# Excavations in Barrow Hills Field, Radley, Berkshire, 1944

#### By MRS. AUDREY WILLIAMS

THE ring-ditches of Barrow Hills Field, on the south side of the Radley-Abingdon road (O.S. 25-in. sheet, Berks. X, 3, Nat. Grid ref. 41/517984), are well known from the late Major Allen's air-photographs and from reports on the excavated members of the group.<sup>1</sup> The air-photograph now republished (PL. I, A) and a new map (FIG. 1) show the approximate positions of ring-ditches 2-11 and 14-16. Nos. 1, 12 and 13 lie W. of the track leading SE. from Wick Hall Lodge. The position of no. 17 is described below (p. 13).

Early in 1944 the extension of a long-established gravel pit threatened to destroy ring-ditches 4-6 and revealed, by partial destruction, an addition to the group, an hitherto unsuspected ring-ditch (no. 17) north of the main alignment. Examination was undertaken by the Ancient Monuments Department of the Ministry of Works, but had to be governed by war-time conditions—priority for gravel digging and shortage of labour. The latter difficulty was mitigated by mechanical removal of topsoil.

#### RING-DITCH 4 (FIGS. 2 and 3)

In the air-photograph this site appeared as a round dark patch with a similar but smaller mark impinging on its western arc. Before excavation it was assumed that a lesser ring-ditch lay cramped between nos. 3 and 4; actually the two marks indicated two barrows within one ditch. The small west barrow will be referred to as 4A, the bigger barrow retaining its original designation, 4. It may be noted that where the whole enclosure produced a crop-mark, as did nos. 4, 5, 6 and 7, excavation revealed an earth mound. Rings previously examined were defined simply by dark circles and in none had a barrow survived. A possible exception is no. 16 where there occurred 'an increased thickness of soil above the gravel . . . which might equally be due to the ridge of a land in ploughing '(Oxoniensia, I, 33).

The ditch was found, partly by excavation, partly through the mechanical clearance of topsoil, on the north-west, east and south of site 4. It was absent on the west but the section taken from the centre of 4 in that direction proved the presence of a second earth mound (4A) which would have necessitated the modification of the circular course of a ditch intended to embrace both barrows.

<sup>&</sup>lt;sup>1</sup> Oxoniensia, 1 (1936), 8-13 (no. 14); *ibid.*, III (1938), 31-40 (nos. 16 and 11); *ibid.*, VII, 103 (no. 15); *ibid.*, VIII/IX, 198 f. (nos. 2, 3); *ibid.*, X, 94 (no. 7). Nos. 4, 5, 6 and 17 are discussed in the present article, nos. 1, 8-10, 12 and 13 have not been excavated.



BARROW HILLS FIELD, RADLEY, BERKS. Map showing position of the ring-ditches

Based on the O.S. 23-in. map with the sanction of the Controller of H.M. Stationery Office.

A series of cuttings showed that from the south the ditch pursued a sinuous line westward and then curved gently to the north. On the north it dissociated itself gradually from the circumference of the circle to run almost straight, slightly south of west, to complete the enclosure, which was therefore ovoid in shape<sup>2</sup> with an overall length east-west, of just over 182 ft. North-south, at the centre of no. 4, it measured 125 ft.; across the centre of 4A this had diminished to 96 ft. The plan was executed with more certainty on the north than the south where the line of the ditch compared with the 'almost-festooned' margins of a double ring-ditch at Cassington (*Oxoniensia*, 1, 14) and may be attributed here as there and elsewhere to the differing technique of gangs employed on various sectors of the ditch.

The ditch had slight variations in dimensions and shape, but its section on the east (PL. I, B) can be taken as typical. It was almost 13 ft. wide at the lip, 3 ft. 6 in. deep from the surface of the gravel and a flattened U in profile. Its filling consisted of a quick silt of gravel against the sides and, more thinly, over the bottom, followed by a band, 28 in. thick, of fine brown soil darker in colour below than it was towards the top and variegated with streaks of gravel. A thin intermittent line of gravel overlay and defined the slightly sagging surface, probably as the result of final weathering of the lips of the ditch. Above the ditch filling and immediately below the present topsoil came light brown gravelly soil. No external bank existed.

Details of the structure of barrow 4A were obtained from an extension of the east-west section through barrow 4 and from radial cuttings from its centre. An earth mound capped with gravel had a height of 3 ft. 6 in. and a diameter of 56 ft., leaving a berm 12 to 20 ft. wide between its margin and the lip of the ditch. The soil of the mound was black with a purplish bloom. It rested on the old topsoil which was 4-9 in. thick with its upper surface intermittently demarcated by a gravel streak. The similarity between the soil of the mound and the old topsoil was explained when it was found that the berm had been stripped of topsoil ; this material with topsoil from the ditch was presumably incorporated in the barrow.

For a width of 4-6 ft. inside its perimeter the upper surface of the mound had a capping of clean gravel (PL. I, c). Evidently the gravel was put down without preliminary smoothing of the mound, for it filled numerous irregular depressions. Beyond the barrow, over the berm and ditch, lay mixed soil and gravel dragged by ploughing from the top of the barrow, which had originally been completely masked by gravel, derived presumably from the

<sup>&</sup>lt;sup>2</sup> When grown, the rye west of the hedge crossing 4A produced a crop mark which enabled the unexcavated west end of the ditch to be plotted. After harvest O.U.A.S. members made a cutting in this area, the results of which are incorporated in the plan (FIG. 2) by permission of Mr. R. J. C. Atkinson, who directed the work.



ditch. Similar structure was found in the neighbouring barrow at Saxton Road, Abingdon (Oxoniensia, 1, 20).

Clearance of the central area revealed a primary burial pit encircled by a trench. Over and south of the pit the craters of earlier investigations were recognized by their infilling of mixed soil and gravel, all lighter in colour than the undisturbed barrow. The pit was roughly rectangular, 7 ft. 6 in. east-west, 4 ft. 6 in. north-south and 3 ft. deep from the old surface. It had slightly undercut sides and a flat bottom. The loose clean gravel and patches of dark soil which filled it represented material excavated and then replaced.

The skeleton (PL. II, A, and Appendix, MH16, p. 16) was that of a man buried lying on his back with his head and legs turned to the left. The legs were drawn up at an acute angle to the body. The right arm was bent across the chest so that its extended hand touched the left upper arm. The left arm was flexed with the hand inturned under the chin. At burial the man wore a pair of gold earrings; in the course of time that from the lobe of the right ear had slipped down to the nape of the neck, the other had worked down into the gravel beneath the left ear. A beaker had been placed lying on its side near the sole of the left foot. From the gravel immediately above the skeleton came three flint arrowheads. The fact that they were found at the same level, though not together, suggests that they were deliberately placed in the pit at a late stage of the burial.

The earrings (A.M. 1944. 122; PL. II, D) are of basket type, fashioned by curling back the sides of a long pointed oval (1.9 in. by 0.7 in.) of sheet gold to form a half-cylinder. Cut in one piece with one side of the oval is a narrow strap for passing through a pierced ear lobe and coiling round the outer face of the earring. Two repoussé lines run round the margin of the oval and two groups of six lines obliquely across its outer face, just above and below the space occupied by the strap which has one central horizontal line. Parallels for these 'trug' earrings are few. Closest are a pair, considerably larger than the Radley example, from Orton, Morayshire3 and a single one found associated with a food vessel at Kirkhaugh, Northumberland.4 Dublin Museum has an unprovenanced pair5, oblong, undecorated and uncoiled, as well as a single specimen6, spoon-shaped in its flattened form and more akin to the broader variant found in bronze at Cowlam, Yorks.,7 and in the Migdale (Sutherland) Early Bronze Age hoard.<sup>8</sup> Professor Childe has drawn attention

<sup>3</sup> Evans, Anc. Bronze Imp. (1881), 392, fig. 492. Here (and again in Childe's Prehistory of Scotland (1935), 102, fig. 26) the end of the strap is shown inside the basket.

<sup>4</sup> Arch. Ael., 4, xiii, 210, fig. 3b. <sup>5</sup> Armstrong, Cat. Irish Gold Ornaments (1920), XCIII, 423-4.

<sup>6</sup> Ibid., xviii, 413.
 <sup>7</sup> Evans, op. cit., 392, fig. 493.
 <sup>8</sup> P.S.A.S., xxxv, 272, fig. 5.

to basket earrings of gold wire at Troy II and as depicted in an Eighteenth Dynasty tomb-painting.9 He suggests that the type reached Ireland from Spain and may be considered an Irish export to Britain and the continent where it occurs in Belgium and Poland.<sup>10</sup> So far in Britain it has a northern distribution. The Radley pair is the first recorded from the south.

The beaker (A.M. 1944, 121; PL. II, B) of well-fired smooth reddish-buff ware is 8 in. high and 6.5 in. wide at the mouth. It has a narrow collar. Decoration, zones of horizontal lines and open herring bone pattern, is carried out in notched technique. Typologically the beaker belongs to the B1 series. A close parallel, but without the collared rim, occurs at Yarnton, Oxon." A BI beaker from Sutton Courtenay, Berks., 12 has the collar. Beakers with this feature have a wide distribution but are not necessarily all of the same origin ; they belong to both the B1 and B2 groups and range from Banff in the north<sup>13</sup> to Glamorgan<sup>14</sup> and Pembrokeshire<sup>15</sup> in the west.

The arrowheads (A.M. 1944. 123; PL. II, C) are of a type usually associated with beakers, small, a trifle convex in outline, with barbs and tang of almost equal length. A fourth arrowhead (A.M. 1944. 124) of the same kind but with the tang and one barb damaged, had been dropped in the body of the mound.

The trench encircling the primary burial area, 28 ft. across, was generally 2 ft. 6 in. wide and 9-12 in. deep from the old surface. Dug in gravel it had gently sloping sides and a narrow flat bottom ; cut in callas, of which a large patch occurred here, it had a V-shaped section. It was filled with the blackish soil which constituted the body of the mound. The similarity of this soil to the existing old topsoil has already been mentioned : only with difficulty and after rain could the upper part of the trench be recognized. On the bottom of the trench south of the pit, lay a horn-core and a metatarsus of ox (bos longifrons), a deposit contemporary with the primary burial and apparently a ritual offering. Similar deposits of animal bones in connection with a beaker burial are known at Crichel Down 2, Dorset (Archaeologia, xc (1944), 65), and at Linch Hill Corner, Stanton Harcourt, Oxon. (Oxoniensia, VIII-IX (1943-44), 40).

A secondary burial, made on top of the infilled trench east of the pit before the mound was built, was that of a child. The skeleton lay on its left side with its head to the east and bent forward. The bones had a peculiar dark grey colour and were much flattened, the skull being reduced to a

- <sup>9</sup> Childe, Dawn (1939), 43.
  <sup>10</sup> Childe, Prehistoric Communities (1940), 125.
  <sup>11</sup> Abercromby, Bronze Age Pottery (1912), 1, 77.
  <sup>12</sup> Antiquaries Journal, XIV (1934), pl. XXX, i.
  <sup>13</sup> Abercromby, Bronze Age Pottery (1912), 1, 277.
  <sup>14</sup> Archaeologia, LXXXIX (1943), 89-125 (Sutton 268).
  <sup>15</sup> Arch. Journ., c (1943), 1-32 (Talbenny).



FIG. 3 BARROW HILLS FIELD, RADLEY Sections of ring-ditches 4 and 6

plate-like object. The legs were slightly flexed, the left higher than the right. Of the arms only the upper bones remained save for a trace of the left lower arm indicating that it had been bent up towards the chin. Above and beneath the bones was a thin black powdery layer, scarcely wider than the crouched body but extending 12 in. beyond the top of the skull and 6 in. beyond the feet. This deposit, though useless for microscopic examination, suggested carbonized wood, probably the remains of a coffin such as contained the Stanton Harcourt beaker burial above cited. No grave-goods accompanied the child.

There was a minimum gap of 20 ft. between the margins of the barrows. The character and limits of barrow 4 were well-defined in the east-west section (FIG. 3) and in a cutting from the north to the centre point. It had a present height of 2 ft. and a diameter of 82 ft. ; a berm 24 ft. wide remained between its edge and the lip of the ditch. The construction of the barrow was exactly like that of barrow 4A except that here the dark soil was interlarded with sticky streaks, probably due to decayed turves, which tended to incline upwards towards the centre as turves would if placed on successive tips of soil. Here again a band of gravel capping survived over the edge of the mound, the upper part having been dragged down with soil from the top of the mound over the berm and ditch. Beyond the outer lip of the ditch the gravel content of the soil quickly diminished.

Slightly west of the centre of the barrow the primary burial appeared as a little conical heap (1 ft. 9 in. across and 9 in. high) of powdered charcoal with a few calcined bone fragments, the residue of a cremation in another place. In the middle of the heap was a small bronze knife-dagger,  $2 \cdot 3$  in. long and  $1 \cdot 4$  in. wide, which had lost its point before being deposited (A.M. 1944. 126; PL. II, E). Having a rounded butt, with two rivets in position, and a straight hafting-mark it resembles the knife-dagger from the primary cremation of ring-ditch 16 of the Radley group (*Oxoniensia*, III (1938), pl. VII, B), there dated by an associated segmented faience bead to 1400-1100 B.C., and another Middle Bronze Age example from a barrow at Blewbury, Berks. (Evans, *Ancient Bronze Implements* (1881), 225).

It remained to test the relationship, if any existed other than the encirclement by one ditch, between the two barrows. The space between them in the east-west section contained a deposit of clean gravel, not inclined as in the cappings of the mounds, but lying horizontally over a layer, rather less than 12 in. thick, of brown soil. The old topsoil was visible below. There was a marked difference between these two horizontal layers between the barrows and the soil-gravel mixture found beyond the edges of the barrows elsewhere. Evidently the hollow between the mounds had been deliberately filled. The

limits of this final addition were found in cuttings taken north and south at right angles to the main section. The two barrows with their connecting link must have appeared originally as one mound of hour-glass shape.

The barrows, then, were contemporary and afford evidence of the overlapping of the burial rites characteristic of the first and second phases of the Bronze Age. Their date should lie somewhere around 1500 B.C. according to conventional dating ; but it should be added that typologically the beaker seems to be fairly early in its series.

Culturally the beaker, which has been shown above to have analogies among other B beakers in the Oxford district, links the site with the B<sub>I</sub> group centred upon Wessex. It is now generally accepted that the colonization of the upper Thames valley took place from the south, though such features as the collared rims, which do not occur in Wessex, suggest that there was subsequently a certain degree of independent development.

On the other hand, the earrings are of Irish origin. In spite of the northern distribution of the type and of the existence of a well-defined route connecting north and south by way of the Oxford region, it is on the whole more likely that they reached Radley from the west or north-west, from the Severn estuary or the Welsh border from north Wales. Trade movements in objects of gold (or jet) were independent of cultural movements except in so far as such precious objects would have gravitated towards the wealthier and more advanced communities.

#### RING-DITCH 5 (FIG. 4)

Before excavation a large bite had been taken by the gravel pit out of the north half of this site. Two burials had been exposed in the north-west quadrant. One male skeleton (Appendix, MH 8) was salvaged;<sup>16</sup> of the second only a leg-bone was retrieved. As the plan shows, these burials lay outside the barrow proper, on the gravel of the berm; they are therefore later, possibly Anglo-Saxon, insertions.

Three cuttings<sup>17</sup> established the line of the ditch as a practically true circle with a diameter of 146 ft. overall. They also demonstrated the customary variation in size and profile of the ditch. On the south-west it was 10 ft. 6 in. wide, 3 ft. deep into the gravel, and a wide U in section ; to the north-east it was slightly narrower, deeper and V-shaped ; on the south-east its sides dropped almost vertically to a wide flat bottom.

The filling of the ditch in the south-west cutting (drawn section) was

<sup>16</sup> By Miss B. M. Blackwood.

<sup>17</sup> Two of the cuttings had been started by members of the O.U.A.S. under Miss Blackwood's direction.



FIG. 4 BARROW HILLS FIELD, RADLEY Plan and section of ring-ditch 5

typical though the quick gravel silting naturally varied according to the profile. The gravel resultant from weathering of the open ditch lay chiefly against the inner slope and thinly over the bottom and against the outer slope. Above lay fine soil, dark brown with pebbles to 12 in. above the bottom of the ditch, then lighter brown and free of gravel except for the usual thin streak on the upper surface. On this upper surface were found a few indeterminate sherds of Iron Age pottery (probably of local A2 derivation) indicating that the ditch was merely a shallow groove by Iron Age or Romano-British times.

Further details of construction had to be gleaned while mechanical scraping of the area progressed. They tallied with those obtained more satisfactorily from barrows 4A and 4. Here the mound of blackish soil was 68 ft. across and 18 in. deep over old topsoil 2-3 in. thick. The unusually wide berm (about 30 ft.) between its margin and the lip of the ditch had been stripped of topsoil. Very little of the stone capping remained, merely a thin layer over the very edge of the earth mound. Extremely gravelly soil overlay the berm and ditch, beyond which gravel was reduced to a minimum.

It was fairly certain that no inhumation escaped notice in the destroyed portion of the barrow, but a cremation might not have been detected. What remained of the central area was carefully examined. Two shallow scoops in the gravel were its only features. One a few feet south of the centre, was kidneyshaped, 6 ft. long north-south and 3 ft. wide. The other, a few feet east of the centre, measured 5 ft. by 3 ft. Neither was more than 4 in. deep. Both contained blackish soil, a quantity of tiny fragments of charcoal, mere flecks of calcined bones and a few reddened pebbles. The first hollow also had a slug-shaped flint blade (A.M. 1944. 128), slightly worked at one end as a scraper : from the second came flint flakes used but unworked. The hollows are hardly the cooking-holes of Radley No. 16 (*Oxoniensia*, III, 34) or Sutton Courtenay (*Archaeologia*, LXXVI, 60). It is possible that their contents represent ' token ' burials, comparable with those found recently in small pits under simple barrows on Chewton Plain, Somerset<sup>18</sup> and at Hampnett and Chedworth, Gloucestershire,<sup>19</sup> the aftermath of cremations in another place.

#### RING-DITCH 6 (FIGS. 5 and 3)

There was no surface indication of this site. A trial trench based on the air-photograph located the ditch on the north but not, as intended, on a radial line. From cuttings on the east and south-west and a mechanically scraped roadway on the west the overall measurement of the ring was established as 116 ft. Further sectors were exposed later by the machines.

Proc. Somerset Arch. Soc., XCIII (1949), 39-43.
 Information from Mr. W. F. Grimes.

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On the north the ditch had a width of 10 ft. and a depth of 3 ft. from the surface of the gravel. It had slightly concave sides and a narrow flat bottom. Again the filling consisted of a primary silting of gravel with fine brown soil



FIG. 5 BARROW HILLS FIELD, RADLEY Plan of ring-ditch 6

above. From the top of the filling in the south-west cutting came a sherd of hard grey Romano-British ware (A.M. 1944. 132).

The structural features recognized in the previous barrows recurred. Round the edge of the earth mound, 75 ft. across and 2 ft. high, there survived

gravel capping 6-10 ft. wide. As usual soil and gravel mixed covered the berm (10 ft. wide) and the ditch, the gravel admixture diminishing beyond that point.

The old ground surface of the central area was featureless. From it came a solitary flint tool, a combined end- and hollow-scraper with blunted side. Evidently the burial, if any, had been made on the surface of the gravel



BARROW HILLS FIELD, RADLEY Plan of ring-ditch 17

and had subsequently been removed. Many ring-ditches have proved barren, but here, since the mound over the central area appeared intact, the disappearance of the burial, presumably an inhumation since the surface was perfectly clean, is puzzling. There is the possibility that it was removed in antiquity and the soil carefully replaced without admixture of any kind. The present reduced state of the mound must leave the point unsettled.

#### RING-DITCH 17 (FIG. 6)

This ring-ditch lay just over 100 ft. south of the road and due north of no. 8 of the main alignment of ring-ditches (FIG. 1 and PL. I, A). It is very

faintly visible on the air-photograph (right of the hedge line, between the haystack and the road hedge) as a single dark circle with a dark spot west of the centre. Unfortunately it had been stripped to the gravel, which in turn had been partly dug away and partly used as a roadway before examination became possible. Even then little could be done save salvage its two burials.

What remained of the ditch showed a width of 7-8 ft. Its depth, to judge from a ruined section on the edge of the gravel-pit, was about 3 ft., its profile a flattened U. A true circle incorporating this surviving arc would have an overall diameter of about 76 ft.

West of the presumed centre point were two pits. The more westerly Pit 1, 6 ft. long, 3 ft. 6 in. wide and 9 in. deep, had parallel sides and rounded ends. It was filled with soft brown soil with a few black patches containing flecks of carbonized wood, too uncomfortable to suggest a coffin for the skeleton on the floor of the pit. The body of a man (Appendix, MH 9) had been placed on its left side, the head to the west and bent forward, the legs acutely flexed, the lower arms bent upwards towards the chin.

Pit 2, was roughly circular, 6 ft. 6 in. by 5 ft. 9 in., with an additional small lobe on the north-east. It was 10-11 in. deep. Filling similar to that of Pit I covered a burial of a different kind. The bones of a child had been thrown pell-mell into the hole, some lying horizontally on the bottom, others leaning against the sides. Long bones overlay a jaw-bone; fragments of the skull occurred at opposite ends of the pit, and ribs were widely scattered. The whole skeleton was present but completely disarticulated. Presumably it had been transferred here for re-burial, a procedure recognized at other Bronze Age sites, notably at the Corston, Somerset, beaker barrow (*Proc. Univ. Bristol Spelaeo. Soc.*, IV, 134).

In the absence of grave goods but taking into account the intensive Bronze Age use of the site, the crouched burial in Pit I suggests an Early Bronze Age date for ring-ditch 17.

#### ACKNOWLEDGEMENTS

Thanks are due to Mr. Curtis, the proprietor of the gravel pit for permission to excavate; to members of Oxford University Archaeological Society, Miss Muriel Jenkins and Miss G. Sowerby for manual work; and to Miss B. M. Blackwood for help in a variety of ways. Mr. J. R. Goody has kindly reported on the human remains. The animal remains from barrow 4A were identified by Mr. L. F. Cowley. Mr. W. Dockar-Drysdale has generously given the objects found to the Ashmolean Museum, Oxford.

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#### APPENDIX

#### ON SOME HUMAN REMAINS FROM RADLEY, OXFORDSHIRE

By J. R. GOODY

### (From the Duckworth Laboratory, University Museum of Archaeology and Ethnology, Cambridge)

In the skeletal material from Radley submitted by the authorities of the Ashmolean Museum, Oxford, in 1946 to the Duckworth Laboratory for report and preservation, the bones of ten individuals are represented, nine, according to the archaeological evidence, of Bronze Age, and one of uncertain but possibly Anglo-Saxon, date. Of the former, four are adult and five juvenile. The remains of the non-adults are too fragmentary for restoration and they are not considered here. All the four Bronze Age adults are of the male sex, as is the mature specimen provisionally assigned to the Anglo-Saxon period.

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Individual Measurements of Crania

Character*		Eu.1.4.3	Eu.1.4.4	Eu.1.4.5	Eu.1.4.6	Eu.1.2.
Maximum length (L)		186	197?	186.5?	199	-
Maximum biparietal breadth $(B)$		142	- 37 -	144.5?	143?	
Minimum frontal breadth $(B')$		101.5			-	96.5
Basi-bregmatic height $(H')$ .	1	136.5	-	-		
Auricular height to apex $(OH)$		110.5	-			
Frontal chord $(S_1')$		112	118?	120	112	
Parietal chord $(S_2)$		113	112	105?	119.2	-
Decipital chord $(S_2)$		87.5		104.5?	_	-
Frontal arc $(S_1)$		120	134.5?	135.5	126	-
Parietal arc $(S_2)$		126	121	113?	130	-
Occipital arc $(S_3)$		105		124?		-
Total sagittal arc $(S)$		360		373		
Transverse arc through bregma (	(603)	314		-		-
Maximum horizontal perimeter (	U)	518		_		
Foraminal length (FL)	- /	40.0?				-
Foraminal breadth $(FB)$		31.2?				-
Basi-nasal length $(LB)$		107.5?				
Basi-alveolar length (GL)		97.5				
Upper facial height $(G'H)$		78		69.5?		73
Bimaxillary breadth $(GB)$		96	_		-	94.5
Bizygomatic breadth $(\mathcal{J})$		138	-	-	-	-
Nasal height ( <i>NH</i> )		55.1		54.8		53-8
AT 1 1 1.1 ( 3/D)		25.1	23.5?	26.5		24.6
0.11.11.1.1.(0))		47.3	-5 5	_	-	43.8
A 11 1 1 1 1 1 1 A A		33-8	_	-		34.2
D 1 1 1 1 10 0		49.5	43.1 ?		-	44.2
- · · · · · · · · · · · · · · · · · · ·	* *	49 5	45			- 38-2
87 1 1 1 135 / 1	4.4	61° · 7 ?			-	-
41 1 1 1 1 1 1 1 1 1		740.17			-	
D 1 1 (D ()		440.2?			-	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		76.3		77.5?	71.9?	
		89.2	-		_	
100 as /2(m 1 m /		86-8	87.7?	88.6	88.9	
$100 S_{\rm I}'/S_{\rm I}$	• •	0	92.6?	92.9?	91.0	-
$100 S_2'/S_2$		0		84.3?	-	=
$100 S_3'   S_3 \dots \dots \dots \dots$	* *	-0.02			-	-
$100 FB/FL \dots \dots$		0			-	77.2
$100 G'H/GB \dots \dots$	* *			48.4	-	45.7
100 <i>NB</i> / <i>NH</i>	* *	NT.C.	-		-	78-1
$100 \ O_2/O_1 \ \dots \ $		00				86.4

\* The characters NH,  $O_1$  and  $O_2$  were measured on the left side.

The following brief remarks relate to individual adult skulls and femora, cranial and mandibular measurements being given in Tables I and II. Stature was determined from the femoral lengths in accordance with the formulae provided by Pearson (1898).

Barrow 4.4. Field No. MH 16. Laboratory No. Eu.1.4.3. Bronze Age. Adult male. Complete skull. Teeth slightly worn and all except right M<sup>3</sup> present at death. None carious. Slight overbite. Reconstructed stature from maximum length of right femur (460 mm.) 167.8 cm. or 5 ft. 6 in.

Ring-ditch 17. Field No. MH 9. Laboratory No. Eu.1.4.4. Bronze Age. Adult male. Incomplete calvaria and portion of upper facial skeleton. Mandible lacks left ramus. Teeth much worn but all present at death. Incisor bite edge-to-edge. Left P<sup>t</sup> and M<sup>2</sup> and right M<sup>2</sup> carious. Reconstructed stature from maximum length of left femur (509 mm.) 177.0 cm. or 5 ft. 10 in.

Field No. MH 55. Laboratory No. Eu.1.4.5. Bronze Age. Adult male. Incomplete calvaria, right and part of left half of upper facial skeleton. Mandible lacks left ramus. Teeth much worn, but apparently all present at death. No caries in those remaining. Incisor bite edge-to-edge. Reconstructed stature from maximum length of left femur (483 mm.?) 172.1 cm.? or 5 ft. 8 in.?

Field No. MH 7. Laboratory No. Eu.1.4.6. Bronze Age. Adult male. Incomplete calvaria and right half of upper facial skeleton and mandible. No caries in remaining teeth. Incisor bite apparently edge-to-edge. Femora too damaged for reconstruction of stature.

Character*	Eu.1.4.3	Eu.1.4.4	Eu.1.4.5	Eu.1.4.6	Eu.1.2.1
Maximum bicondylar breadth $(W_1)$	121		_		
Maximum length of condyle $(C_yL)$	24.9			24.9	_
Coronial breadth $(C_r C_r)$	99			-4 9	
Bigonial breadth $(G_0G_0)$ Chord between mid-points of M <sub>2</sub> and P <sub>7</sub>	91.2	-	-	-	-
on outer alveolar margin $(M_2P_1)$ Minimum chord between anterior	27.9	30.4	29.1	28.8	26.9
margins of foramina mentalia $(ZZ)$	46.1	47.8	44.8		1510
Symphyseal height $(H_{\rm T})$	34.9	33-1 ?	33.0	97+9	45.0
Minimum breadth of ramus (RB')	35.2			37·3 37·6	
Projective length of ramus (RL)	62.0		_	370	33.8
Projective length of corpus $(C_p \hat{L})$	79°5				
Projective height of corpus at mid-point	10 0				
of $M_2$ on outer alveolar margin $(M_2H)$	32.5	30.0		34.1	27.8?
Maximum projective length of man-				3'E *	\$1.01
dible ( <i>ML</i> )	113				-
rojective height of coronoid process					
(C <sub>r</sub> H)	57				-
Mandibular angle $(M \angle)$	1250.2				_
Angle of condylar-coronoidal line with					
ramus tangent $(R \angle) \dots \dots \dots$	69°.0	-		-	-
Mental angle $(C' \angle)$	89°.5		91°.5?	_	87.5
$00 \ G_o G_o / C_r C_r \qquad \dots \qquad \dots \qquad \dots$	92.4			_	07.5
00 RB'/RL	56.8	_			_
00 GoGo/GpL	115.1				_
$00 C_r C_r / ML \dots \dots \dots$	87.6			_	
oo $C_r H/ML$	50.4				_

TABLE II

	89.764.95	adriat			in a star			3-11	
- 2	naw	idual	IVIED.	514T ETT	LETILS.	OT	Man	12231	15

\* The characters  $C_yL$ ,  $M_2P_1$ ,  $M_2H$ ,  $C_rH$  and RL were measured on the left side, except that in the case of Eu.1.4.6 the first four were measured on the right.

Ring-ditch 5. Field No. MH 8. Laboratory No. Eu.1.2.1. Anglo-Saxon? Adult Frontal bone and complete upper facial skeleton. Mandible lacks right ramus. male. Teeth slightly worn and all present at death. Reconstructed stature from maximum length of right femur (469 mm.), 169.4 cm. or 5 ft. 7 in.

Archaeological reports on Barrows 3 and 15 which yielded the skeletons with Field Nos. MH 55 and MH 7 (Laboratory Nos. Eu. 1.4.5 and Eu. 1.4.6, respectively), will appear in a future volume of Oxoniensia.

The technique employed in taking the skull measurements is that of Buxton and Morant (1933) for the cranium and of Morant, Collett and Adyanthaya (1936) for the mandible.

The specimens of certain Bronze Age date are too few to justify any elaborate statistical treatment The specimens of certain Bronze Age date are too few to justify any elaborate statistical treatment of their measurements, which are furnished simply for record until such time as a comprehensive survey of the skeletal remains of that period is undertaken. It may be observed, however, that of the three individuals whose statures could be reconstructed, one (Eu.1.4.3) was slightly below, another (Eu.1.4.4) well above, and the third (Eu.1.4.5) very close to the English Bronze Age male mean height of 171 · 1 cm. or 5 ft. 7 in. given by Pearson (1898). No adequate comparative figures for English Bronze Age mandibles are yet available, but on the basis of cranial characters two of the four skulls (Eu.1.4.4 and Eu.1.4.6) tend to approach the British Neolithic type rather than that of the English Bronze Age (Morant, 1926, 1928). The other two (Eu.1.4.3 and Eu.1.4.5) appear to be roughly intermediate between these types. The population of the country in Bronze Age times was certainly not racially homogeneous, and the survival of a strong Neolithic element, often in hybrid form, may be inferred with some confidence. The distinction between Neolithic and Bronze Age crania epitomized in nomogeneous, and the survival of a strong recontinic element, often in hybrid form, may be inferred with some confidence. The distinction between Neolithic and Bronze Age crania epitomized in Thurnam's 'convenient antithetic formula' of '*Long barrous, long skulls*; *round barrous, round or short skulls*' (1870, p. 143), is not borne out by the present material, though such a fact would hardly surprise that author were he alive to appreciate it (Thurnam, 1865, p. 128). The writer would like to thank Mr. J. C. Trevor for placing the material at his disposal for study, and Messrs. R. K. Mukherjee and C. R. Rao for assistance rendered in various ways.

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PLATE I



BARROW HILLS FIELD, RADLEY

A. Air-view, showing the two lines of ring-ditches.
B. Ring-ditch 4; inner slope in section AB, north face.
C. Barrow 4A; gravel capping over earth mound in section CC<sup>r</sup>, west face.

Phh. A: the late Major G. W. G. Allen. B, C: Mrs. A. Williams.

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#### BARROW HILLS FIELD, RADLEY

A. Barrow 4A: the primary beaker burial, from the east. B, C, D. Barrow 4A: beaker  $(\frac{3}{2})$ , flint arrowheads  $(\frac{1}{1})$  and gold earrings  $(\frac{1}{1})$  from primary burial.

E. Barrow 4: bronze knife-dagger  $(\frac{1}{4})$  from primary burial.

Phh. A: Mrs. A. Williams. B-E: Ashmolean Museum, after Ash. Mus. Rept., 1944, pl. 11(b) and 111 by courtesy of the Visitors.

WILLIAMS, BARROW HILLS FIELD, RADLEY