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Excavation of a Round Barrow

In Rag Copse, Near Hurstbourne Tarrant, Hants.

by GROUP CAPTAIN G. M. KNOCKER

Introduction

MR H. S. L. DEWAR has drawn attention[1] to the existence of a large round barrow in Rag Copse, which forms part of the extensive area of woodland known as Doles Wood, lying on the ridge just south of the village of Hurstbourne Tarrant, some 5 miles north of Andover on the Newbury road (Fig. 1). In 1904 he dug a trial trench across the barrow but found nothing except a core of flints and a black layer just above natural.

The whole area of Doles is rich in barrows and earthworks and these have, with Mr. Dewar's kind permission, been marked on the map at Fig. 2. One of Mr. Dewar's sites was the well-known Belgic barrow in Blagdon Coppice described in his paper[2] and mentioned by Professor C. F. C. Hawkes and Mr G. C. Dunning[3].

Early in 1950, there seemed to be some likelihood of the replanting of Doles Wood by the Forestry Commission and on this account the excavation of the Rag Copse barrow was undertaken by the writer on behalf of the Ministry of Works during the period May-September 1950.[4] It was hoped that this barrow might prove to be another Belgic one, since Belgic and early Romano-British pottery is plentiful all over Doles.

In fact, however, it turned out to be of early Middle Bronze Age date and to consist of an unurned female cremation, set in a large pit and covered with a substantial flint cairn to the north of which a smaller cairn covered what was probably the site of the funeral pyre.

1. H. S. L. Dewar, 'The Field Archaeology of Doles', *Proc. H.F.C.* X, Part 2, pp. 121 ff.
2. H. S. L. Dewar, op. cit., pp. 121-2.
3. Hawkes and Dunning, *Belgae of Gaul and Britain*, pp. 304 ff.
4. *Acknowledgments.* The excavation of this barrow was possible owing to the kind permission of the owner, the late Mrs R. Bruce of Doles House, who showed great interest in the work. Thanks are also due to the contractor, Mr A. Knight of Hurstbourne Tarrant whose kindness and co-operation were most valuable, Mr Stevens of Little London who found some of the labour, Mr Dukes of Enham-Alamein who has much local knowledge, Mr H. S. L. Dewar who visited the site and pointed out several of the sites in the district and to Messrs G. Burgess, G. Green, A. Weblin, L. Skippings, G. Briant and R. Waite who worked so hard in the excavation of this stubborn and reluctant soil.

The writer is also most grateful for advice from Mr Paul Ashbee, F.S.A., and Dr Isobel Smith, PH.D., F.S.A., who have kindly read through the text, the latter having also prepared the notes on the flint implements to be found at Appendix B. Mr C. Green has drawn upon his great recent experience of barrows and made many helpful suggestions, particularly in regard to the separation of the northern and southern cairns. Professor C. F. C. Hawkes, M.A., F.S.A., has kindly reported upon the bronze object and, in company with Mr C. H. J. Case, M.A., F.S.A., upon the bronze knife. To them also the writer's grateful thanks are due.

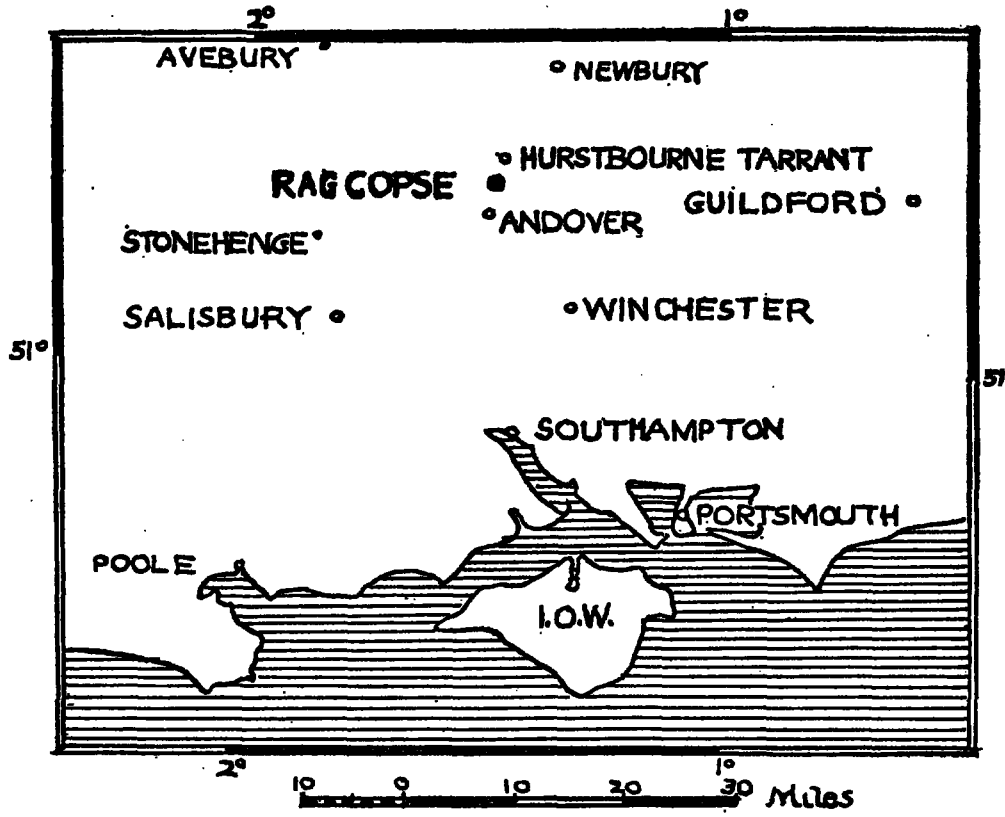

2°
1°
AVEBURY
NEWBURY
HURSTBOURNE TARRANT
RAG COPSE
GUILDFORD
ANDOVER
STONEHENGE
SALISBURY
WINCHESTER
51°
51°
SOUTHAMPTON
PORTSMOUTH
POOLE
I.O.W.
2°
1°
10 0 10 20 30 Miles

FIG. 1

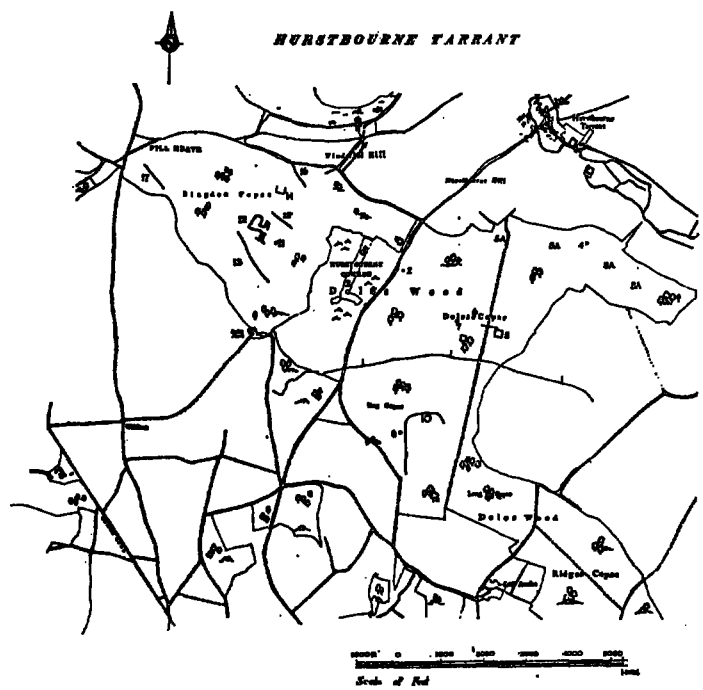

HURSTBOURNE TARRANT

FIG. 2

EXCAVATION OF A ROUND BARROW IN RAG COPSE

Geological and Topographical

Like the rest of Doles Wood, the soil of Rag Copse consists of an upper layer of yellow-brown clay, containing many flints, resting upon a subsoil of red clay-with-flints, which in turn lies upon chalk. A general description of clay-with-flints in the Andover district has been given by the late Mr O. G. S. Crawford in his paper[5] on that district and some notes upon the particular subsoil beneath Rag Copse barrow will be found in Appendix E to this paper.

Rag Copse is densely covered with secondary growth, consisting mainly of hazel clumps, birch and ash saplings and scrub oak, the main forest trees having been felled in about 1920. The barrow itself had upwards of 100 hazel clumps on it as well as the stumps of four large trees (Plate IA). It was found necessary to drag these stumps out with a tractor and an initial mistake was made in first cutting them short. For the benefit of those who may be faced by a similar operation in the future, it may be observed that scrub growth comes out much better if the tops are left uncut. Without these there is no purchase for the tractor chain, which breaks continually as a result. These factors combined with the stony nature of the soil and the wet summer made the excavation a slow and laborious process. A total of 48 working days were occupied with five men for two-thirds of the time and two for the remainder.

5. O. G. S. Crawford, *The Andover District. An account of sheet* 283 *of the One-Inch Ordnance Map*, Oxford Geographical Studies (Clarendon Press, 1922), p. 19.

SCHEDULE OF SITES

(FIGURE 2)

1. Devil's Dyke.
2. ? Round barrow.
3. Small flint cairn.
4. Round barrow partly excavated. Cremation in small cist in chalk, covered with sarsen slab.
5. Rectangular earthwork with ditch-bank. Belgic and 1st century bead rim was found.

5A. Lynchets all along this brow.

6. Barrow in wood: position doubtful. Not mentioned by H.S.L.D.
7. Stone heap in cornfield ? ploughed over cairn. Not mentioned by H.S.L.D.
8. *Rag Copse barrow.*
9. Chalk or flint pits, 6-10 ft. deep.
10. Shallow bank and ditch, 10 ft. wide overall. Perhaps copse boundary. Not mentioned by H.S.L.D.
11. Blagdon Barrow.
12. Cattle pen or enclosure with wings.
13. Cultivation bank.
14. Rectangular bank and ditch. Surface pottery includes New Forest ware.
15. Bank.
16. Cultivation bank.
17. Cultivation bank.

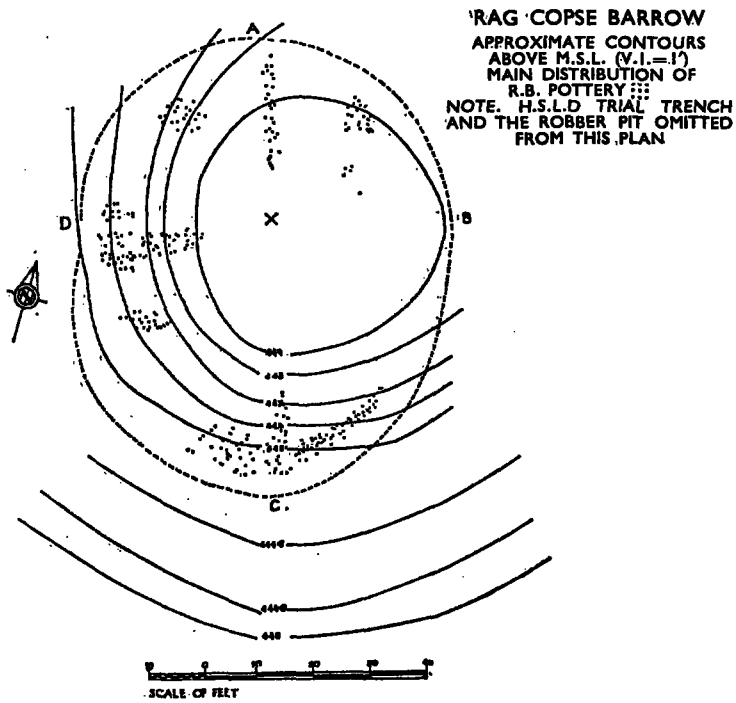


FIG. 3

Method of Excavation

The quadrant method of excavation was employed but it was not possible to obtain a photograph of the barrow with the central cairn standing exposed since it was necessary to remove this before a break, which occurred in the middle of the excavation. Considerable difficulty was experienced throughout in deciding when the old ground surface had been reached, as there were no signs of a turf line when the sections were dug. The difficulty was increased by the fact that the ground sloped downwards from N.E. to S.W.

Construction of the Barrow (Fig. 4)

Undergrowth made it difficult to determine the exact size and shape of the mound. It was however taken to be a rough oval 66 ft. E.N.E.-W.S.W. and 80 ft. N.N.W.-S.S.E. but it seems likely that the northern 10 ft. or so were ' spread ' and that the barrow was originally roughly circular with a diameter of about 70 ft. The ground sloped downwards from N.E. to S.W. There was no trace of a ditch round the northern three-quarter perimeter, but a broad shallow depression embraced the southern quarter perimeter. This may have been a scrape-ditch, whence some of the barrow material was obtained. A test trench, dug across this depression, seemed to indicate that the yellow-brown, upper, clayey loam had been removed. The make-up of the mound was of homogeneous, yellow-brown, clayey loam, set with many flints of all sizes.

Charcoal Spread, perhaps the Funeral Pyre

North of the remains of Mr Dewar's test trench was an area roughly 10 ft. square, covered with a thin spread of oak charcoal, which was thicker at the south-east corner. The southern edge had been cut away by the test trench. It is suggested that this area represents the funeral pyre. Compare Edmondsham bell barrow. *P.P.S.* XXIX (1963) 400, 404.

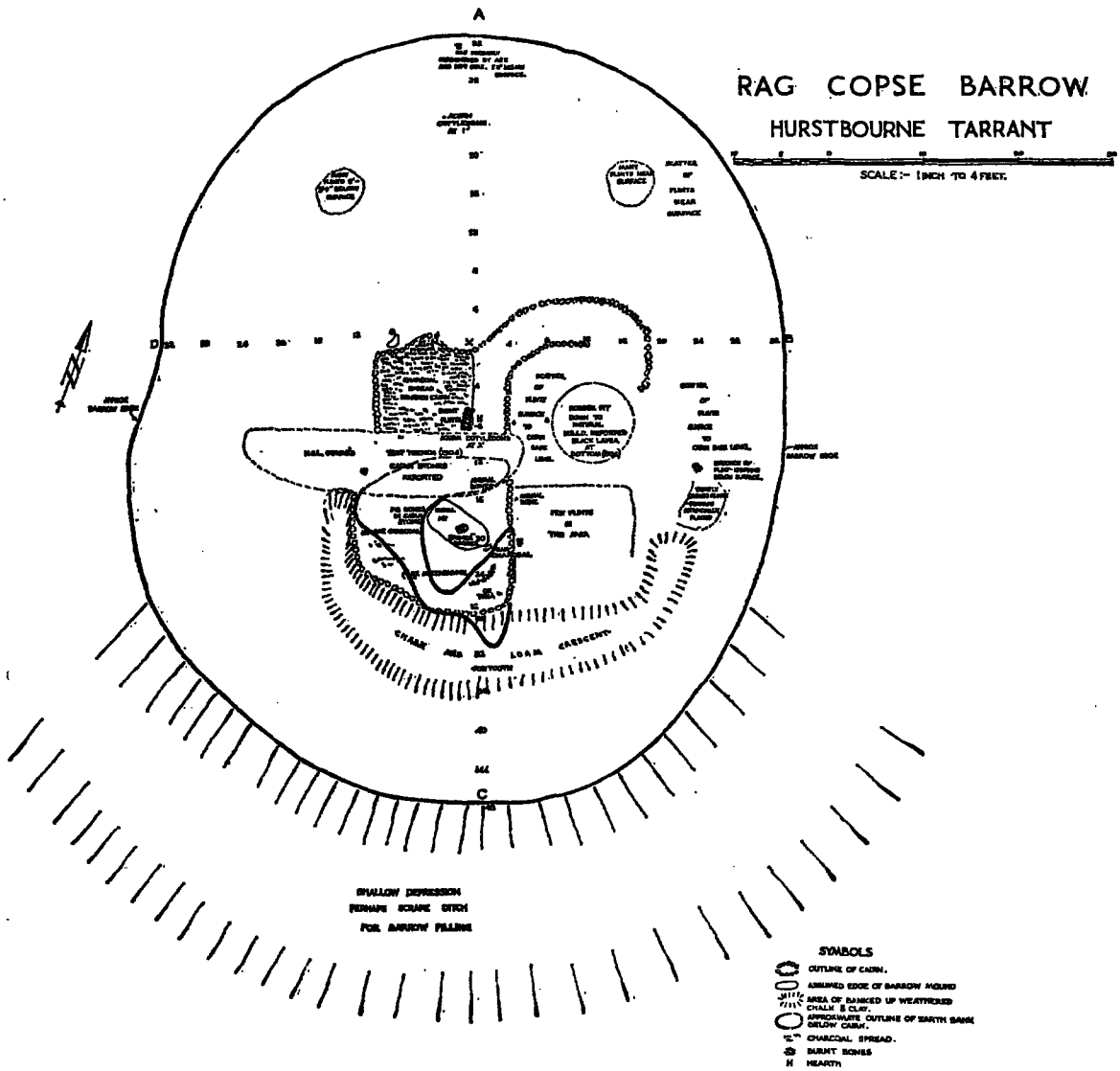


FIG. 4

The Burial Pit (Fig. 6 and Plate IB)

About two-thirds of the way south along the centre line, in the southern half of the barrow, was a roughly rectangular pit, measuring 6 ft. by 3 ft. and dug down 1 ft. 3 in. below presumed old ground level. Near the centre, finely crushed bones representing part of the unurned cremation of an adult woman, lay upon an oval pad of dark brown loam, some 1 in. thick and measuring 1 ft. 6 in. by 1 ft. It was perhaps a turf. The bones occupied a layer 3 in. thick. There was nothing to indicate that they had been enclosed in a bag. Earth and flints were then set upon the cremation, over a roughly rectangular area measuring 2 ft. 6 in. by 2 ft., and a small, much corroded bronze knife with a rudimentary tang (Plate V) was laid just above the level of the layer of cremated bones and 11 in. to the south-east. The whole pit was then filled with flints. A small patch of oak charcoal and dark soil was found near the south-east edge of the burial pit, extending from 1-3 in. below cairn base level. Running south-west, starting about 1 ft. south of this patch, was a rough crescent of charcoal, 3 ft. long and 10 in. wide.

A note upon the cremated bones, kindly prepared by Professor A. J. E. Cave of the Department of Anatomy, St Bartholomew's Hospital, is given at Appendix C.

The use of a pit, fully large enough to take a crouched burial, for a cremation appears to be an instance of conservatism. L. V. Grinsell, 'The Bronze Age Round Barrows of Wessex', *P.P.S.* N.S. VII (1941), 91, comments upon this and, in Appendix II on p. 102 of his paper, gives a list of those known at that time. To these must be added, *inter alia*, the round barrows, A.M. No. Dorset 292 (c), north of Avenue Lodge, Edmondsham, Dorset 5A and A.M. No. Wilts. 378, south of Westfield Farm, Wilts., excavated in 1959, to be published.

West of the burial pit, at about cairn base level, were found two sherds of Bronze Age pottery (Appendix A.1. 2) and a little oak charcoal, and from the same area came the metacarpal of a young ox and the tibia and femur of a young pig, while from further east, at the same level, and below eastern edge of the southern cairn, came the tibia of a young ox and part of another ungulate.

The Earth Bank

Round the burial pit was an irregularly shaped, earthen bank, roughly crescent-shaped, with the mouth towards the N.E. The shape of the bank was obtained from a number of sections, drawn during the removal of the cairn, and its apparent irregularity is no doubt due to distortion and spread caused by the weight of the cairn above it. Mr Dewar's trench cut through its northern edge.

From this earth bank came a possible rim sherd of Bronze Age pottery (Appendix A.1.3) and the limb bone of a young sheep.

The Flint Cairns (Fig. 4)[6]

The central area of the barrow, but mostly to the west of the north-south axis, was occupied with one certainly, and most probably two cairns of flints.

The Northern Cairn (Plate IIB and Figs. 4 and 5 (i))

North of Dewar's trench and cut by it, was a roughly rectangular area of flints extending from 4 ft. east of Point X to 9 ft. south and 10 ft. west, forming a flat cairn or platform 2 ft. high, resting upon the charcoal spread already mentioned. These stones were set in yellowish, 5A. *P.P.S.* XXIX. 405.

6. L. V. Grinsell, op. cit., p. 93, says that a central cairn is a very common feature in Bronze Age round barrows. To those he mentions must be added the round barrow, A.M. No. Wilts. 378 south of Westfield Farm, Wilts., already mentioned as having a large grave pit.

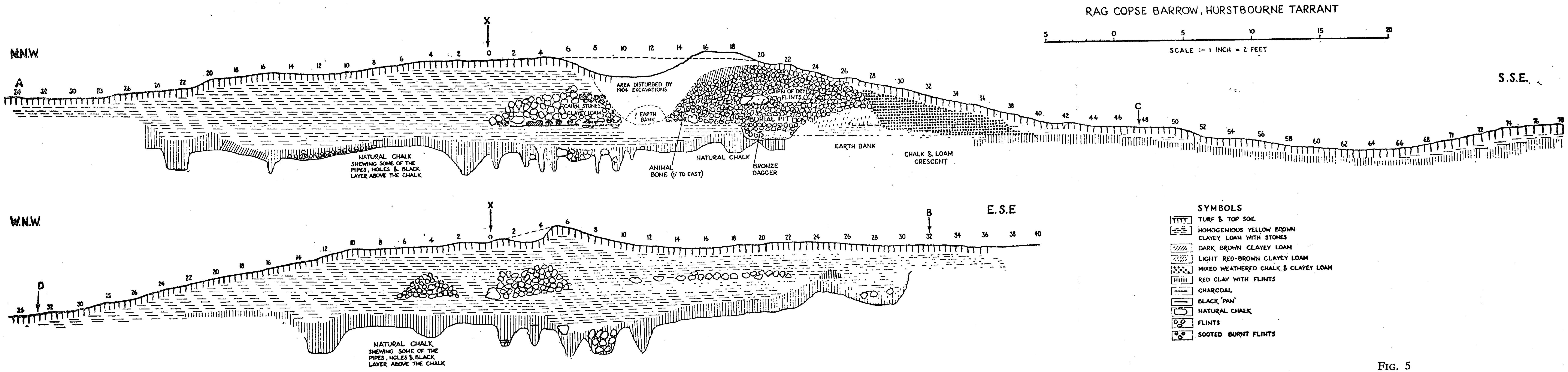

RAG COPSE BARROW, HURSTBOURNE TARRANT
SCALE :- 1 INCH = 2 FEET
N.N.W.
S.S.E.
A
X
C
AREA DISTURBED BY 1904 EXCAVATIONS
CAIRN STONES IN CLAYEY LOAM
? EARTH BANK
CAIRN OF DRY FLINTS
BURIAL PIT
NATURAL CHALK SHEWING SOME OF THE PIPES, HOLES & BLACK LAYER ABOVE THE CHALK
ANIMAL BONE (6" TO EAST)
NATURAL CHALK
BRONZE DAGGER
EARTH BANK
CHALK & LOAM CRESCENT
W.N.W.
E.S.E
B
D
NATURAL CHALK SHEWING SOME OF THE PIPES, HOLES & BLACK LAYER ABOVE THE CHALK
SYMBOLS
TURF & TOP SOIL
HOMOGENIOUS YELLOW BROWN CLAYEY LOAM WITH STONES
DARK BROWN CLAYEY LOAM
LIGHT RED-BROWN CLAYEY LOAM
MIXED WEATHERED CHALK & CLAYEY LOAM
RED CLAY WITH FLINTS
CHARCOAL
BLACK 'PAN'
NATURAL CHALK
FLINTS
SOOTED BURNT FLINTS

FIG. 5

clayey loam. In the south-east corner, where the charcoal spread was thicker, the flints on top were charred and sooted as if a fire had been lit upon them ('H' in Fig. 4). The lowest stones were apparently only sooted on their under surfaces. A large pear-shaped flint protruded from the north-west corner of the cairn.

The Southern or Main Cairn (Figs. 4 and 5 and Plate IIA)

South of Dewar's trench stood a cairn of dry set flints, some 4 ft. high, extending from 4 ft. east to 12 ft. west and 16 to 28 ft. south. Study of Plates IIB and IIA clearly reveals the difference in the make-up of the two cairns. It was noticeable that the flints in the eastern half of the southern cairn above the burial pit appeared to have been specially selected, being mostly about the size of a coconut, although somewhat larger near the base of the cairn, as they were, also, further west. In the cairn and above the western end of the burial pit, was an exceptionally large flint, measuring 2 ft. 3 in. by 2 ft. 9 in. (Plate IIA). This stone, being 18 in. above the lip of the burial pit could not be considered to be a capstone for it. It is however probable that it may have formed the top of a small, inner cairn composed of the specially selected, coconut-sized flints, erected first of all upon the filled-in burial pit.

Tail of Northern Cairn

Stretching from the north-east corner of the northern cairn was a curve of flints, set in clayey loam, running east for about 14 ft. and then curving south and merging into the scatter of flints which occurred at all levels, east of the northern cairn. A few sherds of Bronze Age pottery, some of them abraided, were found below this 'tail' and at varying depths below cairn base level, having no doubt been carried down by roots or possibly stamped in during the funeral ceremonies. The abraided sherds were probably from pre-barrow occupation (Appendix A.1. 4-7).

A robber pit, noted by Dewar, south of the 'tail', extended as far down as natural clay.

East of the Southern Kiln

East of 4 ft. east and south of the tail and robber pit was an area containing few flints and no artifacts.

Crescent of Weathered Chalk and Clay (Plate III)

Embracing the southern and western perimeters of the southern cairn, was a banked-up crescent of mixed weathered chalk and clayey loam. This crescent extended from 16 ft. west to 20 ft. east of the AXC axis. Whereas its western horn lapped round the southern and south-western portion of the southern cairn, the eastern horn embraced the blank segment curiously devoid of stones mentioned above. It was almost as if this area had been deliberately denuded. There were no surface indications of any robber pit, such as occurred further north.[7] Beneath the western horn was found the rim sherd of an Abercromby Type 3 Food Vessel (Appendix A.1. 1 and Fig. 7).

Considerations regarding the Central Area as a whole

It is extremely unfortunate that Mr Dewar's test trench occurred where it did, because it removed the line of junction of the northern and southern cairns. Indeed it is not absolutely certain that the northern cairn was not in fact an extension of the southern one although the difference in their compositions makes this unlikely. It will be observed that a point in Dewar's trench at S.12, on the AXC axis, is almost equidistant from the eastern, southern and western edges of the mound. If this circle continued it would cut the axis at N.22. It has already

been suggested that the northern 10 ft. may be 'spread', so that the barrow centre may have been around S.12. Study of Fig. 4 shows that the two cairns are very lop-sided and placed almost entirely to the west of the north-south axis. It is suggested that it was the original intention to complete the symmetry by extending the cairns further east, but that the builders

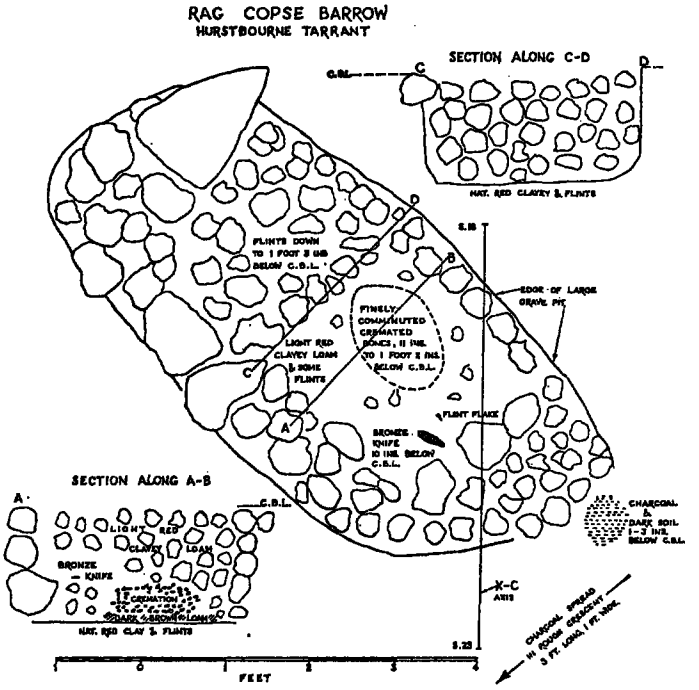


FIG. 6

either grew tired of collecting suitable flints or were prevented from doing so. Instead they compromised with a token northern cairn as outlined by the tail and embraced the empty south-east quadrant with the chalk and clay crescent (but see footnote 7 below). The purpose of this crescent is not apparent but it may have had some ritual significance. Alternatively it is possible that the earth, collected while building up that part of the barrow, just so happened to be different from the remainder and that the crescent has no significance at all.

Remainder of Barrow Make-up

North of the eastern tip of the crescent, was an area of tightly packed flints, just below the surface, at the northern end of which was what the late Dr J. F. S. Stone described as a lump

7. It should be noted that Dewar, op. cit., p. 121, speaks of a circular cavity 17 ft. by 3½ ft., on the southern face of the barrow, to within 1 ft. of the periphery, from which he infers the complete removal of a large mass of barrow material, at some fairly distant date, possibly for building. The size of the cavity, as given by Dewar, does not agree with that of the robber hole found by the writer which was roughly a circle 9 ft. in diameter, but Dewar gives the diameter of the whole barrow as only 36 ft. It is however possible that the empty quadrant may in fact have been robbed, as suggested by Dewar, although there were no surface indications.

of intractable flint, possibly a discarded core or useless lump of flint and a number of characterless flakes (Plate VI). The accompanying Romano-British sherd may well have worked its way down from the surface. Flint stones were scattered throughout most of the barrow make-up, with two small concentrations in the north-east and north-west quadrants respectively. The flint implements are discussed by Dr Isobel Smith in Appendix B. They appear to be of native Neolithic technique and it is probable that they were scraped up with the earth used to build the barrow and thus antedate it. There were no indications of the original ground surface below the barrow, homogeneous, yellow-brown, clayey loam continuing unchanged till it reached the layer of red clay-with-flints above the chalk, but old ground surface has been assumed to correspond with cairn base level. In the extreme north, a scatter of oak charcoal occurred at or about old ground level. The carbonisation is considered by Mrs E. Balfour-Browne to be the result of age rather than fire.

Notes are given at some length in Appendix E upon the subsoil below the barrow.

Above the highest point of the southern cairn were only 6 in. or so of topsoil. Traces of chalk were found in the interstices of the stones and it is probable that the barrow was originally covered with an envelope of the mixed chalk and clay of which the crescent was composed and which had been washed away during the intervening centuries. Examples of chalk envelopes have occurred, *inter alia*, in two barrows excavated by Mr C. Green at Launceston Down, Long Crichel, Dorset (Dorset Nos. 353 (a) and (b) in 1959).

It is likely that the barrow was tree-covered in the Middle Ages when Doles formed part of the ancient Chute Forest.[8]

At several places within 2 ft. of the surface were found small clutches of blackened acorn cotyledons, i.e. acorns without husks, split down the centre. Mrs Balfour-Browne remarks that she cannot recall similar specimens having been previously submitted. They had evidently been buried for many years.

Order of Events

The order of events in the construction of the barrow seems to have been as follows:

(i) The cremation and collection of the burned bones.
(ii) The digging of the large burial pit and the placing of a proportion of the bones upon a turf in the pit, possibly in a bag of some sort.
(iii) The covering of the cremation with earth and flints and the deposit of the bronze knife.
(iv) The filling of the large burial pit with flints and the building of a small cairn of selected flints, above the burial pit, with a large flint on top.
(v) The scattering of charcoal around the burial pit and its small cairn, as well, possibly, as the scattering of sherds of pottery, although this pottery may be from an earlier deposit.
(vi) Some time during the funeral ceremony there may well have been a feast on the site, of which the scatter of animal bones, mainly, it should be noted, of young animals, may be the residue.
(vii) The earth bank heaped up around the burial pit and small cairn, leaving an encircling berm and an opening towards the north-east.
(viii) The northern cairn raised up, with mixed clay and flints, over the charcoal spread left over from the pyre. This was no more than 2 ft. high and upon the stones around Point H a small fire was lit.

8. H. S. L. Dewar, op. cit., p. 118, and O. G. S. Crawford, op. cit., p. 10.

(ix) The southern cairn erected.
(x) The tail of the northern extension laid. These stones showed no marks of fire and were set in clayey loam in the same manner as those of the northern cairn.
Note. The southern cairn may have been built before the northern one.
(xi) The area east of the northern cairn banked up with soil and scattered flints, and east of the southern cairn with flint-free soil, instead of completing the eastern parts of the flint cairns.
(xii) The chalk and clayey loam crescent banked up around the southern half of the southern cairn and the empty south-east quadrant.
(xiii) The rest of the barrow piled up, some of the soil being scraped from the southern half-perimeter, leaving a shallow ditch there.

The Bronze Knife (Plate V) *and Dating of the Barrow*

The bronze knife measured 4·2 in. in length with a maximum width of about 1 in. When found it was much corroded and already in four pieces, but examination revealed that the blade was probably flat (but whether hollow ground or not could not be determined), apparently with a short tang at one end but no rivets. It appears to be similar to the specimen from the Winterslow bell barrow, Wilts.,[9] and to the example from Stanton Moor Barrow T.3.[10] It is of interest that the Stanton Moor knife was also buried with the remains of an adult woman. The knife and the rim of the Food Vessel, Abercromby Type 3 (Appendix A.1, and Fig. 7) give an early Middle Bronze Age date to the Rag Copse Barrow.

Ritual

The present writer does not feel competent to comment usefully upon indications of ritual usage upon this site. He is very conscious of how little can be known about the thought-processes of these people, who lived so long ago and of whose very speech we have no knowledge whatsoever. There seem however to be some resemblances to the ritual arrangements described in connection with Pond Cairn, South Wales.[11] Both barrows were cairn structures and possessed interspaces around the burial pit with a charcoal spread below the cairns. Charcoal spreads occur at other barrows as for example Winterbourne Kingston Down, Tum. 9, mentioned by Warne in *Celtic Tumuli*. Animal bones occur at Pond Cairn, in Barrow A at Snailwell, Cambs.[12] and elsewhere.

Subsequent Occupation

The surface of the barrow was abundantly scattered with sherds of Romano-British pottery mainly of the 1st century but extending to the mid-2nd century with a few as late as the 3rd century. A description of this pottery is given in Appendix A.2. Evidence of large-scale occupation of Doles in Belgic and early Romano-British times is plentiful. In addition to the richly furnished Belgic barrow found in Blagdon Coppice, sherds of bead rim ware have been found in the rectangular earthwork (Fig. 2, No. 5, in Doles Copse) and the winged cattle pen or enclosure near the Blagdon barrow (Fig. 2, No. 12, in Blagdon Coppice).

9. F. Stevens and J. F. S. Stone, 'The Barrows of Winterslow', *Wilts. Arch. Mag.* XLVIII, Plate V.e, pp. 176 ff.
10. J. P. Heathcote, 'Excavations at Barrows on Stanton Moor', *Derbyshire Arch. and N.H.S. Journ.* N.S. IV (1930), 31 and Plate 9.a.
11. Sir Cyril Fox, 'Two Bronze Age Cairns in S. Wales, Simondston and Pond Cairns, Coity Higher Parish, Bridgend', *Arch.* 87, pp. 129-180.
12. T. C. Lethbridge, 'Excavation of the Snailwell Group of Bronze Age Barrows', *Proc. C.A.S.* XLIII, 1950, pp. 30 ff.

The occupation near the Rag Copse barrow must have been intensive for no fewer than 200 rim sherds were found on or near the barrow surface. Early Roman pottery was also found as deep as 18 in. below cairn base level, having no doubt been carried down by roots or burrowing animals. There would appear to be various explanations for this profusion of Romano-British pottery on and in the barrow, for none of which however there is any proof. These include the use of the barrow as a rubbish dump or alternatively some kind of rite involving the casting of smashed pottery on the barrow. It is unlikely that the pottery arrived with loads of manure, for the barrow gave no indication of having been ploughed. It may be considered remarkable that no use seems to have been made of the barrow for secondary burials at any stage of its long history, unless there were some in the wide ditch south of the barrow which was not excavated.

Small Finds

The bronze knife has already been described.

The only other significant small find was a bronze clip consisting of a flattened handle pierced at the end and decorated with punch marks around the edge. The other end broadened out and was folded over, with two raised ribs running round the fold. It measured 1·5 in. in length and 0·75 in. across the broad part. It was found after a night's rain at South 19, West 11, below the cairn base and was almost certainly rain-washed down from the early Romano-British scatter. As Professor Hawkes remarks the handle part is just like a miniature Roman *patera* handle. It appears to be a rim clip for a bucket. Such metal buckets were made throughout Roman times in Britain.[13] It is illustrated at Fig. 8 below.

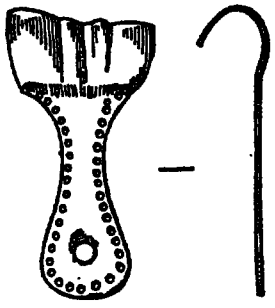


FIG. 8. The bronze clip (1/1)

13. C. F. C. Hawkes, 'Bronze Workers, Cauldrons and Bucket Animals in Iron Age and Roman Britain', in *Aspects of Archaeology. Essays presented to O. G. S. Crawford* (1951), pp. 172 ff.

APPENDIX A.1

THE BRONZE AGE POTTERY

(Co-ordinates measured from Point X)
(Numbers in brackets are Pottery Ref. Nos.)

1. Rim of Abercromby Type 3 Food Vessel. Smooth red ware, black core, sooted, browner in colour inside rim. Twisted cord decoration in three grooves inside rim and in a band outside below the rim (32). From the bottom of the west horn of the chalk and clay crescent. Compare P. Ashbee ' The Great Barrow at Bishop's Waltham, Hants ', *P.P.S* N.S. XXIII, Fig. 9 and Plate XIV, and list of Food Vessel sites *ibid.* 165-6.

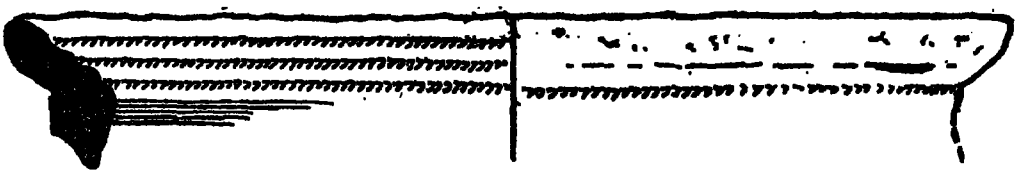


FIG. 7. The Food Vessel (1/1)

2. Two sherds, one dark brown with flints and one brick red outside with a dark buff core with flints, both ·25 in. thick. From below cairn, west half (37).
3. One possible rim sherd, brick red outside, dark grey inside with small flints. From earth bank surrounding grave pit below cairn (40).
4. One abraided, brick red sherd, without flints. N.4 E.1, 1 ft. 9 in. below cairn base level.
5. One abraided sherd, brick red inside, dark brown outside with large flints, E.8 S.1¼, 1 ft. below C.B.L.
6. Two sherds, red, with large flints. S.5 E.10, 6 in. below C.B.L.
7. One sherd, pinkish red, with large flints. N.2 E.6, 6 in. below C.B.L.

APPENDIX A.2

THE ROMANO-BRITISH POTTERY

As already noted, a considerable quantity of Romano-British pottery was found scattered on and just below the surface of the barrow. This pottery has been kindly examined by Mrs M. E. Cotton, M.A., F.S.A., and appears to range between the first half of the 1st century A.D. to the middle of the 2nd century or later. A selection of sherds is illustrated in Figs. 10 and 11. Where applicable comparisons have been given. The pottery included many sherds of bead rim vessels for which comparisons have not been given, on the grounds that such ware is likely to be local in design. Amongst the sherds not illustrated were the fragments of several pitchers, a number of lids of simple form, a few colander bases and some roofing tile fragments. Little can be said about the surface of the pottery which was, in almost all instances, so weathered that the original surface could not be determined.

EXCAVATION OF A ROUND BARROW IN RAG COPSE

ROMANO-BRITISH POTTERY

FIGURE 10

1. Native, hand-made, necked jar in very coarse, brown paste, fired black with particles of flint: perhaps pre-Conquest. Other sherds of this ware were also found (28) south-east quadrant, topsoil.
2. Native bead rim bowl, hand-made, in black gritty paste, fired black with tool-marked surface: diameter approximate (11). North-east quadrant, topsoil.
3. Base with kick and concentric grooves, in gritty grey-brown paste, black at fracture; girth groove above basal angle (10). North-east quadrant, topsoil. Cf. Hawkes and Dunning, *Belgae of Gaul and Britain*, Fig. 22.4 (from London). Mid-1st century.
4. Native copy of *terra nigra* platter in dark brown paste (19). South-east quadrant, topsoil. Cf. Hawkes and Hull, *Camulodunum* 222, which relates the incidence of sub-Belgic native copies, mainly post-Conquest.
5. Native copy of Belgic platter with straight walls, in buff, sandy paste (62). South-west quadrant, upper levels. Cf. *Camulodunum*, Form 31B, p. 223 and Fig. L. Second half 1st century.
6. Body sherd from native copy of a butt-beaker with two lines of rouletted decoration, in hard, grey paste, fired grey (11) with 2 above.
7. Bead rim bowl in gritty, brown paste, fired dark grey (33). South-west quadrant, surface.
8. Bead rim bowl, brownish paste, fired red (11) with 2 above.
9. Bead rim bowl in brown, sandy, hard Romanised fabric, fired grey (21). South-east quadrant, topsoil.
10. Small globular pot with bead rim, in dark brown sandy paste (18). South-west quadrant below tree roots and around 2 ft.
11. Bead rim pot in grey sandy ware (7). Above cairn at 2 ft.
12. Romanised form of bead rim jar, slightly shouldered, in fumed grey paste; flat base (19). With 4 above.
13. Bead rim storage jar in coarse, gritty black paste, fired red; hand-made (4). North-west quadrant at 1 ft. 6 in.
14. Romanised copy of Belgic cordoned urn, in gritty black paste, fired dark grey (58). South-east quadrant near edge at about 2 ft. Derived from Wheeler, *Verulamium*, Fig. 17.52 (cordoned urn).
15. Cordoned bowl or jar with girth grooves, in light brown, sandy paste fired grey-brown (58). With 14 above.
16. Bowl with thickened everted rim with external and internal rim-grooves, in coarse buff-brown sandy paste. No close parallels within the period but see *Camulodunum* 223 and Plate LII, Form 44B (from Periods III-V, A.D. 43-61). For a similar 4th century bowl see Heywood Sumner, *New Forest Roman Pottery* (1927), p. 39, and Plate XI, 6 and 9-12, from Ashley Rails.
17. Necked bowl in buff, sandy paste (4) with 13 above. Cf. Kenyon *Jewry Wall, Leicester*, Fig. 24, Type A.
18. Flaired rim, necked bowl in iron-grey paste (4) with 13 above. Cf. *Jewry Wall*, Fig. 24, Type A.

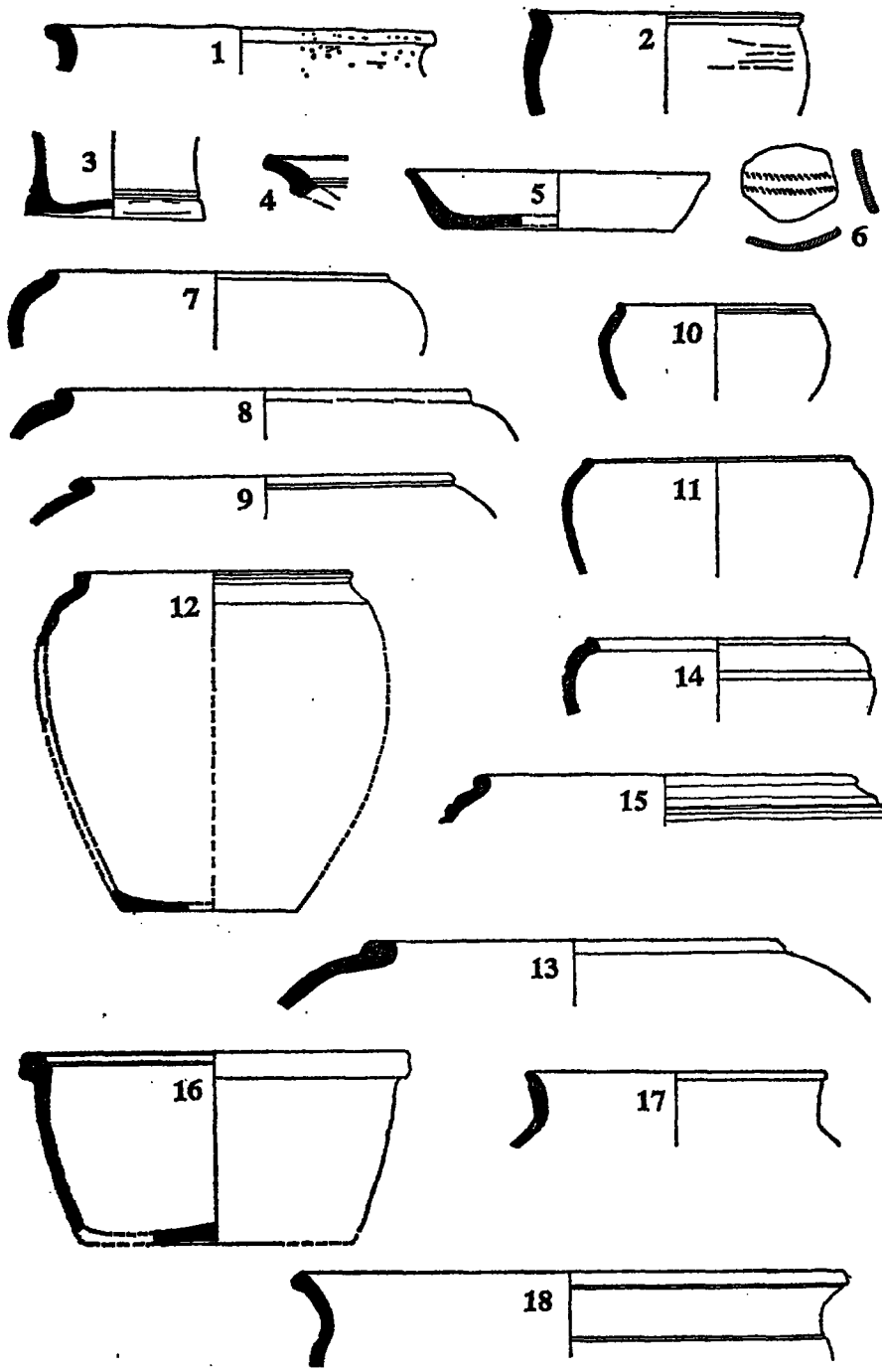


FIG. 10. Early Romano-British pottery ($\frac{1}{4}$)

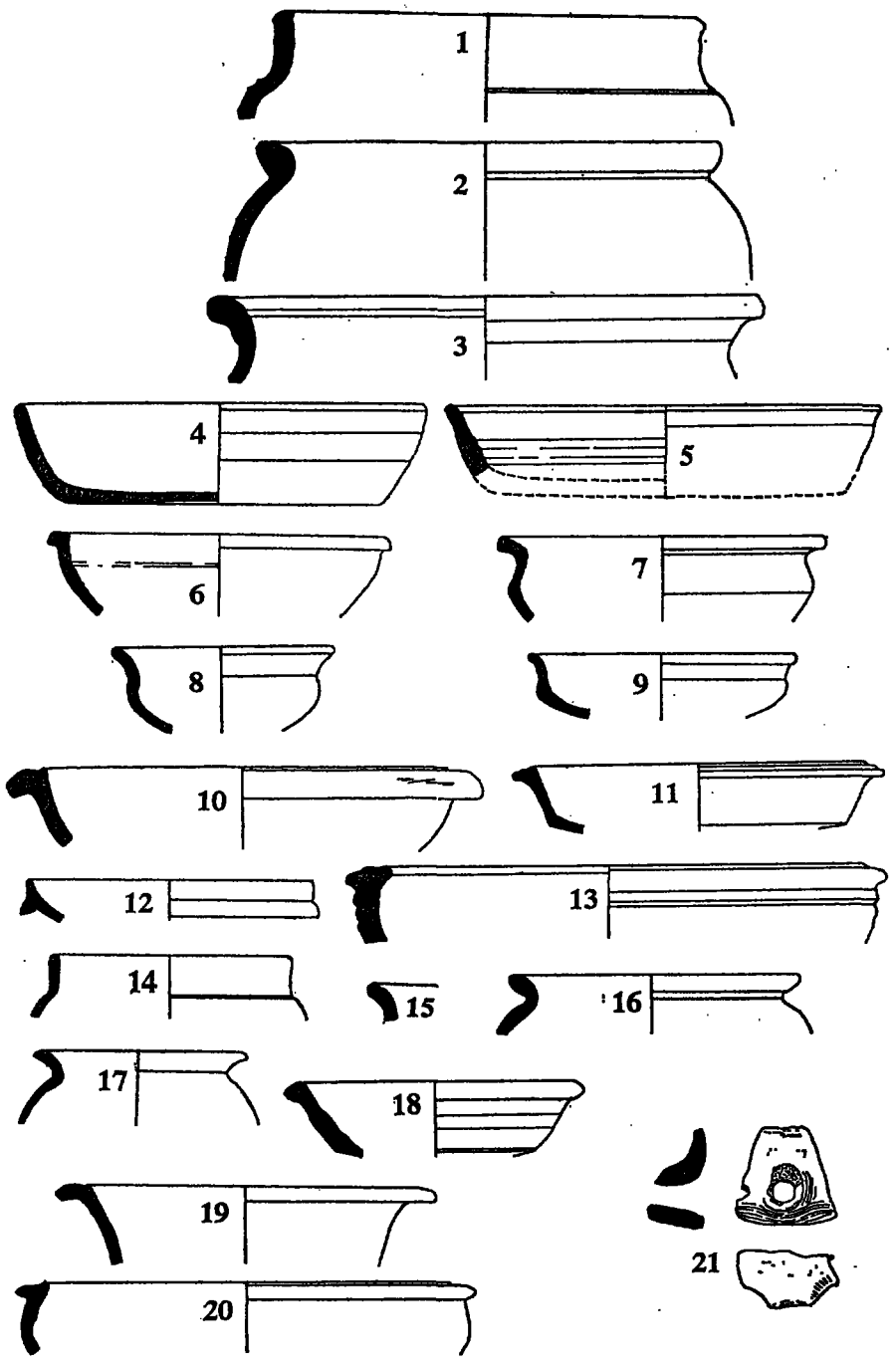


FIG. 11. Romano-British pottery ($\frac{1}{4}$)

FIGURE 11

1. Necked bowl with slightly everted, thickened rim, in hard, coarse, gritty black paste (7) with 10.11 above.
2. Storage jar with short, rounded, everted rim in iron-grey paste (2). North-west quadrant topsoil. Cf. *Jewry Wall*, 104. Type A. Common in second half of 1st century.
3. Necked storage jar in yellow-buff, sandy paste (10). North-east quadrant, topsoil.
4. Bowl or lid, in red-brown, sandy paste, with faint girth lines (33). South-east quadrant, within 6 in. of natural. Cf. *Belgae of Gaul and Britain*, Fig. 26.8. Mid-1st century.
5. Straight sided dish in pink, sandy paste (13). North-east quadrant at about 2 ft.
6. Flat rimmed bowl in buff-brown, sandy paste (4) with 10.13 above.
7. Wide-mouthed bowl, with flairing neck and slightly thickened rim in dark brown sandy paste (4) with 10.13 above.
8. Small bowl with flaired and thickened rim in coarse, buff-brown paste (4) with 10.13 above.
9. Small necked bowl with beaded rim in rough, buff, sandy paste (4) with 10.13 above.
10. Flanged bowl in coarse yellow-buff, sandy paste (62) with 10.5 above. North-east quadrant topsoil.
11. Flanged, reed rim dish in yellowish, sandy ware, sooted (62) with 10.5 above. Cf. *Archaeologia* 90, p. 111, Fig. 13.11. First half 1st century.
12. Flanged bowl in pinkish, sandy paste (12). North-east quadrant topsoil.
13. Flanged bowl, with cordon below flange and grooved rim in grey-brown paste (2) with 11.2 above. Probably 1st century R.B.
14. Shouldered jar with almost upright rim in yellow sandy paste (10) with 11.3 above.
15. Open-mouthed jar with rim grooved internally for lid in brown, sandy paste (1). North-east quadrant topsoil.
16. Cavetto rim jar in dark brown, gritty paste (1) with 15 above. Cf. *Jewry Wall*, Fig. 26.1 and 5. Type A; probably first half 2nd century.
17. Cavetto rim jar in grey, sandy paste of fine texture and execution. Cf. *Jewry Wall*, Fig. 26.9 or 13, Type C or D, mid-1st to mid-2nd century.
18. Pie-dish in grey-brown, sandy paste (2). North-west quadrant topsoil. Cf. *Jewry Wall*, 81 and Fig. 19.14. Type B. Occurs down to A.D. 110-120.
19. Pie-dish with grooved rim in buff, sandy paste (24). South-east quadrant topsoil. Cf. *Jewry Wall*, Fig. 19.21-23, second half 3rd century.
20. Flanged bowl in buff-brown, sandy paste, fired darker brown (4) with 10.13 above.
21. ? Spout, hand-made, in light, buff-brown, coarse paste, dark grey at fracture (26). South-east quadrant near surface. No close parallels.

EXCAVATION OF A ROUND BARROW IN RAG COPSE

APPENDIX B

NOTES ON THE FLINTS FROM RAG COPSE BARROW

by Dr Isobel Smith, Ph.D., F.S.A.

The total number of artifacts, including struck but unused flakes, is 42. Two scrapers (Nos. 1 and 7) (Fig. 9.1 and 2) and two flakes are of fresh black flint and are presumably of imported, possibly mined, material. The remainder of the flints, with the exception of Nos. 13 and 25 (Fig. 9.12 and 14), appear to have been made from the local surface nodules. Some are in fresh condition and others show varying degrees of patination, but this may in part result from contact with the differing materials in the make-up of the barrow.

The use of surface nodules has produced an industry lacking in well-defined characteristics, since the size and shape of many of the struck flakes have been predetermined by lines of weakness. A few thermally detached flakes, of both starch-fracture and pot-lid types, were also used. Owing to these factors and to the small number of artifacts involved, no statistical analysis in the form of length/breadth indices and so on has been attempted.

The industry may be described under the following categories:

1. *Thermal flakes:* (*a*) utilised but not retouched ... 3
   (*b*) retouched 5

The latter category includes one small pot-lid flake with minute nibbling retouch round part of the circumference and two pseudo-microliths on small starch-fractured rods.

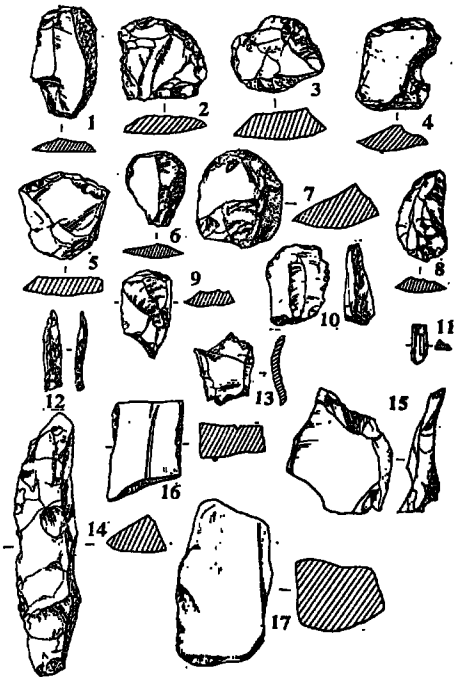


Fig. 9. 1-15, Flint artifacts; 16, 17, hones ($\frac{1}{4}$)

2. *Struck flakes:* (*a*) lacking signs of use 5
(*b*) utilised 5

Two of these have apparently served as saws and show the characteristic narrow band of lustre along the utilised edge.

(*c*) retouched 10

No. 14 (Fig. 9.8) is the most carefully formed of these flakes; in addition to the retouch along the convex edges, the concave edge shows use as a saw, with some resulting damage and a narrow band of lustre 5 mm. in length. The remainder have desultory retouch along the edges similar to that on the scraper No. 1. In four instances a small notch has been worked in one edge.

3. *Scrapers* (Fig. 9.1-7):

Nos. 1 and 7 (Fig. 9.1, 2) have been made of black flint and No. 30 (Fig. 9.7) on an older and already partially patinated struck flake. Apart from No. 7 (Fig. 9.2) which has been damaged by fire, two scrapers (Nos. 1 and 16) (Fig. 9.1, 3), have lost part of the scraping edge by a transverse break, presumably during use. Nos. 7, 22 and 30 (Fig. 9.2, 13, 7) also appear to be heavily worn. The sub-rectangular shape of No. 20 (Fig. 9.5) results from cracks in the parent nodule; the distal end of the flake has been slightly retouched from both faces and it may have served as a knife rather than a scraper.

4. ? *Scrapers* (Fig. 9.8-11):

These four smaller flakes of the appropriate shape may be broken or casually prepared scrapers.

5. *Points* (Fig. 9.12, 13) :

No. 13 (Fig. 9.12) has been made on a flake detached from the side of a polished flint axe, apparently of the type with pointed oval cross-section. The flake has been extensively trimmed, and the bulb removed, to make a point or awl (the extreme tip has also been retouched on the bulbar surface). The flint is unpatinated and of the same texture and brown colour as many others from the site, though presumably the original axe had been made of mined material. No. 22 (Fig. 9.13) has a short point worked at the distal end of an irregular flake.

6. *Chisel or pick:*

No. 25 (Fig. 9.14) is of opaque, creamy fawn flint with numerous coarser inclusions. The late Dr J. F. S. Stone suggested that it might be a product of the flint mines at Martin's Clump, Over Wallop, Hants (*Hants Field Club and Arch. Soc.* XII, 177) or at Easton Down, S. Wilts. (*Wilts. Arch. Mag.* XLV, 350), and that it should perhaps be classed as a debased Thames pick; he noted however, that the *tranchet* technique has not been used to form what is presumably the working end. On the other hand, the neat retouch, directed inwards from the tip, has produced a symmetrical chisel-like end, and this, together with the relatively small size of the implement (length 145 mm.), may suggest that it should in fact be classed as an unfinished or poorly finished chisel. There are no clear signs of use.

In the absence of any implements or flaking techniques characteristic of the Mesolithic or Beaker traditions, the industry seems best classed as in the native Neolithic tradition. Although the safest hypothesis is that the majority of the flints were accidentally incorporated in the barrow with scraped-up soil, the occasional occurrence of small nests of flakes or groups

found together may indicate that some were deposited deliberately during construction. As noted above, degree of patination is not a reliable guide to relative age in this case, but the freshness of many of the pieces does suggest no long exposure to weathering, and they may well be contemporary with the barrow. The inferior raw material and the improvised character of the industry as a whole might in fact indicate use in connection with the building of the barrow.

A point of incidental interest is that 12 of the artifacts (approximately 28·5 per cent. of the total) bear patches of what appears to be redeposited silica (as opposed to the lustre produced by friction in cutting wood or corn or by movement in a wooden haft). These patches, which are up to 25 mm. long and 5 mm. wide, tend to occur most frequently along edges, but are also to be seen elsewhere in positions where they are unlikely to have been produced by mechanical means. Similar deposits occur on some thermal flakes which show no signs of utilization. The patches, unlike those produced by friction, are of equal density over the whole of the area affected. It thus appears that the phenomenon of redeposition is not confined to flints from Pleistocene deposits (as in the well-known series from Knowle Farm, Little Bedwyn, Wilts.; full references in *V.C.H. Wilts.*, Vol. I, Part 1, p. 82).

The following note has kindly been furnished by Mr S. E. Ellis, B.Sc., F.G.S., of the Department of Mineralogy, British Museum (Natural History) on the two hones at Fig. 9.16 and 17.

The large block (Fig. 9.17) is a fine quartzitic sandstone with abundant chert grains and containing some altered feldspar, bleached biotite (brown mica), tourmaline and glauconite. This is consistent with a west country type of sarsen; it was probably found locally as a surface block. The small block (Fig. 9.16) is quartz grey-wacke comparable to three of the Thetford hones (594, 789 and 916)[14] which may have derived from Southern Scotland (via local drift or imported) or from the Ardennes-Rhineland area. It is definitely not local, but the Devon-Cornwall area must be considered as a possible addition to the two named. This hone showed a reaction for copper, but as this was present in the interior of the specimen (cut surface) as well as in the groove, it cannot be regarded as proof that the copper was derived from sharpening a bronze implement.

APPENDIX C

REPORT ON HUMAN REMAINS FROM A BRONZE AGE ROUND BARROW AT RAG COPSE, HURSTBOURNE TARRANT, HANTS

by PROFESSOR A. J. E. CAVE, M.D., D.Sc., F.R.A.I.
(*St Bartholomew's Hospital Medical College*)

The material submitted for examination comprised a mass of flints, earth, and a vast quantity of calcined, fragmented bones. Cleaning and sorting resolved this material into three categories of objects, viz.:

I. A number of unworked flints.
II. A mass of comminuted bones.
III. A few non-human organic remains (snail shells, bird bone, etc.).

Nothing extraneous was found in the earth accompanying these remains.

Item II raised the problem of the number, the age and the sex of the individuals represented, following a preliminary identification of the osseous fragments as human.

14. *Thetford*, H.M.S.O. Publication (to be published), Figs. 178, 3, 2 and 1).

All the bone-pieces had been subjected to fire-heat which had not only cleared them entirely of their animal content, but had produced considerable warping and distortion of the resultant pieces. Further, it was obvious that, after cremation, the individual bones had been artificially still further comminuted by deliberate pounding, with the consequence that the majority of the fragments present are too small and too much distorted to permit of their certain identification, either as to the skeletal element represented or even as to their provenance (i.e. human or otherwise): the overwhelming probability is however that this mass of unidentifiable chips, flakes and pieces does represent the severely comminuted remains of a single human skeleton.

Some of the bony fragments (notably some occipital pieces) are fire-blackened, but the majority are not.

The specific (human) nature of the remains is proved by the presence of the following indentifiable fragments in category II:

II. A, A1 = fragment of petrous temporal bone.
B = fragment of a vertebral spine.
C = fragment of cuboid bone.
D, D1 = fragment of radius head and radius shaft.
E = fragment of fibular shaft.
F, F2 = fragments of astragalus.
G = head of mandible (two pieces).
I = four fragments of femoral condyle.
J, J2 = metacarpal heads.
J1 = ? metacarpal.
K = portion of vertebral transverse process.
L = right mastoid process (of female characters).
M = 26 pieces of rib.
N = fragment of pedal cuneiform bone.
O = terminal hallucal phalanx.
P = numerous cranial fragments (some blackened, most greatly warped).
Q = various phalangeal fragments.
R = piece of clavicle.
S = acetabular chip.
T = numerous fragments of long and short boneshafts, vertebrae, etc.
U = chip of head of humerus.
V = coronoid process of mandible.
W = various human teeth (small, calcined).

(All these bones are labelled accordingly.)

These particular fragments settle the question of the human provenance of the material and render it morally certain that the associated unidentifiable fragments are also human, and, indeed, parts of the same individual skeleton.

As regards the number of persons represented by the Rag Copse material, the probability is that only one individual is concerned. Whilst it is not logically possible to exclude the possibility of the presence of more than one skeleton (since minute bony chips lack skeletal individuality) there is no positive evidence of the presence of any second individual and probability indicates a single cremated skeleton.

Sex. The size, shape and general characters of the teeth, certain of the skull fragments, metacarpal, metatarsal and other fragments, indicate a female. The precise age of this woman at death is mere speculation, and osteological evidence merely proclaims maturity.

A great many of the skeletal fragments (labelled X in the returned material) constitute an unidentifiable and uninformative mass of chips and splinters, representing long bone shafts, vertebrae, ribs and other skeletal parts.

Summary. The Rag Copse cremation represents the burnt and pulverised remains of an adult female skeleton. There is no evidence as to precise age and no indication of admixture with any second skeleton. The quantity of bone present falls short of the mass and bulk of a complete human skeleton, indicating that a portion only of the calcined remains was deposited in the barrow.

APPENDIX D

RAG COPSE ANIMAL BONES

REPORT BY DR F. C. FRASER

*N.*7 *E.*5 *at* 2 *ft.*

Badger

Fragmentary skull and limb bones of young animal (? recent).

Hare

Tibia (? recent).

Chalk and Clay Crescent, S.W. Quadrant.

Ox

Tooth.

*S.E. Quadrant S.*25 *E.*4.

Tibia probably from young ox.

*S.*14 *E.*4 *at* 4 *ft.* 6 *in.*

Fragment of distal end of ungulate tibia.

Below Cairn. W. side in loam.

Ox

Metacarpal of young animal.

Pig

Tibia of young animal.

Distal end femur of young animal.

*S.*5 *E.*3 *at* 1 *ft.* 6 *in.*

Rabbit

Tibia (? recent).

Earth bank below Cairn.

Sheep—probably

Limb bone of young animal.

APPENDIX E

NOTES ON THE SUBSOIL OF RAG COPSE BARROW

As already stated the subsoil of the Rag Copse area consists of clay-with-flints. The late Mr O. G. S. Crawford[15] notes that in section the clay is seen to run down into the chalk in V-shaped pipes. A number of these pipes were found beneath the barrow, which formed patterns strongly suggestive of the post holes of a hut or huts. In addition, where the red flints of the clay-with-flints joined the chalk, was found a layer of black substance. Some of this was certainly manganese and iron pan but some, especially in the filling of the holes or pipes, contained carbon from decayed wood. Notes on various samples sent for analysis have kindly been contributed by Dr I. W. Cornwall, B.A., Ph.D., of the Institute of Archaeology and are given at Appendix F. Further to confuse the archaeologist a number of these pipes appeared to have packing stones around them, consisting in some cases of table flints set on edge and in others of stones set at the bottom and round the sides of the holes (Plate IVB).

The area below the northern half of the barrow consisted of a depression in the natural chalk roughly semi-circular, with 10 holes or pipes set around its perimeter. The floor of this depression was covered with red flints set in a black layer. Some of the flints also appeared to have been split and cracked by heat (Sample No. 26). South of the semi-circle of holes, and beneath the tail of the northern cairn were a collection of holes or pipes which arranged themselves into a roughly rectangular ' hut ' some 10 ft. long by 9 ft. wide, with a straight line of holes, set with stones and containing a black substance, running along the west side, the southern ' wall ' being formed by the edge of the depression with chalk.

Two at least of the pipes found in the area consisted of perfectly vertical holes with smooth sides, 3 in. in diameter, driven through the clay-with-flints, some 2 ft. into the chalk (Plate IVA). In one case a flint apparently embedded in the chalk partially overlapped the vertical hole. North of the northern semi-circle was a grave shaped pit in the chalk 10 ft. long by 3 ft. wide running N.E. and S.W. and adjoining the northern perimeter of the semi-circle. At the S.W. end of this pit were found eight small holes in the chalk arranged neatly in opposed pairs.

Professor H. L. Hawkins, D.Sc., F.R.S., F.G.S., head of the Department of Geology, Reading University, very kindly visited the site during the excavation and examined a number of these pipes and the black layer. He stated that the surface of chalk below clay-with-flints often displays holes and pipes easily mistaken for post holes, weathering having been caused by deep freezing during the glacial periods. A line of black is frequently found at the junction of clay with flints and chalk. Tabular flints set on edge, as found at Rag Copse, can also be a natural feature. He was however of the opinion that some at least of the holes were probably artificially made, being too regular and well defined to be natural. While some of them might be caused by the tap roots of ancient trees he thought that ' it would need very strange tap roots to make cylindrical holes of such smoothness ' although it is quite true that the sides of ' swallow holes ' are often smooth and vertical but such features are normally wider and deeper than the Rag Copse pits. Professor Hawkins also inclined to think that the big ' packing stones ' indicated that the holes had been used.

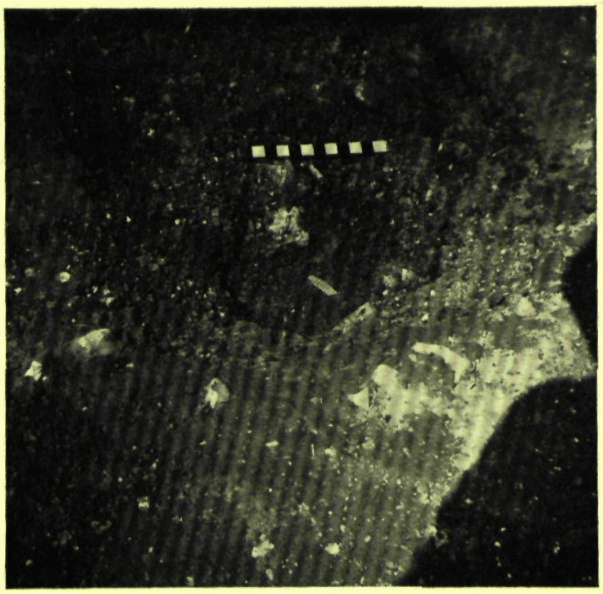
Professor and Mrs Stuart Piggott, who were also kind enough to visit the site, were, on the other hand, quite sure that all these pipes and holes were natural features. The very smoothness of the sides of the pits and pipes pointed to the scouring action of water at some early period and the black deposits in the holes to carbonised roots of long decayed trees.

15. O. G. S. Crawford, op. cit., p. 19.

PLATE IA

The Barrow before excavation.

PLATE IB



The Cremation and Bronze Knife.

PLATE IIA

The Main Cairn showing large Flint over Burial Pit.

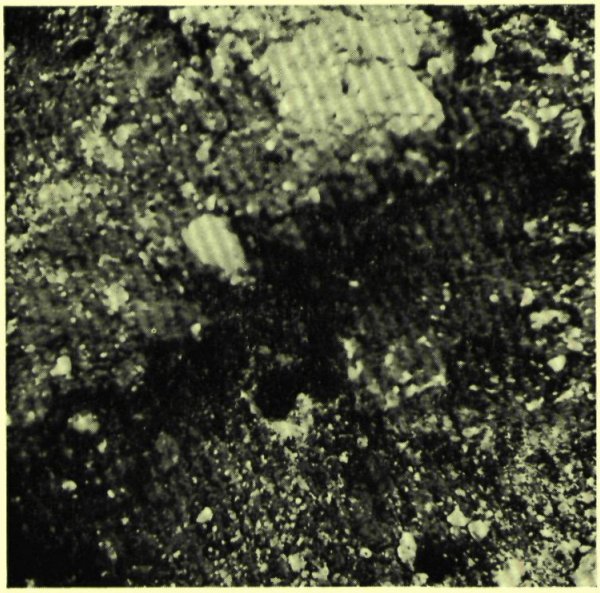
PLATE IIB

The Northern Cairn.

PLATE III

The Weathered Clay Crescent.

PLATE IVA

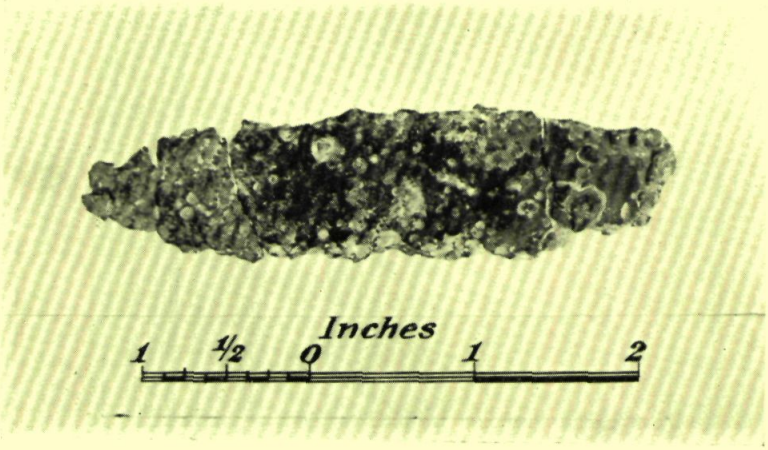


Natural pipe in chalk.

PLATE IVB

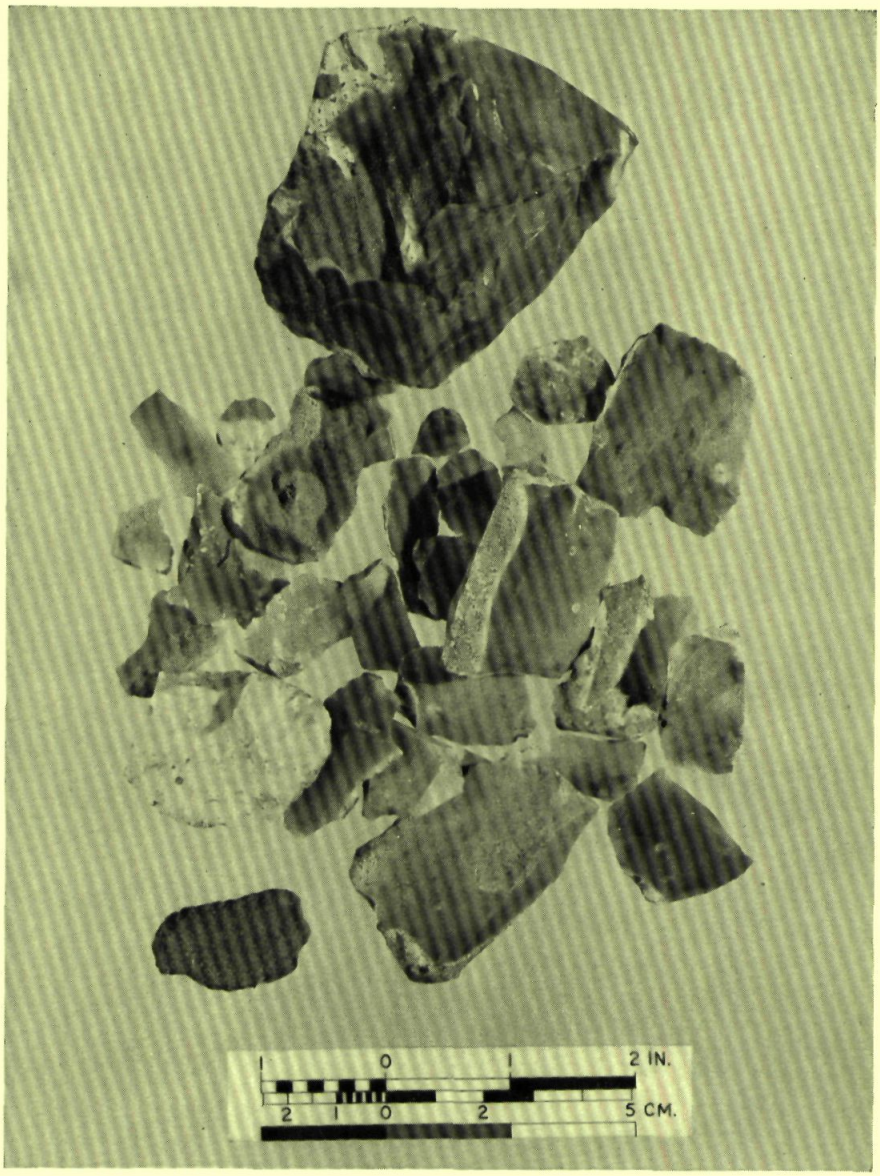
Natural pipes with apparent packing stones.

PLATE V



The Bronze Knife.

PLATE VI



Flints from N.E. of Clay Cresent (see p. 132)

They were unable to imagine how primitive man could have driven a 3 in. stake through flinty clay and then 2 ft. into virgin chalk (although as Professor Hawkins pointed out the upper layers of virgin chalk below clay-with-flints are often quite soft).

It seems therefore fairly certain that these holes were in fact natural features, although a small test area dug at a distance from the barrow produced no evidence of holes or black layer. Perhaps the most convincing proof that these holes were not artificially made was the complete absence of bones or pottery except for some sherds of Romano-British pottery which must have been carried by roots, since it is impossible that a Romano-British hut could have been below a Bronze Age barrow.

The above notes have been given at considerable length in the hope that they may prevent others from falling into the same pit, natural or otherwise, as the present writer.

APPENDIX F

RAG COPSE ROUND BARROW

REPORT ON SOIL-SAMPLES SUBMITTED

by DR I. W. CORNWALL, B.A., Ph.D.

All samples were examined for the presence of calcium carbonate, charcoal and humus. The reaction of the soil (pH) suspended in distilled water, was also tested.

For visual examination, portions were washed and 'panned' with water to remove silt and clay, dried, and the residue viewed under the binocular microscope. A part of the washed sample was then boiled with concentrated hydrochloric acid, re-washed and dried. This treatment removed iron and manganese compounds, leaving only a more or less colourless siliceous residue, with crumbs of charcoal when present. The distinction between black manganese crusts and charcoal was then easily made.

Samples Nos. 3, 5, 7, 9, 12, 21 and 29 all yielded charcoal, which may be taken to be evidence of the action of fire, and, therefore, of human interference.

Samples 1, 2, 4, 15-20 and 24-31, inclusive, were strikingly red or red-brown in colour before acid treatment. Iron and manganese crusts were present, often in large amounts. Save for No. 29, all were without charcoal. Humus was low in all of them. The manganese is probably derived from the Chalk by the processes of weathering and the red colour is likely to be due to soil-formation under climatic conditions warmer and perhaps drier than those at present obtaining. Much of this weathering may be as old as the Tertiary period, but red soils have elsewhere been observed below Bronze-Age monuments which are certainly to some extent the outcome of the conditions obtaining immediately before the erection of the monuments. In any case, the red soils with iron and manganese crusts and without charcoal are natural, so that the 'post-holes' from which many of the samples were taken are in all probability natural also—solution-pipes into the Chalk filled with chalk weathering-products and perhaps some drifted material.

Organic matter (humus) was present to the extent of about 20 mg./100 g. in all. The following list, however, yielded significantly larger quantities:

No.			mg. per cent.
7	...	...	240
8	...	...	40
9	...	...	140
13	...	...	50
15	...	...	26
18	...	...	26
21	...	...	160
29	...	...	56

Most were completely decalcified, but Nos. 3, 9 and 13 still contained biggish undissolved fragments of chalk.

Apart from the list in para. 4 of this report, which may safely be regarded as natural deposits, comments on individual samples are as follows:

No. 3. 'Top filling of P.H.10, 2 ft. below C.B.L.' This was a brown soil with a little charcoal, an acid reaction as to the finer constituents but with some chalk fragments undissolved. pH. 5·7, humus 10 mg. per cent.

No. 5. 'Dark soil and charcoal from N.2 W.12, 2 ft. 3 in. below C.B.L.' Grey-brown soil with much charcoal, magnetite and coke-like mineral aggregates, the last resisting acid solution. On fusion yielded no important quantities of any constituents other than iron and silica—probably therefore iron silicates formed at a high temperature in a fire. Soil decalcified, pH 5·3, humus 22 mg. per cent.

No. 6. 'Bottom of P.H.11.' Pale brown soil with chalk pebbles. No charcoal. pH 8·9, humus 16 mg. per cent. Probably natural material from the lower part of the soil-profile.

No. 7. 'Charcoal and dark soil from small patch S.E. of burial-pit, 1 ft. 3 in. below C.B.L. and from crescent of charcoal running 3 ft. 6 in. S.W. from S.18.' Grey, decalcified, with charcoal and large quantities of organic matter. pH 6·4, humus 240 mg. per cent. Fragments of snail-shell and rootlets. Appears to be, or to derive from, the ancient surface below the cairn.

No. 8. 'Cairn filling N.W. of grave-pit to 1 ft. 2 in. below C.B.L.' No charcoal. Chalk pebbles, pH 7·8, humus 40 mg. per cent. Included an entire small snail-shell. This and the somewhat higher organic matter figure suggest that the material was scraped up from the surrounding soil in building the cairn and has doubtless been added to, in the interstices of the stones, by worm-castings ever since.

No. 9. 'Charcoal from below N. bay of cairn.' Brown soil with much charcoal. Some uncarbonized wood and rootlets. pH 8·0, humus 140 mg. per cent. Besides the evidence of fire, the humus suggests that the sample belongs to the ancient surface-layer.

No. 10. 'Clay and weathered chalk from filling of the crescent.' No charcoal, calcareous, pH 8·8, humus 20 mg. per cent. From the absence of charcoal perhaps a natural filling, but the low humus figure is against this, since silting of ditches in chalk consists generally of a great deal of surface material, usually rich in humus. Possibly a deliberate filling with clean subsoil material.

No. 11. 'Below cairn at W.9, 3 ft. 6 in. below top of cairn. Associated with animal bone.' No charcoal. A few manganese-stained pebbles and some calcareous concretions with root-holes. Much phosphate. Acid-insoluble residue almost pure silica. Phosphate doubtless comes from the bone, otherwise apparently natural. pH 8·7.

No. 12. ' Charcoal and soil from below Dewar's trench at S.10 W.8.' Much charcoal and calcareous matter, pH 8·2, humus 16 mg. per cent. The sample contained also some fragments of uncarbonized organic matter which yielded a good deal of tarry volatiles on heating. This has been identified by Mrs F. L. Balfour-Browne, Department of Botany, British Museum (Natural History), as one of the Tuberacene (truffles), ascomycetous fungi.

No. 13. ' Very bottom of E. horn of crescent. Dark line of soil and patinated flint. Is this old turf-line?' No charcoal. Calcareous—pH 8·4, humus 50 mg. per cent. The relatively high humus-content and the presence of rootlets and recognizable sponge-spicules do suggest that this layer represents the ancient surface with vegetation. The siliceous spicules have been released from the chalk by solution of the embedding calcium carbonate, an indication of chemical weathering.

No. 14. ' Fragments of clay from bottom of P.H.18. Contains ? seeds or pollen.' The sample was evaporated with excess hydrofluoric acid and the residue examined for plant and pollen remains without success.

No. 21. ' Charcoal associated with pottery at E.7 S.5, at 9 in. below C.B.L.' Sample decalcified, pH 5·9, with much charcoal and organic matter. Humus 160 mg. per cent. This seems to be associated with the ancient surface on which the cairn was raised and the fire and concentration of organic matter which the sample indicates may have something to do with the ceremonies attendant upon the raising of the cairn.

No. 17. ' Black concretion adhering to stone 15 in. below C.B.L. at S.12 E.1 in T.T.' This is a natural iron and manganese concretion associated with the red weathering-soil below C.B.L.—see para. 4 of this report.

No. 22. 'Yellow pebble, E.7 S.5 at 9 in. below C.B.L., with R.B. pot.' Pebble of limonite (hydrated ferric oxide). Would be of use as a pigment crayon, giving a yellow or brown streak. In view of the different (iron-crusts) condition of the natural iron-deposits on the site, it looks as if this object was introduced from elsewhere by man.

No. 23. 'Rubber-like fragment—E.7 S.5 at 9 in. below C.B.L.' This appeared to be vegetable in nature, a portion of some biggish seed or nut. The British section (phanerogamic) of the Department of Botany, British Museum (Natural History), in the person of E. B. Bangerter, kindly identified it as a fruit, without the wings, of ash (*Fraxinus excelsior*).

No. 26. 'Part of packing-stone from P.H.28. It cracked into fragments on removal. Is this due to heat or prehistoric deep freezing?' Since the ' P.H. ' is probably natural and the stone in question shows no trace of fire, but only local manganese incrustations, the disintegration of the flint is probably due to weathering—insolation and/or frost-fracture. This would not necessitate a ' deep freeze ' in immediately pre-B.A. times, as the history of the flint since its release from the Chalk and before incorporation in the sub-barrow soil is probably a long one. An incipient flaw, due to physical weathering on the surface, may have been developed into an actual fracture by chemical weathering since its incorporation in the soil.

No. 27. ' Burnt bone or stone? P.H.21, at 2 ft. 6 in.' This is certainly not bone—the phosphate-content is far too low, apart from the structure. The specimen consists of calcium carbonate with some slight amount of phosphate, heavily impregnated with silica and iron. It is probably a fragment of much mineralised fossil molluscan shell, perhaps originally from the Chalk, but later involved in the weathering of the surface soil.

No. 28. ' ?Brick fragments. E.16 N.1. Yellow-brown loam flecked with black. 15 in. below C.B.L. (ref. No. 29).' The red fragments are, perhaps, burnt. The buff matrix assumes the same colour when heated to a red heat for a few minutes, but there is no charcoal to suggest burning *in situ.*

No. 29. 'Black layer, E.12-E.17, N.0-N.3 and 18 in. below C.B.L. ? Natural, or man-made.' The sample has all the obvious characters of the natural red soil below the cairn—colour and presence of manganese and iron crusts. Unlike most of the other, undisturbed, red samples, however, the pH of 5·2 is particularly low, bearing out the complete decalcification and the presence of considerable amounts of organic matter—humus 56 mg. per cent. It seems, therefore, as if the material, though basically natural, has been somewhat disturbed and interfered with by man.