through a reasonably full programme of digging in little more than the three weeks between August 29th and September 17th. The Club's Field Meeting to inspect the work took place on September 13th.

I. INTRODUCTORY (map, Fig. 1).

Quarley Hill, in the parish of Quarley and a mile W.N.W. of the village of Grateley, some 7 miles W.S.W. of Andover and just 2 miles from the Wiltshire border at Cholderton (6in. O.S. Hants xxii S.E. ; 1/2500 O.S. Hants xxii 16), is the most conspicuous landmark in north-western Hampshire. It rises, to a height of some 560 feet above sea level, between two well-marked depressions in the north-south ridge of chalk that divides the basin of the Test, and its western confluent the Anton and the Pillhill and Wallop brooks, from that of the Wiltshire Avon and its eastern confluent the Bourne. Over the southerly of these two depressions the main Salisbury line of the Southern Railway, running W.S.W., crosses the ridge at 391.5 feet, reached at Grateley Station just south of the hill, and nearly parallel to this and barely a quarter of a mile from the hill's southern slope runs the line of the Port Way, the Roman road from Silchester to Old Sarum, which makes a slight change of direction as it passes the watershed. Also across this depression, but on a north-westerly course, the line of an ancient road from the direction of Winchester and the South Hants Ridgeway runs on its way from the Test at Longstock past Danebury Camp to the Bourne at Cholderton (the nearest running water to the hill). Beyond, it must have joined the main ancient road from east to west across all this part of southern England, that usually known as the Harroway, which passes just north of Andover to Weyhill, and thence across the ridge probably by the northerly of our two depressions, between Quarley Hill and Thruxton Hill, where runs the modern road from Andover to Amesbury. No attempt is here made to trace a precise course for it west of Weyhill, nor for its fellow running north-west from Longstock and Danebury, but of their general course there can be little doubt, though the stretches of modern road or green lane or hollow tracks which survive to represent them give no more than a shrunken and modified clue to the broader and doubtless often shifting range covered by the traffic of prehistoric antiquity.¹ It is enough to remain assured

1. For these roads see Williams-Freeman, *Field Archaeology as illustrated by Hampshire* (1915), 45-55 and map at end; Grundy, *Arch. Journal* lxxiv (1917), 79 ff.; lxxv (1918), 69 ff.; Hawkes, *Proc. Hants Field Club* ix (1925), 324-5 and map, 333.

that on both flanks of Quarley Hill ran important routes of ancient passage between east and west, between our Hampshire and Wiltshire—routes which anyone occupying the hill with force could command to the extent of his power.

And on the summit of Quarley Hill there is a hill-fort or camp which has long attracted the attention of archaeologists. In the 17th century it was mentioned by John Aubrey in his *Monumenta Britannica*;² unfortunately he seems to have confused his notes and interchanged its name with that of Danebury, the great multiple-ramparted camp 4½ miles away to the south-east, for the “great fortification” and “great British-camp” which he calls Quarley Hill is from his description of it clearly Danebury, while his “Dunbury, towards Andover near Grateley” is evidently really Quarley Hill. This error was incorporated by Gough in his edition of Camden’s *Britannia* (1789),³ but to correct it one needs only to transpose the names, and what is of interest is, that while Aubrey regarded what will thus be Danebury as “British,” what will accordingly be Quarley Hill he calls “a great Roman camp,” by which he conceives Danebury was “answered.” His reason for doing so is plain: in addition to its two main entrances on the north-east and south-west, Quarley Hill has two entrance-like gaps in its defences opposite one another on the north-west and south-east; the result is an appearance of four symmetrically-placed entrances, which naturally would suggest to Aubrey the four gates of a classical Roman camp. The notion has in fact long remained current: while the essentially British and prehistoric character of the earthwork was duly recognized in the last century,⁴ Dr. Williams-Freeman suggested in 1915 that on the strength of these entrances it might be a British camp adapted for Roman occupation.⁵ It will be shown below that excavation has disproved this suggestion. The camp is in all respects a genuine example of a hill-fort of the Early Iron Age of British prehistory.

Its situation is characteristic of many such hill-forts, but few of the same natural elevation can command such wide uninterrupted views in all directions.⁶ Something of these may be seen from Mr. Phillips’s camera on Pl. II: in 1, looking north-west from near the gap in the earthwork on that side, the ridge rises beyond the northerly depression above mentioned to Cholderton and Thruxton Hills, with the eastern summits of Salisbury Plain behind; in 2, covering most of the northern outlook from the

2. Vol. I, fol. 155b and 158. I owe the quotation to the kindness of Mr. L. V. Grinsell.

3. Vol. i, 134, col. 2.

4. See T. W. Shore’s list of Hampshire earthworks in *Proceedings Hants Field Club* I, pt. 1, 25; in Dr. Williams-Freeman’s list, *ibid.* VI, pt. 4, 344, it is given under Class B of the Earthworks Committee’s old classification.

5. *Field Archaeology as illustrated by Hampshire*, 122.

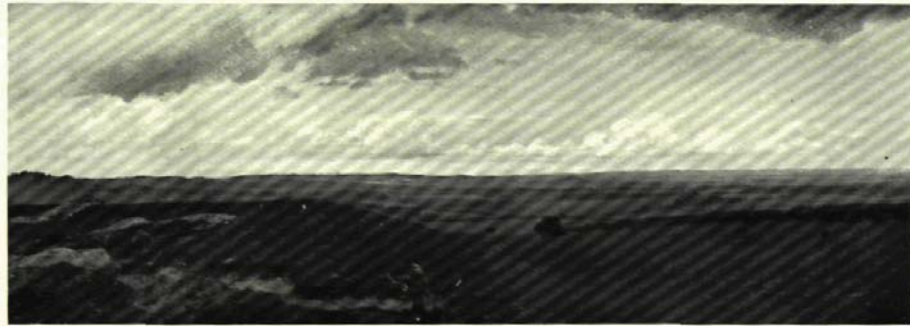
6. *Op. cit.*, 121.



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PLATE I.
Quarley Hill : 1, from the West ; 2, from the South.

[Photos J. F. S. Stone



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PLATE II.

[Photos C. W. Phillips

Views from N.E. end of Quarley Hill : 1, looking N.W. to Thruxton Hill and Salisbury Plain ; 2, looking N.N.W. to high ground bounding Thames basin ; 3, looking S.W. to Test valley, with Danebury in centre.

N.E. entrance, the horizon is formed by the high ground running west from Chute Causeway—beyond which Beacon Hill, Burghclere, and Ladle Hill, Great Litchfield (pp. 170, 189), can also be seen—and bounding the basin of the Thames; while in 3 is seen the south-westerly view from the same point, with Danebury, crowned by its thick clump of trees, rising beyond the Roman road and the railway in the centre, the downs towards Winchester beyond the Test valley on the left, and on the right the partly-wooded downland on the Hampshire—Wiltshire border by the Stockbridge—Salisbury road, with an ultimate skyline which extends eastward to reach the highlands of the New Forest. Such a dominating point of vantage must inevitably have attracted the attention of prehistoric man. But one's semi-modern ideas of "strategic value" demand caution in applying to any period of antiquity, and the just estimate of contemporary conditions with which they need to be checked can only be arrived at by a study of factual evidence. And it takes but a brief inspection of Quarley Hill to reveal that the defences of the hill-fort were preceded, at least in part, by an earthwork-system of a quite different kind. Along the ridge from south to north, and passing on a north-westerly course some 120 yards from the S.W. entrance of the camp, runs one of those peculiar "travelling" ditches which are so often to be encountered on the Wessex downland, considered by Colt Hoare to be embanked roads (his "covered ways"), and by others as boundary ditches. Dr. Williams-Freeman discusses them in his book⁷ and adopts the term "boundary ditch" to describe them without committing himself to any hard-and-fast view of their purpose; to carry the matter further, it is obviously necessary to get to know something about their age, and particularly of their age-relation to well-recognized earthworks such as the hill-forts of the Early Iron Age. Now at Quarley Hill, while the ditch just mentioned does not itself touch the camp, it throws off a branch which does, and on the opposite side another such ditch comes slanting up the hill from the north, is cut across by the ditch and rampart of the camp, resumes its course within, and rather over 100 yards farther on turns abruptly due east, is immediately cut across again by the camp's defences on that side, and runs away down the hillside to be lost in the cultivated ground below.⁸ It is at once obvious that this ditch, being twice cut across by the camp's ditch and rampart, should be earlier than the camp. Here, then, we have it indicated that the first detectable use to which Quarley Hill was put in early times was connected with these "boundary ditches," and only later was it chosen as the site of a fortification.

Inspection on the ground having reached this point, one can now supplement it by inspection from the air. The air-photograph

7. *Op. cit.*, 34, 46-7.

8. *Op. cit.*, 123-4.

of Quarley Hill here re-published as Pl. III was taken in January 1923 by the R.A.F. School of Army Co-operation, Old Sarum, at the instance of Mr. O. G. S. Crawford, with the express purpose of bringing out the priority of the ditch or ditches to the camp, and was first published and discussed by him in his monograph *Air-Survey and Archaeology*, read before the Royal Geographical Society and printed as a Professional Paper by the Ordnance Survey in that same year.⁹ It shows that there are in fact four ditches to be considered, which in this Report will be called Ditches 1, 2, 3, and 4, and are so marked on the accompanying plan of the site (Fig. 2). Ditch 1 is the long ditch running along the ridge from the south. After crossing the south-western end of the hill and descending again below the 500-foot contour-line, it throws off a branch on the right, Ditch 2, which has been so filled up that very little of it can be traced on the ground at all. Running first north-east and then turning west-south-west, it is traceable in the photograph up the hill as far as a point some 30 yards below the defences of the camp, where it fades out. However, the ditch above mentioned as approaching from the north, our Ditch 3, seems to have some connexion of plan with it, for when, as described, it has passed under the camp's northern defences and starts to turn east just inside the eastern defences, it is exactly on the alignment of Ditch 2 that it executes its turn. Lastly, the branch of Ditch 1 which touches the camp's defences on the south-west is our Ditch 4, which unlike Ditch 3 is not traceable at all inside the fortified area. If, then, all these ditches are of the same date as Ditch 3, all should be earlier than the camp: earlier, that is, than whatever phase of the Early Iron Age the camp belongs to, and perhaps earlier than the Iron Age altogether. It cannot indeed be assumed at the outset that all four ditches are contemporary with each other, but each has a connexion with the others of some kind, and they seem in part at least to belong to some kind of coherent system of ditch planning. To see what can be said of the system, if system it is, and of the age—both absolute and relative to any Iron Age date assignable to the camp—of these ditches in general, it will be best briefly to consider the whole of this part of the Hampshire—Wiltshire borderland at large, and any archaeological evidence bearing upon the Quarley Hill problem that is to be obtained within it. To this end, with the assistance above acknowledged from Dr. Stone, Mr. Farrer, and Mr. Crawford, the map Fig. 1 has been prepared, to show what is known in this district of the Early Iron Age, and with it of the period immediately preceding, the Late Bronze Age.

The area chosen for the map covers the north-west corner of the Test basin and the middle reaches of the valley of the Bourne,

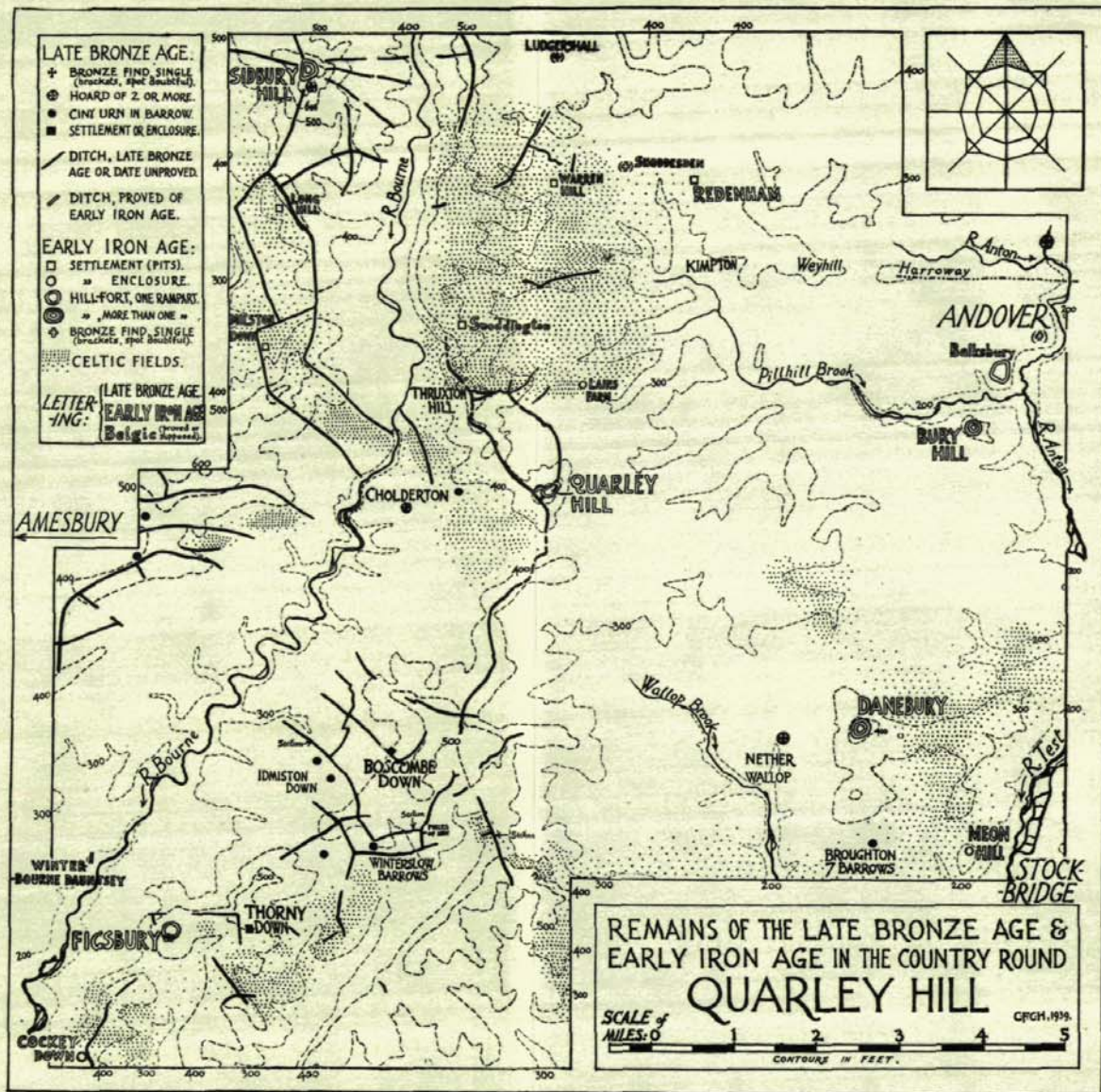
9. *O.S. Prof. Papers*, n.s. no. 7 (1923), 4-5, 32, and Pl. X.



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PLATE III.
Air-photograph of Quarley Hill (taken Jan. 23rd, 1923).

[Royal Air Force Official: Crown Copyright reserved.
† Shows Magnetic North.



Based upon the Ordnance Survey Map, with the sanction of the Controller of H.M. Stationery Office.

WARREN AND SON LTD., LITHOGRAPHERS, WINCHESTER.

FIG. 1.

with part of the Wiltshire downland sloping to the latter on the west, from the well-known landmark of Sidbury Hill, North Tidworth, to a point near Winterbourne Dauntsey, which is 4 miles N.N.E. of Salisbury Cathedral. Its eastern margin just includes the longitude of Andover and Stockbridge, while Amesbury lies some 2 miles outside its western edge. Modern names of towns, rivers, etc., being in sloped letters, two kinds of upright lettering have been used to mark the archaeological sites, answering to the two main periods of prehistoric time included. Early Iron Age site-names are written in outline letters, block capitals except where proved or supposed to belong to the latest phase of the period, that of the Belgic invasions or immigrations within the century or so before the Roman conquest: the symbols for the different kinds of site or find are in the same outline convention. Late Bronze Age site-names, on the other hand, are written in full black, and the corresponding symbols have been chosen to give a conformable effect. It will be seen that while the Andover and Nether Wallop hoards of bronze implements,¹⁰ the secondary bucket urn from one of the Broughton Seven Barrows,¹¹ and some vaguely localized pottery, probably domestic, found with some scraps of bronze somewhere in Kimpton parish,¹² cannot between them suggest more than quite a sparse Late Bronze Age occupation in the Test basin, the downs flanking the Bourne valley have yielded proportionately a good deal more of that period's remains. A number of barrows have produced Late Bronze Age secondary urn-interments: two in Amesbury parish (Goddard's Nos. 71 and 77),¹³ in Idmiston parish the disc-barrow Goddard 1 or 3¹⁴ and the round barrow Goddard 11,¹⁵ while another of the Idmiston Down group, Goddard 19, contained a primary urn-interment of the same period,¹⁶ and of the near-by Winterslow barrows the "bell-barrow of chalk" excavated by Hutchins contained another secondary.¹⁷ On Easton Down, some 50 yards east of the well-known earlier flint-mines, Dr. Stone found the pieces of a solitary bucket-urn,¹⁸ and further north, in the "Barrow Field" group in Cholderton Park, fragments of a similar urn (evidently a secondary) were found protruding from a barrow by my wife during the period of our excavations. As for bronze

10. Andover: *Proc. Soc. Antiquaries* xxvi, 323.

Nether Wallop: hoard of square-mouthed socketed axes of Brittany type, of which six survive in the British Museum (unpublished: acquired 1922).

11. *Arch. Journal* ix, 11-12; *Proceedings Hants Field Club* xiv, pt. 1, 20.

12. Unpublished: Winchester Museum.

13. *Proc. Prehist. Soc.* iv, pt. 1, 187; Salisbury Mus. nos. 207, 206.

14. *Ibid.* and *Wilts Arch. Mag.* xxxviii, 267; Abercromby (*Bronze Age Pottery*), no. 427.

15, 16. *Ibid.* and *Wilts Arch. Mag.* xlvi, 387.

17. Evidence re-assembled by Dr. Stone in *Wilts Arch. Mag.* xlviii, 174 ff. This barrow, Stone's Winterslow no. 3 = Goddard's Idmiston 23a.

18. *Wilts Arch. Mag.* xlvi, 234.

implements of this age, a winged axe is recorded from Sidbury Hill,¹⁹ and a socketed axe from somewhere in Ludgershall parish;²⁰ a socketed axe and a palstave were found together at the S.W. corner of Cholderton Lodge cottages;²¹ and from the site of the Iron Age hill-fort of Figsbury Rings there is the old find of a leaf-shaped bronze sword.²²

Dr. Stone has drawn attention to this sword in connexion with his discovery a mile east of Figsbury of an important settlement-site of the Late Bronze Age people on Thorny Down, where his excavations have brought to light much pottery, distinctive flint implements, etc.,²³ and on Boscombe Down East, 2½ miles to the north-east, he has excavated and described²⁴ an example of the characteristic type of enclosure constructed by the same people, formed of a complete (but for entrances) or more or less incomplete square or oblong of single ditch and low bank. Such enclosures were of course first discovered to belong to the Late Bronze Age in Wessex by General Pitt-Rivers in his excavation of those at South Lodge (Rushmore Park), Handley Hill, Handley Down (the "Angle Ditch"), and Martin Down on Cranborne Chase;²⁵ furthermore, 500 feet east of the Martin Down enclosure there passes a travelling "boundary ditch" of the same kind as those we have found on Quarley Hill: the General excavated this for 300 feet of its length, and from his finds of stratified pottery was able to assign it to the same Late Bronze Age occupation as the enclosures.²⁶ This brings us to the system of these ditches in the region covered by our map, for the southern side of Dr. Stone's Boscombe Down enclosure is actually formed by one of them, and though it cuts off the nose of the enclosure-ditch at one corner and so must be presumed later than it in strict point of time, it is evidently associated with the enclosure in purpose, and thus belongs to the same Late Bronze Age occupation of the region. Two more such enclosures, as yet unexplored, have been located by Dr. Stone on Idmiston and the adjacent Porton Down,²⁷ and the system of "boundary" ditches on all this block of downland, marked on our map as completely as field-work and air-photography between them make at present possible, appears quite homogeneous, and, though very possibly comprising subsequent additions to an original lay-out, may be regarded without much doubt as initiated by the Late Bronze Age population. The most obvious

19. *Proc. Soc. Antiq.* ix, 227; *Wilts Arch. Mag.* xxxviii, 115 (in North Tidworth parish).

20. *Devizes Mus. Cat.*, ed. 2, 68, no. B 22 (W. C. Lukis Coll).

21. Unpublished: Andover Museum.

22. Crawford and Keiller, *Wessex from the Air*, 86, fig. 13 (Ashmolean Museum, Oxford).

23. *Wilts Arch. Mag.* xlvii, 640-660. 24. *Ibid.* 466-489.

25. *Excavations in Cranborne Chase*, iv, 1 ff., 46 ff., 59 ff., 185 ff.

26. *Ibid.* 190 and Pl. 307, bottom.

27. *Wilts Arch. Mag.* xlvii, 488.

feature of the system is the row of ditches running at more or less regular intervals north-westwards down towards the Bourne. Dr. Stone dug a section of one of these on Idmiston Down, and found its profile very similar to that revealed at the Boscombe Down enclosure : he obtained a like result higher up its course on Easton Down.²⁸ In the latter area this ditch and its neighbours evidently started their course originally as branches from a single ditch running from the S.S.E. along the highest part of the ridge, over Roche Court Down, where Dr. Stone once more obtained a similar result from a section.²⁹ And that single ditch may be followed northwards along a sinuous course, diversified but not interrupted at two points by curious small kinks, along the crest of the ridge between the 400-foot contours, past the earlier flint-mines at Martin's Clump, down into the depression crossed by the railway south of Quarley Hill, across which it has been almost completely traced by Mr. Farrer. In fact, on ascending the hill beyond, it turns out to be the identical Ditch 1 of our Quarley series. There is then at least a *prima facie* case for believing that this evidently initial member of the series is of Late Bronze Age date.

What, then, was the purpose of these ditches? They consist essentially of a steep-sided, narrow-bottomed, rather deep cutting through the chalk, with a low, spread bank, not always now traceable, on either or both flanks. Details of their surface appearance (univallate, with one bank visible; bivallate, with two visible; or ditch only visible from the air) are not marked on our map; they will, however, be found, for most of those in its south-western quarter (together with the region adjoining on the west), on the Old Sarum sheet of the Ordnance Survey Map entitled "Celtic Earthworks of Salisbury Plain" (1934). In the Foreword to that map, the question of purpose is briefly touched on. The double ditches there noticed as perhaps roads, *e.g.*, on the ridge south-east of Figsbury, are at least in that case; Dr. Stone tells me, so closely associated with surface sherds of Roman pottery that for our present purpose they may be disregarded, though it seems likely that these are really Romano-British enlargements of earlier ditches of the same sort as the great majority. The latter are regarded in the Foreword as less probably roads than boundaries, perhaps of cattle and sheep pastures. This is the view of those in the Boscombe Down area taken by Dr. Stone,³⁰ and the notion well suits their planning as already described. A similar system, of ditches running at intervals on a parallel course down the chalk ridges towards the river, is to be seen on the other side of the Bourne towards Amesbury, and opposite those another such ditch has recently been photographed from the air in Cholderton Park. The oblong "ranches" so bounded need not, however, always end on the

28. *Ibid.*, xlvii, 79.29. *Ibid.*, xlv, 568.30. *Ibid.*, xlvii, 488.

river. A similar "ranch," with Ditch 2 at its southern end, is formed by Ditches 1 and 3 of the Quarley series: they run from our hill north-westward to be linked again on Thruxton Hill a mile and a half away, where a subsidiary ditch forms a sort of sub-triangular enclosure between them, and scraps of prehistoric pottery have been picked up by Mr. Farrer both here and at the Quarley Hill end of the "ranch" likewise.³¹ But it remains true, both here and in the much less completely preserved group of ditches further north towards Ludgershall, that the main idea of the system appears to have demanded a main ditch running along the ridge with lateral branches running off from it, or alternatively radiating from a central high point, of which the leading instance is Sidbury Hill. The radiating ditches there have been known ever since the days of Colt Hoare, whose map of them is reproduced in Dr. Williams-Freeman's book;³² there is, of course, no reason for assuming them to be contemporary with the evidently Iron Age camp on the hill's summit, for as at Quarley Hill, any or all may be earlier, and their possible Late Bronze Age date reminds us of the winged bronze axe found on the hill as already noticed (p. 142).

To the west of Sidbury an interesting further point was first brought out by Mr. Crawford:³³ on Figheldean Down (just off the edge of our map), ditches belonging to the same system separate an area of untouched downland from considerable patches of the well-known Celtic Fields. There are many other instances of this: on our map, the most obvious is on Thruxton Hill, where the ditch complex just mentioned forms part of the southern boundary of an enormous area of Celtic Fields stretching away northwards past Snoddington and Warren Hill and east towards Kimpton. This does not necessarily mean that ditches and fields were laid out at the same time: it does mean they might be utilized at the same time, but in such cases the fields may have been, and it seems frequently were, laid out in patches bounded by ditches already existing (though at one point on Figheldean Down a couple of fields lie over beyond the ditch). On the other hand on Milston Down, just over a mile further south-east and just within our map, a fine group of Celtic fields is obliquely traversed by one of the ditches bounding the two long "ranches" which sprawl over the hills between Sidbury and the river at Cholderton. The air-photograph illustrating this was published in 1932,³⁴ and there can be no doubt of the priority of fields to ditch. Changes of plan have then to be allowed for occasionally, by which agricultural land was turned over to pasture—for this ditch completely

31. Crawford, *Air-Survey and Archaeology*, 4.

32. *Field Archaeology*, 48, Fig. 7 (cf. 46-7), from Colt Hoare, *Ancient Wilts*, i (1819), 180-1.

33. *Air-Survey and Archaeology*, 39, with map 1 at end.

34. Kendrick and Hawkes, *Archaeology in England and Wales 1914-1931*, 300, Pl. XXIV, 1.

ignores the planning of the fields and is dug ruthlessly across their delimiting banks, so that its only conceivable purpose seems to be that of a boundary to a tract of pasture land. Such changes—another example on Ladle Hill, Great Litchfield, will be noticed below (p. 170)—may have occurred at any time within the duration of the habit of making such ditches as boundaries, that is, in the Late Bronze Age or as far into the Iron Age as it may have lasted; the upper dating-limit provided by the Celtic fields cannot arbitrarily be more closely fixed, for though the Celtic field-system in Wessex was most fully developed in the Iron Age, there are signs³⁵ that its inception was no later than the Late Bronze Age, as is well known to be the case in Sussex,³⁶ and was due to the same people who in that period introduced the ditch-system.

But while Celtic fields may thus sometimes be as early as the Late Bronze Age, ditches may sometimes be as late as the Early Iron Age. Dr. R. C. C. Clay examined a number in south Wiltshire, and, by cutting sections across four of them near the Early Iron Age settlements of Fifield Bavant and Swallowcliffe Down, not only dated them to that period, but threw fresh light upon their purpose.³⁷ Their narrow bottoms were trodden hard, and each was laid out to connect the heads of two neighbouring combs by passing straight across the intervening ridge of down. He accordingly interprets them as cattle-ways, and, noting that their course lies across downland covered with Celtic fields, concludes that they were for driving cattle over from one valley-pasture to the next without risk of their straying among the crops. A similar conclusion has been reached by the Drs. Curwen in Sussex,³⁸ where on Glatting Down one has been dated by pottery as early as the Late Bronze Age, and Dr. Williams-Freeman has enlarged on the subject of these "cross-dykes" in general with the same interpretation as his result.³⁹ In some instances they may be not only double, but treble or multiple, and one of these, on Thickthorn Down in Cranborne Chase, shows close association with a quadrangular enclosure of the South Lodge or Boscombe Down type.⁴⁰ This, like some others both there and in Sussex, is not a mere cross-dyke, but a "travelling" affair like those of our map, so that the cattle-way as well as the boundary-ditch explanation has definitely to be taken into consideration in our context. In our area only one such ditch has been found by excavation to

35. e.g. at Marleycombe Hill in South Wiltshire Dr. R. C. C. Clay found three Late Bronze Age barrows to be demonstrably later in construction than the adjoining field lynchets: *Wiltshire Arch. Mag.* xliii, 556.

36. cf. Curwen, *Archaeology of Sussex*, 180 ff.

37. *Antiquity*, i, 61-65.

38. *Sussex Arch. Colls.* lxix, 35-75; Curwen, *Prehistoric Sussex*, 113-6.

39. *Antiquity* vi, 24-34.

40. Heywood Sumner, *Earthworks of Cranborne Chase*, 35-7 and Pl. XVI.

have the distinctive trodden bottom of a cattle-way, the short length at Winterbourne Dauntsey excavated by Dr. Stone and found to be both shallower and broader-bottomed than the average, with the unique further feature of a stockade of posts set in circular holes along both its berms.⁴¹ This ditch was datable by pottery to the Early Iron Age, and so completes all the evidence we here need for saying that ditches used as cattle-ways may belong to that period no less than to the Late Bronze Age, in which these ditches in general were first introduced.⁴²

Still, we have seen that in our area the balance of evidence is strongly in favour of a Late Bronze Age date for the majority, and precisely here does the lay-out of the ditch-system as a whole argue, no less strongly, that their primary purpose was that of boundaries between ranches or areas of pasture for sheep or cattle. The angular enclosures associated with them have always been best interpreted as cattle-kraals, and their relationship to Celtic fields shows that so far from being always a device to keep cattle off arable land, their thickest concentration is in the Boscombe Down—Easton Down area where there are no Celtic fields at all. In any case, they represent the pastoral side of the Celtic economy, and here, it seems, they delimited pastures which the Late Bronze Age people who introduced them kept separate from their arable. The latter was evidently on the south slopes of these downs towards Winterslow,⁴³ but it is probable that the greater part of the fields now discernible there date from the ensuing Iron Age and Roman periods. For taking the distributions shown by our map in general, it is obvious that the Celtic-field areas are far more closely attached to the settlement-pattern of the Iron Age than of the Bronze Age. Agriculture, in fact, would seem to have increased its range progressively through the centuries of Celtic occupation, and despite an occasional exception like that of Milston Down, the general rule seems to be that where fields and ditches occur together, the fields if not contemporary with the ditches are later. Thus ditch-areas seem to have been "swamped" by fields both in the Winterslow region and especially in the big area between Thruxton Hill, Kimpton, and Ludgershall. And it is perhaps in this connexion that we may find the best clue to the seeming antagonism between the boundary and the cattle-way explanation of the ditches' purpose.

When first laid out as ranch-boundaries, these ditches with their low wide banks would make broad ribbons of white chalk across the downs, clearly visible strips of communal boundary

41. *Wilts Arch. Mag.* xlvii, 448 (Pl. 4), 450-3.

42. cf. Mr. Crawford's demonstration that they are in a number of cases later than Early or Middle Bronze Age barrows: *Air Survey and Archaeology*, 5.

43. cf. Dr. Stone in *Wilts Arch. Mag.* xlvii, 488.

running between the allotted pastures of this and that group of the community. As such, their use for communal passage between the different parts of the district so divided would from the first be inevitable, and was probably intended: as the history of the Latin word *limes* shows, the notions of "road" and "boundary" may be primitively most closely linked—*limes*, properly a balk between fields, really means both: a boundary when thought of transversely, a road when thought of lengthways. As the areas of cultivation increased, and more such boundary-ways came to run between or past arable fields, the specialization of the central element in the strip, the ditch itself, for the safe driving of cattle, would tend to become more and more habitual, so that one may often find ditches devised from the start as special cattle-ways in situations which demanded it. The actual use of any given ditch or ditch-system will thus remain a matter for investigation in each case following topographical and archaeological evidence, and here then emerges the first objective for excavation on Quarley Hill. In what sense, if any, were our Ditches 1—4 there anything more than mere boundaries? That they belong to a system essentially of boundary-ditches has now been shown, and it can only have been pastures that they were as such designed to delimit, for though there are plenty of Celtic fields away down at the foot of the hill on the west, there are none on its slopes or anywhere very near the ditches. But if, as we have now suggested, the boundary-strips formed by the ditches and their banks were also used for the passage of traffic, excavation might reveal some trace of it.

In any case, the investigation will be bearing on a site where the chronology of the ditches in question stands to be determined in relation to a datable Iron Age hill-fort, whose defences cut across at least one of them in such a way as to show that by the time it came to be built, the heyday of the ditch-system in this area was past. And the system based on our Ditch 1 is thanks to Dr. Stone's researches as closely associated as any in the country with the Late Bronze Age culture of the preceding period. The people who introduced that culture into Britain were immigrants, entering Wessex from across the Channel not a great while after 1000 B.C., and best known from the distinctive cinerary urns of their interments in barrows or urnfields, of the bucket, barrel, and globular types called by the collective name of Deverel-Rimbury urns. They are generally regarded as Celtic, and their coming made a well-marked break with the Middle Bronze Age occupation of the preceding centuries. A distribution-map of their distinctive pottery well shows how they came up into the chalk country from the south coast along beside the rivers,⁴⁴ and in particular, that it was up the Wiltshire Avon that they pressed most thickly; the

44. The latest maps are Mrs. Piggott's in *Proc. Prehist. Soc.* iv, pt. 1, 185-6.

Test basin has far less to show of them, as we have already remarked (p. 141), and it is, broadly speaking, true to say that the Test—Avon watershed ridge on which Quarley Hill stands forms the eastern boundary of their most intensive area of Wessex settlement. The ditch that they dug along that ridge, our Ditch 1, is in fact a boundary ditch of a particularly outstanding kind—virtually the prehistoric equivalent of the boundary between Hampshire and Wiltshire. It cuts right across the natural lines of inland communication between east and west, those represented by the Harroway and its like, of which we spoke earlier (p. 137), and in short gives an especial emphasis to the invasive, foreign character of the Late Bronze Age culture, already clear from the invaders' archaeological material and from their introduction of the ditch system as a whole.

For to find the origin of that system one would have to go far afield. Why did such an apparently laborious way of dividing up land become customary, as it must have done, in the Continental regions from which the immigrants came? That systematic land-division came to Europe from the Near East, and to the West from the Danubian territories of Central Europe, may probably be regarded as certain. One may also be sure that its original context was not pastoral but agricultural, and thus to explain the peculiar narrow and more or less V-shaped form of our ditches we may reasonably turn once more to a word in the Latin vocabulary of agriculture, connected with the plough-cultivation which must have first reached Italy from the same Danubian territories. *Sulcus* (Greek *δλκος* : cf. *ἔλκω*, I draw) means a furrow drawn by the plough—"whether," as Festus says, "for the sowing of crops or the founding of cities," for the plough was the traditional instrument of Roman land-demarcation for such purposes; but to be effective, a boundary-furrow must be enlarged into a ditch, and for such the same word *sulcus* is used by Pliny⁴⁵ and other writers.⁴⁶ It may in fact be suggested that both the use of such boundary-ditches and their furrow-like form had an origin in the old habit of ploughing a furrow for the delimitation of land; and if such furrow-ditches were dug to delimit their "Terramara" settlements by the forerunners of the Romans in the Italian Bronze Age, the custom may well have been shared by Transalpine contemporaries from whom, pastoralists as well as ploughmen though they were, the Celtic immigrants of Late Bronze Age Wessex derived it. In any case, the Late Bronze Age ditches of our downlands are perhaps the oldest land-divisions of their kind yet recognized in Europe.

In the Quarley Hill series of ditches, then, excavation had as its first aim a matter of very considerable importance. It should

45. *Nat. Hist.* xix, 4, 20.

46. Cato, *De Agri Cultura*, 33, 2-3; 43, 1-2; Virgil, *Georgic* ii, 24, 289; Columella, *De Re Rustica*, ii, 8, 3.

be possible to throw further light on the whole question by establishing the precise course and form of these ditches, by recovering any evidence they might display connected with their purpose, and by investigating their relative age. Furthermore, as was seen early in this Introduction to be obvious, there was their relationship to the Iron Age Camp : were any others earlier than its defences in the same way as Ditch 3 ? and could it be decided by excavation at the points of intersection how much earlier than its defences Ditch 3 was ? By dating both the ditch-system and the camp, the excavator might make a distinctly useful contribution to archaeological knowledge. For, to proceed now from the ditches back to the camp itself, the date, nature, and duration of its occupation were matters which could not help affecting one's whole historical picture of the Iron Age in this part of the country. The site's unique position alone assured that, and turning again to our map (Fig. 1) we may briefly consider what can be made of that picture at the outset from other finds and vestiges in the district. In the first place, instead of a Late Bronze Age occupation-pattern running more or less continuously from south to north up the flanks of the Bourne valley, there is a marked gap in the Early Iron Age pattern separating the Quarley Hill region from that between Winterslow and the south-west corner of the map. The latter really forms the north-eastern quadrant of a circuit of settlement centred round the great river-confluence of Salisbury. As is well known, the Highfield settlement-site at Fisherton on the edge of Salisbury appears from its pottery to have been continuously occupied throughout the Age,⁴⁷ covering an Iron Age A estimated to begin about 500 or at least in the fifth century B.C., distinguished by the association of plain and finger-tip coarse pottery with fine haematite-coated ware of the sort known typically from the North Wiltshire site of All Cannings Cross, and also the ensuing phases. Actually Iron Age A may be sub-divided into two stages, an A 1 in which the new culture was first introduced to supersede that of the Late Bronze Age people, and an A 2, into which certain new influences entered and are reflected in the pottery, answering somehow or other to the appearance in some parts of Britain of the range of cultures known as Iron Age B. While Iron Age A proper corresponds to the 'Late Hallstatt' and 'La Tène I' stages of the Continental Iron Age sequence, the results of these influences in Hampshire and Wiltshire appear in the pottery often called 'La Tène II.' Finally, not before the middle of the first century B.C. these regions were invaded by the Belgae or Iron Age C, who are associated with bead-rim and other pottery made on the wheel. The Prehistoric Society's excavations begun in 1938 at the smaller of the two enclosures known as Woodbury

47. F. Stevens, *Wilts Arch. Mag.* xlvii, 579 ff.

a mile south of Salisbury⁴⁸ have begun to throw new light on Iron Age A 2 and the new influences which supervened thereafter, and have been of further value in supplying detailed information about the small circular enclosure type of settlement which the site represents: a similar enclosure, discovered by air-photography on Cockey Down, Laverstock, appears in the corner of our map, and in the answering circuit of Iron Age settlement which now appears in the Stockbridge region of the Test valley, that on Meon Hill, close to Stockbridge, of approximately the same age, is well known to the Club from the late Miss Liddell's excavations of 1932-33.⁴⁹ The hill-fort dominating this region is of course Danebury, which shows a sequence of earthwork-plans⁵⁰ of which the first should be of Iron Age A, as the only sherd of pottery known from the site (in the British Museum) further suggests, while the later cannot at present be dated, but should have something to do with Iron Age B. A similar sequence of plans appears at Bury Hill just south of Andover, while the big weak camp of Barksbury close by suggestively resembles the Belgic-period enclosure of Casterley Camp in Wiltshire and may thus represent Iron Age C. A Celtic bronze spoon, found somewhere at Andover and now in the British Museum,⁵¹ should also date late in the Iron Age, and the same range of Iron Age occupation is represented in the north-west corner of the Test basin in the neighbourhood of Weyhill and Kimpton. A sizeable Iron Age A settlement was disclosed in the railway-cutting at Redenham,⁵² and the La Tène I brooch found at Shoddesden near by⁵³ falls within the same period: contemporary pottery collected by Mr. Farrer indicates another site on Warren Hill, and further south at Lains Farm, near Thruxton, air-photography has located another circular enclosure of the Woodbury—Meon Hill type, while close to Snoddington Furze in Shipton Bellinger parish a trial excavation in 1924 disclosed typical bead-rim pottery, etc., of the Belgic period.⁵⁴ Here, then, is probably the primary context (though its full extent was probably not reached before Roman times) of the great aggregation of Celtic fields already spoken of (p. 146) as apparently swamping the earlier-looking ditch-system from Thruxton Hill northwards, and some at least of the field-groups on the opposite side of the Bourne should be contemporary, since Mr. Farrer records surface

48. Interim report by Dr. G. Bersu, *Proc. Prehist. Soc.* iv, pt. 2, 308-313; see further p. 189 below.

49. *Proceedings Hants Field Club* xii, pt. 2, 127-162; xiii, pt. 1, 17-54.

50. Crawford in *Wessex from the Air*, 88-92, discussing Williams-Freeman in *Proceedings Hants Field Club* vi, pt. 4, 293-308.

51. *Antiq. Journal*, xiii, 464-5.

52. *Proceedings Hants Field Club*, ix, pt. 2, 217-18.

53. *Ibid.*, 218; *Arch. Cambrensis*, June 1927, 109, list no. 47 and note 2.

54. *Proceedings Hants Field Club* ix, 397.



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PLATE IV.

Quarley Hill: 1, N.W. defences, looking S.W. ; 2, S.W. Entrance, looking N.,
at opening of the Club's Field Meeting, Sept. 1938.

pottery attesting Iron Age A occupations on Long Hill and Milston Down, while the Sidbury Hill camp has double ramparts which suggest a rather later date.

Now Quarley Hill, standing almost isolated on the south of this big stretch of Iron Age occupation and 4 to 5 miles west of those along the Anton and Test valleys, has only a single rampart and ditch, and by all analogy should be considered of Iron Age A. What part did it play in the Iron Age history of the region? Was it a long-occupied "hill-town," or primarily of military importance for its wonderful strategic position? The only at all similar camp in the map area is that of Figsbury Rings, 7 miles farther down the same flank of the Bourne valley; the pottery excavated from there may now be classed as Iron Age A 2, like a good deal of that from the Woodbury enclosure, but the excavators (Captain and Mrs. Cunnington) were able to conclude that "it never seems to have been occupied for any length of time," although the single rampart had been twice reinforced, drawing on material obtained from a quarry-ditch inside its circuit, which was, however, never completely dug out.⁵⁵ Isolated on its hill-top, rather like Quarley Hill but not so strong, Figsbury seems to have been a hill-fort in the literal sense, a military stronghold. Was the same true of Quarley Hill? If so, the context gains in importance from its commanding geographical situation on the district's natural routes from east to west, and as regards its actual structure, its odd lateral entrance-gaps give it an added interest. Whatever its duration and character, its dating was obviously a matter of outstanding concern to Hampshire and Wessex archaeology. With these considerations in mind we may proceed to the excavations of 1938.

II. THE SITE AND THE EXCAVATIONS.

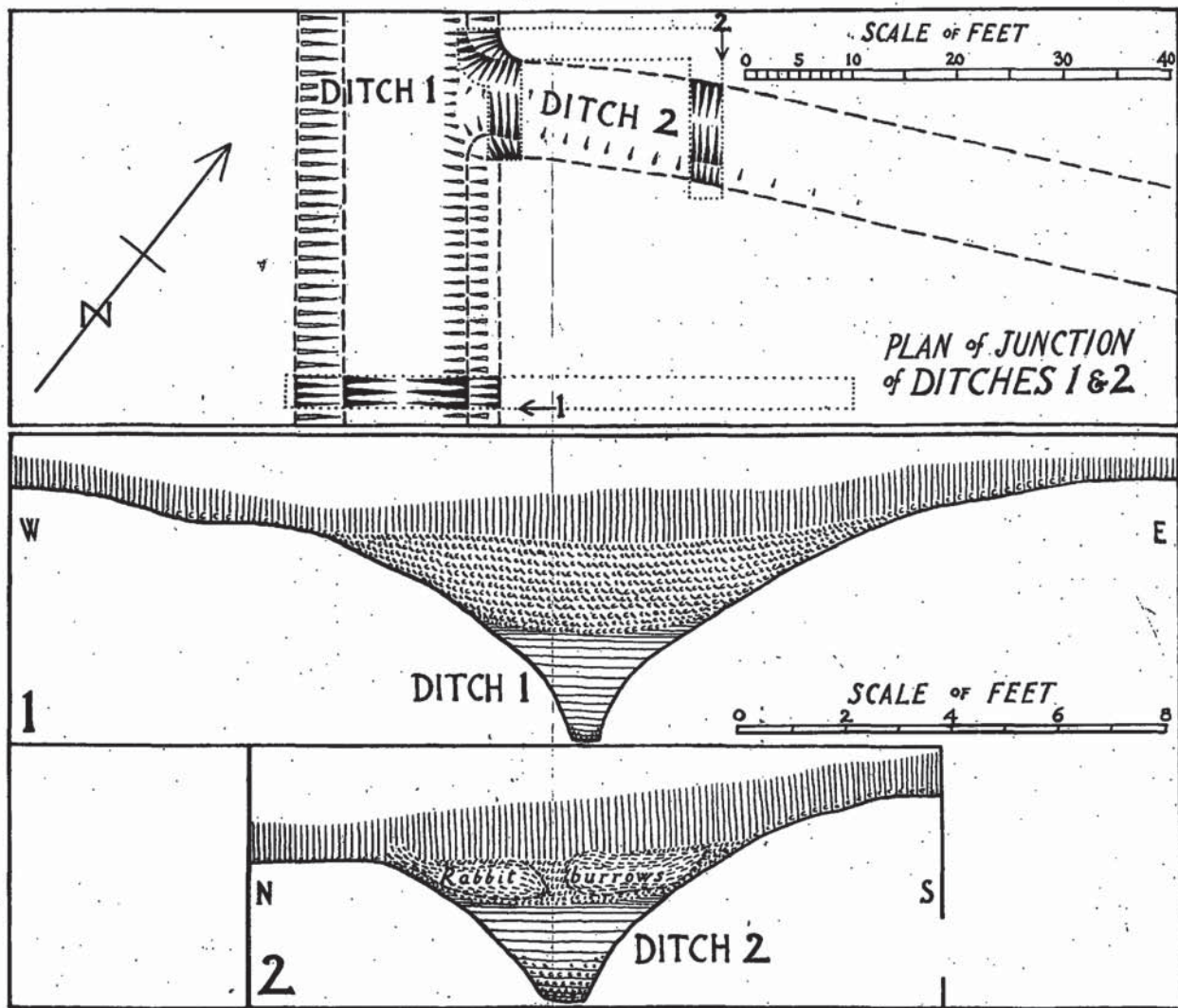
A. Descriptive (Plan, Fig. 2).

The physical conformation of Quarley Hill is simple enough to need but few words of detailed description. The hill is oval in shape, with its narrow end to the N.E. and its broad end to the S.W. Within the latter is its highest point, the spot-level of 561 feet O.D. on the southern rampart of the camp being roughly 200 feet above the mean level of the depressions in the main north-south ridge to which its slopes fall away. Between these across this broad end of the hill runs the line of the catchment-boundary marking the watershed between the Test and Avon basins. The slopes of the hill—now largely overgrown with juniper and still more overrun with rabbits—are steep on the long sides—about 1 in 5 on the S.E. and from 1 in 5 to 1 in 4 on the north; from the ends of the oval they fall more gently—about 1 in 7 on the

55. *Wilts Arch. Magazine* xliii, 48-51; Crawford in *Wessex from the Air*, 84-6.

N.E. and 1 in 8 on the S.W., where a modern track runs up, branching not far above the Grateley—Cholderton road from what is now likewise a track, but in pre-turnpike days was the main road from London to Exeter, running along the southern foot of the hill-side. Between these steep slopes the top of the hill forms a plateau which for the 400 or so yards between the N.E. and S.W. end portions displays a marked tilt towards the north—a feature which may be most clearly seen in the photograph Pl. I, 1. This northward tilt away from the sun is an unfavourable feature from the point of view of habitation, and careful scrutiny, facilitated by the excavations, disclosed a further disadvantage: a large proportion of the hill-top is covered with a stiff drift of clay-with-flints, that most disagreeable capping, formed probably of the débris of denuded beds of Eocene formation,⁵⁶ which overlies so much of the Hampshire chalk. Naturally, this will bear thick vegetation, and its presence accounts for the success which despite the hill's exposure to wind has attended the planting of the big oval clump of trees (mostly beeches and conifers) that so enhances its present-day appearance (Pl. I). This planting seems to have been done in the late 18th century, when accordingly the low enclosure-bank round the clump should be dated; presumably before this, the clay (there rather gravelly) and flints were quarried over a considerable area of irregular diggings towards the broad end of the oval. The clay-with-flints spreads well outside the boundary of the clump on the N.W., where it spills over the brow of the hill almost to the 500-foot contour-line, and also a little way on the S.E., opposite the gap in the camp's rampart on that side: in addition to minor patches, there are two other distinguishable spreads of it, one on each of the rounded knolls that form the two ends of the hill on the N.E. and S.W., outside the area of the camp defences, from which their exclusion is thus to some extent explained. It will be found that this clay-with-flints is of distinct importance in connexion both with the camp and the ditches preceding it. The camp itself encloses some $8\frac{1}{2}$ acres, in an oval answering to the form of the central portion of the hill. Its single rampart stands now from 15 to 16 feet above the silted-up ditch; the entrances at the N.E. and S.W. ends appear unquestionably ancient, but the former at least is remarkably broad—over 50 feet from rampart-crest to rampart-crest, while the narrower lateral gaps on the N.W. and S.E. clearly required investigation as above explained. The course of the four ditches, of which Ditch 3 at least is so obviously earlier than the camp, has been described (pp. 139-140). It only remains then to say a few words about the Plan (Fig. 2) as a guide to the excavations. The only excavation-trenches marked on it (in black) are those outside the areas of which

⁵⁶ Crawford, *The Andover District* (Oxford Geographical Studies, 1922), 19.



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FIG. 3. Quarley Hill Ditches 1 and 2: Plan of junction and Sections 1 and 2.

of Early Iron Age type, identical with that of the occupation-layer of that period to be noticed close by directly. While the clay in the ditch itself is evidently silt from the bank on its N. lip, this filling of the hollow beside and over it seems to be artificial, the work, as the potsherd confirms, of the Iron Age occupation. For 25ft. farther E., where Section 4 was dug across the ditch (Fig. 4), the corresponding deposit, here of clay mixed with chalk, is plainly seen from its heaped-up profile (Fig. 5) to have been shovelled into place from the banks on either side, of which next to nothing was left in place. Beneath this, Ditch 2 was found to be rather wider than before, with a bottom 2ft. 6in. across and hollowed to the same distance in depth below its chalk edges, which are weathered to some 7ft. apart. Its primary silt consisted of the same fine yellowish chalky material as before recorded in Sections 1 and 2, with a little looser chalk below the sides; it was just over 1ft. deep, and above it was a stratum of light vegetal mould, not quite so thick, with a slightly concave upper surface. Upon this the re-deposited bank-material lies to a maximum depth of 1ft. 4in. It seems, then, that the Iron Age occupants of the site had sought to level up this portion of the ditch, having found it partly silted and covered with mould that must represent a time-interval before their arrival long enough for grass vegetation to grow over it. This grass-growing indicates that the interval was one of disuse of this portion of Ditch 2, and the reason becomes apparent when the intrusion of Ditch 3 on to its line is investigated.

The junction of Ditch 2 and Ditch 3. This is planned in Fig. 4. Ditch 3 approaches running S.S.W. At a point 20ft. N. of the middle line of Ditch 2, it begins to turn south and east, curves through a full arc of 90 degrees, completely truncating Ditch 2, and takes up its alignment as its own, thereafter shifting a few degrees on to the course of E. 8° S. which takes it away down the hill to be lost in the cultivated ground below. That it was designed to supersede Ditch 2, and not merely to effect a contact with it, is clear from its very much greater depth. The difference, at the point of Ditch 2's truncation, is a full 3ft., and as the photographs show on Pl. V, its deep, steep-sided curve simply leaves the end of Ditch 2 high and dry. As regards the silting-relationship of the two ditches, the primary silt in both was the same yellowish fine chalky material as already described, and where one runs into the other this silt was found to be continuous. In Pl. V, 1, blocks of it are seen still in place across the junction, which is shown in Pl. V, 2 with these removed and the clean-cut chalk exposed. The lie of this silt over and on either side of the junction showed that Ditch 2 had accumulated a good foot of it by the time Ditch 3 was cut, but that when that was done the two remained open together, so that the progress of a like accumulation in Ditch 3 produced a

in the camp defences to be described below, impinged on its line and found nothing: only the clay-with-flints was here already thick and extremely stiff, and it became clear that on reaching the edge of the natural vegetation which this must anciently have borne, Ditch 2 stopped. The air-photograph has nothing to show for it inside the camp rampart, where the clay-with-flints still continues, so the next trench across its alignment was dug inside the clump of trees, 220ft. inwards from the rampart's crest. Here there was still clay-with-flints, though somewhat patchily spread, and once more no sign of the ditch. Following the alignment through the trees, one approaches the point where, as already remarked (p. 140), it is approached from the north by Ditch 3, which runs along the edge of the clump on its N.E. side, and executes its abrupt turn to the east exactly on the same alignment of Ditch 2 produced. In fact, a trench dug in the most practicable spot among the trees inside the clump's enclosure-bank opposite this point showed that there, some 30ft. before reaching the turn of Ditch 3, Ditch 2 had started again (Section 3 on plan, Fig. 4). This implies that its line must somehow have been continuously marked straight through the vegetation growing on the clay-with-flints from one side of the hill to the other. No doubt a hedge, or more probably a double hedge with a narrow lane down the middle to represent the actual ditch, was formed of the undergrowth ready to hand, which, as will be seen (pp. 179, 193) included what has been identified as most probably hawthorn.

This Section 3 is depicted in Fig. 5, and reveals Ditch 2 narrowed to an extent that shows we are here close to the point of its resumption (the exact location of which was impossible owing to tree-roots). The clay-with-flints is in fact still present: its edge on this side was found to run close under the modern enclosure-bank, against which a diagonal trial trench was dug just south of the ditch's line (Fig. 4); but it is thinning out, over a chalk surface scored unevenly with hollows into which its fringes are pressed. Through the side of one of these Ditch 2 was here cut, 3ft. wide and 18in. deep, sloping sharply to a flattish bottom 6in. wide; on its N. lip the undisturbed clay runs up to a foot in thickness, with the remains of its bank of excavated clay and chalky earth 6in. thick upon it, but on the S. side an attempt has seemingly been made to dig away the clay filling the hollow and expose the chalk, from which nearly all the clay has been removed. The result was a sunken berm, beyond which the excavated clay must have been banked up on the chalk edge of the hollow, and this would form the path for transit such as we have already envisaged. Subsequently, however, the hollow was filled up again, so that it is now invisible on the surface, and just above the bottom of the clay thus re-deposited was found a small sherd of coarse pottery

Ditch 2. The course of Ditch 1 is here N. 38° W., and Ditch 2, joining it at some 5° less than a right angle, is aligned from some 20ft. away on a course about W. 24° N. Section 2 across it (Fig. 3) was cut at 30ft. from the estimated middle line of Ditch 1, and revealed a similar but feebler profile. Ploughing within the modern period has made it virtually invisible on the surface, but rabbit-burrows dug into its soft upper silt of chalk rubble help to reveal its course (*cf.* Pl. III), while somewhat disfiguring its section. They had also disfigured the upper part of the stratification at the junction with Ditch 1, where, however, quite enough was intact to show that as the whole of the silting in one ditch ran continuously into that in the other, the two must have been in use and decay together. That is, of course, not to say that both were dug simultaneously: Ditch 2 is 15in. less deep than Ditch 1, and may quite well be somewhat later within the same period. It will rank in any case as a subsidiary or branch ditch. One or two poor flint flakes only were found in its primary silt.

As Pl. III shows from the air, Ditch 2 may be seen to change direction some 430 feet from the junction and take up an E.S.E. course, slanting across the gully here noticeable in the lower part of the hill-side. It reaches the 500-foot contour-line just north of this pointing W. 15° S., and after a few feet fades out. A trench dug across its line here (Fig. 2) disclosed it just ending, as a cutting in the chalk only 1ft. deep and splayed to 3ft. wide; it also disclosed the reason for its interruption, for just here runs the edge of the hill-top spread of clay-with-flints already noticed (p. 152). Further trenches, prolonged N.W. and N.E. from the N.W. gap

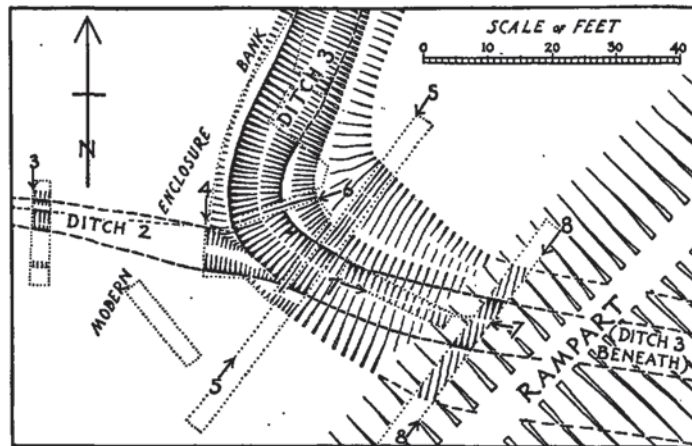


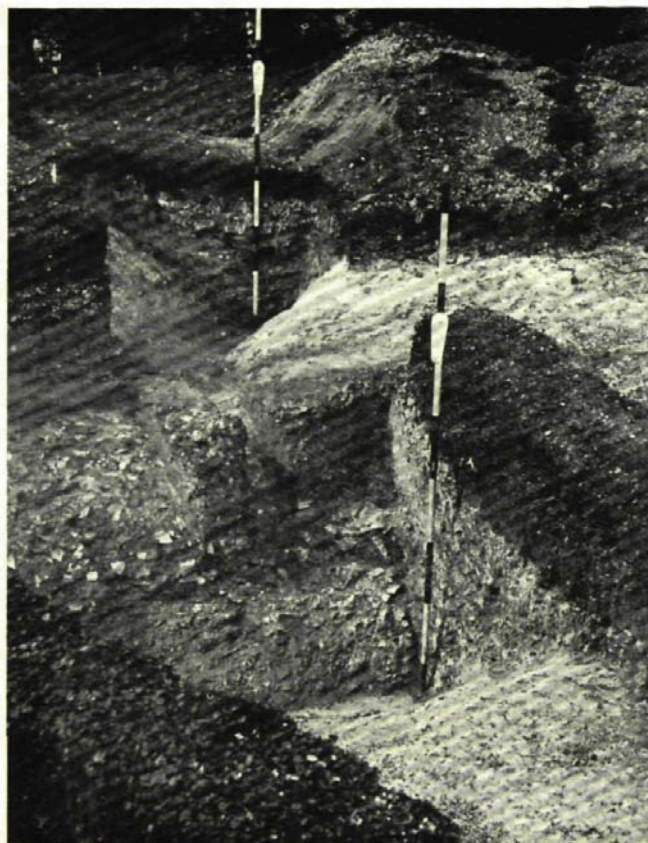
FIG. 4.
Plan of the junction of Ditches 2 and 3.

larger-scale plans are given in Figs. 3, 4, 7, 10 and 12, the position of each of which is marked by means of its number. Two of the marked trenches are later illustrated by sections, the numbers of which are given: Section 15 (Fig. 10) in the S.W. entrance, and Section 18 (Fig. 11) in the S.E. gap.

The account of the excavations which now follows is divided into two parts, the first dealing with the ditches and their relation to the camp, the second with the camp itself, its defences, and the occupation within.

B. The Ditches and the Camp.

Ditch 1. Ditch 1 has been burrowed into by rabbits almost throughout its length here planned. The best place for a section was thought to be close to the junction with it of Ditch 2, in the angle of which three trenches were dug (Figs. 2, 3) in case, as faint markings on the air-photograph (Pl. III) suggested, there had been any quadrangular enclosure within it of the Late Bronze Age type discussed above (pp. 142, 146). Nothing of the kind, nor any trace of settled occupation, was found, and the only trench of interest is therefore that prolonged to cut Ditch 1 at right angles as Section 1 (Fig. 3). The bottom was 4ft. 8in. below modern turf, quite flat and just 6in. wide. The sides had been cut steeply down to it, but were splayed above by weathering, so that from lip to lip the measurement is now some 12ft.—it was perhaps half that originally. For 2ft. above the bottom it was filled with fine, fairly compact, yellowish chalk primary silt, of even consistency except right at the bottom, but not set really hard; above this, 2ft. of slightly earthy chalk rubble represents the further denudation of the flanking banks, of which next to nothing now remains. The natural chalk on each lip of the ditch appeared trodden hard and slightly hollowed, and these strips of berm may thus very well have borne the passage of traffic, while the absence of all trace of a humus-line in the silt within it suggests that it was never left to become appreciably grass-grown before silting up to where the 8in. of existing surface turf begins. Its appearance, in fact, quite suits the notion that ditch, berms, and banks formed together a boundary used likewise as a road. In the primary silt were found three cores and six flakes of humanly-struck flint, of which two are illustrated in Fig. 14, 1—2. These are described below (p. 181): similar cores and flakes have been found elsewhere in both Late Bronze Age and Early Iron Age ditches, and further finds of them here will be noticed as we proceed. Similar flints and occasional scraps of pottery that might be either Late Bronze or Early Iron Age may be found on the surface between Ditches 1 and 2 as they approach each other to form the junction shown in the Plan, Fig. 3.



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PLATE V.

Quarley Hill : the truncation of Ditch 2 by Ditch 3, looking W.S.W. : 1, with silt partly cleared ;
2, with silt totally cleared.

continuous formation of the silt uniting the stratigraphy of both ditches. Thereafter, however, the light vegetal mould that we have observed in Section 4 formed, and formed in Ditch 2 only : between the line of Section 4 and the truncation of that ditch by Ditch 3, the mould stratum tapered away to nothing, and nothing was present to represent the same vegetal growth over the silt in the latter. Indeed, nowhere else in the excavation of any of this series of ditches was such a mould stratum found. The nearest approach to it will shortly be encountered at the top of the primary silt of Ditch 3 where it runs under the northern rampart of the camp (in Section 11 : see Fig. 9) : this was a thin humic formation only, and has, as will be seen (pp. 163, 194) been determined as representing a period of not more than a century of growth. It might be argued that the much thicker stratum here should represent a period longer in direct proportion to its greater thickness. But on the whole it was thought better not to undertake any attempt at a major chronological determination on this basis ; for it seems probable that the makers of Ditch 3 laid its accompanying bank across here, on a line following the curve of its corner right across Ditch 2 at just this point, so that our stratum of light vegetal mould may well be in part the remains of this bank, and not a purely natural formation. However, it is in any case certain that it stands for the disuse of Ditch 2 when once Ditch 3 had been made, and that that disuse lasted for a considerable time, during which, Ditch 2 being superseded, traffic along the line of Ditch 3 used the berm on the opposite side, which being the inner side of that ditch's curve was the shortest way round the corner. And indeed the berm there broadens out (Fig. 4) as though to cut the corner as conveniently as possible. Thus nothing would interfere with the grassing over of the hollow over the disused Ditch 2 on the other side, until subsequently, as already shown, the Iron Age people levelled it up with the mixed clay and chalk material of its own original banks.

Section 5 (Fig. 5) was taken right across Ditch 3 and its flanks just where (Fig. 4) the truncated end of Ditch 2 finally disappears. Its last trace can be seen as a slight ledge in the S. side of its successor. On the right is seen the latter's traffic-hollowed berm, broadening to turn the corner, as above explained, up the slope to what little is left of the N. bank beyond. On the opposite side the original berm of Ditch 2 is seen weathered to a sharp slant, with next to nothing left of the bank above it, which as augmented by the upcast from the deeply-cut Ditch 3 must have been here of some size. Its volume can, in fact, be gauged from the amount of its clayey chalk material re-deposited by the Iron Age people over the primary silting in the ditch. The surface of the latter is seen channelled by the scour of rain-water down the slope which has here begun.

to set towards the edge of the hill, and over that the re-deposited bank-material lies to a maximum thickness of 18in. all down the weathered S. side of the ditch down which it had been shovelled. Into it had sunk some amount of the Iron Age occupation-material—pottery, bones, and charcoal—which lay most thickly above it, in the heavily-blackened layer representing the actual surface on which, after shovelling it down for the purpose, the Iron Age people established their habitation. In Section 6, cut across the curve of Ditch 3 just N. of Ditch 2's truncation, this is seen at its maximum thickness of some 9in., the occupation-layer mingling with the loose shovelled-down bank-material beneath. Under that, Ditch 3 runs down to a depth of 5ft. below the natural chalk level, filled with the same primary silt as before, and on the E. side the hollowing of its berm by traffic as well as weathering is plainly visible: since its broadening up the slope beyond continues here as in Section 5 (*cf.* Fig. 4), with very little to show for bank, the primary silt is naturally spilt mostly from the untrodden opposite side. Further excavation N. of this section (Pl. VI, 1) showed the ditch gradually decreasing in depth to 4ft. and splayed to an even 10ft. between its berms: on the W. now runs the modern enclosure-bank bounding the clump of trees, but the overall width between what was left of the original banks may be given as some 17 to 18ft. The Iron Age occupation-layer gradually faded out, to disappear at about 30ft. N. of Ditch 2, while the layer of re-deposited bank-material shrank to no more than 6in.

As shown in Fig. 4, and in Pl. V and Pl. VI, 1, the total area excavated here covered almost all the region of the junction of the two ditches, except for the balks left for Sections 5 and 6. The Iron Age occupation-material will be discussed as a whole below (p. 179); meanwhile it remains to note that five small pieces of the same Iron Age pot (*cf.* Fig. 16, 4) were found at a point half-way between Sections 5 and 6, 3 to 6in. below the re-deposited bank-material in the top of Ditch 3's primary silt: strictly speaking, this is the oldest stratified find of Iron Age material made, but as the top of the primary silt was fairly soft, these pieces were probably trodden into it while the bank-material was being shovelled down, and are not really any earlier.

The primary silt itself contained altogether seven flakes of humanly struck flint, in general similar to those from Section 1 in Ditch 1 (p. 153); three of these are shown in Fig. 14, 3—5, and described below (p. 181). Further, almost on the bottom of Ditch 3, in the primary silt close to the line of Section 6, was found the stout flint core-axe or adze, Fig. 14, 6, described on p. 183. This flint industry is again similar to that found elsewhere in Late Bronze Age ditches, though also in Iron Age contexts. Otherwise no finds were made in this silt, nor in that of Ditch 2.

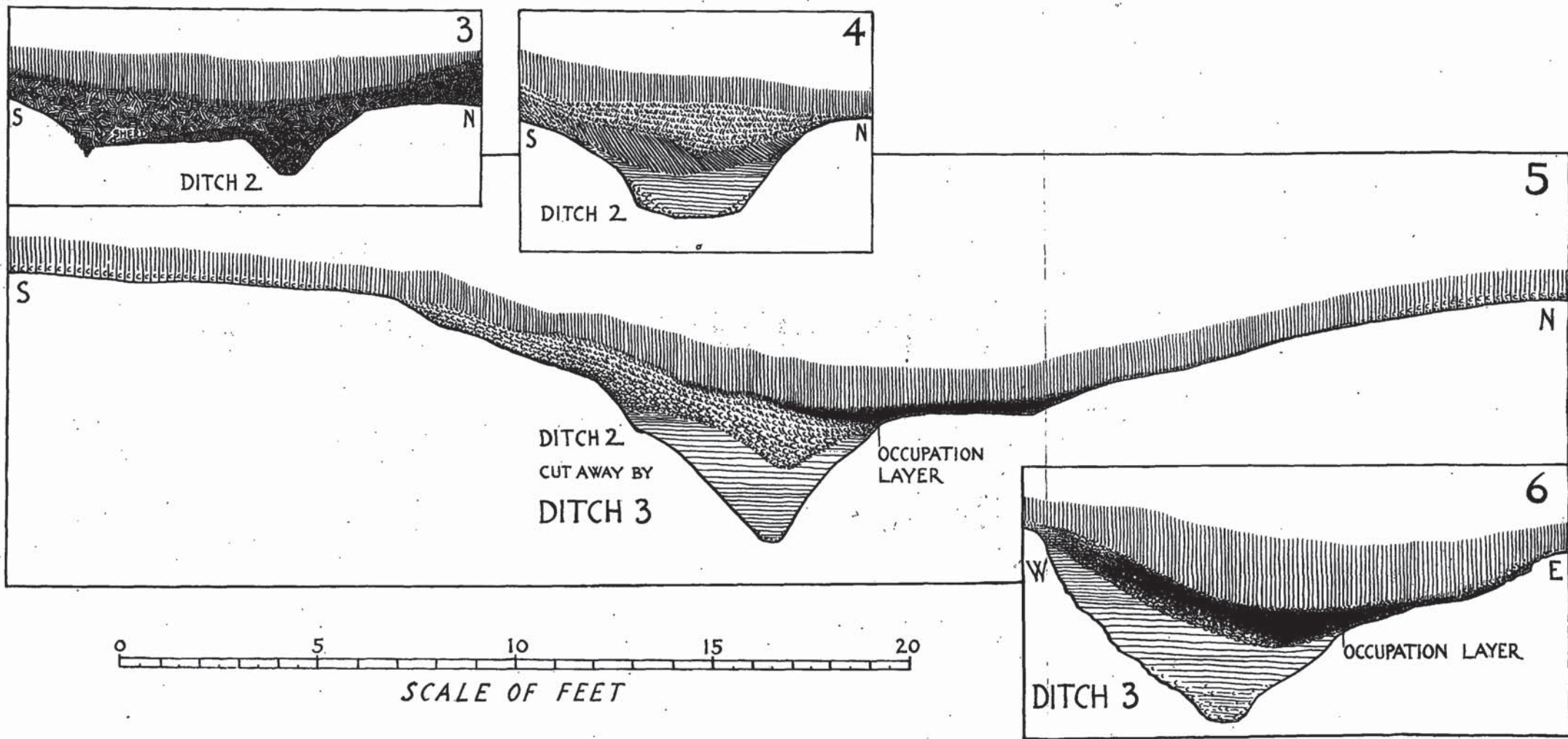
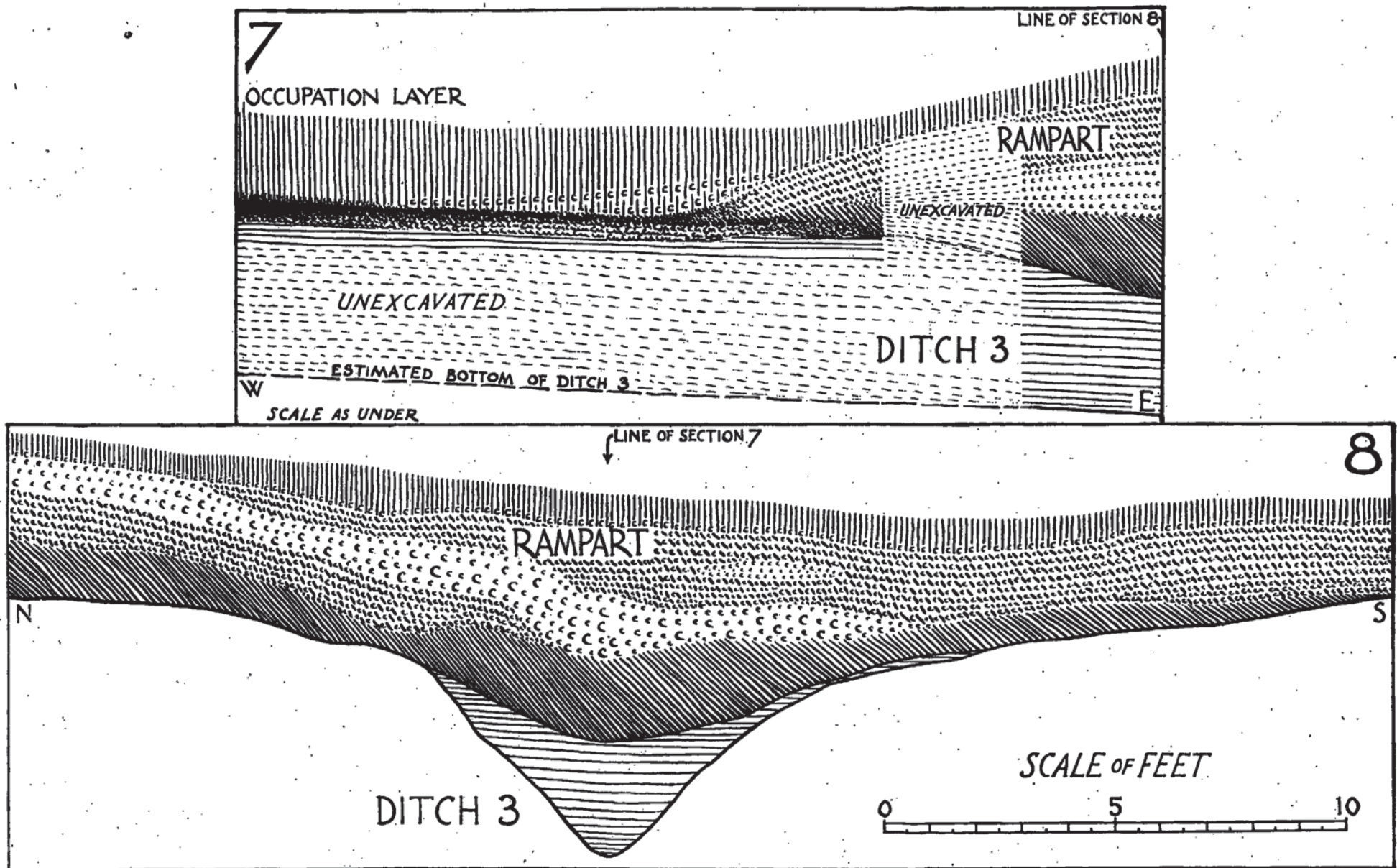
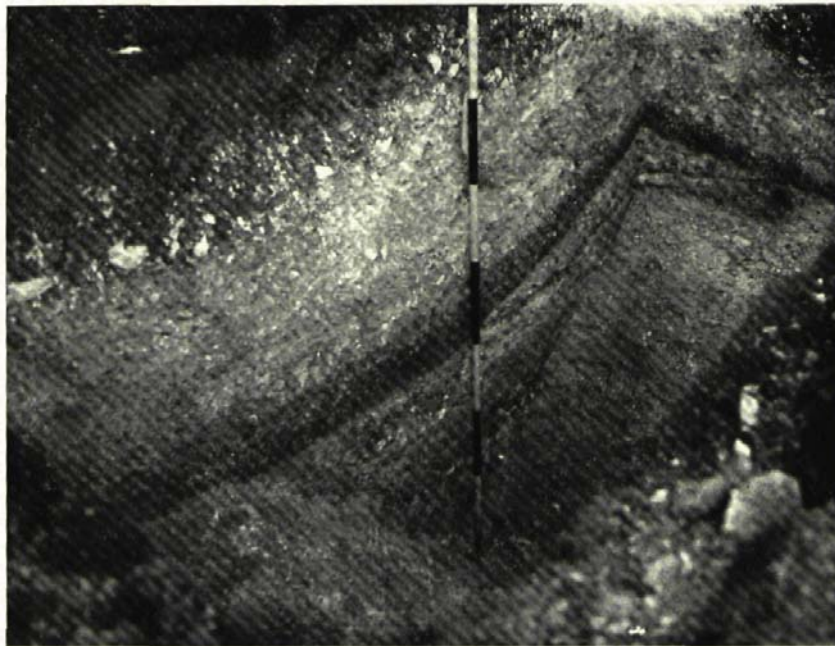
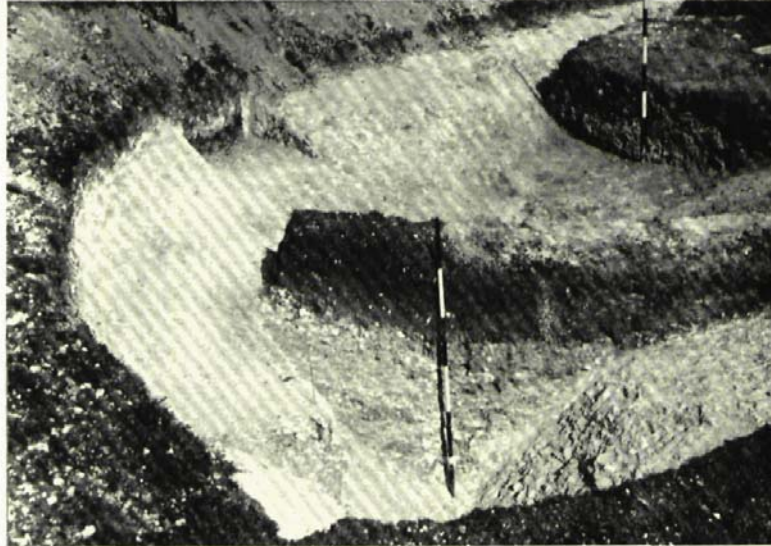


FIG. 5. Quarley Hill Ditches 2 and 3: Sections 3, 4, 5, and 6, in area of plan Fig. 4.



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FIG. 6. Quarley Hill : Sections 7 and 8, showing Ditch 3 running under eastern defences.



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PLATE VI.

Quarley Hill Ditch 3 : 1, looking N. from the turn at which it truncates Ditch 2 (latter here not yet excavated), showing Iron Age occupation-layer overlying silt ;
2, running under northern rampart of Camp (*cf.* Section 11, Fig. 9).

Ditch 3 and the Eastern Camp Defences. Section 7 was taken eastwards along the line of Ditch 3 to show it running under the tail of the eastern rampart of the camp (Fig. 6). The drawing is prolonged to reach the line of Section 8, which was cut at right angles, parallel with the crest of the rampart but 3ft. down its inner slope, to expose the profile of Ditch 3 transversely as it runs through beneath it. The depth of the ditch was here some 4ft. below its somewhat worn chalk edges, and the line of its bottom could be estimated from this and the corresponding figure in Section 5 for the main portion of Section 7, in which the primary silt was not excavated in full to expose it. The chief purpose of this section was to investigate the relationship of the Iron Age strata overlying its primary silt to the adjacent tail of the rampart. This sequence is really quite clear. The stratum of chalk shovelled down from the banks has here shrunk to no more than 6in., and on it the Iron Age occupation-layer, thick at the W. end, thins gradually out eastward, but ends only where the chalk under it tapers away to a finish nearly 14ft. from the W. end of the section. This point is a good 4ft. under the original tail of the rampart. Therefore the chalk was shovelled down and the occupation established before the rampart here was built. But charred and dirty matter from the occupation-layer also runs a little way up the original tail of the rampart itself; therefore the occupation continued after the rampart here had been completed. But not for very long; for the talus of loose earthy chalk rubble that silted subsequently down the tail of the rampart forms a clean blanket over this, so that by the time the rampart began to weather into silt here the occupation was already over.

How long before the building of the rampart Ditch 3 was dug cannot be closely gauged. The rampart here runs just along the brow of the hill, and at the top of this Ditch 3's primary silt was 3ft. 6in. deep, while the down-hill scour from thence eastwards has reduced this in Section 8 to 2ft. 4in. (Fig. 6). All one can say is that it must have taken some time to form. There was no vestige of soil-formation upon it, nor on the ditch's broad sloping berms, which once more appeared trodden hard and slightly hollowed as if by traffic. But the rampart-builders may have done some amount of cleaning-up of the surface here, for there were no traces whatever of the banks on either side of the ditch, as Section 8 shows, and the rampart was here throughout laid on a clean surface. Investigation of this question has therefore to confine its evidence to what was found in Section 11, on the northern rampart (p. 163). It remains notable that for stability on this clean sloping surface the base of the rampart was formed of a solid layer of clayey earth, averaging a foot in thickness, above which it was made up with layers of earthy chalk rubble and clean chalk in

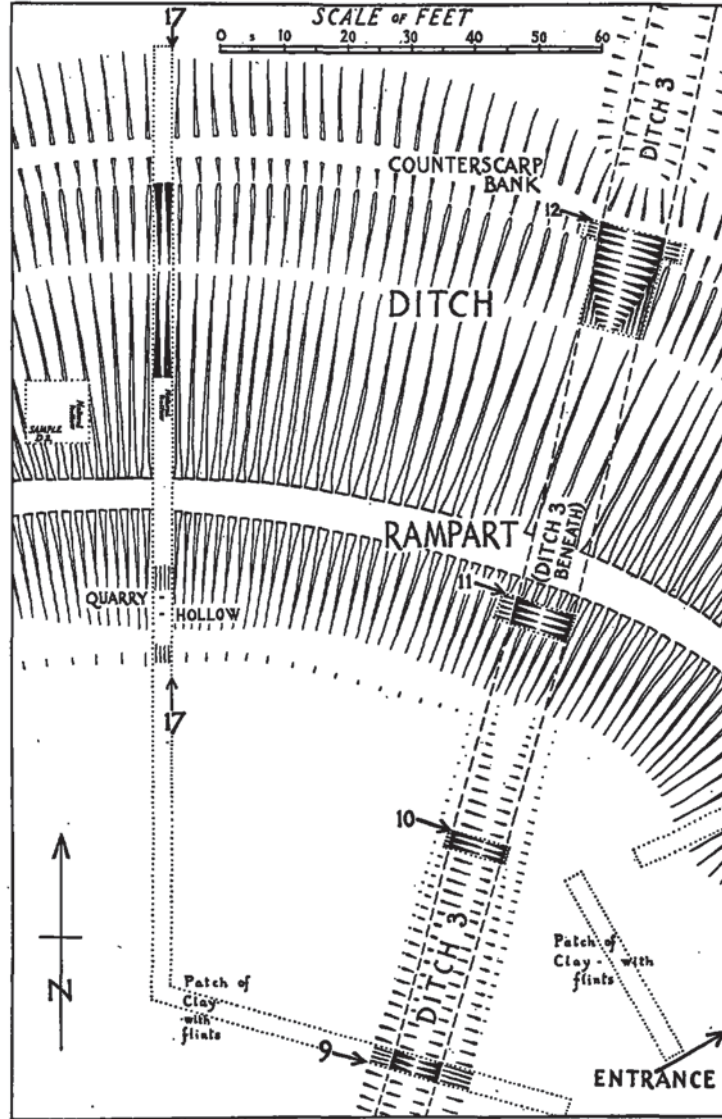


FIG. 7.
Plan of the excavations in and behind the northern camp defences.

larger blocks from its own ditch outside. The profile of Ditch 3 where cut by the latter was not here examined, as the Counterscarp Bank above it on the outside is damaged by burrowing animals, so that a clean section would not have been obtained.

Ditch 3 and the Northern Camp Defences. The area covered by the plan, Fig. 7, will be seen by reference to Fig. 2 to lie at the N. end of the camp directly W. of the N.E. entrance. Ditch 3, running without interruption on the same S.S.W.—N.N.E. course as north of the turn in Fig. 4, is continuously traceable on the surface between there and the tail of the northern rampart of the camp. In the 60ft. immediately S. of the latter, where it runs between two patches of the clay-with-flints above described, two sections were cut across it, Sections 9 and 10 (Fig. 8). Both yielded good standard profiles. In Section 9 it was 3ft. 6in. deep, from the level of edges weathered to some 8ft. apart, to a narrow flat bottom 9in. across, the slope of the sides being steeper in the last foot. The primary silt was of precisely the same material and consistency as that encountered in the previous sections. However, a band of larger chalk rubble crossed it about half-way up, running down from the edges to a thickness of 6 to 8in. at a mean 2ft. from the bottom in the centre. On the right of the section this appears continuous with what little is left of the bank flanking the ditch on that side, and it seems probable that this chalk band represents at least a partial shovelling down of material from the banks into the already half-silted ditch; this would be best assigned to the Iron Age occupation, as in the area of Fig. 4, but no finds of any kind were made, and sufficient bank-material was evidently left standing to produce another 18in. of the same fine yellowish silt as the primary, above this again and up to modern turf level. In Section 10 substantially the same results were obtained: Ditch 3 here has almost a true V profile, 8ft. wide and 3ft. deep, with a bottom only 3 in. across, and the chalk band in the silt is again visible. A second shovelling down of bank-material seems here to have taken place subsequently, perhaps in quite modern times, being represented by a 4in. chalky stratum directly under the modern turf. No finds were made in this section either.

Some 20ft. further north, Ditch 3 begins to disappear under the northern rampart of the camp, and Section 11 (Pl. VI, 2, and Fig. 9) was cut down through the inner slope of the rampart, 3ft. below the S. edge of its flattish crest (Fig. 7), to investigate the manner of its superposition upon the ditch's filling. The ditch was found cut into the solid chalk beneath the rampart as expected, its profile giving once more some 8ft. between the edges in their present condition, and a depth thence of 3ft. 6in. down to a flat bottom 10in. across, with sides sloping similarly to those in

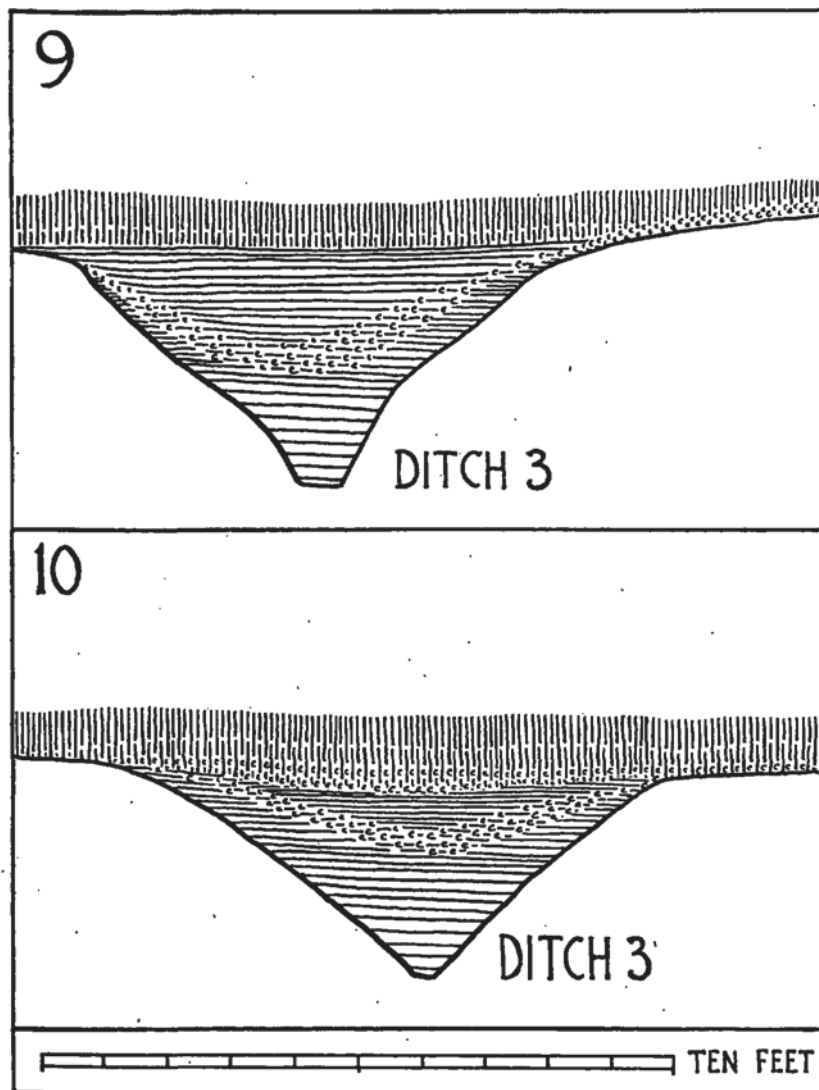


FIG. 8.
Sections 9 and 10 across Ditch 3 (see plan Fig. 7).



To face p. 163]

PLATE VII.

Quarley Hill Ditch 3 cut by northern Camp ditch (looking N.): 1, before excavation; 2, after excavation, showing Counterscarp-bank overlying silt (cf. Section 12, Fig. 9).

Section 9. Within it the now familiar fine yellowish silt had formed as elsewhere, but by the edges of the ditch its upper surface presented a new phenomenon. The top inch, or thereabouts, of the silt was of a brown, earthy consistency, indicating at least the beginnings of soil-formation. Plainly this might afford valuable evidence of the lapse of time between the silting-up of the ditch and the construction of the rampart over it. So two samples were collected and submitted to Dr. F. E. Zeuner, whose Report, acknowledged above (p. 136), is printed in full below on p. 193: Sample A was taken from the yellowish primary silt itself at 7in. above the bottom of the ditch, and Sample B from the earthy brown line on the top of it by the E. edge (Fig. 9). It will be seen from Dr. Zeuner's findings that while the evidence has not permitted him to say anything about the length of time taken by the ditch to silt up, his examination of Sample B enables him to report that "the lapse of time between the silting up of the ditch and the building of the rampart must have been short, since vestiges of a soil only were formed." He is "inclined to estimate that the time-gap did not exceed 100 years and probably was less"; in any case, "vegetation was poor on the silt before the rampart was built," and as the brown line shows nothing more than this embryonic turf growth, he adds that "no forest seems to have grown up on this spot." The conclusion then is that the time-interval between the digging of Ditch 3 and the building of the rampart of the camp here will be the length of years taken by the ditch to silt up to the brown line, plus not more than a century represented by the scanty growth of turf of which the brown line is formed. In view of the fact that the ditch is here already running over the brow of the hill on to its northward slope, it is permissible to add that the time to be allowed for the turf growth need not be much less than the 100 years given by Dr. Zeuner as a maximum, for that a downhill scour was active to the last down the middle of the silted ditch may be inferred from the next fact to be recorded.

The brown soil-line was found in place only for 2ft. 8in. by the E. edge, and 14in. by the W. edge of the ditch. Between, it and the whole 5ft. intervening breadth of primary silt under it had been dug away to a maximum depth of 2ft. 6in. leaving a great cavity, nearly touching the sides of the ditch and ending only 1ft. above its bottom. This cavity was filled with closely-packed chalk rubble, the bottom and middle layers of which, fairly clean and rather earthy respectively, seemed from their bedding to have been shovelled in from the E. side; indeed, the earthy layer there runs in continuously from the scanty remains of the bank that had flanked the ditch on that side, and the whole was covered by a deliberately-laid spread of stiff clay, which formed a bedding for the base of the rampart—on this side of clean chalk rubble—and

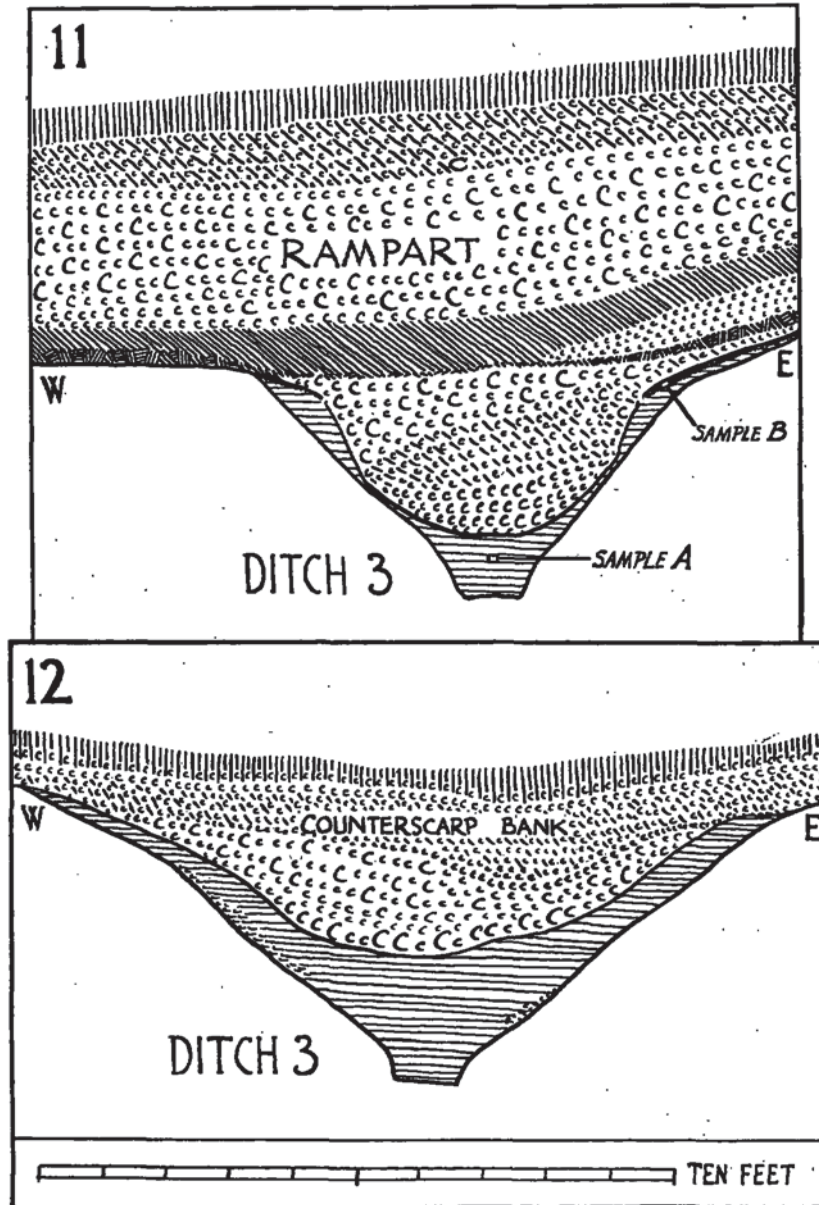


FIG. 9.

Sections 11 and 12, showing Ditch 3 passing under the northern camp defences.

was obviously integral with its construction. In fact, the rampart-builders had dug away the whole middle part of the primary silt of Ditch 3 here, leaving only the strips of scanty turf by either edge, and into the cavity so formed had shovelled down the bulk of the ditch's eastern bank. The top layer, with which they levelled the cavity up may be taken as derived from the other bank, but between this and the ditch intervenes a flat hard-trodden berm, and so no actual connexion with the bank can be perceived on this side. This berm was evidently that trodden by traffic along the ditch during the period of its use, and it was not turf-grown; but over it, and right across the section from one side to the other—though very thin in the middle—was laid the spread of clay already observed as forming the basal bedding of the rampart. Why did the rampart-builders take these elaborate measures here? Clearly for the sake of the rampart's stability. They must have removed the middle portion of the ditch-silt because it had been kept loose and unstable by the drainage-scour running down it off the brow of the hill, aided by the traffic—especially hooved traffic—which in wet weather at least would have naturally preferred its soft "tan" to the slippery surface of the adjacent chalk-rock berm, with its inevitable greasy film of white mud. To dig away this loose unstable silt, and replace it with hard-packed chalk rubble from the ditch's banks, sealed over with a firm bed of clay, would be a very reasonable preliminary to the building of a big rampart. The packing would not only avert risk of instability in the rampart itself, which as the section shows rises 4ft. 6in. above the clay line, formed of successive layers of chalk rubble (in which was a scrap of red-coated Iron Age pottery: p. 181), clayey earth, big block chalk, and earthy chalk rubble topped by modern turf: it would be a necessary lining for the inner face of the camp ditch in front, where it cut across Ditch 3 and exposed its filling.

Exactly the same precaution is attested by Section 12 (Fig. 9), dug, as Fig. 2 shows, where Ditch 3 reappears on the outer side of the camp ditch and runs under the Counterscarp Bank beyond. Ditch 3 had here weathered to as much as 12ft. wide, and was just over 4ft. deep, with a steeply-cut flat bottom a foot across. In the middle of its loose primary silt was laid a solid packing of chalk rubble, continuous with the Counterscarp Bank above and giving a combined thickness with it of nearly 3ft.; and the clearing of the whole of Ditch 3 from here to the slanting plane of its truncation by the camp ditch (Fig. 7) showed that this chalk rubble, including big blocks dug from deep in the camp ditch, had been carried down to the bottom along the plane of truncation to block the mouth of Ditch 3 and give the camp ditch a firm side transversely across it. Pl. VII, 1, shows this spot before excavation, with Ditch 3 running off down the hill behind the Counterscarp Bank: Pl. VII, 2, is a

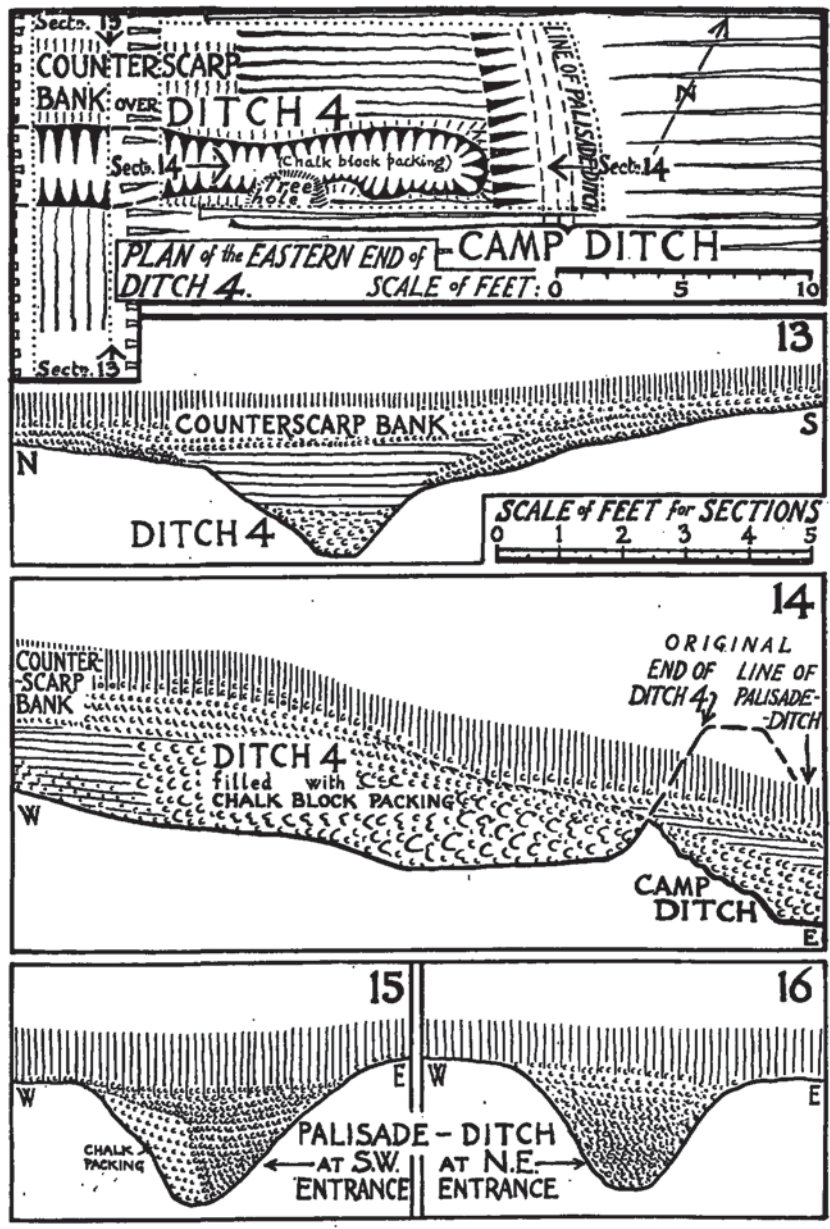


FIG. 10.
 Plan, and Sections 13 and 14, showing termination of Ditch 4.
 Below, Sections 15 and 16 across the Palisade-ditch.

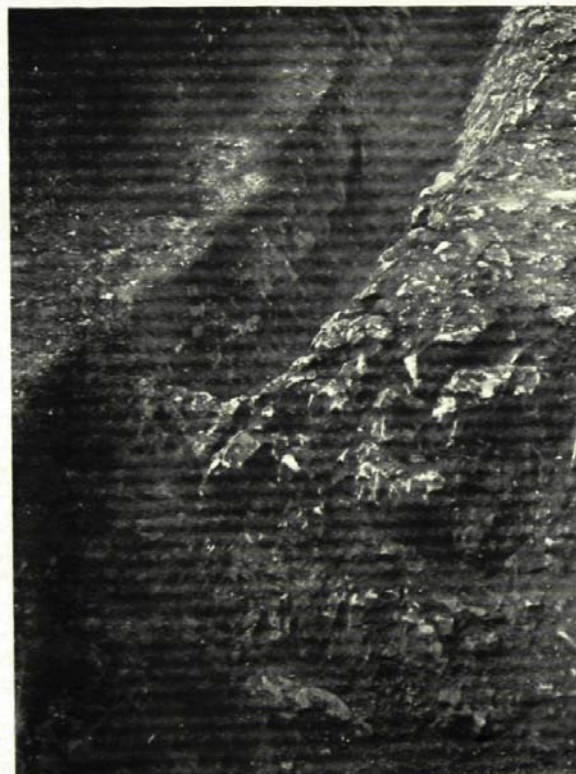
view in the same direction taken after excavation, and shows the face of Section 12, with Ditch 3 cleared of its filling and truncated by the camp ditch in the foreground. A similar chalk block packing will now meet us in Ditch 4 at the opposite end of the camp; but there the circumstances were found to be significantly different.

Ditch 4 and its Termination. Ditch 4, as seen in the air-photograph, Pl. III, and the plan, Fig. 2, runs between Ditch 1, which it joins at virtually a right angle 75ft. south of the S.W. entrance of the camp, and the S.W. portion of the camp's defences, which it appears to touch about 75ft. S.E. of that entrance. Intensive rabbit-burrowing made any examination of its junction with Ditch 1 hopeless, and excavation was therefore confined to investigating the nature of its contact with the camp's defences. Trenches were first dug (for their location see Fig. 2) to see if it reappeared inside the camp beyond them, like Ditch 3. No trace was found, and as there is no clay-with-flints here to account for an intentional interruption like that of Ditch 2, it could be concluded that the ditch had stopped somewhere in the line of the defences themselves. Section 13 was accordingly dug to find the ditch beneath the Counterscarp Bank which, though here of feeble proportions, runs along the outer lip of the camp ditch. A section analogous to Section 12 was expected and the result may be seen in Fig. 10. The Counterscarp Bank consisted of some 6in. of chalk rubble under 4in. of turf, and under it was found Ditch 4, with the bottom, flattish and 8in. across, at 1ft. 8in. below the rubble. Its original width from edge to edge must have been about 4ft., but weathering had affected especially the N. edge, down the consequent slant of which the chalk rubble of the ditch's N. bank had spread; not much either of this or of the S. bank was found still in place. The silt, correspondingly, was loose and chalky for 8in. above the bottom; only above again did it show the fine consistency and yellowish colour already familiar in the other three ditches, and this portion of it, a foot thick, had only formed after the S. bank had spread down over the weathered edge as just described. That this should have happened, in the primary period of the ditch's existence, combines with its comparatively small dimensions to show that it was inferior to the other three in design and construction.

To explore its relationship to the camp ditch, a rectangular area was next cleared between the cutting made for Section 13 and the camp ditch's bottom (for plan, see Fig. 10, top). It was found to terminate 15ft. beyond Section 13, its end running out into the camp ditch about two-thirds of the way down its outer side. This is shown in the two photographs on Pl. VIII, and in the longitudinal Section 14 taken along its middle line, and the facts require interpretation as follows. The builders of the camp found that Ditch 4

ended well within the strip of ground marked out for their ditch. They dug away the upper part of its termination in cutting back the slope of their ditch's outer side, and to block up the intermission in the latter so left they removed all the primary silting from the last 8ft. of Ditch 4—as far back, that is, as the line of the Counter-scarp Bank they were simultaneously building—and replaced it with a firm packing of chalk blocks. The upper face of this was found in a weathered and comminuted state, and had silted down a good deal into the bottom of the camp ditch below, but originally it had evidently been finished evenly on the line of the ditch's slanting side, just as had the analogous packing in Ditch 3 below Section 12 (p. 165).

From the primary silt of Ditch 4 in these cuttings were obtained four flint flakes, in general similar to those already noticed from the other three ditches: two of them are figured in Fig. 14, Nos. 7-8 (p. 183). These are of no independent chronological value, and in assessing the relation of Ditch 4 to the camp the question remains why it ended where it did. For it has now been shown earlier than the camp defences, which can themselves therefore provide no reason for its termination. Further, why did the camp builders give themselves the trouble of truncating and re-packing its end, when by keeping their ditch a few feet farther in they could have avoided it altogether? The reason was found when a trial trench was dug down the middle of the causeway crossing the camp ditch at the near-by S.W. entrance. The causeway proved to be of undisturbed natural chalk, and the entrance therefore an original feature of the camp. But, at a point still well between the flanking ditch-ends, this trench cut across a small ditch traversing the causeway roughly at right angles. Its location is marked in Fig. 2 and its profile seen in Section 15 (Fig. 10). It was roughly 4ft. across and 2ft. deep, with a rounded bottom and sides splayed asymmetrically; the steeper because less weathered W. side had been protected by a firm packing of clean small chalk standing 6-9in. thick along it, while in the centre, and towards the more weathered E. side, the filling was of dirty chalk rubble, with small flecks of charcoal here and there. This ditch can only be explained in one way: it is a palisade-ditch, the timber palisade in which was secured with a chalk packing, here thicker against the W. side and so preserved in contrast to the looser and charcoal-flecked material where the timbers stood. And as will be explained shortly, the same palisade-ditch was found likewise traversing the causeway at the N.E. entrance (Fig. 12) and is seen in Section 16 (Fig. 10). Here there is not quite the same sharply distinguished chalk packing, but the dirty rubble filling was slightly cleaner towards the sides, presumably as the vestiges of it, while the dimensions were



To face p. 168]

PLATE VIII.

Quarley Hill Ditch 4: two views of its termination inside of Camp ditch (*cf.* Fig. 10). 1, looking E.;
2, looking S.S.W.

not greatly different, 1ft. 9in. deep and about 3ft. 6in. across. It will further be seen shortly that on the edge of this N.E. entrance causeway the palisade-ditch was definitely cut away by the end of the camp ditch, so that it must be earlier than it, and have had the rest of its course obliterated by it. For as it appears running across the entrance causeways at both ends of the camp, it is scarcely possible to avoid the conclusion that it originally ran round between them on both sides, on the line of the camp ditch, which obliterated it when later it came to be dug. And this supposition is borne out exactly by what we have found at the termination of Ditch 4. Ditch 4 ends at precisely the right point for contact with such a palisade-ditch on the S.W., and such a palisade-ditch alone can explain not only the fact of its so ending, but the fact that the camp ditch was not made to avoid it. For the camp ditch was the lineal successor of the palisade-ditch, and naturally occupied a broader strip of ground on the same alignment. In fact, Quarley Hill Camp was preceded by Quarley Hill Palisade-Enclosure, and it was in connexion with this that Ditch 4 was dug. The unity of purpose shared by enclosure and camp, and the natural limit of the timber palisading's lifetime, must bring the date of the palisade-enclosure close enough to that of the camp to fall well within the Early Iron Age. And therewith Ditch 4 emerges as the latest of the Quarley Hill ditch-series.

C. The Camp and its Defences.

The palisade-ditch and implied enclosure. A few words on the enclosure now discovered will in the light of the foregoing make a fitting link between these two parts of the Report. It will have been an oval of some 1100 by 550 feet, and we have to regard it as the direct forerunner of the camp and its prototype in intention, since the camp ditch was dug on the line of its palisade-ditch, obliterating it except at the N.E. and S.W. entrances. That such hill-top palisade-enclosures preceded other Iron Age camps likewise is probable, but is only likely to be proved by excavation where, as in the present case, entrance-gaps in the camp ditch did not occupy the sites of similar gaps in the preceding palisade-ditch, or where the area of the palisade-enclosure was larger or smaller than that of the succeeding camp. The leading case of the latter kind is Hollingbury near Brighton, where Dr. Curwen's excavations revealed that the camp had succeeded a palisade-enclosure of smaller extent, the enlargement being effected on the eastern side, where accordingly its palisade-ditch was found parallel to the camp ditch and some way within it.⁵⁷ There are feebly-banked earthwork enclosures in Sussex⁵⁸ which should probably be

57. *Antiq. Journ.* xii (1932), 1 ff.

58. Curwen, *Archaeology of Sussex*, 230-1.

regarded as variants of this palisaded type, *e.g.*, on Thundersbarrow Hill : that of Wolstonbury has its bank outside its ditch, and this is paralleled not only by Rybury Camp in Wiltshire, but by the outermost ring or earthwork at Danebury (p. 150), which may perhaps therefore rank as a case of such an enclosure actually reduced in size when converted into a true camp. No case strictly parallel to Quarley Hill is known to me, but Mr. Stuart Piggott's recognition of Ladle Hill Camp, Great Litchfield, as an unfinished hill-fort furnishes us with comparative evidence from north Hampshire of a unique kind.⁵⁹ For there the gaps in the unfinished camp defences allow what preceded them to be partly seen, and it is thus revealed that on the north they were designed on the line of the incurved terminal portion of a boundary-ditch of the same type as those discussed and illustrated above here ;⁶⁰ and further, that for the rest of their circuit they were planned to occupy the line of a small ditch explained by Mr. Piggott (after Dr. Curwen) as a "setting-out ditch" dug to set out the course they were to follow. The two entrance-gaps in this are identical with theirs, and the "setting-out ditch" explanation may certainly be right ; but it remains possible that this ditch, too, formed an enclosure—for the north side of which the incurved portion of the pre-existing boundary-ditch was utilized—which was designed for and enjoyed a distinct existence of its own for some appreciable length of time before its conversion into a camp was begun. To explain the latter, Mr. Piggott suggests there was some "scare" in the middle phase of the Iron Age, to which a great deal of such activity should be ascribed in the south of Britain generally. To that suggestion we shall return below in connexion with our camp on Quarley Hill.

It is in any case certain that our palisade-enclosure on Quarley Hill preceded the camp by an appreciable length of time, for we have seen that Ditch 4 must be contemporary with it (or at least no earlier), and Ditch 4 had accumulated all the silting seen in Sections 13 and 14 (Fig 10) before the construction of the camp ditch and counterscarp-bank across and over its end. One need not suppose that such an enclosure was occupied more than intermittently : it must have served the purpose of a hill-top refuge for its makers and their flocks and herds in time of emergency only. As regards entrances into it, one may very well have adjoined the point of contact between its palisade and Ditch 4, which marked out the shortest approach to it from the old "trunk line" of

59. *Antiquity*, v, 474 ff.

60. Thus there, as here, a camp site was chosen in connexion with pre-existing boundary-ditches. Within the 'ranch' area so bounded are there also two small square enclosures or cattle-kraals of the type discussed in the same connexion above and illustrated as Late Bronze Age ; but the precise dating of this Ladle Hill pastoral complex must remain unsettled at present. It is only certain that it is earlier than the enclosure and camp and later than at least one portion of the adjacent Celtic Field system, across a lynchet of which the boundary-ditch cuts (*cf.* the Milston Down case, p. 144 above).

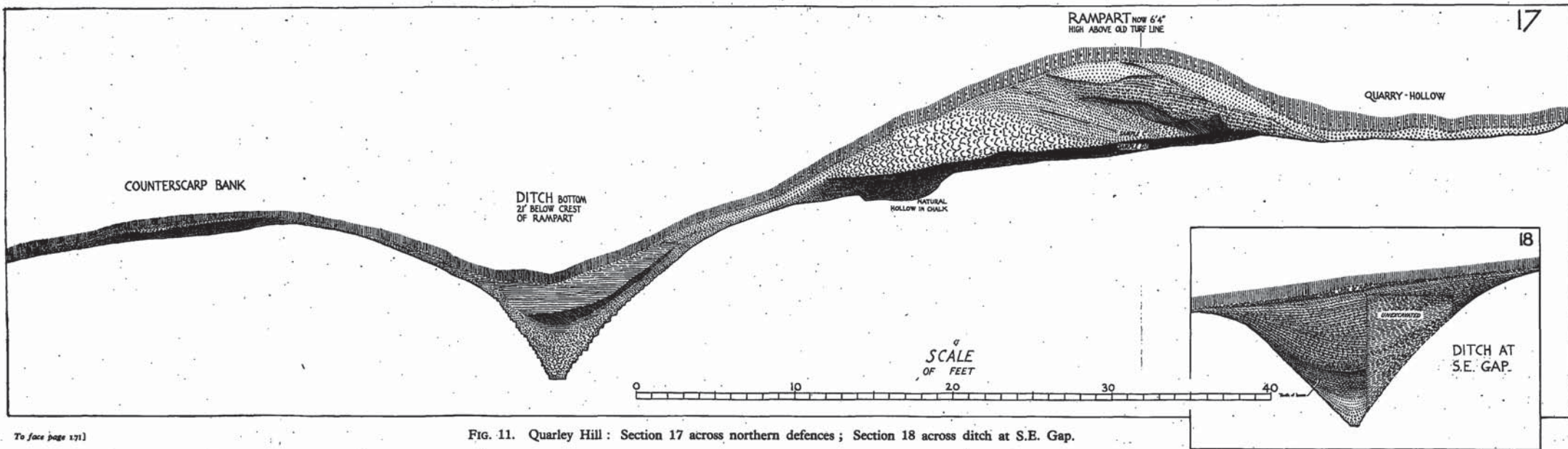


FIG. 11. Quarley Hill : Section 17 across northern defences ; Section 18 across ditch at S.E. Gap.

Ditch 1; and others may be conjectured where the palisade crossed Ditch 3 on the N. and E., from which quarters that ditch's two arms would be established lines of approach likewise.

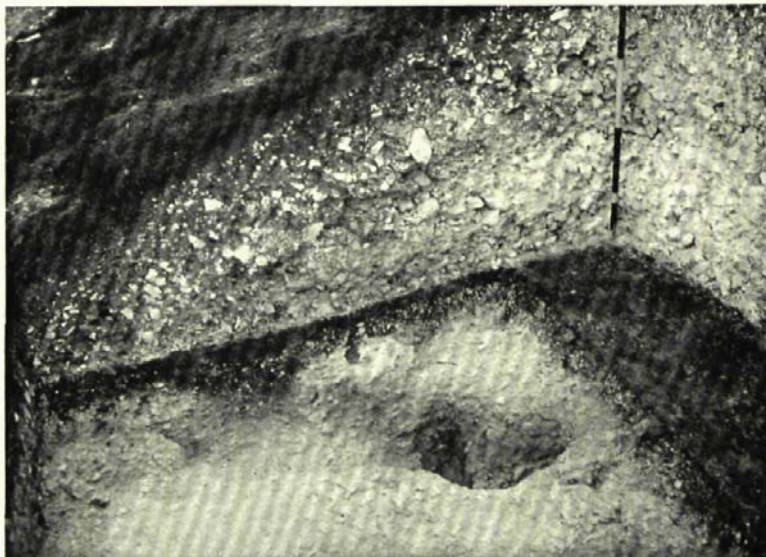
Such a hill-top refuge need not be expected to yield much in the way of occupation-material. But in the main section across the camp defences, on the north (Section 17, Fig. 11), the old turf-line beneath the rampart was found to contain a thick spread of burnt matter probably indicating an ash-dump (p. 192), accompanied by numerous burnt flints and small burnt fragments of sarsen stone, apparently from broken querns (p. 183), and a fragment of the humerus of a small sheep (p. 191). The mollusca (p. 192) show that the ground here was open grass at the time, and these remains seem to attest a temporary squatting-place, perhaps of shepherds or herdsmen, who lit fires, ground meal and cooked at least one shoulder of mutton with it, and departed without using—or at least without breaking—any pottery on the spot. It is thus impossible to identify them any more closely, and the sample (D 1) of this turf submitted to Dr. Zeuner, together with one (C) from the overlying rampart-material, does not enable him to say how long before the building of the rampart this squatting occurred (p. 194). Its desultory character distinguishes it from that of the main Iron Age occupation over Ditch 3 on the E. side (p. 179) and while the latter cannot (pp. 159-61), be dissociated from the camp period, this is just the sort of squatting that one would expect to find occurring in the palisade-enclosure phase. If rightly assigned to that phase, it will be probably belong (p. 169) to some at least moderately early part of the local Iron Age, presumably Iron Age A 1 (p. 187).

The Section of the Camp Defences. The section in which the remains just noticed were discovered beneath the rampart (Section 17), was that taken across the whole breadth of the camp defences where they are best preserved, on the north, to obtain a good standard specimen of their profile and structure (Fig. 11). Its location is marked on the plan, Fig. 7. The ditch, which reaches its maximum superficial depth of 16ft. below the crest of the rampart a little farther east, is here at present about 14ft. 6in. below it; on excavation, its bottom was found to be 6ft. 6in. under the turf, or a full 21ft. below the present rampart-crest at this point. The bottom is flat and 1ft. across. The greater part of the sides is rough-hewn in the solid chalk and absolutely unweathered (*cf.* Pl. IX, 1), and the whole lower portion of the Ditch must have silted up with far more than average speed—indeed, almost instantly. The silt covering all the rough-hewn part of the sides and standing 2ft. 9in. on the bottom consists largely of big chalk blocks, in a matrix of loose smaller rubble, absolutely fresh and many of them showing the marks of the deer-antler

picks with which they had been hewn ; the whole was entirely clean. Only higher up did this rapid silt give place to finer material, till on a few inches of fine yellowish silt like that of Ditches 1—4 lay a concave stratum of brown mould, 10in. thick in the middle, marking the line of stability on which turf humus had in due course formed. Above this more fine yellowish silt lay to a maximum thickness of 21in. beneath the modern turf. The untrimmed sides,⁶¹ and their thick covering of fresh chalk blocks tumbled from above, show that the rampart can never have been properly maintained or even finished here, nor the ditch either. Only above the rapid silt level were the sides of the ditch weathered, and the consequent splay gives the mouth as excavated a width of some 30ft. : it must originally have been about 20ft.

Of the counterscarp bank not much has escaped humus-formation ; as excavated, it only covered the old turf-line beneath to a maximum depth of 10in., while it had spread laterally to a width of some 16ft. The old turf-line beneath the rampart was finely preserved. A natural hollow, "rotted" into the solid chalk, underlay its forward portion (Pl. IX, 1), and another such local hollow was found (Pl. IX, 2) in a cutting 10ft. square made into the forward side of the rampart 10ft. W. of that cut for the section (cf. Fig. 7). The old turf here was a good deal more clayey, and the mollusca from it (Series B) listed by Mr. Kennard (p. 192) include large species indicating thick herbage, which, as Dr. Zeuner's report on the soil-sample submitted to him attests D 2 : p. 194), was not interfered with by man before the rampart was built over it. Its clayey consistency shows it to be the remains of a patch of clay-with-flints like those previously noticed near by (p. 161). The turf on the line of Section 17 is shown by Series A of the mollusca listed by Mr. Kennard to have borne ordinary downland grass, and it was on this that the temporary occupation tentatively above connected with the palisade-enclosure period (p. 171) had taken place as there described (Dr. Zeuner's soil-sample D 1), at some time previous to the building of the rampart. In both cuttings the turf under the forward portion of the rampart was carefully searched for traces of a timber revetment, but no post-holes were found, and it is in any case clear from the rampart's structure as revealed by the section that it was of simple mound or "dump" construction, the stability of the forward side being maintained only by the formidable pile of big chalk blocks from the ditch, of which it was formed to a surviving height of over 3ft. (Pl. X, 1). In fact, the stability thus intended had never been properly attained, since it was from this pile that the chalk blocks found choking the ditch had evidently fallen. Behind it, the rampart had been built

⁶¹. Contrast the normal smooth sides of the St. Catharine's Hill ditch : *St. Catharine's Hill* (*Proceedings Hants Field Club* xi), Pls. II and III, 2.



To face p. 172]

PLATE IX.

Quarley Hill northern defences : 1, Rampart and inner side of Ditch in Section 17 (*cf.* Fig. 11) ; 2, Old turf-line under Rampart in cutting adjoining Section 17 (*cf.* Fig. 7), partly cleared to show natural hollow in chalk beneath.



To face p. 173]

PLATE X.

Quarley Hill northern defences : the Rampart in Section 17 (*cf.* Fig. 11) : 1, from without, showing old turf-line with natural hollow beneath ; 2, from within, with Quarry-hollow in foreground.

up in successive tips of earthy, clayey, or clean chalk rubble, with several seams of stiff clay and a central stratum of compact earth mould (Pl. X, 2). These had all or nearly all been piled from behind, and while the Ladle Hill evidence (p. 170) shows that Iron Age rampart-builders would dump the material first dug from their ditch behind their building-line, for subsequent piling-on in this fashion,⁶² this section shows that some of the material so piled was actually quarried from behind the building-line, and not from the ditch. The quarry-hollow so formed cuts away the old turf-line, and runs back nearly a foot deep for 20ft.; the two outer tips of rampart-material spill down into it, and the outermost, of clean chalk rubble, is continuous with the similar rubble with which it has remained partly filled. It would seem that on this side also the rampart was never properly finished. As now standing, it rises to 6ft. 4in. above the old turf-line here, and is roughly 60ft. wide at the base. The total breadth of rampart, ditch and counterscarp bank here is now thus some 110ft. No finds contemporary with their construction were made in this area.

The Lateral Gaps. It has been already mentioned (p. 138) that the excavations proved the gaps in the camp's N.W. and S.E. defences to be no true entrances, and this has now to be expounded. A trench was cut down along the apparent causeway crossing the ditch at the S.E. gap, as marked on Fig. 2, and the result was Section 18 (Fig. 11), which showed that the ditch had been dug some 18ft. wide and down to its full depth. The camp builders had in fact designed no entrance here, and no causeway had been later made artificially either, for what filled the ditch, for the whole 8ft. 6in. up to the base of the modern turf, was nothing but natural silt. For 21in. up from the narrow bottom (6in. across) this was a rapid silt of chalk rubble, flanking which the excavated side was unweathered; higher up it became earthier, and at 3ft. 6in. from the bottom was the surface of a humus-line. Above that the silt was a naturally-bedded mixture of fine chalk and clay particles, and the only other feature was a thin metalling of flints laid across it (as a scrap or two of tile in it showed) in modern times, when alone its surface had been used as a causeway, probably in connexion with the clay diggings within noticed on p. 152. But corresponding to this bank of silt, which was rather over 30ft. wide, is a gap in the rampart 20ft. from foot to foot and nearly 50ft. from crest to crest. The explanation plainly is that this was an interval where the rampart had been left incomplete. The ditch had been dug out, and material raised and dumped—as may be assumed on the Ladle Hill evidence quoted above (p. 173)—behind the building-line, but no more than a beginning can have been made with the actual building of the rampart. The defences

62. *Antiquity* v, 480.

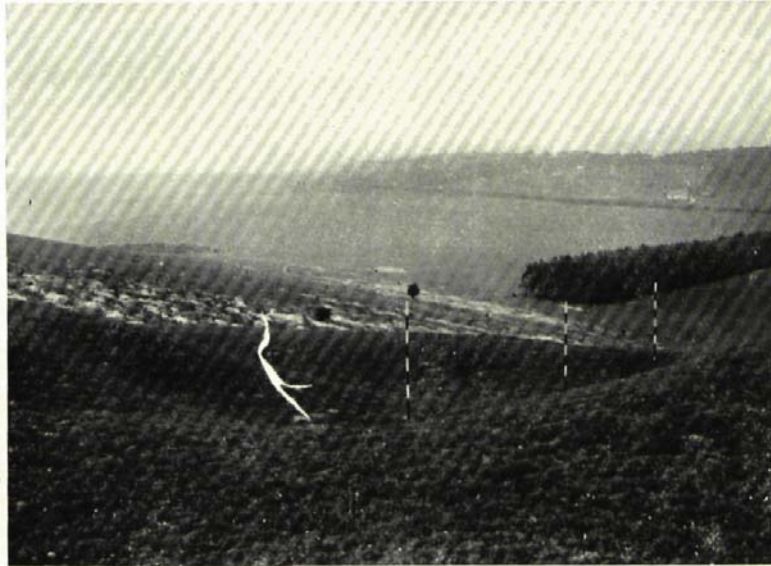
were here running below the brow of the hill, and the slope was steep; further, just here is the edge of the great spread of clay-with-flints that covers the whole centre of the hill-top (pp. 152-5). When the building was abandoned here with this one gap unfilled, what little rampart-chalk was already in position silted down at once into the ditch, and earthy material from the dumps behind followed. Enough stability was then reached for humus to form, but on to it centuries of denudation down the steep slope gradually carried down all the chalk and clay left dumped above the gap, together with contributions from the unfinished rampart-ends on either side, until the ditch at this point was completely silted up. The only significant find in this section was a horse-tooth from the lower earthy silt at 5ft. 8in. from the surface, agreeing with the type represented in the main Iron Age occupation (p. 191); an ox-tooth of contemporary type was also found on the top of the silt at 1ft. (*ibid.*).

The N.W. gap opposite (Pl. XI, 1) was found by means of test trenches cut as marked on Fig. 2 to be due to the same cause. The clay-with-flints was here thick above the chalk, and the transverse trench produced N.E. within the forward edge of the rampart adjoining the gap showed that it had been built of this material instead of the chalk blocks normally used as in Section 17.

These gaps, then, confirm the indications obtained in Section 17, that the camp defences had never been quite finished, though far more nearly than in the classic instance of Ladle Hill (p. 170) that has been so helpful in their interpretation.

The North-East Entrance. The excavation of the N.E. entrance both confirmed and amplified these findings. A general view of it is given in Pl. XI, 2, and its extent and results are planned in Fig. 12. The curve of the ditch-end was located on either side of the solid chalk causeway fronting it, the width of which may be taken as some 23-24 feet. Across this ran the palisade-ditch or trench of the pre-camp enclosure as above described; its priority to the camp ditch was clearly established on the S.E. side of the causeway, and close to this its profile was taken in Section 16 (Fig. 10), described on p. 168. The interval forming the entrance through the rampart measures some 55ft. from crest to crest, the S.E. crest being marked as a trigonometrical station by the concrete Government triangulation-post not long ago erected. The natural slope of the chalk hill-side falls here fairly gently towards the N.E., and while the line between the rampart-crests is roughly at right angles to this, it was found that the axis of the entrance as designed by the camp-builders ran at a slant of some 22° nearer true East.

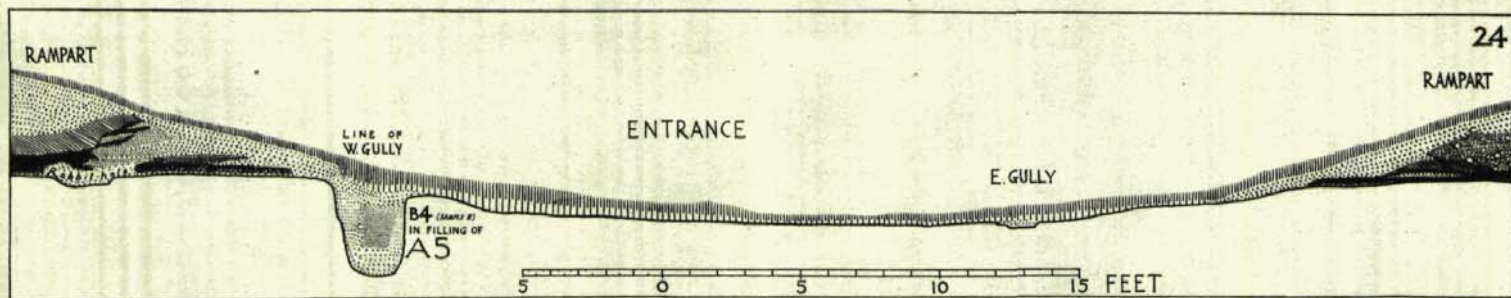
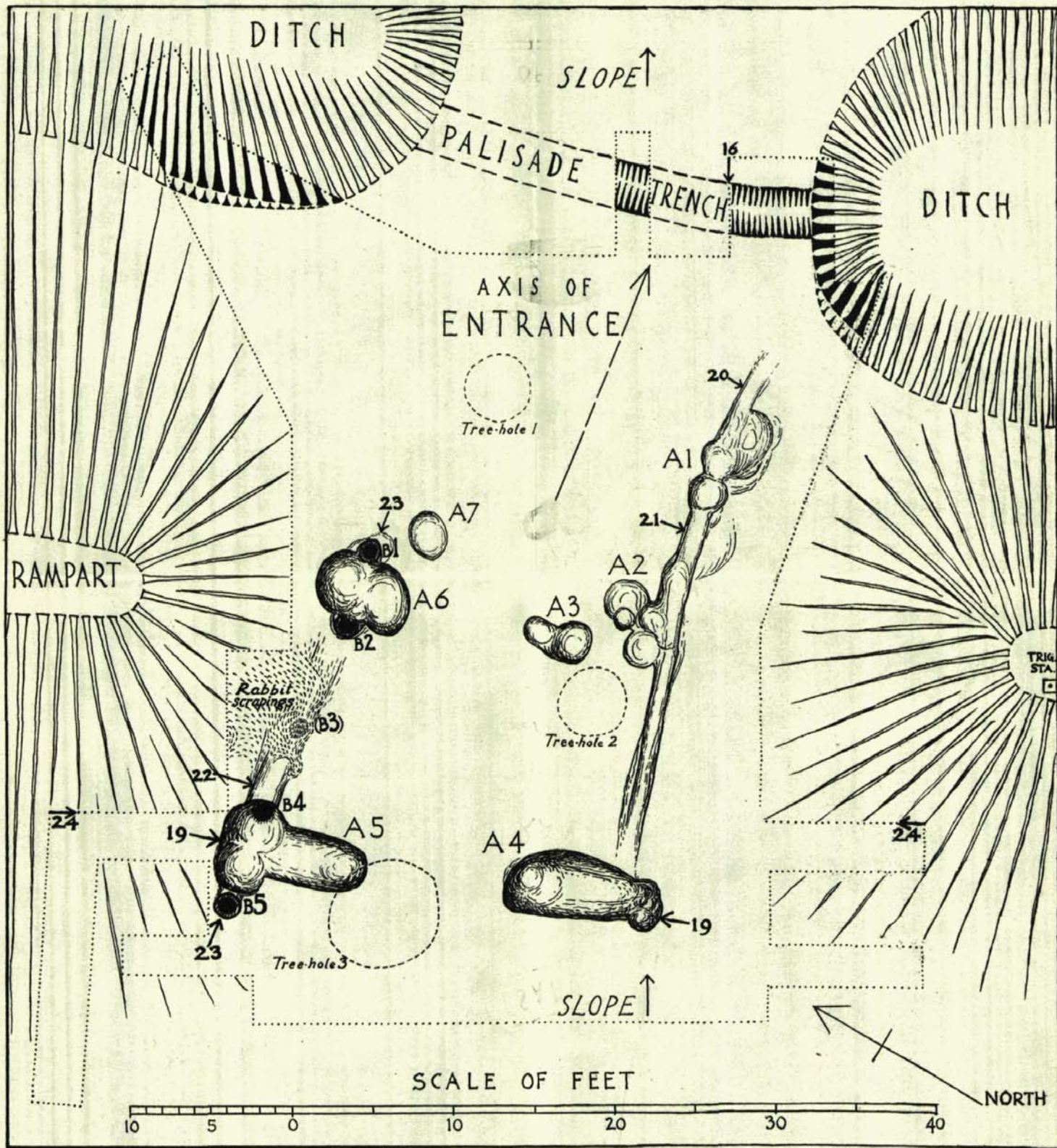
Their design was to erect a stout structure of timber, the main uprights bedded in the series of post-holes marked as A 1, A 2, etc., on the plan, with a revetment-palisade bedded in a running



To face p. 174]

PLATE XI.

Quarley Hill : 1, the N.W. Gap in the defences, seen from within, before excavation ; 2, general view of the N.E. Entrance as excavated, looking E.N.E. (The unexcavated bank across the middle is the line of Section 24 : *cf.* Fig. 12).



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FIG. 12. Quarley Hill N.E. Entrance: Plan (above), and Section 24 (below).

chalk-cut gully to keep back the rampart-material, over a planned length of some 40ft. on each side of the central roadway. These A post-holes were easily distinguished from the B series to be noticed shortly, and also from three round holes cut in the chalk and filled with mould for the planting of trees in modern times, no doubt at the same time as the planting of the main clump on the hill-top (tree-holes 1, 2 and 3), in which, however, no trace of the successful growth of trees was to be detected. The two most remarkable holes were A 4 and A 5, opposite one another at the inner end of the structure's ground-plan: they were long ovals in plan, 10ft. and 9ft. in length and 4ft. and 3ft. 4in. in breadth at the middle, running out into the roadway, which was thus narrowed between them to 8ft. 6in. only. Here there was evidently to be a gate, and their ends were found shaped each to hold a big gate-post, perhaps 2ft. in thickness, while their main length would have held continuous timber walling, to connect these with answering posts at their opposite ends, from which the gullies for the flanking revetment-palisade ran off down each side of the roadway, giving it its full width of 21ft. In A 5, this end was enlarged to a breadth of 5ft. 6in. to take two thick posts standing side by side: the corresponding enlargement in A 4 was only 3ft. broad, and had an unfinished appearance. The profile of the two holes is shown in the transverse Section 19 (Fig. 13) where A 5 and part of the adjoining roadway has been cut into by the modern tree-hole 3 (Pl. XIII, 2): it will be seen that while at their inner ends both are 2ft. 6in. deep, the outer end of A 5 measures 3ft. 6in., but that of A 4 only 2ft. Both were found to have been deliberately filled, while their sides were still fresh and unweathered, with clean chalk rubble, excluding any trace of the timbers they should have held; in A 5 this filling underlies the last 18 to 20in. of the finer chalk edge of the western rampart-end, but on the opposite side the edge of the rampart-end tails out a good 6ft. short of the end of A 4. And the whole of the way along this side of the entrance (Pl. XIII, 1) the rampart never comes nearer than 5ft. to the line of the revetment-gully. As is seen in Sections 20 and 21 across this E. gully (Fig. 13) the subsoil silted from the rampart makes with the modern turf a thickness of no more than 7 or 8 inches over it; whether at its minimum breadth (1ft.) or its maximum (18in.), its sides show no trace of weathering below the level of the clean chalk rubble with which, to a maximum depth of 10in., it had, like the post-holes, been deliberately filled. It thus seems never to have been used, and its isolation from the rampart which its palisade was designed to revet may be most clearly appreciated from Section 24 (Fig. 12), where the chalk, clay, earth, and rubble core of the rampart comes to an end 12ft. away, and the filling of the intervening space with chalk, over the cut-away edge of the old

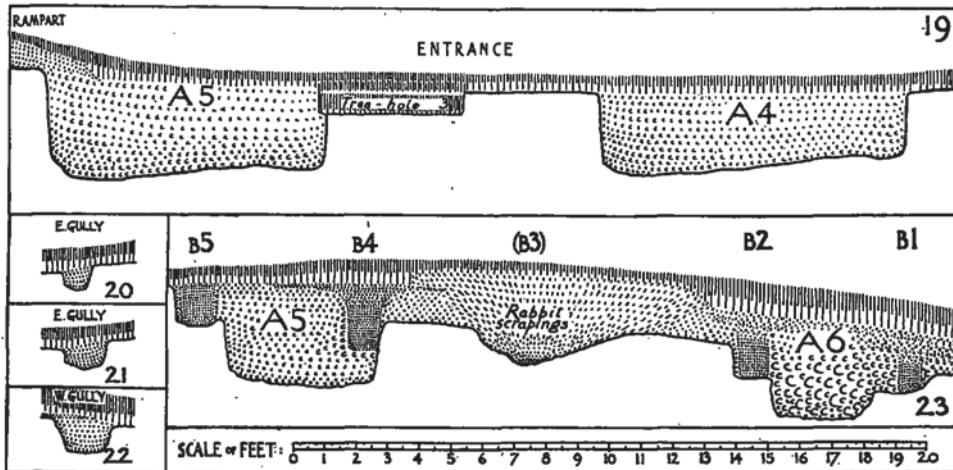


FIG. 13.

Sections 19-23 in N.E. Entrance.

turf-line, has obviously been abandoned when no more than begun. Further, there is no post-hole at the gully's outer end, which simply fades out: the post-hole A 1 is represented by a mere few scoopings in the chalk no more than a foot deep: A 2 is likewise a multiple post-hole begun but left off when only 15in. deep: A 1 has no opposite number on the other side of the roadway at all: and A 7, opposite to A 2, is another mere foot-deep embryo. This last pair is closely adjoined by the next, A 3 and A 6: A 3 lies out in the roadway, narrowing it to only 7ft., and lies with A 6 in the direct line between the rampart-crests; this was thus the central feature of the design, and its posts were no doubt intended not only to form a sort of barbican with A 4 and A 5 behind them, but to carry a bridge for a continuous rampart-walk across the roadway. But it was never built, for of this whole complex of post-holes only A 6 had been completed.

A 6 was a double post-hole, 6ft. in maximum breadth and 3ft. deep from chalk level. Its sides had been vertically cut, and were still fresh and unweathered, for it had been filled with clean chalk rubble like that in the others, but including many big chalk blocks, such as should have been used to build up the rampart behind it, some of which are seen piled at its edge in the background of Pl. XII. On the far side of it, beside A 7, the W. revetment-gully had not been dug, and there was no hole A 8; between A 6 and the broad end of A 5 the gully had been largely destroyed by rabbit-scrappings, but for 3ft. from A 5 it was well preserved,



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PLATE XII.

Quarley Hill N.E. Entrance : view along W. gully and line of post-holes A 5—A 7 and B 5—B 1. (Knife in B 5, foreground ; first ranging-pole in B 2 ; second pole in tree-hole 1 ; *cf.* Figs. 12-13).



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PLATE XIII.

Quarley Hill N.E. Entrance : 1, view along W. gully and line of post-holes A 4—A 1 ; 2, post-hole A 5, looking S. : tree-hole 3 over (*cf.* Figs. 12-13).

as shown in Section 22 (Fig. 13), 21in. across the mouth and 14in. across the flattish bottom, and 9in. to a foot deep, filled with clean chalk rubble, the top of which was just touched by the edge of the rampart chalk behind, under 9in. of modern turf and subsoil formed of rampart silt. This and Section 19 show what can be more fully seen in Section 24, that the rampart on this side is much closer to the entrance-structure than on the other: it rises on its well-laid chalk, clay and earth core to a present height of 3ft. 6in. above the old turf-line (here partly destroyed by a rabbit-hole) within 12ft. of hole A 5, and its edge was in continuous contact with all this side of the structure's emplacement. This was, of course, partly due to the slanting axis of the entrance, as can be appreciated in Pls. XII and XIII, 1, but the building of the rampart was in any case farther advanced on this side than on the other when the whole work was for some reason stopped.

Yet the builders had still sufficient interest in the entrance to think it worth while to provide a partial substitute on this side for the ambitious structure they thus abandoned. For, as the plan (Fig. 12) shows, when filling up the A post-holes and gully with clean chalk, they cut a second series of smaller holes in their stead. These, the B post-holes, are aligned along the axis of the abandoned gully, along which Section 23 (Fig. 13) is taken. B 1 is cut in the N.E. side, B 2 in the S.W. side, of hole A 6, evidently simultaneously with its filling; the rabbit-scrappings half-way along to A 5 seem from their bottom-profile to have destroyed a further hole B 3; and in the sides of A 5's broad end are likewise cut B 4 (*cf.* Section 24 and Pl. XII) and B 5 (indicated in Pl. XII by the knife in the foreground). The average depth of these B holes is rather under 2ft., their average diameter 1ft.; their relationship to the edge of the rampart seems to show that posts in them actually served to retain it, braced together as a solid fence; and that such a fence had in fact stood has been proved by an examination of their filling. This was finer and darker than the chalk filling of the A series into which it intrudes, and contained charcoal, of which the only specimen not too small for determination, from the bottom of B 4, was oak (p. 193). Further, a sample of the filling of B 4 was submitted to Dr. Zeuner, who (p. 194) by washing "found minute traces of charcoal (about 1 mm.) and small lumps of a yellow clay which may have been burnt (they are often full of tiny bits of charcoal, down to one-fifth of a mm.)." He comments that whether the post was first "removed" or "decayed," this material got into its place after burning had at some time taken place, so that burnt matter lay on the ground adjacent. One must add that since this hole is sealed (Section 24) by a talus of the rampart-material which the post in it had retained, the material can only have got into its place simultaneously with

the destruction of the post. The post then did not "decay," and its "removal" was effected by the fire responsible for the "burnt matter." In other words, after standing for an unknown space of time after its erection as part substitute for the abandoned A structure, the fence represented by the B post-holes was burnt down, and the rampart-material it had retained spilled forward as a talus, sealing in the holes charred remnants of the posts. As for the lumps of yellow clay, these must represent a clay packing employed to secure the posts in the holes, and preserve them as far as possible from decay. A similar use of clay was made in the St. Catharine's Hill entrance-works, which, it may be added, present a distinct family likeness in plan to those here designed as the A structure.⁶³

Remarkably few finds were made in the entrance. It has already been noticed in passing that a scrap of red-coated Iron Age pottery was obtained from the chalk rubble of the rampart in Section 11 (p. 165); in the top of the same rubble in the W. rampart-end adjoining the entrance, at a point 3ft. W. of post-hole B 5, were found the two coarse rim-sherds, Fig. 16, 13-14, together with a piece of reddish burnt clay and a small piece of burnt sarsen stone, perhaps from a quern. These must have been deposited during the building of the rampart. The only other stratified finds were two flint flakes sealed in the chalk filling of hole A 5 and in general resembling Fig. 14, 3 and 8. Trial excavation attempted south of the E. side of the entrance, where burnt flints and one or two small scraps of Iron Age pottery had been turned up by moles, proved fruitless (for location, see Fig. 2). The only superficial find of any note was a fragment of a Roman jug-handle of bluish-green glass, found under the turf on the rampart at the W. end of Section 24; this is perhaps of the 2nd century A.D., and may be considered, in common with a sherd of contemporary grey coarse-ware found in a rabbit-scraper 50 yards outside the entrance, as a stray outlier from a neighbouring area of Romano-British occupation. In fact, a considerable number of such sherds may be found in rabbit-scrapes lower down the hill on the N.E. side towards Quarley Manor, and the occupation was probably somewhere in that quarter. But everything goes to show that the entrance was abandoned well before Roman times. In fact, as has now been abundantly shown, its effective history was a brief one. Begun on an ambitious plan, it was given up when still far from complete, and instead of the towering barbican that had been designed, all that was built was a mere revetment-fence, along the only place where there was enough rampart-material torevet. And in due course that fence was destroyed by fire. After that there is nothing more of any significance to record.

63. *St. Catharine's Hill*, 29 ff.

The South-West Entrance. In view of these discoveries there was no strong case for doing more in the S.W. entrance than cut the trench down its causeway already noticed (p. 168) as having discovered the palisade-ditch (Section 15, Fig. 10). Even if, unlike the N.E. entrance, it was in fact completed, its excavation might be interesting in itself but could hardly modify to any great extent the main conclusions drawn from elsewhere.

The Character of the Occupation. With the scanty exceptions recorded on pp. 165, 178, the material remains of the occupation of the camp were confined to the inhabited area over the turn of Ditch 3 described on pp. 155-61 above, with Figs. 4-6 and Pls. V and VI, 1. No vestiges of anything structural could be detected, but since the chalk surface on and beyond the adjacent berms of the ditch was absolutely clean and barren of remains, the area can hardly be taken for a mere midden for refuse from habitations situated anywhere close by, but should be considered as itself the site of habitation. No very stable structures can have been bedded in the loose chalk shovelled down from Ditch 3's banks to floor the area, and what dwelling-constructions there may have been must have been mere light shanties, of whose support-holes this loose chalk has preserved no trace. Our material is thus confined to the refuse in the occupation-layer itself. It comprises fragments of some 20-25 pottery bowls of fine red-coated ware, and of some 40-50 cooking-pots of varying degrees of coarseness; burnt flints and burnt scraps of sarsen stone, perhaps from broken querns (p. 183), and several larger pieces of querns of this material; some pieces of iron pyrites; a great quantity of wood charcoal (p. 193), mainly oak, but including a rosaceous species probably hawthorn; bones and fragments of bones and teeth of ox and sheep (many), pig, small horse, and dog (few); and fragments of a femur and tibia and the proximal end of a radius of human bone (p. 191). All except two of the shank-bones of ox have been broken across in order to extract the marrow or to fit into cooking-pots for stewing, and several of the ox-bones show cut-marks resulting from disjoints or stripping off the flesh. No implements or metal objects were found.

These remains indicate a small colony of people living here in squalor amid their own kitchen-refuse, into which even human bones could find their way. They lit fires with flint and pyrites, burning wood which can only have grown on the adjacent hill-top spread of clay-with-flints, consisting mainly of oak, with a probably hawthorn undergrowth. On these fires they cooked meal ground in sarsen querns, and the meat of domestic animals, especially sheep and ox, much of it by stewing. The number of cooking-pots, and of the finer bowls presumably for eating and drinking, suggests that the occupation was not very prolonged. Furthermore, while it has

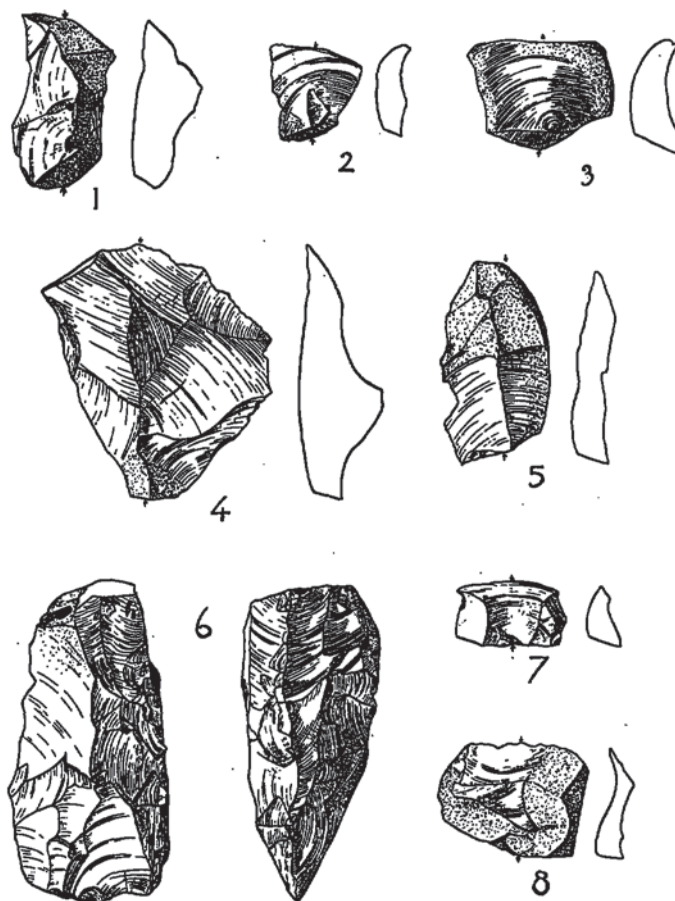


FIG. 14.

FLINTS (‡).

Flakes : 1-2, from Ditch 1 silt, Section 1 (p. 153);
 3-5, from Ditch 3 silt, in area of Fig. 4 (p. 159);
 7-8, from Ditch 4 silt, Sections 13-14 (p. 168).
 Core-axe : 6, from Ditch 3 silt, near Section 6 (p. 159).

been seen from Section 7 (Fig. 6, and pp. 159-61) that the occupation here was begun before the construction of the rampart at this actual point, it is safe to infer that it was established in connexion with the undertaking of the rampart as a whole. For its loose chalk flooring finishes just where the core of the rampart begins, on a line that must have been laid down in advance; the tail of the rampart that covers the last 4ft. of the occupation-layer is formed only by the outer tip of clean chalk with which its construction was finished off, and thus the relationship between occupation-layer and rampart is intimate enough to justify their ascription to the same people. And the sherds of pottery found in the rampart in Section 11 and adjoining the N.E. entrance (pp. 165, 178) are of precisely similar ware to those found in the occupation-layer. In other words, the occupants of this area were the rampart-builders. The observation that traces of their occupation continue over the rampart-tail, but were soon afterwards blanketed over by the talus that silted down upon it (p. 161), agrees exactly with the conclusion reached in the entrance; namely, that the occupation, interrupted in its primary purpose of fortifying the site before the fortification was finished, lasted for no very long time thereafter. It will in a moment be shown from the pottery that it falls wholly within a single phase of the Early Iron Age, that known as Iron Age A 2, and may be assigned most probably to the 3rd century B.C.

III. THE FINDS.

The Flints (Fig. 14). The flint flakes (1-5) and the cores found in the primary silt of Ditches 1, 2 and 3 agree closely with the flint industry found by Dr. Stone in the Late Bronze Age habitation-site on Thorny Down⁶⁴ (p. 142), and in the contemporary enclosure on Boscombe Down⁶⁵ shown above to be connected with the same system of ditches. Since none of the flakes show any definite secondary working, the main distinguishing features are the obtuse flaking-angle where a striking-platform is present (nos. 1-5), and in all cases the crude striking-technique, manifest in a prominent bulb of percussion. The condition of all was fresh, but during the formation of the silt in which they lay they had taken on a bluish to cream-white patina. Three finished implements of the same industry were found by Mr. Brailsford, together with the re-chipped stump of a polished axe, at the foot of the hill on the south-east, roughly on the 400ft. contour on a line directly between the S.E. gap in the defences and the spot-level 381 in the lane below (6in. O.S. Hants xxii S.E.); these

64. *Wilts Arch. Magazine* xlvii, 654-8, with Pls. VI-VII.

65. *Ibid.*, 480-3, with Pls. V-VI.

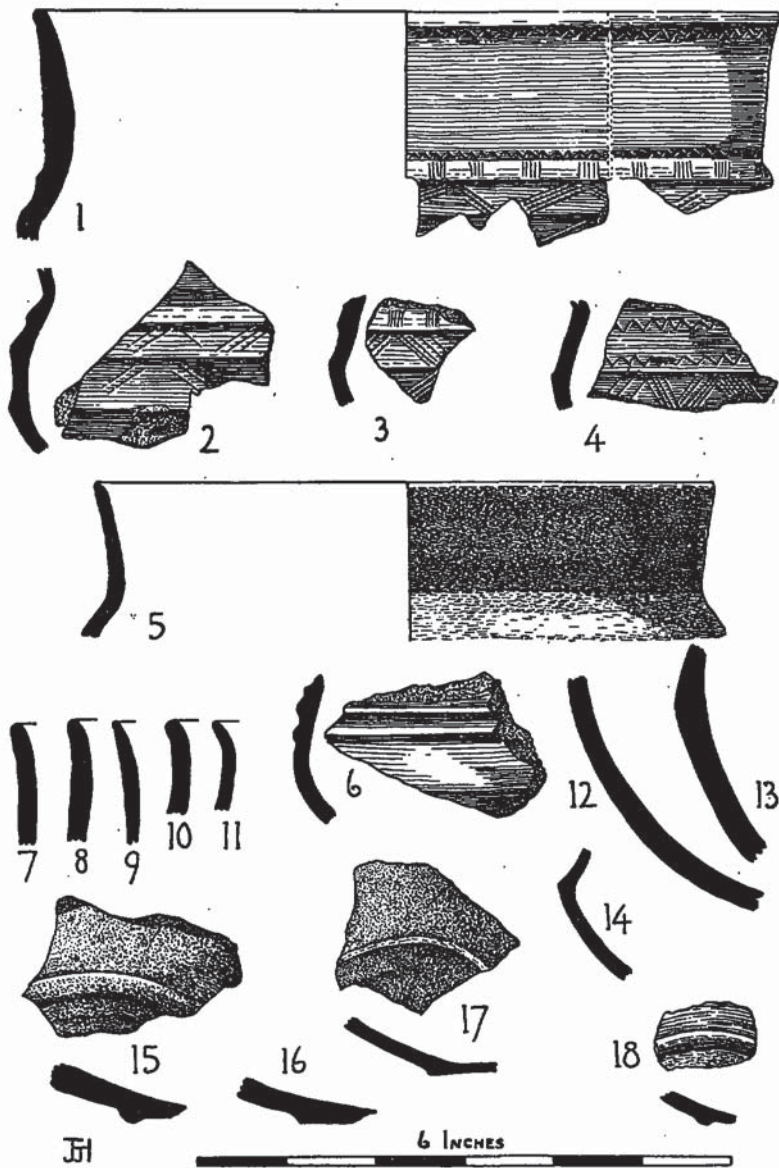


FIG. 15.
 HAEMATITE-COATED POTTERY.
 All from occupation-layer over turn of Ditch 3 (Fig. 4).

show the same striking-technique together with the distinctive secondary step-flaking characteristic of Late Bronze Age flint-work. One is a scraper comparable with Boscombe Down Pl. V, 1 or 3, or Thorny Down Pl. VI, 5; the second is similar but longer; the third is a sub-triangular blade struck in the same style. On the site itself the only finished implement found is Fig. 14, 6, the stout core-axe or adze from the primary silt of Ditch 3 near Section 6 (p. 159): it is probably one of the tools used in digging the ditch. But if these flints are of Late Bronze Age date, similar flakes (7-8) were found in the primary silt of Ditch 4 (p. 168), contemporary with the palisade-enclosure directly preceding the camp, and two more (p. 178) were found in the filling of the entrance post-hole A 5. Such flint-work may therefore occur in the Early Iron Age, and was indeed plentiful in part of the inner ditch of the contemporary hill-fort of Figsbury.⁶⁶

The Sarsen Fragments. Sarsen stone saddle-querns such as yielded the fragments found beneath the rampart in Section 17 (p. 171) and in the occupation-layer over the turn of Ditch 3, are regularly represented on Wessex Early Iron Age sites and call for no special comment.^{66a}

The Pottery (Figs. 15-16). No definitely Late Bronze Age pottery was found, and all the Iron Age pottery belongs to a single industry, the bulk coming from the occupation-layer over the turn of Ditch 3. Red-coated bowls of comparatively fine ware were represented to an estimated total of 20-25: pieces of 18 are illustrated in Fig. 15. This class is familiar from the fine series obtained by Miss Liddell at Meon Hill,⁶⁷ and in type represents the later phase of the bowl series from the Wiltshire type-site of All Cannings Cross, answering to the period Iron Age A 2. The "furrowed" type of bowl, assignable to Iron Age A 1, already rare at Meon Hill, was here absent, as it was also at Figsbury,⁶⁸ and at the habitation-sites of Fifield Bavant⁶⁹ and Swallowcliffe Down⁷⁰ in South Wiltshire. Of these Fifield Bavant is certainly the latest, since as well as this Iron Age A or "Hallstatt—La Tène I" ware it yielded decorated ware of the kind assigned to a subsequent phase at Meon Hill as "La Tène II," and associated with the last stage of the occupation at St. Catharine's Hill,⁷¹

66. *Ibid.*, xliii, 53.

66a. See *St. Catharine's Hill*, 123-5, Fig. 15, 3; Curwen, *Antiquity* xi, 135-7, Pl. II, 4. Native Sarsen stones, of small size, are still to be seen beside the lanes towards Quarley village, a mile or so N. of the hill: cf. Williams-Freeman, *Field Archaeology*, 120.

67. *Proceedings Hants Field Club* xii, pt. 2, 145-9; xiii, pt. 1, 27-33 with Pls. 25-7.

68. *Wilts Arch. Magazine* xliii, 51.

69. *Ibid.*, xlii, 472 ff.

70. *Ibid.*, xliii, 12 ff.

71. *St. Catharine's Hill*, 113 ff., Figs. 13-14; cf. the same "La Tène II" ware at Twyford Down (*Proceedings Hants Field Club* xiii, pt. 2, 197-9, with Fig. VI), and Worthy Down (*ibid.*, x, pt. 2, 182-3, with Pl. III): dating, *Proceedings Hants Field Club* xiii, pt. 2, 208-212. See p. 149 above; and further p. 189 below.

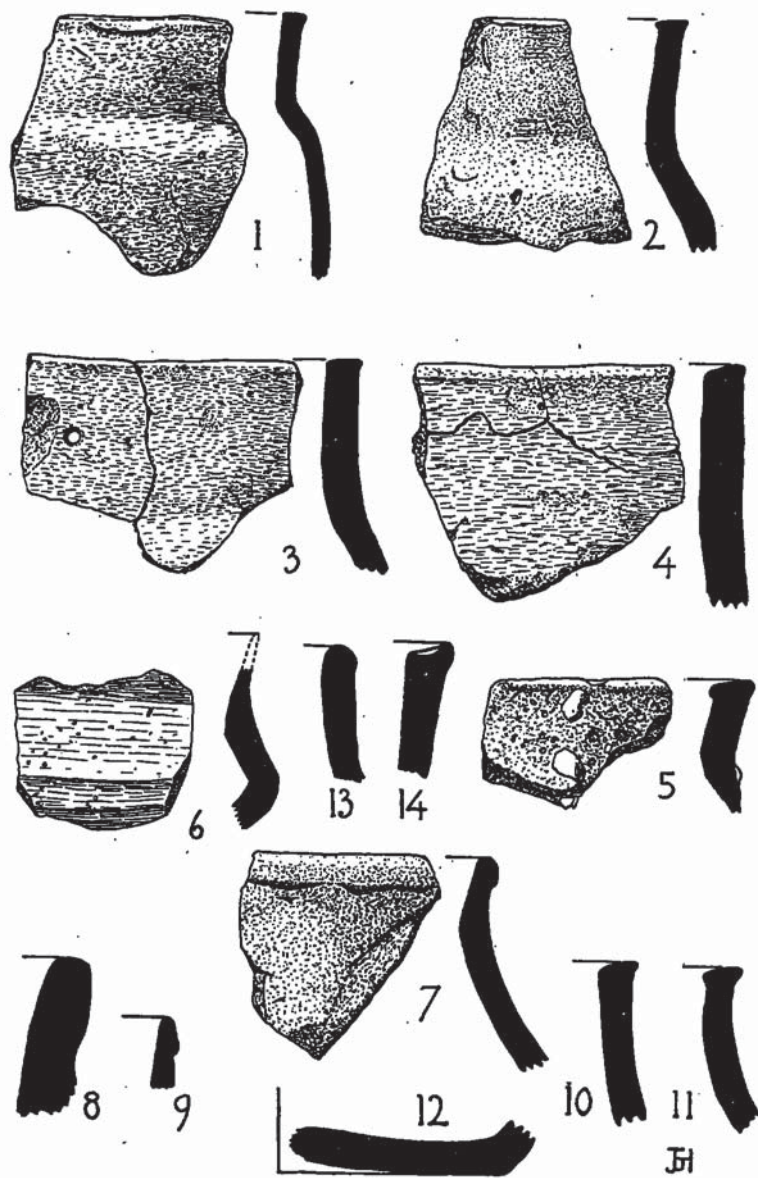


FIG. 16.

COARSE POTTERY ($\frac{1}{2}$).

All from occupation-layer over turn of Ditch 3 (Fig. 4), except 13-14, from rampart (p. 178).

directly preceding the Belgic period. None of this was found at Quarley Hill; on the other hand Fifield Bavant had none of the cordoned or ribbed form of Iron Age A 2 bowl present at Meon Hill, Figsbury, and Swallowcliffe, which does occur at Quarley Hill. Our occupation is therefore earlier than Fifield Bavant, contemporary with Figsbury and Swallowcliffe, and overlapping with part of the life of Meon Hill. The typical bowls have an upstanding rim, with or without a slightly everted lip (Fig. 14, 1, 5, 6-10), and the ribbed form just mentioned is seen in the shoulders of 1-3 and especially 11, while the alternative was an unribbed carinated shoulder like 4, 13, or 14. The well-rounded lower part of the body is represented by 12, while the bases have either a low foot-ring like 15 or 17, with a central hollow or "omphalos" (15) or alternatively a downward depression (17) in the middle, or else they rise into a slight central hollow from a plain standing-edge, as in 16 and 18. The most attractive feature is the finely incised surface ornament, of single zigzag line on rim or shoulder (1, 4), and grouped-line chevrons or panels on shoulder ribbed (1-3), or unribbed (4). The four vessels 1-4 were the only ones found so ornamented; the ornament is scratchily incised with a fine point after the firing of the vessel, and is very distinctive of the best bowls of this class in our region generally (Meon Hill, *loc. cit.*, Pls. 25-6, mostly on ribbed bowls; Fifield Bavant, Pl. VI, 5, unribbed). The type-specimens (again ribbed) at All Cannings Cross are Figs. 3 and 4 on Pl. 28 of Mrs. Cunnington's well-known publication. The red coating of all these bowls is formed of a specially applied haematite slip, which on firing takes a brilliant red colour, contrasting with the dark grey core beneath, and enhanced by polishing. "Haematite ware" in general is typical of the whole of Iron Age A in a great part of Wessex, and on some sites occurs in quite late Iron Age contexts; but the particularly fine form it was given in these A 2 bowls, whether ribbed or unribbed, is more restricted in distribution. Whatever its exact real limits, this distribution certainly covers Salisbury Plain and the chalk country north, south, and south-east of it (All Cannings Cross, Swallowcliffe and Fifield, Meon Hill), and within that region the ware's uniformity—irrespective of the presence or absence of such features as ribbing—is so remarkable that in publishing the Meon Hill series Miss Liddell wrote⁷² that it "so closely resembles that from All Cannings Cross that it is almost impossible not to deduce a common source of origin for both, especially as the haematite-coated wares in each case are found by analysis not to have been made in the locality in which they were found, since both contain ferruginous grit foreign to the chalk soil." The clue latent in this grit and the angular chips of quartz identified in

72. *Proceedings Hants Field Club* xiii, pt. 1, 23.

the core of the ware by the late Dr. H. H. Thomas has not yet been followed up, but the Quarley Hill excavations have at least added a new site to the list of the ware's occurrences, and its presence here furnishes a certain index to the Iron Age A 2 date of the occupation.

The vessels of comparatively coarse fabric illustrated in Fig. 16 are all of ware containing flint and sometimes shell particles, and also sand, and like the corresponding Meon Hill series⁷³ they may be taken as of local manufacture. The flat, sometimes slightly everted rims (1-5, 10-11) are commoner than the rounded, often slightly grooved-off forms (7-9), but the shape seems universally to have carried a slight shoulder, a more or less cylindrical body, and a more or less flat, plain base (12). A few vessels imitate the fine haematite bowls (6), and some amount of the sherds of this ware are fired reddish with the same intention; the majority, however, are grey-brown to black, with a greater or less amount of surface burnish. A good series of complete specimens of these vessels, which were certainly in the main cooking-pots, was published by Dr. Clay from Swallowcliffe and Fifield Bavant;⁷⁴ at All Cannings Cross the type-figures are Mrs. Cunnington's Pl. 30, 1-2. Finger-tip ornament, which taken by and large is an A 1 rather than an A 2 characteristic on this ware, and at Meon Hill⁷⁵ was confined to the rough gritty ware that was the crudest found there, was absent at Fifield Bavant and rare at Swallowcliffe; where it occurred least seldom on the top of the flattened type of rim (Dr. Clay's Pl. IV, 5; VI, 9, 11); only one example of it was found at Quarley Hill. This (Fig. 16, 14) was one of the rim-sherds found sealed in the material of the rampart on the W. of the N.E. entrance (p. 178); apart from its finger-tip impression it was, like the rounded rim-sherd (13) found with it, identical in fabric with the normal coarse ware of the occupation, and there is no reason for regarding it as a stray from the preceding palisade-enclosure phase on the strength of this feature.

To sum up, the pottery may be determined as definitely later than the Iron Age A 1 phase, and earlier than the appearance of the features that have been assigned on other sites to a "La Tène II" period directly preceding the Belgic invasions of the 1st century B.C. It is typically representative, as far as it goes, of the Iron Age A 2 culture of this part of Wessex. In current estimation this implies a date about the 3rd century B.C.

Animal Remains, Mollusca, Charcoal, Soil-samples. The Reports on these are given in full below, Appendix I—IV.

73. *Ibid.*, 23, 26.

74. *Wilt's Arch. Magazine* xliii, 12 ff., Pl. IV, 1-3, 7, 9, and Pl. V; *ibid.*, 542; xlii, 472 ff., Pl. IV, 6-9, and Pl. V.

75. *Proceedings Hants Field Club* xiii, pt. 1, 26-7, with Pl. 22.

IV. SUMMARY AND CONCLUSIONS.

Quarley Hill is situated where natural routes from east to west cross the watershed between the Test and Avon river-systems. The attractiveness of its natural strength is, however, offset by forest-bearing clay-with-flints on a mostly northward-facing summit, which makes it not so suitable for occupation under pre-historic conditions as appears at first sight. It was, in fact, first used by man not (apparently) for actual occupation, but for the passage of the main boundary-ditch, Ditch 1, cut along the watershed by the immigrant Late Bronze Age inhabitants of the Avon river-system, who seem to have established a system of such ditches on both sides of the Bourne valley during the first half of the 1st millennium B.C. It is probable that these were primarily boundaries between "ranches" into which the downs were divided by these people for pastoral purposes, but the embanked boundary-strips which they formed appear also to have been used for transit, in particular as ditched cattle-ways, of which use, probably inherited from the Late Bronze Age, there is evidence also from the more agricultural Iron Age which began, with renewed immigration, roughly with the second half of the same millennium. Ditch 2 was a smaller eastward branch of Ditch 1, dug, perhaps though not certainly rather later, as part of the same system, which crossed the hill but was interrupted across the thickly-wooded spread of clay-with-flints on the summit, where its place was probably taken by a double hedge. After an appreciable interval Ditch 3 was made, connected with Ditch 1 on Thruxton Hill some way to the north, and mounting the hill from the N.N.E. towards it again, as if to enclose a new "ranch" area. On reaching the line of Ditch 2 on the east side of the hill, it turned nearly due east to occupy this line and supersede Ditch 2, running at a considerably greater depth. A few flint flakes and cores, and a flint axe from Ditch 3, are the only artifacts found of this period.

After another interval, the hill was occupied by people probably of Iron Age A 1 culture, perhaps in the 4th century B.C., who established an oval palisade-enclosure on the summit, measuring some 1100 by 550 feet, and dug Ditch 4 to connect it on the southwest with Ditch 1. This enclosure may have had entrances here and on the line of Ditch 3, since all these ditches (but for Ditch 2 where superseded) may still have been in use for traffic. The occupation of the enclosure was apparently intermittent, and was perhaps confined to occasions of emergency; the nearest running water is the Bourne at Cholderton 2 miles away. A squatting-place towards the north end of the hill that may belong to it showed traces of fires on which meal ground in sarsen querns and meat had been cooked on the open grassland, but yielded no pottery. It was more probably now than earlier that a patch of poor grass

could begin to grow on the eastern silted-up edge of Ditch 3 behind the palisade on the north brow of the hill. Subsequently, at a date when this had been growing for not more than a century, people of the local Iron Age A 2 culture, presumably the same group earlier responsible for the palisade-enclosure, to whom some of the Celtic fields (and the circular enclosure at Lains Farm, Quarley) detected by air-photography in the vicinity may probably be assigned, set about converting the enclosure into a hill-fort or camp, of some 8½ acres, with entrances on the N.E. and S.W. They dug the camp ditch on the line of the old palisade-ditch, which only remained, filled up, across the two entrance causeways.

During the work, these people or a sizeable group of them, subsisting on domestic animals and meal ground in sarsen querns, cooked on fires of the wood growing on the adjacent clay-with-flints, inhabited the hollow over the turn of Ditch 3. Into it they shovelled down the chalk of its banks as a floor, immediately behind the line projected for their rampart, which in due course just covered the eastern edge of their occupation-area. The rampart was not revetted with timber, but the bulk of its forward side was formed of big chalk blocks, or of clay-with-flints where as on the N.W. side this was present along it. To defend the N.E. entrance an ambitious barbican-like structure, to carry most probably a bridge over the gateway, was planned, and its supporting post-holes and gullies partly dug. The S.W. entrance presumably had another such. But at this point, when also the ditch and rampart were not everywhere finished, and the rampart still had two gaps in it to be filled in, on the S.E. and N.W., the whole work of fortification was abandoned. The ditch and rampart were left as they were, but the excavations for the N.E. entrance structure were filled in with clean chalk, and a small fence supported on five posts set in holes packed with clay, four of them dug in the edges of two of the original post-holes, was put up instead to retain the rampart-material on part of the west side of the entrance. Soon afterwards this fence was burnt down, and no further traces of occupation have been recorded, save one or two stray scraps from an area of Romano-British occupation somewhere down the N.E. slope of the hill. The rampart soon weathered and silted up the ditch partially, while at the gaps left on the S.E. and N.W. the loose material off the surface silted it up completely, so that the natural causeway so formed opposite the S.E. gap could be metalled with flints in modern times and used probably in connexion with clay diggings on the hill-top, which preceded the planting, apparently in the late 18th century, of the clump of trees there which still exists. An attempt made probably at the same time to plant three trees in the N.E. entrance was not successful.

As regards the site's prehistoric chronology, the construction of the camp is dated by the associated pottery to a stage of the Iron Age A 2 period already recognized on other sites, and believed to be datable within the 3rd century B.C. Among those sites Figsbury Rings, 7 miles S.W. along the watershed, is likewise an isolated hill-fort occupied only in temporary fashion, its rampart indeed twice reinforced, but from an internal quarry-ditch that was never completely dug out. The phenomenon of incompleteness is more strikingly represented on Ladle Hill, Great Litchfield, whose summit is visible north-eastwards from Quarley Hill; there a ditched enclosure to some extent analogous to the Quarley palisade-enclosure was superseded by a hill-fort which was abandoned at a far less advanced stage of its construction. It has been suggested that the occasion of this was a "scare" which may have had widespread repercussions in the south country generally. And it may now be added that in his Interim Report on the Prehistoric Society's excavations of 1938 in the contemporary settlement-enclosure of Woodbury near Salisbury, Dr. Bersu states⁷⁶ that there, too, a defensive ring-work was begun but never completed, and on the evidence available here and elsewhere in the Salisbury-district he infers that at some point "during Iron Age A times all the folk living in the district were impelled by some threat, the nature of which is as yet unknown, to defend their open settlements in level country by banks and ditches." Now a preliminary examination of the Woodbury material suggests a close correspondence in the pottery of this phase with that both from Figsbury and from Quarley Hill. And Dr. Bersu continues: "The fact that at the same time they began to build very strongly-planned defences in high places better protected by nature—hill-forts which in part were certainly not completed or occupied—suggests that we have here to deal with an event of far-reaching importance."

The "scare" explanation of Ladle Hill is thus borne out, and the fortification of Quarley Hill is to be explained on the same lines, along with that of Figsbury, and that of Woodbury and sites like it, of which Meon Hill, with pottery in part again similar to ours, is the leading Hampshire example. Now it has been seen (pp. 149, 183) that subsequent changes in the Iron Age pottery in this part of Wessex introduced the fabric often called "La Tène II," in allusion to influences somehow connected with the La Tène culture of the Continental Celts, which is echoed in some parts of Britain in the immigrant cultures called Iron Age B. The first of these cultures arrived during the 3rd century B.C., and it may be possible to recognize it not only further north in Britain, but in the

76. *Proc. Prehist. Soc.* iv, pt. 2, 309.

south, for it can be argued⁷⁷ that a branch of it was brought about 250 B.C. by invaders from across the Channel to parts of Sussex, whose A 2 inhabitants defended themselves by building hill-forts. I believe this contention is well founded. If a branch or branches of the same or a related invasion likewise assailed the A 2 populations of the Test and Avon districts, the attempted fortification of Quarley Hill and the other Hampshire and Wiltshire sites here discussed—apparently just at this time in the 3rd century B.C.—would be explained. So would its sudden interruption, and the abandonment of the hill-forts (though not of the settlement-enclosures) which ensued, with at Quarley Hill the burning of the secondary fence beside the N.E. entrance. It remains to be seen if this idea will prove acceptable. With the opening of the possibility, this Report must end. The main facts about Quarley Hill are now on record, and only further work can fit them more definitely into the growing outline of Iron Age prehistory. It may be hoped that the Club's excavations at Bury Hill and Balksbury will make fresh contributions to that outline in 1939.

⁷⁷. I have done so in a paper on the pottery from the Caburn, near Lewes, to be published in this year's volume (xc) of the *Sussex Archaeological Collections*.

Appendix I.

REPORT ON THE ANIMAL REMAINS.

By J. WILFRID JACKSON, D.SC., F.S.A., F.G.S.
(Manchester Museum).

"The remains found during the excavations on Quarley Hill last year and submitted by Mr. Christopher Hawkes, F.S.A., consist of the fragmentary jaws, teeth and limb-bones of domestic animals slaughtered for food by the inhabitants. They belong to the horse, ox, sheep and pig. In addition there are some bones of dog and a few of man.

A. Beneath rampart in Section 17 (p. 171).

SMALL SHEEP.—A small humerus, minus both ends. This single bone antedates the fortification of the site: it was found in the old soil underneath the rampart associated with burnt material and broken pieces of Sarsen quern-stones. The bone does not differ from those of the main site, Area B.

B. Main Early Iron Age occupation over turn of Ditch 3 (pp. 179-81).

HUMAN.—Fragments of a femur and tibia, and the proximal end of a radius.

SMALL HORSE.—One lower molar tooth, one incisor, fragment of a splint-bone, and a perfect metatarsal (cannon-bone). The latter measures: length, 250; proximal end, 47; distal end, 45; mid-shaft, 27.5 mm. These scanty remains belong to a small, slender-limbed animal of the Exmoor pony type.

DOG.—Few imperfect limb-bones (humerus, femur, radius and ulna) of a small animal.

FIG.—Few fragments of limb-bones, loose teeth, and pieces of upper and lower jaws containing teeth: all adult.

SHEEP.—Many broken limb-bones, jaws containing teeth, and loose teeth: adult and young. They belong to small animals of the usual 'Romano-British' type. The metacarpals and metatarsals (shank-bones) are slender and waisted; none are perfect, so cannot be measured. Two astragali measure 24 mm. in length each, and one measures 25 mm.

OX.—Several broken limb-bones, including metacarpals and metatarsals (shank-bones); two perfect metacarpals; two astragali; loose upper and lower teeth (some young); a left and right mandible retaining the last milk-molars; and two fragments of small horn-cores. The remains indicate a small type of ox—the *Bos longifrons* Owen. The two metacarpals measure: length, 162 and 169; mid-shaft, 31 and 25 mm. respectively: the wider is probably that of a male animal. The two astragali measure 58.5 and 54.5 mm. in length. All the other shank-bones have been broken across in order to extract the marrow or to fit into the stew-pot. Several of the bones show cut-marks resulting from disjuncting and stripping off the flesh.

C. Ditch in Section 18 at S.E. Gap (pp. 173-4). At 5ft. 8in. in silt.

SMALL HORSE.—One lower molar tooth (as in B).

At 1ft. on top of silt.

SMALL OX.—One broken lower molar tooth (as in B).

All the above remains agree closely with others from Early Iron Age sites, including Glastonbury Lake Village¹, All Cannings Cross², Fifield Bavant³, Swallowcliffe Down⁴, Meon Hill⁵, etc."

1. *The Glastonbury Lake Village*, Vol. ii, 1917.
2. *Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire*, 1924, pp. 43-50.
3. *Wiltshire Arch. and Nat. Hist. Mag.*, Vol. xlii, 1924, pp. 90-93.
4. *Ibid.*, Vol. xliii, 1925, pp. 90-93.
5. *Proceedings Hants Field Club and Archaeological Society*, Vol. xii, 1933, pp. 156-157, and *ibid.*, Vol. xiii, 1935, pp. 39-42.

Appendix II.

REPORT ON THE NON-MARINE MOLLUSCA.

By A. S. KENNARD, A.L.S., F.G.S.

"Material and soil samples were submitted from two loci A and B, both being from the old turf beneath the Iron Age rampart of the camp.

The material from locus A (Section 17, p. 171) contained a large quantity of burnt material probably indicating an ash dump, conditions which were quite absent from B (square cutting on W. of Section 17, p. 172), which was a normal turf earth. The results are tabulated separately, for they show that the different conditions indicated by the material is reflected in the faunules.

TABLE.

	A.	B.
<i>Pomatias elegans</i> (Müll.)	—	186
<i>Carychium minimum</i> (Müll.)	1	—
" <i>tridentatum</i> (Risso)	—	1
<i>Pupilla muscorum</i> (Linn.)	112	95
<i>Cochlicopa lubrica</i> (Müll.)	17	51
<i>Vertigo pygmaea</i> (Drap.)	9	2
<i>Ena obscura</i> (Müll.)	—	1
<i>Vallonia pulchella</i> (Müll.)	13	20
" <i>costata</i> (Müll.)	12	31
" <i>excentrica</i> Sterki	40	65
" <i>Arion</i> sp.	26	28
<i>Retinella nitidula</i> (Drap.)	—	6
" <i>radiatula</i> (Old)	—	7
<i>Xerophila itala</i> (Linn.)	—	121
<i>Trochulus hispidus</i> (Linn.)	20	165
<i>Cepaea nemoralis</i> (Linn.)	—	12
" <i>hortensis</i> (Müll.)	—	2
<i>Clausilia rugosa</i> (Drap.)	—	4

In A the faunule is a grassland one, whilst in B there must have been thick herbage to account for the presence of the larger species. The climatic conditions indicated are warm and sunny. All the examples of *T. hispidus* are the small downland form var. *nebulata* Menke, whilst the examples of *Cepaea* are also small, both indicating dry conditions. With the exception of *R. radiatula*, all the species are probably living there to-day. It must be noted that this faunule is markedly different from the Early Bronze series found on Stockbridge Down by Dr. N. Gray Hill, this latter showing much damper conditions than those of to-day."

Appendix III.

REPORT ON THE CHARCOAL.

By GEOFFREY TANDY and FRANCES L. STEPHENS,
Dept. of Botany, British Museum (Natural History).

“Specimens 1-4, from the B post-holes in the N.E. Entrance (p. 177).

Of these, 1-3 are such small fragments that it is almost impossible to express any opinion about them, except that they are not coniferous. Specimen 4, from the bottom of hole B 4 (dug in the filling of hole A 5) is Oak (*Quercus sp.*).

Specimen group 5, from main Iron Age occupation over turn of Ditch 3
(pp. 179-81).

This contains two kinds (and we think not more), which we have sorted into separate boxes, as follows :—

- (a) Oak (*Quercus sp.*).
- (b) A Rosaceous wood, ? Hawthorn.

The difficulty about the Rosaceous wood is that we are unable to exclude Apple, Pear, Mountain Ash, Whitebeam, and the like. But Hawthorn seems ‘the best bet’ (if we may be allowed the expression).”

Appendix IV.

REPORT ON SOIL - SAMPLES.

By F. E. ZEUNER, DR. HABIL., PH.D.,
Dept. of Geochronology, University of London Institute of Archaeology.

Dr. Zeuner writes :—“ I have studied your samples and come to the following results :—

I: Samples A and B, in and in top of silt of Ditch 3 beneath the Rampart in Section II (p. 163, Fig. 9).

How much vegetation, and what sort, if any, does the soil-line over the ditch under the rampart represent, and can one suggest what lapse of time it implies between the silting of Ditch 3 and the rampart built over it ?

The lapse of time between the silting up of the ditch and the building of the rampart must have been short, since vestiges only of a soil were formed. I am inclined to estimate that the time-gap did not exceed 100 years and probably was less. Vegetation was poor on the silt before the rampart was built. No forest seems to have grown up on this spot.

II. Samples C, D1, and D2, in the base and in the old turf-line beneath the base of the Rampart in Section 17 and in the cutting W. of it (p. 171, Fig. 11 : cf. Fig. 7).

(Samples D1 and D2). Was the human activity evidenced by D1 immediately followed by the building of the rampart, or not?

D2 is a real 'turf,' *i.e.*, a soil formed under the influence of vegetation. It represents the original weathering surface before man began to interfere with the natural processes ; it began long before B of the ditch under the rampart was formed and may have, and most probably has, continued to form until the rampart was built. It is impossible to say whether the human activity evidenced by D1 was immediately followed by the construction of the rampart (C) or not.

III. Sample E, of the material in post-hole B4 in the N.E. Entrance (pp. 177-8 : Figs. 12-13).

I washed the matter from the post-hole B4 and found minute traces of charcoal (about 1 mm.) and small lumps of a yellow clay which may have been burnt (they are often full of tiny bits of charcoal down to 1-5th of a mm.). This material must have got into its present place after the post had been removed or after it had decayed naturally. It indicates that burning took place at some time, and that burnt matter lay on the ground in the gateway. I leave it to you to draw conclusions."