

Green Knowe unenclosed platform settlement and Harehope cairn, Peeblesshire

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INTRODUCTION

The reasons for the excavation of this settlement in 1977 and 1978 were twofold. In the first place it was apparent that unenclosed platform settlements were persistent over a wide area of northern Britain, extending well beyond the nucleus of some forty examples originally recorded in the *Inventory for Peeblesshire* (RCAMS 1967). Despite this no more than a single platform had been investigated hitherto, this also in the settlement on Green Knowe, where it was shown to be the stance for a round, timber-built house (Feachem 1961). At that time a tentative context in the earliest Iron Age was assigned to the settlement, mainly on the basis of some sherds of so-called 'Flat-Rimmed Ware' recovered from the platform. For some time, however, it has seemed that this context was too conservative and that an earlier date would be more appropriate. Especially would this be the case if the suggested relative sequence was to be maintained, whereby unenclosed platform settlements were seen to be an earlier form of settlement than the enclosed, palisaded sites of the area (eg Piggott 1966, 7–9). As some of the latter undoubtedly preceded hillforts and could now be assigned to the first half of the first millennium BC on the basis of radiocarbon dates, it followed that at least some unenclosed platform settlements might qualify for a context in the second millennium BC and thus help to fill a void in the existing settlement patterns in northern Britain (Jobey 1980). The sherds of flat-rimmed pottery from the original excavations at Green Knowe would provide no obstacle to this solution, and, on the contrary, might furnish a welcome if chronologically insensitive answer to an uncomfortable ceramic gap in the later Bronze Age. In these circumstances, it also seemed advisable to examine one of two well-robbed burial cairns which lie adjacent to the settlement on Green Knowe.

The second purpose of the excavation, detailed results of which are not included in the present report, was to assess the amount of damage caused by ploughing for afforestation. In recent years both Green Knowe itself and some sixteen additional platform settlements in Peeblesshire alone had been overplanted, in whole or in part, making it necessary to arrive at some policy with respect to possible clearance and preservation.

The excavations were financed by the Scottish Development Department, the University of Newcastle upon Tyne and the Society of Antiquaries of Scotland. Gratitude must also be expressed to the Fountains Forestry Company and Mr W Brockie for permission to excavate, and to the staff of the Inspectorate of Ancient Monuments for their assistance with the preliminary arrangements. Messrs T G Newman, D Metcalfe and I M Jobey acted as assistant supervisors at different times during the course of the investigations and the work was carried out by students

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from the University of Newcastle upon Tyne, together with a long standing group of volunteers from the same area. One is indebted to all who have been involved for their informed co-operation and also to those colleagues who have provided specialist reports, namely, Miss A Donaldson and Mr J Rackham, University of Durham, Mrs C A Dickson and Dr M Stenhouse, University of Glasgow, and Dr J Weyman, University of Newcastle upon Tyne.

THE SITE AND ITS ENVIRONS (figs 1 & 2)

The settlement on Green Knowe, which consists of nine extant platforms and associated field-banks, is one of three similar sites located on either side of the Meldon Burn in Upper Tweeddale (NT 212434; fig 1, 1). A second settlement, containing eighteen or more platforms within a plot-system, lies on the nearby slopes of White Meldon (2), whilst three platforms of what is possibly a third settlement are still visible on the eastern flank of Black Meldon (3).

Although the majority of the remaining field monuments in the area of the Meldons have already been recorded in some detail in the *Inventory for Peeblesshire* they merit passing reference at this juncture, in that their presence may be relevant to some of the problems raised by the present excavations. The early attraction of the low plateau which extends along the N bank of the Tweed westwards from the confluence of the Meldon Burn and the Lyne Water is demonstrated by the Neolithic and later complex at Meldon Bridge (17; Burgess 1976), together with some standing stones and the existence of cairns on Sheriff Muir (18). Three palisaded homesteads or settlements are known in the immediate area; two of these on South Hill Head (14 & 15) appear to have had free-standing stockaded perimeters, familiar elsewhere in pre-hillfort contexts, but the third at Harehope (4) was shown in excavation to be an embanked palisaded settlement of two phases (Feachem 1960) and by structural analogy might be post-Roman, at least in its second phase (Alcock 1979). Hillforts exist on Hamildean Hill (16), Harehope Hill (5), and Upper Kidstone (7), as well as on the great eminences of Black and White Meldon (11 & 8). None of these forts have been excavated so that the possible incidence of underlying palisaded sites remains unknown. Two additional enclosures are also defensive in nature and may be Iron Age in general context (6 & 9). Native domestic sites of the Roman period are perhaps less well represented, but from field observation probably exist in the form of three, non-defensive stone-built settlements on the lower slopes above the Meldon Burn (10, 12 & 13). Even so, the nodal position of the Sheriff Muir area in relationship to the Roman route through Upper Tweeddale is well illustrated by the temporary camp at Meldon Bridge, the fort and fortlet at Lyne and the fort at Easter Happrew. This military presence, together with the great parade of Iron Age defences, has led to the suggestion that Sheriff Muir was possibly the Segloes, or hosting place of the Selgovae, mentioned in the Ravenna Cosmography (RCAMS 1967). Whilst the discovery of the great stockaded enclosure at Meldon Bridge could now enhance this suggestion, albeit at some considerable distance in time, it would have to be admitted that there may be other deserving locations elsewhere.

The Green Knowe settlement lies on the E to SE facing slopes at an altitude of about 275 m (900 ft), approximately at a point where the underlying Lowther Shales retain a slightly deeper cover of sandy drift-material and gravel. Although only nine platforms are now visible there might well have been more originally, lying on the afforested slopes to the N of platform 8 or on the extensively cleared and resown area to the N of platform 1 (fig 2). A small shelf to the S of platform 7 also offers a third possible location, where it would have been unnecessary to create artificial stances for houses. Individual platforms vary somewhat in diameter and in the stature of their rear scarps and frontal aprons, but all fall within the normal range exhibited on unenclosed

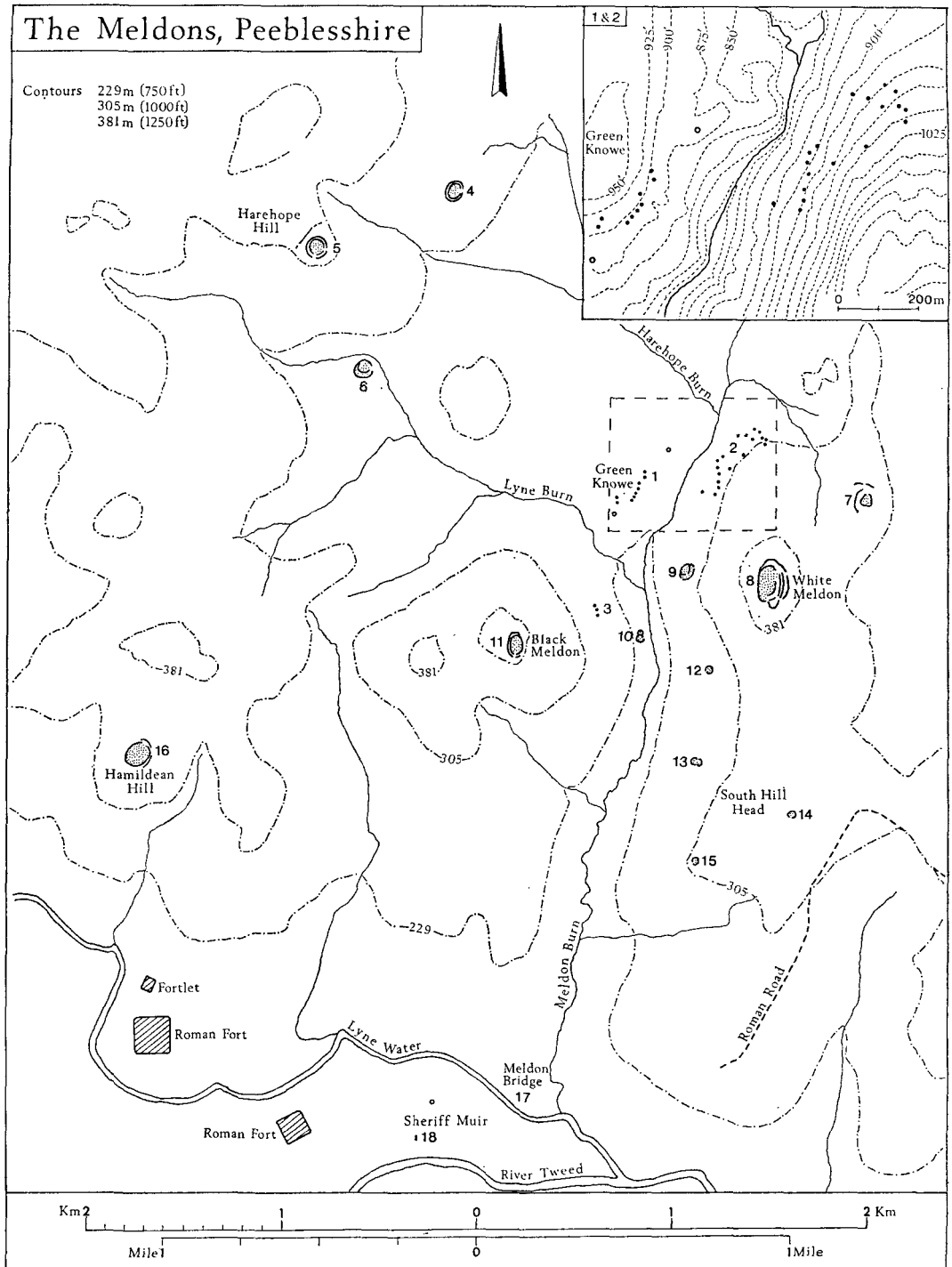


FIG 1 The Meldons, Peeblesshire

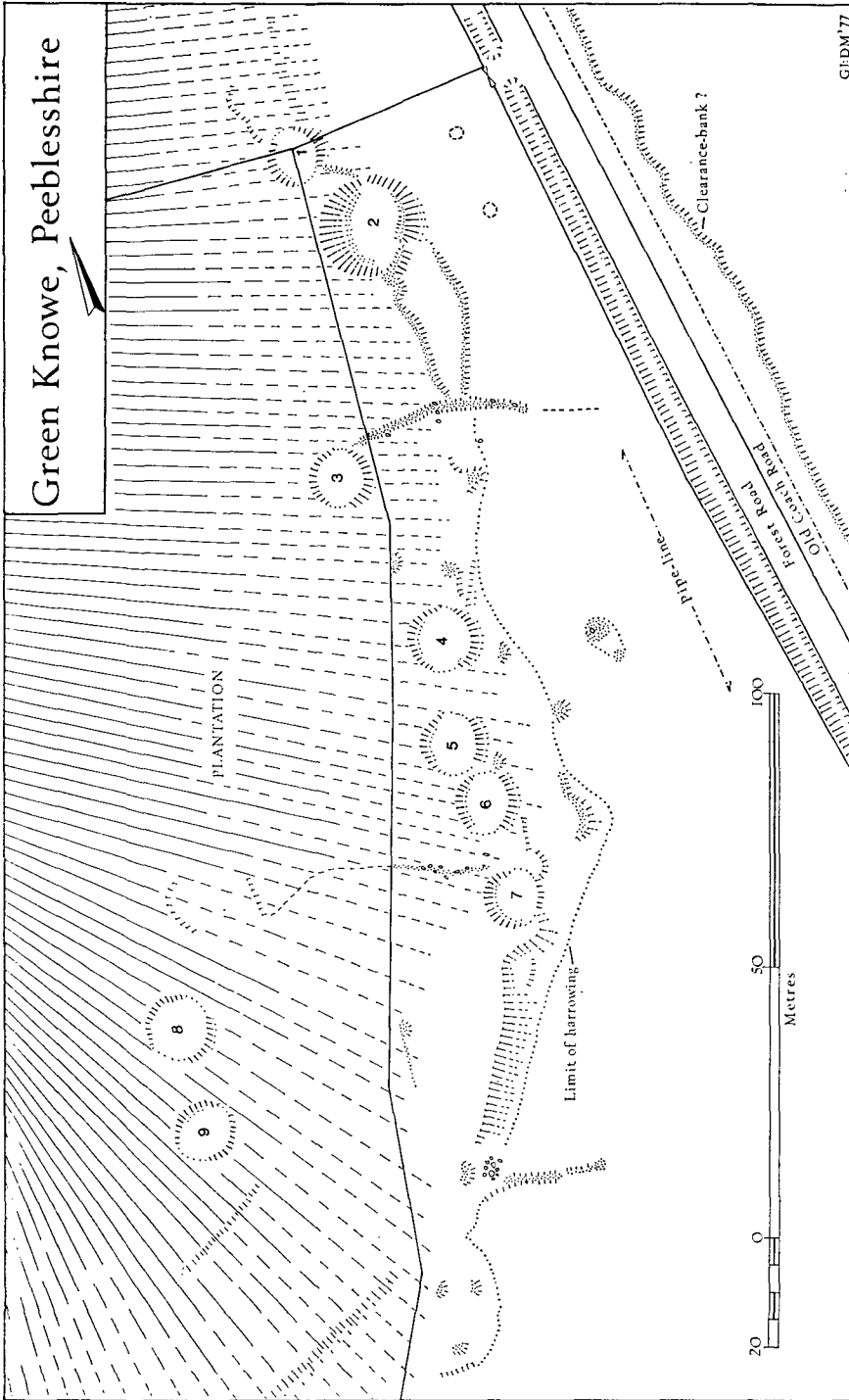


FIG 2 Green Knowe

platform settlements elsewhere (Jobey 1980). Even before excavation platform 2 was undoubtedly the largest, and gained further prominence from a low, turf-covered bank of stone which outlined part of its perimeter and added to the height of its frontal apron. This bank of stone evidently formed part of the irregular system of field-clearance banks which occupy the lower slopes of the hill and the flatter ground between the lower range of platforms and the final scarp down to the Meldon Burn. Unfortunately, within the restricted confines of the valley this has also been the route followed by the old Moffat to Edinburgh coach-road, a modern forestry road, and a more recent underground pipe-line. These features, together with recent harrowing and resowing, have all taken their toll of the linear clearance-banks and at least two possible clearance-cairns which formerly lay to the E of platform 2. Nevertheless, it is reasonably certain that this stone-clearance had extended originally as far to the E as the E side of the old coach-road, where there is a slight, stony scarp above the steep descent to the burn.

The only remaining features of archaeological interest in the immediate area of the settlement are two large and extensively robbed burial-cairns. The first lies some 140 m to the N of the settlement and has been recorded as item 24 in the *Inventory for Peeblesshire*, whilst the second is to be found at about the same distance to the S of platform 7, on a shoulder overlooking the confluence of the Meldon and Lyne Burns (fig 1, inset).

THE EXCAVATIONS

The platform excavated by Richard Feachem in 1961 is number 4 on the present plan (fig 2). The house was found to be 28 ft in internal diameter and was interpreted as having walls of cavity-type, screened on both faces with wattle. Unfortunately, the nature of the cavity-filling could not be determined.

In 1977 and 1978 platforms 2, 5, and 8 and an area at the junction of clearance-banks to the S of platform 2 were investigated. In addition the northern burial cairn was completely uncovered.

Platform 2 (fig 3; pls 3-4)

Before excavation this platform appeared to measure some 15 m from the top of the frontal apron in the E to the top of the rear scarp in the W. During excavation it soon became evident that the artificially cut rear scarp lay within the estimated perimeter in the W, and had been covered by a considerable amount of stony brash and soil which had drifted in from above. The scarp itself had been cut through the natural brash to give an almost vertical face of 0.45 m at its deepest point (fig 3, X-Y). It was equally apparent that the front of the platform, formed from the excavated material and surface-clearance, had been partly overlaid by the bank of stones already suspected to be the result of field-clearance. At this stage it will be sufficient to note that this spread of stone extended around more than half of the perimeter of the platform, except for a single gap in the SE, where rough alignments of larger boulders served as retaining kerbs at what eventually proved to be only one of two entrances to the platform (fig 3). As this bank of stone also respected the locations of the round timber-built houses which were subsequently uncovered, a degree of contemporaneity between the houses and the field-clearance seemed to be assured.

Despite a lack of vertical stratification this platform would seem to have been the stance for three successive houses, described below in their probable chronological sequence.

House 1 (fig 3). No more than the barest traces of the southern perimeter survived as a

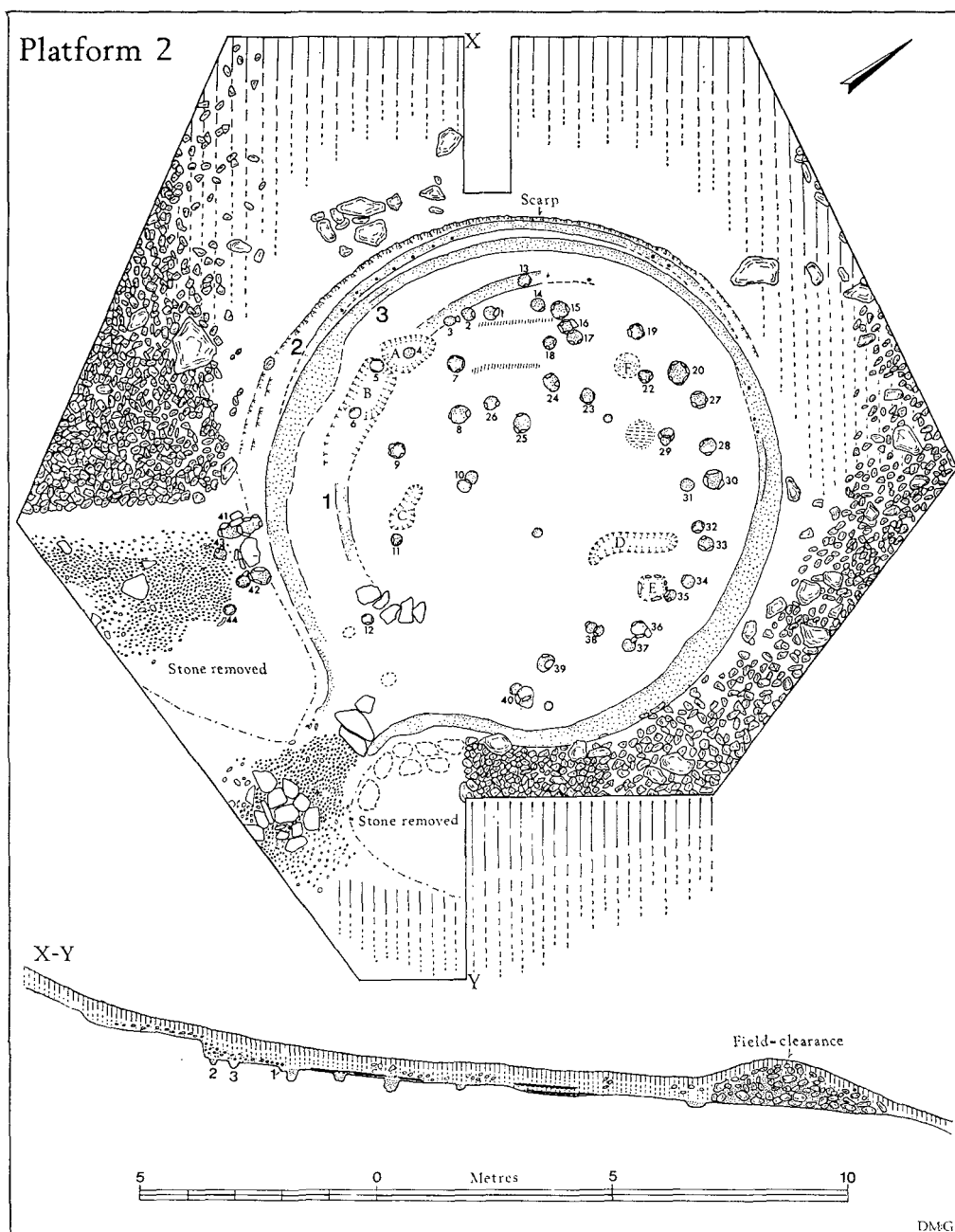


FIG 3 Platform 2

shallow groove in the surface of the platform. The groove did not exceed 100 mm in depth and had been altogether removed in two places by a later pit (A) and more recent sheep-burials (B). It terminated on the edge of a number of flat paving slabs, possibly marking the position of a S-facing doorway, and beyond this could only be traced for a metre or so as a dark surface stain in the make-up forming the front of the platform. By projection of the surviving arc the northern perimeter of this house would have coincided for a short distance with the perimeters of houses 2 and 3, giving an overall diameter of about 8.5 m. No more than two unequivocal stake-holes were found on the circumference but it is possible that the groove had supported a wattle and daub wall similar to that which will be proposed for house 2 (below). The groove itself was filled with dark, greasy earth, similar in texture to the patches of occupation earth found elsewhere on the platform but unlike the burnt material recovered from the wall-grooves of houses 2 and 3.

The case for the primary context of this house must rest upon the vestigial nature of the remains, conceivably resulting from the erosion caused by later occupation, and the fact that it was undoubtedly earlier than pit A and post-holes 2, 3, and 13. Whilst it is noteworthy that it did not make full use of the area provided by the existing platform, there was no evidence to suggest that the platform had been smaller in the first instance.

House 2 (fig 3; pl 4a). The narrow wall-groove of this house was most pronounced on its western circumference, close to the foot of the rear scarp, where it had been gouged out to a maximum depth of 150 mm. To the N and S of this the groove decreased in depth but contained a consistent pattern of small, pointed stake-holes, cut into the irregular bottom. These did not exceed an additional 40 mm in depth, were c 50 mm in diameter as found, and were placed at intervals of 0.45 to 0.5 m apart. The groove was filled with fragments of carbonised wood, mainly from small branches of willow and hazel from 10 to 15 mm in diameter, intermixed with burnt earth and some fragments of fired daub. Larger stub-ends of carbonised stakes, some of birch and alder and up to 50 mm in diameter, occurred in or near to the stake-holes and also at intervals elsewhere in the groove where no stake-holes were evident. No doubt this pattern of more substantial uprights had been continuous around the whole perimeter and it can be inferred that the wall of the house had consisted of stakes and interwoven wattles covered with daub. For the remainder of its circumference the wall-groove of house 2 coincided with that of house 3, and, apart from short sections marked by a slight ridge in the bottom of the wider trench, it proved impossible in plan or section to distinguish between the two. Nevertheless, the diameter of house 2 would have been in the region of 10 m, and at the merge of the two grooves in the SW the groove of house 2 was almost certainly the earlier.

Although it would have been possible to accept that the doorways to houses 2 and 3 had both occupied the same well-marked location in the SE, where there had been a deliberate attempt to prevent the encroachment of stones from field-clearance, removal of the accumulation of stone to the W of this revealed another and presumptively earlier entrance. This was marked by a pathway of compacted, water-worn pebbles and a small complex of post-holes. The twin pairs of post-holes numbered 41 and 42 on the plan were 200 to 300 mm deep and all contained packing stones on edge. They were separated by a large paving slab and the whole arrangement was consistent with that for a doorway, possibly with a small porch. Post-holes 43 and 44, lying on a slightly different alignment, are probably best explained in terms of a separate structural phase, a possibility which was enhanced by the presence of charcoal in the fill of post-holes 41 and 42 and its absence from 43 and 44. All told it would seem reasonable to assign this doorway to house 2 and to envisage the paired post-holes 41 and 42 as a replacement which ended in the same conflagration that destroyed the house-wall. Such a solution would not be denied by the

failure to find the continuation of the wall-groove of house 2 across the later doorway to house 3, since the made-up surface of the platform in this area was well-worn and a shallow slot would soon have been erased.

House 3 (fig 3; pl 4a). The U-shaped groove for the wall of this house also enclosed an area c 10 m in diameter. It was slightly more substantial than that of house 2, reaching a maximum depth of 250 mm for a short stretch on its western circumference. Although only a small number of slightly deeper stake-holes had penetrated the bottom of the groove, and these at widely separated points, it can be inferred that the house-wall had been constructed in a manner similar to that of house 2. The burnt filling in the groove again contained fragments of small diameter branches and, less frequently, of more substantial stakes. The SE-facing doorway was marked by the outward, porch-like extensions of the groove itself. This was approached by a pathway of rammed pebbles leading up to large, stepped, paving-slabs, bounded in this instance by the boulders which retained the field-clearance banks.

Removal of the stones to the E of this entrance revealed that occupation-refuse had been cast out at various times on to the frontal apron of the platform, possibly by a right-handed throw to the left from the doorway of house 3. The dark, greasy earth contained burnt fragments from the branches of hazel and willow and was flecked with comminuted bone. Broken pottery similar to the sherds recovered from the interiors of the houses was also present in some quantity (see small finds). As this material occurred in patches intermixed with the clearance-stones to a height of 0.6 m within the bank, it can be inferred that the disposal of refuse and the clearance of land-stones from the area to the E had been contemporary activities, at least for a short time. In like manner, the earlier entrance to house 2 would have been covered eventually by the continued clearance of stone, probably from the small plot lying immediately to the S of platform 2 (fig 2).

Interior features (fig 3). Thin patches of occupation-earth, generally no more than a few millimetres thick, occurred over much of the area within the perimeters of the houses, resting directly upon the brashy natural surface or on the make-up material towards the front of the platform. In only one small area was there any evidence for two occupation-levels, separated by a thin band of cleaner earth, but it proved impossible to relate these directly to specific houses (fig 3, section).

A total of 43 certain and four possible post-holes were found on the platform, the former all containing packing stones and ranging in depths from 150 to 300 mm below the floor level. As already indicated a small number were demonstrably later than house 1, and at least numbers 2, 4, 16, 22, 27 and 28 seemed to have contained uprights which had burnt *in situ*. Two narrow linear patches of charcoal, running roughly between post-holes 2 and 15 and 7 and 18, could well have been the remains of burnt roof-supports or roofing-spars which had fallen to the floor in one or other of the conflagrations which had destroyed the walls of houses 2 and 3. However, apart from noting the generally concentric distribution of the post-holes in relationship to the house-walls, and the undoubted use of many of them to hold vertical supports for the roofs, it would be hazardous to attribute them to specific houses on the available evidence.

No stone-built hearths were found, although one heavily reddened patch close to post-hole 29 may have been the site of a surface-fire. Whilst some of the five shallow pits, B to F, could have functioned as pit-hearths, the unusual location and somewhat irregular form of some of them would make this doubtful. All were only from 100 to 200 mm deep and filled with carbonaceous earth, occasionally flecked with minute fragments of bone. Pit E was the only one to have its edges lined with reddened stone slabs, but although the fill contained fragments of fuel-ash vitrified with a little clay, suggesting a high temperature process, there was no further evidence

to support a strictly metallurgical function. As pit B was later than house 1 and earlier than post-holes 5 and 6 it may be attributed tentatively to house 2.

Date of houses and clearance-bank, platform 2

Small finds from the platform and from the refuse in the field-clearance bank consisted mainly of stone rubbers or pounders, two fragmentary pieces of shale objects, and the sherds of coarse, hand-built pottery. This material together with its provenances is described in more detail below; for the present it will be sufficient to note that as a whole it was chronologically insensitive, except within the broadest limits.

Three samples of carbonised wood, all from branches or stakes 20 to 50 mm in diameter, were submitted to the Glasgow University laboratory for radiocarbon assay. Two samples were derived respectively from the burnt wattle in the wall-grooves of houses 2 and 3, whilst the third came from the refuse amongst the clearance-stones to the E of the doorway to house 3. As there was no reason to suspect that there had been any prolonged intervals between the destruction and replacement of the houses, or between the occupation of the houses and the field-clearance, no significant difference was anticipated between the dates for the three samples. Two results were received for each sample, the duplicate dates in brackets representing a smaller counting geometry.

	Lab no	C14 dates	Calendar dates (Clark 1975)
House 2	GU 1012	1025 ± 63 bc (1095 ± 130 bc)	1285 ± 112 BC
House 3	GU-1011	984 ± 45 bc (1205 ± 105 bc)	1226 ± 112 BC
Clearance	GU-1013	972 ± 87 bc (1048 ± 124 bc)	1208 ± 112 BC

Platform 5 (fig 4)

This platform lay adjacent to but at a slightly lower level than platform 4 which was investigated in 1961. In excavation there was much more natural stone amongst the top soil on the uphill slope behind the platform and amongst the material which had eventually covered the rear scarp (fig 4, X-Y). The scarp itself was vertically cut through rocky brash on only one short arc of the northern perimeter of the platform, where it attained a maximum depth of 0.4 m; elsewhere it was marked by no more than a slightly steeper gradient in the natural subsoil. Whilst an accumulation of loose stones beneath the turf on the front apron could have acted as additional revetment to the excavated material and boulders forming the front of the platform, their removal over a short section to the E of the entrance suggested that they were probably no more than field-clearance stones, similar to but less prolific in number than those thrown up on the edge of platform 2.

The natural surface of this platform was very broken and there appeared to have been no general conflagrations as in the case of platform 2. Perhaps for these reasons, allied with an unusual spell of arid weather, no more than two short arcs of a narrow and extremely shallow wall-groove were found. The first of these, lying immediately within the vertical section of the rear scarp, contained some fragments of burnt wattle, but the second, towards the front of the platform, contained only a dirty carbonaceous fill. At four places elsewhere, however, small elongated slots could have formed part of the same provision for the wattle wall of a house c 7.7 m in diameter. No unequivocal stake-holes could be detected on this perimeter but uprights could well have been lodged at any number of points in the irregular surface. Up to 30 possible post-holes were found on the platform, the majority with one or more packing stones still in

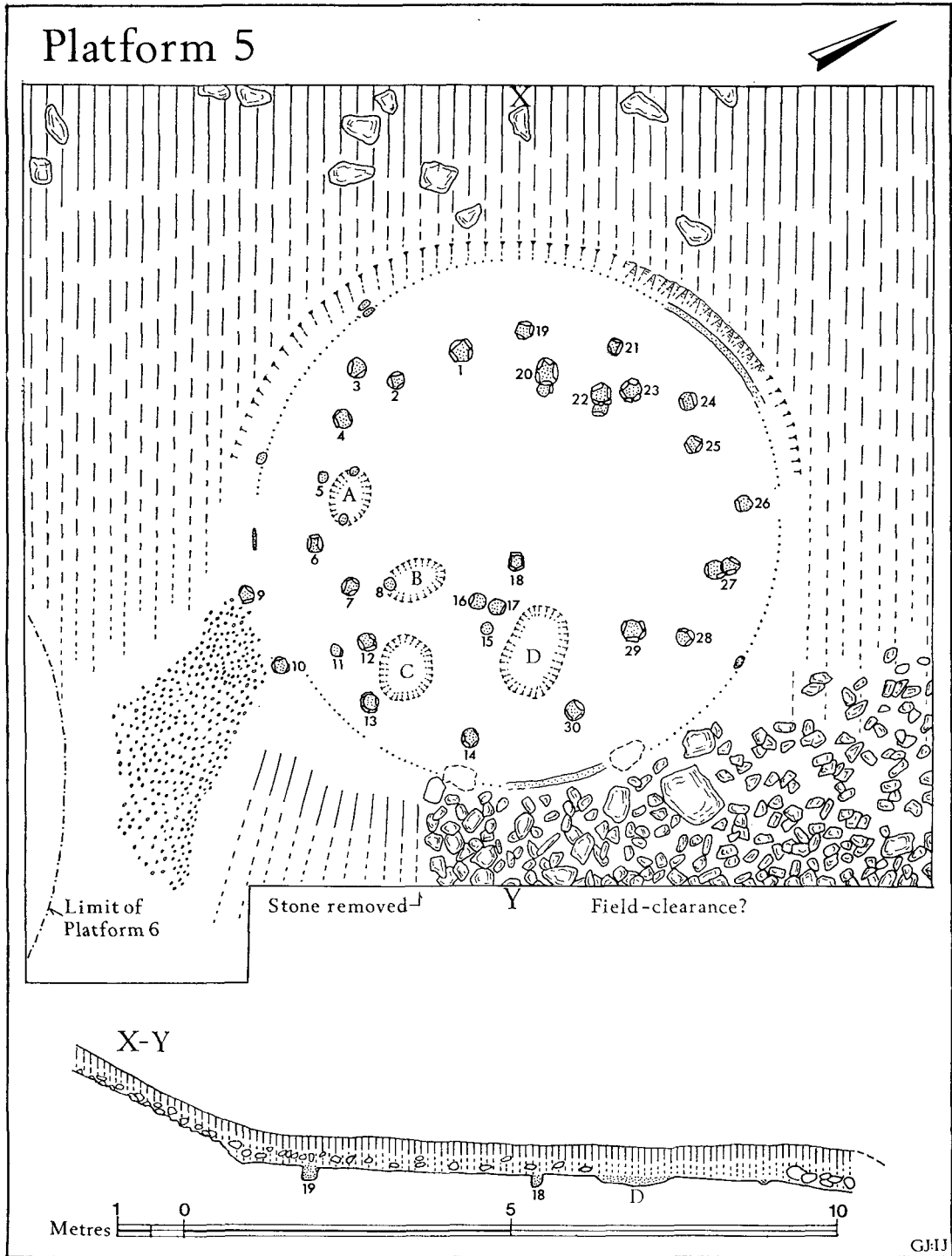


FIG 4 Platform 5

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position. Almost all were c 300 mm deep as found and could have secured fairly substantial roof-supports. On the other hand, despite the general concentricity of their distribution within the suggested perimeter of the house, it must be obvious that not all could have been in contemporary use. In particular, conjoined post-holes 20, 22, and 27 would suggest that some replacements or reconstruction had taken place, even if this did not show itself by distinguishable differences in the fillings of the post-holes as a whole. A S-facing doorway was marked by substantial post-holes 9 and 10, possibly the remains of a porch, and by a pathway of small cobbles running between the low spread of clearance-stones and the perimeter of platform 6.

Thin intermittent patches of occupation earth, flecked with charcoal and occasional minute fragments of bone, extended over the floor area. Pits A, B and C were little more than shallow depressions, and as their fill was indistinguishable from the occupation earth elsewhere their function must remain doubtful. On the other hand, pit D was well formed at 350 mm deep and lined with reddened slabs, consistent with its use as a hearth or cooking-pit.

A few sherds of flat-rimmed pottery were recovered from the occupation level on the platform but there was no refuse-tip to either side of the doorway in this instance. The remainder of the finds consisted of stone rubbers and pounders and one large saddle quern, cracked in antiquity, which had been thrown amongst the clearance-stones on the apron (see small finds). A sample of carbonised wood recovered from the wall-groove at the foot of the rear scarp and consisting of alder, birch, hazel and willow, provided the following radiocarbon date:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1213	1270 ± 75 bc	1568 ± 112 BC

Platform 8 (fig 5)

This platform lay within the forestry plantation where the soil cover over the Lowther Shales had been somewhat thinner than on the lower slopes. Even before the area was planted platforms 8 and 9 had never been so pronounced as those platforms in the lower range, and their outlines were now further confused by the series of furrows and ridges.

Slightly less than half of the probable area of the house-platform was excavated. The rock-cut, rear scarp was no more than 0.3 m in height above the floor level, and what remained of the frontal apron contained only a few larger stones which had not been displaced. No wall-groove as such was found on the platform but an incomplete series of stake-holes was detected in the broken surface at the foot of the rear scarp. These were on average some 60 mm in diameter and no more than this in depth. They were filled with carbonised wood and, as there were fragments of fired daub in the nearby occupation-earth, it may be inferred that the house-walls had been similar in construction to those found on platform 2. Timber uprights for roof-support would have been secured in post-holes 1, 2 and 3, all of which were c 300 mm deep and contained packing stones, whilst the square setting of post-holes 4 to 7 could have served for the door-posts and possibly a porch. In this instance the proximity of the rock to the surface in the vicinity of the doorway would have made a purpose-built pathway unnecessary. Apart from a single post-hole to the E of the doorway, however, the detection of unequivocal structural features in the whole of this area was hindered by the broken and denuded nature of the front of the platform and to a lesser extent by plough-damage.

A thin layer of greasy occupation-earth covered the western half of the house-floor but this too faded out towards the front of the platform. Small finds from this level consisted of a single sherd of hand-built pottery, a number of stone rubbers or pounders, and an amber bead (see

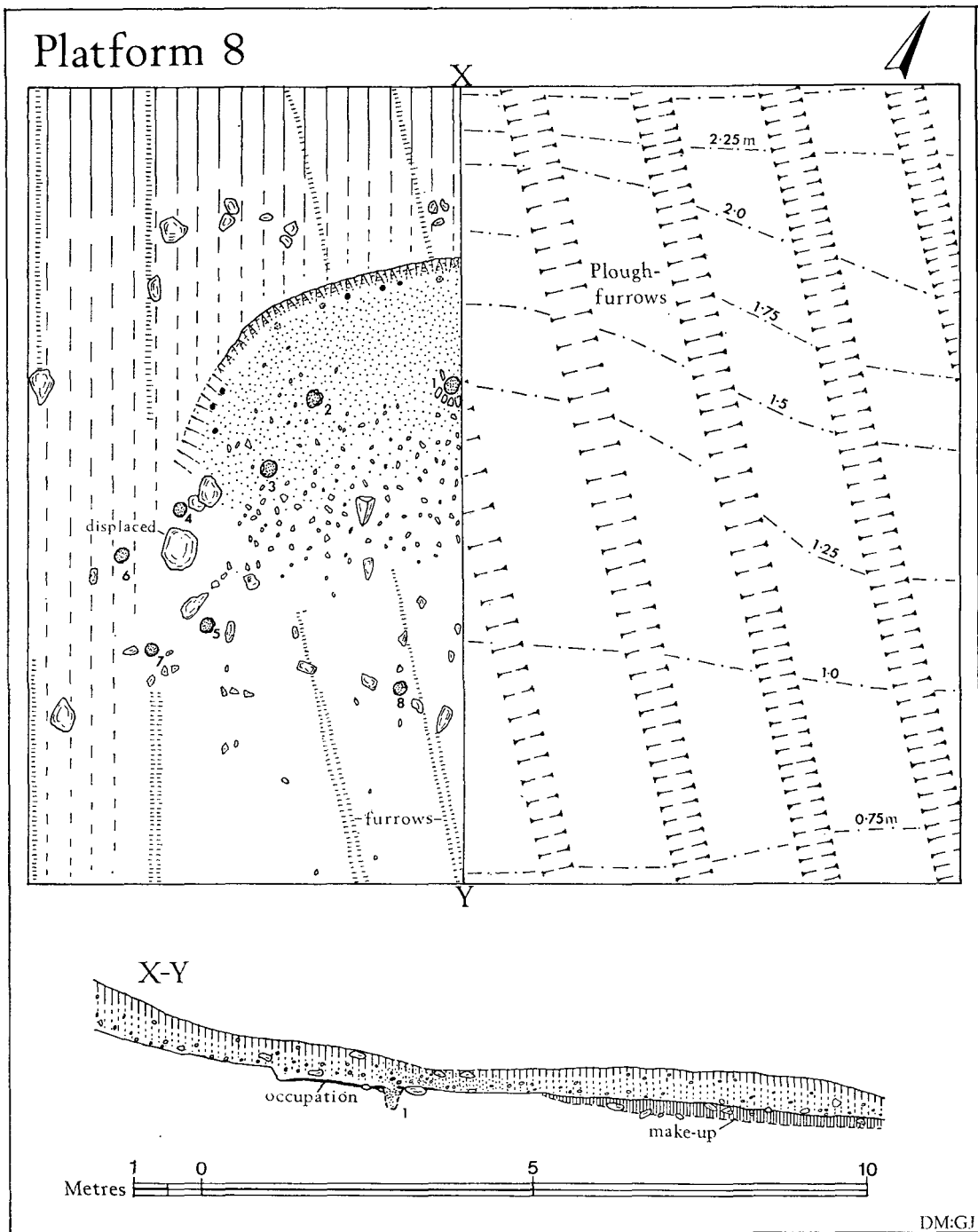


FIG 5 Platform 8

small finds). The amount of charcoal present in the occupation level was limited and apart from the burnt wood in the stake-holes there was nothing to suggest that the house had been entirely destroyed by fire. A combined sample of carbonised wood from the small stake-holes yielded a radiocarbon date as follows:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1014	781 ± 75 bc	956 ± 112 BC

The clearance-banks

As already suggested, the original extent of the clearance might have been greater than is now apparent, perhaps continuing along the gentler gradients to the N and S of the present remains (fig 2). In addition a bank of stone runs as far uphill as platform 3, whilst another rickle of stone and odd boulders give the appearance of linear clearance running uphill from platform 7. Even so, the main terrace to the E of the platforms could well have been one of the original determinants in the choice of location for the settlement, providing an area suitable for cultivation which was carefully respected by the subsequent linear disposition of the platforms on the steeper gradients to the W. The process of clearance doubtlessly continued for some time during the occupation of the site, as demonstrated by the evidence obtained from platform 2.

Because of the presence of newly-sown grass, investigation of the clearance-banks had to be limited to a comparatively small area at the S end of the small plot lying immediately to the S of platform 2, where some of the banks merged (fig 2). The section presented in fig 6 is typical of the banks in this area and probably of their nature elsewhere, where larger boulders can be seen protruding through the turf at intervals. There was no semblance of a purposefully built wall; smaller stones seemed merely to have been thrown to the edge of the area or to have been cast against larger boulders which had been either rolled into position or were already earthfast. A fine, brown soil, possibly wind-blown, filled the interstices between the stones lying beneath the turf and top-soil. A more compact brown earth below the stones and above the undisturbed subsoil was flecked with minute specks of charcoal, as if some burning-off had occurred in the initial stages of clearance, but this material was not present in sufficient quantity for a reliable radiocarbon assay. No ard or spade-marks could be detected in the restricted area close to the stone banks, and beyond this the underlying surface had been disturbed by more recent harrowing.

Despite these somewhat negative results, however, it seems reasonable to maintain that

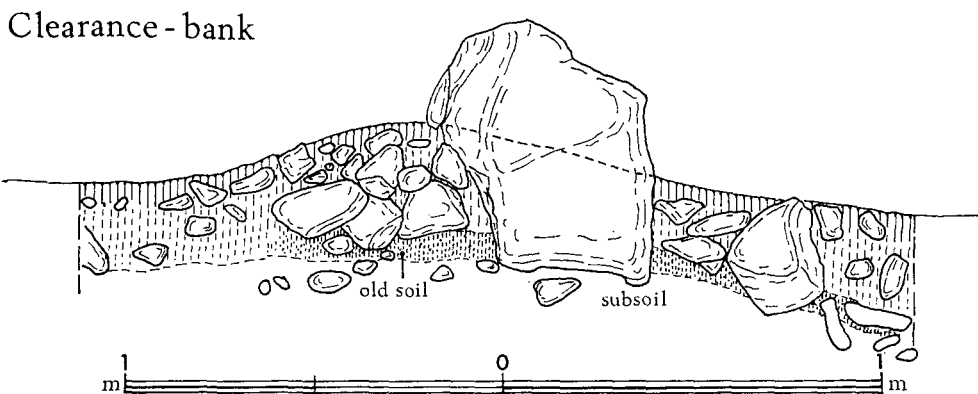


FIG 6 Section across clearance bank

the clearance had been for arable purposes rather than merely to improve grazing. Unfortunately there is no recorded pollen analysis from this area of Peeblesshire and a deep column of peat obtained from a bog over 1 km to the N of the site has not been processed.

SMALL FINDS

Pottery (fig 7)

About 350 sherds of coarse, hand-built pottery were found, the majority being wall-sherds and base-sherds, few of which conjoin. At least 16 different vessels are probably represented. The fabrics all contain grits, varying from 1 or 2 mm up to 10 mm in size, and would appear to be locally made. The surfaces are from grey to buff in colour, often broken by grits, and the cores are generally dark grey to black. Apart from slight finger-grooving below the rims on two vessels, which may or may not be intentional, only one small wall-sherd is decorated, this with small prick-marks in a seemingly haphazard manner. From the evidence of a sooty deposit on the walls, or a thicker carbon encrustation on the outside surfaces below the rims, it would seem that at least 12 if not more of the vessels had been used for cooking. Although slight sedge or grass-marks are present on two wall-sherds, careful examination revealed no unequivocal cereal-impressions.

Only one sherd of pottery was recovered from platform 8 and 13 sherds from platform 5. The remainder came from platform 2, many of them from the deposit outside the doorway of house 3. In the circumstances, however, no reliable conclusions can be drawn from this distribution, except, perhaps to confirm the more intensive use of this platform already indicated in the structural evidence. A barrel-shaped vessel, reconstructed in part from 20 sherds, together with eight other sherds perhaps from different vessels were found on platform 4 in 1961, and have been illustrated elsewhere (Feachem 1961). There is nothing in the whole assemblage from the site to suggest that the pottery tradition varied as between one house or platform and another.

1. Probably a barrel-shaped pot with slightly incurving and obliquely flattened rim, four sherds conjoining; buff/brown surfaces and grey core; slightly sooty deposit outside extending to 50 mm below the rim. From the refuse-deposit, doorway to house 3, platform 2. Cf Platform 4 (Feachem 1961).

2. A similar barrel-shaped pot with an almost flat rim, four sherds conjoining; brown/grey surfaces, grey core; thin carbon encrustation on both surfaces near to the rim. From the lower occupation-level, platform 2.

3. A wide-mouthed vessel with a sharp inturn or shoulder 25 to 30 mm below the flattened rim, three conjoining sherds; hard grey/buff surfaces and grey core; carbon encrustation on the outside surface below the rim. From the refuse-deposit, platform 2.

4. Possibly a barrel-shaped vessel with a poorly formed rim, flat to rounded and varying in thickness from 7 to 11 mm, 12 conjoining rim-sherds; buff to pink surfaces and grey core; sooty marks on the outside surfaces. From the refuse-deposit, platform 2.

5. A wide-mouthed vessel with simple rounded rim and two slight finger-grooves below, three conjoining sherds; buff surfaces, grey core; patches of carbon encrustation below the rim. From the refuse-deposit, platform 2.

6. One small rim-sherd incurving towards a rounded rim, the angle being uncertain; buff coloured throughout and probably burnt. From pit A on platform 5, together with a few wall-sherds possibly from the same vessel but not conjoining.

7. One rim-sherd with an obliquely flattened rim, the angle being uncertain but possibly c 200 mm in diameter; buff surfaces with some finger-impressions, grey core. From the base of the refuse-deposit and clearance-stones, platform 2.

8. A large bipartite jar with a slight pinching or groove below the obliquely flattened rim and a roughly formed cordon on the shoulder which has been partly pushed up from below; light brown/buff surfaces with wipe-marks on the outer surface, grey core; carbon encrustation on the outer surface from the rim to the cordon. About 20 sherds, most of them conjoining, together with some heavy base-sherds possibly from the same vessel, were scattered in the lower level of the refuse-deposit, platform 2.

9. A single rim-sherd with a slightly pinched-in and rounded rim, the angle being uncertain; light brown surfaces, grey core. Found together with other wall-sherds in the upper reaches of the refuse-deposit, intermixed with the clearance-stones, platform 2.

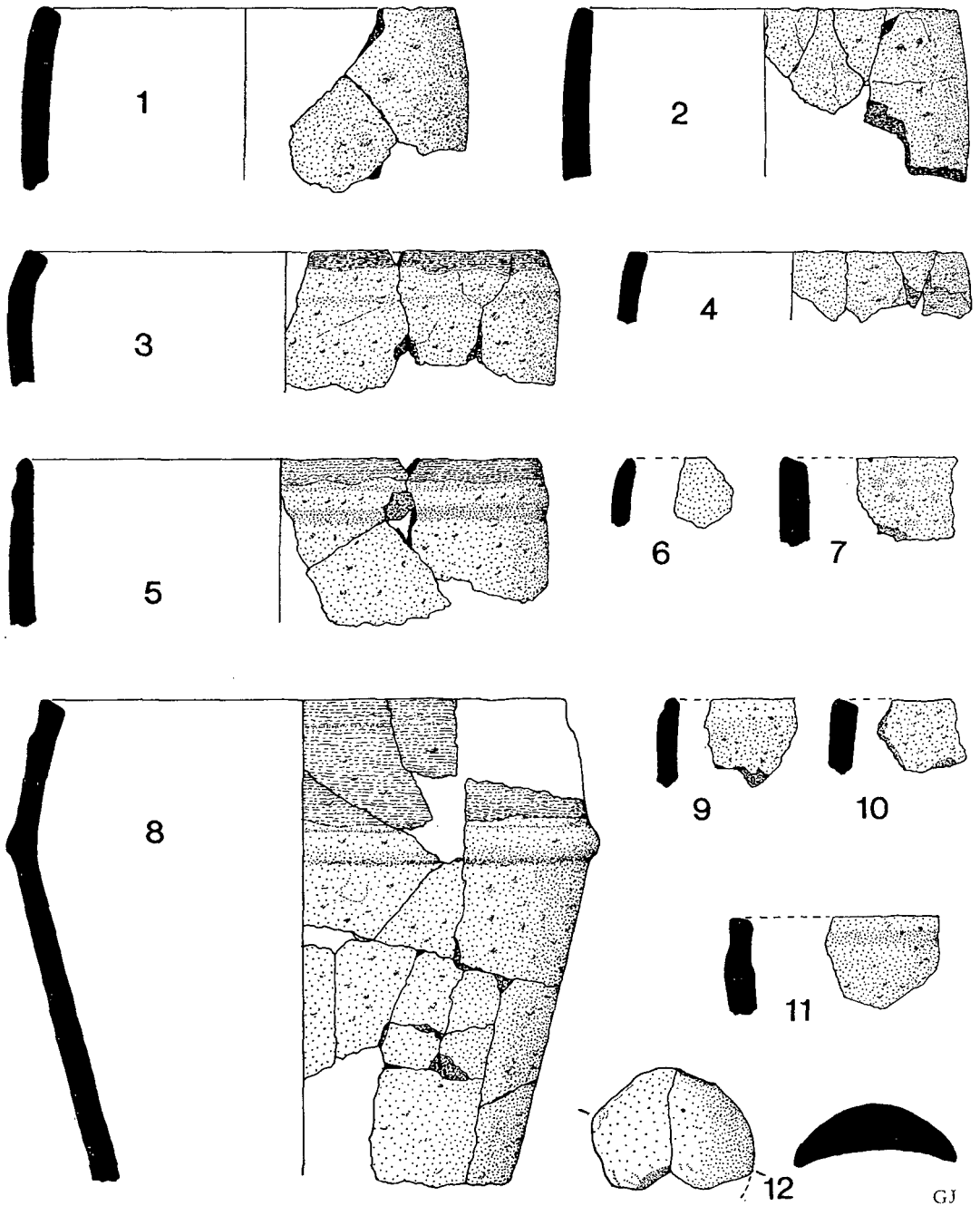


FIG 7 Pottery - 1-11 (1 : 4); 12 (1 : 2)

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10. A single rim-*sherd* with obliquely flattened rim; brown surfaces, dark grey core. From the upper level of occupation-earth, platform 2.

11. A single rim-*sherd* with a shallow finger-groove below the rounded to flat rim, the angle being uncertain; brown surfaces, grey core. From the refuse-deposit, platform 2.

12. Two conjoining fragments of fired clay, buff coloured throughout. From the occupation-level on platform 5. A similar fragment, not conjoining came from pit B, platform 5. It is difficult to suggest a function for this item; it is too small for a lid, except perhaps for a miniature vessel of crucible size, and shows no evidence of use as a small palette.

Not Illustrated. (a) Numerous wall-*sherds* chiefly from platforms 2 and 5. (b) One wall-*sherd* with a random decoration of small, 1 mm pricks on its light brown outer surface, from the refuse-deposit, platform 2. (c) One rim-*sherd*, similar to but not the same as no 9, from the lower occupation-level, platform 2. (d) One *sherd* with a flat rim and carbon encrustation, similar to no 1, from the fill of the wall-trench of house 1, platform 2. (e) One *sherd* with a flat rim from on top of the cobble pathway leading to house 3, platform 2.

In his discussion of the pottery from a midden in the Culbin Sands, Morayshire, Dr Coles has drawn attention to the apparent longevity of the group of wares generally called 'Flat-Rim' pottery, occurring in contexts as diverse as the 'third millennium and the first millennium bc' (Coles & Taylor 1970, 97-8). Radiocarbon dates of 1295 ± 75 bc from the Culbin midden and 1200 ± 150 bc from Scone Wood, Perthshire, prompted the further suggestion that if other second millennium sites were excavated more such pottery would be recovered. In brief, although much of the pottery in itself must remain chronologically insensitive, the radiocarbon dates from platforms 2 and 5 at Green Knowe would confirm this.

The simple bucket or barrel-shaped vessel with a flat or internal-bevel rim is a form that has an assured longevity, despite the fact that the angles of the rim-*sherds* may at times be uncertain. For present purposes, however, apart from comparisons that might be made with some of the Culbin Sands material, there is similar pottery from the burnt-mound site at Liddle, Orkney (Hedges, J 1975), with radiocarbon dates in the 9th and 10th centuries bc, and what may be similar rim-forms from the cremation cemetery with comparable dates at the Knowes of Quoyscottie, Orkney (Hedges, M 1977). And although it could well be no more than a comparison of basic crudity, there is, for example, the funerary vessel from Duff House, Banffshire, accompanied by metalwork of Coles' Glentrool phase (1964), in addition to the vessel from Sandy Road, Scone, Perthshire (Stewart 1966, 19). Although comparable funerary material in the Border counties is difficult to find, it may be worth noting that the fragmentary vessel no 4 from Green Knowe is barely distinguishable in its fabric and apparent form from a vessel with one of two, late, urned cremations from the nearby site at Meldon Bridge, where there is a radiocarbon date of c 1200 bc (I am indebted to Mr C Burgess for unpublished information).

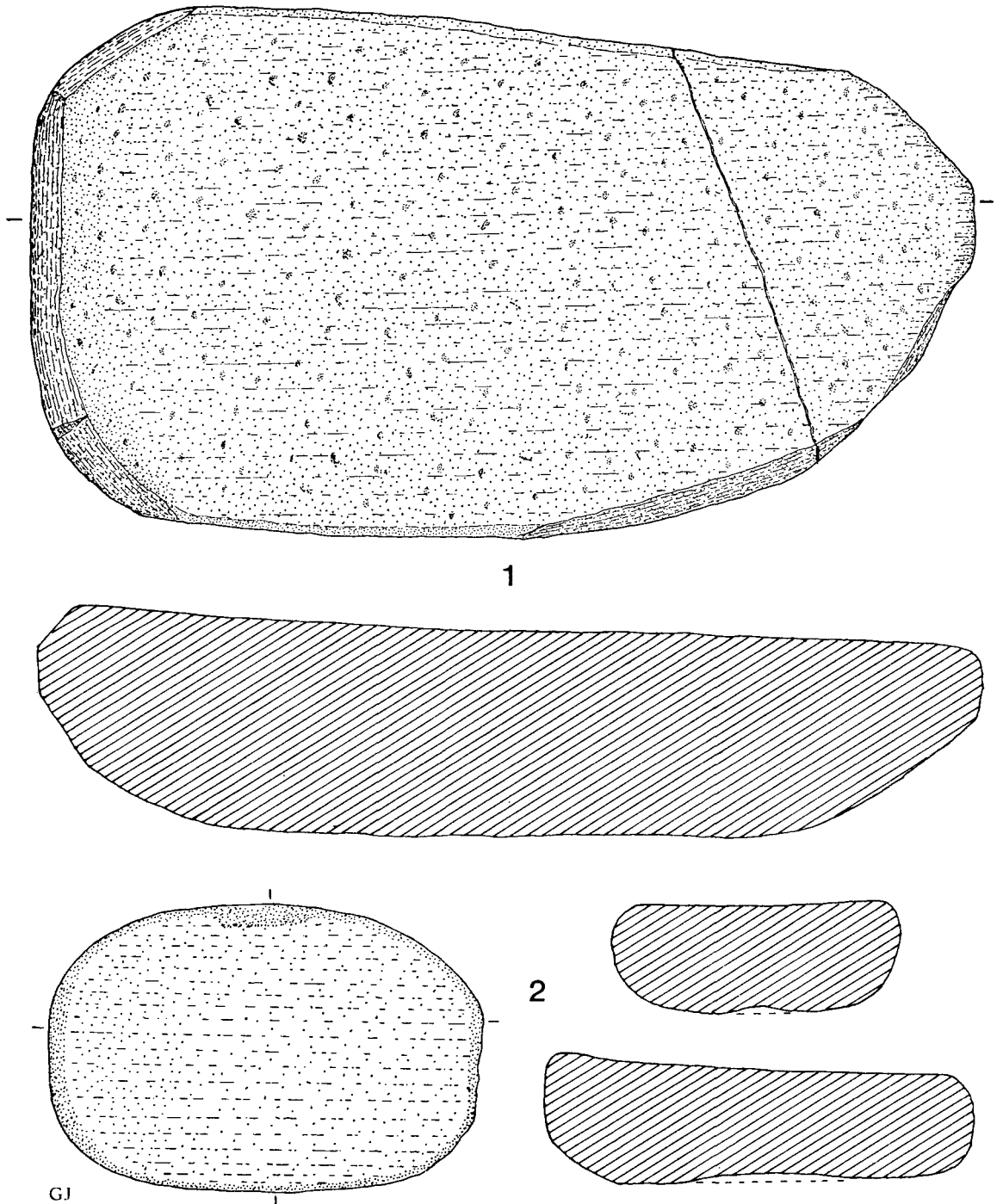
The finger-grooving below the flat to rounded rims of vessels 5 and 11 might be regarded as a legacy of construction, rather than a deliberate application, were it not for the fact that it occurs on one or two of the Culbin rim-*sherds* and on vessels from Dalnaglar, Perthshire, in addition to other sites in Scotland where there are no secure dates (Coles 1962). Further afield, it is also a feature of some vessels from the presumed Middle Bronze Age cremation cemetery at Catfoss Moss, Yorkshire (McInnes 1968), and occurs on an undated bucket-shaped urn with cremation from Barnard Castle, Co. Durham (Gibson 1978, no 143), which was seen as a northern class of urn possibly equivalent to some southern Deverel-Rimbury vessels.

The most striking vessel from the Green Knowe collection, however, is the large urn, no 8, with its cordon or ? reduced collar. In an interim survey (Jobey 1980), it was thought that such a vessel would not be altogether out of place in urn-cremation cemeteries or, for example, amongst the material from the phase III cairn within the stone circle at Balbirnie, Fifeshire, where the old land-surface yielded a radiocarbon date of 890 ± 80 bc (Ritchie 1974). Together with other considerations, and before radiocarbon dates were available from the settlement, it was this vessel which hardened the resolution to investigate the remains of the nearby Harehope cairn (below).

Stone

Saddle-querns (fig 8)

1. Two conjoining fragments of a large stone of local material with the grinding surface peck-marked. Both parts were discarded amongst the clearance-stones on the edge of the apron of platform 5.



GJ
FIG 8 Saddle querns (1 : 4)

2. A smaller stone of dense sandstone, probably initially dressed overall with peck-marks which are still showing on the edges of the grinding surface; the lower, non-operative surface is slightly dished. Re-used as a packing stone in the wall-trench of house 2, platform 2.

Not illustrated. Approximately half of a broken saddle-quern with an abraded grinding surface which had been peck-marked and is c 280 mm wide at its greatest extent. From the lower occupation-level, platform 2.

Pounders and Rubbers (figs 9 & 10).

1-6. A selection from a larger number of quartz pebbles which fit into the palm of the hand conveniently or can be held between the thumb and forefinger. Abrasions appear on one or both ends and sometimes consist of more than one facet, according to the angle at which the stones have been held for pounding or rubbing. No 3 has small roughened patches, diametrically opposed, as if for finger and thumb-grips. The pebbles were present in the occupation-levels of platforms 2, 5 and 8, and are similar to the oval pebbles with finely abraded surfaces recorded from platform 4 (Feachem 1961).

7. A sandstone cobble which bears a number of facets on the edges, as if from rubbing rather than pounding. From the lower occupation-level, platform 2.

8. A sandstone rubber or pounder with abraded facets and pronounced finger and thumb-grips on opposed surfaces. From the occupation-level platform 8. The provision is basic and pounders with similar grips have been found in a number of different contexts elsewhere (eg Jobey 1978, 16-18).

9. A thin disc of dense shale with abraded edges from rubbing and pecked hollows for finger-grips. From the lower occupation-level, platform 2.

10. A pounder of fine grained sandstone bearing percussion-marks and scars at one end. From the upper occupation-level, platform 2.

11. A rubber with two large and smooth working facets. From the lower occupation-level, platform 2.

12. A large rubber of igneous stone with two well-worn surfaces. From the occupation-level, platform 5.

Not illustrated. In addition to some quartz pebbles from platforms 2 and 5, similar to nos 1 to 6 above, the following were recovered from the occupation levels of platform 2: one sandstone pounder, 120 mm by 125 mm by 60 mm thick, with percussion-marks at both ends; half of a large, oval-shaped pounder or maul of quartz, c 150 mm at its greatest diameter and with pounding marks at one end; a small hand-rubber of sandstone with one face worn smooth from use.

Hones (fig 10)

13. A small block of sandstone with both broad faces and both long narrow edges slightly concave from use. From pit B, platform 5.

Not illustrated. A well-shaped hone of schist, 170 mm by 67 mm by 16 mm thick, from the same provenance.

Cup-marked stones (fig 11)

There is a single cup on one face of each of these three stones which has been deliberately made and is not water-worn. All came from platform 2; no 1 was re-used as a packing stone in post-hole 12; no 2 was recovered from the clearance-stones on the frontal apron; no 3 came from amongst the clearance-stones overlying the uphill doorway to house 2.

In a domestic rather than a funerary context the purpose of these stones is uncertain (eg Jobey 1978, 16-18). They show no striations in the cups such as appear on pivot stones, and it seems unlikely that they could have been used to secure the bottoms of small diameter timber uprights. Two of the cups show slight percussion-marks but the composition of the stone and the formation of the cups would seem to preclude their use as anvil-stones.

Chert (fig 12)

A number of struck flakes and scraps of green-grey chert were recovered from platforms 2 and 5. The material is very poor to work and is probably only suitable for scraping rather than cutting tools. It appears as a common constituent of mesolithic collections from southern Scotland, such as in the case of the Tweed Valley material (Callander 1927, 326; Lacaille 1954, 163). The latter, however, also contains flint. No flint has been recovered from the excavation of the four platforms on the settlement at Green Knowe, although it is present, possibly in earlier contexts, in the nearby Harehope cairn (below). It could

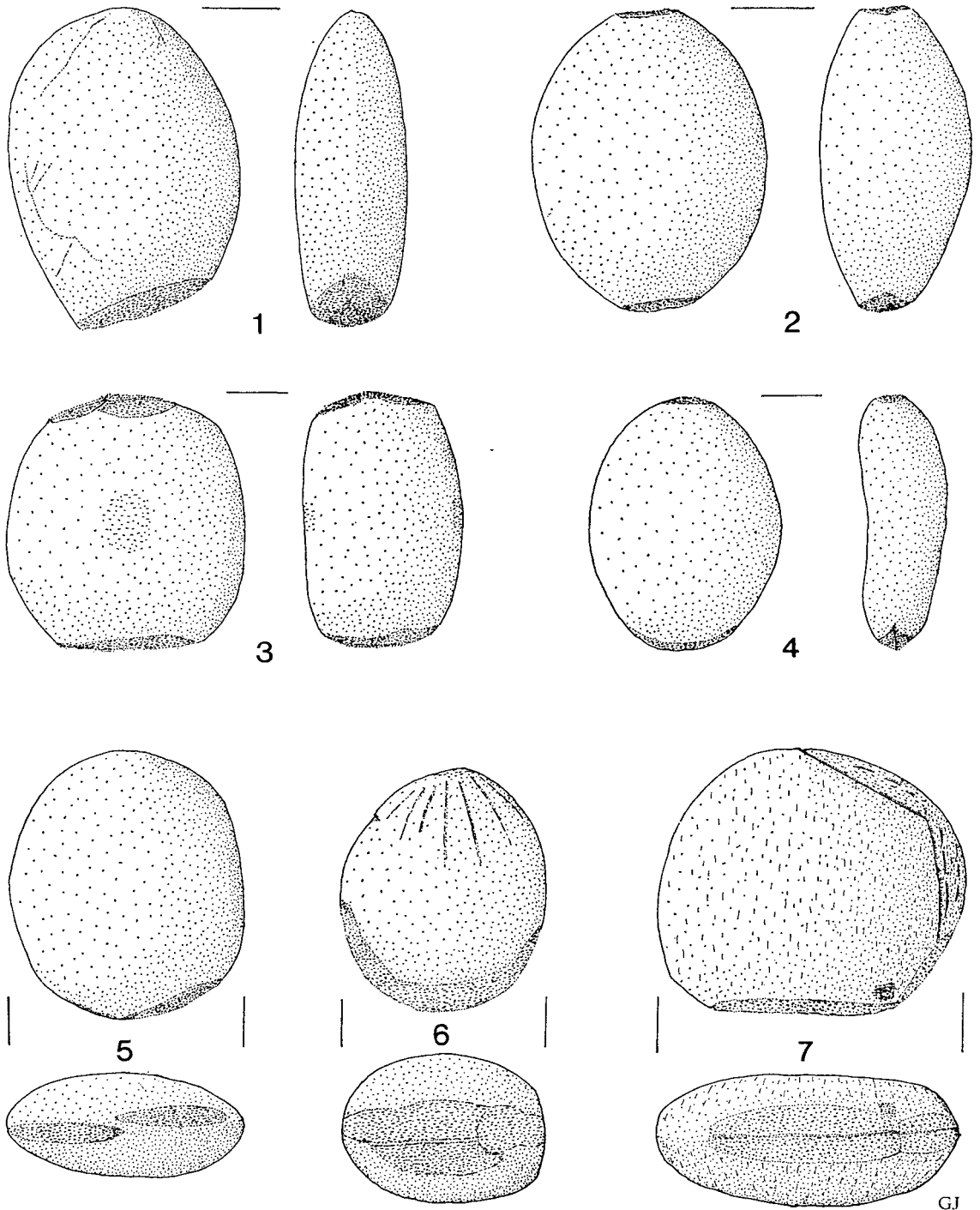


FIG 9 Ponders and rubbers (1 : 2)

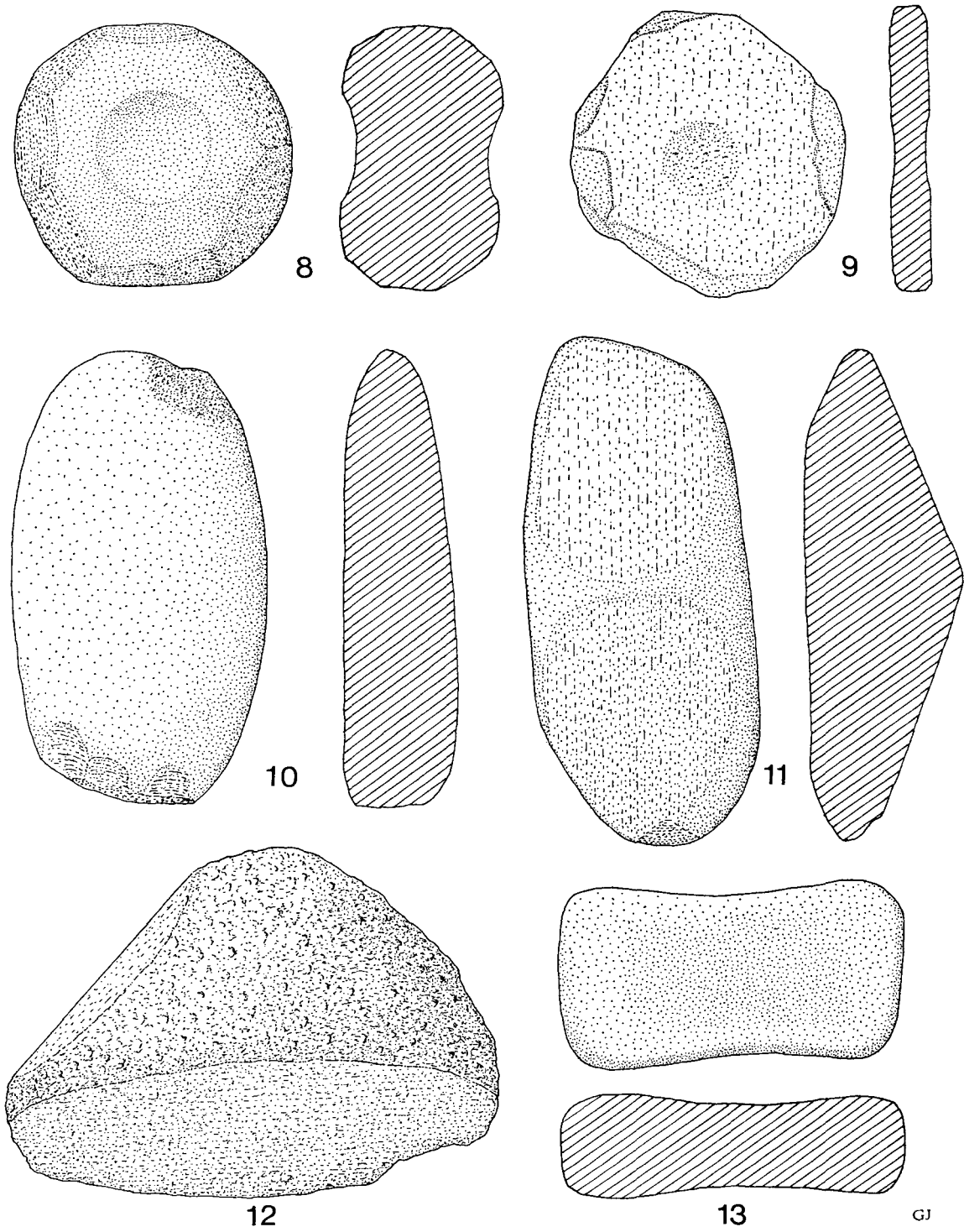


FIG 10 Pounders, rubbers and whetstone (1 : 2)

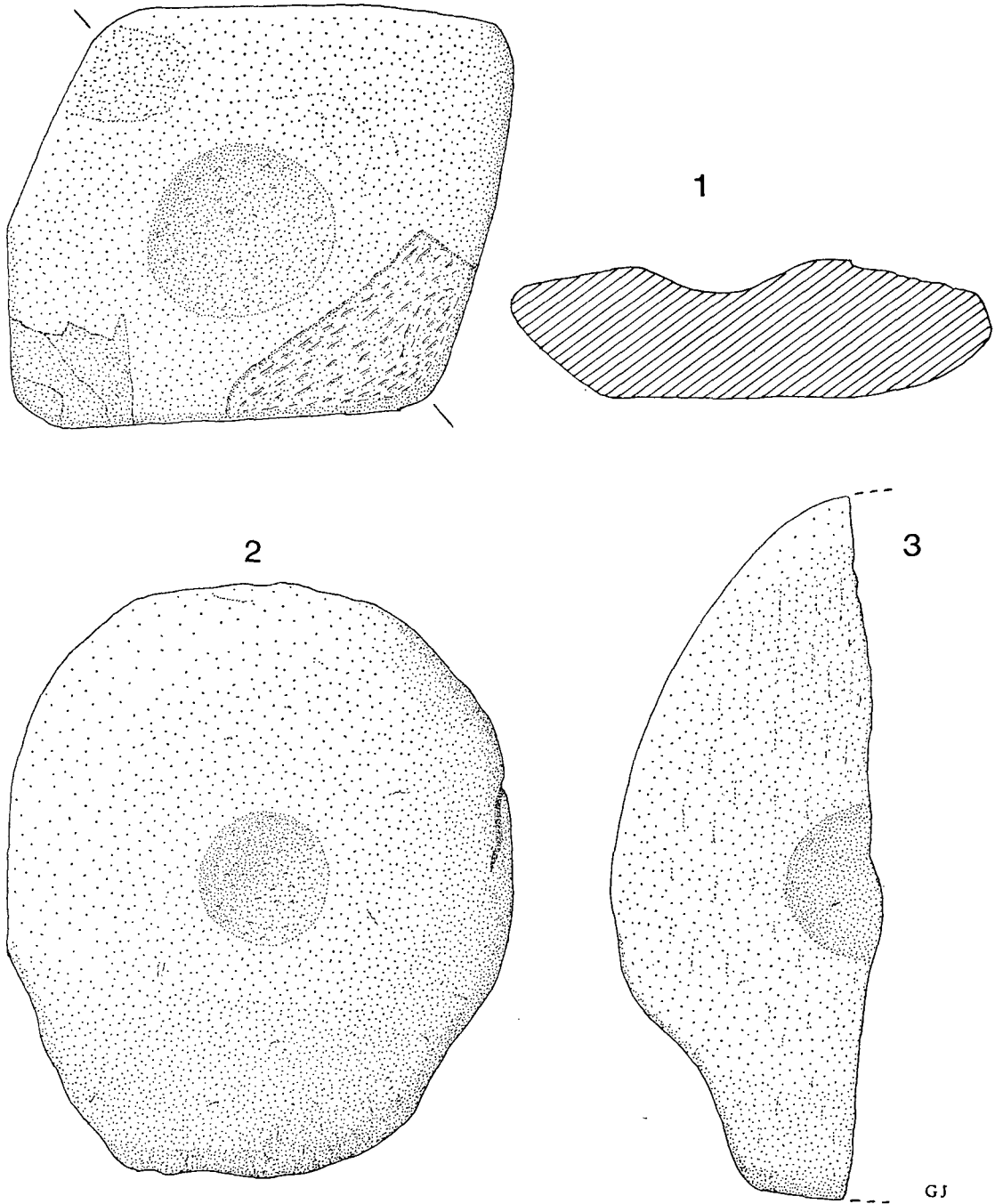


FIG 11 Cup-marked stones (1 : 4)

be that the inhabitants of the settlement had cutting tools in other material which has not been recovered or has not survived.

The only recognisable worked tools in this material from platform 2 are a broken scraper of little merit (fig 12, 1), a blade-like flake with retouch down one margin, and possibly three cores. From platform 5 there is only one flake derived from a core and bearing flake scars on its outer surface, and one rolled fragment of green-grey chert.

Lignite|Jet (fig 12)

These two objects are made from a dense, black shale rather than Yorkshire jet.

2. Probably a fragment from an oval-shaped pendant with the remains of a single hour-glass perforation, broken in antiquity. The somewhat pitted surfaces have been polished, the upper surface being convex and the lower surface slightly dished. Recovered from the lower occupation-level, platform 2.

When complete it may have measured little more than 25 mm by 18 mm and, for example, have resembled in form those in the Sim collection in the National Museum of Antiquities (EQ 112, EQ 115) or the larger specimens in slate from Seggiecrook and Loanhead of Daviot (Kilbride-Jones 1936).

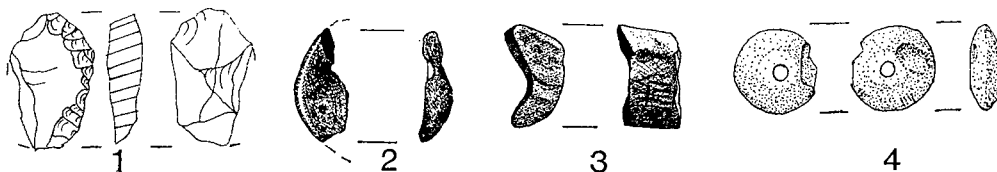


FIG 12 1 Chert, 2-3 Lignite and 4 amber (2 : 3)

3. A thick fragment of shale curved in section and possibly part of a ring. The ? outer, concave surface and the ? inner, convex surfaces have been lightly polished but not sufficiently to remove the marks of the original paring. Found in the top of the fill of the joint wall-grooves of houses 2 and 3, platform 2.

The complete form of the object remains uncertain, unless the fragment is part of a squat version of a so-called 'napkin-ring' or 'tress-ring', similar to those from a cist near Yarrow or from New Luce, Wigtown, which are now in the National Museum of Antiquities (EQ 92, FN 142). A fragment from what could be a similar ring of larger diameter was found in an undated but probable Bronze Age burial at Alnham, Northumberland (Jobey 1966).

Amber (fig 12)

4. A small bead c 17 mm in diameter with a central straight-sided perforation c 2.5 mm in diameter. Apart from a break which discloses the red coloured material the remainder of the surfaces are covered with a brown patina from weathering. Found in the occupation-earth on platform 8. Amber beads of a somewhat similar form which have been found in later Bronze Age contexts have been listed elsewhere (Pearce 1977).

Wood

Samples of carbonised wood submitted for identification from the wall-grooves of the houses on platforms 2 and 5 indicated that branches of *Salix* (willow) and *Corylus* (hazel) had probably formed the main constituents of the wattle. *Alnus* (alder) and *Betula* (birch) were also present and, sometimes being of larger diameter, may have provided material for the more substantial structural members. A few fragments of unidentifiable bark from the wall-grooves of houses 2 and 3 on platform 2 would suggest that at least some of the timber was undressed. No additional arboreal species were identified in samples from elsewhere on the platforms.

Although it may be inferred that the timber used in the construction of the houses was locally available in the valley of the Meldon Burn, it is possible that some selectivity had been exercised and that the identifications are not fully representative of the local tree-cover in the second half of the second millennium BC.

Bone

Unfortunately most of the skeletal material was so fragmentary as to make identification impossible, but a number of fragments of ox teeth and an antler fragment, possibly from a red deer, were present in the material from platform 2.

CONCLUSION

In an interim report on Green Knowe (Jobey 1980), given at a time when the series of radiocarbon dates was still incomplete, the occupation of platform 2 was envisaged at some stage in the 12th to 14th centuries BC, with the closely grouped dates centering on the 13th century BC. A single date for platform 8, spanning the 9th to 11th centuries BC on the basis of a single confidence interval, was perhaps only partly explained by the possibility of a somewhat later occupation of this platform which lay in the second, uphill range. The more recently acquired radiocarbon date for platform 5, albeit from a single assay, would allow occupation somewhere from the mid-15th to the mid-17th centuries BC on the basis of a single confidence interval. On the balance of this evidence it would seem not unreasonable to attribute a *floruit* to the settlement at some time during the second half of the second millennium BC. The structural evidence from four platforms, including platform 4 which was excavated in 1961, would not support continuous occupation of the site over the whole of a very extended period unless this had occurred at widely separated intervals of time on different platforms – a consideration which would seem to be unlikely. The greatest structural complexity was found on platform 2, with its three superimposed houses, where both the close grouping of the radiocarbon dates and the stratigraphy, such as it was, would suggest an occupation probably of no great duration. Be this as it may, the importance of Green Knowe must lie in the fact that we now have a northern upland settlement broadly contemporary with some better known settlements having Deverel–Rimbury contexts in the South (eg Barrett 1976) and at least some of the burnt mound sites in Orkney away to the North (Hedges, J 1975). Moreover, although it would be foolhardy to claim the same or even similar contexts for the whole range of unenclosed platform settlements in northern Britain, they now form an increasingly persistent feature on the landscape with an obvious potential towards the eventual elucidation of settlement patterns in the second millennium BC generally.

Assuming a contemporary occupation of all platforms at Green Knowe at some stage, an expectation in which there could be some doubt, the settlement would have contained at least nine round houses. This is within the range of similar but undated sites elsewhere (Jobey 1980). As there was no evidence to suggest that the structures were other than dwellings, a maximum population of between forty and fifty people might be envisaged at the full extent of the settlement. The structures were all timber-built with wattle and daub walls, but the cavity-wall construction previously found on platform 4 (Feachem 1961) was not repeated. No immediate solution can be offered for this structural difference, except that in view of the succession of houses on platform 2 it may now be legitimate to consider the possibility of there having been more than one structural phase on platform 4. A combination of factors, including the general location of the platforms, their rear scarps which elsewhere are sometimes far more pronounced than at Green Knowe, and the lack of floor-paving or provision for drainage, might in themselves also prompt consideration of an occupation before any noticeable effects of climatic deterioration in the first millennium BC (Piggott 1972).

At Green Knowe there can be no doubt about the association of the settlement at some stage with the system of field-clearance banks and possibly some clearance-cairns. One or other

system of clearance, or a combination of both, occur adjacent to similar sites elsewhere, but whether or not the different methods have a chronological significance remains to be seen, and it was not a problem capable of solution in this instance. Likewise the full extent of the field-clearance at Green Knowe must remain unknown, although it is likely to have been more than the c 2.5 ha which is a rough estimate on the basis of the present remains. Whilst more direct evidence for cereal cultivation was not forthcoming, other than perhaps the presence of saddle-querns and rubbers, a mixed farming economy has been assumed. Basic stone tools were well attested, though there was a notable scarcity of flint and cutting tools. Initially it was thought that there could be slight evidence for some metal-working on platform 2 (Jobey 1980), but what was taken to be copper cinder has been shown on analysis by Professor Tylecote not to be the case; nor for the present has any Bronze Age metalwork been recovered from the immediate area which could be related to the settlement (RCAMS 1967).

As a whole the excavation poses some further problems of wider implication which can be illustrated briefly from the remains in the Meldon valley itself (fig 1). The occupation of the great Neolithic stockaded enclosure at Meldon Bridge (Burgess 1976), perhaps Mount Pleasant like in conception if not necessarily in function (Wainwright 1979), would be placed at least a millennium before the Green Knowe settlement on the available, calibrated, radiocarbon dates. It would be difficult on present evidence to see extant settlements in this area, as indeed in places elsewhere, which might be accommodated in this yawning gap. Even on the assumption that other unenclosed platform settlements in the area could produce contexts somewhat older than that proposed for Green Knowe, the problem would not entirely disappear.

At the other end of the scale it is not too difficult to link a gradual disappearance of this type of unenclosed settlement with the emergence of what may be regarded as the pre-hillfort, palisaded enclosures, which on present evidence from North Britain would be in the earlier part of the first millennium BC. On the other hand, the problem here might still be to account for a change in settlement-form, progressing from unenclosed to enclosed settlements of a protective nature. In recent years the pressures brought about by climatic deterioration and land-exhaustion have been offered as tentative solutions. Whilst a combination of both may be possible it is not a matter which the present excavations at Green Knowe can resolve.

With reference to the distribution of unenclosed platforms generally in northern Britain it remains to add that the probable distribution given some two years ago (Jobey 1980) has not altered overall, except in the increased number of certain or possible sites which have come to light during subsequent ground-survey or air-photography. In particular, since it redresses part of the imbalance within the Border counties, it may be noted that the number of extant sites in Northumberland with attendant field-clearance has greatly increased, some of them approaching altitudes of 390 m (1,300 ft). During the course of the same general survey a plea was also made for a consideration of settlements of unenclosed stone-founded huts in any search for settlements of the late third or second millennium BC in the uplands. In the past a number have been attributed to the Iron Age with some justification, but others with little, and a few whose earlier Bronze Age context has been doubted may have to be reconsidered. On a subsequent count in parts of the mainland N of the Tyne, a survey which is by no means exhaustive, some 800 or more sites of so-called unenclosed hut-circles have been recorded over the years, about a quarter of them with some form or other of adjacent field-clearance. Moreover, it is fairly evident that at least some of these may now be the sites of timber-built as well as stone-founded houses. They have received little attention hitherto, perhaps because the excavation of one may not demonstrate the context of all, but their potential towards establishing settlement-types in contexts earlier than the first millennium should not be neglected. However, to pursue the matter further at this stage

would be to digress from the final purpose of the present excavations which was to investigate the burial cairn lying a short distance to the N of the settlement on Green Knowe.

HAREHOPE CAIRN

THE SITE

Harehope cairn is the name given to this monument in the *Inventory for Peeblesshire*, where the remains are illustrated and described under entry no 24. It lies c 140 m to the NNE of the N end of the settlement on Green Knowe at an altitude of c 260 m. Before excavation the remains consisted of a circular, turf-grown bank of stone, at most only 0.5 m high and some 18.5 to 19 m in diameter from crest to crest. Larger boulders broke the surface of this bank at irregular intervals, as if they were the remains of a kerb, but most of the cairn-material seemed to have been removed from the interior, except for a large boulder in the NW quadrant and a number of slab-like stones which protruded above the turf in the SE quadrant. Although the latter were described in the Inventory as having the semblance of a cist-like structure, at least two depressions in the turf on much the same arc as five of these stones indicated the possibility of there having been an inner and perhaps earlier kerb-line. Apart from this the only other internal feature was a turf-grown hollow some 2 m to the SE of the centre of the monument. As recorded in the Inventory, two circular, stony mounds, both c 4.5 m in diameter and 0.5 m high, lay contiguous with the outer edge of the cairn in the SW quadrant, but a third mound of similar dimensions which was also recorded some 3 m beyond the northern perimeter had already been partly obliterated by ploughing for afforestation.

Although no radiocarbon dates were available for the nearby settlement at the time of the excavation of the cairn, it was hoped that what was ostensibly a composite burial monument might have attracted some later cremations that could be related to the settlement. A similar though not necessarily the same problem must have exercised the minds of the writers of the Inventory, when, in referring to the compact group of burial cairns in the area of White Meldon, they thought it reasonable to suppose that the settlements of the builders could not be far removed (RCAMS 1967).

THE EXCAVATIONS

A. Structural evidence (fig 13; pl 5a)

As anticipated the monument had suffered from most extensive stone-robbing, possibly because of its proximity to the adjacent Moffat to Edinburgh coach-road. Nevertheless, two structural phases were confirmed.

Phase 1

The perimeter of an inner cairn, 12.5–13 m in diameter, was eventually determined. This cairn had been retained by a kerb of roughly shaped, slab-like stones of local material, probably standing no higher than 0.7 m above the original ground level. Seven kerb-stones remained more or less *in situ*, although only four of these were contiguous and all were leaning outwards or were partly broken. The remainder of the circumference was marked with varying degrees of certainty by a maximum of some 57 shallow stone-sockets, a few of which still contained small stabilising stones on edge. During the course of the later stone-robbing many of the kerb-stones had been deliberately shattered whilst in position, leaving the splintered stub-ends in the

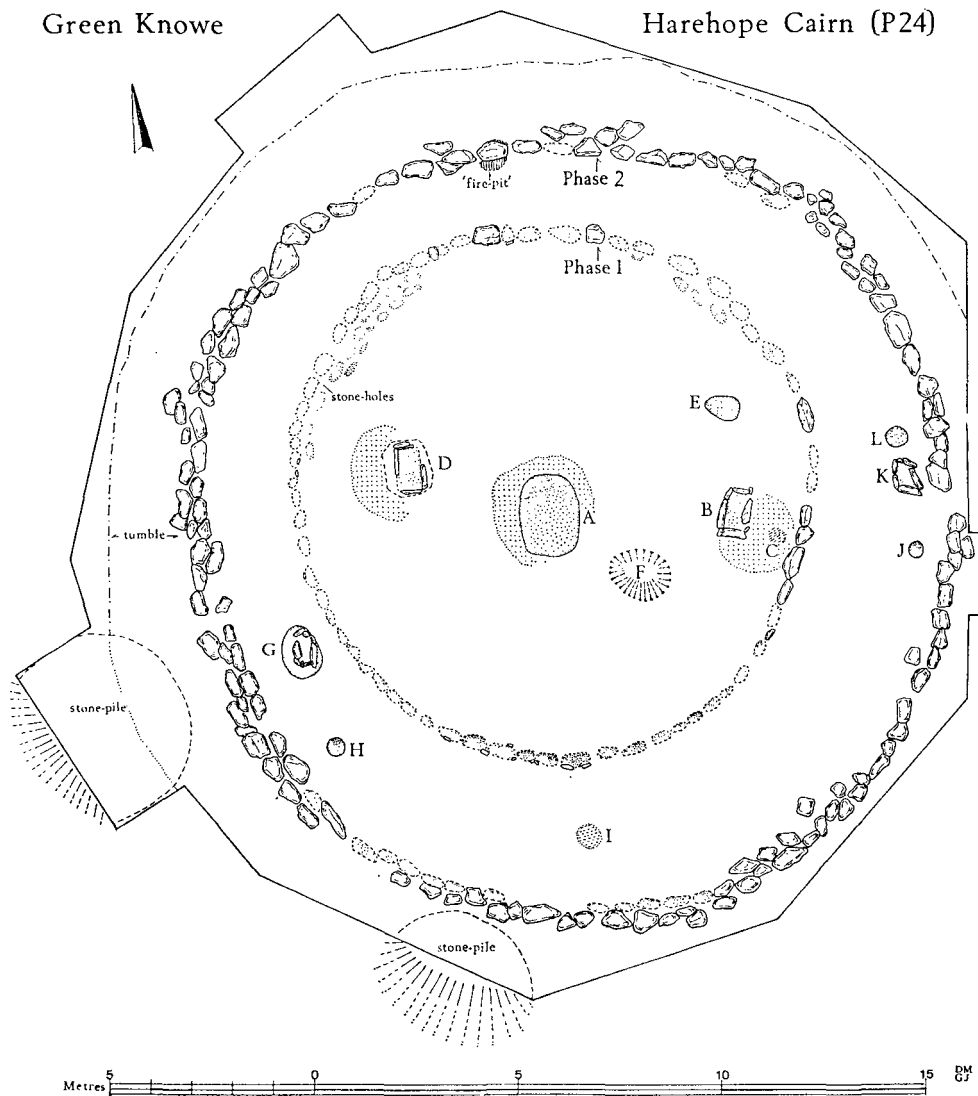


FIG 13 Harehope Cairn (P24)

sockets. A series of concentric impressions in the subsoil within the kerb-line in the NW quadrant also indicated the former presence of at least a basal layer of fairly large stones in the cairn-material. The height of the original cairn, however, must remain unknown, since the whole of the interior had been robbed down to the sandy-clay and stony subsoil, as demonstrated by the odd fragment of glass and pipe-stem recovered from the trampled surface. By and large, any material remaining between this surface and the present turf and thin band of humus was no more than the general debris from stone-robbing.

Phase 2

At some stage the original cairn had been enlarged by the addition of an outer kerb of unfashioned boulders, located generally beneath the highest point of the surviving bank. Once

again a number of these kerb-stones had been displaced or entirely removed, but on the basis of the large number of stones still in position the final diameter of the cairn would have been c 19 m.

As will be evident from the plan the outer kerb was not entirely concentric with the inner kerb-line, the maximum distance between the two being of the order of 3.5 m in the S and only 2 m in the N. Most of the stone infilling between the two kerbs had also been removed by the robbers, except in parts of the NE and SE quadrants where a single layer of smaller stones appeared to be undisturbed. The spread of tumbled stone extending from 1.5 to 2 m beyond the outer kerb was, by contrast, fairly loose material and probably residue from robbing rather than material which had slipped from the interior during antiquity. Unfortunately shortage of time prevented the entire removal of this external material, and, by the same token, no more than the two external mounds in the SW quadrant could be investigated. The latter also proved to be dumps of fairly loose stones from robbing, possibly left in anticipation of eventual cartage from the site.

It proved impossible on the basis of structural evidence to estimate the time that might have elapsed between the construction of the inner cairn and its subsequent enlargement. Whilst most of the few surviving kerb-stones of the original cairn were leaning outwards, as if unsupported for some time against the thrust of the cairn-material, the significance of this must remain doubtful in view of the devastation caused by later robbing. In like manner, reliable information was denied with respect to possible differences in the levels of old land-surfaces, such as were found, for example, at Cairnpapple Hill, West Lothian (Piggott 1948). On the northern perimeter one of the very large kerb-stones of the enlarged cairn had partly subsided into the top of a shallow pit which had reddened sides and contained charcoal identified as being mainly of oak. A radiocarbon assay of this material yielded the following date:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1213	2140 ± 90 bc	2738 ± 112 BC

It will be apparent, however, that this date can provide no more than a general *terminus post quem* for the phase 2 enlargement and, as we shall see, probably relates to some transitory activity on the site even before the construction of the phase 1 cairn.

B. Inhumations and cremations

It will be evident from the outset that because of the extensive robbing the burial record is likely to be both incomplete and to pose difficulties in establishing a reliable sequence. For the present the interior remains are described without prejudice as to their chronological order, commencing with those features found within the area enclosed by the inner kerb-stones (fig 3, A-F) and progressing to those lying between the two kerb-lines (fig 3, G-L). So far as is possible the beaker classifications employed are those of Clarke (1970) and Lanting and van der Waals (1972).

Inhumation A (pl 5b)

A large rectangular-shaped pit, measuring 2 m N-S by 1.5 m E-W, occupied a more or less, though not exactly, central position within the phase 1 cairn. It had been dug into the natural stony drift to a depth of 0.4 m and had been backfilled with a mixture of the excavated material and possibly a few smaller land-stones. Some thin patches of original upcast remained on the periphery and, apart from a small intrusion to a depth of 0.2 m at the extreme northern end, the

pit had completely escaped the attention of the later robbers. Although it had doubtlessly been intended for at least one inhumation, no more than an intermittent and formless greasy stain survived in the thin spread of finer silt covering the floor. Resting directly upon this was a collection of 32 V-bored conical buttons, a V-bored oval button, and a belt-fastener, all of shale, together with a flint knife (see small finds). These objects all lay within an area c 0.3 m square, slightly to the W of the centre of the pit. Although no skeletal material survived, Clarke's analysis of beaker associations would suggest that buttons and belt-rings were probably male gear (Clarke 1970).

Fragments of carbonised wood, consisting mainly of oak and hazel, were present in the silt covering the floor but were so scattered as to give no clue as to the manner or purpose of their deposition. This material provided the following radiocarbon date which, in the circumstances, can provide no more than a *terminus post quem* for the burial:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1215	1875 ± 95 bc	2345 ± 112 BC

Inhumation B

This cist-burial lay near to but well within the eastern perimeter of the phase 1 cairn. The capstone or capstones had been entirely removed during the course of stone-robbing, allowing an amount of earth and small stones to enter the upper reaches of the cist. On investigation it proved to be aligned roughly N-S and measured internally 0.9 by 0.6 m and was 0.65 m in depth from the top of the side-slabs. The rough setting of side and end-slabs of local stone had been placed almost directly against the sides of the prepared pit, but as the latter had been dug to a depth of no more than 0.3 m into the subsoil it will be evident that the cist would have protruded above the original ground-level. An amount of clean upcast, up to 0.1 m in height, survived as a low mound above thin patches of buried soil on the E and S sides of the cist and is best explained as residual material from the excavation of the pit. Unfortunately this upcast did not extend as far as the inner faces of the remaining phase 1 kerb-stones, so that no relationship could be established between the features.

Either in antiquity or, more probably, during stone-robbing the eastern side-slab of the cist had fallen inwards, partly protecting a layer of undisturbed yellow silt which covered the bottom of the cist to a depth of c 80 mm. Within this silt and just above the natural floor-level towards the SW corner lay a necklace of 127 disc-beads of lignite, still more or less graded in size according to the original stringing. Unless somehow a pottery vessel had been removed intact at the time of the stone-robbing, which seemed unlikely, there had been no additional grave-goods with the burial. No skeletal material was recovered from the cist but it may be inferred that this had been a crouched inhumation, possibly with its head towards the S and adorned with a necklace. On what little evidence there is for grave-associations by sex this was probably a female burial (eg Clarke 1970).

Simple washer or disc-beads of shale or jet, occurring either in small numbers or in the form of a necklace as here, are not restricted in their ceramic associations and have been found with beakers, Food Vessels, and occasionally Urns (see small finds).

Cremation C

Immediately beneath the present turf, and in the interstices between a number of stones which were overlying the original upcast from the pit containing the aforementioned cist-burial,

were fragments of cremated human bone intermixed with occasional fragments of charcoal and some 300 very small sherds of pottery. The bulk of these remains were confined to a small area some 0.3 m square, lying between the cist and the inner face of the phase 1 kerb-stones. Before the investigation of the upcast and the final clearance of the cist it seemed just possible that the whole of this deposit could have been removed from the cist during the previous robbing. In the final analysis, however, the complete absence of charcoal, cremated bone, and pottery sherds from the silt in the cist, apart from other considerations, made this supposition most unlikely. The inference must be that this was a separate cremation, the accompanying vessel having been completely shattered *in situ* during the course of stone-robbing. As such it must have been later in context than the cist-burial and almost certainly inserted into the existing phase 1 cairn.

The vessel itself is not capable of being reconstructed from the small, abraded sherds, but some form of Collared Urn is assumed (see small finds, fig 14, 5). In all probability both an adult and a child are represented amongst the cremated remains.

Inhumation D (pl 6a)

The very large capstone of this cist-burial in the NW quadrant must have been visible since the time of the extensive stone-robbing, and is referred to in the Inventory as a 'large boulder measuring 4 ft by 4 ft and standing 2 ft above the ground'. During the course of excavation it became evident from the presence of areas of disturbance in the subsoil, on both the E and W sides of the boulder, that there had been previous attempts either to explore beneath the stone or to raise it out of position. As this disturbance had not entirely removed some thin patches of what seemed to be a residual layer of upcast from an underlying pit, the boulder was raised to a vertical position from the W side, revealing the remains of an underlying short cist.

In common with pit A and cist B this cist was also aligned roughly N-S, but unlike cist B had been entirely contained within a rectangular-shaped pit so that the tops of the stone-slabs would not have risen above the original ground-level. It measured internally 1 m by 0.55 m and was 0.6 m deep to the surface of a stone base-slab. On both the E and W sides one of what must originally have been twin side-slabs had been completely removed, a phenomenon which can only be explained by assuming that the very large capstone had been raised sufficiently for this to have been accomplished by the earlier investigators. The underside of the capstone itself had been deliberately smoothed in antiquity, as if to ensure a snug fit over the area of the cist.

There were no skeletal remains or artefacts in the dirty silt and earth which filled most of the cist, nor, for that matter, in the immediately surrounding area. If grave-goods had been deposited with this presumed inhumation it can only be inferred that they had been removed from the site during previous investigations; in which event it might be necessary to envisage more than one phase of investigation of the monument, since the stone-robbers had shown scant attention for such material elsewhere. Although it is unlikely to be related to any earlier investigation it may be of interest to note that a number of .303 cartridge cases, datable to the last War, were found in the topsoil in the immediate vicinity of the capstone – a testimony not only to the convenient cover afforded by the boulder in some field-exercise but also to the commanding position chosen by the original builders of the cairn.

Cremation E

Later disturbances had also extended down to the subsoil in the NE quadrant of the phase 1 cairn, penetrating into a shallow pit and possibly enlarging it in the process. As found the pit was an irregular oval in shape, its greatest diameters being 0.8 m by 0.6 m and its maximum

depth 0.2 m. An amount of calcined human bone, probably that of an adult, was recovered from the filling of the pit and from the immediately surrounding area. In addition, rim and wall-sherds from a Final Southern or Step 7 beaker were present in the disturbed filling and were also scattered over an area up to 1 m in width from the edges of the pit (viz small finds, fig 14. 1). Despite the lack of firm association it would seem reasonable to relate the cremation with the beaker sherds. Although a small amount of charcoal was also recovered this was not submitted for radiocarbon assay in view of the disturbance and extensive penetration by grass-roots.

Pit F

This pit was already visible as a turf-grown feature before the excavations commenced. As finally revealed it proved to be almost V-shaped in section and was 0.6 m deep. The only filling beneath the turf consisted of a few loose stones and gravelly soil in the bottom 0.2 m and there was no upcast visible around the perimeter. There were no small finds from this feature or from the immediately surrounding area. Whilst it may have been no more than an enlarged stone-hole from which a large erratic had been removed, perhaps comparable in size to the boulder forming the capstone of cist D, it is difficult to see how this could have taken place in antiquity on the available evidence.

Inhumations G (pl 6b)

On cleaning off the thin scatter of debris from stone-robbing between the two kerb-lines in the SW quadrant, this burial-pit first appeared as an irregular, circular disturbance in the sub-soil. Its maximum diameters at the surface were 1.3 m and 0.95 m and the top 0.15 m of the fill consisted of some fist-sized stones intermixed with material not greatly different in colour from the subsoil. Removal of this material disclosed an irregularly shaped capstone covering a small crudely formed cist, the base-stone of which rested on the bottom of the pit at a depth of 0.6–0.65 m. The cist was ostensibly aligned N–S, measured internally c 0.7 m by 0.5 m and lay towards the N end of the pit. The space between the cist and the sides of the pit was filled with the same material as had covered the capstone. So far as could be determined there had been no disturbance subsequent to the construction of the cist within the pit, so that the relationship between the finds from both must be explained in terms of antiquity.

Towards the SW corner of the cist, and almost entirely embedded in the yellow-grey silt which had filtered through between the ill-fitting stones, lay a complete Developed North British (N2, L) or Step 5 beaker. Its mouth was tilted towards the N and its body was partly encased in an extremely large fragment from a British/North Rhine or Step 4 beaker (see small finds, fig 14. 2 & 3). This fragment was abraded on the edges, somewhat worn on the outer surface, and had almost certainly been broken in antiquity. No additional sherds from this vessel were found in the cist, in the filling of the pit, or elsewhere on the site, so that it is difficult to escape the conclusion that the fragment had been deliberately introduced with the complete long-necked Northern beaker. On the other hand, some randomly disposed sherds of an all over comd impressed European or Step 2 beaker (fig 14. 4) were recovered from different levels in the filling of the pit, one of them from over the capstone of the cist, but not from elsewhere on the site. From this evidence it can be inferred that a European Bell beaker had accompanied a primary burial in the pit which was later disturbed by the secondary insertion of the cist, some of the sherds from the broken vessel being re-introduced during the refilling. Such an explanation could also account for the somewhat eccentric location of the cist within the original pit. As no skeletal material was recovered from the pit or the cist, inhumation must be inferred in both cases, and possibly that of a young person in the cist in view of its restricted size.

If the above solution is admissible it will entail the further assumption that the pit-burial was a visible feature, by reason of a small cairn or a marker, when the cist-burial occurred. Moreover, it would seem almost imperative that the cist had been inserted either before or at the time when the original cairn was enlarged.

Cremation H

A small pit, originally perhaps no more than 0.5 m in diameter and only 0.3 m deep as found, lay a short distance to the S of the above interments but sufficiently far removed not to have supported a marking post. It had been largely disturbed, possibly at the time of the stone-robbing, and the undisturbed portions contained no more than fragments of charcoal in the fill. On the immediately surrounding area of the robbed surface, however, were a number of small sherds of pottery and some calcined fragments of bone. The vessel itself can not be reconstructed but a late style of beaker with incised decoration is almost certain, rather than, say, some form of incised Grooved Ware (see small finds, fig 14. 7). A small sample of charcoal from the pit which included some alder, hazel, willow and elm, yielded the following radiocarbon date:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1214	2180 ± 90 bc	2810 ± 112 BC

This date, if not anomalous or from long-lived material, would certainly divorce the pit from the Beaker and probably the calcined remains.

Cremation I

Occasional fragments of calcined bone and charcoal were found at various points on the disturbed surface between the inner and outer kerb-lines, but not in sufficient quantity to be treated as firm evidence for cremated deposits. In this instance, however, a small pocket of cremated bone with some charcoal survived in a slight depression in the old ground-surface. The skeletal remains suggest an adult cremation but the small amount of charcoal was so penetrated by grass-roots as to make it an unreliable sample for submission to the radiocarbon laboratory.

Cremation J

This cremation was one of three located close to the inside of the eastern perimeter of the outer kerb. The cremated remains, together with an amount of ash and charcoal, had been placed partly in the bottom of a small pit and partly in a Collared Urn which had been inverted over a small accessory vessel (see small finds, fig 14. 8 & 9). As the pit was less than 0.2 m deep the base of the Urn must have protruded above the old ground-level and had disintegrated under the weight of the overburden. The only identifiable remains in the whole of the deposit of bone were those of a child, possibly 4 to 5 years of age. Some hazel and aspen or poplar fragments were present in the charcoal which provided the following radiocarbon date:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1212	1265 ± 90 bc	1564 ± 112 BC

Cremation K (pl 6c)

Cremated remains, possibly of a child and one older person, had been placed on the old ground-surface within a small, roughly constructed, stone-setting, unaccompanied by grave-

goods. The 'cist' was aligned roughly N-S and measured internally c 0.6 m by 0.4 m to 0.5 m. No capstone as such had been used and the small, irregularly shaped stones forming the 'cist' were barely set into the old land-surface. It proved difficult to determine if the cremation had been inserted through the small amount of cairn-material which remained *in situ*, but intrusion seemed most likely. Moreover, the oblique alignment of the eastern side-slab of the 'cist', corresponding generally with the arc of the phase 2 kerb-stones, could well have been determined by the pre-existence of the kerb. The small flecks of charcoal amongst the cremated bone were not present in sufficient quantity for radiocarbon assay.

Cremation L (pl 6c)

The cremated remains of two persons, together with ash and burnt wood from the pyre, had been placed in a circular pit c 0.45 m in diameter and 0.3 m deep from the old land-surface: there were no associated grave-goods. Once again there was uncertainty as to the relative sequence between the cremation and the small amount of surviving cairn-material, but, on balance, the deposition seemed to be intrusive. The charcoal, which was mainly identifiable as aspen or poplar and prunus, gave the following radiocarbon date:

Lab no	C14 date	Calendar date (Clark 1975)
GU-1211	1555 ± 60 bc	1908 ± 112 BC

C. Additional material

As already suggested, other interments could well have been removed during the course of extensive stone-robbing. A further indication of the incomplete nature of the record may also be seen in a rim-herd from a beaker, which matches none of the vessels already listed, a number of flint flakes, and a single edged flint knife, all of which were recovered as loose finds from different points on the robbed surface within the area originally covered by the cairn. Similarly lacking in associations were four flint scrapers from the old land-surface beyond the outer kerb-line (see small finds).

SMALL FINDS

Pottery (fig 14)

1. This beaker is partly reconstructed from about 100 sherds from within or in the immediate area of cremation E. The fabric is coarse and heavy, the outer surface light brown to brown in colour, and the incised chevron decoration is crudely applied, probably with a flint blade. There is a slight semblance of a collar but this is not consistent around the whole diameter. Cf Clarke's Final Southern beaker group (S4); Lanting and van der Waals, steps 6-7.

2. A complete, well-made beaker from the cist in burial-pit G. The surfaces are buff in colour with patches of pink; the zones of decoration including that within the rim have been carefully applied with a fingernail and are demarcated by continuous, lightly applied score-lines. There are faint ? sedge-marks on the base. Cf Clarke's Developed N British beaker group (N2(L)); Lanting and van der Waals, step 5. Over half of the known burials of this group have come from cists, the remainder from 'shafts'. A second vessel is not uncommon, occurring on a number of occasions with Clarke's N/NR type (as 3 below). When the association is with a barrow some of the burials with this group are undoubtedly secondary and incorporate bones and broken vessels in the back-fill (as 4 below).

3. This fragmentary vessel, partly encasing 2 above, has been c 210 mm in height, with a belly diameter greater than the diameter of the rim. The buff coloured surface is worn and the broken edges and rim somewhat abraded. Although the fabric is reasonably good the decoration is careless and consists mainly of lightly scored lines or grooves, though a finger-nail may have been used for the zig-zag 'fringe'

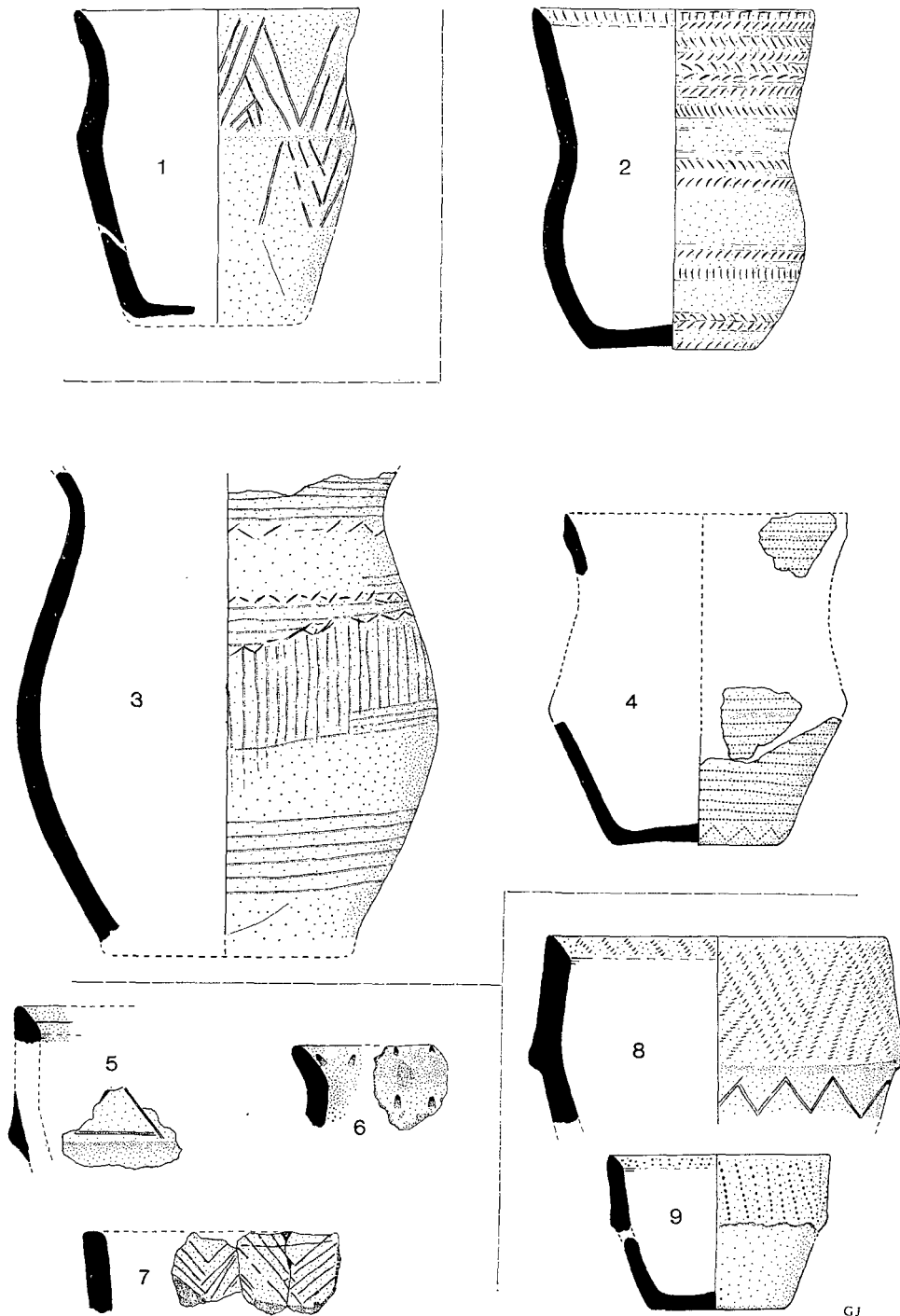


FIG 14 Pottery (1 : 3)

GJ

motif. Cf Clarke's Northern British/North Rhine group (N/NR), some with multiple grooving below the rim; Lanting and van der Waals, step 4. A better example of this group from Chatton Sandyford, Northumberland, has a radiocarbon date of 1670 ± 50 bc (Jobey 1968).

4. This beaker, accompanying the primary burial in pit G, has been reconstructed from 14 sherds, only some of which are conjoining. It has a dark red, shiny finish and the rectangular shaped, all-over comb-impressions are neatly formed and extended onto the collared rim. The carinated bell shape and continuous horizontal line decoration is typical of many of Clarke's European Bell beaker group (E), motif category 1; Lanting and van der Waals, step 2. Typologically this is the earliest vessel from the site.

5. The 300 or more very small sherds from this Collared Urn, associated with cremation C, are all much abraded and weathered and few retain both surfaces which are buff coloured. There are ten small sherds, not conjoining, from the base of the collar, four of which have parts of an incised decoration. This may not have been continuous since other comparably placed sherds are plain. Only two recognisable rim-sherds were recovered, both of which have a single scored line on the inner bevel. The depth of the collar is uncertain and it seems that the body was probably undecorated.

6. A loose find, from the disturbed surface between the two kerb-lines, which is grey in colour and somewhat weathered. The angle and diameter of the rim are uncertain and the simple decoration on both surfaces consists of stab-marks made with a blunt stick or bone.

7. Two conjoining rim-sherds from a collection of ten small sherds, some decorated, others plain, but all from the same vessel and probably to be associated with cremation H. The angle of the flat rim is uncertain. The outer surfaces are dark red to brown and a sooty deposit adheres to some of the inner surfaces. What appears to have been a multiple chevron decoration is incised, possibly with a flint blade. No reconstruction is possible but the vessel is probably a late, long-necked beaker.

8. This Collared Urn accompanying cremation J has been partly restored from a total of 122 sherds. The outer surface is brick-red with buff patches, the core dark grey. Twisted cord has been used for the decoration on the collar and the internal bevel of the rim, the zig-zag beneath the collar is scored and the remainder of the body completely plain. Whatever may have been proposed elsewhere for the typology of urns, the lateness of this vessel is indicated by the radiocarbon date of 1265 ± 90 bc and is comparable, for example, with that of 1292 ± 90 bc for the Collared Urn cremation from Hepple, Northumberland (Miket 1974, 187). These dates and others from elsewhere are at the tail-end of those available for Collared Urns.

9. This accessory vessel accompanying 8 above had also partly collapsed into some 52 sherds. The surfaces are buff to mottled grey in colour and the decoration, which is confined to the 'collar' and rim-bevel, consists of deep 1 mm diameter pricks. Impressed dot decoration is uncommon but not unknown on urns and accessory vessels alike (cf Morrison 1968).

Shale/Jet

1. V-bored buttons and belt-ring (figs 15 & 16; pl 7a)

This assemblage from burial A contains 32 V-bored round buttons, generally with a conical shaped profile, and one button which is semi-ovoid in form. All have been made from black lignite or shale rather than Whitby jet. It is the largest collection of buttons of this particular form found recently in a single deposit in Britain, and in Scotland far exceeds in number the 12 V-bored buttons found with a fusiform bead, bronze awl and razor, and S4 beaker at Kirkcaldy (Clarke 1970), or the six buttons in the Migdale hoard (*Inventaria Archaeol*, GB 26).

Invariably the upper surfaces of the buttons have been finished with a high polish, but in only two examples has this been extended to the backs of the buttons with sufficient application to remove the marks from cutting and abrasion. On the other hand, most of the buttons and the belt-ring seem to show some degree of wear and one appears to have been partly broken in antiquity. The largest button is a fine, decorated specimen (1) with a diameter of 63 mm, but this is exceptional and the majority of them are between 18 and 30 mm in diameter. With one possible exception, which has a marked pimple on the apex (23), the profiles of the conical buttons from apex to base are flat or slightly convex and there are no truly dished examples (Clarke 1970). The bases are generally flat or convex and in some cases the convexity seems to be the result of deliberate paring. Varying degrees of accuracy are evident in the boring and in three instances the upper surfaces have been penetrated either in manufacture or during later use (eg 15 & 20).

Nineteen buttons are decorated with a ladder-patterned, cruciform design or a variant of this in

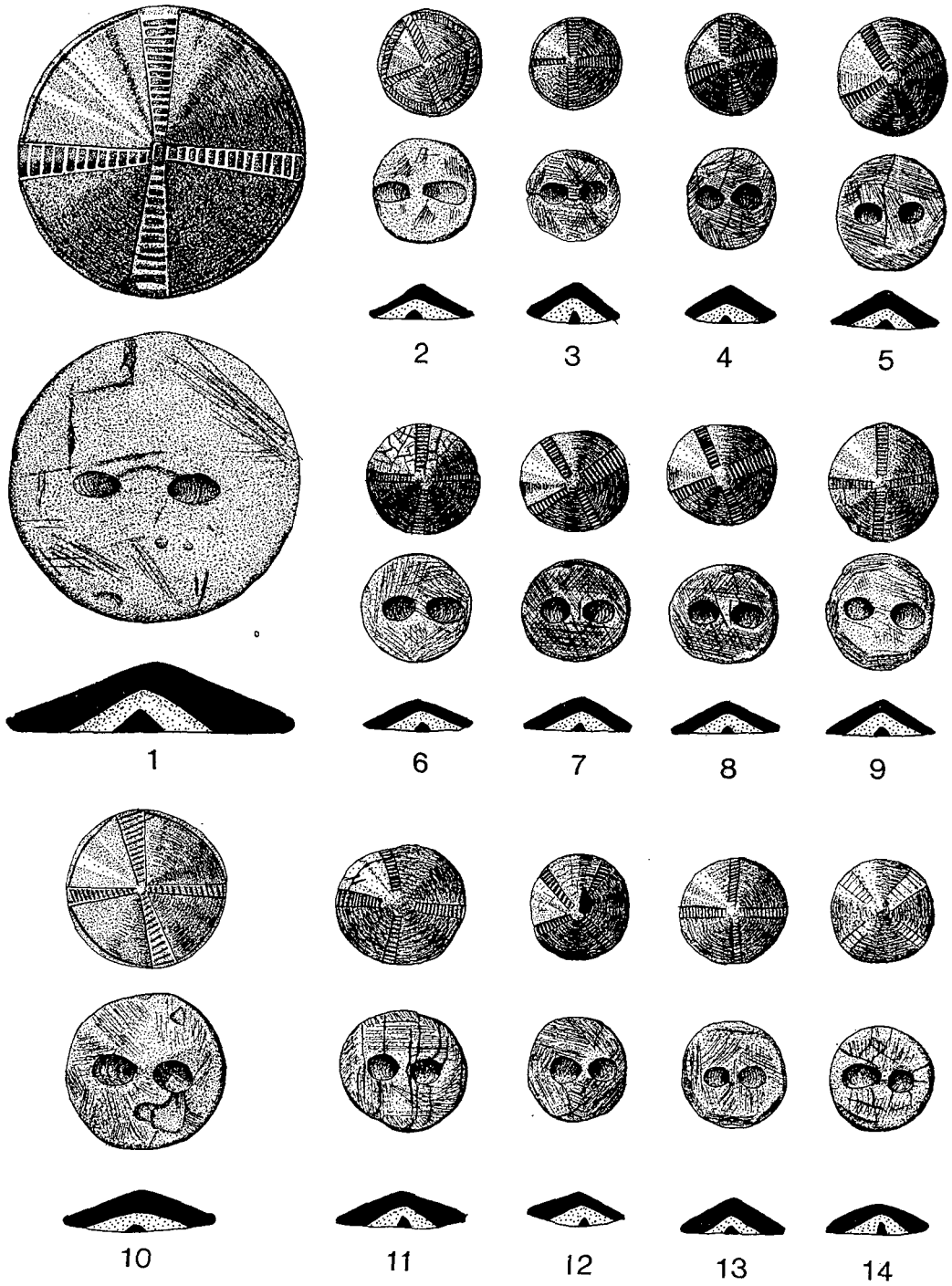


FIG 15 V-bored buttons (2 : 3)

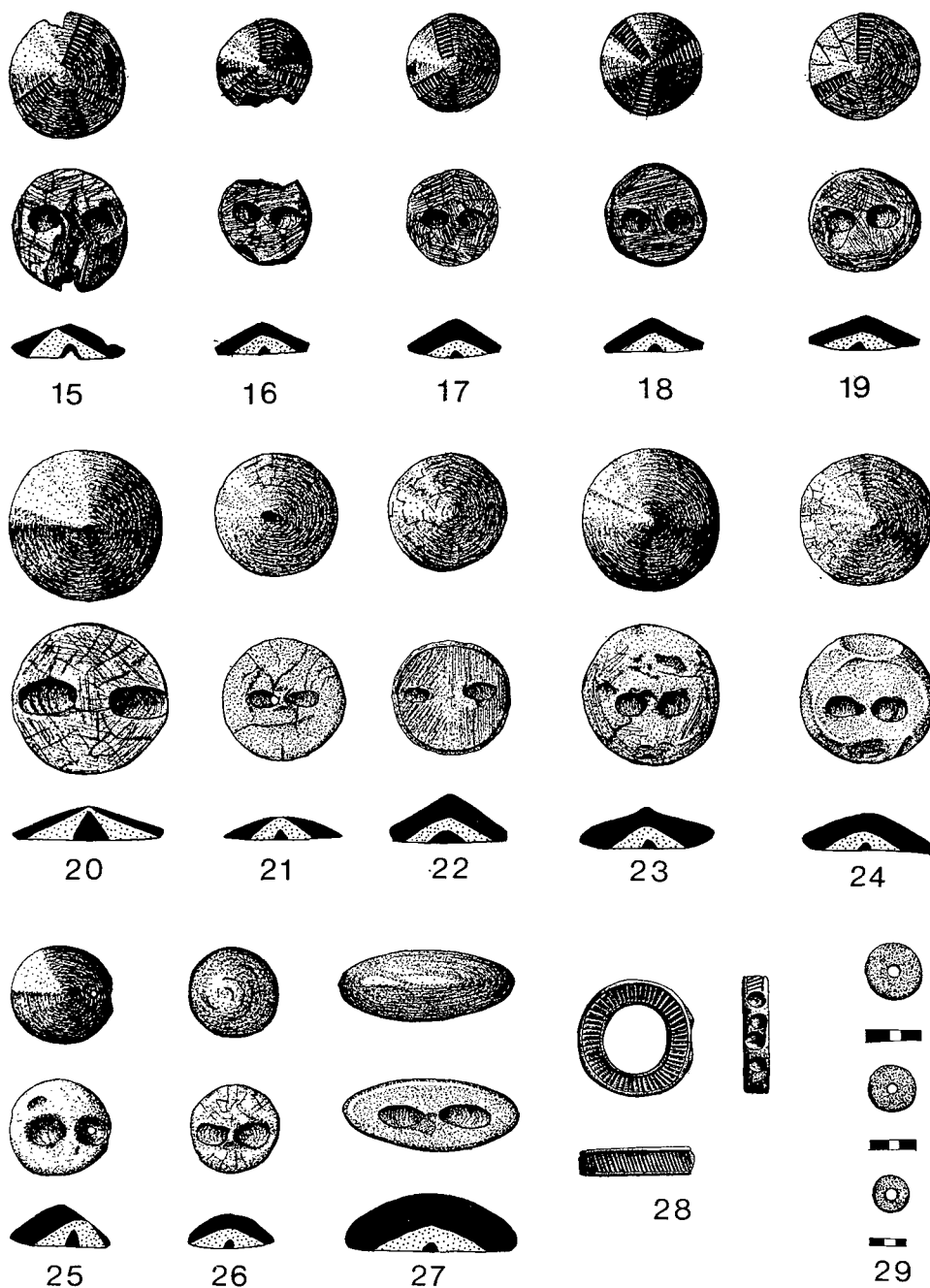


FIG 16 V-bored buttons, belt fastener and disc beads (2 : 3)

which there are only three arms running from the apex to the circumference. In four instances there is a single peripheral groove running between the four arms (eg 3 & 4) and in one a ladder band (2). Similar bands of incised ladder decoration appear on the faces and the edge of the belt-ring except in the area of the double V-boring (28). In all cases the decoration has been cut or scored into the surfaces, probably with a sharp flint blade, and occasionally the short cross-cuts have overshot the main radial lines.

The association of V-bored conical buttons with certain types of beakers and with Food Vessels is well enough established, though a distinction has been tentatively suggested between the larger, single or paired examples found with beakers and smaller examples found with Food Vessels (Clarke 1970). In the case of beakers the main range of association is with Clarke's later Northern and Southern beakers (Steps 5 and 6) but there is, for example, one pair of undecorated V-bored buttons of shale or jet probably associated with a N/NR beaker (Step 4) from Chatton Sandyford, Northumberland, where there is a radiocarbon date of 1670 ± 50 bc (Jobey 1968).

Buttons decorated with a cruciform design have been found spasmodically over the years, some fine examples from early excavations (eg Greenwell 1877, 33). The patterns generally resemble those found on the Irish/Wessex gold sun-discs or button-caps and on the central European button-caps and raquet-headed pins. In the case of the Harehope examples the motifs would most closely resemble those on the gold discs of Case's type a in his Middle Phase of the beaker culture (Case 1977). The decorated belt-ring would fall into Clarke's class IIIa where the main associations are again with his long necked Southern beakers (Clarke 1970). The radiocarbon date of 1875 ± 90 bc from burial A at Harehope provides no more than a general *terminus post quem*.

Whilst the objects from burial A were seemingly in two contiguous groups, with odd outliers a few centimetres distant, there was no significant difference in the composition of the two groups of v-bored buttons; large and small and plain and decorated buttons occurred in both. It seems unlikely that the buttons could have been attached to any form of garment at the time of burial and the whole assemblage appeared to be a deliberate, collective deposit. The occurrence of flint knives with jet or shale objects is frequent but the association is by no means exclusive, so that it would be hazardous to regard the flint knife (fig 17. 1) as a tool of the trade or the whole assemblage as marking the burial of a specialist artisan. Although we may infer the interment of a person of some social distinction, the absence of at least an accompanying vessel is perhaps surprising and archaeologically regrettable.

2. Necklace (fig 16, no 29; pl 7b)

The necklace from cist-burial B consists of 127 graded disc or washer-type beads with a high polish confined to the outside edges. They range from 7 to 11.5 mm in diameter, 1.5 to 2 mm in thickness, and the central perforations are c 2.5 mm in diameter. This simple type of bead is by no means restricted in its associations. Whether occurring in small numbers or in necklaces, with or without other forms of beads, they have been found with late beakers in particular (Clarke 1970), Food Vessels (eg Ritchie 1970,

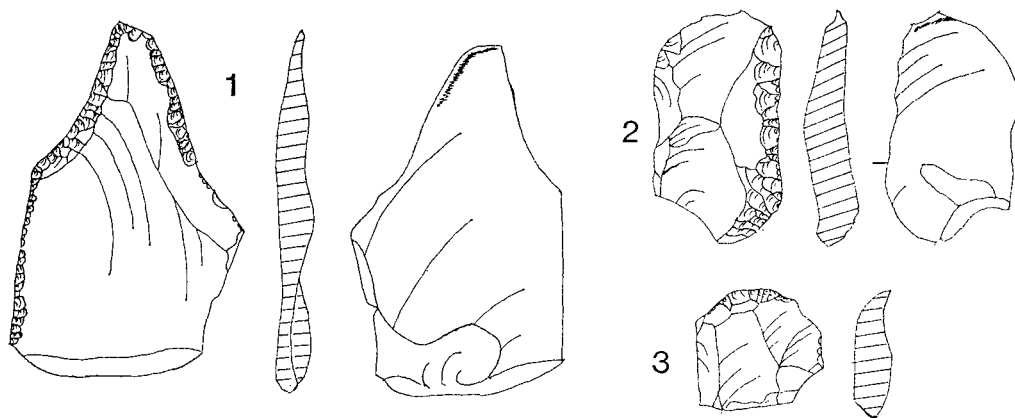


FIG 17 Flint (2 : 3)

49), and occasionally Urns (eg Hope-Taylor 1978, 335). Although in this instance it could provide a comfortable solution to associate a probable female burial (B) with a probable male burial (A), in some social and fairly close chronological context, the proof is lacking.

Flint (fig 17)

Eleven items of flint were found but these included only six implements, the remainder being waste.

1. A flake knife of honey-grey flint worked on the dorsal surface only, with fine pressure flaking limited to the margins; there is some wear-gloss on the top of the reverse. Associated with the V-bored buttons, burial A.

2. A single-edged knife of similar flint, showing a slight gloss from use on the ripple ridge on the reverse. Found on the robbed surface within the phase 1 cairn. Both knives are appropriate in beaker or Food Vessel contexts and occur together, for example, in the secondary beaker fill with jet disc-beads at Achnacreebeag (Ritchie 1970).

3. One of four scrapers similar to each other and all from the old land-surface beyond the phase 2 kerb in the SW and NW quadrants. All are crudely manufactured in mixed material and of a small type which is frequent in beaker contexts.

Cremated Remains

Dr Joan Weyman, University of Newcastle upon Tyne

It is improbable that unburnt bone would have survived in this soil and the whole of the remains were cremated and very fragmented. There were no indications as to sex or pathology and the age of the individuals could not be assessed more accurately than is given. Tooth fragments were found only in cremations J and K where the material could be removed as a mass and sifted later in the laboratory.

Cremation C. Weight 315 gm. These fragments included parts of a cranial vault with mature sutural margins and parts of mature long bones, rib and vertebrae. Also present were thin cranial fragments with an immature sutural margin and a very immature petrous bone and portions of young rib. There were present, therefore, the remains of an adult and a young child.

Cremation E. Weight 170 gm. The fragments were all less than 2 cm in dimension. They included pieces of cranial vault of reasonable thickness, suggesting an adult, and part of a terminal phalange also suggesting an adult.

Cremation I. Weight 25 gm. Small fragments of calcined human bone which included a piece of skull-vault with fairly mature sutural margin, possibly from a young adult.

Cremation J. Weight 280 gm. Fragments in this sample were all less than 2 cm dimension, and most very much less. Recognisable were a part of a human jaw, containing the tooth-germ of two premolars, and the enamel caps of two further premolars and a permanent canine. Some root fragments were sufficiently slender to have been those of deciduous teeth, and showed no evidence of resorption. The stage of development of the premolars gives an age of 4-5 years for this individual and no fragments occurred to suggest that any other was present.

Cremation K. Weight 350 gm. These remains included an immature human petrous bone and some rather slender long bone, rib, and cranial vault fragments. These represented a child. In addition there were robust cranial fragments and long bones, suggesting a second, older individual.

Cremation L. Weight 1420 gm. Although this was a substantial quantity of material it was very fragmented. There were only six pieces over 4 cm and the majority were below 2 cm. Two individuals at least were present. There were recognisable pieces of adult cranial vault, part of an occipital bone, a mastoid process, alveolar fragments of jaw, rib, pelvis, long bones and vertebrae. There were also immature pieces of human cranial vault, petrous bone, orbital margin, temporal bone and rib. Fourteen roots of human teeth were too damaged to identify individually or to say whether they were deciduous or permanent teeth.

Little or no useful information was obtained from the remaining samples which were examined.

Charcoal identification of radiocarbon samples

Camilla A Dickson, Department of Botany, University of Glasgow.

1. 'Pit-hearth', earlier than outer kerb: *Quercus* (oak), 12.2 gm; unidentifiable 23.6 gm.
2. Burial A: *Corylus* (hazel), 0.2 gm; *Quercus* (oak), 6.8 gm; unidentifiable 11.6 gm.

3. Cremation H: *Alnus* (alder), 2.7 gm; *Corylus* (hazel), 1.8 gm; *Salix* (willow), 7.4 gm; *Ulmus* (elm), 0.2 gm; unidentifiable, 0.7 gm.
4. Cremation J: *Corylus* (hazel), 0.2 gm; *Populus* (aspen or poplar), 11.7 gm; unidentifiable, 8.8 gm.
5. Cremation L: *Populus* (aspen or poplar), 48.5 gm; *Prunus cf avium* (wild cherry), 21.4 gm; unidentifiable, 64.9 gm.

CONCLUSION (fig 13)

It is possible that there was some pre-cairn activity on the site at Harehope, however transitory, represented by a 'pit-hearth' beneath the outer kerb and less certainly by a small pit in the subsoil between the inner and outer kerb-line. In the absence of associated structural evidence or artefacts this calls for no further comment except to point out that the corrected radiocarbon dates both lie in the early part of the third millennium BC and on the available evidence could be more or less contemporary with the nearby stockaded perimeter at Meldon Bridge (Burgess 1976).

The secondary enlargement of a burial mound such as exists at Harhope cairn is not unusual. The occurrence of re-used round barrow sites, where enlargement or rebuilding is represented by a second or less frequently a third ditch, is well enough established in the south of England (eg Vatcher 1976, 273). Perhaps the best known example of an enlarged round cairn in the north is that on Cairnpapple Hill, West Lothian, where the period III cairn, constructed at the expense of an earlier henge monument, was enlarged in period IV to accommodate later interments (Piggott 1948). Further examples of the same process, however, may also be seen amongst the extant and often well-robbed cairns of the Border counties or may sometimes be suspected from earlier records in the same area (eg Craw 1932).

At Cairnpapple it was noted that the monumental nature of the inner kerb contrasted with the rough construction of the outer kerb, and, except for the fact that the builders of the first cairn had been able to use material from the henge monument, could perhaps be paralleled in the similar differences observable at Auchterhouse cairn, near Dundee. Even so, the observation prompted the consideration of a possible decline of tradition or interest in the skill of the stonemason, already noted in Bronze Age contexts elsewhere. Although little remained of the kerb of the phase I cairn at Harehope, and the stones themselves did not exhibit the same particularly high standard of craftsmanship as found, for example, at Chatton Sandyford, Northumberland (Jobey 1968), the distinction must be drawn between the close fitting, slab-like stones of this phase and the rough boulders in the kerb of the enlarged cairn.

In any attempt to attribute a sequence to the burial record at Harehope cairn the difficulties imposed by the almost complete robbing of the cairn-material are compounded by the degrees of overlap that might exist between different groups in the present ceramic typologies (eg Case 1977). On the balance of evidence, however, the earliest burial on the site would have been that in the pit or shaft-grave G, accompanied by an all over comb impressed Bell beaker. The adoption of this tentative solution would imply not only that the burial was marked in some way but also that it had been excluded from the area subsequently covered by the phase I cairn. A general *terminus post quem* for the construction of the phase I cairn is provided by a calibrated radiocarbon date of 2345 ± 112 BC from material in the rectangular-shaped grave A, where the interment was accompanied by an exceptionally rich collection of V-bored buttons. The almost central position of this grave must have partly governed the location of the phase I cairn if, indeed, it was not the immediate reason for its construction sometime during Case's Middle Beaker Phase in the second half of the third millennium BC. Two inhumations, B and D, also lay within the phase I perimeter, almost diametrically opposed to one another. The first contained

no more than a necklace of disc-beads and the second was entirely robbed of its contents; even so, they need not have been greatly removed in time from the central burial. It is always possible that both had been inserted through the material of an existing cairn, and the semi-proud nature of cist B might support this view. On the other hand, residual upcast from the original pits partly surrounded the cists and it remains equally possible that the phase I cairn was initially erected over all three burials. It is easier to envisage the fourth interment E, a cremation with a Final Southern beaker, as having been intrusive, and this was most certainly the case with the Collared Urn cremation C, even though it is impossible to be sure that it was inserted before the enlargement of the cairn.

Of those interments within the perimeter of the enlarged cairn, the cist-burial accompanied by a Developed North British beaker and part of a North British/North Rhine beaker had been intruded into the pre-existing pit-burial G, and may well have provided the occasion for the enlargement of the cairn. It certainly could not have taken place, except most fortuitously, after the space between the two kerbs had been filled with cairn-material. There would then follow an intrusive cremation with a probable late beaker in the area of pit H and at least four additional, intrusive cremations. Only two of the latter are in any way datable, namely, cremation L, unaccompanied by grave-goods but with an unexpectedly high corrected radiocarbon date of 1908 ± 112 BC, and cremation J with a Collared Urn and accessory vessel and a date of 1564 ± 112 BC.

All told, the burial record on the site as a whole could have extended over at least half a millennium. Although some selectivity may have been employed in the choice of timber used in the funerary practices or, unwittingly, in the more recent sampling, it is notable that oak has not been identified in any samples later than that from burial A and the corrected radiocarbon date of 2345 ± 112 BC. It will be recalled that oak was also absent from the identifications of material from the platform settlement, although in this instance the wattle construction would have demanded some selection of suitable material. Even so, it may be that the inroads into available timber in this particular area, commencing with the twenty acre stockaded enclosure at Meldon Bridge, was having some effect on the range of woodland species.

The evidence from Harehope cairn, or such as remained of it, cannot be used to refine typologies and this has been avoided. Moreover, as an essay towards establishing a direct relationship between the living and the dead it has largely failed. On the basis of radiocarbon dates, only that from cremation J, accompanied by its Collared Urn and accessory vessel, needs to be considered. This date of 1564 ± 112 BC falls towards the end of those at present available for Collared Urns (eg Burgess 1974), and, as it happens, is comparable with the dates for two late cremations on the Meldon Bridge complex at the entrance to this particular valley. It is indeed not significantly different from the single date from platform 5 in the settlement on Green Knowe, but with all the uncertainties involved does not necessarily betoken contemporaneity. Moreover, as we have seen, the date from platform 5 is appreciably older than those from the other platforms which were excavated. This is not to deny the rite of cremation to the inhabitants of Green Knowe or their contemporaries elsewhere, in cremation cemeteries, by secondary insertions into existing funerary monuments, or in small kerbed cairns such as those at Claggan in Argyllshire (Ritchie 1975, 19–22); it is simply that in this instance the close association between the settlement and later interments in the cairn is not firmly established, even though one cremation may not be too far removed in time.

In a negative sense, however, the Harehope cairn does re-emphasise the need to consider the potential role that similar unenclosed settlements may have to play in the beaker period generally and that covered by the majority of the present burials. The solution may already be

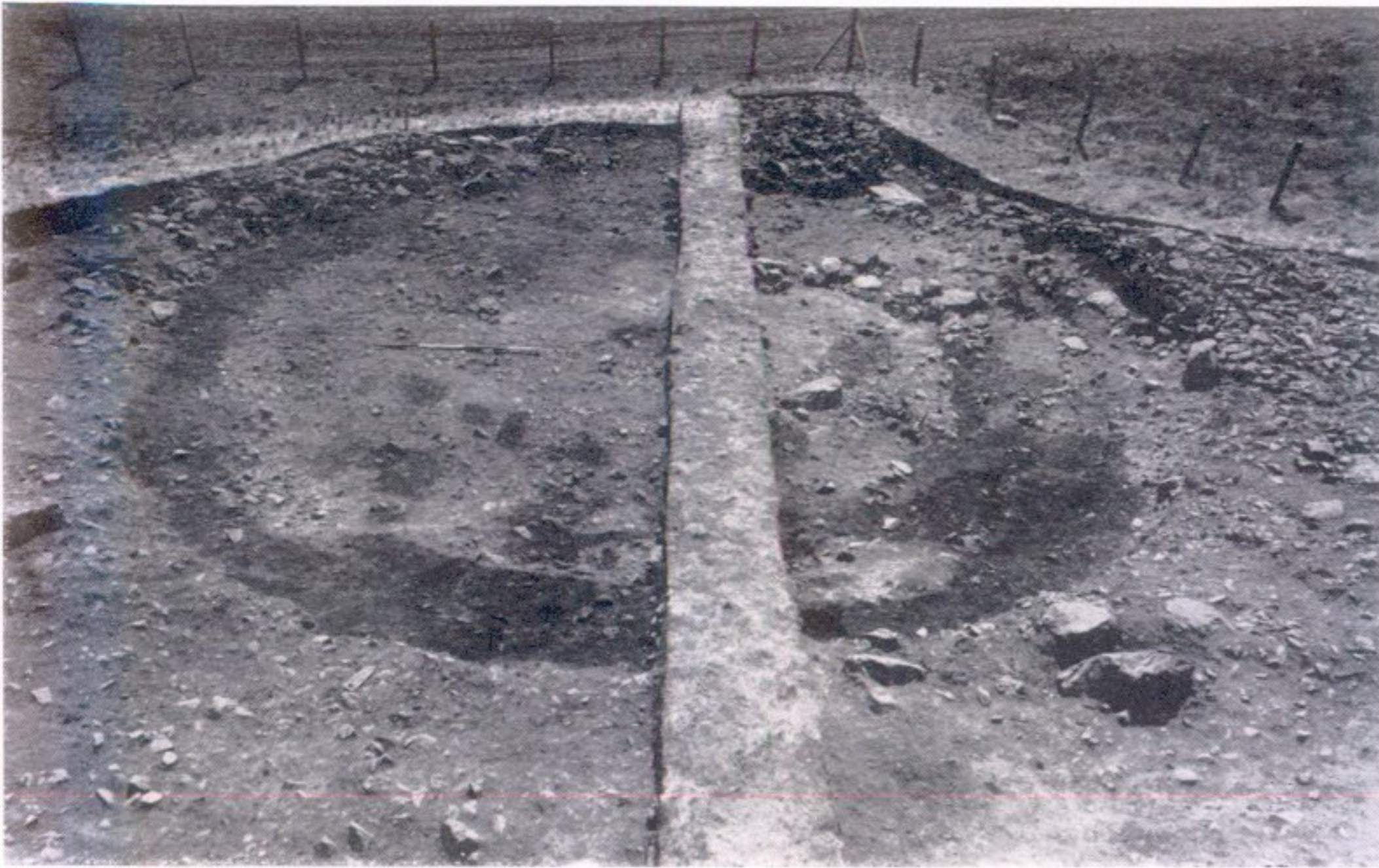
present in recent and as yet unpublished excavations of unenclosed house-platforms elsewhere in the North, which it would be premature to discuss at this stage. But so far as the restricted confines of the Meldon Burn are concerned, there may be no need to look to the lower lying ground in the Tweed valley for an answer whilst neighbouring unenclosed platform settlements on the slopes of both Black and White Meldon remain uninvestigated.

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a platform 2



b platform 2



a platform 2: rear scarp, stake holes and grooves of houses 2 and 3



b platform 2: field-clearance bank and retaining kerb-stones



a The cairn after excavation (platforms on White Meldon in background)



b grave A



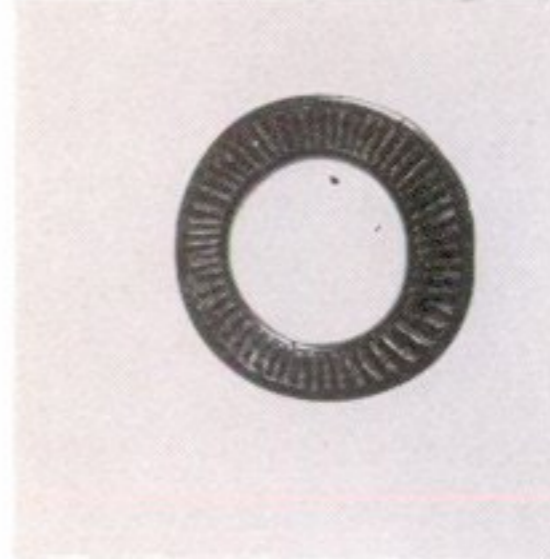
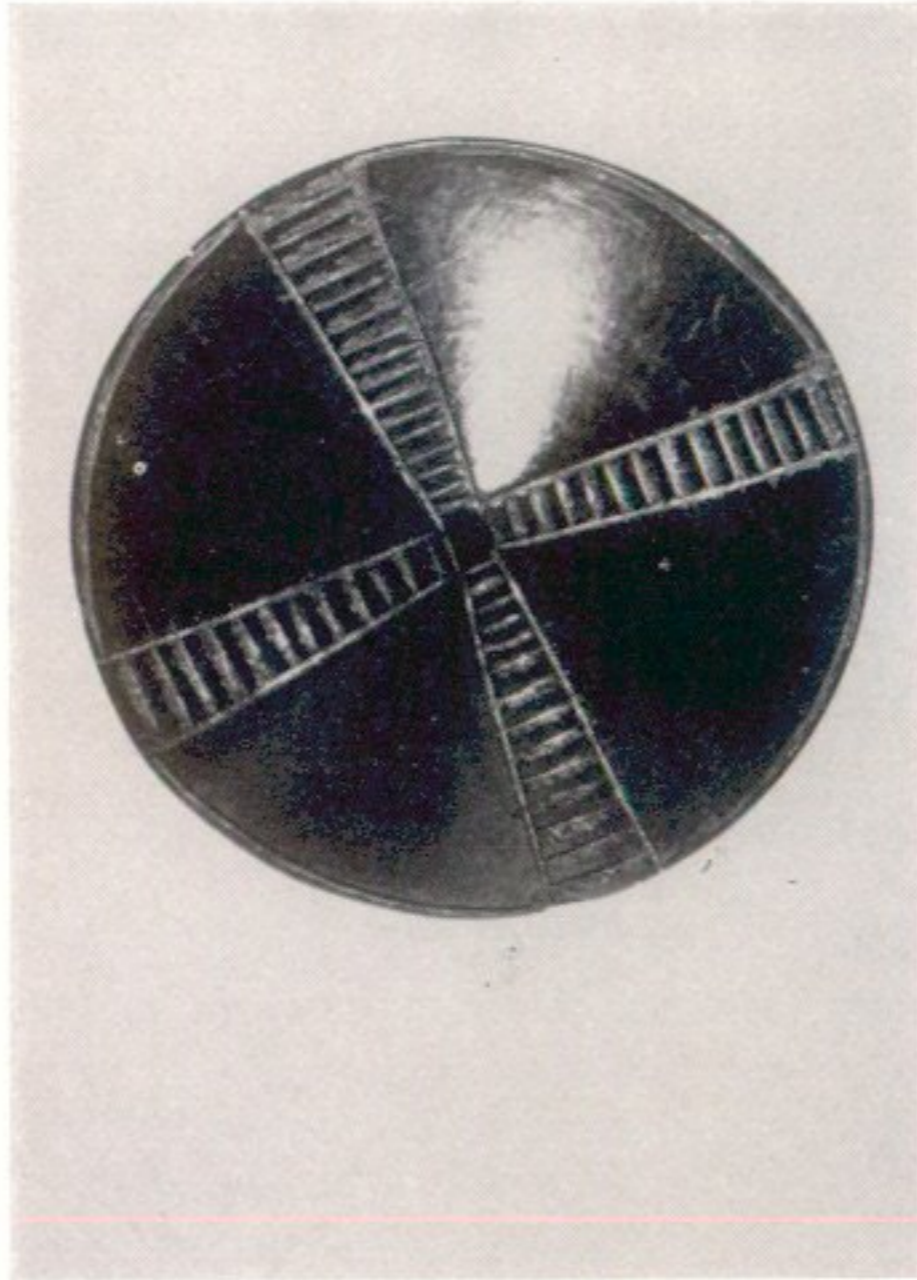
a robbed cist D



b cist and pit G



c cremations K and L



a V-bored buttons and belt fastener



b Necklace