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# The excavation of a chambered cairn, the Ord North, at Lairg, Sutherland by J X W P Corcoran

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## ABSTRACT

In 1967, the late J X W P Corcoran, then a lecturer in archaeology at the University of Glasgow excavated a chambered tomb for the Ministry of Public Building and Works. The tomb was situated to the W of the village of Lairg in central Sutherland on the small hill known as the Ord. It consisted of a well-preserved bipartite tomb entering in the SE of a large heart-shaped cairn surrounded by a low platform. The Neolithic levels remained undisturbed and finds from these included a small flint assemblage and a variety of potsherds representing a wide range of vessel shapes and fabrics, including an Unstan bowl. An intrusive, early Bronze Age, burial consisted of a cremation associated with a Food Vessel, and a small decorated bone mount. Radiocarbon dates were obtained for most of the important levels and for the first time give us an independent assessment of the age of the tombs in the north mainland.

## INTRODUCTION

Before examining the results from the excavations at the Ord North it seems necessary to say something about the circumstances of the excavation and the problems that have arisen because of them. In 1966 Dr Corcoran was asked to excavate the tomb for the then Ministry of Public Building and Works. The tomb had previously been dug into by some interested local people who were only stopped when the implications of the site's scheduling was made clear to them. It was felt, however, that the building of a housing estate nearby would result in further disturbance and therefore that proper excavation was necessary. This was particularly so as the digging had already revealed a burial and exposed enough to show the tomb as an impressive monument. The work was carried out between 17 July and 15 September 1967 and consisted of complete excavation of the chamber and superficial examination of the kerb and cairn.

Unfortunately, Dr Corcoran's prolonged illness and death meant that the excavation was never written up. Undoubtedly he had been working towards publication but this does not appear to have reached the stage of a written manuscript and the only information passed on was contained in the daybook and the site drawings which had nearly all been prepared to a publication standard. After his death the material from the excavation had been split up with the finds and samples going to Dr D V Clarke in the National Museum and the site notebooks and plans going to Mr A Gibb of the Geography Department, Glasgow University. Pressures of other work, however, meant that little work was done and all the material subsequently passed to the author. Unfortunately, during this period the soil samples from the tomb were lost in the National Museum; everything else, however, appears to be present.

There are several problems in working with someone else's site notebooks as one seldom records everything one should in these. This is particularly the case with regard to a fairly straightforward monument such as a chambered tomb where one's memory can store most of the data.

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The consequent problems have been many and varied: for instance Corcoran never completed any of the sections through the fill of the main chamber, thus forcing one to rely on the very scanty descriptions of these deposits in the site notebook; the exact position of several finds is not made clear; the relationship of the surrounding platform with the cairn is never stated and lastly there was no reference to the collapsed lintel between the chamber and antechamber. There is also a tendency to use descriptive terms which do not actually mean what anyone else would think they mean. For example Corcoran uses the term 'cist' to refer to a structure in the main chamber though the plans and photographs suggest that it is more akin to the platforms found in northern tombs. Fortunately these and numerous other problems have been cleared up by consultation with the assistant director Mrs Jean Ward who has been extremely helpful when problems have arisen. Nevertheless the description of certain elements in the tomb is not complete and some errors must surely have eluded my examination. Thus I cannot claim this would be how the excavator would have published the site; I do think though that it covers the main points.

The report was initially written and submitted in 1980 as a dissertation in part fulfilment of an MA in archaeology at the University of Glasgow. The discussion sections have been considerably altered but the description remains virtually identical.

## THE SITUATION OF THE TOMB

The Ord North is situated on a spur just below the summit of the low hill from which it takes its name, the Ord, at the S end of Loch Shin in Sutherland (fig 1). Thin arms of the loch extend along the E and W sides of the hill. These would originally have been much thinner, particularly that to the E known as little Loch Shin, as the water level has been raised by recent damming of the River Shin. Immediately to the S of the peninsula there is a large area of peat bog which has helped to isolate the area in recent years.

The village of Lairg lies three-quarters of a mile to the E of the hill on the other side of little Loch Shin and it is around here and to the S in the valley of the River Shin that the most productive agricultural land occurs today. It is clear, however, that the Ord itself was cultivated in the not too distant past as there are traces of ridge and furrow to be seen inside the large enclosures to the S of the summit. Clearance cairns can be seen all over the slopes and around the tomb.

On a larger scale the Lairg area is on the northern periphery of the fertile land around the firths of Easter Ross which has been heavily settled and farmed in the historic period. Agriculturally, however, it is more akin to the northern straths of Sutherland, and it is at an important crossroads of the natural communication routes to these. This is clearly demonstrated by the present road and railway system of the N and would have been more important before the clearance to the coasts.

## THE EXCAVATION

### DESCRIPTION OF THE CAIRN

The first thing noticed by any visitor to the Ord N is the size of the cairn and its steeply rising sides. These were noted as prominent features in Curle's description (RCAMS 1910, 153-4) and there seems to have been little change in the state of the cairn since then. This is not surprising as the hill has only been used for rough grazing in the recent past. Recently, however, there has been expansion across little Loch Shin from Lairg and a small housing scheme has been built at

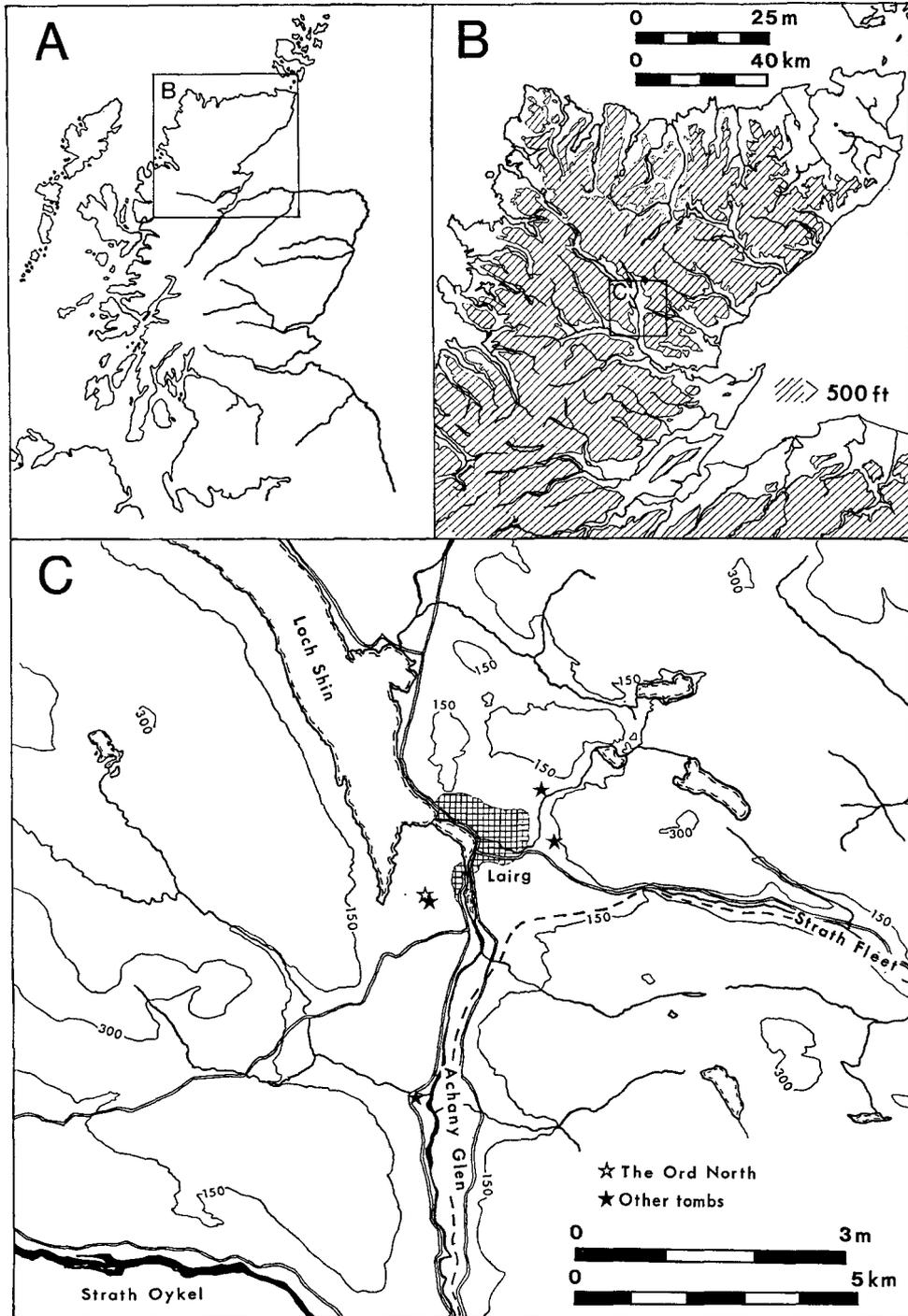


FIG 1 The location of the Ord N and other chambered cairns around Lairg

the foot of the hill. This development is having a considerable effect on the archaeology of the area as in the sixties a television aerial was built on the Ord S and recently a rough road has been built up to the summit causing considerable damage to the surrounding settlement evidence. In the late fifties Henshall visited the tomb and I quote her description:

The cairn is almost 90 ft in diameter of bare stones rising steeply to a height of about 14 ft. For 10–20 ft beyond the cairn edge extends a platform of cairn material turf covered and edged for most of its circumference by a kerb of large stones set on edge or flat. On the south side there projects a wide stubby horn which forms one side of an ill-defined concave forecourt facing south-east (Henshall 1963, 326) (fig 2, pl 2a).

Before excavation, however, Corcoran expressed reservations about the so-called horn due to its shape and the absence of any partner to the N and during the excavation these doubts were substantiated. Other than this it should be said that the cairn had a noticeably flat top and was covered by slight hollows probably the last vestiges of shepherds' shelters which can be found on ancient monuments of all periods in the N.

On excavation the cairn turned out to be almost heart-shaped or to be more precise circular with a flattening and very slight cusped forecourt towards the SE (see fig 3). From the entrance of the chamber to the back of the cairn it is 70 ft (22.5 m), perpendicular to this it reaches a maximum width of 84 ft (29.2 m). The present height of the cairn material above the chamber floor was a maximum of 10½ ft (3 m). The kerbed edge of the cairn was found easily in all the excavated areas exactly where one would have expected it from surface examination. This kerb had a bottom course of large boulders, which seem to have been picked for their irregular shape and size, followed by several courses of dry-stone walling. For the majority of the cairn's circumference only the basal boulder course survived but around the entrance to the tomb the drystone work was preserved and to N of the entrance and in the isolated cutting the slumped remains were clearly visible (pl 3b). In the latter area at least five courses were present and this would have made the cairn quite an impressive site when it was first constructed. It is also quite clear in this area that the kerb collapsed before the platform was built as several slabs from the revetment lie on the old ground surface. There was relatively little excavation of the cairn material and it is possible that there is an inner cairn core built to stabilise the chamber. The cairn material which was excavated had little apparent structure and was comprised of large round boulders, around the chamber however where some depth was achieved there were considerable quantities of soil or more probably decomposing cairn material. This may simply be due to water percolation through the large cobbles rather than any difference in construction.

The platform was throughout its circumference covered in turf; it is, however, clearly visible and the kerbstones in many places show through to define its edges. Very little of its area was exposed and only around the kerb and in the northern cutting was it excavated down to the old ground surface. Because of this we can not be certain of its exact extent but it does seem to be oval, 110 ft by 126 ft (34 m × 39 m), following the cairn outline c 18 ft (5.5 m) farther out, except at the entrance where it is c 24 ft (7 m) away from its edge. Directly in front of the chamber entrance the kerb has been emphasised by the use of two very large stones (see fig 3). To the S there is a very strange tongue-like extension which along with a slump of cairn material had been interpreted as a horn. This cannot be correct as the edge of the cairn is clearly defined and as the platform projection is pointed. Without excavating a larger area of the platform it is difficult to understand this feature. It could possibly be explained if the cairn had slumped badly at this point before the construction of the platform and its builders wanted to keep a specific distance from its edge. It could

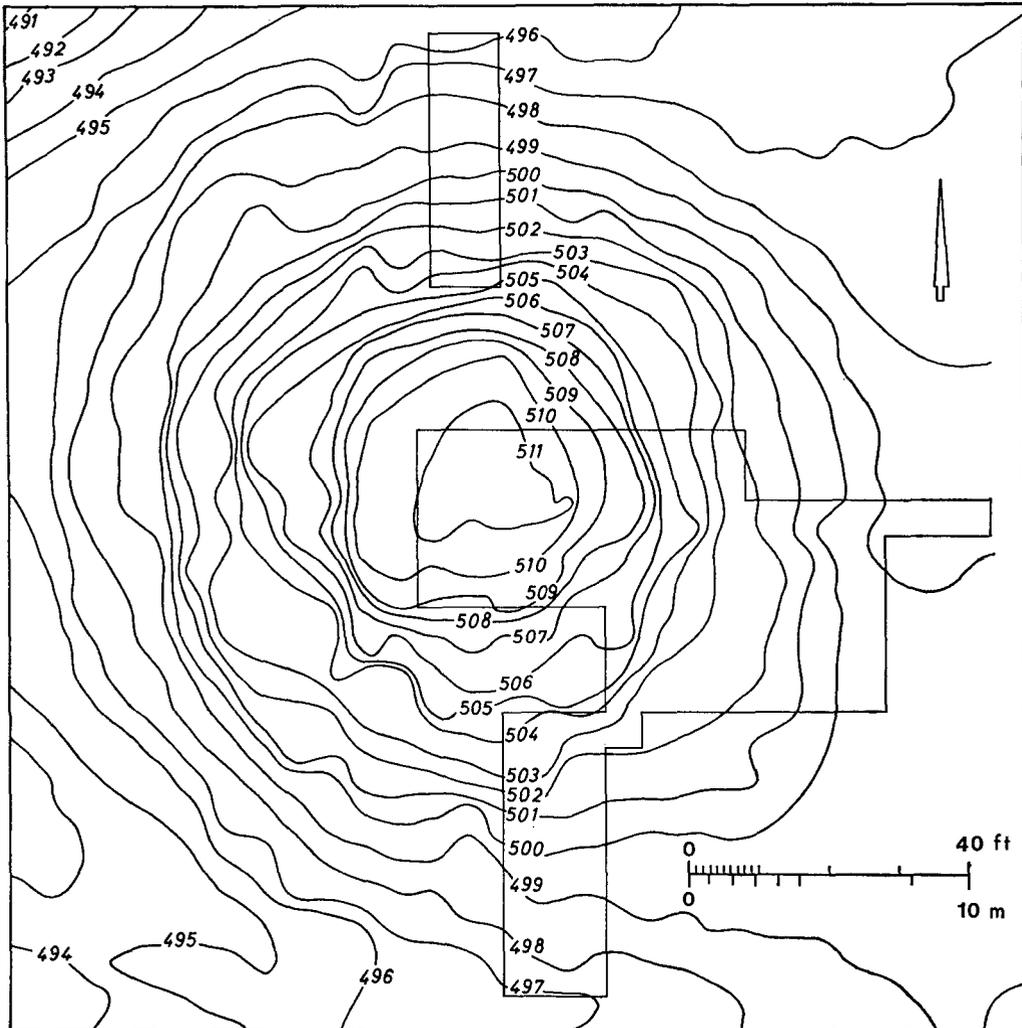


FIG 2 A general plan of the cairn before excavation (contours in feet)

be suggested that the platform was roughly heel-shaped but surface indications do seem to preclude this possibility as a smooth curve is visible elsewhere.

### DESCRIPTION OF THE TOMB

The chamber opened to the SE of the cairn and was 35 ft (13 m) long from the blocking stone to orthostat 9. It was constructed by the normal method for this region, and Britain in general, using alternating stretches of dry-stone walling and large orthostats. The plan (see fig 4 & pl 2b & 3a) consisted of a large main chamber, a smaller antechamber and a passage. Each area was separated by a pair of transverse orthostats. This gradual increase in size as one goes into the tomb is emphasised by the size of the orthostats used, which become larger and larger culminating

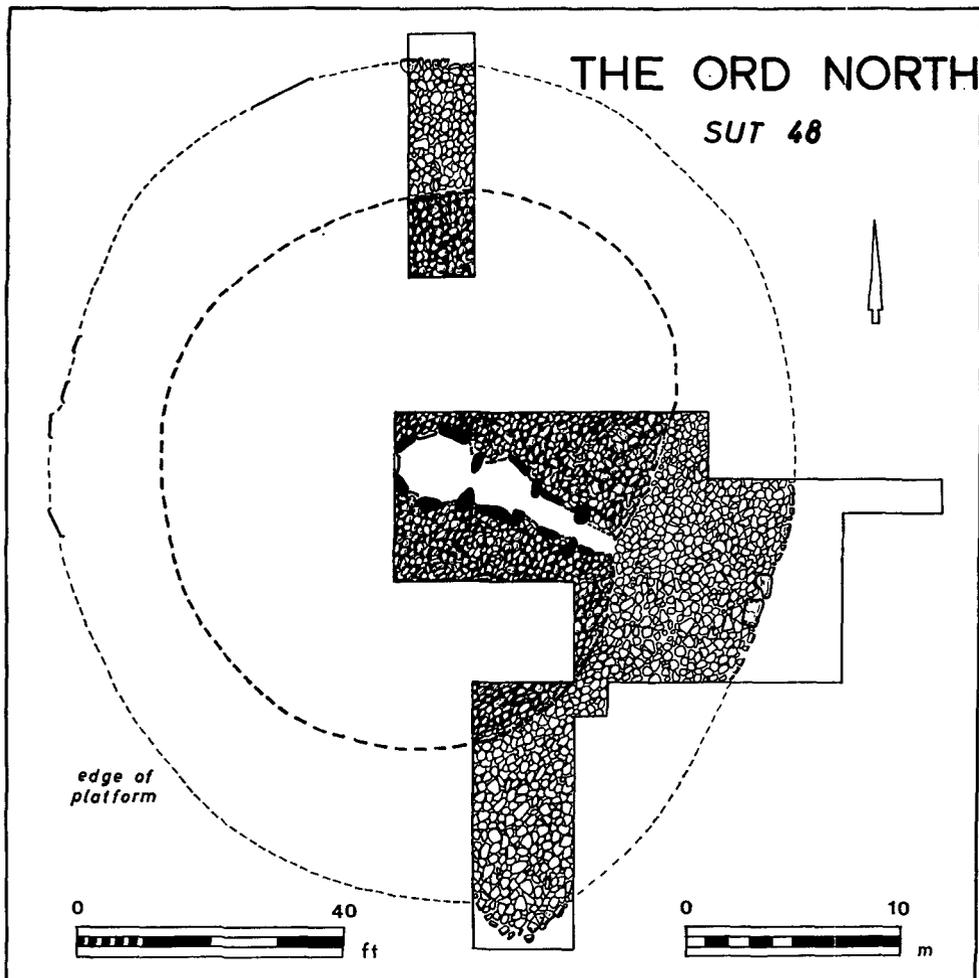


FIG 3 The principal features of the excavated areas

in the massive orthostat No 9 which is c  $6\frac{1}{2}$  ft (2 m) tall. It provides a noticeable contrast to the others by being thin and pointed with a flat surface. The design of the tomb seems to have been carefully arranged to place this stone on the chamber axis, making it visible from the entrance.

Access to the chamber was through a narrow entrance c 2 ft (0.6 m) wide, probably quite low in a very shallow forecourt caused by the inturning of the cairn's revetment. This was not marked by transverse portals but came straight off the dry-stone revetment of the cairn which on the N stood five courses high. The passage was considerably destroyed in its early stages particularly, as is clear from the elevation (fig 5) on the N side where it was almost impossible to find it at all. This can best be explained by cairn slumping as there was no sign of any robbing prior to excavation. It was, however, possible to determine the dimensions of the passage quite clearly: it consists of two sections each 7 ft (2.1 m) in length. They are separated by a pair of transverse orthostats (nos 2 & 15) which would have supported a lintel c 3 ft (0.9 m) off the ground. The lintel had in fact been pushed over and lay in front of these orthostats (pl 4a) but was replaced

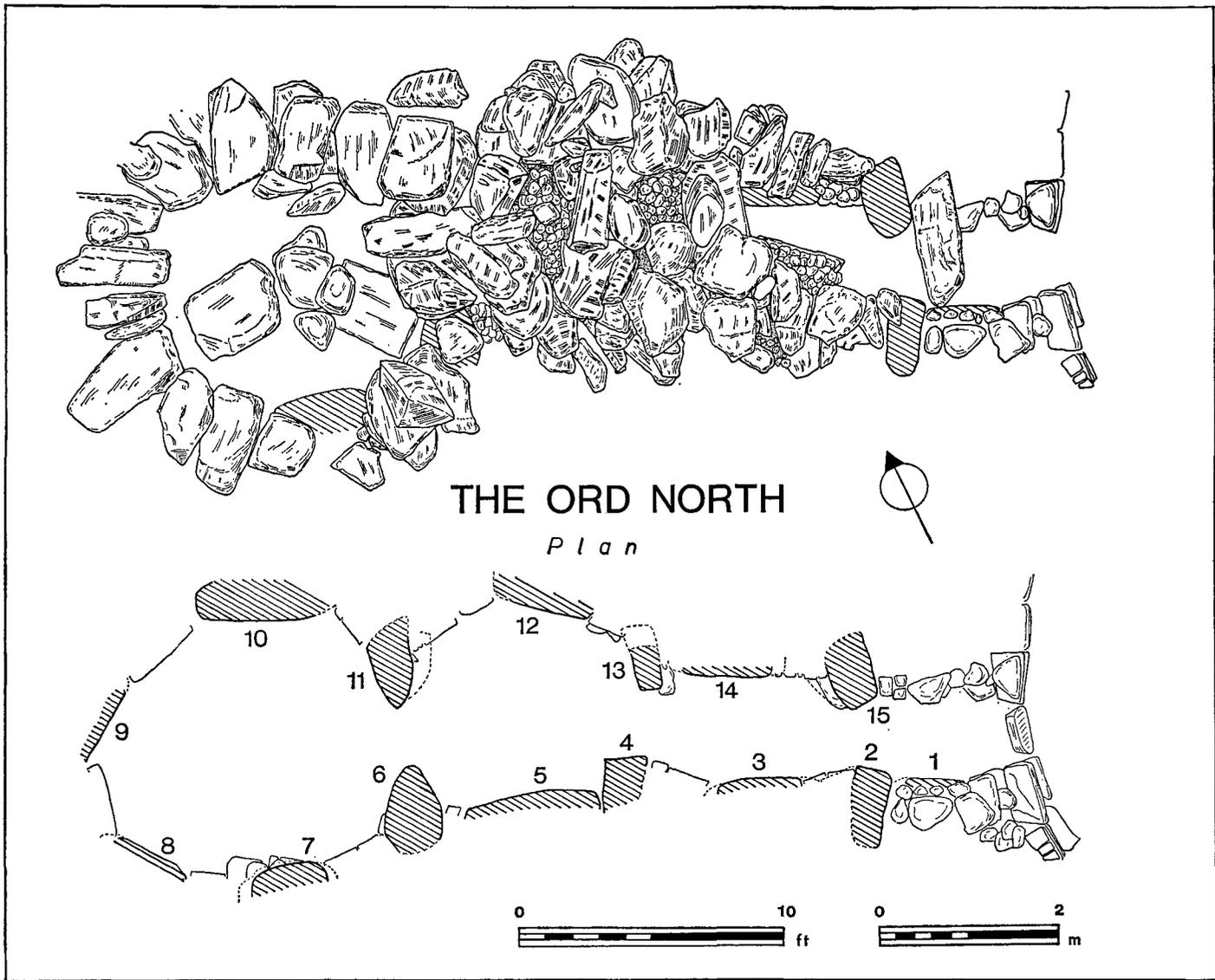


FIG 4 The chambers and passage before the removal of roof corbels and at ground level

during the excavation. The N wall of the front section does not seem to have contained an orthostat and this may partially explain why there was so much slump in this area. The other three sections were of normal construction with well-built dry-stone walling, except on the N side where stone decay had left that section extremely unstable. In the inner section the lower courses of a corbelled roof were preserved and had begun to overhang the walling. This was not visible in the outer section but presumably it too was corbelled as no obvious lintel stones could be found. This style of roofing may explain the presence of the transverse orthostats as otherwise they would have had to corbel the complete length of the passage.

The antechamber was roughly pentagonal in shape, 8 ft 6 in (2.6 m) along the axis of the chamber and 7 ft 6 in (2.3 m) across at its maximum point. The S wall was straight and only very slightly set back from the line of the passage wall. The N wall, however, projects obliquely into the cairn before cutting back sharply to the portal of the main chamber thus enlarging the antechamber considerably. The N wall because of its shape contains much more dry-stone work than that in the S which is largely composed of orthostat 5. The entrance portals of the antechamber (nos 4 & 13) were set 2½ ft (0.75 m) apart and carried a large lintel. Due to its unsuitable shape this lintel had to be propped up on the S orthostat to give a horizontal surface for the roof. The entrance to the main chamber consisted similarly of two orthostats (nos 6 & 11) c 2 ft (0.6 m) apart, but here the lintel was badly cracked and had slumped into the main chamber. The corbelled roof of the antechamber was still in fairly good condition particularly on top of the lintel at the entrance and the gradual overlapping of the stones could be clearly seen in the slumped section at the W (pl 3b). Again there was no sign that this had had a large lintel on top of the corbelling and it seems more likely that a key stone was used similar to the intact roof found at Achaidh (Sut 2. These nos refer to the catalogue in Henshall 1963 & 1972; Curle 1910, 107-8). The highest *in situ* corbel was 8 ft (2.2 m) above the floor and it seems likely that the original roof was at least 2 ft (0.6 m) above this.

The main chamber was, at ground level, oval in plan, c 11 ft (3.4 m) in length and 10 ft 6 in (3.2 m) wide. Four very large orthostats (nos 7-10) had been used in its construction, one of these, no 7, did not have a flat bottom as it had to be supported by small stones. All the other orthostats in the tomb rested directly on the old ground surface with no pits dug to hold them. The largest orthostat, no 9, was built with the dry-stone walling running behind it unlike all the other orthostats where the walling abuts on to the stone. The roofing was preserved as an arc of corbels 10 ft (3.1 m) above ground level with the rest of the corbels collapsed into the main chamber. There had been some disturbance of the lower corbels on the S side since one of them had been pushed into the chamber and another had been pulled back. It seems likely that this had been done in the Bronze Age to allow easy access into the hollow of the chamber to deposit a burial. Due to this collapse it is impossible to be precise about the form of the roof but it was probably similar to the antechamber and would have had a minimum clearance of c 13 ft (4 m) which would have made this a very impressive tomb in its original state.

### THE CHAMBER FILLING

The filling of the chambers and passage were totally distinct with the exception of the floors of the chambers where there were distinctive but discontinuous patches of blue-grey clay. These had been thought of as turf patches but it seems more likely that they are the result of water percolation through the roof. Numerous pits were found in the old ground surface and one of these contained an orthostat used in the platform in the main chamber (see above). This may how-

ever be a coincidence as the general impression is that they were caused by the removal of large boulders before the tomb's construction. Charcoal spreads were found lying directly on the floor in both chambers and include those used for radiocarbon date GU-1172. The filling of the passage seems simply to have been collapsed roof behind orthostats 2 and 15 but in front of this there was a rubble blocking which covered the cremation of a child no older than six (Deposit I in the catalogue). The blocking extended outside the entrance where it merged into the surrounding platform. Thus we know the platform is contemporary with the closure of the tomb. Underneath the platform in front of the tomb's entrance were several charcoal patches and two distinct groups of pottery. Each of these groups contained sherds from fabrics 6 and 7 and as these probably represent two individual vessels it seems likely that the deposits are roughly contemporary.

Above the floor deposits in the antechamber there occurs a deposit c 4-5 in (100-150 mm)

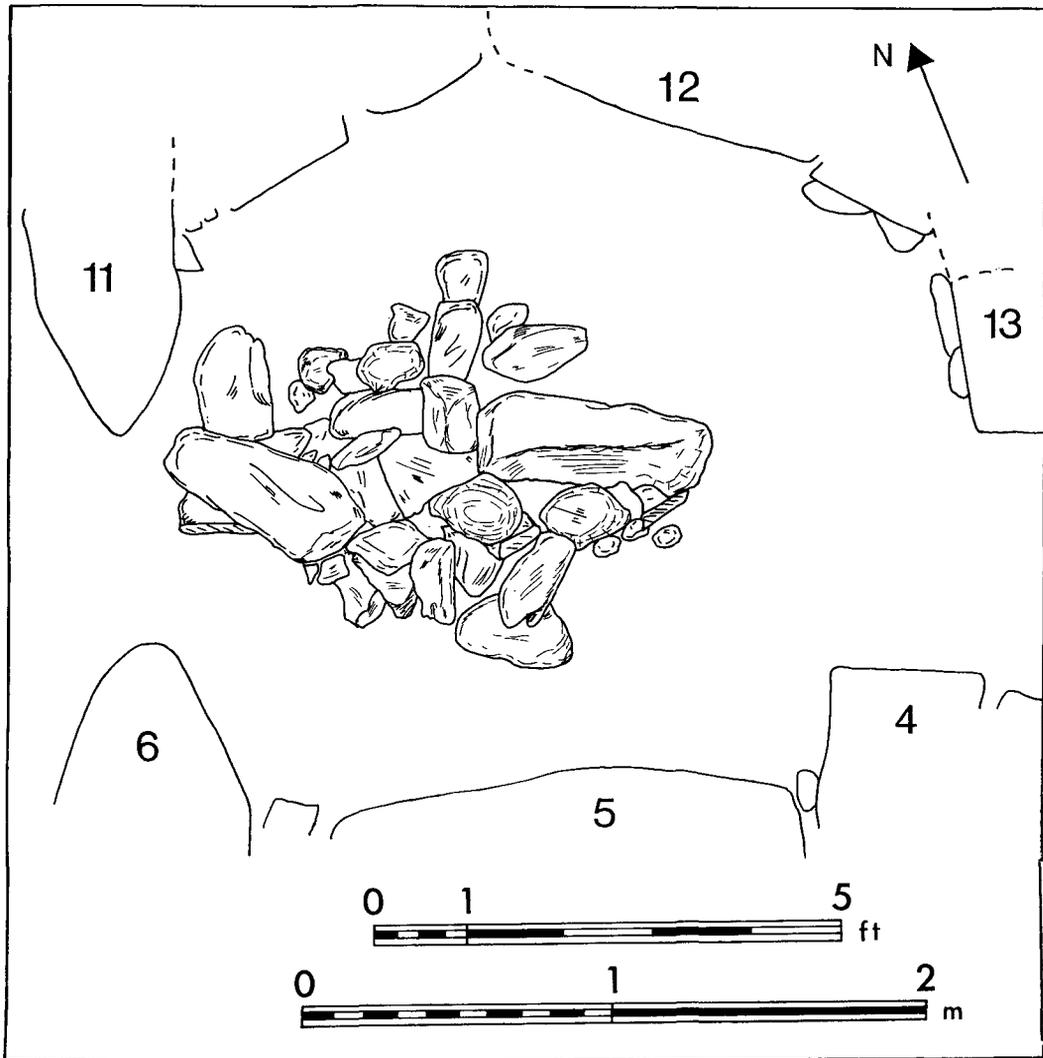


FIG 6 The cairn in the antechamber

thick which is described by Corcoran as 'silty layers' in the site notebook and 'moist gravelly soil' in the drawn section. This need not necessarily be contradictory as it could simply reflect the changing consistency of the layer. Throughout this layer were fragments of charcoal and in its upper level were two distinct spreads (see GU-1168 and 1169 respectively for identifications).

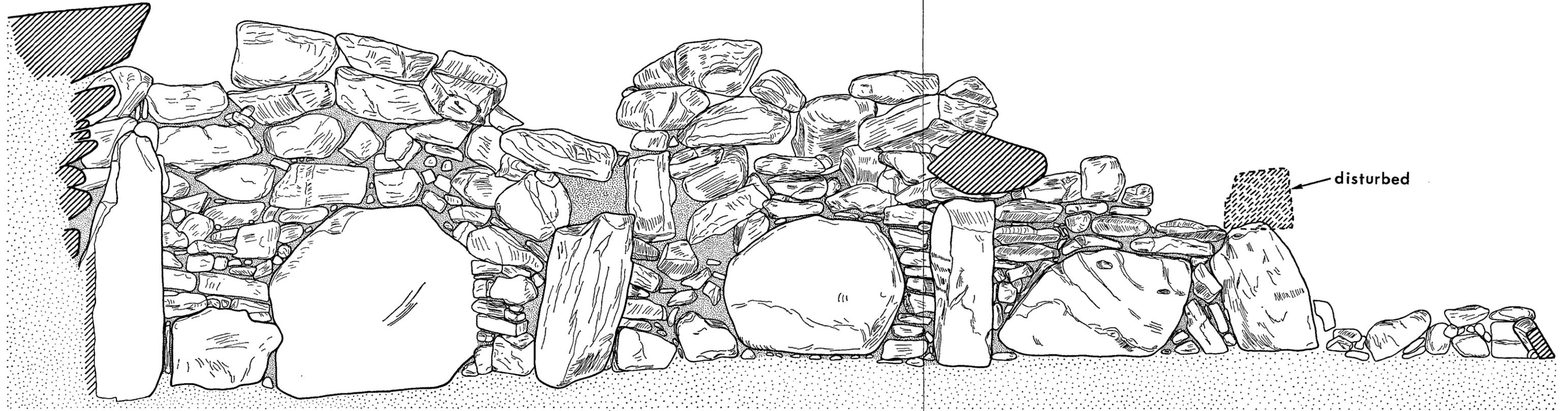
Sitting on top of this layer in the centre of the antechamber there was a small pile of stones c 6½ ft (2 m) by 4 ft (1.2 m) which shall be referred to as the cairn though it does not really warrant the use of this term (see fig 6). It contains stone of a variety of shapes and sizes ranging from large slabs 2½ ft (0.75 m) by 1 ft (0.3 m) down to small pebbles c 4 in (100 mm) across. The larger of these stones would not be out of place in the dry-stone walling but the others would be characteristic of the cairn material. Above this the antechamber was filled with loose cairn material and a few corbels which had slipped through the partially collapsed roof.

The stratigraphy in the main chamber is complex and difficult to understand because of the presence of a structure, the subsequent Bronze Age disturbance and the lack of any detailed description in the site notebook. One of the earliest features seems to have been a structure against the N wall extending from orthostat 8 to portal stone 11. This rested on the old ground surface for most of its extent, though we do get the initial clay and charcoal deposits, which have already been mentioned, under the eastern stones. In the charcoal were some plant debris and these originally formed part of a noticeable deposit but the material was subsequently lost. There were also some quartz pebbles found in the E but these probably relate to the construction of the structure. The structure itself consisted of a central cist-like arrangement of stones, the limits marked by an unusually large basal course of the chamber wall (between stones 9 & 10). Parallel to this were two uprights and two flat slabs, apparently a floor stone and a capstone. On either side of this were stacks of small slabs which could represent the side walls (see fig 7, pl 4c). When opened the 'cist' contained only a large boulder and one fragment of crude pottery (no 14) which must cast some doubt on this interpretation. It has been suggested by the assistant director (J Ward) that it does in fact represent a platform similar to those found in Orkney stalled chambers. The structure could be interpreted as a raised central dais with lower subsidiary areas on either side. This is an attractive hypothesis as there are few parallels for cists in chambered tombs, but we could parallel a platform, though not in its details, in many tombs to the N. Unfortunately the absence of any burial due to the acidity of the soil makes certainty unobtainable. The burial was probably an inhumation as only small fragments of cremated bone appear in the lower infill; enough to show it survives but not enough to be deliberate.

The lower filling of the chamber consisted of light sandy soil c 3 in (76.2 mm) thick which became increasingly discoloured with depth and contained quite large quantities of charcoal. This seems to have overlain most of the lower portion of the structure though the tall vertical slabs at the front poked through. It is in this layer that most of the main chamber finds were discovered. Little significance can be attached to their distribution except to say that they never occur on the structure, appearing mainly in an area from the centre of the tomb to around the entrance. This suggests that the structure was kept clean which would support the idea of it being a platform which may have been reserved for burial. It could however mean that the peripheries of the tomb, including the platform, were not regarded as important when these finds were deposited and the soil accumulated. Above this layer in the S was a layer of grey clay which appears to have been a distinct deposit; it contained a cache of flint objects. The exact extent of this deposit is never specified but it does not seem to have overlain the structure. Definitely overlying this, however, was a hard layer c 1-3 in (25-75 mm) thick which contained large amounts of organic material (subsequently lost) and charcoal identified for radiocarbon date GU-1173. This only appears in the N where it was not overlain by fallen corbels or the overhanging roof and was surrounded

# THE ORD NORTH, LAIRG

Elevation



c h a m b e r

a n t e c h a m b e r

p a s s a g e

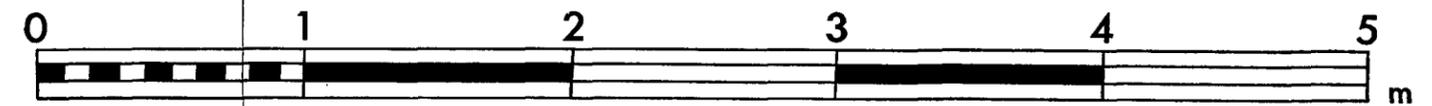
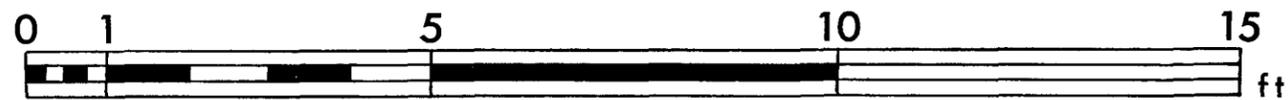


FIG 5 The elevation of the N wall of the tomb

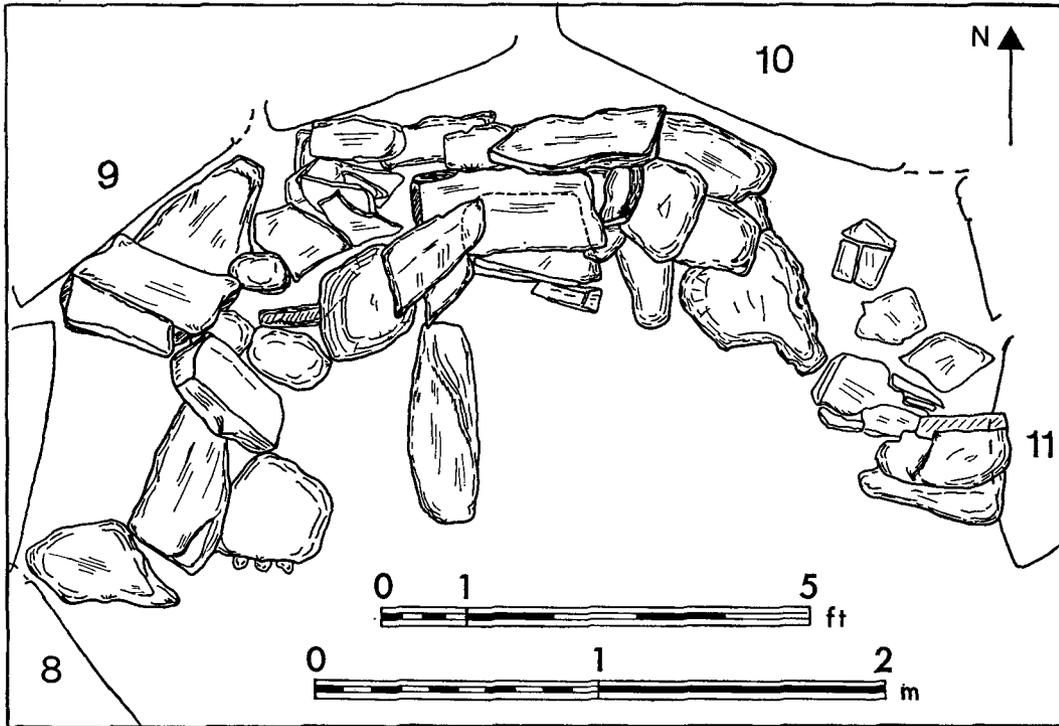


FIG 7 The 'platform' in the main chamber

above and below by the light sandy soil. This panning was probably caused by water percolation being impeded by an organic deposit in the chamber filling.

Above these primary deposits were the collapsed remnants of the chamber roof and cairn material. There were substantial quantities of soil amongst the stones but this is what one would expect as the decay of the stones used was quite considerable. The large roof corbels were found low in the chamber so it can be emphatically stated that there was no attempt to fill the chamber at the end of the Neolithic use of the tomb. Because of the soil present in this infilling, however, it is difficult to define precisely the transition between the primary deposits and the secondary collapse. One can only really use the distribution of finds and the density of stones present which suggest a depth of about a foot (0.3 m) of Neolithic material on the floor. It is not possible to tell if the roof collapsed accidentally or was deliberately destroyed but the former seems more than likely as decay of the stones used has left numerous cavities in the walls making them very unsafe. Within the collapse, however, we have clear evidence of human interference represented by cremated bone and pottery. The cremation deposits were concentrated in the W of the chamber adjacent to the walling between stones 8 and 9 and under the overhanging corbels. There are four main deposits A, B, C and D (see catalogue). B was in three distinct layers and contained the bone mount (catalogue no 57) but they all seem to represent one burial, a female over 30 years old. Some small fragments of cremated bone were found east of these deposits (E, F & G) and included at least one other person, a child of about 12 years represented by some teeth. The relationship of these to the main deposit is impossible to ascertain due to the homogeneity of the lower infilling but it seems unlikely that they represent more than one period of deposition. The main burial deposit lay on top of one of the collapsed corbels and another corbel

showed clear evidence of burning on its upper surface though it was not directly associated with the burial and it was not enough to suggest an *in situ* cremation. Charcoal was found in quantity throughout the filling but was also found directly associated with the burial deposits B, C and F (identified for date GU-1167). Above the burial deposit but still within the main chamber there was a layer less than 2 in (51 mm) thick of disintegrated granite, soil and very small fragments of charcoal which had in several areas been covered by flat slabs. The latter would suggest some sort of symbolic attempt to seal the burial deposit.

## CATALOGUE AND DISCUSSION OF THE FINDS FROM THE ORD NORTH

This section of the report is divided into four parts; first the pottery, then the flaked stone, then the other small finds and finally the cremated bone. Each of these sections is in two parts, the catalogue with the description and contexts followed by a discussion. In the catalogue all the small finds are numbered consecutively and in each section they have been numbered so that similar materials are grouped together. For example the pottery is divided up into seven different fabrics. It should also be noted that in this section where all the sherds of a fabric clearly come from one vessel no attempt to provide a description of each sherd has been made, this would take a large amount of space and provide few results. No attempt was made to impose a uniform structure on the discussion sections as these include several specialists' reports with which the author did not feel justified in interfering.

### A: THE POTTERY

The pottery from the tomb can be divided into basically seven different fabrics by visual examination. There is no overlap between any of these though some variations exist within two of the defined groups. Several of these groups appear to represent only the sherds of a single pot, though only one could possibly have been deposited complete. Very few of these sherds are even from adjoining parts of a pot so it is necessary to base the catalogue on a fabric division and give detailed descriptions of all feature sherds.

Fabric 1: This is a very fine, hard fabric, with a grey interior and light pink to orange exterior surface. It is very sparingly gritted and the grits used are small, c 2 mm at a maximum, and mainly quartz. The use of so few grits has resulted in a serious weakness which can be clearly seen by the surface flaking of all the sherds found. On no sherd does the interior surface survive and most of the exterior surface has also disappeared.

- 1 ON 56; Rim sherd; 83 mm × 80 mm; body thickness unknown but estimated to be c 7 mm; diam at mouth 140 mm.

The form of the sherd indicates the pot was a closed bowl, probably carinated, with the rim pulled out. Immediately below the rim two rows of vertical impressions survive. These impressions are similar to that produced by fingernails but the regularity of the shape of the impression and a slight scarring of the pot surface suggest that an implement was used. (This will henceforth be referred to as false fingernail decoration.) The implement used was 8 mm wide and c 1 mm thick with a noticeable curvature in its width. The latter characteristic would make a bone implement likely, rather than one made of wood. This was inserted into the pot's surface for c 2 mm then pulled back. There seems to have been some error during or before the firing as one part of the original surface is roughened and does not contain any decoration which should otherwise be present at this point. Fig 8, p1 5a.

This sherd lay in sandy soil just above the floor in the main chamber.

- 2 ON 56, 94; Rim sherds; 50 mm × 36 mm; thickness unknown but estimated to be 6 mm.

These two sherds are from the same type of pot as no 1, they join together and have an identical rim, body and decoration; the diameter was however 180 mm. Three rows of false fingernails survive but they do not preclude the continuance of these rows further down the body of the vessel. The surfaces of both these sherds and no 1 show traces of polishing on the top of the rim and on the prominent parts of the body. This may have been due to deliberate polishing or continued handling.

The larger piece, ON 56, came from sandy soil just above the floor in the main chamber; the smaller, ON 94, was trampled into the main chamber floor.

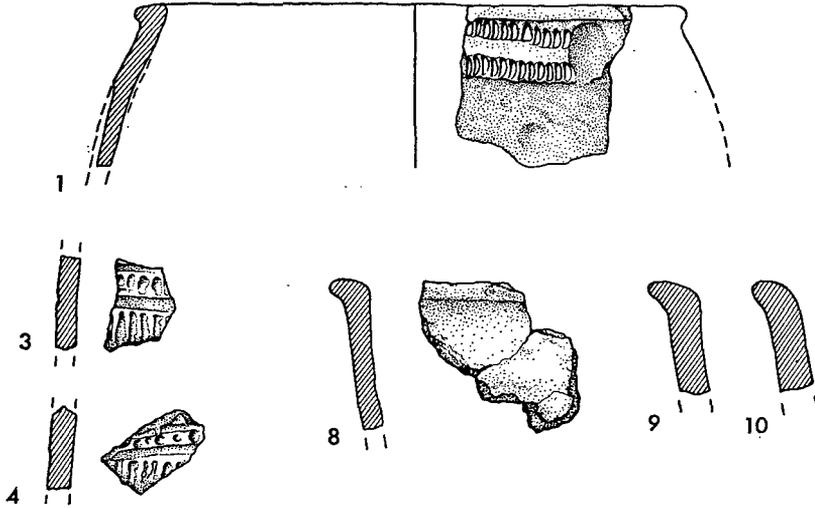


FIG 8 Pottery from the excavations (scale 1:2)

Fabric 2. A thin, fine ware with a black exterior surface and dark brown/red interior surface, the colour changes midway through the sherd. It is well fired with small, up-to-1-mm, particles of quartz and mica used as grits.

- 3 ON 65; Body sherd; 20 mm × 16 mm; 6 mm thick.  
 Decoration consists of a shallow groove, 3.5 mm wide, with shallow grooves or maggots running perpendicular to but stopping just short of it. To one side these stop just short of the broken edge of the sherd and another groove is just visible. The decoration has been burnished flat and is only brought out by the polishing which has occurred on the raised areas between the grooves. This makes the differentiation between grooving, channelling and maggot impressions impossible. Fig 8 pl 5b.  
 This was found in the silty/gravelly layer of the antechamber associated with the Unstan bowl (no 6).
- 4 ON 91; Body sherd; 26 mm × 20 mm; 7 mm thick.  
 Decoration consists of two shallow channels 3 mm and 2 mm wide curving across the sherd. Between these is a line of circular jabs only faintly visible. On one side running perpendicular to the channels are six grooves or maggots which, similar to the previous sherd, stop just short of the channel. In a particularly wide gap between two of these there is a line of impressions. This sherd, like 3, has had the outer surface with its decoration burnished. Fig 8.  
 This was found in the silty/gravelly layer of the antechamber associated with the Unstan bowl (no 6).
- 5 ON 84; Body sherd; 22 mm × 17 mm; 5 mm thick; undecorated.  
 Not exactly similar to nos 3 and 4, the outer surface is grey rather than black and there is no sign of decoration or it having been burnished smooth.  
 From the floor of the main chamber.

Fabric 3. A well-fired, hard fabric using small grits c 2 mm in size. The colour would originally have been creamy brown but some time after its use the pot was broken up and some of the sherds burnt black in places. This sequence of actions is clear due to the discovery of sherds from adjacent parts of the vessel with completely different colouring.

- 6 ON 35, 63, 64, 66, 68, 81, 82, 88, 89 & 90. A shallow carinated bowl: external rim diameter varies from 230 mm to 245 mm, and at the carination it is 214 mm: the depth is 94 mm. The thickness of the pot is 10 mm above the carination and decreases below it from 9 mm to 6 mm.  
 The rim has been pulled outwards and upwards producing a slight internal bevel and giving the exterior profile a gentle outward curve from the carination. At one point on the circumference,

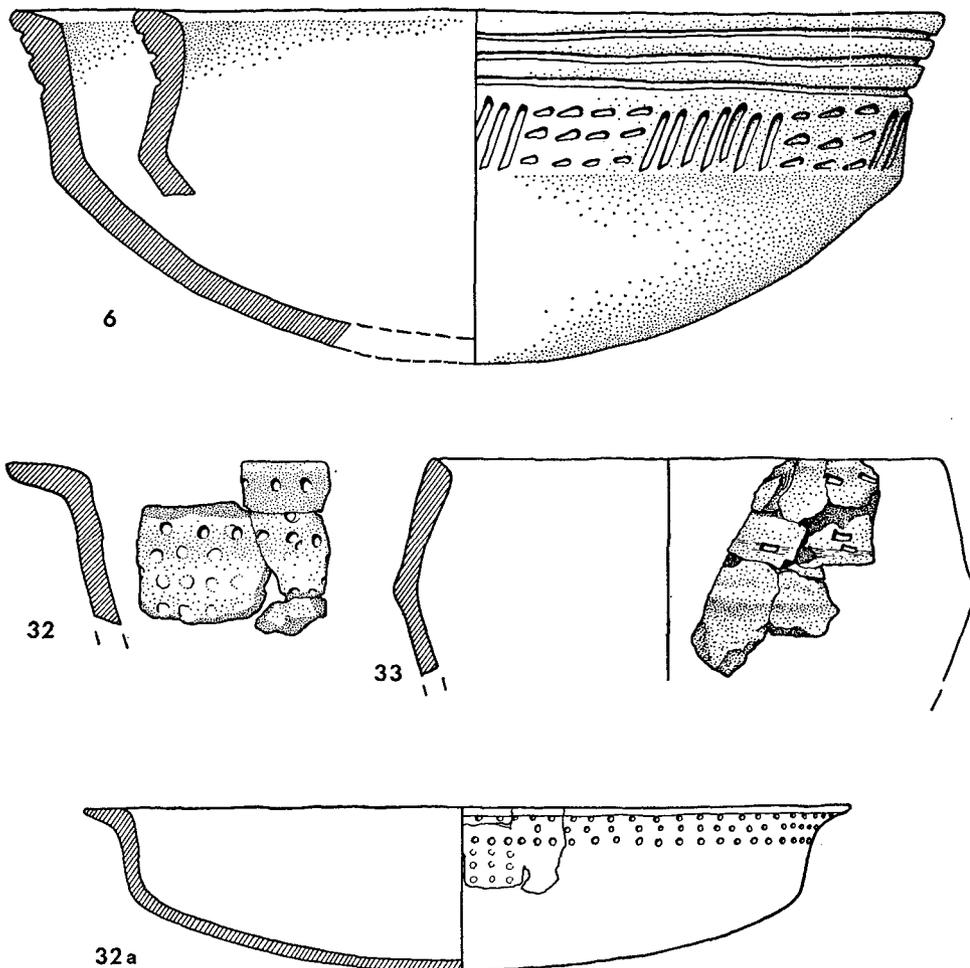


FIG 9 Pottery from the excavations (scale 1:2 except 32a, 1:4)

however, the profile is completely different and the pot does not thicken at the carination while immediately above this it is only 7 mm thick and curves noticeably inwards. It does thicken out for the rim but there is only a half-hearted attempt to give it any shape. This deformity is difficult to explain except as a potter's error, perhaps not allowing for the quantity of clay required and being thus forced to thin out the wall of the vessel. This does suggest that the pot was built from the base upwards as it is only at the end that he would realise his mistake. The surface of the vessel appears to have been smoothed off by a wide spatula-like implement before firing (see pl 5c). The shallow curving scrapes left by this on the surface are still clearly visible at one point on the base. Elsewhere they seem to have been burnished off after firing. The vessel is decorated by three grooved lines made with a square-ended tool which has been drawn round the rim rather carelessly as they do not join up but wave about. Below these are alternating panels of jabbed impressions and almost vertical stab-and-drag. There appears to be eight groups of each with between 7 and 10 stab-and-drag in each group and the jabbed impressions commonly occur in groups of 3×3 but at least one group of 4×3 is also found. Fig 9, pl 5c.

The sherds were scattered throughout a thick silty/gravelly layer in the antechamber.

7 ON 67; Body sherd; 20 mm×28 mm.

Separated from the silty/gravelly layer by a layer of charcoal.

Fabric 4. This coarse, easily broken fabric has a coal-black interior with a light, creamy-coloured surface, a uniform 1 mm thick all over though not a slip. Large quartz grits up to 8 mm have been used in considerable quantities and this has made the sherds very friable. On the occasional sherd where the size of the grits is reduced the fabric holds together well. The small size and poor quality allow for only tentative estimations of body angle and diameter.

- 8 ON 93; Rim sherd; 55 mm × 25 mm; 11 mm thick; diameter estimated to be 160 mm.  
Rim has been pulled out to a point. Fig 8. Associated with two plain body sherds, 40 mm × 25 mm and 29 mm × 25 mm, the latter was 10 mm thick.  
Impressed into the floor of the main chamber.
- 9 ON 70; Two pieces of rim; 10 mm × 7 mm and 35 mm × 30 mm; both 9 mm thick. The diameter of the latter is 140 mm.  
Its rim had been pulled out similar to 8 for part of the circumference but changed until it could only be described as thickened akin to 10. Fig 8. Associated with a body sherd 17 mm × 17 mm; 11 mm thick and ten fragments.  
From the primary deposits in the main chamber just above the floor.
- 10 ON 62; Rim sherd; 50 mm × 30 mm; 12 mm thick; diameter c 150 mm. External surface has been pulled out only slightly to produce a thickened rim. Fig 8.  
From the primary deposits in the main chamber.
- 11 ON 16; Rim sherd; 24 mm × 20 mm; 10 mm thick.  
External surface has been pulled out, slight internal bevel. Associated with a body sherd 32 mm × 22 mm and three small fragments.  
From the infilling of the main chamber after the roof collapse.
- 12 ON 80; Rim sherd; 15 mm × 10 mm.  
Very small piece of rim with a slight external lip. Associated with two body sherds, 22 mm × 20 mm and 18 mm × 18 mm, 9 and 11 mm thick respectively, and several tiny fragments.  
From above the cairn in the antechamber.
- 13 ON 96; Rim sherd; 19 mm × 19 mm; 10 mm thick.  
Only slightly pulled out. Associated with two small fragments.  
From the silty/gravelly layer in the antechamber.
- 14 ON 86; Two fragments of pottery, no external surfaces.  
In the slab construction in the main chamber.
- 15 ON 84; Two fragments of pottery, no external surfaces.  
From the floor of the main chamber under the slab construction.
- 16 ON 57; Body sherd; 80 mm × 15 mm; 13 mm thick.  
From the primary deposits in the main chamber.
- 17 ON 43; Three body sherds; 25 mm × 32 mm, 22 mm × 10 mm; 19 mm × 15 mm; all 10 mm thick; and numerous small fragments.  
From the grey clay layer in the main chamber.
- 18 ON 38; Four body sherds; 15 mm × 16 mm, 25 mm × 10 mm, 17 mm × 14 mm; 25 mm × 17 mm; all 10 mm thick.  
The latter has a slight carination. Associated with numerous small fragments.  
From the primary deposits in the main chamber.
- 19 ON 52, 36; Several small fragments.  
From the primary deposits in the main chamber.
- 20 ON 18, 30; Body sherd; 17 mm × 11 mm; 11 mm thick; and a small fragment.  
From the infilling of the main chamber after the roof collapse.
- 21 ON 67; Two body sherds; 20 mm × 28 mm and 30 mm × 25 mm; and several small fragments.  
From the top of the silty/gravelly layer in the antechamber.
- 22 ON 97; Fragment of body sherd.  
From above the uppermost charcoal layer in the antechamber.
- 23 ON 55, 61, 76, 87, 23; Fragments; one c 13 mm thick.  
From the antechamber.
- 24 ON 59; Body sherd; one 22 mm × 18 mm and a fragment.  
On the wall of the antechamber.
- 25 ON 46; Body sherd; 18 mm × 18 mm; 12 mm thick.  
Location unknown.

- The following sherds differ slightly from the normal fabric 4 sherds.
- 26 ON 101; Body sherd; 31 mm × 22 mm; 9 mm thick.  
The fabric contains more and much larger grits of quartz. The interior is greyer and the sherd seems to have been burnt as there is surface cracking.  
From the platform.
- 27 ON 98; Body sherd; 36 mm × 26 mm; 9 mm thick.  
Same fabric as 26 with a possible grass impression inside.  
From the main chamber.
- 28 ON 92; Body sherd; 16 mm × 10 mm; 6 mm thick.  
Much finer and better quality than normal fabric 4.  
From the antechamber sealed under the stones of the cairn.
- 29 ON 86; Body sherd; 16 mm × 13 mm; 8 mm thick.  
The creamy interior surface does not appear in this sherd.  
In the slab construction in the main chamber.

Fabric 5. Relatively soft ware with black interior while outer surface varies from a sandy colour to a grey brown. Substantial quantities of small white quartz grits have been used as a temper which gives the surface a noticeably speckled effect.

- 30 ON 33; 17 pieces from a simple splayed-out base. Largest piece 55 mm × 25 mm. Body of pot is 4 mm thick though it thickens gradually as it approaches the base. Exterior diameter of base 60 mm. Decoration consists of three wavy grooves above which is an irregular line of stabbed impressions. The vessel has been well fired and is of good quality. Fig 10.  
Probably situated in the filling of the chamber caused by collapse of the roof but see p 54.
- 31 ON 30; A small flat-based bowl; 110 mm high with a diameter of 130 mm at the rim, which has been bent outwards to form a pointed lip. Below the rim the body expands outwards to a diameter of 144 mm then gently curves in to the base which has a diameter of 94 mm. The body thickness is c 9 mm except at the base which rises from c 15 mm where it meets the body to 22 mm in the centre. Interpretation of the precise form of the base is difficult as the majority of it has crumbled beyond repair. The fabric of the vessel is extremely soft and friable, possibly the result of an inadequate firing. Some of the decoration has become smudged and indistinct due either to it being badly applied in the first place or perhaps to the effect of its use. Considerable areas of the pot's surface have flaked off and large quantities of the pot survive only as crumbs. This has made drawing fig 10 more of a reconstruction than a representation of the surviving vessel. The decoration consists of three bands of four horizontal grooves; below the lip, just below the waist and at the base. Separating these bands there are vertical rows of whipped-cord impressions. In the top section these are spaced about 10 mm apart but in the lower section they are slightly closer together and separated by vertical fluting. Between the foot of each vertical row there are deep kidney-shaped jabs and these are occasionally found replacing the maggot impressions. On the inside of the rim there are faint traces of whipped-cord impressions set diagonally. It is clear from examination of the decoration that it was casually applied. The vertical rows on the bottom section run at a distinct angle across the surface for several rows then quite abruptly this is corrected so that they run vertically again, totally destroying any continuity in the process. The numbers of whipped-cord impression in each row varies and several different shapes and sizes have been used. The horizontal lines are likewise crudely incised and tend to wander over the surface. Fig 10, pl 6a.  
The vessel was found above the collapsed corbels of the roof in the main chamber in positions that suggested it was broken up before deposition.

Fabric 6. A very hard well-fired fabric with a dark-grey interior and a creamy-orange surface which has a blue tinge to it on the exterior face. The inner surface has been exceptionally well burnished which has left fine striae visible in many places. The exterior does not appear to have been burnished. The grits used are on average very small, c 1 mm but go up to 3 mm. They are mostly quartz though some mica is present.

- 32 ON 102; Eight undecorated body sherds; 30 mm × 25 mm; 30 mm × 20 mm; 30 mm × 20 mm and 95 mm × 40 mm are the dimensions of the largest. All are 6 mm thick.

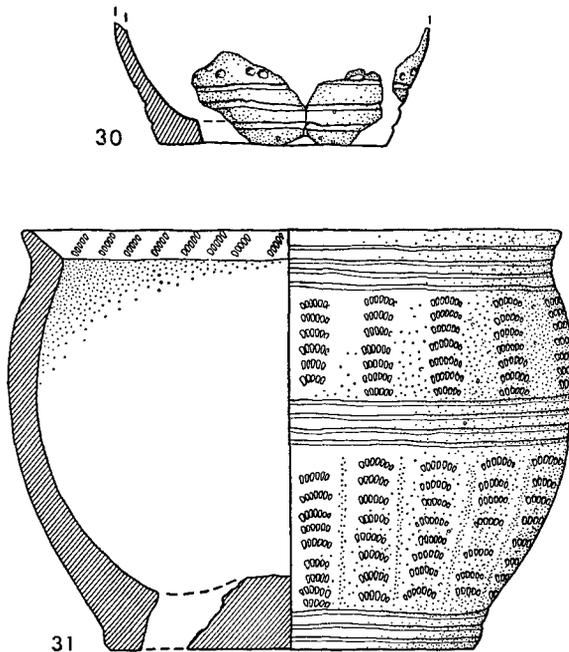


FIG 10 Pottery from the excavations (scale 1:2)

One has a noticeable curvature at its edge probably representing the beginnings of an inward carination. The large body sherd is almost flat and would have suggested a flat base had it not been for the slight trace of an S-shaped curve in its length. The outer surface of all these sherds has eroded quite badly, unlike the inner which is complete.

Two body sherds have been decorated with jabbed impressions  $20\text{ mm} \times 15\text{ mm}$  and  $20\text{ mm} \times 7\text{ mm}$ ; the latter is part of an outward carination.

Three rim sherds were also present;  $80\text{ mm} \times 25\text{ mm}$ ;  $25\text{ mm} \times 30\text{ mm}$  and  $50\text{ mm} \times 36\text{ mm}$ ; 6–7 mm thick. The first two consist of the flattened part of a rim which has been bent sharply from the body to lie almost horizontal. It extends 25 mm from the carination to the tip of the rim. The external diameter is 380 mm. The latter sherd (fig 9) includes part of the body showing the rim to be perpendicular to it. At the bottom of the sherd there are slight traces suggesting that there is an inward curve, perhaps even a sharp carination. Decoration on these rims consists of three lines of jabbed impressions on the exterior, one at the body, on the rim and at the carination. On the body there also appear to be three rows of faint circular impressions which occur below this on part of the vessel. Due to the identical treatment of these sherds and their presence together it seems highly likely that they are from one vessel. An attempt has been made to reconstruct this in fig 9. This is based upon the presence of an interior carination on a body sherd and also at the base of the large rim sherd. The carination would have to be very sharp to allow for the flatness of the largest sherd and it may be that the depth of the bowl is too great on the reconstruction. The open nature of the dish does help to explain the high quality interior burnish, however.

This was found under the platform just outside the entrance to the chamber.

Fabric 7. A hard well-fired fabric, grey with a black surface. Grits are almost invisible to the naked eye except for the odd piece of quartz. The black surface-colouring may have been caused by smudging as it is only a very thin layer and varies in consistency over the surface. It is most prominent around the rim of the pot.

33 ON 102, 103; The sherds consist of 25 small fragments; 12 body sherds on average about  $20\text{ mm} \times 20\text{ mm}$ , some undecorated but others with traces of decoration, and 8 rim sherds ranging from  $12\text{ mm} \times 12\text{ mm}$  to  $60\text{ mm} \times 45\text{ mm}$  (for latter see fig 9). It is unnecessary to describe all

these sherds as their fabric is identical and all the characteristic features are seen on the only piece with a reasonable profile. Economy of hypothesis would suggest they are in fact from one vessel. This vessel would be a simple, closed, round-bottomed bowl with an estimated diameter of 120 mm at the rim and c 140 mm at its widest point, 35 mm below the rim. Its depth is unknown. The sherds are all 6 mm thick. It has a simple flat rim though in places it has been tooled below so that it projects very slightly. The decoration consists of small rectangular impressions, 5 mm × 2 mm, which have been pushed at irregular intervals all over the surface of the upper part of the bowl. In most cases these lie parallel to the rim. At the maximum width of the vessel there is a pronounced cordon which seems to have been produced by thinning the area immediately below it. On one sherd there seems to be a groove running below this cordon. The only other decorative feature appears to be a very fine grooving running between some of the impressions directly above the cordon. There is also a tool mark running down from the rim on the illustrated sherd but this is probably accidental.

This was found at two points under the platform just outside the entrance to the chamber. Both deposits were associated with sherds of fabric 6.

### THE CULTURAL AFFINITIES OF THE POTTERY ASSEMBLAGE

Any study of the pottery from the Ord N is subject to severe limitations which must be stressed at the very beginning. Only two of the vessels can be reconstructed to give a complete profile. The fragments represent seven completely different vessels on the basis of form and decorative style. Little Neolithic pottery has been discovered on the mainland of the N of Scotland and very few of the vessels found at the Ord N resemble anything which has been found in the Neolithic of Scotland or even Great Britain. Consequently there is only a limited number of tenuous comparisons which can be made.

In dealing with the Neolithic pottery it seems best to start with the type which can be clearly paralleled, the Unstan bowl. Two possible examples of this were found, vessel No 6 (fig 9, pl 5c) from the antechamber and the sherds no 32 (fig 9) from outside the entrance which have been reconstructed as a shallow bowl (fig 9). The major distribution of these vessels is of course in Orkney with large quantities from the stalled tombs at Unstan, Taversoe Tuick and that recently excavated at Isbister (Ork 51, 49 & 25) and small fragments in many other tombs. Only one settlement is known with Unstan in Orkney at Knap of Howar, Papa Westray (Ritchie 1973, 74). Outside Orkney there are sherds from the settlement sites at Northton (Simpson 1976) and Eilean an Tighe (Scott, W L 1953) in Harris and North Uist respectively and also in North Uist an isolated sherd was found at Loch Olivat (Henshall 1972, 177). These Unstan bowls are of the highest quality and have been dated to  $2461 \pm 79$  bc (BM-705) at Northton (Simpson 1976). Previously, the only earlier dates were from Knap of Howar before those from the Ord N were obtained. On the Scottish mainland isolated sherds of Unstan bowls have been found at Skitton, Caithness and Urquhart, Morayshire (Stevenson 1948) and there are related vessels from Kenny's Cairn in Caithness (Cat 31, Henshall 1963, 254) so the Ord N helps to fill in the distribution pattern.

Before continuing with more detailed comparisons of Unstan bowls it is important that a definition is made, as at present there is a certain confusion over the use of this term. Piggott (1954, 248) originally defined Unstan ware as all the pottery in the stalled cairns of Orkney, these he could describe as of two forms: 'plain unornamented round bottomed bowls, straight sided or incurved and with simple developed rims or bowls in which a carinated form is produced by an applied fillet or cordon' and 'a shallow open bowl with vertical collar which is usually ornamented either in channelled or in stab and drag technique'. Quite clearly the bowls from the Ord N fall into the second category. In recent years, however, the tendency has been to restrict the term Unstan exclusively to these vessels and Henshall has gone so far as to redefine the term as 'a wide,

shallow, round based bowl, the external diameter at the carination being more than double the total depth of the pot, having a vertical collar clearly defined outside which is generally decorated' (1977, 9). She then goes on to comment upon the typical decoration and rim types and this should be accepted as part of the definition. This is referred to as the Unstan type or bowl.

This change in definition reflects a conflict in the meaning of ceramic classifications which is of crucial importance to the study of Scottish Neolithic pottery today. Piggott used the term Unstan to represent an assemblage of various pottery forms which were in constant association and therefore, he thought, represented a contemporary set of ceramic styles used by a distinct society. Henshall has used the term to apply to a specific vessel form without any *a priori* meaning in relationship to the society using it. Clearly, therefore, there is some need of discussion and if possible standardisation of how we are to define the pottery of this period. This has been started by Scott who set forth several principles by which Scottish Neolithic pottery should be studied (Scott, J G 1979, 26). The important principles are:

- (a) Various traits of shape and decoration together form a tradition: out of them may coalesce a style, or styles.
- (b) Groups of traits associated with the pottery tradition of one region may be transmitted to a further region, to be recognised in the pottery of that region. If sufficiently well established, this pottery may then merit a style name of its own.
- (c) A pottery style, once established, may develop in stages which though differing from one another, may retain a family relationship.

The major criticism that one can make of these 'principles' is that they do not consider the relationships between material culture, ceramics in this case, and the people that used it. This is emphasised by an inadequate definition of the terms employed, for instance what is the difference between a 'style' and a 'tradition', what does 'well established' mean and how does one differentiate between 'stages' and 'styles'? The result is a framework which fails to take into consideration the basic problems of ceramic studies for the Scottish Neolithic, the absence of large assemblages, the dominance of the material from chambered tombs, and the inadequate and disputed chronology. These problems are exacerbated by the use of site assemblages which were either the product of bad excavations or where the stratigraphy was insufficient to separate chronological phases. Thus at Loanhead of Daviot the presence of 'fluted', typically early-middle Neolithic sherds is more likely to indicate disturbance of an earlier occupation than the tradition carrying on into the beaker period (Scott, J G 1979, 37; Henshall 1972, 171). This disturbance and confusion is particularly likely to occur in chambered tombs which we know from, for example, the Ord N were a focus of attention for at least a thousand years. If one accepts these are problems then it is difficult to believe that at the moment one can adequately define 'styles' in the Scottish Neolithic. In most areas we do not know if different assemblages are contemporary, if these assemblages include extraneous material and if part of the style is unrepresented or over-represented by the archaeological bias towards ritual contexts. The simplicity of the theory excludes numerous possibilities including the fact that different ceramic styles can be used by the same people for different functions and in different contexts. The latter problem has now been accepted as an important factor in the archaeological record of the succeeding late Neolithic and early Bronze Age period (Burgess 1980, 41). Because of these problems it seems best to use the much more restricted definitions which relate to specific vessel forms devised by Henshall. This is particularly necessary when discussing Unstan bowls as their significance, chronology and function are still a matter of considerable debate (Clarke forthcoming).

To return to the vessels from the Ord N both of these would clearly fall into the shape

definition of Unstan bowls. No 32, however, does not have the typical rim and decoration of other examples and may best be regarded as related to the type. The best parallel for the rim of this vessel is in SW Scotland at the Hilton chambered tomb on Bute (Marshall 1976). On the two bowls at Glecknabae (But 4.122), at Knappers Farm, Dunbartonshire (Mackay 1950, 235, fig 1.2) and Clettraval in North Uist (Ust 12.2) there are also distinctly similar projecting rims. This feature is in fact an important characteristic of Scott's Rothesay style (Scott, J G 1977, 32) and predominantly occurs in SW Scotland. None of these vessels, however, have the quality of fabric which along with the shape of the Ord bowl are traits of the northern isles. The punched decoration can be seen on several of the vessels from Northton and Eilean an Tighe where it occurs below the more typical slashed areas, and at Clettraval it occurs on the inside of a rim (Ust 12.4). Punch marks are also found on the rim of the lugged bowl (no 6) at Beacharra (Scott, J G 1963, 146) and on several Unstan bowls from Isbister (Ork 25; Henshall 1977, 10) though at the latter it is of a very irregular nature.

The other Unstan bowl from the Ord N is a much more typical example and is nearest in shape to the simple bowls found at Unstan (Ork 81: particularly no 5). The decorative features are similar to those on several Unstan assemblages. The jabs appear particularly common at Isbister (Ork 25; Henshall 1977) and on a sherd from Blackhammer (Ork 3.1). The three horizontal lines immediately below the rim appear on the fine bowl from Rowiegar (Ork 31.1) and stab and drag marks are a relatively common feature on many vessels though not precisely similar, tending to be joined end-to-end. The combination of all these elements again is not exactly paralleled on any other vessel but it does show the common trait of alternating panels of decoration. Thus the vessel would not have been regarded as unusual if it had been found in a stalled cairn on Orkney.

The vessel represented by sherds no 1 and 2 is clearly a closed bowl; unfortunately it is broken off above the carination, which would be expected from the body angle, so there is no indication of its depth. If it was a deep bowl it could be paralleled in the Hebrides whereas if it was a shallow bowl it could be related to Unstan bowls like the bowls from Kierfea Hill (Ork 26.1,2). It is, however, more likely to lie between the two which would make its closest parallels the Beacharra Bowls of the SW. J G Scott (1977) has recently argued for an early Neolithic date for the appearance of these bowls, in contrast to Henshall (1972) and McInnes (1969), and the dates from the Ord N would support this. The rim form is best paralleled in the assemblage at Eilean an Tighe (Scott, W L 1953) in particular EOA 185 in the National Museum which has a similar body angle. One could also however regard this rim-form as a natural development from the everted rims of the Beacharra bowls at Clachaig (Arn 16.1) and Beacharra itself (Arg 27.3). The fabric of these sherds from the Ord N is however of a much higher quality than these vessels and is as hard as anything found in Scotland. The rusticated decoration is a local trait of the N of Scotland and is found at Kenny's Cairn (Cat 31.1,2,3) and Carn Glas (Ros 12.5) as well as being recorded from several of the Caithness tombs excavated by Anderson (1870) and on several Unstan bowls, particularly those from Isbister (Henshall 1977). It does not occur elsewhere in Scotland at this date with the exception of a bowl from Beacharra (Arg 27.5).

The rest of the Neolithic pottery is very difficult to parallel elsewhere. The very crude sherds of fabric 4 probably represent a round-bottomed bowl of Piggott's form A which Henshall has dismissed as 'so simple and widespread that their study is unrewarding' (1972, 167). The possible presence of a carination on one sherd, no 18, may signify a bowl form similar to that at Glecknabae (But 4.1). Its rim form is difficult to parallel exactly but one can use the simple rims at Bickers House (But 5.2) and Sandyhill Smithy (Ork 47.2) for comparison. The simple oval bowl of fabric 6 is of similar shape to these but the quality of firing and the fact that it is a closed bowl sets it in a class of its own. The presence of a cordon does relate it to several Orkney bowls (Ork

37.5; Ork 49.6) but the likeness is not close. Its decoration is unique in early-middle Neolithic wares as it seems to consist of some sort of impressions, which is a feature much more common in the later Neolithic Peterborough wares. These, however have a completely different fabric and are much larger and cruder vessels. This leaves the decorated sherds of fabric 2 which are too small to give any indications of form and the decoration is very difficult to understand as it has been burnished flat. It does, however, appear to consist of a pattern of either maggots or incisions. This and the fabric at first impression seemed to point to a very high quality beaker. However, the two radiocarbon dates associated with this from the antechamber preclude that hypothesis and it now seems more similar to Unstan bowls like those from Northton and Eilean an Tighe. The size of the sherds, however, precludes any degree of certainty in this attribution.

In conclusion then little has come from this examination of connections for the Neolithic pottery from the Ord N except to emphasise its uniqueness. Its main importance is that it shows the existence of technically advanced pottery production during the Neolithic in central Sutherland. This area had hitherto not produced any pottery of an equivalent date and it seems quite possible that other areas previously barren of artefacts but containing chambered tombs will produce ceramic assemblages. A variety of styles seem to have been the result of local inventiveness based on the common Neolithic traditions as there are no close parallels except for the Unstan bowl. This is dated before most of those found in Orkney so an origin in the northern mainland can not be ruled out and indeed would seem likely as the distinctive tomb type, the stalled cairn, in which the majority of vessels occur, originated on the mainland. The concentration of vessels in Orkney is directly related to the finds from these tombs and so could be the result of a different tomb ritual in the area. It is more likely, however, to be the result of repeated clearing out of the smaller tombs on the mainland throughout the Neolithic period when the pottery traditions were changing. The stalled cairns would not require emptying as they were seldom fully used and therefore the earlier pottery would be preserved.

The vessels associated with the Bronze Age cremation are both of the same fabric but they are quite different in form. No 30 is by far the finer and better fired of the two. No 31 belongs to the food vessel group and shows connections with two classes of this type, the simple Irish-Scottish bowl and the Globular bowls (Burgess 1974, 184). The latter has the pulled-out rim and thickened, concave base while the former is reflected in the shape of the body and the decorative style. Simple Irish-Scottish bowls are quite common in NE Scotland (Abercromby 1912) and an example from Urquhart, Moray provides the best parallel for the Ord N bowl. Under a cairn in a cist filled with charcoal and wood ash but no bones (Morrison 1880), a simple bowl was found with a slight out-turned rim, its decoration consisted of two areas of whipped cord patterning divided around the middle of the bowl by grooves and bordered at the rim and base by similar grooves. It is interesting to note that the decoration of the Ord bowl would be the ultimate typological development according to Simpson (1968, 207) of Irish-Scottish bowls: 'the panels have become vertically attenuated producing pots with lines or grooves'. But there is still insufficient evidence to assess the accuracy of this scheme.

The base sherds no 30 are more problematic. They were originally described as Grooved Ware (Henshall 1972, 578) but this can no longer be accepted because of the similarity in fabric with no 31, the food vessel, the position in the chamber infilling associated with the cremation, the radiocarbon date from the latter and the actual shape of the vessel. Grooved Ware is generally much thicker and cruder than this vessel and the graceful curving profile is very difficult to parallel on bases in either Scotland or England (Childe & Grant 1947; Longworth 1971). The shape and quality of the vessel suggest a close resemblance to beaker which unfortunately can not be confirmed due to the absence of the upper parts of the vessel. It should be stated that grooving and

impressions are not unknown in the beaker decorative repertoire (Scott, W L 1934, 216). The most likely hypothesis is that the makers of the food vessel (no 53) also made a vessel which was strongly influenced by contact with the beaker tradition.

Associated with these two pots was the bone mount, no 57, which is extremely difficult to parallel. It seems unlikely that it represents part of a decorated pommel for a dagger as where these survive (Henshall 1968) they are rectangular in section. The only bone mounts in Britain which have a circular cross-section are those from the Bush Barrow burial (Annable & Simpson 1964, 45-46, 99, fig 174). It seems highly likely that the Ord N example came from the shaft of a battle axe or macehead. Two battle axes have been found with Food Vessels at Calais Wold Yorkshire and Doune, Perthshire (Simpson 1968, 200) and there is a macehead associated with a Yorkshire Vase, again at Doune, Perthshire (Roe 1968, 171). Further, the Bush Barrow mounts have zig-zag decoration (and the ferrules here are in fact very similar) though the decoration has been cut out rather than incised. The date for the Ord N would also be in keeping with the later part of Wessex I suggested by some recent workers (eg Burgess 1974, 189-90).

## B: THE FLAKED STONE ASSEMBLAGE

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Notes: (i) The catalogue entries are split into three sections; first a description of the flake, then the microwear examination and finally a description of its exact context as close as it can be discerned from the site notebooks.

(ii) Dimensions are given in millimetres in the order—length: width: thickness.

(iii) When examining the pieces they are always held with the dorsal surface uppermost and the proximal end towards the observer.

(iv) Cortication refers to the matt discoloration, usually white or cream, which may cover the surface of a flint with time. Patination is the lustrous sheen that may subsequently develop (Shepherd 1972, 114-18).

(v) A blade is a flake where the length: width ratio is at least 2:1.

(vi) the microwear entry is first the edges used, then in parenthesis the edge angles, followed by the motion which was used and finally by an approximation of the material worked.

(vii) There is some disagreement over whether some tools were retouched so both specialists specifically state their opinion in all cases.

### Flint

- 34 ON 100; Secondary flake; translucent honey; cortex platform; hard hammer; 30:17:08.  
Left distal (53°); cutting; soft.  
From the platform surrounding the cairn.
- 35 ON 51; Secondary flake; translucent honey; slightly corticated; cortex platform; 26:21:05.  
Left distal (32°); cutting; soft.  
From the grey clay layer in the main chamber.
- 36 ON 69; Secondary flake; translucent honey; slightly corticated; lightly patinated; cortex platform; 18:20:06.  
Right proximal (67°); scraping; medium.  
From the grey clay layer in the main chamber.
- 37 ON 71; Secondary flake; red/brown; flawed; steep distal end; unretouched but microscarring on the distal end; 21:18:09; unretouched scraper. Fig 11.  
Distal (retouched) (75°); scraping; soft/medium with abrasives. Right distal (retouched) (79°); scraping; soft/medium with abrasives. proximal haft.  
From the primary filling of the main chamber, close to the floor.
- 38 ON 60; Secondary flake; translucent honey; corticated; artificial platform; hard hammer; 18:29:04.  
Unused.  
From the primary filling of the main chamber, possibly associated with the grey clay layer.

- 39 ON 45; Inner flake; pale grey; corticated; artificial platform; hard hammer; 19:18:03.  
Unused.  
Probably from the grey clay layer in the main chamber.
- 40 ON 22; Inner flake; pale grey; corticated; 15:10:04.  
Distal (64°); scraping; soft. Left proximal (84°); scraping; soft.  
From above the roof corbels, collapsed into the main chamber.
- 41 ON 40; Core trimming flake; secondary; pale grey; corticated; artificial platform; 12:14:06.  
Proximal (platform edge of core) (86°); scraping; medium.  
From the platform surrounding the cairn.
- 42 ON 51; Blade; inner; red/brown; artificial platform; 28:09:03. Fig 11.  
Right (47°); cutting; soft. Left (36°); cutting; soft.  
From the grey clay layer in the main chamber.

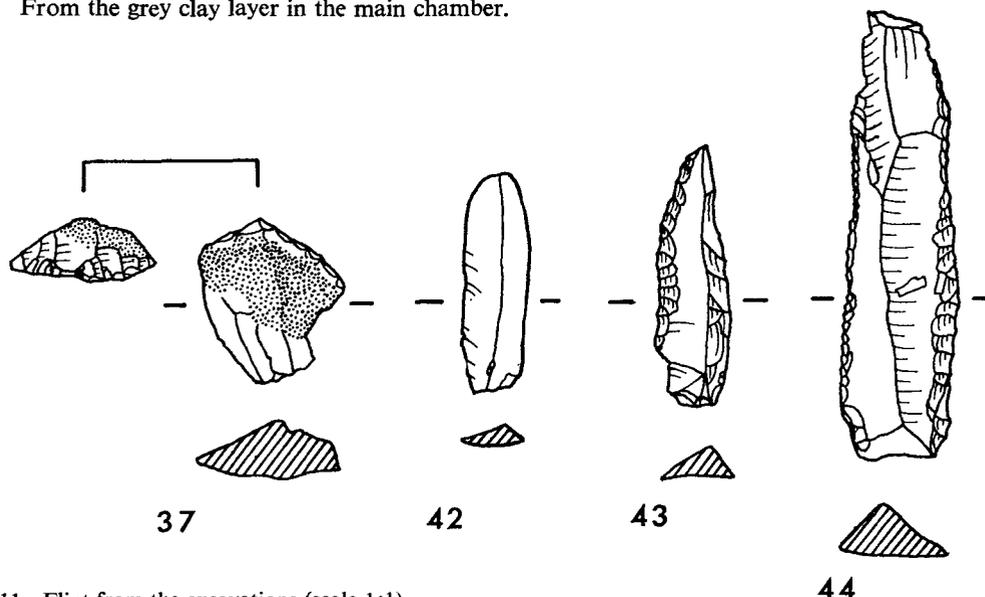


FIG 11 Flint from the excavations (scale 1:1)

- 43 ON 51; Blade; inner; orange/brown; flawed; artificial platform; hard hammer; left edge small irregular retouch; both sides converge to blunt point at distal; 34:11:04; single edge retouched blade. Fig. 11.  
Distal (burinated) (90°); engraving; medium. Right (surface retouch) (58°); cutting; medium.  
Left (retouched) (56°); scraping; soft/medium; ?handling.  
From the grey clay layer in the main chamber.
- 44 ON 51; Black; inner; translucent brown; partially corticated; artificial platform; hard hammer; left edge deep microscarring; right edge irregular retouch and microscarring; distal blunt; 60:15:09; single edge retouched blade. Fig 11.  
Distal tip (84°); rubbing; hard. Right (retouched) (70°); scraping: hard. Later scraping soft or ?handling. Left (75°); scraping; hard.  
From the grey clay layer in the main chamber.

## Pitchstone

- 45 ON 41; Secondary flake; dark grey; patinated; cortex platform; hard hammer; 17:14:02.  
Right (34°-47°); cutting; soft.  
From the platform surrounding the cairn.

## Quartz

- 46 ON 54; Flaked lump; 18:18:12.  
Unused.  
From above the roof corbels collapsed into the main chamber.

- 47 ON 102; Primary flake; 20:22:07.  
Unused.  
Under the platform outside the entrance.
- 48 ON 23; Primary flake; 14:15:07.  
Unused.  
From above the roof corbels collapsed into the chamber.
- 49 ON 58; Secondary flake; parallel sides; 46:25:11.  
Right (60°); cutting; medium.  
From secondary infilling of the antechamber.
- 50 ON 58: Inner flake; 29:26:11.  
Right (85°); scraping; medium.  
From secondary infilling of the antechamber.
- 51 ON 102; Inner flake; 22:21:08.  
Right (38°); cutting; soft. Left (72°); cutting; soft.  
From under the platform outside the entrance.
- 52 ON 69: Inner flake; 11:13:02.  
Right (42°); cutting; soft.  
From the grey clay layer in the main chamber.
- 53 ON 58; chunk; 21:16:07.  
Unused.  
From the secondary infilling of the antechamber.
- 54 ON 74; Inner flake; subcircular plan; shallow unifacial retouch on ventral; irregular retouch around edges; 24:19:05.  
Miscellaneous tool.  
Distal (retouched) (53°); scraping; medium. Right distal (retouched) (68°); scraping; medium. Left distal (retouched) (51°); scraping; medium. Haft on proximal haft.

#### Analysis of the flaked stone industry

Caroline Wickham-Jones

Three types of stone are represented on the site: flint, pitchstone and quartz. Pitchstone, however, is only present as one flake (no 45). Amongst the flint there are both flakes and blades of several colours (see catalogue). This, together with the state and type of cortex, indicates that a pebble source has been used to provide the raw material. The pebbles were of quite good quality, few of the pieces are flawed, and could have been collected from any beach or river source. However, analysis of the pitchstone (by O W Thorpe) has shown that it originates from Arran so there is some indication of long-distance sources.

Some of the pieces (eg nos 39, 43, 43 & 45) show evidence of the practice of knapping with indirect percussion through punches, probably in this case of antler as quite a pronounced bulb is often present. This technique is particularly well suited to the working of a pebble industry. The presence of the blades (nos 42, 43 & 44) is evidence of the degree of control possible in the knapping process. Only two of the pieces, 43 & 44, are actually retouched but most of them could have been used very efficiently as tools.

The quartz is somewhat coarse but it has been knapped with a high degree of control and functional pieces have been produced, although only one piece, 54, is retouched. As with the flint a local pebble source was probably used.

The distribution of pieces throughout the cairn would appear to be random, the bulk of the material being associated with infilling layers rather than with actual features. There is no differentiation as to the type of piece found in any particular area and quartz and flint are intermixed. Although not many of the pieces are retouched there is very little débitage, just a few small flakes and one core trimming flake (no 41). Most of the pieces could have been efficiently used as tools.

The industry present is one in which local pebbles of both quartz and flint were skilfully flaked, although there is little actual evidence of knapping activities. Unfortunately, the distribution is quite random. It is possible that some of the pieces have moved from primary positions, through the cairn material, to secondary positions in the infilling of the chamber and antechamber. None of the pieces are culturally diagnostic and the morphology of the collection is, in fact, more likely to have been affected by the available material than by artificial cultural limitations.

## The Low-Power Microwear Analysis of the Flaked Stone Pieces

Rosemary Bradley

A microscopic analysis of all the 21 flaked stone pieces retrieved from the excavation of the cairn at the Ord N was possible since none of the pieces had been burnt. It was done using a Wild M8 Stereo-microscope with magnifications of 6x to 50x and transmitted light sources with no surface preparation of the pieces. Variables that could affect the formation and distribution of use-damage were noted and measurements were made of the angles of the working edges once their use had been determined by the method of Barnes and Cheynier (1935, 295) using a bevel gauge and protractor.

The main method used for establishing the function of the pieces is the form and position of edge damage, especially the disposition of microscarring following Tringham *et al* (1974). Modification to this approach has been made based on my own replicative experiments and experience. Here analysis has been limited to the mode of action and material worked on each functional edge since the sample is very small and no clear and recurrent morphological types are present.

My replicative experiments to date have been only concerned with the damage that is sustained on high-quality Brandon flint and on flint from Buchan in Aberdeenshire. While the results of these experiments can be used on the flint pieces from this site this is not the case with those items made of quartz. Work has shown that quartz does scar in a broadly similar way to flint as seen by low-power microscopy (Broadbent & Knutsson 1975). Due to my unfamiliarity with the use-damage sustained by quartz during use and lack of replicative experiments to provide a control sample, any statements here on the function of the non-flint pieces must be taken as highly subjective and very tentative.

As the sample is very small and to avoid repetition of various points it will be treated as a single unit and not divided up into the different levels in which the pieces were found. The analysis is primarily ordered by the differences seen in function and not on other attributes like edge angle or general morphology, so each type of use will be discussed in turn.

None of the pieces had evidence of post-depositional damage of any type. The occasional smoothing of the edges could be due to soil movements but this still has to be proven experimentally. There is none of the severe polishing rounding and scratching commonly seen on pieces exposed for some time, hence it seems probable all the pieces were dropped and then buried fairly rapidly.

Six of the 21 flaked stone pieces studied microscopically were unused, representing 28.6% of the total, two were of flint (nos 38, 39) and four of quartz (nos 46, 47, 48, 53). Of the flake types one was primary, one secondary, two tertiary and two chunks so no particular type of flake was selectively rejected. None were retouched. All were small, under 25 mm in length and 30 mm in width but since equally small pieces were also used this is not the sole reason for their discard. The two flint pieces have a lack of suitable edges for use and this is the most important feature in determining why they were discarded. No 38 has a hinge termination on the right side and thin, feathered distal and left edges whereas no 39 is very irregular all around its periphery. Similarly some of the quartz pieces have equally unsuitable edges morphologically. The chunk no 53 is so irregular it is difficult to define an edge at all and no 46 has a lateral break making its right side very steep. However, some of the edges on the quartz pieces were suitable for use but were left untouched. It would be unusual if every edge that could be used was used. One cannot guess on the basis of shape of the edges or the piece as a whole whether it is likely to have been used or not.

Fifteen flaked stone pieces (71.4%) were used on one or more edges of which six (28.6% of the total, 40% of pieces used) functioned solely for cutting and two more for cutting combined with other activities. Altogether nine edges were used to cut for no 42 had left and right sides used whereas the other pieces showed unilateral use. Four of the flakes were secondary and four were tertiary, only one was retouched (no 43) on the edge used for cutting. This lack of secondary working on an edge used transversely is not unexpected for often a raw edge will work extremely well in this mode. The rate and extent of damage increases both with the resistance of material worked and the time a piece is used. From the evidence of microwear it is seen that here seven of the nine edges worked soft and the remaining two medium materials, often for only a short time. The raw edges are all fairly substantial and it would be unnecessary to retouch them to give extra strength because the substance worked was soft enough not to scar them excessively during use. When an edge was blunted it would be easier to manufacture a new flake than to rejuvenate a used one for this tends to steepen the edge angle. Indeed in cutting the edge angle must not be too great as this affects the thickness of the flake's edge. If this is too steep the depth of the cut will be impeded by the bulk of the stone and friction will be increased. The edge angles show a clustering towards the

lower values which are more suitable for cutting: four are under  $40^\circ$ , two between  $40^\circ$  and  $50^\circ$ , and three between  $50^\circ$  and  $60^\circ$ . There is a predominance of use on the right sides of pieces with only three used on the left edges in whole or in part. The absence of use in this mode on distal and proximal portions is explained by the general morphological unsuitability of such edges to cutting.

A few pieces deserve special comment: no 35, used on the left distal edge ( $32^\circ$ ) for a short time has interesting scar patterns. The used edge is very sinusoidal and the scalar scars produced are asymmetrical showing the slices were made in one direction from the proximal to the distal ends only and not to and fro as on other pieces.

No 42 has both its regular edges used for cutting but damage is more extensive on the left ( $36^\circ$ ) side than on the right ( $47^\circ$ ) even though both worked a soft material. An explanation may be that the left edge was used longer or more vigorously but perhaps also the lower edge angle can account for the difference. The variation of  $11^\circ$  between the two edges would be reflected in the strength of the edges and hence their ability to withstand damage. The lower edge angle would be attacked far more by use-scarring for the same amount of work. This can be used to explain why the right side on piece no 43 that was used to cut received flat surface retouch before use. The material worked was medium (like wood) and examination of the cross-section shows the edge may originally have been quite thin and thus was retouched to increase its strength. It is also possible that the damage here interpreted as just cutting may also be mixed with damage from hand-holding the piece during use. The retouch in this case would have functioned to blunt a thin and very sharp edge. None of the pieces were hafted and this combined with the lack of surface and edge preparation in most cases suggests those pieces selected for cutting were chosen for a brief use and then discarded.

Seven pieces (33.3% of the total, 46.7% of used pieces) functioned as scrapers in whole or in part and a further two (nos 43, 51) were used in other activities as well, no 43 for engraving, cutting and scraping and no 51 for cutting and scraping. In all 13 edges were used in this mode of action of which one was proximal, four were left, four were right and four were distal. The proximal end is generally unsuitable functionally and this case is slightly unusual. It represents the worked platform of a core that was used incidentally as a scraper after the core trimming flake was detached, probably because the shape and edge angle ( $86^\circ$ ) were suitable for scraping the medium material like wood or tough hide which rounded and scarred the surface and outer edge of the platform. There is no other preference seen in the edges selected for use, although the sample is small.

Six of the sides that scraped were retouched and seven were not. Of those left unaltered all had naturally high edge angles making additional secondary working generally unnecessary. The use of retouch on scrapers is to provide an edge which functions efficiently but does not wear too quickly. Those pieces working soft material were probably retouched to give a regular edge so that eg in the skinning of animals and hide working no sharp projections were present to hamper the work. However, those used on hard materials received retouch to stabilise the edges which deteriorate very rapidly in transverse action on a hard substance. A raw edge will be scarred and flaked by use until it reaches its edge stability angle (Keller 1966, 509; Broadbent & Knutsson 1975, 122-4). To prevent this incidental and uncontrolled scarring the piece is retouched to an angle close to the value that would be achieved otherwise through use. Thus the edge is preserved as severe scarring is reduced and it lasts longer.

In all cases for a successful transverse action the edge angle must be amongst the higher values which is seen here. Two edges have values under  $60^\circ$ , three between  $60^\circ$  and  $70^\circ$ , four between  $71^\circ$  and  $80^\circ$  and four over  $81^\circ$ . There is a dominance of softer materials worked, the three edges processing hard materials all lie on one piece (no 44) and if they are put aside then one edge is used on a soft substance, two on soft/medium and five on medium substances indicating the working of less resistant materials generally. There was a selection of tertiary (5) and secondary (4) flakes for scraping and no primary flakes. In fact no primary flakes at all have been used on the site.

Only two pieces have evidence of a haft. No 37 whose distal ( $75^\circ$ ) and right distal ( $79^\circ$ ) edges (retouched) were used to scrape a soft/medium substance like wood or dry hide (with abrasives as the edges are smooth and rounded) has slight damage on the proximal half possibly because of a haft. Indeed, the left side appears to have had a thin burin-like spall detached possibly to remove a thin edge and to narrow the piece for insertion into a socket.

The quartz flake no 54 is a very fine piece with even retouch around the distal end ( $53^\circ$ ) used to scrape a medium material. The left distal and right distal edges also carry scarring both dorsally and ventrally showing the action as more of a sweeping slice than a steady push or pull as is likely with no 37. The proximal portion was hafted leaving part projecting. The curved shape of this piece is one often

selected for scraping because it is particularly suitable in the working of skins for the distal end is curved away clear of the ventral surface. Hafting not only increases the ease of holding a small piece but also if one is working fresh hides a stone tool can become slippery and difficult to grip. Also hafting increases the mechanical advantage by providing a longer lever to operate; this is particularly true of small items. It is likely that if a piece was designed for a scraping mode and was envisaged as having a long life a haft would be provided to increase its effectiveness especially if it was small.

Piece no 40 is interesting because microwear analysis helps to reconstruct the method of use. The flat unretouched distal end (64°) was moved backwards in scraping with the flat face kept next to the soft material worked hence detaching microscars on the dorsal surface and only rounding the ventral face and polishing it.

The tertiary flint flake no 44 is also notable. The right retouched side (70°) scraped a hard material detaching step flakes that overlap and scar the edge. These scars were later modified by uses on a softer material, which must have been flexible as the polish, smoothing and faint microscarring associated with this phase of use extends up the surface for some distance. It could be that this use-wear was due to handling but it is rather extensive and the working of hides or perhaps vegetable matter is more likely. The distal edge (84°) rubbed a hard substance in a scraping action and sustained quite pronounced wear but it is the long left edge which has been most damaged. Measurement of the spine plane angle (Tringham *et al* 1974) can be used to determine the approximate edge angle before use on this piece which was about 68°. All the tiny 'retouch' seen on this surface is due to prolonged use on a very hard substance, detaching step flakes, and leaving projections, angular scars and deep hollows. Damage continues, as has been noted, until the edge angle reaches its stability value. Since the edge carries uniform and extensive wear it could be postulated this has happened here and the edge itself has an angle of 75° which is within the limits of the value expected from previous replicative experiments. Indeed close examination shows that the very distal part of the edge did receive retouch to steepen the edge but this was considered unnecessary on the rest of the face as it had a naturally high edge angle value.

Of the nine pieces used for scraping only two (nos 37, 54) would normally be classified as scrapers in a traditional typological study. A further two (nos 43, 44) could be suggested as scrapers on the form of retouch and edge angles but not typed as such. Several would be called waste flakes (nos 40, 41, 50, 51) and because of their lack of retouch would not be considered tools. It must be remembered that a great many flakes are extremely suitable for a wide range of functional activities without the need for extra attention. While some pieces did receive careful modification in the treatment of edges and their shape in general, these represent perhaps those pieces chosen to be used for a long time or in a mode, like certain types of scraping, where retouch was clearly an advantage.

Only two pieces have evidence of multiple use. No 51 was used to cut on the right unretouched edge (38°) and scrape on the left unmodified edge (72°) both on a medium substance like wood, vegetable matter or dry hides.

More interesting is no 43 which received careful retouch and clearly was used for some time. The right side with surface retouch (58°) cut a medium material which rounded the edges and detached scalar microflakes. The left side with regular edge retouch (56°) scraped a soft/medium substance for a short time. Again as in piece no 44 this damage could be related to handling from the main use of engraving. The distal end had a fine burin spall detached which produced a 90° sharp edge that was effective as a burin and very strong since it had a mass of flint behind it. Damage is concentrated on this portion and thin stringy step scars with extensive polishing up the faces suggests the working of a flexible but not too soft material, eg hide or wood.

In conclusion it can be seen that the low-power microwear analysis of the flaked stone pieces from the Ord N has yielded some worthwhile results. As expected the major activities are cutting and scraping but more interesting is that only three functional edges worked a hard material and these were all on piece no 44. The majority worked soft substances often with some fine abrasives, either present in the material or introduced as dirt from outside. Very little can be said about what these stones represent in economic terms so this clearly does not constitute a proper cultural deposit but the analysis is important in the light it throws on some of the pieces. It has been possible to establish that certain flakes which would normally be classified as waste were used for specific activities and this may help to explain their presence on the site. Rather than drawing a broad economic assessment from an analysis of this sort its usefulness lies in the information it yields on specific stone pieces and helps to bring the focus of analysis down from much broader terms to the pieces as individual items and the information which can be derived from them as single archaeological artifacts.

**C: OTHER FINDS**

Other finds from the tomb were noticeably scarce; except for the cremated bone and charcoal there was only a lump of pumice, a drill weight and a bone mount.

- 55 The drill weight is a circular stone disc 25 mm thick with a diameter of 62 mm and a perforation in the centre 15 mm wide. On one face there are two indentations on either side of the hole. The drill shaft which pierced the hole would probably have been held in place by a simple pin which would lie in the indentations. Fig 12.
- This was found in the upper levels of the chamber area and is probably a modern intrusion.
- 56 The pumice's shape could best be described as a prism which has had one end flattened presumably by use as a rubber. It is approximately 60 mm × 50 mm with a height of 45 mm. It is the typical black pumice found on the Scottish beaches with relatively large vesicles (Binns 1976). It was found on the floor of the tomb at the entrance to the antechamber.

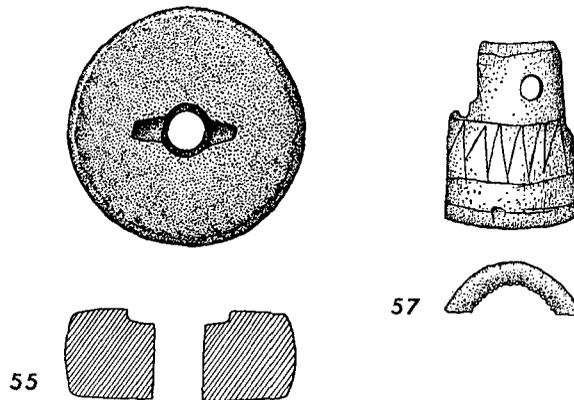


FIG 12 Miscellaneous finds (no 55 scale 1:2, no 57 scale 1:1)

- 57 A small cremated bone or antler mount 23 mm high. Its original diameter is difficult to estimate because less than half of it is present and it has been considerably warped in the fire, but at present it seems to be 25 mm at the bottom and 10 mm at the top. It probably acted as a decoration for a handle as there are traces of three holes to attach it, two of these are at the broken edges. The central hole is placed higher than the other two. It has been decorated by fine incisions in an irregular zig-zag band around the middle and bordering incision around the top and bottom. Some fine scoring also occurs at the top but this does not form a coherent pattern and probably occurred during its use. Fig 12, pl 6b. For discussion of this mount see p 42.

**D: THE CREMATED BONE**

C B Denston, Duckworth Laboratory of Physical Anthropology, Department of Archaeology and Anthropology, University of Cambridge

The aim, methods and limitations of the study of these cremated remains are the same as described by the writer (1965; 1967; 1968), and were initially based on procedures in cremation reports by Lisowski (1956), and by Gejvall (1947).

**RESULTS**

General description of the material

Deposits A, B, C, and D, although disturbed and scattered, were thought by the excavator to have possibly belonged to a single deposit, and after a very thorough examination of the remains from these

four deposits, this view was most likely substantiated by the following observations: the fragments from each of these deposits were of a uniform colour, size and robustness; no definite recognisable duplicate portions were noted; at least two pieces of bone from deposit A joined at broken edges to two from deposit B; a similar fragment from deposit B, of the same texture and size as joined from A and B, joined to a fragment from deposit C; a zygomatic bone from deposit B articulated at the zygomatic process of a right orbit from deposit A; a glenoid (or mandibular) fossa of a fragment of a right temporal bone from deposit A displayed signs of arthritis. A left glenoid fossa from deposit C also displayed arthritis; signs of periodontal infection of a similar degree were noted in tooth sockets of pieces of mandible from deposits A and C.

No direct evidence could be found to connect deposit D with the other three deposits, but it is the writer's opinion that the probability arises that it is connected along with those of A, B and C, and all are of one deposit.

#### Estimation of number, sex and age

Classifying the deposits A, B, C and D as one deposit, the number of individuals the remains represent was possibly one. There were no recognisable duplicate portions to suggest more than one. Morphological features, especially of the skull suggested the individual was a female. These features included those of the mandible; petrous portion of a temporal bone; mastoid processes; zygomatic bones; and a zygomatic arch.

Intact phalanges and a metacarpal bone displayed that epiphyseal union was complete, suggesting the individual was an adult. This was substantiated by the fact that the mandible displayed evidence that the third molars had been fully erupted, and cranial sutures signs of synostosis. From the evidence of the sutures, and the fact that arthritis had occurred at the glenoid fossa of the temporal bones, it would seem to put the age at death of the individual over, rather than under, 30 years of age.

#### DETAILS OF MATERIAL

##### Deposit A

*Skull.* Sixty-three fragments ranging in length from 15–62 mm.

Mandible: fragment of right corpus and ramus, with two tooth sockets; rest of right corpus to the mental protuberance, some tooth sockets; right coronoid process; right condyle.

Cranium: a superior margin of a right orbit with zygomatic process; portion of the right glenoid fossa of the temporal bone; right mastoid process; piece of the frontal bone displaying internal crest; seven pieces of cranium from various areas of the vault displaying sutures.

##### *Postcranial remains*

Long bone: ninety-two fragments ranging in length from 18–85 mm.

Femur: three fragments of the shaft, and one of the distal extremity.

Radius: one distal extremity.

Vertebrae: six small fragments.

Patella: one fragment.

Metacarpals, Metatarsals, Phalanges: 12 fragments; three of the phalanges of the hand, and one fragment of a first metatarsal bone.

Talus: one fragment.

Also miscellaneous fragments.

##### Deposit B

*Skull.* Sixty-eight fragments ranging in length from 11–53 mm.

Mandible: a fragment of right ramus; a fragment from the angle of ramus and corpus; a fragment of the left alveolar border, displaying tooth sockets.

Cranium: a superior margin of a left orbit; two portions of the right zygomatic bone; a portion of the left zygomatic bone; two fragments of roots of teeth; four fragments displaying sutures.

*Postcranial remains*

Long bone: one hundred and twenty-two fragments ranging in length from 10–99 mm.

Femur: three portions of the extremities.

Humerus: one fragment of the shaft.

Ulna: one portion of the proximal extremity.

Ribs: four fragments.

Metacarpal, Metatarsals, Phalanges: six complete and two fragments of phalanges of the hand; one metacarpal minus proximal extremity; 11 fragments.

Patella: one fragment.

Vertebrae: five fragments, one of which was the odontoid facet of the atlas.

Also miscellaneous fragments.

## Deposit C

*Skull.* Forty fragments ranging in length from 12–56 mm.

Mandible: a fragment of the left ramus and socket of the third molar tooth.

Cranium: four fragments of the maxilla with tooth sockets; two portions of the left temporal bone which articulate, and form the zygomatic arch and glenoid fossa; part of a mastoid process; a right petrous portion of the temporal bone; two roots of teeth.

*Postcranial remains*

Long bone: 41 fragments ranging in length from 13–58 mm.

Also miscellaneous fragments.

## Deposit D

*Skull.* Eight fragments, length range 15–28 mm.

*Postcranial remains*

Long bone: six fragments, length range 18–33 mm.

Vertebrae: one fragment.

Metacarpals or Metatarsals: two fragments of shafts.

Also miscellaneous fragments.

TABLE 1

The weight and distribution of the total identified and unidentified cremated remains of each deposit

Deposit A		
Skeletal Material	gm	%Total
Identified Total	256.2	83.9
Unidentified Total	49.0	16.1
Total	305.2	100.0
Deposit B		
Skeletal Material	gm	%Total
Identified Total	219.2	61.1
Unidentified Total	139.5	38.9
Total	358.7	100.0
Deposit C		
Skeletal Material	gm	%Total
Identified Total	76.2	64.6
Unidentified Total	41.7	35.4
Total	117.9	100.0

TABLE 1—*contd.*

Deposit D		
Skeletal Material	gm	%Total
Identified Total	9.9	49.7
Unidentified Total	10.0	50.3
Total	19.9	100.0

TABLE 2

The weight and distribution of the combined total of the identified and unidentified cremated remains

Skeletal Material	gm	%Total
Identified Total	561.5	70.0
Unidentified Total	240.2	30.0
Total	801.7	100.0

TABLE 3

The weight and percentage distribution of the combined identified remains

Skeletal Remains	gm	%Identified	%Total
Skull	181.7	32.4	22.7
Femur	25.5	4.5	3.2
Humerus	6.5	1.2	0.8
Radius	0.4	0.07	0.05
Ulna	1.9	0.3	0.2
Vertebrae	6.2	1.1	0.8
Patella	2.0	0.4	0.3
Metacarpals, Metatarsals, Phalanges	14.6	2.6	1.8
Talus	2.6	0.5	0.3
Ribs	1.0	0.2	0.1
Miscellaneous long bone	319.1	56.8	39.8
Identified Total	561.5	100.0	70.0

Pathology. (a) dental. (b) general.

(a) Tooth sockets in the fragments of mandible and maxilla displayed numerous minute foraminae: these were possibly the result of a considerable degree of periodontal infection or disease. One portion of mandible displayed the sockets for the three right molar teeth, and at least one showed signs of an abscess, and perhaps also the other two were affected to a lesser degree.

(b) Arthritis of a considerable degree had affected the mandibular fossa of the right temporal bone, and also the contiguous articular surface of the right condyle of the mandible, this latter surface having been worn flat instead of the rounded surface. The left mandibular fossa had also been affected by arthritis.

#### OTHER SMALL DEPOSITS OF BONE

##### Deposit B

One fragment of a cranium measuring 23 mm × 38 mm, with an unfused suture; one fragment of a long bone measuring 38 mm in length; four small miscellaneous fragments, length 7–18 mm. Weight of the combined fragments 4.9 gm.

Sex: undeterminable. Age at death: Undeterminable, but possibly not adult.

##### Deposit F

One fragment of a long bone measuring 52 mm in length possibly either of a radius, ulna, or fibula shaft; Six small fragments of miscellaneous bone, length range 5–18 mm. Combined weight 2.0 gm.

Sex: Undeterminable. Age at death: Undeterminable.

## Deposit G

One crown, possibly of a third maxillary molar tooth, and three other small fragments of a crown of a tooth. By the amount of wear, and if identified rightly, the age at death of the individual would have been in the region of 12 years. The crown would not have been of an adult. The tooth crown possibly survived the combustion because it had not erupted through the alveolar border.

Sex: Undeterminable.

## Deposit H (?Uncremated)

Just one bone or piece of bone, measuring 22 mm × 16 mm. The bone could be a triquetral of the wrist, but this is far from conclusive.

Sex: Undeterminable. Age at death: Undeterminable.

## Deposit I

Thirty-three very small fragments, length range 3–18 mm, some possibly of a cranium, and one fragment a portion of a left zygomatic bone. Compared for size with that of a cranium of known age at death, the zygomatic bone fragment was possibly of a child no older than six years.

Sex: Undeterminable. Combined weight of the remains 2.1 gm.

## UNCREMATED BONE. ANIMAL

As reported on by Mr D Allen, animal bone research department.

## Deposit C

A mandible fragment with teeth; a fragment of a shaft of a fibula with distal extremity unfused; a miscellaneous fragment of post-cranial bone.

All of rabbit.

## Deposit D

One metatarsal bone of a rabbit.

## Bones marked X

Two fragments of a femur, and a vertebra, all of a rabbit.

## Bones marked U–Z

Possibly fragments of a femur; humerus; radius; and tibia of sheep.

Fragments of a radius, and a spinous process of cattle.

## THE RADIOCARBON DATES

M J Stenhouse, Radiocarbon Laboratory, University of Glasgow

Charcoal identification, C A Dickson, Department of Botany, University of Glasgow

GU-1167	Associated with the secondary cremation lying on collapsed corbels of main chamber.	3435 ± 65 δ <sup>13</sup> C = -26.4%
	Betula, Corylus, Alnus, cf Pinus bark	
GU-1168	In silty layer above the floor of the antechamber, associated with the Unstan bowl.	4260 ± 60 δ <sup>13</sup> C = -26.0%
	Alnus, Corylus, Pinus	
GU-1169	In antechamber from layer of charcoal between Unstan layer and the lower infilling.	4665 ± 70 δ <sup>13</sup> C = -25.6%
	Corylus, Pinus	
GU-1172	Lying on floor of the main chamber.	4510 ± 100 δ <sup>13</sup> C = -25.2%
	Pinus, Corylus	

- GU-1173 In discontinuous pan sealing the structure in the main chamber but not the final deposit.  $4480 \pm 60$   
 $\delta^{13}\text{C} = -25.0\%$   
 Alnus, Betula, Corylus, Pinus  
 All dates are expressed in years before present.

## THE CONTENTS OF THE TOMB

### THE CHRONOLOGICAL CONTEXT

The finds from the Ord N come from four important contexts – the primary deposits in the main chamber and the antechamber, the old ground surface under the platform in front of the chamber's entrance and in the collapsed roofing of the main chamber. There are also a few objects scattered in most of the excavated areas but they are of little importance comprising mainly sherds of fabric 4 and a few flakes of quartz and flint. Radiocarbon dates have been obtained from all but one of the main contexts and these give us a tentative chronology for the deposition of the finds.

The earliest dates are from the antechamber  $2670 \pm 60$  bc (GU-1168) and  $2715 \pm 70$  bc (GU-1169) followed closely by those from the main chamber  $2560 \pm 100$  bc (GU-1172) and  $2530 \pm 60$  bc (GU-1173). There is only one finds-bearing deposit in the antechamber and the charcoal dated comes respectively from a scatter within this layer and as a patch at the top of it. Both dates appear to represent a near contemporary event, which dates the finds contained in the layer – an Unstan bowl (6), sherds of fabric 2 and 4, a quartz flake (54) and a piece of worked pumice (56). The dates from the main chamber come from the very earliest charcoal lying on the old ground surface and from the pan layer which must be fairly late in the use of the tomb. These deposits in the main chamber were thus laid down during a timespan inseparable by radiocarbon dating but this could still allow for a period of deposition over several hundred years. Finds encompassed by these dates are the sherds of fabric 1, several sherds of fabric 4 and several flints. They must also cover the construction of the platform. When one compares the dates from the antechamber to the dates from the main chamber there does appear to be some separation, those from the former being distinctly earlier. However, when plotted at two standard deviations there is considerable overlap between the two and when one carries out the *t*-test (using an average for two antechamber determinations) one gets a value of 0.992 which is well below the value normally used to establish that dates are different. The close grouping of both dates from each area, however, suggests that there is a possibility that the deposits in the antechamber are from an earlier period of tomb activity. If these dates do represent a chronological difference it could be due to different deposits in each chamber. As has already been noted the fills of both chambers are distinct and this does suggest an important difference between the two contexts. Only pottery of the very simple fabric 4 was found in both contexts, sherd no 5, though of fabric 2, is not closely comparable to the two other decorated sherds of this fabric so that its presence in both contexts can not be regarded as significant. Fabrics 1 and 3 came exclusively from the chamber and antechamber respectively. This is important because fabric 3, the Unstan bowl, was scattered widely throughout the antechamber and could have been expected to continue into the main chamber, particularly as there is approximately 50% of it missing. The distribution of the flaked stone assemblage is also different. Only one flake occurs in the primary deposits of the antechamber compared to nine in the main chamber.

An inference that could be drawn from the dates and the distinction within the tomb is that the main chamber had been emptied of its deposits some time around 2600 bc and that afterwards all attention was concentrated in this area with no attempt to continue deposition in the ante-

chamber. This could also be taken to suggest that there were only two fairly short periods of depositional activity in the tomb's life. The alternative hypothesis would be to ignore the slight difference in dates and to explain the difference in finds and fill as the result of different activities restricted to certain specific areas within the tomb.

On the old ground surface outside the chamber there were two deposits of sherds and a patch of charcoal. The sherds were solely of fabrics 6 and 7 which were found nowhere else in the excavation, suggesting that they were found in their original position and had not been removed from the tomb. One group contained sherds of both fabrics and though no joins could be made the sherds of the fabric found in both groups are so alike as to suggest that they represent only one vessel and that the two deposits are contemporary. Unfortunately there was no radiocarbon date for these deposits so their chronological position can only be deduced from the fact that they were deposited before the construction of the platform which was contemporary with the blocking of the tomb.

The last context is represented by the material above the collapsed corbels of the main chamber which is clearly in a secondary position and must be later than all the above contexts. It contains several cremation deposits with a bone mount, 57, a food vessel, 31, and probably the base sherds, 30. The latter were found very low in the main chamber so it is difficult to place them precisely by position alone but they are remembered (by J Ward, the assistant director) as coming from the collapsed roofing material and are similar to 31 in both fabric and decoration. There were also some sherds of fabric 4 but these must represent finds deposited in the cairn material for to imagine that this admittedly simple type of pottery could survive into the Bronze Age is difficult in view of the close similarity of all fabric 4 sherds. The pottery (30 & 31) was not directly associated with the cremation deposits, neither were they associated with each other but as has already been said lack of any evidence for repeated intrusions would suggest that they represent a burial and its grave goods. The presence of charcoal directly associated with the cremation deposits (B, C & F) dated to  $1485 \pm 65$  bc (GU-1167) would reinforce this conclusion as it fits within the range of radiocarbon dates for food vessels. At the time Corcoran thought that the deposit on the corbels occurred soon after the end of the tomb's use but the radiocarbon dates and the finds would argue strongly that the two events were separated by several hundred years.

The chronological sequence of the deposits and their associated finds is first the antechamber with the fabric 4 Unstan bowl (6) and the two decorated sherds of fabric 2 (3, 4), then the main chamber deposits with fabric 1 sherds (1, 2). During this period the fragments of vessels in fabrics 6 and 7 were deposited outside the entrance to the tomb and throughout its use fabric 4 was in existence. When the tomb was closed a cremation was deposited in the passage and several hundred years later another cremation and its accompanying grave goods, the fabric 5 sherds and the bone mount, were placed in the hollow caused by the collapse of the roof. It is not thought that the chronological differences during the tomb's use should allow us to make assumptions about how the various types of pottery related to those in everyday use. There is no reason to believe that they reflect anything but one part of a large variety of contemporary forms particularly as there is little comparison between the associated fabrics. All the vessels in the Neolithic levels of the tomb could in fact be contemporary.

## DISCUSSION

Finally, it seems worthwhile to look at the results of the excavation in a much wider context particularly as, with the exception of the Orkney islands, our understanding of the N in early pre-history is almost exclusively based upon the evidence of burial practices. Basically the areas to be

discussed can be divided into three groups; the typological similarities of the tomb's structure, the nature of the tomb's use and the significance of its position in relation to the other monuments in the locality. It seems appropriate to deal with the latter aspect first as this contributes the least information.

As has already been mentioned the area around Lairg was the nodal point of Sutherland before the construction of the coast road. This important position is not, however, apparent in the distribution of chambered tombs or any other possible early-middle Neolithic remains, only six chambered tombs are recorded (Henshall 1962) in the area and one of these (Sut 38) must be regarded as only a possibility. Immediately adjacent to the Ord N is the Ord S (Sut 39) a much smaller monument whose cairn has been almost completely robbed exposing a simple bipartite chamber, basically a sealed down version of the Ord N. This is situated on the summit of the hill and because of this attractive position and the superior size and constructional sophistication of the Ord N it seems likely that the latter was constructed sometime after it. About 2½ miles to the S lies Achany (Sut 3) a simple rectangular tomb in an oval cairn and to the E in the agricultural land above the village of Lairg lie the other three tombs all badly robbed and exhibiting no coherent structure. The other evidence for early prehistory consists of the recorded discovery of two stone axes from different find-spots about a mile to the SE on the valley side and a 'flint workshop' which was reported beside the Lairg churchyard late last century (O S record cards). The number of tombs does not really compare with the heavy concentration in Assynt or Strathnaver (see Henshall 1963, 56-7) but one must remember that present distributions are not necessarily representative of the original pattern. There can be no objective way to assess the percentage destroyed by later activities and it is important to stress that these destructive agencies are unlikely to act uniformly. In particular it seems likely that in the N of Scotland areas which were not affected by the clearances would have suffered considerably more damage from the disastrous effects of modern agricultural techniques. Thus in the Lairg area where there is a considerablecrofting population one would not expect monuments to survive unlike for example the Strath of Kildonan which has been almost depopulated and the land given over to sheep grazing.

Surrounding the tombs on the Ord extending over both slopes and the more level area around the summit are extensive remains of hut circles, more massive enclosures, clearance cairns and relict field systems. Little detailed work has been done on these monuments in Scotland and in particular the shortage of excavated examples makes it impossible to put any clear date on them. There seems to be no reason, however, why some of these remains should not relate to early prehistory. Normally they would be dated to the early and middle phases of the Iron Age like those excavated at Kildonan (Fairhurst 1971) but examples on Arran and Jura (*Discovery and Excavation in Scotland* 1977, 52; 1978, 28) have suggested that a much earlier late Neolithic/early Bronze Age dating is possible.

In the early Bronze Age the area seems to have achieved much greater importance. The number of cairns and unmarked burials of this date recorded by the Ordnance Survey is considerably larger than for any other area in Sutherland. In particular, however, there are four stone circles (one of which has disappeared) and this is a noticeable concentration of a monument otherwise rare in the N of Scotland.

These slight changes in the way socio-religious monuments are distributed in the Sutherland landscape would seem to indicate that this geographically isolated region is changing in much the same way as the more archaeologically studied areas like Orkney or even the S of England. That is the appearance of a centre with control over what had once been relatively independent, dispersed communities. The interpretation of this change is open to considerable dispute so there seems little point in discussing it here (Renfrew 1979, 218-23; Barrett 1981).

Discussion of the activities associated with the use of the Ord N is immediately hampered by the absence of any remains of a primary burial which one would normally assume is the most important function of a chambered tomb. The presence of secondary cremations would suggest that this absence indicates an inhumation rite with the bones destroyed completely due to an acidic soil. This is also what one would expect from examination of the excavations of nearby tombs; the two tombs which had surviving burials, Embo and Achaidh (Sut 63, Henshall & Wallace 1965; Sut 2, Curle 1910), contained inhumations and there is suggestive negative evidence from the excavations at Kilcoy South and Carn Glas, Kilcoy (Ros 24, Henshall 1963, 348; Ros 12, Woodham & Woodham 1957).

The presence of secondary burials is not unusual in chambered tombs (Henshall 1972, 187–94) and must be regarded as part of the general desire in the early Bronze Age to place burials in any conspicuous topographic feature. The occurrence of a burial in the passage is slightly more unusual but it is found in Caithness at Tulach an't Sionnaich and Tulach of Assery B (Corcoran 1967, 9 & 42). At the Ord the burial is clearly associated with the blocking and this seems to be the case at least with Tulach of Assery B. In both these tombs there is a secondary filling of the chamber which relates to a late Neolithic or early Bronze Age use of the tomb and is separated from its primary deposits by several hundred years.

The change in burial form from inhumation to cremation can not be regarded as significant at the moment as Neolithic cremations are known in the chambered tombs of Caithness (Anderson 1886, 252) and in the Clava cairns to the E (Piggott 1956). It is however important to note that the dating of the latter monuments is in dispute and the possibility of later disturbance for the former monuments makes certainty impossible. Thus it could be that we have a straightforward shift in the late Neolithic in this area from inhumation to cremation.

The intrusion of a Bronze Age cremation in the destroyed chamber can be paralleled closely at the nearby tomb of Embo (Henshall & Wallace 1965) where a cremation with a food vessel was placed in a cist constructed inside the chamber which had been filled with sand. The absence of a built cist at the Ord N may be due to the difficulty involved in removing or even arranging the very large corbels which had collapsed into the chamber.

The soil in the early levels of the tomb could have two sources. It either percolated through the roof during the tomb's use and or was deliberately deposited by the users of the tomb. It has already been emphasised in this report that certain types of stones used in the tomb had decayed considerably and it seems likely that this was the main source for the soil in the tomb. It may however be useful to note that soil deposits described as sandy or sand have been excavated at Achaidh (Curle 1910, 110), Kilcoy South (Henshall 1963, 348), Carn Glas, Kilcoy (Woodham & Woodham 1957, 106–7) and perhaps Embo (Henshall 1965, 13) though at the latter site it may be related to a later Bronze Age intrusion. In other words all the excavated tombs in the area around the Ord contain a sandy layer in their main Neolithic chamber deposits. It is clear that there must have been some artificial deposition of soil in the main chamber at the Ord as apart from the sandy soil there is a clay layer. It would be very unlikely that they could both be formed naturally. The reason for this deposition may have been to cover up the structure in the main chamber but this seems unlikely as much of it was left visible. There is in fact no functional or other obvious explanation for it and therefore it can only be regarded as a ritual act.

Further N in Caithness the tombs (Corcoran 1967; Anderson 1870) do not show a similar importance attached to the presence of earth. This ritual primarily resulted in the deposition of charcoal, cremated bone, ashes and unburnt bone. However, where Anderson does note a soil layer (1870, 496–8) it is of clay. Unfortunately nothing is known of the burial ritual in the more isolated eastern and northern concentration of Assynt and Strathnaver. In Orkney the stalled cairns do not

seem to have soil deposited in them during their use. To the W in the Hebrides excavations at Rudh an Dunain, Unival and Clettraval by W L Scott (Ust 32, 50, 35) showed that large quantities of soil built up during the use of the tomb and it has been suggested (Henshall 1972, 147) that this was a deliberate deposit. Little is known about the Clava tombs to the SE of the Ord but it may be significant that at Corrimony, the only tomb excavated W of the Great Glen (Piggott 1956), the burial was placed in sand layers.

Accepting that it is useless to speculate on the motives behind ritual deposition of soil it is, however, necessary to point out that they may be similar to that behind the totally different ritual, which has also been noted in connection with the Ord N, namely clearing out the tomb's contents. It seems possible that both rituals could portray a desire to start a new cycle of burial within the tomb. One act does this by removing the old deposits, the other by covering them up. It has also been suggested (Scott, W L 1950, 13-14) that the end of a cycle of burial at Unival was marked by the cleansing of the tomb by fire. If one takes this a little further one could claim that the large stalled chambers in Orkney did not need these rituals because sufficient space was available for the continual use of the tomb without disturbing the earlier burials. This space is particularly evident at Midhowe (Callander & Grant 1934). This suggests that one of the main problems with the use of chambered tombs in the N was the continual disturbance of earlier burials by the insertion of the recent dead. Though different rituals did evolve in various areas it seems likely that this was a major stimulus towards development of a larger tomb.

There are two intrusive structural elements within the tomb, the small cairn in the antechamber which lay above the soil deposits and the platform in the main chamber which lay on the floor. The former is unlikely to be of ritual importance as it had no coherent structure to it. It can be explained in structural terms as either material unused during the construction of the platform, material for a new platform or as material to repair the fabric of the chamber. The first explanation should be dismissed as it is unlikely that this inconvenient pile of stones would be left in the middle of the passage while the tomb was in use, and it also seems improbable that they would bring in so much superfluous material. It is also unlikely that they would want to build a new platform when the earlier one was still visible and, if so, why would they stop. The third explanation seems to be by far the most likely as this is what the material, small boulders and flat slabs resembles. It was probably intended to patch up the dry-stone walling which around the W end of the antechamber's E side was in particularly bad condition. A successful repair can be seen at Barpa Langass (Ust 6) where a dry-stone column was built at the junction of passage and chamber. It seems that at the Ord N the repair was never begun, perhaps due to the chamber becoming dangerous.

The structure in the main chamber at the Ord N can, as has already been pointed out, find its best parallels in the platforms to the N where they appear with regularity between the partitions of the stalled chambers. These seem to have been specifically built to take the burials and it seems likely that this is where the burials of the Ord N were placed. Primitive cists are not a feature of these platforms and there are no obvious parallels elsewhere. The cist at South Yarrows N (Cat 54) was a later Bronze Age intrusion and the cist at Unival (Ust 50, Scott, W L 1950, 8, fig 4) did not have a roofing slab and so is really more akin to the platforms of Orkney than it would first appear. If one accepts this as a platform then it extends their distribution noticeably southward. Hitherto only one platform, Tulach of Assery A (Corcoran 1967, 31) had been found outside Orkney.

The deposition of grave goods at the Ord N can be summed up by saying there were quite large quantities of pottery, which was characterised by its fragmentary condition and variety of fabrics and styles, and a flaked stone assemblage of simple, mostly unretouched, tools. This regard for pottery can be paralleled at Camster Round, Garrywhin, Kenny's Cairn and Ormiegill in

Caithness (Cat 13, 26, 31 & 42) which were all excavated by Anderson (1870). According to his description, as all the sherds have now disappeared, the pottery was discovered as broken sherds and of numerous different fabrics, some of which were of the highest quality, which sounds very similar to the state of the pottery at the Ord N. The flint industry at these sites, however, is a noticeable contrast as it contains some very large flakes and implements of high quality such as knives and arrowheads. The impoverished flint industry from the Ord N is in fact similar to the excavated tombs in Easter Ross but here Neolithic pottery is almost totally absent and most of the tombs produce beaker, eg Kilcoy South (Ros 24), and Carn Glas, Kilcoy (Ros 12). This contrast is best explained by a chronological difference between the fillings of the Ord N and the other cairns. The absence of Neolithic finds may be the result of continual clearance of the tombs which were structurally safe enough to continue in use for a long period.

It should also be noted that there is a contrast within the pottery finds at the Ord N between the almost complete Unstan bowl and all the other fabrics which are but token representatives of the original vessels. There is no reason to assume that these sherds were deposited as almost complete vessels particularly as the representative nature of the sherds is emphasised by the predominance of rim sherds. The only fabric not to contain rims is no 2 which does however comprise sherds with a highly distinctive decoration. Because these sherds are but tokens of vessels it seems likely that they come from the domestic assemblages of the tomb users.

To the N and W the deposition of grave goods was a very important feature of tomb ritual. Large quantities of complete and almost complete pots have been found at Unival and Clettraval in North Uist (Ust 12, 34) and at Taversoe Tuick, Isbister and Unstan in Orkney (Ork 49, 25, 51). There are, however, sites where there is a noticeable shortage of finds in both these areas eg Rudh an Dunain, Skye (Sky 7) and Bigland Round and Sandyhill Smithy in Orkney (Ork 2, 37). At Midhowe (Ork 37) there is a marked contrast within the tomb between those burials with grave goods and those without. Only two out of seven compartments with burials had associated grave goods and the majority of these were in one compartment. In contrast to the mainland this is unlikely to be due to purely chronological differences as the use of the tombs in Orkney does not require continual clearing out of the contents. It may be that the deposition of grave goods in these areas reflects a much more personal aspect of burial open to individual choice.

The architectural affiliations of the Ord N are very clearly to the Orkney-Cromarty-Hebridean group of the N of Scotland (Henshall 1974, 148-53). The tomb form is particularly well paralleled at Skelpick Long (Sut 53), Leachkin (Inv 38) and Cnoc Chaornaidh, SE (Ros 17) though of these only Skelpick Long, excavated by Horsburgh in 1867, survives at all well. The chambers of this tomb are about a foot larger in both dimensions and one extra orthostat has been used in the construction of the main chamber. Otherwise, however, the layout is exactly similar with two very large lintels and the beginning of the roof corbelling still in position. The one major idiosyncrasy of the Ord N plan in relation to these tombs is an exceptionally long passage c 14 ft (4.2 m); the closest to this is again Skelpick Long but this, at 7 ft, is only half the size of the Ord N. Another peculiarity of the passage is the absence of any portal stones at the entrance but the use of a pair of transverse orthostats half way along its length. Henshall has suggested that the appearance of transverse orthostats in many of the simple tombs of Easter Ross indicates an original entrance which has since been incorporated into the body of the monument by secondary additions (Henshall 1972, 259) and this would have been a fairly straightforward interpretation of the peculiarity in the Ord N passage. Unfortunately, Corcoran could not find any earlier cairn revetment to go with this pair of orthostats and though the excavations were by no means as complete as he would have wished the fact that he was at this point finishing off his article on multi-period tomb construction (Corcoran 1972) suggests to me that he would have found it if it was there.

Consequently the more prosaic explanation of constructional necessity seems to be more applicable to this case, with the size of the passage directly related to the desire for a large imposing cairn. The shortage of large lintel stones clearly made it necessary to corbel the passage and to do this it would be necessary to provide a support at its midpoint. The best parallel for transverse orthostats being used as a constructional technique is seen in the passage at Camster Round (Cat 13) where there are four pairs of uprights built into the passage walls but again none at the junction between passage and cairn revetment.

Typologically these bipartite chambers have been quite clearly placed as the culmination in the development of the polygonal chambers which characterise the western highland areas of the O-C-H group (Henshall 1972, 260). Thus we can use the radiocarbon dates obtained from the Ord N to provide a *terminus ante quem* for the preceding stage. To be 99.7% certain that we have a *terminus ante quem* for the Ord N construction it is necessary to take the lower limit at three standard deviations of the oldest date (GU-1169), this gives a date of 2505 bc (at two standard deviations the lower limit is 2575 bc). This date would fit quite nicely in Henshall's broad date range for the O-C-H group (Henshall 1974, 161-2) but with the publication of further dates from tombs in the N it should be possible to gain a much more detailed picture of the links between typology and chronology.

## CONCLUSION

In conclusion then, we can say that the excavations at the Ord N have been particularly useful in filling out our knowledge of the Neolithic in northern Scotland. The major importance of the tomb was in producing an extremely interesting ceramic assemblage, which has been dated by radiocarbon determinations to the second quarter of the third millennium bc. Hitherto the only good assemblages had come from the islands but the variety and quality of the Ord N assemblage shows that a very strong tradition exists, awaiting further discoveries. The other major point to come out of the excavations is that the Ord N fits in well with general Neolithic traditions of tomb construction, pottery production and burial. This does not, however, diminish the importance of regional variations. In fact, the Neolithic is characterised by different local combinations and emphasis of the traits which make up the common tradition. Future excavation should allow us to accurately define the extent of these regional territories and exactly how they are being defined.

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## REFERENCES

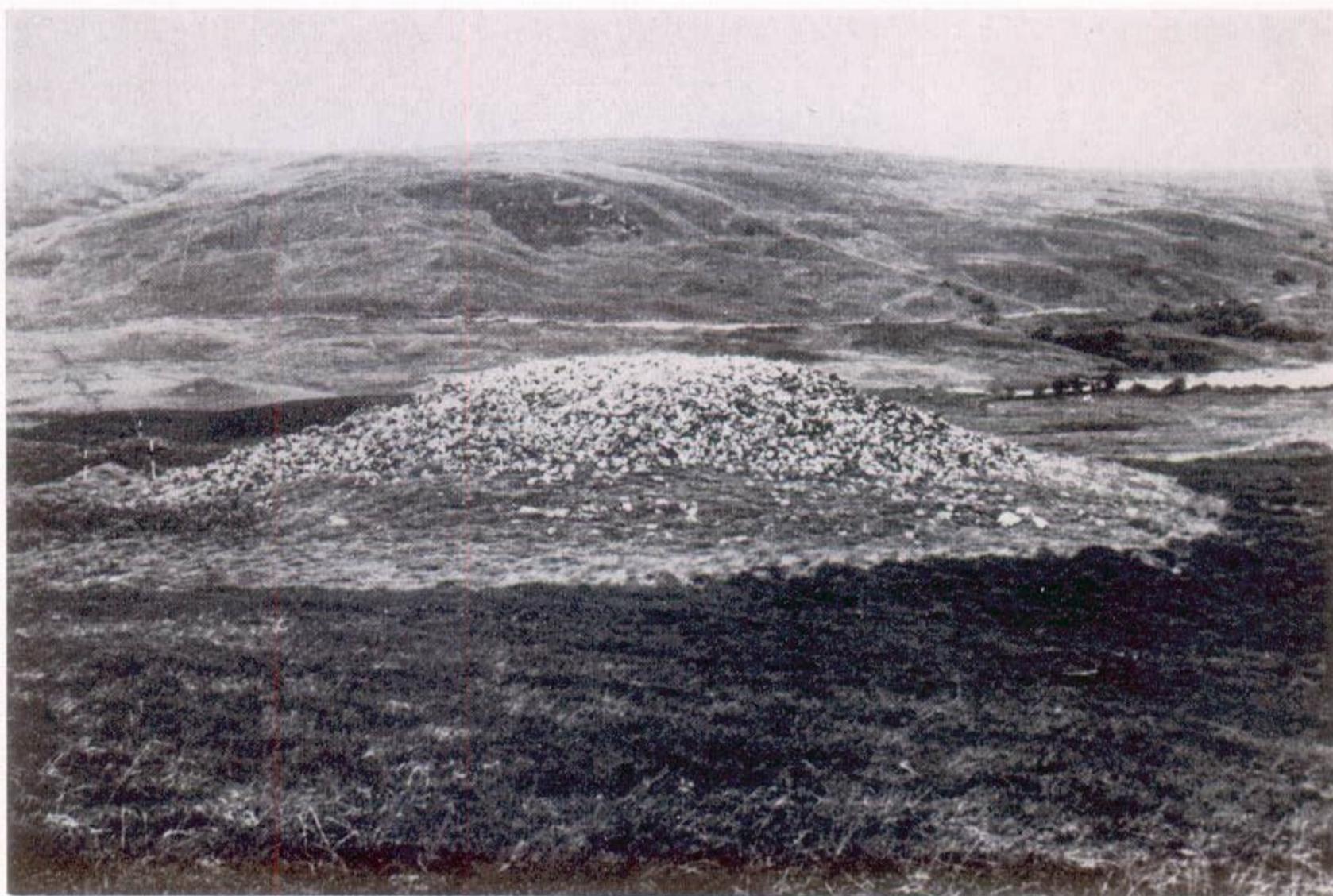
- Abercromby, J 1912 *A study of the Bronze Age Pottery of Great Britain and Ireland*, 2 vols. Oxford.  
 Anderson, J 1870 'On the horned cairns of Caithness, their structural arrangement, contents of chambers, etc', *Proc Soc Antiq Scot*, 7 (1866-8) (1870), 480-512.

- Anderson, J 1886 *Scotland in pagan times: The Bronze and Stone Ages*. Edinburgh.
- Annable, F K & Simpson, D D A 1964 *Guide Catalogue of the Neolithic and Bronze Age collections in Devizes Museum*. Devizes.
- ApSimon, A 1976 'Ballynagilly and the beginning and end of the Irish Neolithic', in De Laet 1976, 15-44.
- Atkinson, R J C 1962 'Fisherman and Farmers' in Piggott, S (ed), *The Prehistoric Peoples of Scotland*, London, 1-38.
- Barnes, A S & Cheynier, A 1935 'Étude sur les techniques de débitage du silex et en particulier des nuclei prismatiques', *Bull Soc Préhist Fr*, 32 (1935), 288-99.
- Binns, R E 1976 'Drift Pumice in Northern Europe', *Antiquity*, 44 (1976), 311-12.
- Barrett, J C 1981 'Artifacts and Society', unpublished seminar paper, Glasgow, Jan 1981.
- Bradley, R 1978 *The Prehistoric Settlement of Britain*. London.
- Broadbent, N D & Knutsson, K 1975 'An experimental analysis of quartz scrapers. Results and applications', *Fornvännen*, 70 (1975), 113-28.
- Burgess, C 1974 'The Bronze Age' in Renfrew 1974, 165-222.
- Burgess, C 1980 *The Age of Stonehenge*. London.
- Burgess, C & Miket, C (eds) 1966 *Settlement and Economy in the Third and Second Millennia BC*. Oxford. = *Brit Archaeol Rep* 33.
- Callander, J G 1929 'Scottish Neolithic Pottery', *Proc Soc Antiq Scot*, 63 (1928-9), 29-98.
- Callander, J G & Grant, W G 1934 'A Long Stalled Chambered Cairn or Mausoleum near Midhowe, Rousay, Orkney,' *Proc Soc Antiq Scot*, 68 (1933-4), 320-50.
- Callander, J G & Grant, W G 1935 'A long Stalled Cairn, The Knowe of Yarso, in Rousay, Orkney', *Proc Soc Antiq Scot*, 69 (1934-5), 325-51.
- Case, H 1969 'Neolithic Explanations', *Antiquity*, 43 (1969) 176-86.
- Case, H 1973 'Acculturation and the Earlier Neolithic in Western Europe' in Daniel & Kjaerum 1973, 45-58.
- Childe V G 1935 *The Prehistory of Scotland*. London.
- Childe, V G 1944 'An unrecognised group of Chambered Cairns', *Proc Soc Antiq Scot*, 78, (1943-4), 26-38.
- Childe, V G & Grant, W G 1947 'A Stone Age Settlement at the Braes of Rinyo, Rousay, Orkney (Second Report)', *Proc Soc Antiq Scot*, 81 (1946-7), 16-42.
- Clarke, D V forthcoming 'Rinyo and the Orcadian Neolithic' in Clarke, D V & O'Connor, A C (eds), *From the Stone Age to the Forty-five: essays presented to R B K Stevenson*, forthcoming.
- Coles, J M & Simpson, D D A (eds) 1968 *Studies in Ancient Europe*. Leicester.
- Corcoran, J X W P 1967 'The Excavation of three Chambered Cairns at Loch Calder, Caithness', *Proc Soc Antiq Scot*, 98 (1964-6) (1967), 1-75.
- Corcoran, J X W P 1969a 'Multi-Period Chambered Cairns', *Scot Archaeol Forum*, 1 (1969), 9-17.
- Corcoran, J X W P 1969b 'Excavation of two Burial Cairns at Mid Gleniron Farm, Glenluce, Wigtownshire', *Trans Dumfriesshire Galloway Natur Hist Antiq Soc*, 46 (1969), 29-90.
- Corcoran, J X W P 1972 'Multiperiod construction and the origins of the chambered long cairn' in Lynch, F & Burgess, C (eds), *Prehistoric Man in Wales and the west*, Bath, 31-63.
- Curle, A O 1910 'Exploration of a Chambered Cairn at Achaidh, Spinningdale, in the Parish of Creich, Sutherland', *Proc Soc Antiq Scot*, 44 (1909-10), 104-11.
- Daniel, G E 1941 'The dual nature of the Megalithic Colonisation of Prehistoric Europe', *Proc Prehist Soc*, 7 (1941), 1-49.
- Daniel, G & Kjaerum, P (eds) 1973 *Megalithic Graves and Ritual: Papers presented at the III Atlantic Colloquium Moesgård 1969*. Copenhagen.
- De Laet, S J (ed) 1976 *Acculturation and Continuity in Atlantic Europe: Papers presented to the IV Atlantic Colloquium, Ghent, 1975*. Brugge.
- Denston, C B 1965 'The Pitnacree cremations' in Coles, J M & Simpson, D D A, 'Excavation of a Neolithic round barrow at Pitnacree, Perthshire, Scotland', *Proc Prehist Soc*, 31 (1965), 49-57.
- Denston, C B 1967 'The secondary cremation from Tulach an t-Sionnaich' in Corcoran 1967, 73-5.
- Denston, C B 1968 'The cremations' in Marriott, J W, 'A Bronze Age site at Kinneil Mill, Stirlingshire', *Proc Soc Antiq Scot*, 100 (1967-8), 96-9.
- Fairhurst, H 1971 'A settlement at Kilphedir', *Proc Soc Antiq Scot*, 103, 65-99.
- Gejvall, N G 1947 'Bestämning av brända ben från fortida gravar', *Fornvännen*, 42, (1947), 39-47.

- Hedges, J W & Simison, R 1977 *Excavations at the Chambered Cairn of Isbister, South Ronaldsay, Orkney: A preliminary report*. Stencil report.
- Henshall, A S 1963 *The Chambered Tombs of Scotland*, Vol 1. Edinburgh.
- Henshall, A S 1968 'Scottish Dagger Graves' in Coles & Simpson 1968, 173-95.
- Henshall, A S 1972 *The Chambered Tombs of Scotland*, Vol 2. Edinburgh.
- Henshall, A S 1974 'Scottish Chambered Tombs and Long Mounds' in Renfrew 1974, 137-63.
- Henshall, A S 1977 'Report on the Pottery' in Hedges & Simison 1977.
- Henshall, A S & Wallace, J C 1965 'The excavation of a Chambered Cairn at Embo', Sutherland, *Proc Soc Antiq Scot*, 96 (1962-3) (1965), 9-36.
- Keating, T H & Dickson, J H 1979 'Mid Flandrian changes in vegetation on Mainland Orkney', *New Phytol*, 82 (1979), 585-612.
- Keller, C 1966 'The development of edge damage patterns on stone tools', *Man*, n ser, 1 (1966), 501-11.
- Lisowski, F P 1956 'The cremations' in Powell, T G E & Daniel, G E, *Barclodiad y Gawres*, Liverpool, 62-9.
- Longworth, I H 1971 'The Neolithic Pottery' in Wainwright, G J & Longworth, I H, *Durrington Walls: Excavations 1966-8*, London, 48-155. = *Rep Res Comm Soc Antiq London*, 29.
- Mackay, R R 1950 'Neolithic Pottery from Knappers Farm, near Glasgow', *Proc Soc Antiq Scot*, 82 (1947-8) (1950), 234-7.
- Marshall, D N 1976 'The Excavation of Hilton Cairn', *Trans Bute Natur Hist Soc*, 20 (1976), 8-26.
- Marshall, D N & Taylor, I D 1979 'The Excavation of the Chambered Cairn at Glenvoidean, Isle of Bute', *Proc Soc Antiq Scot*, 108 (1976-7) (1979), 1-39.
- Morrison, J 1880 'Notes on an urn found at Kennysilloch, Urquhart, Elgin', *Proc Soc Antiq Scot*, 10 (1879-80), 109-10.
- McInnes, I J 1969 'A Scottish Neolithic Pottery Sequence', *Scot Archaeol Forum*, 1 (1969), 19-30.
- Piggott, S 1954 *The Neolithic Cultures of the British Isles*. Cambridge.
- Piggott, S 1956 'Excavations in Passage-Graves and Ring-Cairns of the Clava Group 1952-3', *Proc Soc Antiq Scot*, 88 (1954-6), 173-207.
- Piggott, S 1973 'Problems in the interpretation of Chambered Tombs' in Daniel & Kjaerum 1973, 9-15.
- Renfrew, C 1979 *Investigations in Orkney*. London. = *Rep Res Comm Soc Antiq London*, 38.
- Renfrew, C (ed) 1974 *British Prehistory: a new outline*. London.
- Renfrew, C, Harkness, D & Switsur, R 1976 'Quanterness, Radiocarbon and the Orkney Cairns', *Antiquity*, 50 (1976), 194-204.
- Ritchie, A 1973 'Knap of Howar, Papa Westray', *Discovery and Excavation in Scotland*, 1973, 68-9.
- Ritchie, A 1974 'Knap of Howar, Papa Westray, Orkney, 1973', *Northern Studies*, 3 (1974), 22-5.
- Ritchie, J N G 1978 'The Stones of Stenness, Orkney', *Proc Soc Scot Antiq*, 107 (1975-6) (1978), 1-60.
- Roe, F 1968 'Stone mace-heads and the latest Neolithic Cultures of the British Isles' in Coles & Simpson, 1968, 145-72.
- RCAMS 1911 *Inventory of the County of Sutherland*. Edinburgh.
- Scott, J G 1966 'The Chambered Cairn at Beacharra, Argyll, Scotland', *Proc Prehist Soc*, 30 (1966), 134-58.
- Scott, J G 1977 'A Note on Beacharra Pottery', *Antiquity*, 51, (1977), 240-3.
- Scott, J G 1979 'The Rothesay style of Pottery in Scotland' in Marshall & Taylor, 1979, 26-39.
- Scott, Sir W L 1932 'Rudh an Dunain Chambered Cairn, Skye', *Proc Soc Antiq Scot*, 66 (1931-2), 183-213.
- Scott, Sir W L 1934 'Excavation of Rudh an Dunain Cave, Skye', *Proc Soc Antiq Scot*, 68 (1933-4), 200-23.
- Scott, Sir W L 1935 'The Chambered Cairn of Cletraval, North Uist', *Proc Soc Antiq Scot*, 69 (1934-5), 480-536.
- Scott, Sir W L 1950 'The Chambered Tomb of Unival, North Uist', *Proc Soc Antiq Scot*, 82 (1947-8) (1950), 1-49.
- Scott, Sir W L 1953 'Eilean an Tighe: A pottery workshop of the second millennium BC', *Proc Soc Antiq Scot*, 85 (1950-1) (1953), 1-37.
- Shepherd, W 1972 *Flint, its origins, properties and uses*. London.
- Simpson, D D A 1968 'Food Vessels: Associations and chronology' in Coles & Simpson 1968, 197-211.
- Simpson, D D A 1976 'The Late Neolithic and Beaker settlement at Northton, Harris' in Burgess & Miket 1976, 221-31.

- Smith, I F 1967 'Windmill Hill and its implications', *Palaeohistoria*, 12 (1967), 469-81.
- Smith, I F 1974 'The Neolithic' in Renfrew 1974, 100-36.
- Stevenson, R B K 1948 'Jottings on early pottery', *Proc Soc Antiq Scot*, 80 (1945-6) (1948), 141-3.
- Tringham, R, Cooper, G, Odell, G, Voytek, B & Whitman, A 1974 'Experimentation in the formation of edge damage: a new approach to lithic analysis', *J Fld Archaeol*, 1 (1974), 171-96.
- Whittle, A W R 1978 'Resources and population in the British Neolithic', *Antiquity*, 52 (1978), 34-42.
- Woodham, A A 1956 'A survey of prehistoric monuments in the Black Isle,' *Proc Soc Antiq Scot*, 88 (1954-6), 65-93.
- Woodham, A A & Woodham, M F 1959 'The excavation of a chambered cairn at Kilcoy, Ross-shire', *Proc Soc Antiq Scot*, 90 (1956-7) (1959), 102-15.

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a The Ord N from the summit of the Ord



b The chamber after excavation from the SE



a The chamber after excavation from the NW



b The slumped cairn revetement to the N of the entrance



a The entrance in the process of excavation showing the displaced lintel



b The roof of the antechamber from the NW



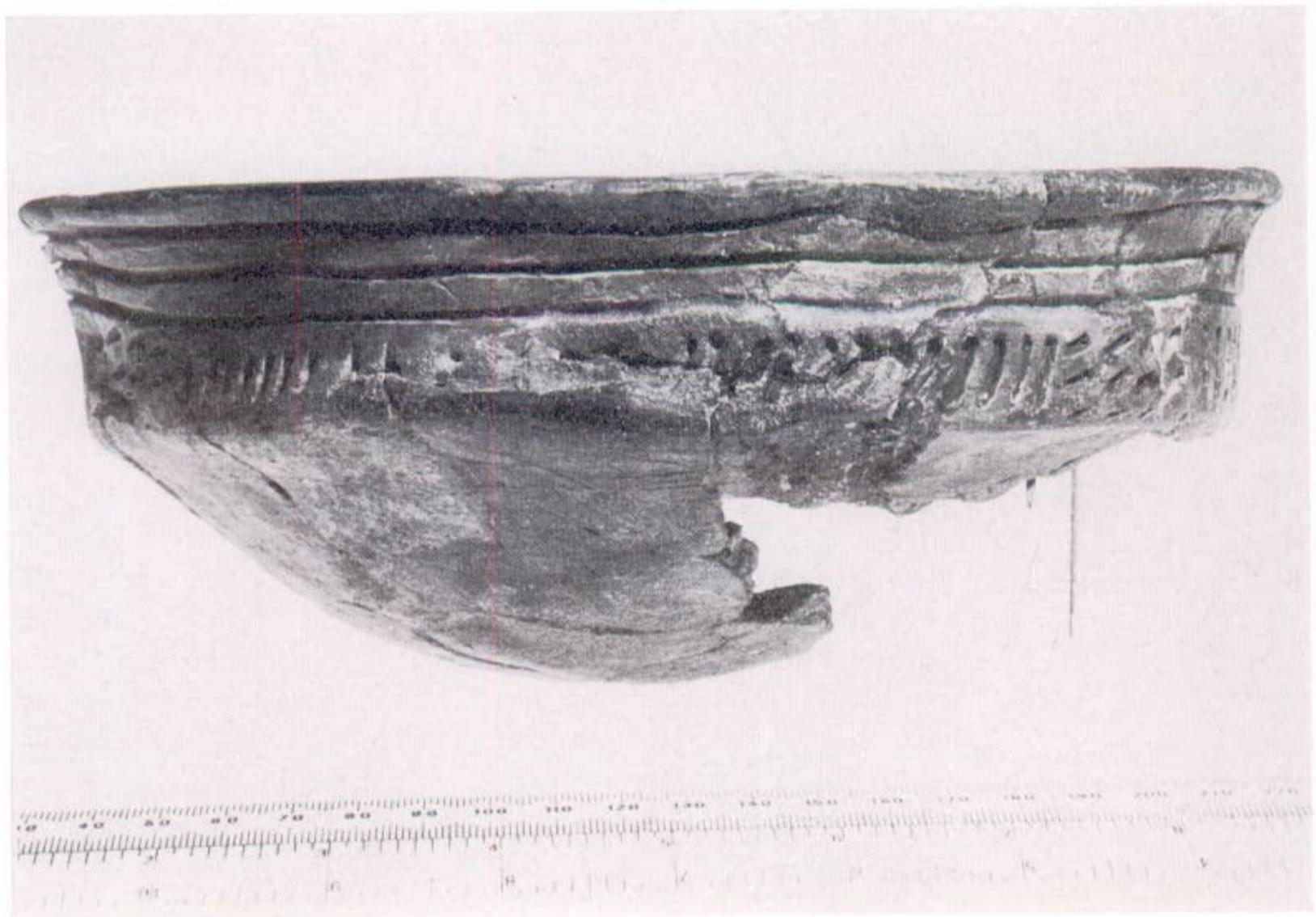
c The 'platform' in the main chamber seen through the transverse stones at the entrance to the main chamber



a Rim sherds no 1 & 2



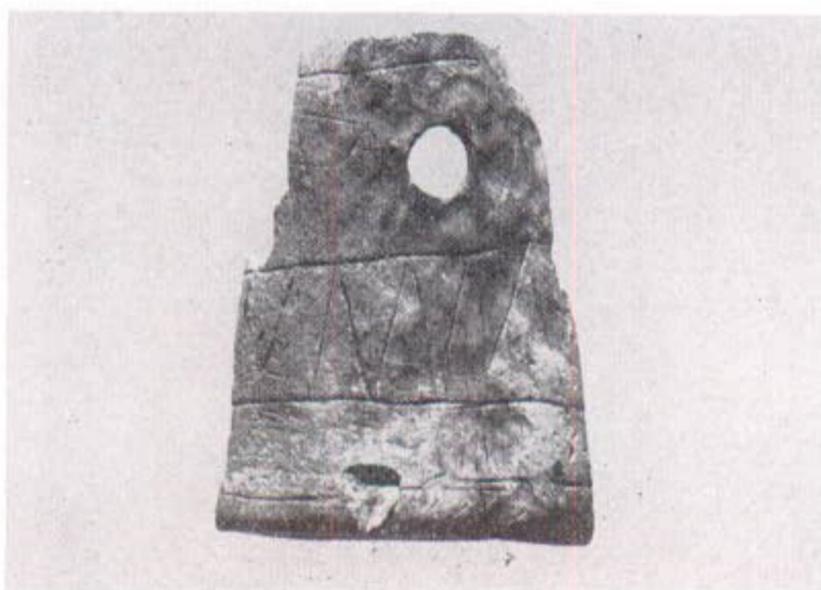
b Sherd no 3



c The Unstan bowl no 6



a The Food Vessel no 31



b The bone mount no 57