

ART. IV.—*The prehistoric site at Broomrigg near Ainstable: the excavations of 1948-49.* By Miss K. S. HODGSON, F.S.A., and the Rev. KENNETH HARPER, M.A., M.Litt.

*Read at Carlisle, September 1st, 1950.*

## I. INTRODUCTION.

THREE stone circles in Broomrigg plantation were first noted by our late member T. H. B. Graham. In 1934 they were surveyed and photographed,<sup>1</sup> at the request of our late President, R. G. Collingwood, when two more circles were discovered; and others have been noted later. They are an interesting group: there is a megalithic circle (A), a large burial-circle (C), two small burial-circles (B, which has a very small circle close to it, and D), a doubtful ring-ditch (E), a probable habitation-site (F), and other structures as well. All these different types of structure stand very near together, and they are certainly related.

The whole neighbourhood is notably rich in prehistoric sites and finds, as the map (fig. 1) shows. All lie on a shelf of moderately high ground (600 to 800 ft. above sea-level) between the Pennines and the Eden valley, and this Broomrigg group with which we are concerned is about half-way between the two known ends of the series — the beaker burial at Leavy Hill near Castle Carrock in the north, and the great stone circle, “Long Meg and her daughters”, at the south; it is also close to a practicable route through the fells by Newbiggin Beck and New Water of Gelt.

<sup>1</sup> CW2 xxxv 77-79.

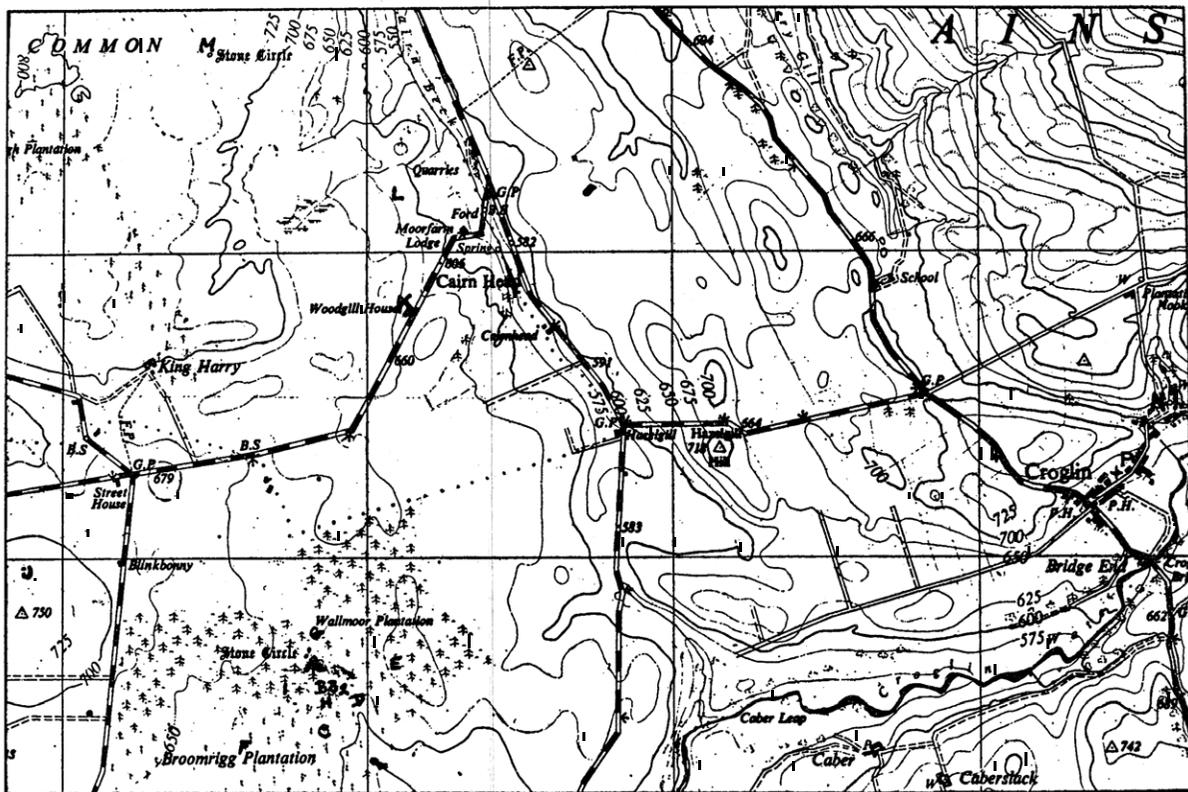


FIG. I.—Broomrigg: map of the site and its setting. (Reproduced by permission from the 6-inch Ordnance Survey map).

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|---|---|
| <p>A .. Megalithic circle<br/>         B .. Burial circle.<br/>         B2 .. Subsidiary burial circle.<br/>         C .. Large burial circle.<br/>         D .. Burial circle.<br/>         E .. Ring-ditch (?).<br/>         F .. Probable habitation site.</p> | <p>LEGEND:<br/>         G .. Standing Stone.<br/>         H .. Hollows and mounds (nature unknown).<br/>         I .. Stone and mound.<br/>         J .. Beaker cist.<br/>         K .. Socketed bronze axe.<br/>         L .. Circle in cairn.</p> |
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facing p. 30.

The division between Broomrigg and Wallmoor plantations is purely arbitrary. Broomrigg was planted more than a hundred years ago; before that, the land was probably rough pasture with a few "intaken" fields, as is evidenced by old field-dykes, plough-riggs and an occasional "hoggus" and currick. The flora bears out this idea: it is of hill-pasture rather than true moorland type. We noticed field gentian (*gentiana amarella*), milkwort (*polygala*), several veronicas, lesser bedstraw and tormentil. It is noteworthy that there is a spring of excellent water near the circles; it never dried up even during the exceptionally dry summer of 1949.

## II. THE EXCAVATIONS OF 1948-49.

This complex of prehistoric sites seemed likely to repay systematic and complete excavation. In 1948, therefore, we approached the owner, the late Mr U. I. Parkin, for permission to excavate. This he readily granted, and after his lamented death the present owner, Mr A. D. Parkin, very kindly allowed us to continue our work.

It was decided to begin by examining the large burial-circle, C.<sup>2</sup> This now consists of fourteen stones, the largest of which measures 4 ft. by 3 ft. by 2 ft., and the smallest 1 ft. 6 in. by 1 ft. 2 in. by 2 ft.; the diameter of the circle is about 50 ft. east to west and 48 ft. north to south. The whole area was very heavily overgrown with bracken, which made its excavation very laborious.

Of the stones which remain, seven in the south-west quadrant are set close together, and the curve which they form does not fall in with that of the rest of the circle; the possible significance of this observation will be discussed later.

It was decided to excavate by the quadrant method, and to begin with the south-west quarter. As soon as the growth and top-soil (decayed pine-needles and bracken

<sup>2</sup> A brief notice of the initial stages of the work was given in CW2 xlvi 216.

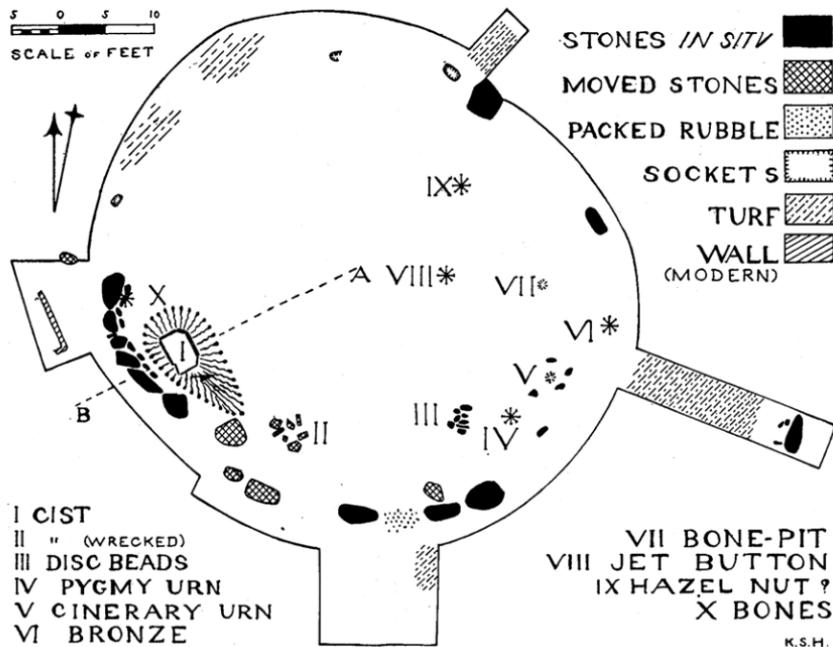


FIG. 2.—Broomrigg C: plan of the excavation.

fronds) had been removed, it was clear that there had been a cairn—whether high or low there was no means of determining—inside the circle. Below the stones of the cairn there was a layer, 3 to 8 in. deep, of cream or pale orange sand,<sup>3</sup> which on exposure to the air turned a dirty white. Near to the perimeter there was a noticeable oval depression (fig. 3), which proved to be due to subsidence of the sand and stones over a deep pit, in which a large cist was set.

Another noteworthy feature of this quarter was a definite “footing” or kerb of large cobbles, very firmly set, just below and within the stones of the circle. Beneath three of them, near the north-west corner of the cist, were two deposits of bones, crushed together into a compact mass.<sup>4</sup> These circumstances leave little room for doubt that here we have an instance of a “foundation sacrifice”.

The pit referred to was oval, about 3 ft. wide and 4 ft. long—or rather pear-shaped, since at the south end it was prolonged in a tapering slope, closely packed with large cobbles. The cist itself had been built on the flat rock, with a double wall of sandstone slabs, hammer-dressed and neatly fitted together (Pl. IIIr). Small flat stones were set on the edges of the slabs, for the great coverstone to rest on. It was oval, flat beneath and convex above, measuring 4 ft. 9 in. by 3 ft. 3 in., 6 in. thick at the edges and about 1 ft. 2 in. in the middle. Unfortunately there were no datable objects associated with the cist, which only held washed-in soil, containing a little charcoal.

It was evident that the pit had been dug into the “brash” (its sides were very clearly distinguishable, as may be seen in Pls. II2 and III2), and even into the uppermost stratum of the living rock. The funnel-like slope southwards was probably made to allow the slabs

<sup>3</sup> See Dr Raistrick's report, p. 40 below.

<sup>4</sup> See Professor Brash's report on the bones, p. 41 below.

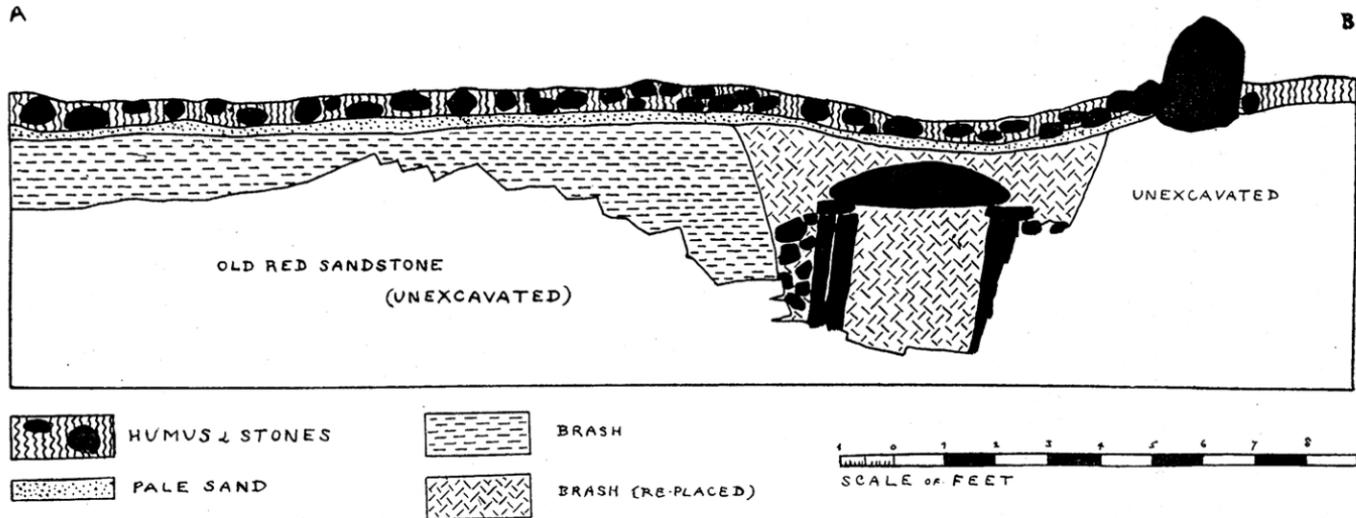


FIG. 3.—Broomrigg C: section A—B (see fig. 2 and p. 33).

of the cist to be brought down and placed in position, after which they were packed with cobbles and the brash from the excavation.<sup>5</sup> The packing cobbles of this approach were large and firmly set; it seems probable that they were intended to provide a solid incline, down which the cover-stone could be dragged.

There had probably been a smaller cist in this quadrant, placed *on* the subsoil; but unfortunately, during the excavators' absence one week-end, some idle youths found it and wrecked it. On our return to the site, we found several light slabs of sandstone, disarranged and scattered.

The south-east quadrant contained cremation burials. One had been contained in a large cinerary urn of the "overhanging rim" type. This was standing on its base, but had been considerably crushed by the sandstone slab which had originally covered it but which, being pushed out of place by the roots of a tree, had fallen into it. A "pygmy" urn was recovered intact (fig. 5), very near the cinerary urn, amongst a further deposit of bones.

A small oblong of firmly set stones was noticed near the north-south axis of the circle, and this proved to cover another deposit of cremated bones.<sup>6</sup> In the earth among these stones were scattered 13 disc-beads of bastard or inland jet (Pl. IV2); the impression given was that they had not been laid as a string, but had been either strewn, or thrown down so that the cord broke.

There was a third deposit, in the north-east quadrant, which was not accompanied by any grave-goods, and consisted of more charcoal than bones. All the deposits were accompanied by much charcoal<sup>7</sup> and, except with the cinerary urn, were in small circular pits, 1 ft. wide and 1 ft. deep with rounded bottoms which looked as if

<sup>5</sup> Some of the brash was thrown immediately outside the circle and was remarkably hard, as if rammed or trodden.

<sup>6</sup> Cf. Professor Brash's report, p. 41 below.

<sup>7</sup> Cf. Mr. Orr's report, p. 41 below.

the bones and ash had been placed in some sort of bag, which had later perished. One particularly interesting feature was an irregular layer of grey soil, old turf,<sup>8</sup> just behind the stones (Pl. III). This was found in several radial trenches, and may fairly be concluded to have surrounded the circle, except behind the continuous stones; it was very uneven in width, and therefore was not a wall or bank.

No entrance could be determined, unless the patch of rammed sandstone rubble on the south represented one.

There were several heaps of stones outside the circle, which did not show any features of interest; they had possibly been thrown out by cairn-robbers. That to the south yielded a few fragments of bone and charcoal, but showed no sort of structure. On the east there was a fragment of later wall, probably some agricultural building, medieval or later.

### III. CONCLUSIONS.

It will be recognised that there are two points which call for explanation. First, the absence of a central burial: all the interments, including the deep cist (apparently primary), are on the perimeter. Secondly, the impossibility of reconciling the curve of the seven contiguous stones with that of the rest of the circle. We offer the following explanation, which resolves both discrepancies.

The line of stones, 1-7, can be shown to be part of a circle 14 ft. in diameter, with the north-west corner of the cist very nearly at its centre (fig. 2). This, the original interment of the Early Bronze Age, was surrounded by a small circle of large stones—a familiar type, of which "Little Meg" is a near-by example. In the Middle Bronze Age, when further burials were to be made, the circle was enlarged to its present size, the

<sup>8</sup> See Dr Raistrick's notes on the soil samples, p. 40 below.

turf was removed<sup>9</sup> and piled up outside it, and the cremations and the accompanying urns were deposited round the perimeter. Finally the pale sand was spread over the whole area, which was then covered with a cairn.

It will be evident that in this circle we have a notable example of the fusion of cultures characteristic of the Highland Zone.<sup>10</sup> The pale sand may be interpreted as a degenerate survival of a Neolithic tradition, as (for instance) the quartz pebbles of New Grange in Ireland and the white limestone of the Bride Stones in Cheshire. Perhaps the disc-beads are even more striking—a Neolithic or Early Bronze Age type, here definitely associated with cremated bones, i.e. a Middle Bronze Age burial.

Finally, it is a pleasant duty to offer warm thanks to all who helped us. Professor I. A. Richmond paid two visits to the excavations and gave us most valuable advice and encouragement; Mr Robert Hogg gave us help on the geological side and by taking the studio photograph reproduced as Pl. IV2; and we are particularly grateful to Mrs. H. M. Parkin for her delightful hospitality and unfailing kindness. We also acknowledge with gratitude our debt to Dr Raistrick, Professor Brash and his assistant Mr Jaywardine, Mr Orr and Mr Hogg, for their kindness and care in examining the specimens of soil, bones, charcoal and stones respectively; their reports are given in four appendices to the present report. In 1948 we were honoured by a visit from Professor Gerhard Bersu; and in 1949 we were joined by several members of this Society's newly-formed Carlisle Regional Group, who wished to study archaeological methods, and who did great service in their practical work. The excavations of 1950 will be reported in a future volume.

<sup>9</sup> Cf. the cases of Bryn yr Hen Bobl (*Archæologia* lxxxv 253f) and the Shield Knowe (CW2 xl 154-162).

<sup>10</sup> Cf. Sir Cyril Fox, *The Personality of Britain*, 4th ed., 1943, 40.

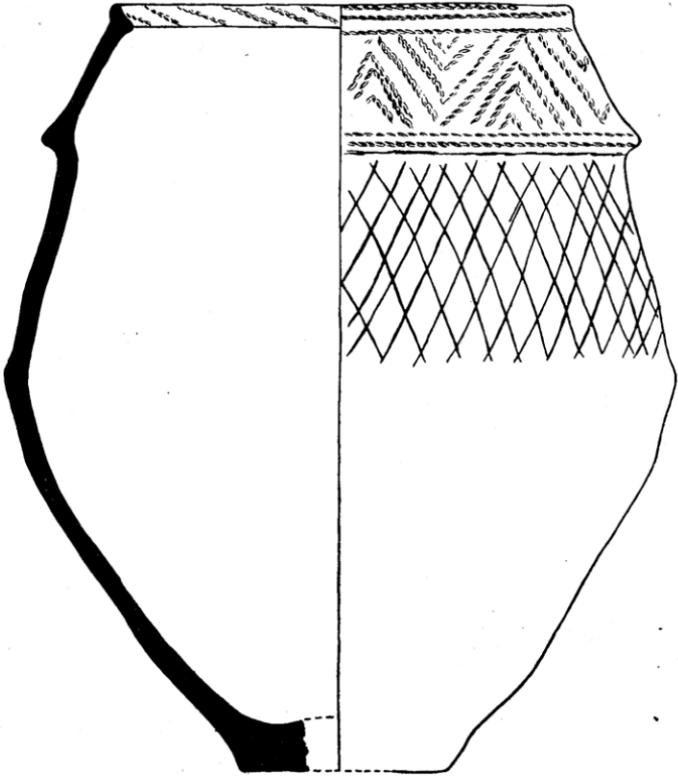


FIG. 4.—The Cinerary Urn. ( $\frac{1}{4}$ ).

#### IV. THE FINDS.

1. *The cinerary urn* (fig. 4). This has not yet been fully put together, so that some of the following measurements must be regarded as tentative. It has been a fine specimen, well shaped and elaborately decorated; it probably stood about 16 in. high. The base is certainly  $4 \frac{3}{4}$  in. in diameter, and the diameter at the rim may be about 10 in. There is a marked carination, at which point the diameter is probably about 12 in. The decoration is "maggot" pattern, except for a band of cross-hatching between the lower edge of the rim and the

carination. The lines of "maggots" are arranged to form chevrons 3 1/2 in. wide on the overhanging rim, with two rows of continuous pattern above and below. On the concave inside of the lip the pattern is arranged in slanting rows about 5/16 in. apart. The overhanging rim is 4 1/4 in. deep in addition to the well-developed beading of its lower edge. The lower part of the urn is plain. The paste is coarse, with large grits, dark grey inside, both surfaces being of the usual brownish colour, well-smoothed and with a slight burnish. The lower part of the urn is much reddened by heat.

2. *The pygmy urn* (fig. 5). This was found lying on its side among a mass of bones. Its fabric is hard and well-baked, of a yellowish grey colour; it is 2 7/8 in. high, 1 1/8 in. in diameter at base and 2 5/8 in. across the mouth; there is a strong carination at 1 1/2 in.

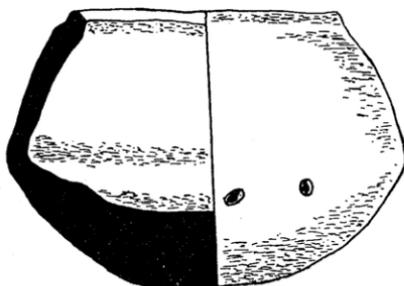


FIG. 5.—Broomrigg: the "pygmy" urn. (1/2).

height. The lip is slightly bevelled and there is a strongly-marked ridge round the base inside. The vessel is quite plain, except for two perforations just below the carination; they are 1/2 in. apart.

3. *Two fragments of bronze*. These are of special importance because they are attached to some fibrous substance, probably leather. They are very slight, rather bronze stain than actual metal, and very small.

They appear to have definite parallel edges, and look like fragments of a strip of metal. They were found close to the cinerary urn, perhaps (but by no means certainly) associated with it.

4. *The beads* (Pl. IV2). These were pronounced by Dr Raistrick to be of bastard or inland jet. Thirteen of them were recovered. They vary from 5 to 9 mm. in diameter and from 1 to a little over 3 mm. in thickness; the hole in each case is 3 mm. The two smallest are definitely a pair; the rest are fairly well matched, except the largest, which has no mate. Similar beads were found in a cairn on Dale Moor, Westmorland, with "fragments of early British pottery and unburnt bones"<sup>11</sup>; Anderson figures some from Dalmore, Inverness, with "a flint knife and polished stone wrist-guard" and from a chambered cairn at Yarhouse, Caithness.<sup>12</sup> Abercromby figures a string of them found with food-vessels;<sup>13</sup> and there are two groups in the National Museum of Antiquities in Edinburgh, 9 from Farrochie, Kincardineshire and 17 from Knockenny near Glamis, which are indistinguishable from the Broomrigg beads.

5. *The jet button* (Pl. IV2). This was found in the filling of an old rabbit-hole, well within the circle. It is not large—1 1/4 in. in diameter and 3/8 in. thick at the middle—and has the usual V perforation, 1/8 in. apart.

#### APPENDIX A: REPORT ON THE SOIL SAMPLES.

By Dr A. RAISTRICK,  
King's College, Newcastle upon Tyne.

1. *The pale sand layer.* Leached sandy material, no silt, sub-angular quartz heavily iron-stained, fairly uniform grade: not a soil, and no trace of humus.

2. *From grey layer just outside the circle* (p. ?? above).

<sup>11</sup> PSAL2 vii 214.

<sup>12</sup> *Scotland in Pagan Times* p. 51 fig. 53 and p. 237 fig. 240.

<sup>13</sup> *Bronze Age Pottery* i, pl. lxi.

Rich humus, soil ungraded, very little iron-staining: definitely a rich soil, probably turf.

3. *Natural surface, away from the circle* (for comparison). Similar in every way to no. 2, but much more abundant iron oxide, due to less leaching.

4. *Filling of large cist*. Identical with no. 3, but mixed with charcoal.

#### APPENDIX B: REPORT ON THE BONES.

By Professor G. C. BRASH and Mr JAYWARDINE,  
Department of Anatomy, University of Edinburgh.

1. *Bones under footing of circle* (p. ?? above). Fragments, light and fragile; fragment of rib with sub-costal groove: probably the remains of a child.

2. *Bones associated with cinerary urn*. (a) Frontal region with well-marked superciliary ridges. (b) Fragments bearing sutures, all fused on endocranial aspect, none on ediacranial aspect. (c) Remaining fragments, with heavy, strong muscle markings. Probably an adult male, between 30 and 60 years of age.

3. *Bones associated with pygmy urn*. Fragment of a metatarsal head identified: probably adult human.

4. *Bones associated with jet bead*. Fragments, bulky vertebral bodies, large well-developed ischial tuberosity, heavy fragments of long bones: probably an adult male.

5. *Bones from pit in north-east quadrant*. Too fragmentary to identify with certainty, but probably human.

6. *Bones from south-east quadrant*. Large heavy fragments: probably adult male. Professor Brash wrote, in reply to a letter: "With regard to your question about the number of individuals represented . . . we find that there is only one certain piece of evidence that more than one are represented . . . there are portions of two axis (second cervical) vertebrae present. One of these is with group no. 2, and the other with group no. 4."

#### APPENDIX C: REPORT ON THE CHARCOAL.

By M. Y. ORR,  
Regius Keeper of the Royal Botanic Gardens, Edinburgh.

1. *From the deep cist*. Material charred and very friable, but I think it belongs to willow (*salix sp.*).

2. *Near the deep cist.* Oak (*quercus sp.*) and willow (*salix sp.*) mixed.
3. *From the cinerary urn.* Chiefly oak, associated with a little hazel (*corylus avellana*) and willow.
4. *From bones associated with jet beads.* Mainly oak with some hazel intermixed.
5. *From pit in north-east quadrant.* Mainly oak, some hazel and willow present.
6. *Scattered in north-east quadrant.* Oak, but badly charred. The object is very possibly the remains of a hazel-nut.
7. *From all parts of the excavation, unassociated.* Entirely oak.

#### APPENDIX D: GEOLOGICAL REPORT.

By ROBERT HOGG, B.Sc.

The principal source of building-material for hut and burial-circles has been the surface spread of glacial erratics, mainly Lake District rocks but with occasional boulders of Penrith Sandstone. The cover-stone of the cist has been made from a large Lake District erratic, its under side showing clear evidence of tooling. The cist itself was constructed of stone slabs made of both dressed erratics and quarried sandstone, erected on a prepared floor of bed-rock and held in position by an outer packing of smaller erratics.

cinerary urn  
found here (V)

pit with charcoal  
and bones (VII).

'packing' of pit

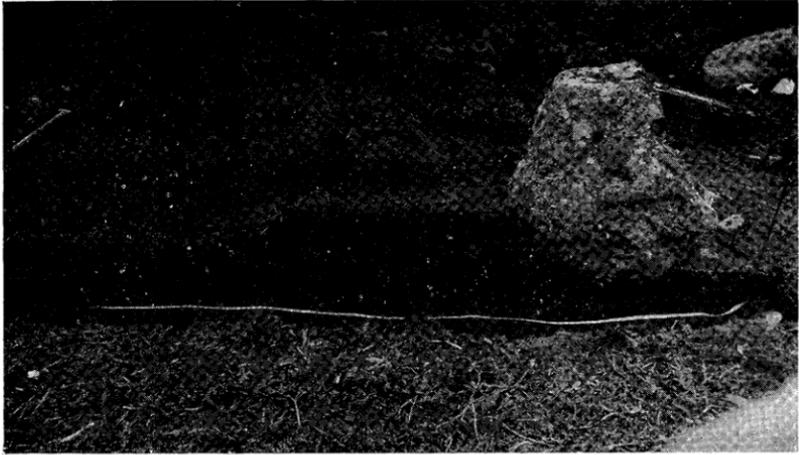
large cist (I).



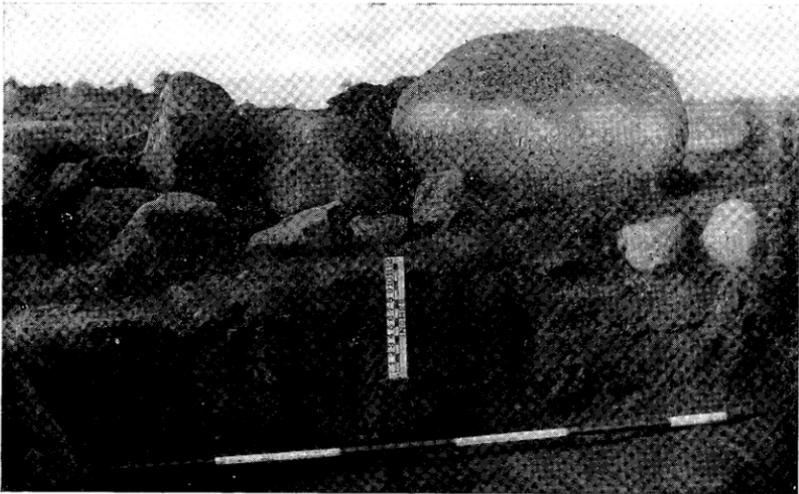
PL. I.—Broomrigg C: general view of the excavation. Note the white sand.

*Photo: K. S. Hodgson.*

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PL. II 1.—Broomrigg C: the turf heap behind a stone of the circle.

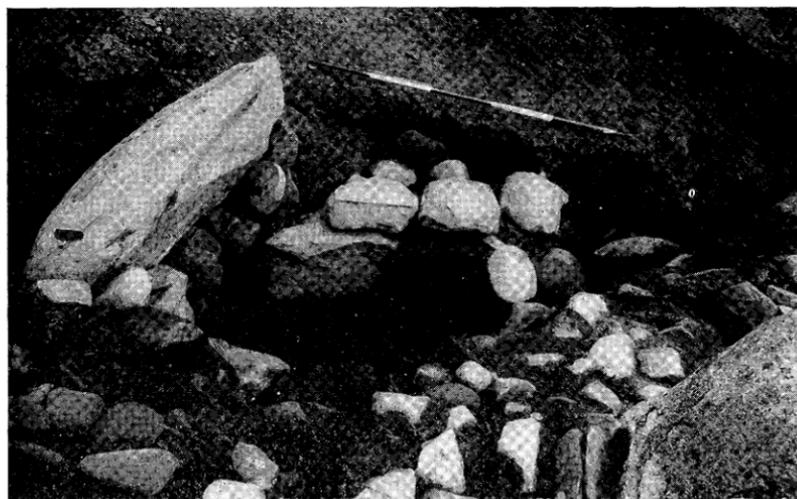


PL. II 2.—Broomrigg C: arrows indicate the slope of the pit.

*facing p. 42.*



PL. III 1.—Broomrigg C: note the hammer-dressed slab and the rock cut away in front.



PL. III 2.—Broomrigg C: the large cist (I) and the edge of the pit.

*facing p. 42.*