

## I.

## OPERATIONS AT SKARA BRAE DURING 1929.

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H.M. Office of Works continued during July and August of 1929 the conservation works at the "Pictish village" of Skara Brae, Skail, Orkney, whose initiation has been described in *Proceedings*, 1928-9, pp. 225 ff. Once again I was afforded facilities for observing and recording the archæological remains that might incidentally come to light. The actual work was again under the charge of the Department's contractor, Mr J. Firth, and we were fortunate in having the same foreman and labourers as previously. Mr J. Houston of the Office of Works once more took charge of the surveying—a very complicated matter—and rendered invaluable assistance in other directions. The Society owes to him the admirable plans and sections that illustrate this and the previous paper. The preservation of the buildings and many of the objects they contain is due to the able assistance of Mr Firth, his foreman Mr Moor, and the rest of the staff. During the excavation the site was visited by Mr Richardson, Inspector of Ancient Monuments, and Mr Paterson, Architect-in-Charge of Ancient Monuments. Both made invaluable suggestions, which have been incorporated, with due acknowledgment, in the present paper. Before operations concluded we had the great honour of a visit from Mr George Lansbury, the Minister under whose charge the monument is placed.

The operations of 1928 had left three "loose ends" that had to be followed up for the conservation of the structures: the main passage, A, continued westward into the midden; the newly discovered passage, C, ran onwards under the midden past the door of Hut 7; and the so-called Hut 6 remained to be delimited.

## THE AREA TERMED HUT 6.

Last year I suggested that this chaotic area was likely to throw much light on the history of the village. My anticipations were amply justified although my forecast (p. 260) was in the main mistaken. It now appears that Hut 6 is one of the latest elements in the village. That follows from a discovery made by Mr Firth after the 1928 campaign had closed. In repairing the roof of passage B he came upon a "limpet-box" in the midden just east of the passage wall (fig. 2). The bottom of this box was subsequently found by Mr Houston to be only

6 inches below the threshold of doorway L. In other words, this box must have been one of the fixtures of the hut to which L gave access and whose incurving corbelled walls could be discerned on either side of that doorway. Hence it follows that the floor of Hut 6 lay approximately on a level with passage A and far above that of Hut 7 and the adjacent section of passage C. We must already have cut through it at several points to the south of L, and it may be that the low wall M, mentioned last year, rested on that floor. The west, south, and east



Fig. 1. Entry L from area of Hut 6.

walls of 6 must have been demolished at some time before the original area of the chamber had been covered with refuse, which would otherwise have preserved them.

My former view of the early date of Hut 6 must therefore be revised. Though abandoned before Huts 1 to 5, it belongs to the same system as they and not to its earliest phase. A study of the southern wall of passage A by Mr Paterson disclosed that the entry to 6, termed L (fig. 1), was a secondary breach in that wall flanked by rather crude patching. Moreover, further examination below the floor-level of 6 disclosed the fact that the ruinous wall, Q, once joined up with the south wall of passage A; fig. 2 shows its lower courses running along under the assumed floor-level. At approximately the

same depth as its base a line of flagstones can be seen traversing the midden; they probably once provided a route across the mire between A and Hut 7. Wall Q itself can only have been an outer wall to Hut 5. To make room for Hut 6 this outer wall was presumably removed and the wall of 6 built up against the core of the wall of 5 as the wall of Hut 2 is against that of 1 (*Proceedings*, 1928, p. 228). Hut 6 must, therefore, be a later structure than Hut 5.

Between Q and the inner wall of 5 there may once have been a gallery, similar to that discovered this year round Hut 7. But actually

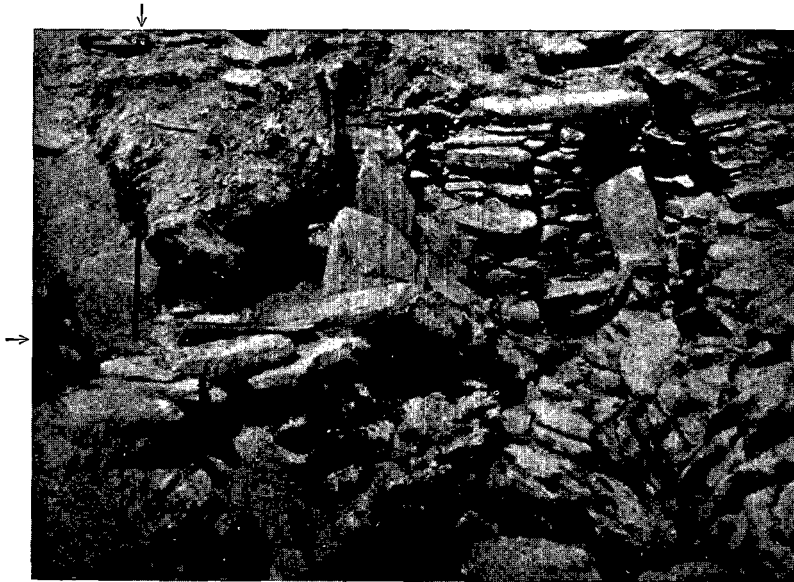


Fig. 2. Wall of Q under floor of 6, showing box.

the intervening space was found packed with midden. Wall Q itself was bedded carefully on a layer of blue clay, but was built above two earlier constructions, covered by the clay bedding, which are both necessarily anterior to Hut 5.

#### HUTS 6' AND 5'.

On the west, wall Q cuts across the surviving courses of a broken wall, U, that, joining the wall of passage C at its junction with B west of entry T, curved away in an easterly direction (fig. 3). This wall had originally bounded a Chamber 6' whose southerly wall runs partially parallel to the north wall of passage C. The hearth of the new hut, of perfectly normal rectangular form, has been disengaged.

Its position shows that the floor of 6' sloped up northwards from passage C, from which the hut had undoubtedly been originally entered. On the west the wall U runs through into passage C, projecting into the passage with a sort of buttress resting, like a portal, on an upright slab (fig. 3) on the west side of T. But the supposed entry T had been completely blocked by a well-built buttress which is not bonded in to U. The eastern cheek of the real entry is, however, perfectly clear, as Mr Paterson pointed out to me; it is conspicuously visible to the left of the buttress. Between this cheek and the buttress comes a



Fig. 3. Hut 6' and gallery outside Hut 7.

piece of obvious rough infilling that presumably marked the position of the original doorway to 6'.

The floor of Hut 6' consists of blue clay mixed with reddish midden clay, 1 foot 2 inches deep. This rests on another layer of true midden, due to older occupation, having a depth of 1 foot 4 inches, and resting in turn on 1 foot 2 inches of pure sand. Only below this, 6'40 feet above datum, did we reach rock and sterile clay. The virgin soil lies, therefore, a foot lower here than in Hut 7, 20 feet to the south. Hut 6' had obviously been deserted while passage C still remained in use, otherwise the blocking of the entry is unintelligible. The walls must have been deliberately dismantled from a certain height (nine courses or 2 feet 5 inches on the south, five courses or 1 foot 5 inches on the

north-west) and the stones used elsewhere; they were not piled up on the hut floor. The hut was filled with sand nearly to the top of its existing walls. Over the sand comes the usual midden deposit and the blue clay bedding of wall Q. The outer wall of the cell, C2, seems also to abut on the area originally occupied by Hut 6'. At some moment during the silting up of the hut a breach was made in the north-west wall, apparently to allow movement in the direction of passage A. The slab pavement mentioned above may be connected with this gap.

It follows from the foregoing observations that Hut 6' belonged to the



Fig. 4. Chamber 5' under hearth of 5, showing lintelling.

same general context as 7 but was abandoned earlier. Soundings made farther north brought to light the remains of a yet earlier structure whose discovery is one of the most startling developments of the 1929 campaign. On his visit to the site, Mr Richardson, observing the curious sagging of wall Q visible on fig. 2, inferred that it must be due to the collapse of some structure beneath the bedding of the wall. In fact, under the flagging shown in that photograph, some 3 feet below the floor of 6 as given by L, we came upon the collapsed lintels of a deep and narrow passage, running roughly east and west. In a westerly direction this passage must pass under B (its roof would be 1 foot or so under the floor of B), but the bad condition of many of the lintels, and fears for the security of B, forbade exploration

in that direction. To the east the deep passage D obviously passed under wall Q and under the parallel western wall of Hut 5. To disengage it, wall Q, of which only four or five courses survived here, was removed, and then shafts were sunk in the floor of Hut 5. Below this floor we found a confusion of interlocking lintel slabs, some of rotten slate, others of heavier flagstones, often big but all more or less broken. Some of these slabs may belong to the flooring of 5. The arrangement of the rest was compatible with the theory



Fig. 5. View into 5' under hearth of 5.

that they had belonged to the corbelled roof, partly supported perhaps by a collapsed pier or pillar, of an irregular chamber 5'.

In any case, the eastern wall of such a chamber, curving away westward on the south and east, eventually came to light immediately beneath the hearth of 5 (fig. 6). This wall stood to a height of 2 feet, its top lying 2 feet 10 inches below the hearth of 5. The wall was here formed of two large blocks on edge, continued on either side by five to seven courses of the usual dry masonry. (A similar use of upright slabs is seen in the walls of cells C2 and F1.) The chamber, of which this constituted the rear wall, undoubtedly communicated with passage D. Light could be seen through, under the wall of 5, but it was impossible to trace in detail the connection of the walls for fear of completely undermining the wall of 5. The passage had instead to

be filled in immediately with stone packing, and eventually the whole area of 5' was filled in. A shaft has, however, been built giving access to passage D opposite the entry L.

No hearth was traceable in 5' as far as it was available for exploration. The whole area was filled with compact midden mixed intimately with the broken lintels. A similar but slightly thinner midden deposit continued for about 12 inches below the bottom of the wall slabs. An accumulation of 1 foot 9 inches drift sand separates this midden from the native clay. The latter here lies only 5 feet

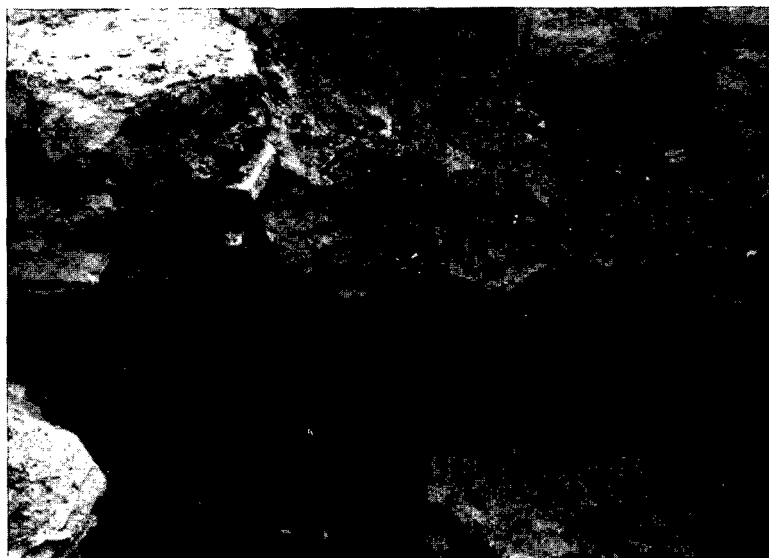


Fig. 6. East wall of 5 bis; hearth of 5 in top left-hand corner.

above our datum, or nearly 2 feet 6 inches lower than in Hut 7 to the south-west.

These unexpected discoveries reveal a phase of life at Skara Brae substantially anterior to anything previously discovered, unless perhaps Hut 7. Hut 5' and passage D are totally unrelated to the A system, and no connection with the C system has yet been traced though a former link in a hypothetical earlier form of passage B is conceivable. But there were indications, prior to the building of the breakwater, of a deep midden extending under the old huts 1-3. Traces of the same early deposit were reached this year by a pit sunk in the so-called "market place," a slate paved area to which passage A leads on the west as is described in a subsequent paragraph. The thin slates

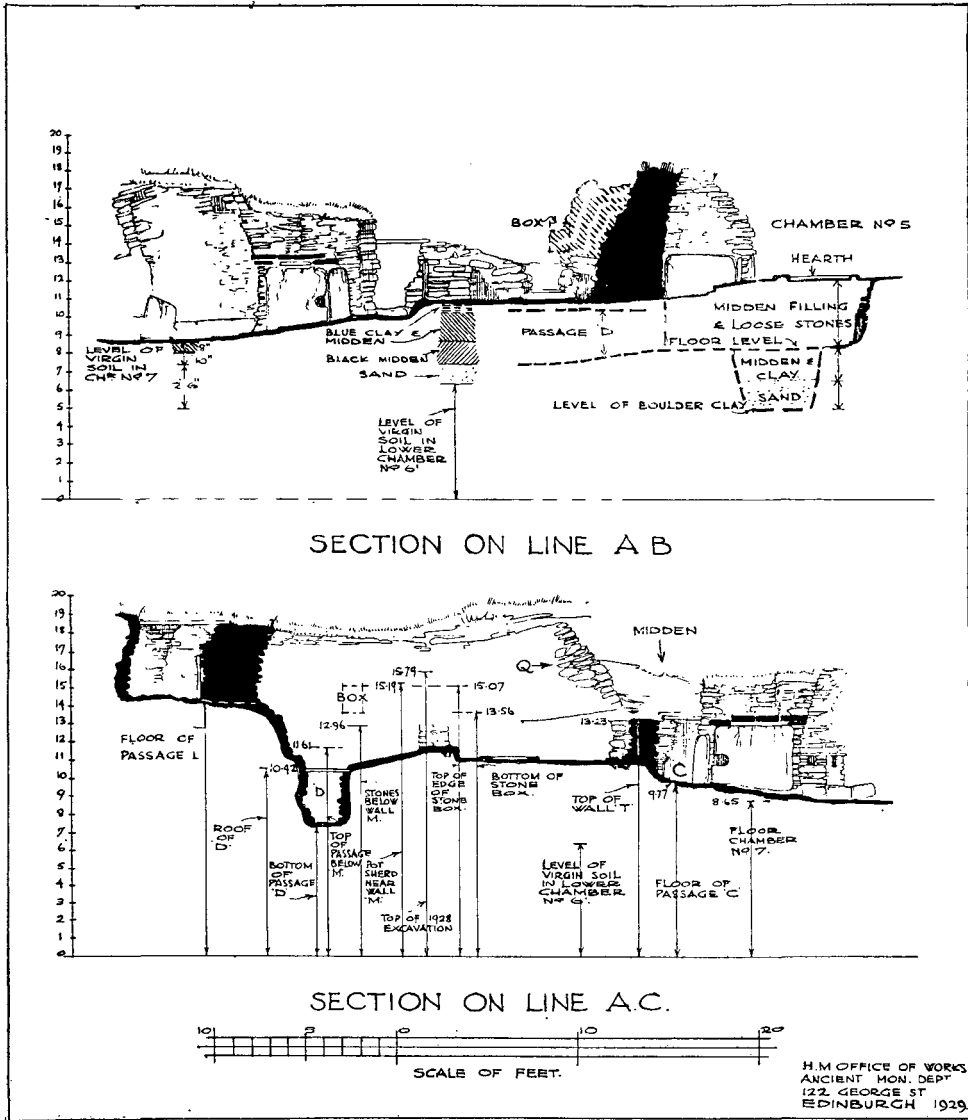


Fig. 7. Skara Brae: Sections along the lines AB and CA (not AC) shown on Plate I.



paving this area rested on a double layer of substantial flagstones. Below these we had to dig through 8 feet of midden and sand before reaching the virgin clay. The section here (pl. I.) was as follows from the top:—

		Depth from Floor.
(a)	7 inches, flooring slabs and blue clay bedding	
(b)	6 „ sand . . . . .	7 inches
(c)	9 „ midden . . . . .	1 foot 1 „
(d)	3 „ sand . . . . .	1 „ 10 „
(e)	1 foot 6 „ brown midden . . . . .	2 feet 1 „
(f)	1 „ 0 „ black midden . . . . .	3 „ 7 „
(g)	3 feet 3 „ brown midden . . . . .	4 „ 7 „
(h)	4½ „ sand . . . . .	7 „ 10 „
	undisturbed clay . . . . .	8 „ 2 „

In the lower stratum of brown midden, approximately 5 feet 6 inches from the pavement, several large stones, lying horizontally, were observed. They may well have represented the floor or some other element in an early building, but the pit was too narrow to allow of certainty on this point.

#### CHARACTER OF THE LOWER MIDDEN DEPOSITS AND THEIR SIGNIFICANCE.

In a general way the thick midden deposit resting on virgin soil under the pavement of the "market place" must be equated with that found similarly situated filling Chamber 5' and passage D beneath the floor of the approximately contemporary Hut 5, and in part also with the thinner deposit beneath the floor of the old Hut 6'. In character all these low-lying deposits were similar to the usual midden found over the passage roofs and between the huts, though somewhat darker in colour. One foot of the midden under the market place was quite black as if peaty. In all the deposits the usual broken bones, including long bones and horns of oxen, and limpet shells were encountered exactly as in the usual midden. Tines from red deers' antlers were found in the filling of Chamber 5' and in layer *g* under the market place. Artifacts were, unfortunately, rare, and no Skail knives were noticed. Otherwise such as did turn up correspond exactly to those found elsewhere at the site.

From the filling of 5' we collected several unornamented sherds of the usual coarse pottery, including the bottom section of a bowl with the next section breaking off at the join, exhibiting the technique of building up by superadded rings described in *Proceedings*, 1928-9, p. 269. From passage D we have a pot-base of the usual type 3 feet

6 inches below the western lintel. From about the same level came a flake of translucent flint and a rim sherd with two horizontal lines roughly incised upon it.

More conclusive evidence was produced by the shaft in the market place. Under the layer of stones in stratum *f*, at depths of 5 feet 6 inches and 7 feet 4 inches respectively, came sherds of distinctive Skara ware with applied rib ornament. And at a depth of 5 feet we found a pin of type *A1a*.

There is thus no reason to doubt that even the lowest deposits were left by the same people whose descendants built the long-familiar huts. There is, that is, no indication of a distinct culture in the lower levels. The industry is homogeneous from the roof of passage A to the virgin soil 12 feet below. The first settlers who have left any traces upon virgin soil were the direct forefathers of the well-known villagers.

The clearing up of the ruins of Chamber 6 have therefore, as I expected, enormously widened our knowledge of the history of the village as a whole. We have in this small area the record of a series of rebuildings and reconstructions of a very drastic kind. The earliest phase, I, represented here is illustrated by the passage D and the Chamber 5'. Whether these structures were also anterior to Hut 7 and passage C cannot at the moment be determined. Almost certainly later (after the accumulation of the 1 foot 4 inch midden under it) was the erection of Hut 6'. By this time passage C probably existed in some form, and presumably also Hut 7. Phase III witnessed the building of Hut 5 with its original outer wall Q. By this time Chamber 5' must have been filled with midden and its roof had collapsed. Hut 6' had also been deserted and allowed to fill with sand to a depth of 8 inches or more. Midden was deposited above this sand, and a bedding of blue clay laid thereon. A considerable interval, reasonably estimated at two generations, must separate this sweeping demolition and reconstruction from the building of 6' which inaugurated phase II. To the same phase, III, must belong passage A and most of the huts opening thereon, since that passage serves also Hut 5. Possibly Hut 7 was still occupied, being connected with the A system by passage B. Hut 6 marks a still later phase, IV, for its erection entailed the partial demolition of the outer wall (Q) of 5. Finally, we reach phase V when Hut 6 had been allowed to fall into decay; a small cabin or cell was built in its precincts, with a roof of horizontal slates resting on wall M. Phase IV, again, must have been comparable to phase III in duration. Yet throughout this phase and its successor the huts of the A system were in occupation.

## PASSAGE C.

The exploration of passage C sheds further light on the history of the settlement. As left last year, the passage could be seen running on under midden in a south-easterly direction beyond the doorway of Hut 7. For a distance of 50 inches the lintels had collapsed and must be removed. At this point the passage bends sharply southwards following the contour of the inner wall of Hut 7 at an average distance of 12 feet, the wall of 7 being double on this side. The passage roof was intact for a distance of 10 feet from the corner, and it has been possible to preserve the whole section. This is the most perfect piece of original roofing at the site. The gallery was filled with pure sand mixed with which were a few antlers and clean bones.

At the corner a small cell opens on to the passage on the left (going clockwise from the door of 7). On the right hand of the entry is an upright jamb such as usually marks doorways (fig. 8). Above the lintel which it supports is, however, a gap, which may be secondary. The cell measures 4 feet 5 inches by 3 feet 10 inches and is splendidly preserved. The rear wall consists of upright stones on edge, but the roof is corbelled, the dome being 3 feet 1 inch from the floor. Three otters' skulls were found in the cell, which may have served as a guard-room.

From the entry to the cell the gallery rises gently, its floor being paved with slates. Opposite the right-hand jamb of the door to cell C2 is a buttress bonded into the right, forming with the afore-mentioned jamb a doorway into the gallery proper 1 foot 10 inches wide. A sill stone on edge lies across the door, forming a step. The roof of the gallery is here formed by corbelling: three courses of solid flagstone slabs project from either side so that the uppermost spans the gap entirely. The oversailing begins 3 feet 3 inches up, and the maximum height of the entry, *i.e.*, from the threshold to the underside of the spanning slab, is 3 feet 10 inches. The same method of roofing is followed for a distance of 3 feet 4 inches. At this point there is a straight join between two sections of the left wall. Here a narrow kerb-like slab, resting on the seventh projecting course of the right wall, spans the gallery, joining the left wall just at the gap 4 feet 7 inches above the floor. Above this beam the right wall is continued by four courses of thin oversailing slabs, and the left by three courses arranged askew so as to bridge the gaps between the two sections of the same wall. Above the beam a large slate slab crowns both walls 5 feet 8 inches from the floor. The rest of the gallery is roofed, like others, with slate slabs spanning its whole width for a distance of 7 feet 6

inches. A second threshold is formed by a slab on edge 3 feet from the joint in the left wall, and 4 feet above this a transverse slab on edge spans the passage. At this point there is a niche in the right wall formed by the omission of three courses of masonry, and roofed and floored with long flags. In the left wall a corresponding gap runs through two thicknesses of wall to the midden outside. It is floored



Fig. 8. Entry to cell C1 and gallery.

with a single slate. Below is another smaller gap. These opposing apertures in the walls were apparently bar-holes. Mr Moor observed a good deal of rotten whalebone in the left-hand one, and cleverly suggests that the bar may have been of this material. Beyond this doorway the gallery still rose slightly for a distance of nearly 5 feet to a height of 4 feet above the floor of 7. Hereafter no trace of roofing was found, and the space was entirely filled with loose sand free from midden. There is a gap, apparently secondary, on the left which gave access to a semicircle of stones lying on midden, but the gallery proper

continued, now turning gradually to the east. It was followed up almost to the Office of Works fence, where traces of broken roofing slates again appeared. Here, however, the walls were in bad condition. A large slab was observed at the base lying on midden. It may have been part of the floor or a collapsed lintel, but pending an extension of our boundaries nothing more could safely be done on this side.

Some confirmation of this view came to light through an attempt to grout in from behind the oversailing west wall of Hut 7. It was then found that a gallery 2 feet 2 inches to 2 feet 10 inches wide, in poor preservation, had run behind the western wall, its slab floor being slightly above that of the raised recess over the mural tomb (D' on fig. 1 of the previous report) and 4 feet 10 inches above the floor of the hut. Only a single very flimsy wall, through which daylight could be seen when the gallery was uncovered, separated it from the raised recess. Part of this recess has been obviously blocked up by the piece of wall that makes a straight joint with the main inner wall to the left on fig. 24, 1928; this joint does not continue, as has been alleged, below the level of the gallery floor. Perhaps the "raised recess" in the wall of 7 had once been the entry to a sort of balcony on that side of the hut. The upright pillars regularly found at the ends of the "beds" or "pens" in this and other huts (1928, figs. 5 and 22) might well have served as the supports for some such balcony. On either side of the "recess" the wall of Hut 7 is double on the west as on the east, though rather less thick. The outer face of this wall, forming the left wall (still going clockwise of the gallery), was distinctly rough. The opposite wall of the gallery was partly faced with slabs on edge, supporting oversailing courses of horizontal slabs. The gallery was filled with sand and a little midden. No roof survived. It has been traced northward from the "recess" to a point above the cell C1 at the end of passage B (see fig. 3). Quite possibly the gallery originally continued further as a second storey over passage C to the "gap" above the door of 7 described last year (1928, p. 250). Wall R (1928, p. 244) would have formed the northern side of this upper storey, and its imperfect conformity with the lower courses of the north wall of C would thus be happily explained. Indeed, a broken lintel slab was actually observed at the base of R.

These discoveries give us a glimpse of Hut 7 as a much larger and more elaborate structure than had been originally supposed. Instead of being just one of a series of huts opening on to a street, such as 1-5 now are, it appears as a self-contained complex partly surrounded by a winding gallery. It thus begins to approximate in type to the broch, though being more primitive both by reason of its much smaller size and of the absence of a true staircase.

## CONTINUATION OF PASSAGE A: THE MARKET PLACE.

Passage A was cleared westward from the point left last year. It was roofed throughout with thin slates, which in every case were so cracked that their removal was inevitable. The north wall was in

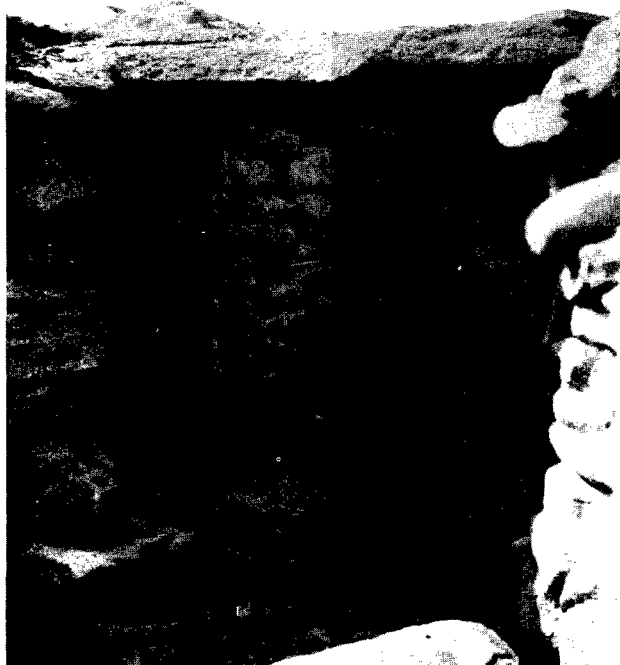


Fig. 9. Barred gate in passage A.

good condition, but a section of the south wall bulged badly, as if collapsing into the unexplored area to the south. The bulging section ended in straight joints at either extremity. No new hut was found opening on to the passage. It is instead barred, 14 feet from the entry to Hut 2, by a gate consisting of two monolithic slabs, built into the walls, that constitute the jambs, with a space of 1 foot 9 inches between them. A slab on edge forms the sill, and the lintel, 3 feet 5 inches above it, is a flagstone not a slate (fig. 9). The bar-holes for closing the gate lie to the east, the long one, 3 feet deep, into which

the bar slid when the gate was open, lay to the south. A special covered channel of stone had been built through the wall into the midden beyond for the reception of the bar, but there was no cell or other control point at its end any more than in passage C. A great lozenge-shaped slab, found lying prostrate just inside the sill, may have been the original door itself.

The gate opened out on to an antechamber continuing the passage, but rendered wider by the outward curvature of the south wall. Beyond this came a further constriction. The inner jambs were here buttresses

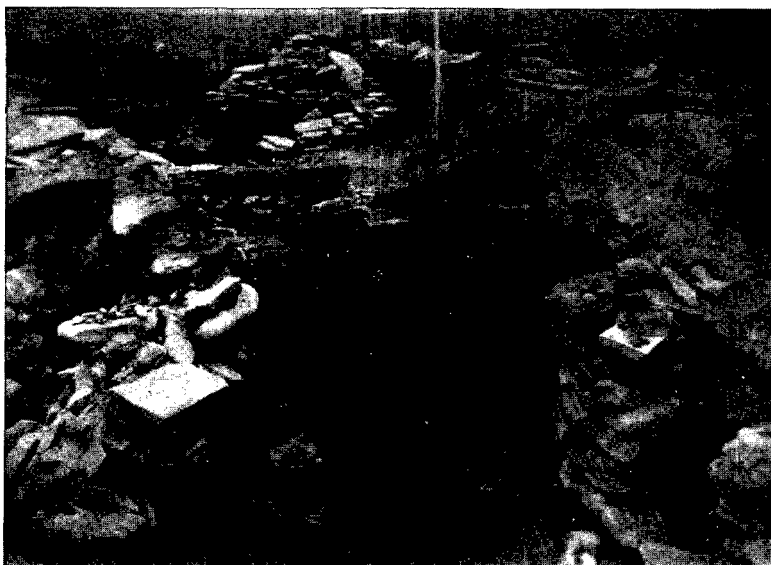


Fig. 10. Market place looking east along main street, showing the compound gate of the latter.

of dry masonry resting on slabs on end and projecting 5 inches and 1 foot 8 inches from the north and south walls respectively, thus leaving a fairway 1 foot 9 inches wide (fig. 10). Here, too, a stone on edge formed the sill. The outer cheek of this portal lacked upright jambs, and no sill corresponded to it. The aperture was, however, lintelled over with two heavy flagstones 3 feet 3 inches above the slate pavement.

Traversing the portal just described, we emerge on to a slate-paved area. No suggestions of roofing were observed here save at the corners. The whole area was filled with drifted sand, which became rather sticky near the ground but never degenerated into a true midden.

Only a few stray bones and shells lay upon the pavement, but just west of the opening of passage F a broken pot and a heap of the shells that it had once contained were discovered. The whole area was neatly paved with slates, fitted together after the manner of a crazy pavement. The slates were supported by flagstones bedded on blue clay. They were mostly intact when first uncovered, but soon broke beneath our hobnailed boots—the original villagers presumably went barefoot. The paved area can never have been a dwelling as no fireplace nor other fixtures were found. Perhaps it had served as the village market place. In any case four “streets” intersected here, and in addition two huts, one industrial rather than domestic and the other perhaps reserved for ritual ends, also gave on to the square. The exterior walls of the latter bound the market place on three sides. It is worthy of note that these are the only sections of indubitably external walls exposed beyond question to the weather that have yet been uncovered at Skara Brae.

The building to the south (Hut 9) seems to be in a very ruinous state. Its threshold stands 6 inches above the pavement of the market place. The entry had apparently once been lintelled over and was largely choked with collapsed roofing slabs resting in sand. There were indications of midden above them. The area was cleared back to its south-east wall in the belief that it was just a cell. It soon, however, appeared that it had extended much further to the west, though at the eastern end the inner face of the walls has utterly collapsed. The remarkable stone objects described on p. 185 were found wedged in between the fallen stones of these inner walls, above the level of the clay floor (which is flush with the threshold) but below the intrusive midden that has probably slid in from wall tops. The further clearance of this area had, for reasons of time, to be postponed.

#### HUT 8.

The north wall of the market place is a solid-looking mass with a distinct batter (fig. 11). It proved to be the external wall of a building, subsequently christened Hut 8. The wall stands to an average height of 4 feet 9 inches above the pavement, and below that is bedded on blue clay. The existing wall-top was covered with sand rather than midden, but a stone mortar and several bone implements were found upon it. This may indicate that it had never risen much higher. Near its western end there is a gap in the wall, filled up with rough patching, 3 feet 9 inches high by 1 foot 9 inches wide, as if an entry had once existed on that side. There is, however, at present no positive indication of the continuation of that gap through the inner wall.



The present entry to Hut 8 is the low doorway on the right in the western end of the market place. It is 3 feet 10 inches high and 2 feet wide, and is paved with slates like the market place. It is spanned by a solid flagstone lintel carrying six courses of dry masonry above it, so that at this point the west wall of the market place stands 5 feet high. It had probably never been any higher since the roof of the porch lay at the same level. The corner of the market place between the door and the north wall was sheltered by a verandah of slates laid obliquely across between the two walls (fig. 11).



Fig. 11. Market place looking west, showing door of Hut 8 on right.

The door gave access to a cruciform porch paved with a single slate slab and roofed with another some 4 feet above it. The latter, however, being broken, had to be removed. To the left of the door the south arm of the cross was a shallow recess. Oversailing courses bring its rear walls gradually flush with the roof of the whole porch. Two upright slabs like jambs stand at either side of the mouth of the recess. The recess opposite the door is very shallow, and its rear wall very flimsy. The whole porch gives the impression of being a secondary construction built on to the south end of Hut 8. It was filled with sand that had filtered in through the door and the broken roof. But the floor was littered with bones, and two large pots had stood upon it. The base of one standing in the western recess could

be rescued. The only other artifact found on the floor was a tool of type B3.

The northern arm of the cross was the entry to Hut 8 proper. The door itself, 2 feet 2 inches wide, was spanned by a solid flagstone lintel and checked on the inside by projecting upright jambs built into the wall. The lintel rests directly on the eastern jamb, which is 3 feet high. That on the west stands only 2 feet 3 inches and supports three courses of horizontal slabs below the lintel. The bar-holes come as usual on the inside, the long one lying on the east side. The inner



Fig. 12. Looking through flue across kiln into Hut 8.

cheek of the entry is marked by a slab on end, 1 foot 10 inches high, that supports five courses of masonry. Up to this point the whole entry had presumably been roofed with flat slates (fig. 12).

From the inner cheek the hut walls curve back on either side. But the line of the original east wall is masked by a secondary wall built in front of it and extending to the mouth of the eastern recess. At its southern end near the door the secondary construction makes an obvious straight joint with the original wall, which can be traced right along behind it. In the opposite wall was a small beehive cell of the usual pattern. Unfortunately, its roof and the greater part of its outer wall were ruined, but the entry is still visible. A corresponding cell on the east, had it existed, would have been

blocked by the secondary wall, but examination revealed no trace of such a feature. The rest of the western wall is completely ruined. It seems to have been disturbed in comparatively recent times for the interment of a dead sheep. Sufficient remains, however, of the wall's lower courses to show that this side of the hut corresponded closely to its eastern counterpart.

Here there is a wide alcove in the original wall (fig. 13). In its southern corner is a small niche, and further north a double-shelfed ambry. The shelves are formed of thin flagstone slabs, the uppermost



Fig. 13. Alcove with cupboards in Hut 8.

being carved along its edge with a rough chevron pattern. Beyond the wide recess is a two-storeyed cupboard let into the main wall. The slab forming the upper shelf is again carved with deep lines along its edge. The joints where the shelf-slabs fit the walls have been luted with yellow clay similar to that used for luting "limpet-boxes" in the normal huts. Just beyond this point a built wall projects at right angles to the hut's east wall, but not properly bonded in therewith. After 2 feet it turns north again, but its line is continued by a wall of thin slabs set on edge (fig. 14).

Beyond this partition lies a complex structure which, as Mr Paterson very cleverly points out, bears a resemblance to a kiln. On the other three sides this annex is bounded by big flagstones set on edge, the

corners being rounded off with courses of dry masonry. There is a gap between the slabs forming the rear (northern) wall and a similar gap flanked by another pair of slabs on edge in the outer wall. Between the two pairs the gap is traversed by a low wall supporting a lintel slab. Mr Paterson interprets this as the base of the kiln flue. Two great slabs paved the areas on either side of the gap between the north wall and the partition to the south. Upon them lay a packing of burnt stones, some of which are clearly shown in fig. 14. Mr Paterson tells me that such a packing is often found in mediæval kilns. To



Fig. 14. Hut 8 looking north towards kiln.

either side was heaped yellow clay that might have been the material of the village potter.

The character of the rest of the hut is in keeping with the industrial function ascribed to the annex. Though provided with a central hearth of the usual pattern, it lacked the "beds," "dressers," and "limpet-boxes" invariably found in the dwelling places. It was therefore not domestic, and the finds indicate that it may well have been a workshop. The whole area was, as usual, choked with sand. At an early stage in the clearance a pillar, leaning to the west, was seen projecting from the sand and was observed to be covered with carvings. Its base had originally come near the south-east corner of the hearth, and is marked by a peg in fig. 13. Actually the pillar was loose and no special base

for it could be identified. Its lower end, though not itself marked by fire, rested upon the corner of an irregular heap of black matter, consisting of burnt whalebone mixed with charred shells and bones. This heap, which covered the hearth, was about 3 feet 6 inches square. Broken bits of large slate slabs were found just above, but also under the charred material. Some might conceivably have fallen from the roof. The curious "playing man," illustrated in fig. 27 and described below, was found under the layer of ash.

A few paving slates were found near the doorway and also to the north and north-west of the hearth. Otherwise no fixtures were observed. A pot, apparently once filled with limpet shells, had stood near the buttress south-east of the hearth, and another further back to the south. Pot fragments together with animal bones were also found in the ruined cell in the west wall. The most distinctive traces of human occupation found on the floor of this hut were, however, chert and flint scrapers, cores, and chips. No less than 390 pieces were collected on the floor, 57 from the eastern alcove alone. As these included the tiny chips flaked off in the course of fabrication, it is safe to conclude that a village flint-worker plied his trade in Hut 8. In addition to the flints, 5 "chisels" of type B3 and 10 smoothed knuckle-bones of oxen—7 against the partition and 3 in the adjacent cupboard—were found in the hut. Both may have been used in the same industry. A few pins and beads of normal type were also found.

In addition to the "pillar" and the shelves already mentioned, two of the stones in the original east wall of the hut had been carved. It is natural to correlate this exceptional wealth in carvings with the numerous pieces of flint and chert.

#### PASSAGES OPENING ON THE MARKET PLACE.

The openings to the right and left of the gate from passage A into the market place proved themselves to have been passages also. That on the north, passage E, seems originally to have encircled Hut 8. It had been paved in the usual way, and remains of the paving slabs can be seen not only to the east, but also to the north-west of the hut. Unfortunately, the right-hand wall is everywhere ruinous, and it is impossible to state whether this passage had ever been roofed over. Even within the bounds of the market place itself a large gap occurred, suggesting the mouth of yet another passage. Indeed, a line of horizontal slabs lying between rough walls on either side was found running parallel to passage A. The space between these walls was, however, choked with midden, and the faces of the walls here were too rough to

have been tolerated. What we were really confronted with here, as Mr Paterson conclusively demonstrated, was a double wall with midden filling. Incidentally, outside the external face of the double wall we came upon a curious bin formed of slabs immediately behind the inner wall of Hut 2. It was filled with yellow clay, and Mr Houston suggests that potter's clay may have been stored in it. Beyond the gap just mentioned the right-hand wall of passage E was preserved for a distance of 15 feet. Thereafter it was lost completely.

Passage F, the western counterpart of E, is better preserved. Its



Fig. 15. Looking down passage F, showing cell F1 on right.

fine slate paving was intact before our shod feet began to tread it, and the left-hand (going from the market place) or north-eastern wall stands 3 or 4 feet high. The right-hand wall, on the other hand, had almost entirely collapsed outwards into the sand-filled area west of the passage (fig. 15). The roof of passage F, together with the upper courses of the left wall, and the midden that had rested on both, had slid forward in the same direction. Hence the passage is partly choked with slabs fallen from the wall and roof and with midden. But these are everywhere separated from the pavement by a layer of sand at least 7 inches deep. This collapse has produced a sloping deposit of midden and stones projecting into the sand west of passage F for some 6 feet.

The passage itself rises steadily from the market place 15·50 feet

above datum to a sort of hump, 15 feet from its mouth, where the pavement level is 16.62 feet. Thereafter it descends again. About 21 feet from the passage-mouth a cell, F1, opens on to it. The lintel of the door was visible, but the left-hand jamb is no longer recognisable. From this point the left wall is very ruinous. Fortunately the right wall is here better preserved, and it will be possible to trace the continuance of the passage next season.

Once the narrow but now ruined doorway has been traversed, cell F1 resembles a short passage terminating in converging walls and running nearly parallel to F in the direction of passage A (fig. 15). It is, however, cut short by an abrupt convergence of its walls. As in other cells, the walls are partly formed of slabs on edge supporting oversailing courses of horizontal slabs. Their projection, however, is not great, and the roof was formed of very large slates as in a normal passage. All had been broken before we disengaged them. The cell was largely choked with midden when we found it. The artifacts from this deposit may therefore in part have fallen in from above. Within the cell a fire had at some period been kindled against the south-east wall nearly opposite the door; fragments of a big pot and broken bones were found at this point. The corresponding stone in the opposite wall had been carved and pitted. From the very top of the midden above the entry to cell F1 we collected a fine stone mortar that was lying inverted close to the displaced lintel. Another mortar was found, likewise inverted, in the sand a little to the west.

The area between passages A and F and an imaginary prolongation of F1 was excavated down to the level of the cell roof in the expectation of finding a cell or other structure here. But, apart from the channel for the bar from passage A, no trace of building was observed. The whole area was covered with midden, from which many interesting relics were collected. Any constructions that there may have been in this area must lie lower down and consequently be anterior to the A system of buildings.

In the area south-west of passage F matters were different. The whole area from the top of the right-hand wall of F to the south-east wall of "Hut 9" was covered with sand, 5 feet deep, to a point 16.70 above datum (about 1 foot 3 inches above the floor of market place). Under the sand we found a line of flat slabs, like a pavement, resting on midden and forming a sort of path southward. This pavement appears to have been laid after the right-hand wall of passage F had already collapsed, to give access to some as yet undiscovered spot which F perhaps once served. In any case the junction between the right-hand wall of F and the south wall of

the market place (wall of Hut 9) can no longer be discerned, a gap 2 feet 2 inches wide intervening. Across this gap a large flagstone was observed continuing the line of pavement P and laid right over the original pavement of F, 4.5 feet above it. Hence pavement P belongs to a way constructed after passage F had become partially blocked but while the market place was still open and in use. Further explorations in this area will undoubtedly throw light upon this odd feature.

#### CARVED STONES.

Decorative carvings on the stones used for the building of Skara Brae were first noted by the writer in 1928, in the newly exposed upper wall of passage C and then on the slab in front of the grave in Hut 7. Owing to the soft nature of the stones, scratches may very easily be made upon them accidentally—for instance in cleaning a trowel—and such will, after a year's exposure, come to look quite old and weather-beaten. In 1929, therefore, a sharp look-out was kept as soon as any wall or likely stone was cleared of sand. The result was a very great increment in the list of marked stones, six being found in Hut 8 alone.

Five technical processes may be distinguished, giving five classes of marking.

(i.) Scratches that might easily be executed with an unworked flint edge upon soft, fine-grained stone.

(ii.) Engravings: deeper lines implying the use of a worked edge. Stone 8 (from Hut 8) shows that the outlines of these figures were first sketched in by scratches and then deepened with the worked flint edge.

(iii.) Carvings giving deep V grooves. These are commonest on coarse-grained stone and presume the employment of a worked flint.

(iv.) Broader carvings resulting apparently from a series of parallel strokes with a worked edge, or perhaps partly pocked.

(v.) Percussion producing pits.

A list of the stones so far recorded is as follows:

(1) "Inscription" on the edge of the sandstone slab bounding the bed "Y" in Hut 7 behind which the submural grave was found last year. It consists of a series of irregular figures between vertical strokes and is executed in technique (iii.). Only the "double-V" near the centre of the preserved decoration is a well-recognised decorative motive. I suggested last year that these signs are epigraphic rather than decorative. Several authorities who have seen the marks, like Mr Richardson, or the fine photograph reproduced here, like Sir Arthur



Evans, incline to regard the marks as merely ornamental. That has become more likely in view of the finding of so many purely decorative carvings (fig. 16).

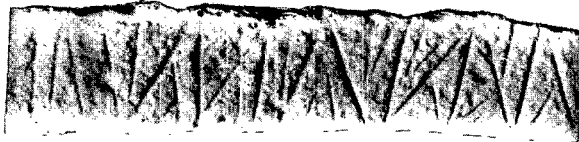


Fig. 16. Supposed "inscription" on edge of "bed" in Hut 7.

(2) In a very inaccessible position immediately below the lintels on the (inger's) right-hand wall of the entry to Hut 7. A series of double-V's in technique (iii.).

(3) High up in the wall of passage C (wall of upper gallery) near entry T, as No. 2 (fig. 17).



Fig. 17. Carved stone from wall of passage C.

(4) In built structure N, to left of doorway in Hut 7. Series of vertical strokes in technique (iii.), with lighter cross strokes. The marked surface was turned inwards and not exposed (fig. 18).



Fig. 18. Carved stone in structure in Hut 7.

(5) Slab standing on edge in cell F1 immediately on the left as one enters, two lightly and rather carelessly engraved triangles; to the right, series of pocked dimples like small cup-marks (fig. 19).

(6) South jamb of outer portal of passage A to market place, sixth stone from lintel, engraved pattern resembling letters KI; below, on

seventh stone down, group of unintelligible engravings. A skin of the stone is peeling off, but some of the engraved lines have cut right through the outer skin and are visible under it.

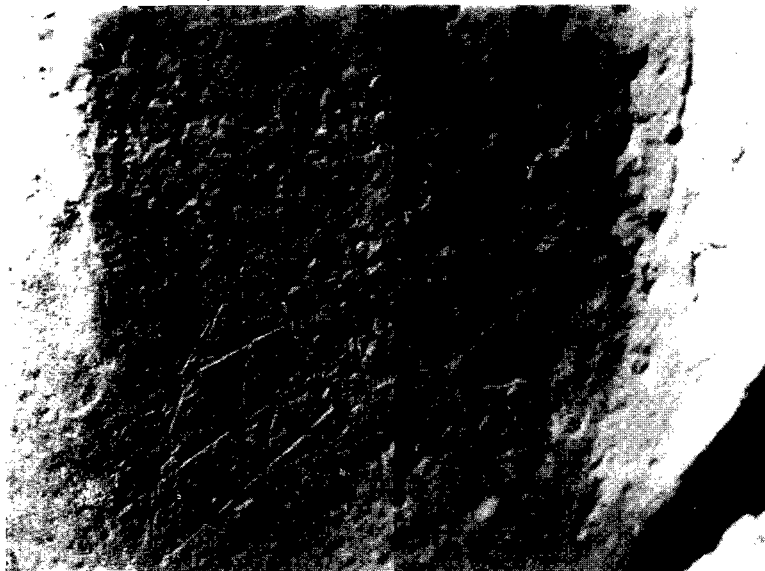


Fig. 19. Markings on stone in Cell F1.

(7) Rough graffiti of class (i.) on north jamb of entry to porch leading to Hut 8.

(8) Lozenge engraved on smooth flagstone high up in original east wall of Hut 8 near the corner where the wall bends to form the eastern alcove (fig. 20). The stone, when found, was hidden by the secondary wall mentioned above. The rather lopsided lozenge to the right has been engraved; on either side the outlines of similar figures have been scratched. Other, apparently aimless, scratches are visible on the further end of the stone.



Fig. 20. Engraved and scratched lozenges, Hut 8.

(9) Smooth flagstone in original east wall of Hut 8, just within doorway before junction of secondary wall and one foot above floor. Series of hatched lozenges executed in technique (ii.) (fig. 21). One lozenge

is rather unsuccessfully fitted into a panel formed by two pairs of vertical lines. Some of the hatchings are shaded, with light strokes; and similar lightly shaded figures occur near the four corners outside

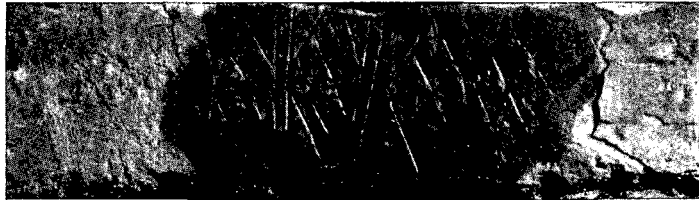
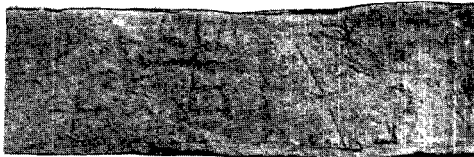


Fig. 21. Lozenge patterns on stone from Hut 8. (By courtesy of Royal Society of Edinburgh.)

lozenge 3. These might be compared with little figures in the corners of panels on stone 1.

(10) Edge of upper slab covering cupboard in east alcove of Hut 8, irregular zigzag, engraved.

(11) Edge of middle shelf in cupboard north of the foregoing. Carved lines, no pattern discernible owing to condition of slab.



1 0 3 5 inches.



1 0 3 6 inches.

Figs. 22-23. Markings on pillar from Hut 8.

(12) Pillar behind hearth in Hut 8. The pattern belongs to class (iv.). It is difficult to discern any definite motives, but a sort of cross is just distinguishable (figs. 22-23).

(13) Slab of shale found, with the ornamented face upright, in the midden between passages A and F, class (iii.), zigzag line with hatchings in corners.

(14) Small shale slab found in the midden, ornamented with lozenges, class (ii.).

This newly discovered style of Scottish glyptic differs entirely from both the well-known Iron Age series represented by the "Pictish symbols" and runes, and also from the Early Bronze Age group of curvilinear figures (spirals and cup-and-ring markings). In contradistinction to these, our group uses exclusively rectilinear patterns. The nearest parallel is to be seen on the slab near a cist at Stennis, published

in *Proceedings*, lx. p. 35. Here we note in particular the lozenge enclosing a St Andrew's cross as on our stone 8. The latticed lozenge is a well-known Bronze Age motive, from the early beakers (Abercromby, Nos. 104, 118, 295, etc.) to late razor-blades, like those from Sutherland and Midlothian (Anderson, ii., figs. 19, 20, and 24). A really close analogy to the triangle and zigzag motive of stones 2 and 3 cannot be found nearer than Brittany. There, an apparently identical pattern adorned the edge of one of the paving slabs in the sculptured tumulus of Gavv' Inis.<sup>1</sup> The remaining sculptures in this covered gallery are regarded by Breuil<sup>2</sup> as cognate and coeval with the second group at New Grange. The latter in turn falls in the beaker and food-vessel phase of our Bronze Age. The artistic evidence thus agrees with that of the pottery in connecting the village somehow with Bronze Age culture.

#### RELICS.

The general impression produced by the industry is now more definitely early than heretofore. Neither metal nor any object certainly worked with metal tools has yet been found at the site. On the contrary, we unearthed a very large number of flint and chert flakes, an appreciable percentage of which had been very neatly worked to form small disk "scrapers." As already remarked, Hut 8 provided proof that the working was carried out in the village itself, so that there is no question of the re-utilization of old tools. Four more ground stone celts were found this year, one of quartz, one of a green volcanic stone, and two of shale. The butt of one (fig. 24, 1) has been narrowed down by rubbing to form a sort of handle, a feature observable in a more rudimentary form on some Shetland and North Scottish specimens in the National Museum. All came to light in the late midden, and bear traces of use. None of the foregoing objects can really be regarded as specifically and exclusively neolithic. Still less can such a designation be applied to the quite exceptional tools to be described next.

The five objects shown in figs. 31-33 were discovered in or near the entry to Hut 9, as described on p. 173 above. They lay in the same order as they are here described, the club almost in the doorway, the double axe among the stones fallen from the inner face of the rear wall.

(1) Shale club rudely worked by chipping and reminiscent of the well-known Shetland group (fig. 24, 2).

(2) Pointed implement of shale shaped by grinding. The butt is rounded (fig. 24, 3).

<sup>1</sup> Péquart et le Rouzic, *Corpus des signes gravés dans les monuments mégalithiques de Morbihan*, pl. cxxxiii. A less satisfactory reproduction is given in *Rev. Arch.*, 1884, vol. ii.

<sup>2</sup> *Proc. Roy. Ir. Acad.*, xxxvi. C, I. pp. 2-3; cf. Burkitt, *Ipek.*, 1926, p. 53.

(3) Two-pointed implement of similar stone. It is clearly not lathe-turned, its cross-section being nowhere strictly circular. The broader end has been worked down, not to a sharp point, but rather to a very narrow blade, and is elliptical in cross-section (fig. 25, 4).

(4) Three-spiked object of shale. It measures 7.40 inches long and 4.20 inches from the tip of the medial spike to the opposite surface of the convex band encircling the body. This band is marked off from the terminal spikes by two grooves and is decorated with a carved pattern (fig. 25, 1). On one side of the medial spike is a shallow depression, on the other a corresponding raised surface. Our object is undoubtedly allied to that from the chambered mound of Quoyness on Sanday, illustrated by Anderson as fig. 269. At the same time it

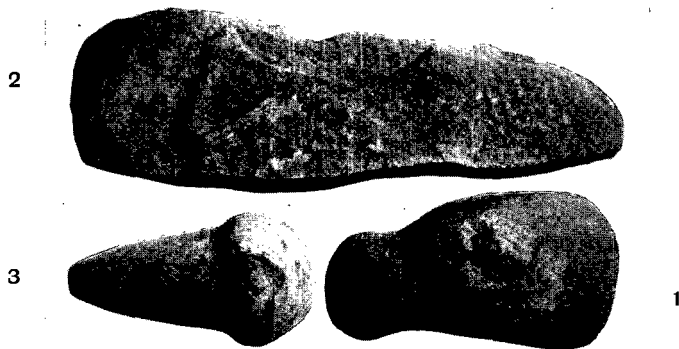


Fig. 24. Shale implements from Skara Brae.

exhibits an undeniable similarity to slate implements of the Arctic Stone Age from Norway and Finland.

(5) A double axe of shale, with handle in one piece with the blades. These are chipped as if by use (fig. 25, 3). The object is unique.

A still more puzzling object was discovered near the entry of the passage that opens on to the "market place" on the west. This passage was filled with sand like the market place itself, but 18 inches below the top of the wall surrounding the porch of Hut 8 lay a stone, covering a layer of darker sand, including broken bones. The object, reproduced in fig. 25, 2, lay in this deposit together with a pick of type C1. Immediately below were sherds of the usual pottery resting on a piece of broken slate. Thereunder came another stratum of clean sand, 3 inches thick, resting on darker sand and refuse. The object is one of the most astonishing monuments to human patience and skill ever dis-

covered in Scotland. Though made out of hard volcanic stone (probably andesite), it has been brought to its present shape by grinding. The minute striæ left by the process are so irregular as to preclude the assumption of lathe-turning. Yet the proportions are extraordinarily accurate. In shape it is an ellipsoid truncated at both ends. The body is decorated by five horizontal ridges, interrupted and divided into two



Fig. 25. Unusual stone objects from Skara Brae.

groups by two groups of vertical ridges. The ends are divided by deep V-shaped notches, intersecting at right angles. The notches are not strictly in alignment with the vertical grooves nor with the notches at the opposite end. The object's maximum length is 3.60 inches, while that between the intersections of the notches is 2.35 inches. Its diameter on the plane of the middle horizontal ridge is 2.56 inches, a distance retained with incredible precision all round. Diameters taken along the terminal notches differ by only .08 inches from one another.

The terminal spikes and lateral ridges are somewhat chipped. On the other hand, there is not a trace of wear on the terminal notches. The

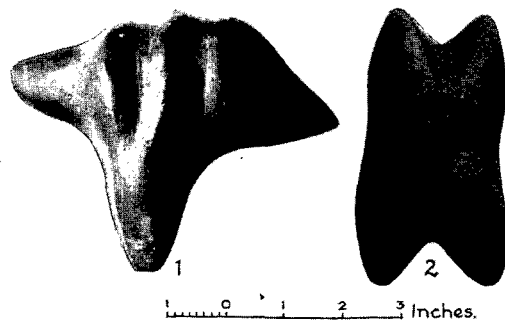


Fig. 26. Shale objects from chambered mound at Quoyness, Sanday.

use of the object, fashioned with such masterly accuracy and minute care, entirely eludes us; nor can any parallels be cited.

Another peculiar object was found in midden on the wall between passage F and the cell F1. It is a prism of sandstone  $3\frac{3}{4}$  inches long by  $3\frac{1}{4}$  inches high by  $3\frac{1}{2}$  inches wide, with an hour-glass perforation joining two convergent faces. The perforation seems to have been executed by pecking with an implement of the nature of a chisel, leaving a series of minute pits.

*Bone Implements.*

Most of the other relics can be fitted into the classification adopted in 1928 as follows:

*Bone Tools.*

“Pins,” type A1, 63 specimens, including one giant  $10\frac{3}{4}$  inches long.

Awls, A2, 12 specimens (one from the leg bone of a gannet).

Celtiform implements, B1, 5 specimens.

Blunt-nosed tools, B3, 10 specimens, 6 from Hut 8; this suggests that they may have been used as fabricators by the flint-knapper who worked there.

Blunted marrow-bones, B3b (fig. 27, 1), are a

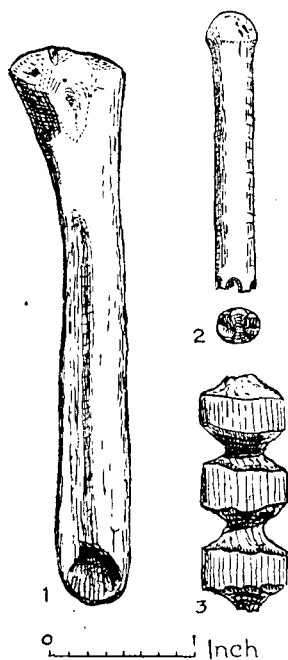


Fig. 27. Objects of bone and other materials.

new type. That figured is the proximal portion of the radius of a sheep.

Type C1, 3 specimens, together with one example of a new type, C1b, in which the perforation is drilled through the narrow face of the bone at right angles to the direction of the normal perforation.

Shovels, C3, 5 specimens.

*Pottery.*

Sherds were as abundant as usual but no less friable. By immediate immersion in strong shellac it has been possible to save some good

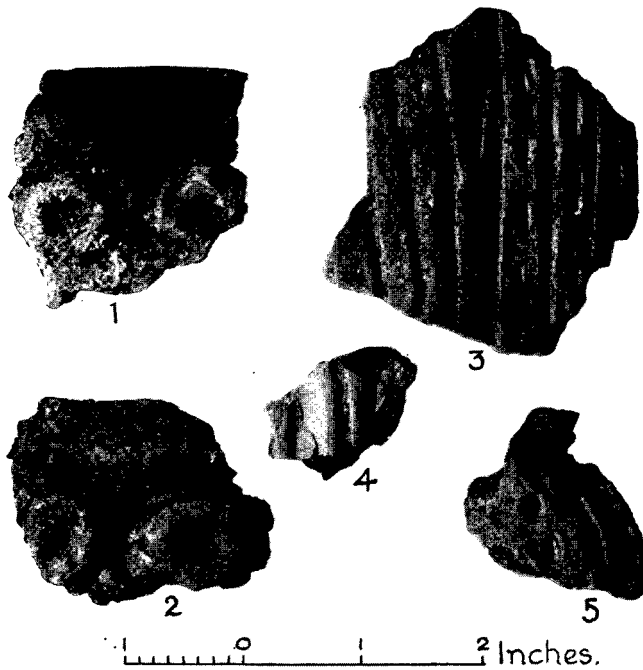


Fig. 28. Sherds from two pottery vessels.

base fragments and one complete segment of a bowl, but in some cases the material dissolved to powder even in shellac! The bowl had the form of an inverted truncated cone. The bases are always flat and sometimes slightly splayed out; but the walls are always straight and show no inclination to belly out. Still less is there any trace of



necks, handles, or everted rims to be observed. One rim was, however, scalloped like that of the bowl from Hut 7.

Many sherds were decorated in the technique previously described. The only important new motives are the small circles and applied bosses with finger-tip impressions, shown in fig. 28, 1-2. These only augment the list of agreement with encrusted-urn pottery designs. The sherd with horizontal ribs was found in the midden over passage A. It is identical with one observed on the floor of Hut 7 in 1928, and so confirms the uniformity of culture throughout the site. Another pot this year had ribs on the inside of its base like one found in 1928.

In addition to the normal Skara Brae encrusted ware, we secured, in 1929, one incised sherd (fig. 28, 3-5). Technically the fabric hardly differs from the normal ware. The incisions are deep and comparatively wide, as if executed with a rather blunt bone point. The row of dashes between the incised lines has been made by jabbing the same implement obliquely into the clay. The sherd lay at the base of the midden which covered the wall stumps of the sand-filled Chamber 6'. It is rather like one from Tiree now in the National Museum.<sup>1</sup>

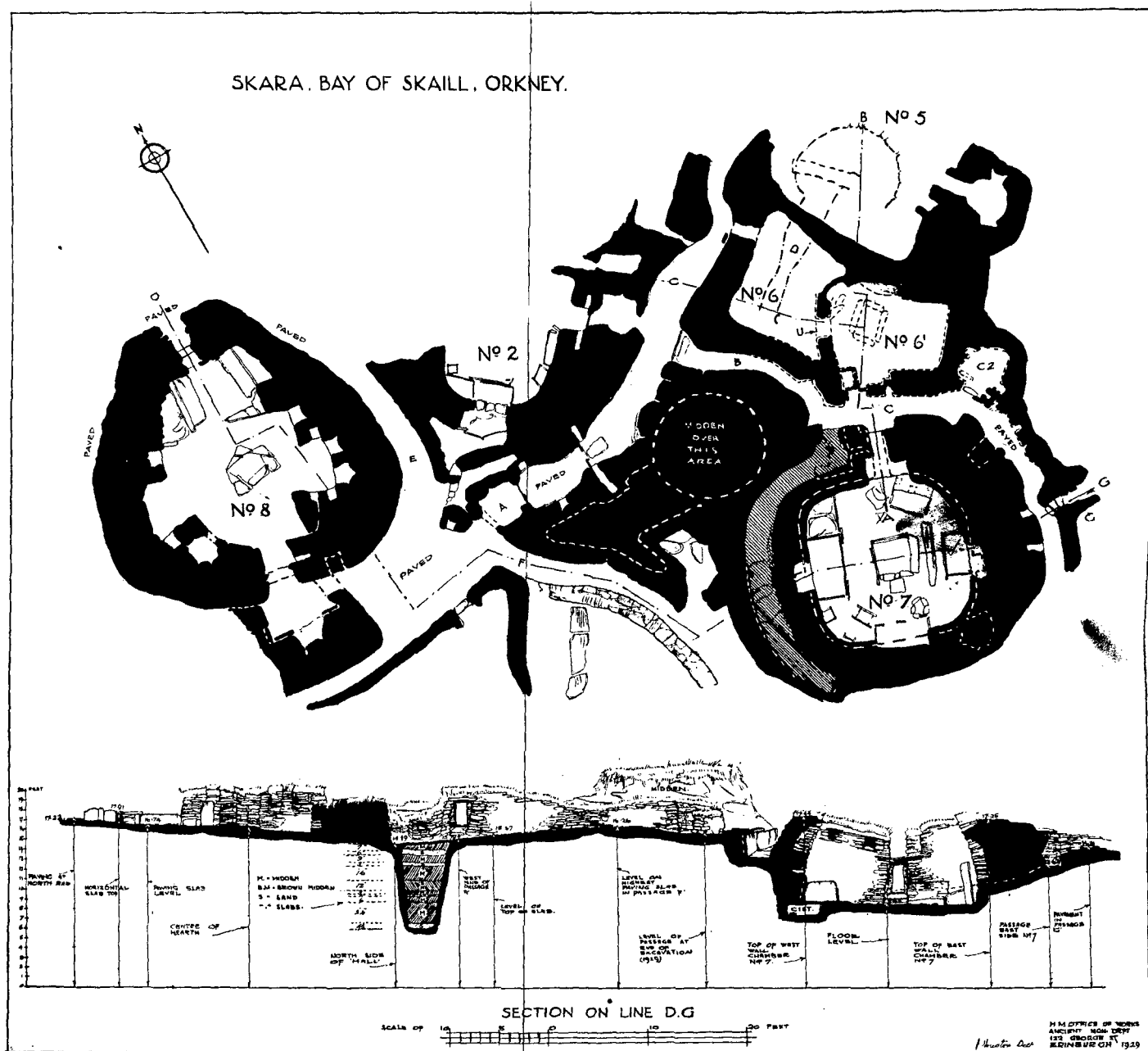
A paint-pot made from the tail vertebra of a small whale was found in the "bed" against the western wall of Hut 2.

Two well-made paint-pots of stone were recovered from the same "bed" and others from the midden. Some still contain red pigment. Larger vessels—mortars—hollowed out of stone blocks, mostly broken in two, were also common. The majority were found in sand on or near the tops of walls—*e.g.* on that of Hut 8, near the market place and just over the entry to cell F1. In most the hollow is hemispherical, but one block had a regular oval depression pecked out in it. No lamps were found, but one stone with shallow depressions on two opposite faces suggested a door socket.

#### *Ornaments.*

In Hut 2 we found a group of 60 beads and 6 tusk pendants. One bead of this group was made of black stone and cubical in shape, while one bone bead had a double perforation. Otherwise the beads found here and in the midden conformed to types already figured. A triangle of shale, carefully rubbed into shape but not perforated or ornamented, was also discovered in Hut 2. The midden over F yielded a long boar's tusk lamina perforated at one end and notched at the other. From the same region came the implement shown in fig. 28, 2, made from the vestigial tooth of a narwhale. It had apparently been pierced

<sup>1</sup> HD. 366. Figured in Beveridge, *Coll and Tiree*, Pl. No. 6.



Skara Brae: Plan and section of 1929 operations.

Professor V. GORDON CHILDE.

PLATE I.

with a hole bored from either end and then broken at this point. The broken end was subsequently notched across at right angles to the perforation. The curious fragment, perhaps of a playing man, shown in fig. 28, 3, was found in the ash over the hearth of Hut 8.

#### CONCLUSIONS.

The most important results obtained during 1929 are: (1) The demonstration of the prolonged occupation of the site by people preserving throughout the same homogeneous culture. (2) The recognition of a distinct quarter, separated by a barred gate from the residential district and including at least one industrial hut. (3) The identification of the artistic side of the Skara Brae culture. The newly identified art only strengthens the case previously stated for the Bronze Age affinities of the villagers. At the same time the indications of a high degree of specialisation, both in the lay-out and the therein implied economy of the village and in the unique industrial products, is incompatible with a very high date. The chronological problem has been reviewed at some length in a paper read before the Royal Society, Edinburgh,<sup>1</sup> and so need not be discussed again here.