

ART. III.—*Excavations at Barnscar, 1957-58.* By D. WALKER, Ph.D.

*Read at Carlisle, July 10th, 1964.*

### Introduction.

BARNSCAR is the largest of the many groups of ancient cairns which occur on interfluvies overlooking the Cumberland coast between about 165M (500 ft.) and 295M (900 ft.) O.D. It consists of a very large number of cairns, each about 1M (3 ft.) high and about 5 to 8M (15 to 24 ft.) in basal diameter. A number of low "walls" of large rocks cross the cairn field and the extreme western edge is occupied by what appear to be the remnants of hut circles. It is by no means certain that these three kinds of structure relate to the same period of occupancy. The cairn field lies on Birkby Fell almost entirely on the south-eastern slope of the spur facing into the valley of Black Beck, but its western extremity reaches the ridge crest at about 180M (550 ft.) O.D., commanding the lower part of the valley of the River Esk and Muncaster Fell beyond (Nat. Grid Ref.: 135960). The site is exposed to the prevailing south-westerly winds and is shrouded in mist and rain for long periods each year. The area is treeless, grass and bracken covered, with extensive boggy areas to the north-east.

Barnscar was first surveyed by Dymond (1893).<sup>1</sup> At that time several small cinerary urns had been obtained, ostensibly from the cairns, two of which are now in the Cambridge University Museum of Archaeology and Ethnology.<sup>2</sup> It is primarily on this evidence that the site has generally been considered to be a Middle Bronze Age burial area. A short description of these urns is given by Miss C. Fell in the Appendix.

### Excavation.

The locations of the excavated cairns are shown in Fig. 1. They were chosen for their apparent lack of earlier disturbance and their isolation from neighbouring cairns by narrow intervening tracts of "natural" soil surface. Of the ten cairns examined, four were excavated with extreme care. The highest point of each cairn was marked and the whole then divided into quadrants. The surface grass and bracken were then carefully removed and the extent and contour of the structure plotted before the careful removal of rocks and earth was continued. In two cairns, two opposite quadrants were excavated. In the rest, single quadrants and areas in the centre were cleared. No artifacts, other than the cairns themselves, were encountered.

So far as can be judged from a number of soil-pits dug in the surrounding area, the natural soil profile is best described as follows:

- 0-3 cm. Surface mat of living grass roots and litter.
- 3-8 cm. Dark brown to black, waterlogged humus.
- 8-25 cm. Grey to yellow sandy clay with frequent large rocks and smaller pebbles, freely penetrated by bracken rhizomes. Iron stains frequent, particularly toward the base.

25-50 cm. Yellowish-grey compact boulder-clay.

The variation of the soil profile from place to place is considerable, particularly in the development of the humus layer which, in the wetter declivities, is represented by a peat up to 35 cm. thick.

The two smallest cairns proved to be entirely structureless piles of rocks resting on the boulder-clay surface. The rest, however, conformed to the general structure illustrated from specific sections and plans (Figs. 2, 3 and 4) and in a generalized schematic manner (Fig. 4).

The materials associated with the cairns or contributing to them are described as follows, from the base upwards:

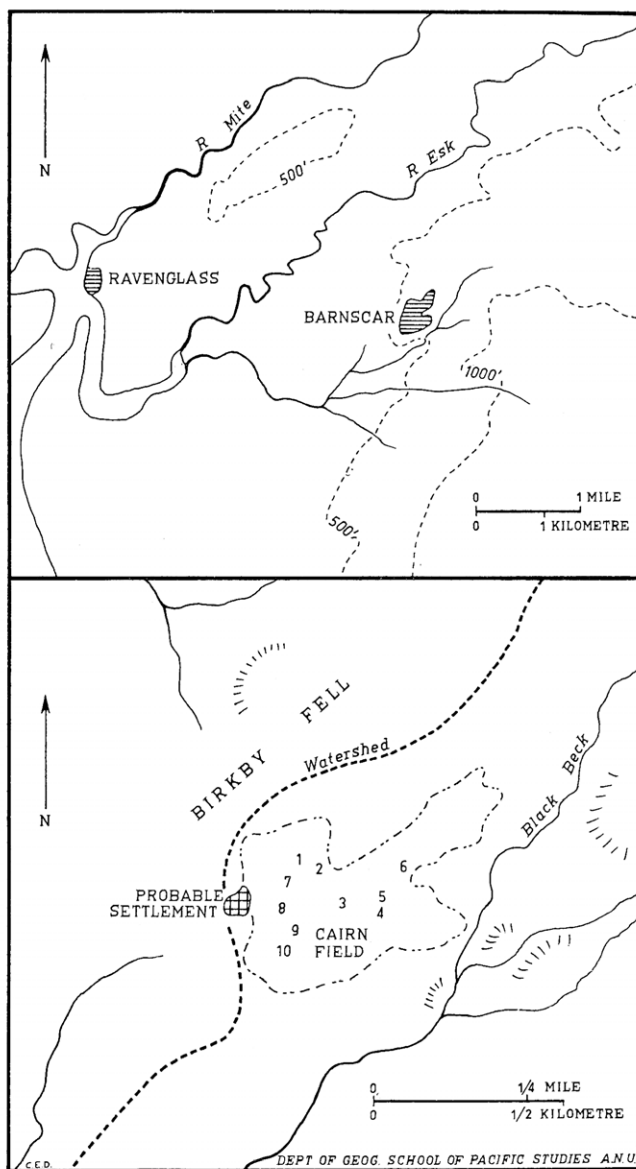


FIG. 1.—The location of Barnscar and of the excavated cairns.

1. Hard, unmodified, boulder-clay, yellow to grey in colour, rocky and very compact: very rarely penetrated by root traces from above.
2. Weathered boulder-clay, yellowish-brown in colour with a small organic content, mainly in the form of old root traces, and rare iron accumulations: soft and friable and of variable depth: not developed over very gravelly parts of the parent boulder-clay.
3. Very dark brown to black compact, friable, organic loamy clay with a few small stones. This overlies the weathered boulder-clay and is evidently the surface layer of the old soil developed before the construction of the cairns.
4. Orange-yellow sandy clay with small stones, only rarely exceeding 10 cm. in greatest dimension. This is a compact material into which rootlets rarely penetrate from above. Cominuted carbon fragments occur occasionally. It is clearly not *in situ* and is almost certainly the redistributed matrix of the boulder-clay rendered richer in colour by the oxidation of the iron it contains.
5. Medium to dark brown loam with frequent small charcoal fragments and inclusions of the orange-yellow sandy clay. This material is confined to pits dug out of the boulder-clay in which it is usually mixed with large stones. Often the surface is charred, in which case the stones overlying the surface are blackened on the undersides only.
6. Boulder cap, composed of rocks of all sizes but mostly exceeding 20 cm. in greatest dimension. The rocks are lavas, tuffs and granites, mostly rounded to sub-angular in shape and probably derived from the local glacial drift. The stones are roughly "keyed" together and there is a suggestion of an incomplete circle of very large rocks, marking the edge of the cap of each cairn, but there is otherwise no clearly discernible construction technique. The growth of vegetation over and between the stones has resulted in the accumulation of a medium brown organic soil in the uppermost layers.

The distribution of these materials suggests a number of stages in the construction of each cairn.

1. The original ground surface was burned, at least in parts.
2. The surface soil was partially stripped, but that at the intended centre of the cairn was usually preserved intact. In some of the stripped areas, pits were excavated into the boulder-clay beneath.

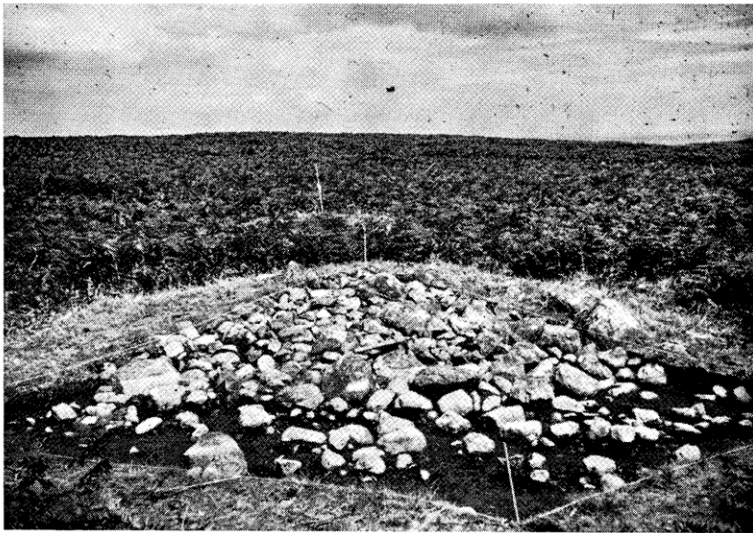


PLATE I.—A Barnscar cairn from one quadrant of which the surface turf has been removed.



PLATE II.—A Barnscar cairn, one quadrant of which has been partially excavated. The foot of the pole rests on a fragment of the original soil surface beneath the structure.

## CAIRN 10

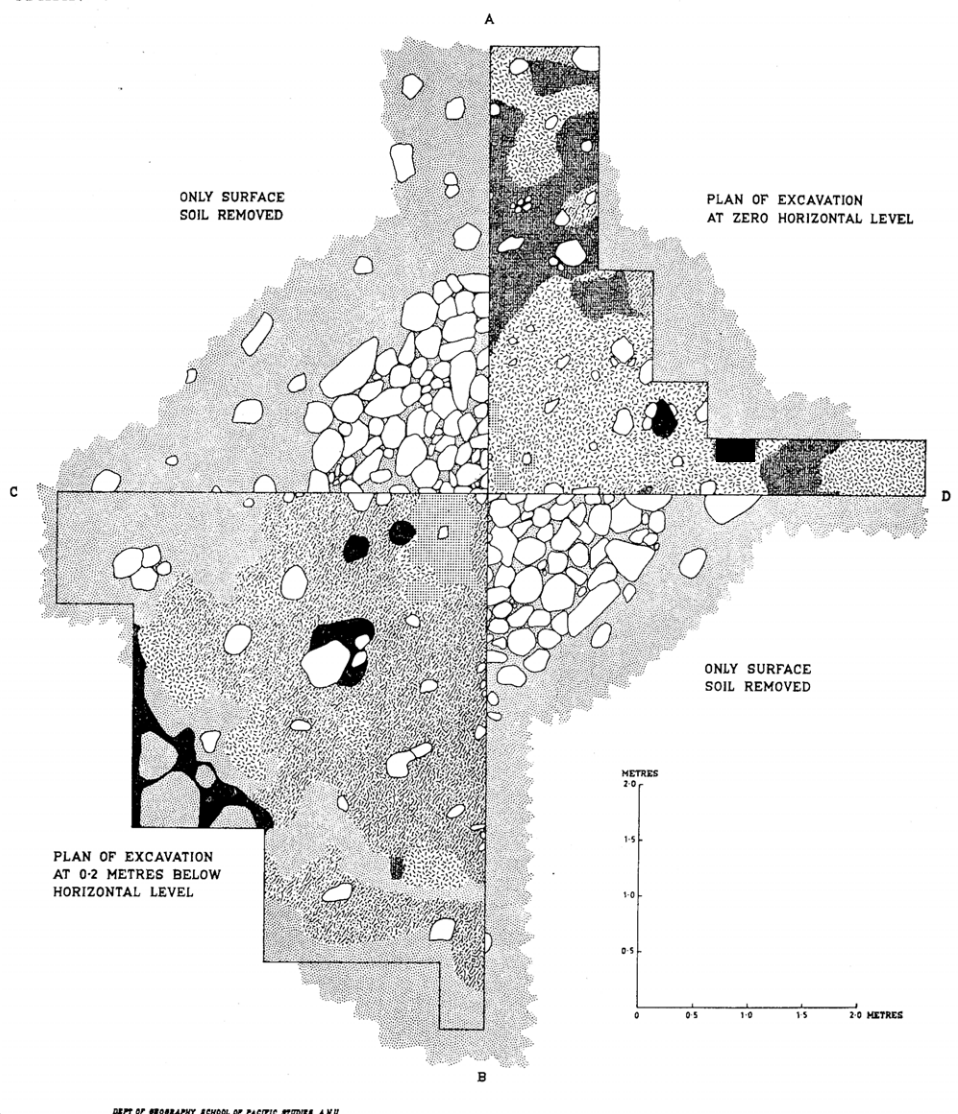


FIG. 2.—Plan of cairn 10, partially excavated to different levels.  
For key to symbols see Fig. 3.

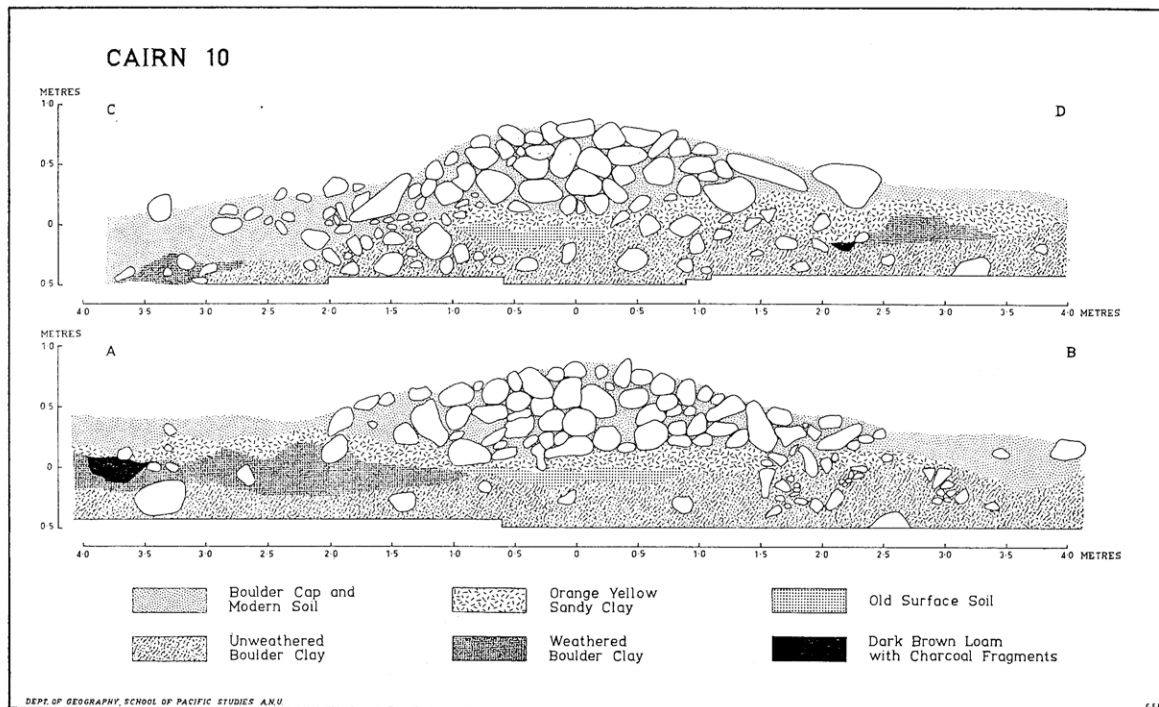


FIG. 3.—Sections of cairn 10 along lines indicated in Fig. 2.

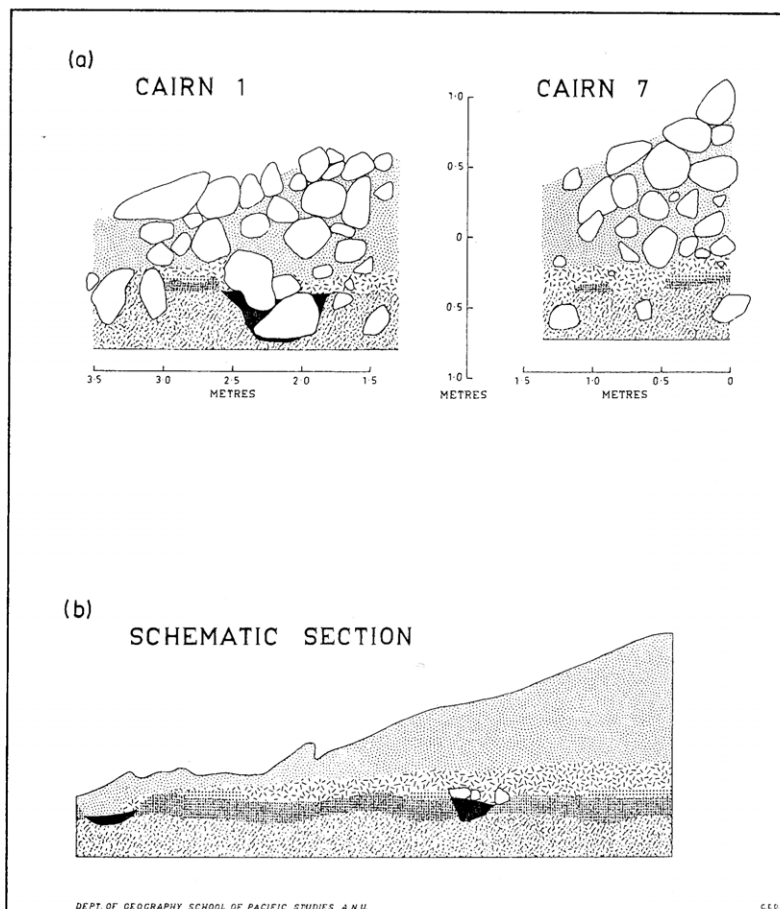


FIG. 4.

- a. Details of parts of sections from cairns 1 and 7 to illustrate relative positions of materials.
- b. Schematic representation of general cairn structure.

3. The excavated matrix of the boulder-clay was spread over the area on which the cairn was to be built. During or shortly after this period the pits became filled with a mixture of soil and rocks which was commonly fire-charred before, during, or after accumulation.



4. Rocks excavated from the pits at an earlier stage and collected from the ground surface were piled into the form of a cairn. The rock cap did not cover all the pits dug at an earlier stage.
5. Percolating rainwater to some extent redistributed the orange-yellow clay layer so that some of it came to lie outside the limit of the boulder cap.

### **Pollen analysis.**

Eight samples in direct association with cairn 10 were collected for pollen analysis. Six of these (1 to 6) were taken from the uppermost 2 cm. of the remnants of the old soil surface underlying the cairn. Every effort was made to secure samples from the least disturbed parts of the surface. A seventh sample (7) was taken from the base of the grey-brown clay filling a small pit in the boulder-clay. The remaining sample (8) was taken from the uppermost 2 cm. of the modern soil 30 cm. beyond the edge of the rock cap of the cairn. In all the samples the pollen grains were badly preserved, a large proportion being totally unidentifiable. This was particularly the case with one sample (5), which has been excluded from the tabulation of results (Table 1). Finely divided charcoal was found to be common in all samples save that from the modern soil.

The differential destruction of pollen grains in mineral soils, and the difficulties of identifying partially eroded grains greatly reduce the facility with which the plant communities from which the pollen was derived can be identified. Nevertheless, there seems to be some similarity between the results from samples 1, 2, 3, 4 and 6, and a sharp contrast between these and the count from sample 8. Sample 7 occupies a somewhat intermediate position.

Three more samples (9, 10 and 11) were obtained from 5 cm., 15 cm. and 25 cm. respectively below the ground surface of a peat-filled declivity, 28 cm. deep, immediately north-east of the cairn field. Although even greater

caution is necessary in comparing analyses from waterlogged peat with those from mineral soils, it is clear that the former bear a closer resemblance to that from sample 8 than to those from samples 1 to 6. The samples from the old soil beneath the cairn strongly suggest that the area was at that time, or before, at least partially wooded, that bog development had hardly begun and that clearings containing weeds were rare. Even if allowance is made for relative difficulty in the identification of fragmentary pollen grains, it seems likely that birch, oak, alder and hazel were the significant constituents of the woodlands. The contents of samples 8, 9, 10 and 11, however, reflect a vegetation much closer to that existing at the present day; trees are rare, grasses and heaths abundant, and weeds, such as plantain, frequent. Between the building of the cairn and the present day, therefore, the area has been disforested and the present moorland has developed. Sample 7, from the bottom of the fill in one of the pits beneath the cairn, contains a larger proportion of pollen grains of grasses and herbs (including plantain) than do those from the soil surface beneath the cairn. This may indicate that major disforestation took place shortly after the main construction or might only be the result of local disturbances during work on the cairn field itself.

### **Discussion.**

The consistent structure of many of the cairns and their association with prior fire and the excavation of pits confirms that they are not natural objects. The use of excavated clay in their construction, as well as the great likelihood that many of the stones were themselves obtained by excavation, suggests that the cairns were made for some particular purpose and were not merely field-clearance heaps. There is nothing in their structure or content which indicates that they were associated with the rituals of burial or cremation. However, the pollen

analytical evidence suggests that they were built when the area was forested and that their construction severely disturbed the vegetation. It may be, therefore, that these cairns were made as part of a process of positive deforestation. This would be in conformity with the scorching of the old soil surface, the stripping of the latter and the digging of pits which might have been primarily for the removal of tree stumps. Even so, the significance of the constructions themselves is difficult to understand.

The dating of these cairns to the Middle Bronze Age depends on the two collared urns reputed to have been found within them. Considerable forest clearance had taken place on the West Cumberland Lowland before this time (Walker, 1964)<sup>3</sup> and there is no indication of a new impetus in the Bronze Age there. Nevertheless, the higher ground bordering the coastal plain was almost certainly still under its original forest cover and the general distribution of artefacts confirms that human activity of some kind was considerable there during the Bronze Age, but not earlier. Although positive correlations are lacking, therefore, all the circumstantial evidence agrees in suggesting that the Barnscar cairns are associated with the spread of people on to the hills during the Bronze Age, and probably with forest clearance there.

#### **Acknowledgements.**

The excavations were carried out during the summers of 1957 and 1958, the work of the first year being supported by a generous grant from the Cumberland and Westmorland Antiquarian and Archaeological Society, for which the author is most grateful. During 1957 the excavations were carried out, under extraordinarily trying weather conditions, by a group of hardy assistants under the supervision of Mr G. de G. Sieveking, to all of whom the author offers his sincere thanks. Miss A. B. G. Charlton and the late Mrs A. Bromley-Boorne deserve special thanks for the catering arrangements for half

that season's work. Particularly valuable was the advice and help of Miss Clare I. Fell, Miss K. S. Hodgson, Mr W. H. Alp and Mr W. Fletcher. The agent of the Muncaster Estates, Mr I. McWilliam, kindly gave permission for the work to be carried out, the project having been approved by the Inspectorate of Ancient Monuments, Ministry of Works. The pollen analyses of the unusually intractable materials were made by Miss Camilla Lambert, and Mrs C. Daniell drew the diagrams.

### References.

- <sup>1</sup> Dymond, C. W. 1893. "Barnscar: an ancient settlement in Cumberland", CWI xii 179.
- <sup>2</sup> Registration nos. 25, 472-473. Given by the late Sir John Ramsden.
- <sup>3</sup> Walker, D. 1964. *The Late-Quaternary history of the Cumberland Lowland.* (In the press.)

**Table 1.**

*Pollen analytical results. Figures show total actual numbers counted of pollen grains and spores of each type in each sample.*

Sample Number	Associated with Cairn							Natural Hollow		
	1	2	3	4	6	7	8	9	10	11
<b>POLLEN TYPE</b>										
Betula .. ..	12	5	8	6	2	3	3	12	4	15
Pinus .. ..	5	5	2	8	3	1	1		1	1
Ulmus .. ..	2		2	1					1	
Quercus .. ..	1	10	10	8	7	2		6	8	7
Tilia .. ..	3		8		1	5				
Alnus .. ..	77	80	30	27	42	17	6	6	3	10
Corylus .. ..	126	45	90	70	64	59	28	17	17	29
Gramineae .. ..	9	7	3	7	8	25	31	75	128	93
Cyperaceae .. ..								20	90	31
Plantago .. ..			1			9	14	12	35	17
Succisa .. ..		1		1	2	2	1	3	1	2
Caryophyllaceae .. ..							1	2	17	1
Rubiaceae .. ..						1	3	7	2	1
Umbelliferae .. ..	1							1	1	
Ericaceae .. ..	1	3	1	14		3	57	126	171	137
Ranunculaceae .. ..		1								1
Polypodium .. ..	151	44	114	68	39	43	5	1		
Pteridium .. ..	24	103	63	126	39	13	71	89	120	74
Ophioglossum .. ..							5		1	
Other Filicales .. ..	20	23	43	114	25	13	1	6	10	15
Lycopodium selago .. ..							1			
Sphagnum .. ..	4	2		2			1	27	52	27
Unidentified pollen and spores .. ..	109	273	289	350	509	212	517	8	10	2

## Appendix.

*Two Collared Urns from Barnscar.*

The scanty records of Lord Muncaster's excavations at Barnscar, carried out in about 1890, are given by C. W. Dymond<sup>1</sup> and Miss M. C. Fair<sup>2</sup> in the *Transactions* of this Society, and also in the *Victoria County History* for Cumberland.<sup>3</sup> We learn from Dymond that several small cinerary urns were found in the cairns in an inverted position, also some fragments of pottery and burnt bones which have not been preserved. Two or three of the huts in the settlement at the western end of the cairn field were also "dug into", but no record of this work was kept. Miss Fair claims that most of the urns and bones were reburied without being examined, while the account in the *Victoria County History* adds that excavation was abandoned on account of the reluctance of the local people employed on the work to disturb the bones of the dead.

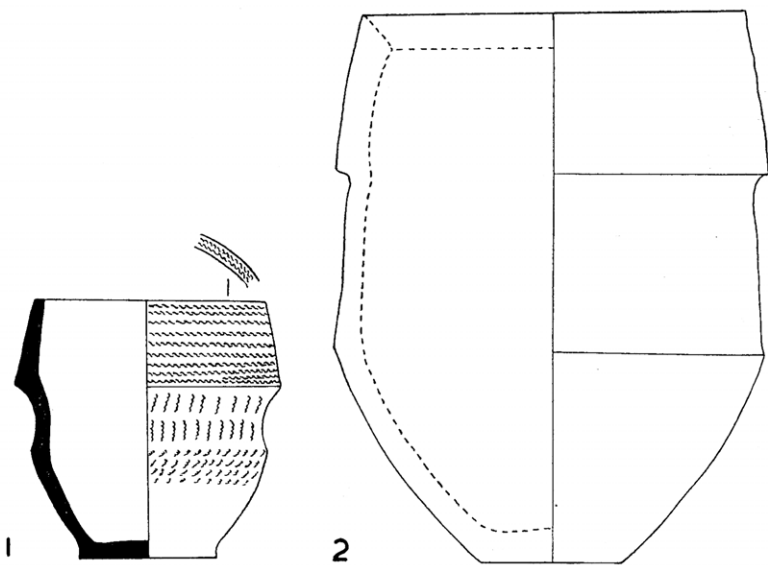


FIG. 5.—Two collared urns from Barnscar ( $\frac{1}{2}$  size).

<sup>1</sup> CW1 xii 179-187.

<sup>2</sup> CW2 xliii 50.

<sup>3</sup> VCH Cumberland i 250.

Two collared urns, presumably surviving from these excavations, were given to the Cambridge University Museum of Archaeology and Ethnology by Sir John Ramsden in 1925. They have never been illustrated and make an appropriate appendix to Dr Walker's paper.

*Fig. 5, 1. Museum no. 25. 472.*

This small urn is of buff-coloured hand-made ware, decorated on the flat-topped rim, collar, concave neck and below the shoulder with impressions of twisted cord. It has a protruding foot, a feature derived from Beaker ceramics. Height 5.4 in. Dr I. H. Longworth has shown that the Primary Series of collared urns developed in the Early Bronze Age about 1550 B.C., and was superseded by the Secondary Series around 1400 B.C.<sup>4</sup> This urn is included in his Primary Series, though late within it, since it retains only two traits of the ancestral "Peterborough" tradition.

*Fig. 5, 2. Museum no. 25. 473.*

This large, undecorated urn is of red-brown, hand-made ware. The collar is deep and straight. The neck, too, is almost straight instead of concave, and the diameter of the base is small in proportion to the size of the vessel. Height 11.4 in. It belongs to the Secondary Series of collared urns, i.e. later than 1400 B.C. The urn has unfortunately disintegrated and is no longer available to study in section. The outline given here is from a photograph taken before World War II.

The presence of these collared urns in cairns at Barnscar confirms the Bronze Age date deduced by pollen analysis of the old turf-line underlying cairns examined by Dr Walker and his team.

My thanks are due to Dr G. H. S. Bushnell for permission to publish the urns, and to Miss M.'Craster for drawing the smaller vessel.

<sup>4</sup> *Proc. Prehistoric Soc.* xxvii (1961) 263-306.