

À CHEARDACH MHOR, DRIMORE, SOUTH UIST

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To describe the site adequately some indication of the environment is necessary. The western coastline of South Uist consists of a superb sandy beach, defined on the east by a more or less continuous ridge of dune, which at Drimore rises 27 feet to the level of the machair or coastal plain. East of this a chain of shallow lochs with occasional scrub-covered islands stretches from north to south, between the machair and the rocky hills, of which the highest is Ben Mhor, 2,035 feet above sea-level. So flat is the machair that the Isle of Barra, some 20 miles to the south, is plainly discernible, and Dun Scurrival at the north point of that island can be identified. The sandy coastal plain includes a stretch of dunes, covered with coarse grass, persisting from the shore on the west to a broken line of low banks which suggests an old beach line. It appears probable that a nearby burn to the north of the site, now draining eastward, has changed direction, probably due in part to the shifting sands of the machair. The dune, in which a number of sites were located, alternates with an area which has every appearance of being water laid. A seasonal lagoon of varying extent forms immediately to the east of the seaward ridge. Though cultivated in part at the present day, the machair is mainly grazing land, and in spring and early summer a flora, chiefly white clover, silver-weed and orchis in variety, provides a dense and brilliant growth.

The mound known as à Cheardach Mhor,¹ the Big Smiddy, is 300 yards from the shore, nowhere higher than 6 ft. 6 in. above the machair level, and covers approximately three quarters of an acre with irregular hummocks, showing plainly as an oval hillock above the flat grazing land which surrounds it, the long axis according with the prevailing south-west wind.

Based on the four marking pegs left by the surveyors of the Ministry of Works, whose contour plan provided the basis of fig. 1, two lines of pegs were driven in at right angles, and a grid was laid out. Work started on the north-east quadrant on 23rd May 1956 and continued for a period of six weeks.²

The surface of the mound was broken by old rabbit burrows from which, during the preliminary survey undertaken by Mr P. R. Ritchie, fragments of pottery and bone refuse had been recovered at various points. Large stones heaped on the surface indicated fairly recent robbing of some underlying structure, and, though odd stones protruded from hollows mainly on the south side of the mound, no wall-

¹ For the bibliography of other sites referred to in the text see p. 169.

² This excavation was undertaken on behalf of the Ministry of Works as part of the programme of rescue work anticipating the use of this stretch of the machair as a rocket range. Our thanks are due to Mr Stewart H. Cruden, F.S.A., Inspector of Ancient Monuments for Scotland, for his co-operation throughout. We are also indebted to the following for their several reports: Mrs F. L. Balfour-Browne, Dept. of Botany, British Museum (Nat. Hist.); Dr A. D. Clarke, Dept. of Nat. Hist., Royal Scottish Museum; Mr K. W. Elliot, Geological Survey; Mr A. O. Lacaille, F.S.A.; Dr K. P. Oakley, Dept. of Geology, British Museum (Nat. Hist.); Mr James Phemister, Geological Survey; and Prof. C. M. Yonge, Zoology Dept., Glasgow University.

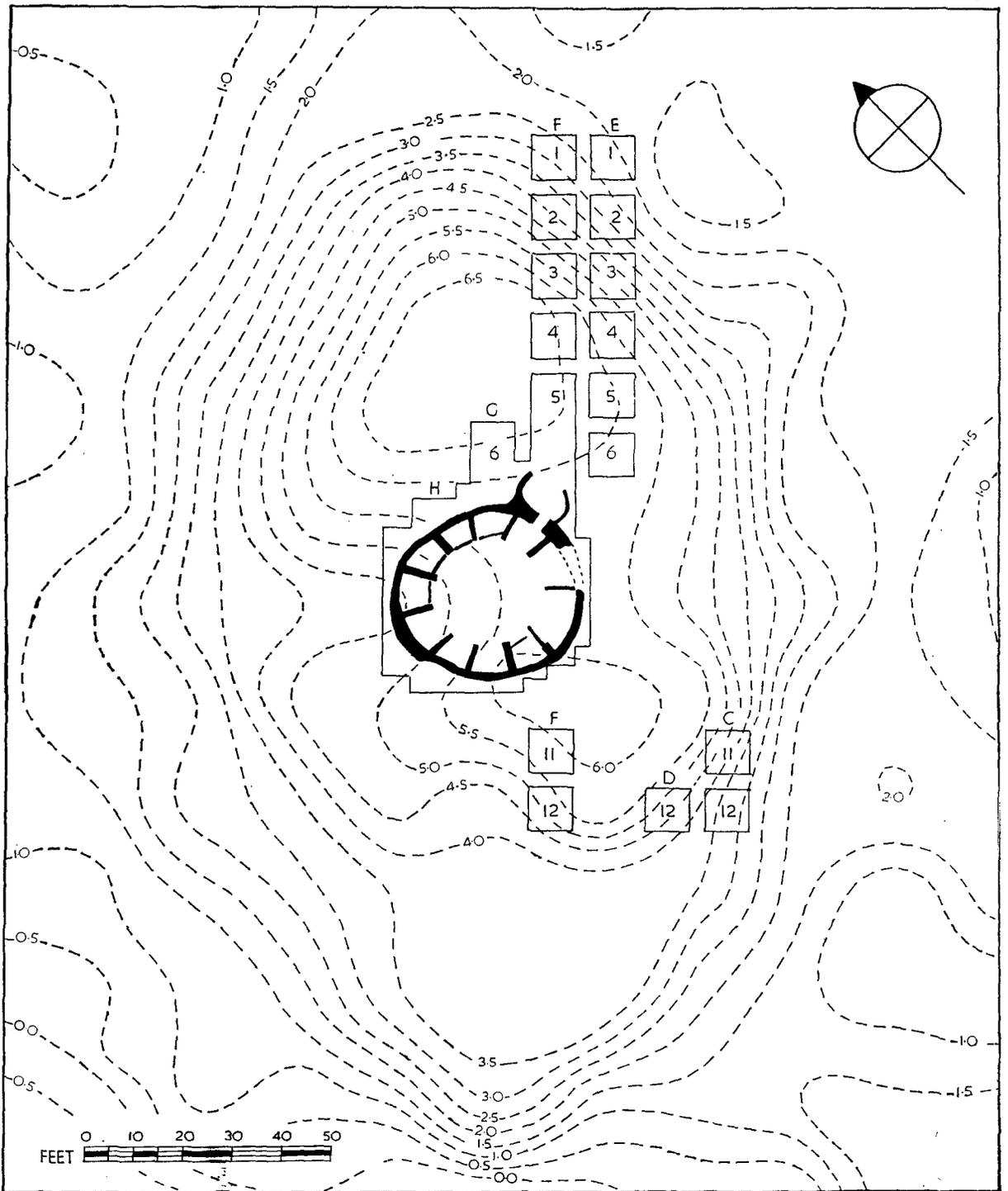


FIG. 1. À Cheardach Mhor, area excavated

A CHEARDACH MHOR SOUTH UIST

-  Phase IA
-  Uprights
-  Slabs
-  Clay floor

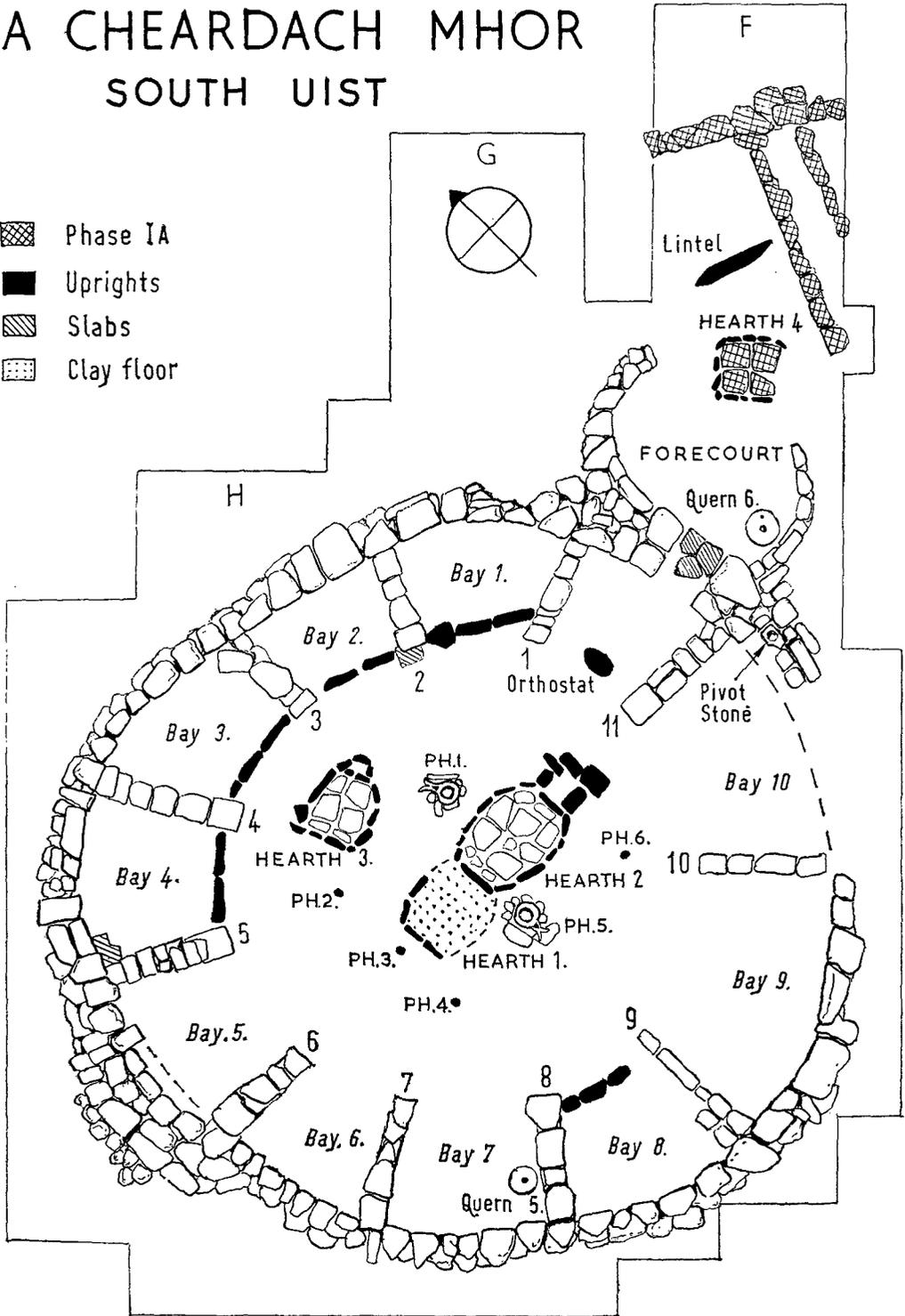


FIG. 2. Phases I and IA

ing was visible at any point. The nearest available natural stone is half a mile distant. No reason can be suggested for the earliest choice of the site, now almost half a mile from the nearest source of surface water, for, though water occurs at a depth of 22 inches today, it is unlikely that this was as high when the earliest structures were first built; the foundations now stand in waterlogged sand.

Excavations revealed five distinct phases of occupation, with the robbed remains of a wheelhouse at the lowest level. In the mounded sand, which had covered the earliest building, four later phases were defined. Stones brought to the site for building the wheelhouse were used, probably several times, and the four succeeding occupations honeycombed and added to the mound. These later living horizons and their midden tips became distorted by blown sand and further confused by stone-robbers, so that the uppermost level (Phase V) cannot be considered as strictly stratified. Fortunately the central area of the primary building lay under a variable depth of blown sand which, though tunnelled into by later inhabitants, remained sealed. No trace of roofing material could be identified, nor were fallen stones from the upper courses found in the bays. Corbelling, for which the incurve of the main wall and widening piers are sole evidence, must therefore have been removed by later builders, which argues that the original sand-blow was probably much deeper, and the aspect of the mound may have changed materially before the present growth of turf stabilised it.

The series of trenches EI-7, FI-4, CI1, and CI2, DI2, FI2, revealed little more than tips of peat-ash with unrelated settings of stone, seldom more than a single course high and some material from temporary occupation levels; the lower layers in the main were sterile down to the water-logged sand which formed the 'natural'. This confirmed the evidence provided by a trial trench which had been dug beyond the limits of the mound, where water occurred at a depth of two feet below the pure sand of the machair, and made further digging impossible. The water level, however, varied with the rainfall.

PHASE I, THE WHEELHOUSE

A stone lintel in Trench F6, while obviously moved from its original position and set on edge, was the first indication of the wheelhouse, confirmed by uncovering in Trench F7 what appeared to be the inner end of a pier. It was, in fact, the south wall of the entrance passage (figs. 2 and 3; Pl. VI).

The structure proved to be of irregular shape, the lower courses of two curving walls forming a forecourt outside the entrance on the north-east, faced away from the weather quarter, the prevailing wind being from the south-west. The long axis of the main structure was 40 ft. and the inner area was divided into bays by eleven radial piers, of which nine remained, all ruined in varying degrees. The floor of the central area measured 22 ft. from Piers 2 to 8. Stonework on the western arc of the outer wall had been entirely destroyed by robbing, but the foundations of one pier, No. 10, were traced below the robber level and a stone 2 ft. 6 in. long, possibly a re-used kerbstone, was deeply embedded at a point where another pier

A CHEARDACH MHOR

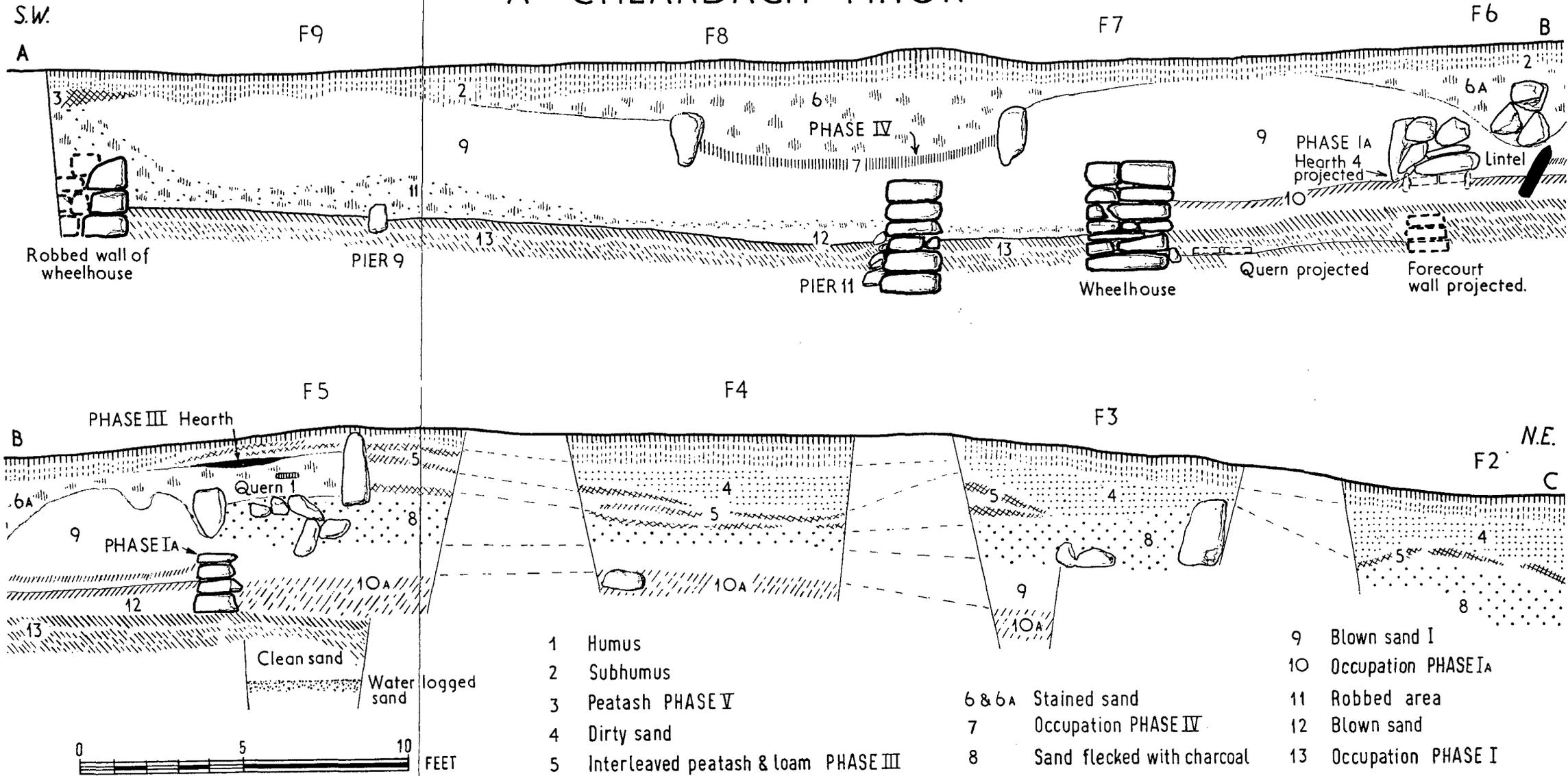


FIG. 3. Section of site

would normally occur. The robbing, though extensive, was localised and the almost vertical sides of the intruders' trenches were clearly defined against the blown sand. Nowhere was a sufficient number of large stones left to warrant certainty as to the method of roofing the bays, but from the nature of the piers these were probably corbelled. The upper stonework, where visible, would provide a convenient source of building material for succeeding occupations. The main wall varied in thickness, at widest 3 ft. and, where it stood to any height, showed a tendency to corbel inwards. Though the area enclosed was well levelled, the lower part of the structure, at least, was originally backed against the sand, which may account for the irregular shape, and, at one point behind Bay 5, was reinforced on the outside by boulders piled roughly against well laid courses.¹ Here, however, there were suggestions of a break in the walling. The possibility of a second entrance was considered but no evidence at foundation level could be traced, either from the interior, which at this point was particularly rich in occupation refuse, or on the outer periphery, where the likelihood of a passageway into a second building was envisaged. The upper courses of stonework were disturbed and rebuilt, but the resulting wall was not characteristic of wheelhouse masonry, and the disturbance most probably related to secondary walling of Phase IV at a higher level (see p. 157), though the possibility of a blocked doorway cannot be disregarded. Notably large stones had been used to build the lower courses on the south, and part of the south-east arc was stained on the interior face by peat-ash, which must have piled up against the main wall. Beds of green clay occur in the locality, and this had been used in places as mortar; there was, however, no evidence of clay foundations and the walling was laid on sand.² Clay was also used to secure a large stone set in the entrance of the wheelhouse. Measuring 2 ft. 9 in. the boulder was firmly embedded for half its height and wedged with stones, some of them worn hammerstones. A fragment of pottery was found in the clay infill together with a partly polished gouge-like implement made of antler (fig. 7, 9). The purpose for which this stone was carefully set is difficult to assess, as it would appear to impede traffic in and out of the single entrance. It seems likely therefore that it served a structural purpose, such as the foundation for a support to carry some form of roofing over the paved passage connecting the wheelhouse with the forecourt.

THE FORECOURT

The two curving walls of the forecourt were asymmetric and had been extensively robbed. Two sealed layers, one at the level of the paving in the wheelhouse passage, the other divided from the first by sand and interleaving peat-ash, contained pottery, a bone needle, a pin and half a polished bone pin-head, as well as a broken bone quern handle (fig. 7, Nos. 6, 1, 11 and 14). The top stone of a rotary hand-mill with a partly perforated handle-hole, lay in the lower level (fig. 9, 1 and Pl. VIII, 4).

¹ This is borne out by the fact that tips containing wheelhouse pottery occurred on a level with the remaining walling on the north-west and above the level of the robbed walling of the forecourt to the east.

² The use of clay as mortar is noted in the reports on *Foshigarry* p. 299 and *Bac Mhic Connain*, p. 42.

THE PIERS AND THE BAYS

The inner terminals of piers Nos. 2, 4 and 5 (Pl. VII, 3), still standing to a height of 4 ft. or so above the wheelhouse floor, showed features in common with the nearby site of *Kilpheder*, which was, however, an aisled house with lintels joining the piers to the outer wall. But, whereas at à Cheardach Mhor the surviving piers, though carefully built up to the main wall, were not bonded in, yet these showed no sign of a straight joint (see fig. 4). We must therefore conclude either that the

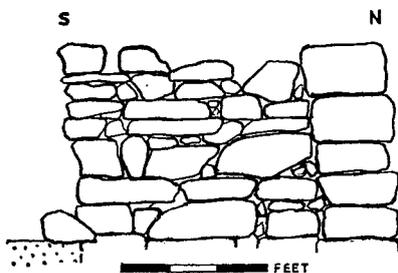


FIG. 4. Pier 2

house was never aisled, or, had it been so originally, that a complete rebuild of the piers must have taken place. The uppermost of the remaining pier stones was the largest and oversailed the lower courses with a corbelling of 3 inches in 4 feet.¹ The facing stones of piers had been dressed and trimmed, and worn hammer-stones were built into the walling, doubtless discarded mason's tools; a heap of chosen beach pebbles including some used hammer-stones, lay in Bay 1. This bay, defined from the Central Area by a kerb running from pier to pier, was sterile, apart from the heap of stones and a hollowed-out whale vertebra 'cup' which was found at the base of Pier 2 (fig. 8, 19); this pier was singular in having a protruding footing-stone at floor level. From the water-logged foundations of the main walling an interesting sherd was recovered. This fragment was encrusted with the cast of a sea worm, and its presence, 300 yards from the beach, was curious.²

Bay 2 was also kerbed. An antler quern-handle, worn and polished at one end, was found in this bay. Bay 3 showed signs of considerable disturbance. The wheelhouse wall had been partially removed and much of Pier 3 demolished towards the main wall, though the lower courses, including the kerbing, remained untouched. A clumsy, haphazard structure filled the upper level of the bay, using Piers 3 and 4 as the walls of a temporary shelter in Phase II. The wheelhouse occupation was covered by a level of blown sand and the two periods were well demarcated. A dressed stone, robbed from the wheelhouse and used by secondary builders, had fallen on and crushed sherds from which the complete section of a pot belonging

¹ The inward corbelling of the radial piers at *Kilpheder* becomes apparent at the height of 4 ft.

² Dr Yonge, who kindly examined the sherd and identified the encrustation, says that the sea worm would choose a flat surface in open beach conditions for forming the cast. We are left with the query: did the sea bring to an end the occupation of the wheelhouse, flooding over the machair, or was this sherd left on the beach by some previous inhabitant, and, found on the seashore by the builders of the wheelhouse, subsequently brought to the site on account of the interlaced pattern?

to the Phase II horizon was restored. Though the upper levels of Bay 4, also kerbed towards the centre, showed signs of disturbance, the wheelhouse floor was securely sealed. Bonded into the angle of the wall, a thin slab of stone formed a shelf.¹ A bone quern-handle and a polished bone pin were recovered from this bay, as well as numerous pottery sherds. Bay 5 was notable for the quantity and type of sherds recovered, mainly localised in the western half; household refuse, noticeably deeper than in the preceding bay, covered a thick layer of peat-ash and clay. Bone remains were remarkable, not only on account of the quantity but for the prevalence of longbones and jaws of sheep, which were thrust vertically through the occupation level into the sand.² A cache of 32 ox teeth was found buried against the footings of Pier 6. In a pit dug into the floor, a heap of beach pebbles lay, apparently collected for some purpose; these averaged 3 to 4 ounces in weight. Small lumps of prepared green clay, still plastic in the wet conditions of the lower levels, were of even size and free of stones, apparently raw material prepared for some specific use. Bay 6 was notable for a heap of razor shells lying against Pier 7 and under paving stones in the angle of the wall lay a closely packed collection of limpet shells.³ The occupation level in this bay was not so deep as in the two immediately preceding but food refuse was abundant. A trimmed scapula, which could have been used as a scoop for shell-fish, lay in a crevice of the wall. Here it may be noted that oyster, mussel, razor and large whelk shells were found throughout wheelhouse levels. Sherds of an almost complete pot stood mouth downwards against Pier 7 (fig. 6, 33 and Pl. X, 1). Bay 7 contained many pottery sherds, and, under a heap of particularly large limpet shells, the lower stone of a shallow rotary quern was found on the sand below the living level (fig. 9, 2 and Pl. VIII, 3). Outside the bay a crude setting, slightly dished in the centre, could have been used for steadying a pot. In Bay 8, the wheelhouse occupation, sealed below robber levels, yielded many fragments of almost complete pots, suggesting that this pottery is, like the vessels from Bay 7, contemporary with the abandonment of the house. Sherds were also recovered from Bay 9 at wheelhouse level. Both in Bay 9 and Bay 10 the blown sand had been much disturbed and the main wall was in part removed in the latter bay. A boulder with a worn circular depression, 6 in. in diameter, probably a pivot stone, was built into the surviving wall in the angle formed by Pier 11 (Pl. IX, 1). The outer end of this pier included the broken half of a saddle-quern (fig. 9, 3).

THE CENTRAL AREA

This was sealed by blown sand and the floor was a level, trodden crust, greasy in places, with impacted peat-ash in varying depth. A bronze fragment, square in section, probably a broken ring, lay on the floor as well as a flat ring made of antler and a yellow glass bead. Pottery sherds in very fragmentary condition were also found at floor level, but, with the exception of two whale vertebra post-holes

¹ Compare a shelf or seat mentioned in the *Galson* report, p. 191, fig. 5.

² See Appendix I, p. 169, for a report on the bones.

³ The localised heaps of shells suggest that they were used for some purpose, possibly to be pounded for backing pottery.

described below, no artefact or occupation material was recovered below the trodden surface.

The central hearth, Hearth 1, was pebble edged and made of clay burnt brick red; Hearth 2 had been built in part over it (Pl. VII, 1). The upper hearth, which was lined with flat stones set in clay and also pebble edged, was entirely free of ash. It was irregular in form, constricting to a narrow neck and fanning out to a fish-tail shape, with flat slabs which could have been used for baking.¹ Hearth 3 was eccentrically placed to the west of Hearths 1 and 2 (Pl. VII, 2). This also was stone lined and pebble edged. Somewhat bag-shaped, it narrowed to the north, ending in a stone set extension. The hearth was encrusted with peat-ash, which spread irregularly outside the stone edging and contained refuse from iron working.²

In the south-west arc four post-holes were uncovered set with wedging stones. In one instance a spade-shaped whale bone, 11 in. by 8 in. and $1\frac{1}{2}$ in. thick, apparently also used as a wedge, was driven into the sand at an acute angle. Several of the post-holes were originally identified by the clean white sand filling the hole, which, on examination, revealed the packing stones. These holes were on average 3 in. in diameter but the depth could not exactly be ascertained in the wet sand of the subsoil. The function of these slight post-holes was not immediately apparent. The possibility of their having held supports for a verandah type of covering, stretching from the piers, was envisaged. The span of the interior was apparently too great for such slender posts to have been used as the framework for a complete roofing.

A patch of whale bone found almost flush with the flooring and immediately to the south of Hearths 1 and 2 proved on excavation to be the trimmed vertebra of a whale, 1 ft. 2 in. in diameter and $9\frac{1}{2}$ in. deep with the central bony tissue hollowed out. The vertebra was bedded in clay and wedged with seven large stones ranging from 10 in. by 11 in. to 1 ft. 8 in. by 9 in., and fourteen smaller stones, including worn hammer-stones, as well as a smaller whale vertebra which had been trimmed (Pl. VIII, 1). On the opposite side of the hearth, a second vertebra of slightly different proportions, 1 ft. in diameter and 1 ft. 2 in. deep, had been similarly treated and was also firmly set in clay and wedged with stones, together with a portion of the spinous process, which had been sawn off (Pl. VIII, 2). Buried with the second vertebra was a hammer made of the burr and brow tine of an antler. These carefully constructed post-holes could have held supports 9 in. in diameter, and, with the supplementary post-holes already described, may have carried the rafters of a roof, possibly thatched with heather or with the reeds which grow freely in the near-by lochans.³ The clay settings of the vertebrae were considerably below the floor and when excavated were practically water-logged. These must have been set in place before the construction of Hearths 1 and 2, though the top of the whale bone was flush with the living level. The hollowed-out portions were mainly filled with white sand and showed no signs of decayed wood,

¹ Compare the barn hearth at the *Tigh Talamhanta* farm-house at the Allasdale, Isle of Barra, p. 89 of the report and Pl. VI.2.

² See Appendix II, p. 172.

³ Post-holes comparably sited were on either side of the lower of two hearths in the aisled farm-house, *Tigh Talamhanta*, see p. 84, and fig. 3. The diameter of the central court, 22 ft., appears to rule out the possibility of a corbelled roof as recorded by Capt. F. W. L. Thomas, R.N., for the aisled house of Uisnich (*P.S.A.S.*, III (1880-1), 124) of which the central area was only 15 ft. in diameter.

suggesting that any roof supports which were originally contained must have been removed when the wheelhouse was abandoned. The vertebrae were identified as representing both the common Rorqual and Sibbald's Rorqual, most likely from stranded animals. The careful construction of the post-holes demonstrates the ingenious use of available material.

The evidence of the animal bones, sheep, ox, pig, supports the pastoral nature of the wheelhouse inhabitants, though pony is only found in post-wheelhouse levels. The most interesting of the bone finds is the evidence of a small dog, compared by Dr A. D. Clarke to 'the Highland terrier', from which have descended the Skye, Cairn and Aberdeen breeds (see Appendix I, p. 170).¹ The presence of red deer, no longer found in South Uist, may be noted.

It was a matter of regret that time and weather did not permit of further investigation on the south-west of the mound, where there was the possibility of locating another structure. It was possible that a building of the barn-byre type existed; on the other hand the absence of any steading would have supported the view that these are a feature of the second class of farm-house, with free-standing walls, set on high ground, such as those identified at *Clettraval* in North Uist and *Tigh Talamhanta*, Isle of Barra.

THE WHEELHOUSE FINDS

The Pottery (figs. 5 and 6 and Pl. XI)

It was fortunate that part of the wheelhouse, from which much of the pottery described below was recovered, was undisturbed by later occupants. It is also an important feature in the study of the pottery that the stratification of an earlier and later group within the wheelhouse was well defined. The earlier was recovered from below the living levels of the bays, the later lay immediately on the surface of the floor level, as if abandoned at the onset of some disaster.

The pottery from the wheelhouse falls into two main groups. The earliest, which is of a soft paste, has plain inturned rims associated with incised decoration. Sherds Nos. 1 and 2 are closely paralleled at *Foshigarry*. These were stratified in the lowest levels of Bays 5 and 7. A sherd, No. 6, with a worn rim, is decorated with herring-bone, for which many comparisons may be quoted, mainly small fragments and from similar sites.² This ornament is also reported from Shetland.

An unusual type of incised pattern is present at the wheelhouse. Two sherds in well prepared paste have curving incised lines with fine 'stitched' infill suggesting the copy of a leather prototype, Nos. 8 and 9. No rims can be associated with this small group, nor are the fragments of sufficient size to indicate more than a globular type of pot. No exact parallel can be suggested. The sherds are from the sand blow, immediately over the floor of the wheelhouse, and from the forecourt. A carelessly executed ladder pattern appears on No. 7; comparable material may be quoted from *Foshigarry*, *Clettraval* and *Buaile Risary* (see *North Uist*). No. 19, decor-

¹ In this context mention may be made of the second century bronze figurine of a dog closely resembling an Aberdeen terrier, found in Coventina's Well, Carrawburgh, figured by Prof. J. M. C. Toynbee in *Art in Roman Britain* (1962), Pl. 62.

² *Dun Cuier*, *Clettraval*, *Jarlshof*, *Foshigarry*, *Dun Nighean*.

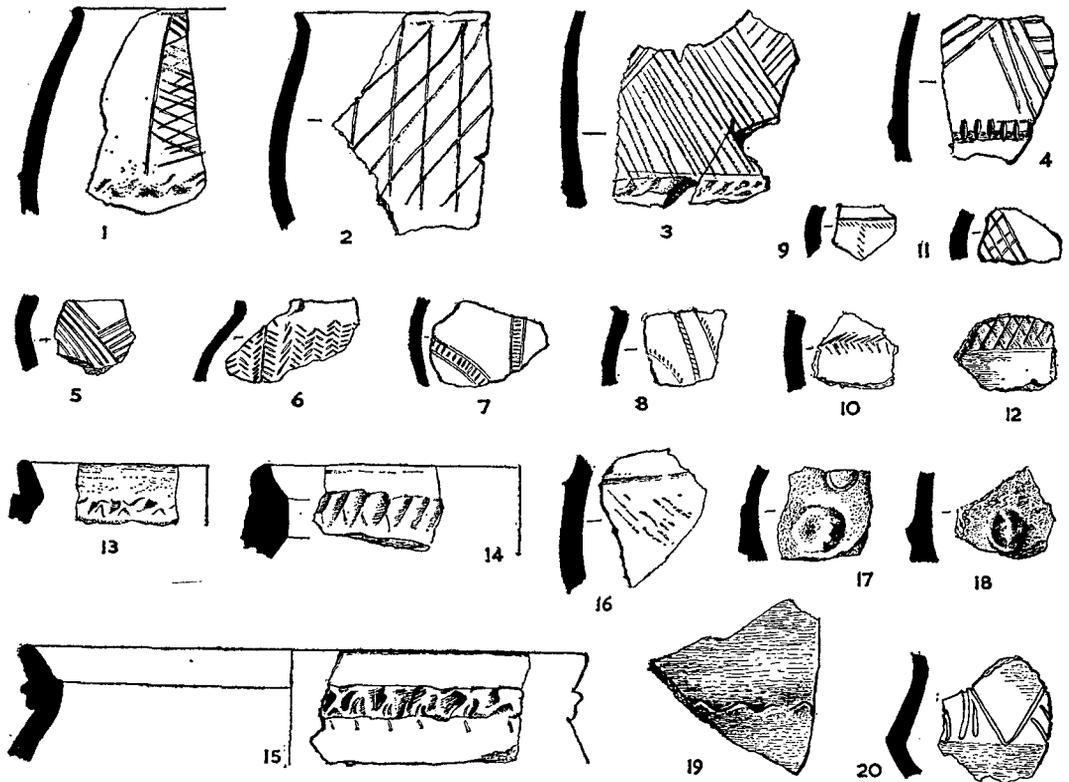


FIG. 5. Pottery, Phase I (1/3)

ated with the simplest form of applied fillet, was found in the clay foundations of the monolith at the entrance.

Other early types of decoration include two sherds, with a raised boss Nos. 17 and 18. One of these No. 17, is also stamped with the head of a small shouldered pin¹ and comes from a wheelhouse midden tip, the second lay in a disturbed ashy level with later material. Typologically belonging to the primary horizon, it seems reasonable to include it in this group. Comparable sherds with boss ornament are from *Tigh Talamhanta*, *Foshigarry* and *Dun Iadhard*.

A small group of rims, Nos. 13-15, can be compared to others from *Coll*, *Eileen Maleit* and *Jarlshof* (sherds from the broch). Mr Hamilton figures similar material from sites in Orkney and Shetland. The main characteristic of these sherds is the pinched and thumbbed-on clay fillet placed in the angle of the everted rim.

Part of another vessel, No. 20 from Bay 5, with clumsily incised linear decoration, has a much sharper carination than the rest of the material, the unique example of a rather debased type.

¹ For a discussion of pin-stamped sherds and comparisons see the reports on *Tigh Talamhanta*, p. 92 and *Cuier*, p. 312. From the evidence of a pin-stamped sherd from the Eye Peninsula, Mr R. B. K. Stevenson deduced that this decoration persisted in the Islands to the eighth-ninth centuries A.D. (*P.P.S.*, XXI (1955), 282).

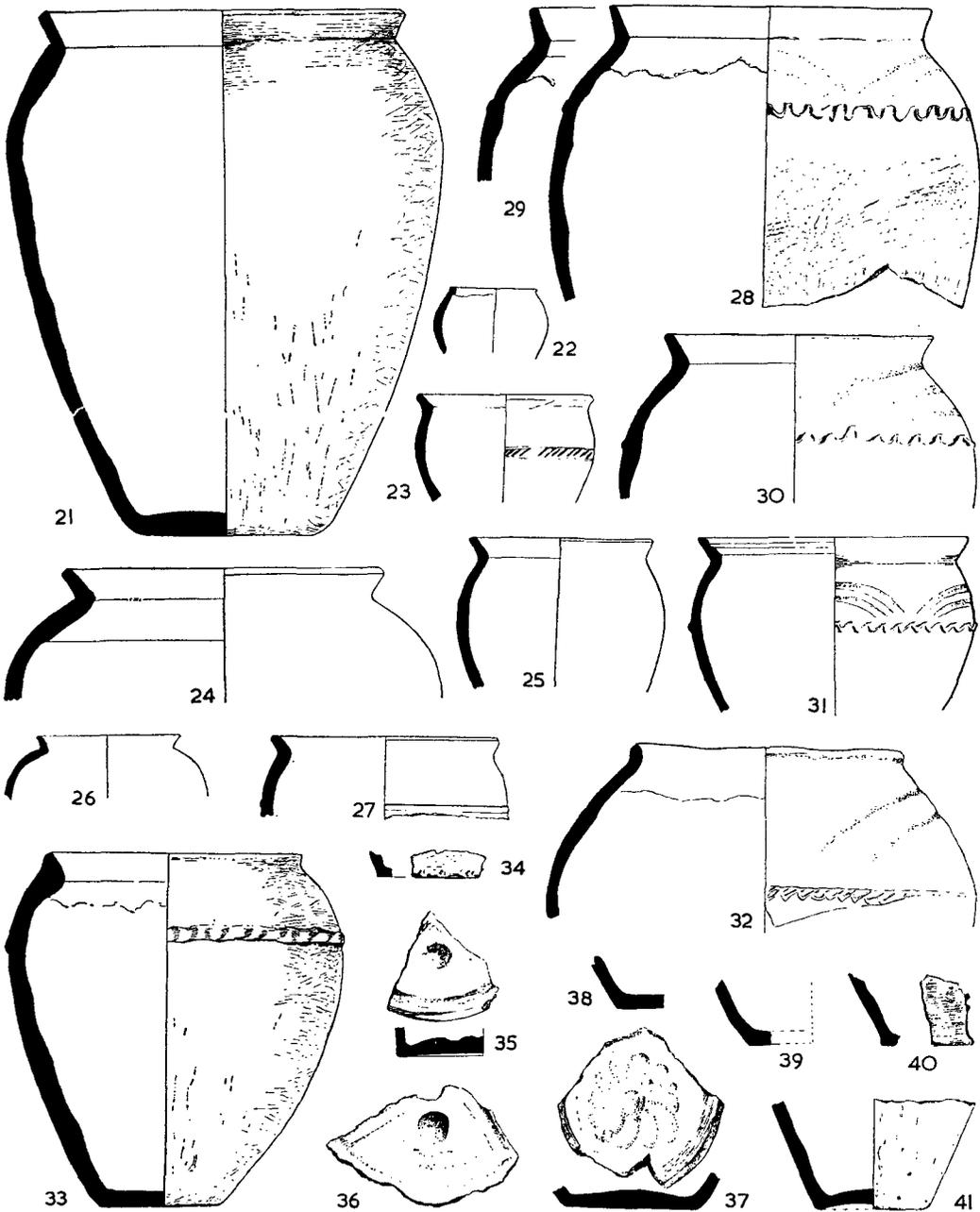


FIG. 6. Pottery, Phase I (1/4)

In the later wares of Phase I, sharply everted rims preponderate though a short thickened rim of unusual type occurs on the restored pot, No. 33. One rim, No. 31, is fluted round the inside as though by two finger-tips (another similarly grooved is not illustrated), an idiosyncrasy also recorded at *Foshigarry*, *Dun Beag*, and *Jarlshof*¹ (Phase II).

A double angle of the rim on the inner side as it joins the body of the pot occurs on certain sherds, e.g. No. 29, and may be due to the use of a turn-table, a feature also seen on others from *Clettraval* and *Tigh Talamhanta*. The angles are, for the most part sharp and the interior smooth, though in the larger sherds, for instance No. 28, a finger-channelled vessel, with applied ornament, the smoothed neck unit terminated on the interior in a roughly folded join over the ring-build.

A number of pots with everted rims are decorated with finger-channelled arcs between the applied decoration and the neck, Nos. 28-32. This type of ornament, less well executed, is present at *Tigh Talamhanta*. A variant of this decoration occurs in Phase IA (see fig. 10 No. 42).

Bases include saucer-shaped units upon which the pot is built up coated both within and without with clay.² A large base sherd, No. 41, shows the smoothing or paring of the lower ring-building; No. 34, which has signs of a slip, is nicked with the finger nail on the outside of the foot, an unusual feature in Hebridean pottery, while No. 40 is finger pressed round the outside of the foot.

An interesting feature of this later group is the base decorated on the inside by the potter's thumb. The pattern on No. 37 gives a sunflower effect, while Nos. 35 and 36 are divided by wide shallow intersecting grooves with deep thumb prints in each quarter. No. 35 shows a more angular type of base. Amongst the material in the National Museum of Antiquities, base sherds with comparable decoration have come from sites in Orkney, Shetland, Caithness, as well as the Outer and Inner Isles.

The majority of the pottery consists of globular pots with sharply everted rims and various forms of the applied decoration characteristic of the Hebridean wares,³ known at a few sites in Orkney, notably the brochs of Ayre and Lingrow, and reported from broch sites in Caithness. The ring-building of many of the larger pots is lumpy on the outside and the build-up is in some cases further masked by the application of a thin coating of clay, too thick to be termed a slip. The paste varies, some is well prepared and may be backed with pounded sherds. The larger pots show coarse grit backing in which both rolled and shattered quartz occurs and the paste includes particles of mica. The skill evinced in potting is remarkable when the most obvious means of firing would be provided by peat.⁴ A few sherds are abraded and friable but in the main the pottery has survived the wet conditions of the machair amazingly well. No trace of a kiln was found in the area explored.

¹ Mr Hamilton notes this fluting on pottery from Orkney and the Shetlands; see *Jarlshof*, p. 65.

² cf. *Tigh Talamhanta*, fig. 5.1 and 2.

³ Found at *Bac Mhic Connain*, *Clettraval*, *Cuier*, *Foshigarry*, *Dun Iadhard*, *Kilpheder*, *Tigh Talamhanta* and other sites.

⁴ The low growth on island sites in South Uist, in some instances obviously planted, is in the main scrub willow as has already been noted. It seems possible that with fewer head of stock the island may have carried a greater amount of willow than at the present.

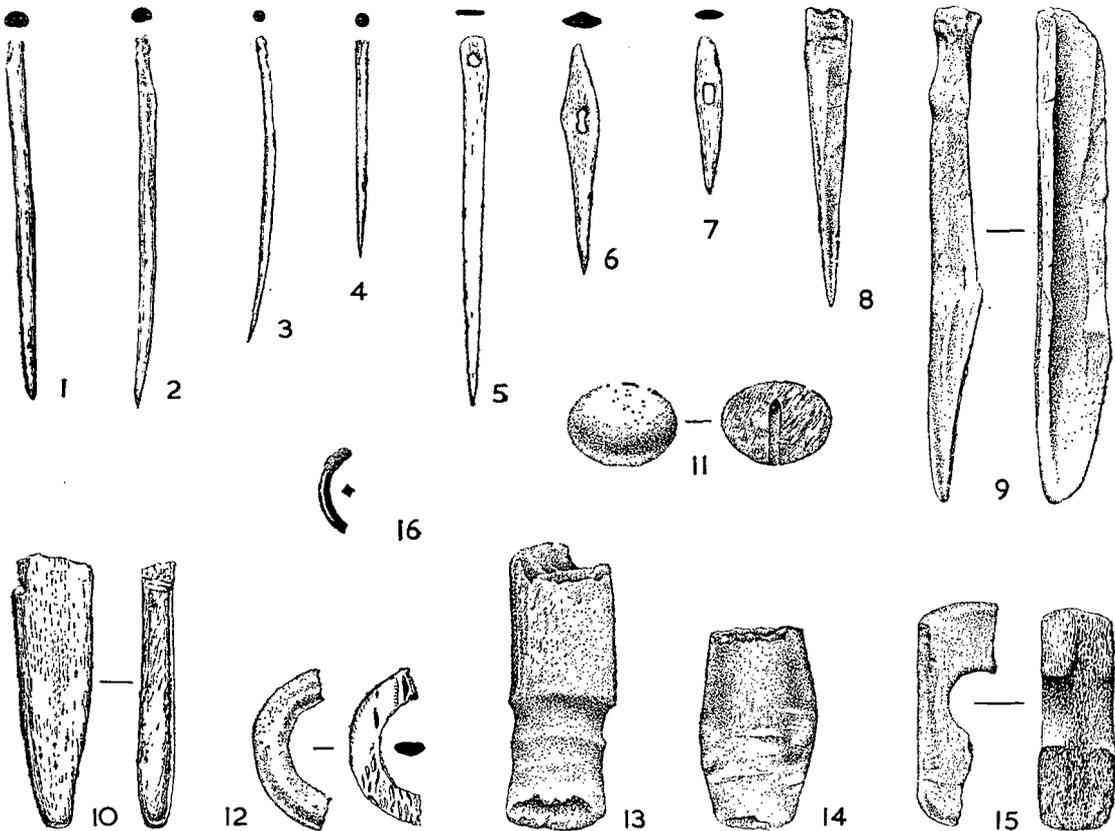


FIG. 7. Objects of bone and antler, Phase 1 (1/2)

Bone (figs. 7 and 8)

The bone tools are of antler, whale bone and unidentified bone. Many animal bones, roughly split as if for the extraction of marrow, were amongst the food refuse, these doubtless served a turn as a makeshift tool, for bone would be a practical substitute for wood in a sparsely afforested countryside. Unworked antler was found in the sandy floor of the bays as if for storage. Amongst the antler finds the worn pick, No. 21, may be mentioned, an implement commonly used on Hebridean and other Northern sites, and the half of a cleverly devised ring for which no parallel has been found, No. 12. Three implements, Nos. 13, 14 and 23, two of antler and one of bone, with one end trimmed and worn, may be noted; similar artefacts are mentioned in the *Kilpheder* report, where Mr Lethbridge suggests their use as handles for rotary querns. Whale bone was used in various ways, from the hollowed-out vertebra post-holes of the Central Area to the shaped and handled 'cups', Nos. 19 and 20. The use of these last artefacts, recorded from various sites in the north and west is problematic. A people who made and used quite sophisticated pottery would hardly tolerate such an ungainly drinking vessel, but, filled with animal or

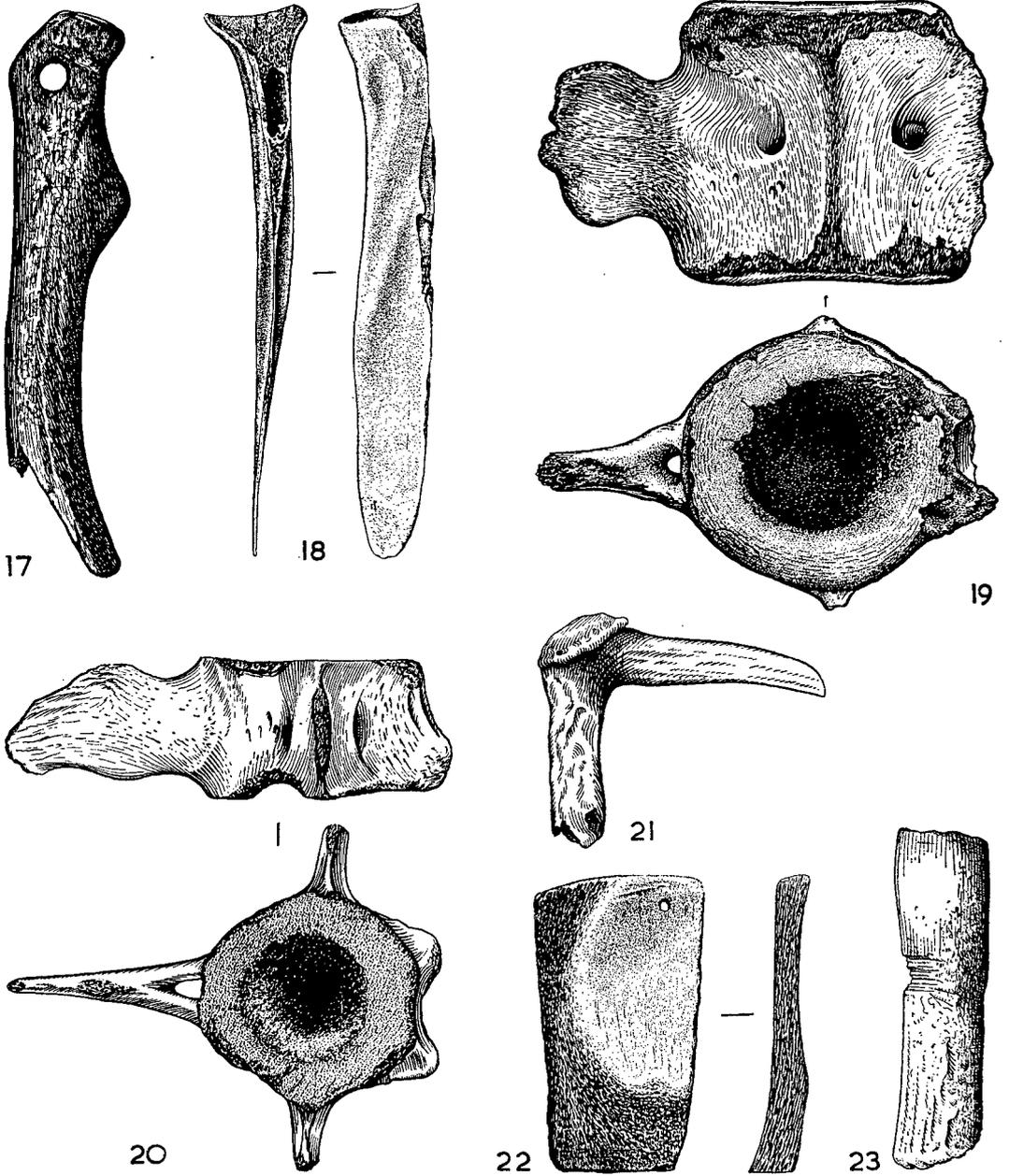


FIG. 8. Objects of bone, whale bone and antler, Phase I (1/2)

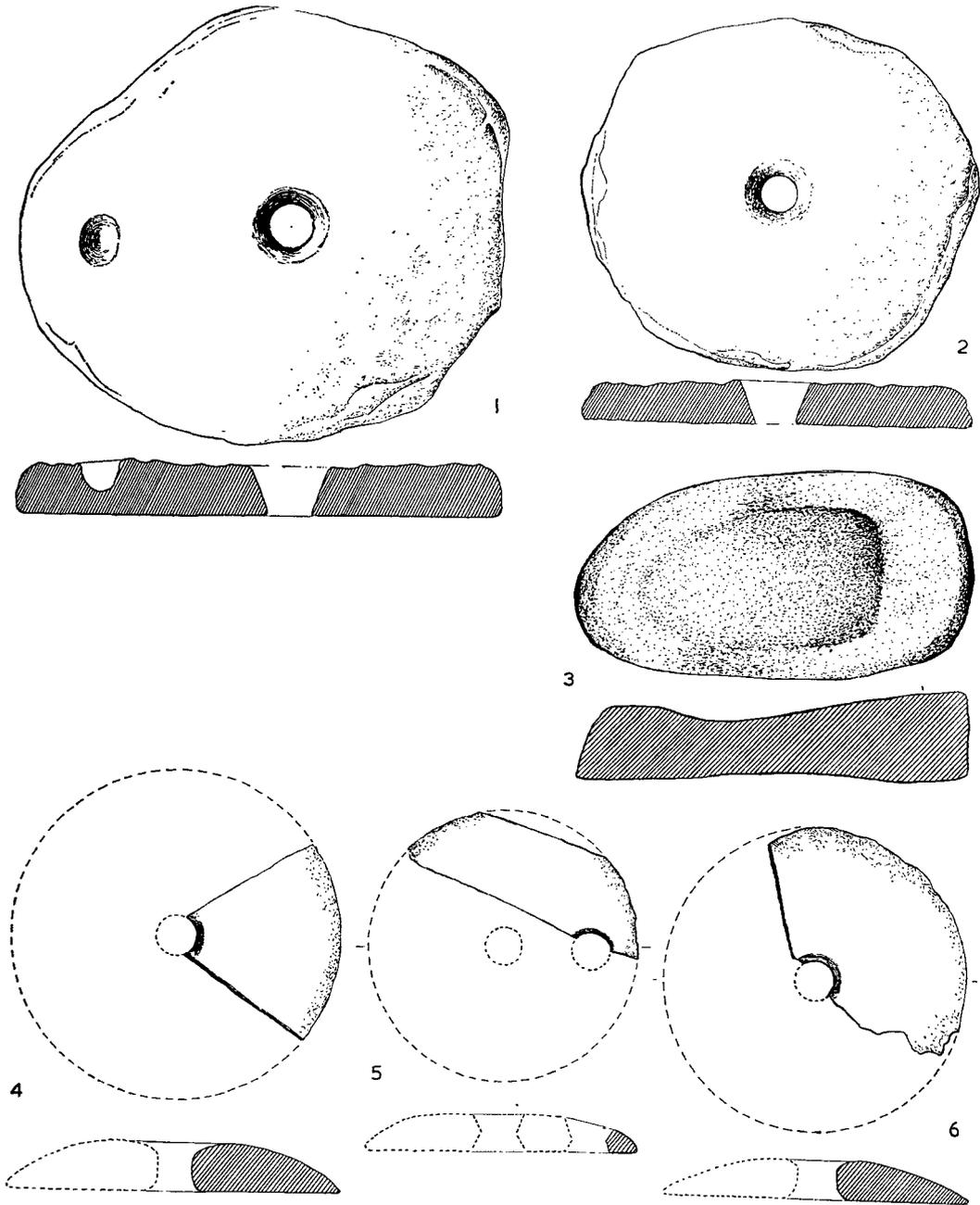


FIG. 9. Querns: 1-3, Phase I; 4, Phase II; 5, 6, Phase III (1/8)

fish fat, these would serve as lamps and could provide a feeble light. Another use has been suggested for these so-called cups, that of a pivot to carry the framework of a door, but those found at à Cheardach Mhor appear to be too fragile for such a function. Of the pins from the wheelhouse all, with one exception, were of the headless type, and only one, No. 11, is fashioned with any care, consisting of half a polished head, oval in shape, bearing traces of an iron shank, square in section. While bone needles found in Phase I levels would be useful for thonging, they would be clumsy for any fine material and, in this context, it may be noted that no true spindle whorl or fine needle was recovered from this horizon. An unusual bone find has been identified by Dr Kenneth Oakley as a flake of fossil bone, perhaps, as Mr Lacaille has suggested, deriving from the gravel beds at Daliburgh, a distance of over 12 miles, where fossil bone has already been observed.

Glass

A yellow bead of vitreous paste, 1 cm. in diameter, was found in the sand on the wheelhouse floor. A similar bead, unstratified, was also recovered. These have many parallels and the type has a wide distribution.

Metal

The slag noted from Hearth 3 suggests iron working, but, apart from a fragmentary bronze ring, No. 16, no metal artefact has survived the permanently wet condition of the wheelhouse levels.

Stone (fig. 9)

Two notably flat quern-stones are both of stone typical of the Lewisian Gneiss. These are similar in type, with oblique, central perforation. The oval handle hole of the upper stone, No. 1, though only partially perforated, appears to be complete. This is from the forecourt, the second, No. 2, possibly a lower stone, is from Bay 8. A broken saddle quern, No. 3, was used in building Pier 11. A pivot stone was found built into the main wall at a point where this had been much robbed. This was made from a boulder of irregular shape with a shallow, well-made circular hollow, 6½ in. in diameter (see Pl. IX, 1).

Forty-one hammer-stones were recovered from the wheelhouse levels. Some showed signs of use at both ends, and a few over one side. These are fashioned from water-worn stones of varying types of rock. Five whetstones are also recorded. Of the 28 pieces of pumice from all levels in the mound, 22 are from the wheelhouse and mostly found in the bays.

Summary

The sequence of style in the pottery would account for a long occupation of the wheelhouse. The development of the main feature, the tooled applied band, has a surprising continuity, and persists in the later occupations. Characteristics of two phases at Jarlshof, both represented in the sealed occupation levels of the wheelhouse bays, imply intercourse beyond the Hebrides, or perhaps a common origin.

PHASE IA

Sealed by the blown sand, but about 2 ft. above the level of the wheelhouse floor, a rectangular hearth, Hearth 4, stone lined and pebble edged, lay under the collapse of a wall which, when standing, must have run within a distance of 2 ft. from it (figs. 2 and 3, Pl. IX, 2). The hearth, which yielded iron slag, was stratigraphically related to a double wall on the east, well built on the outer face and containing in its core iron slag.¹ The double wall backed against a poorly made line of single stonework which could not be traced in the adjoining trenches. A lintel stone, 4 ft. by 1 ft. 3 in. and 8 in. at its thickest, probably removed from the adjacent wheelhouse, lay at an awkward angle, close to the hearth (Pl. VII, 4). Successive levels of peat-ash and sand had been tipped beyond the return of the double wall on the north side. Fragmentary pottery sherds of this phase were from a thin and introdden occupation level. This did not penetrate beyond the wheelhouse entrance, nor was there any evidence of it to the west of Trench F5. Though successive tips suggest more than a temporary habitation, the middens of this phase were singularly lacking in bone or other debris and relatively few sherds were recovered from them. It seems possible that the occupation was of short duration and though, judging from the material recovered, not far removed in time from the earlier phase, the inhabitants were concerned with the wheelhouse merely as a source of building material, as having

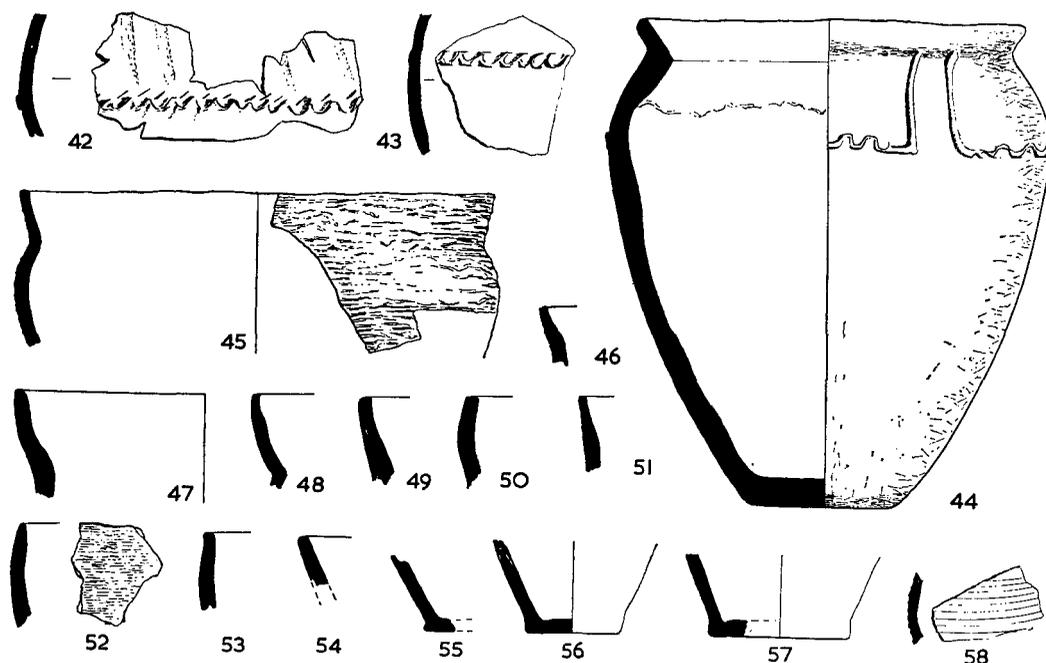


FIG. 10. Pottery: 42, 43, Phase IA; 44, Phase II; 45-57, Phase III; 58, Phase IV (1/4)

¹ See Appendix II, p. 172.

created a drier building site than the surrounding machair. Walling could not be traced on the west where it may have been robbed by the later inhabitants. The slight evidences of Phase IA walling were in a ruined state when they were in turn buried by the blowing sand.

THE PHASE IA FINDS

Pottery (fig. 10)

This includes nothing distinctive, mainly devolved wheelhouse types in the same paste which can be related to a stage little later than the primary structure. Of the few sherds from this horizon eight join to form the upper part of a pot with a finger-channelled pattern between the rim and the applied decoration, No. 42. This compares poorly with the execution of the arching patterns on the wheelhouse pottery and is nearer to a debased form found at *Clettraval* and *Tigh Talamhanta*, both aisled farm-houses. Three bases are represented, including one which has been built up on a saucer-shaped unit.

Bone and Stone (fig. 13)

A bone trimmed to a gouge-like form, No. 47, was recovered from the occupation level, together with a cut antler, partly stripped of the cortex.

Three hammer-stones and one piece of pumice are from this horizon.

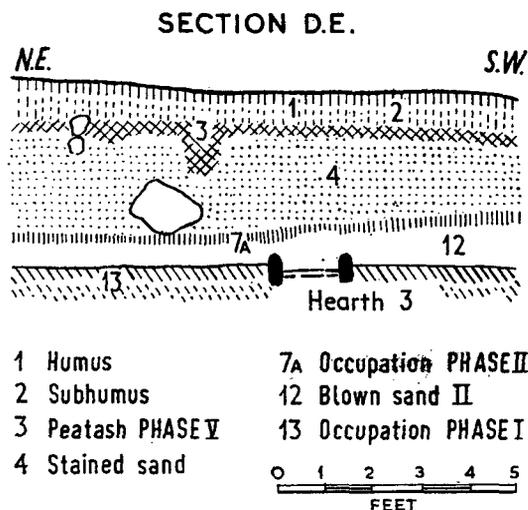


FIG. 11

PHASE II

The blown sand which covered the wheelhouse, doubtless shifting with the weather, did not entirely conceal the walling on the west when fresh arrivals found it a useful quarry for building material. In one of their temporary occupations, the inhabitants of this period used a part of the primary structure. The main wheelhouse

A CHEARDACH MHOR

PHASES

-  Wheelhouse Phase I
-  Collapsed wall over hearth IV. Phase IA
-  Phase II
-  Phase III
-  Phase IV
-  Phase V

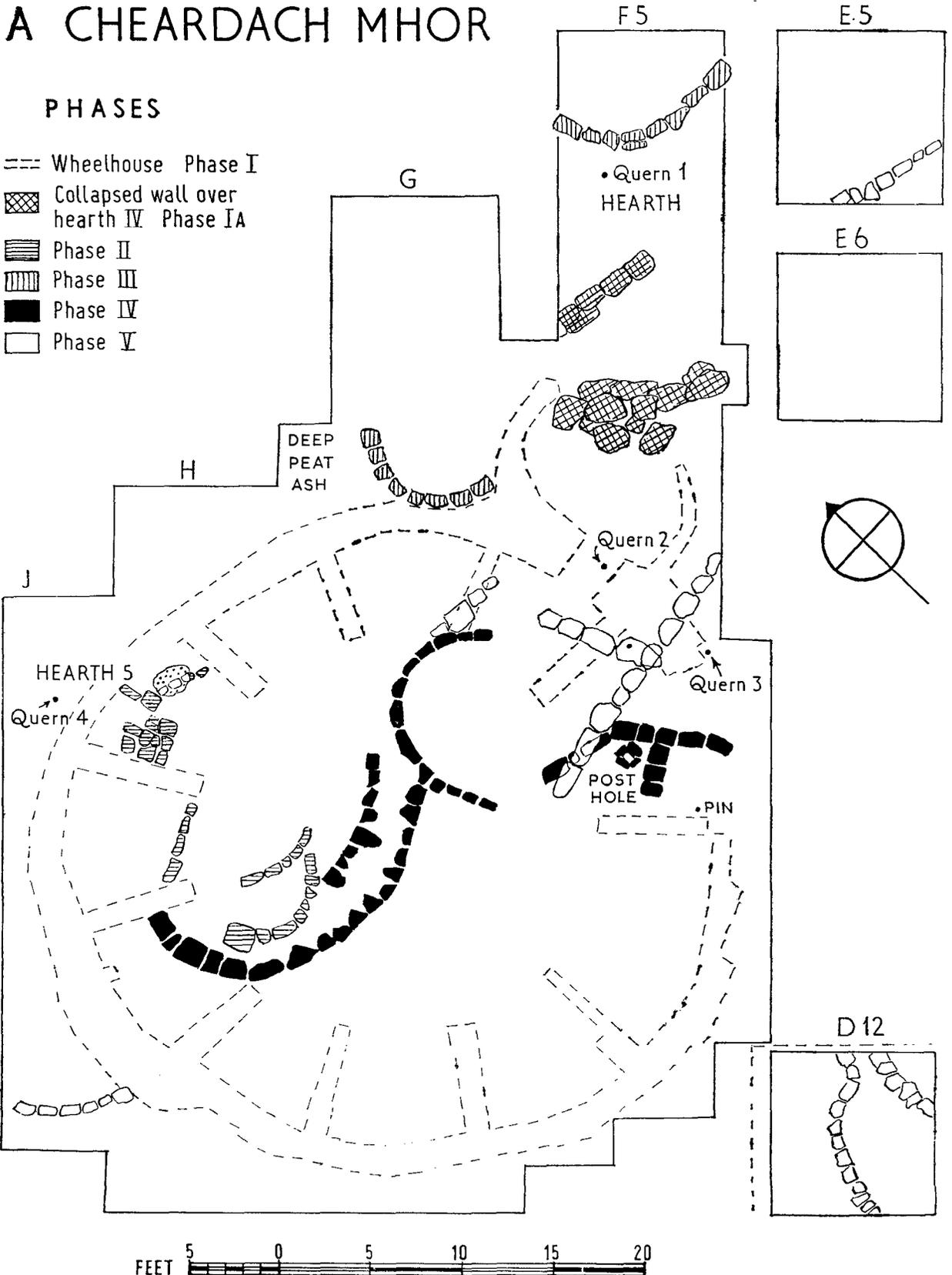


FIG. 12. Phases II-V

wall was lowered in Bay 3 to effect an entrance from the west, and stonework was carelessly piled against the upper courses of Piers 3 and 4, using wheelhouse material to form a shelter backing against the blown sand (figs. 11 and 12). The upper part of the wheelhouse main wall formed one side of the entrance passage, of which the outer wall was built of shoddy Phase II stonework with footings at a higher level than the wheelhouse foundations. This occupation was dated by pottery with characteristic decoration. Sufficient sherds had been preserved under a fallen slab for the reconstruction of a well-made pot (fig. 10, 44 and Pl. X, 2) with applied decoration on the shoulder. The irregular pattern of the ornament compares with material from *Dun Cuier* and *Dun Scurrival*, both galleried duns in the Isle of Barra. In the entrance passage a broken quern-stone was found (fig. 9, 4).

Traces of iron working occurred in the blown sand immediately overlying the occupation horizon of this period, and therefore very probably related to this phase.¹ Also from this level were recovered the remains of a dog which Dr A. D. Clarke compares in size to a modern retriever,² a breed introduced perhaps by the newcomers, inhabitants of the galleried duns. Bones identified as belonging to a stocky breed of pony, roughly twelve hands in height, came from Phase II levels and from those of Phases III to V. Ox, sheep and pig were also represented.

PHASE III

This period shows little evidence of true structures, but a foot or so below the modern turf level short stretches of curving walls occurred, similar in character, and seldom more than two courses high (figs. 3 and 12). Associated with these walls, midden tips of peat-ash interleaved with dirty sand contained pottery, iron slag,³ bone and shell refuse, mainly mussel, scallop and oyster. No built hearth was traced, but the only charcoal recovered which retained any form in the wet conditions of the machair, filled a shallow hollow at the back of the curving wall in Trench F5; the charcoal was identified as willow. A quern-stone was found in this horizon. Structures of this phase were nowhere as complete as the shelter within the wheelhouse piers where the primary occupation was sealed by blown sand.

Pottery comparable in type to the rough ware from these levels has been found in northern Irish sites⁴ and has been recovered elsewhere from well planned and constructed duns⁵ which supports the opinion that the occupation is temporary, perhaps seasonal. Squatters of this phase may well be coeval with the builders of the numerous island duns in South Uist, who must have maintained an agricultural link with the mainland based on their strongholds. The identity of these casual inhabitants of the pasture lands of the machair may prove to be the herdsmen of the island duns.

PHASE III FINDS

Pottery (fig. 10)

The finer wares of this phase are ring-built and fragmentary. Three sherds (not illustrated) have coarsely incised decoration. Characteristic of Phase III are

¹ See Appendix II, p. 172.

⁴ *Ballintoy*.

² See Appendix I, p. 170.

⁵ e.g. *Dun Cuier*, and *Dun Scurrival*.

³ See Appendix II, p. 172.

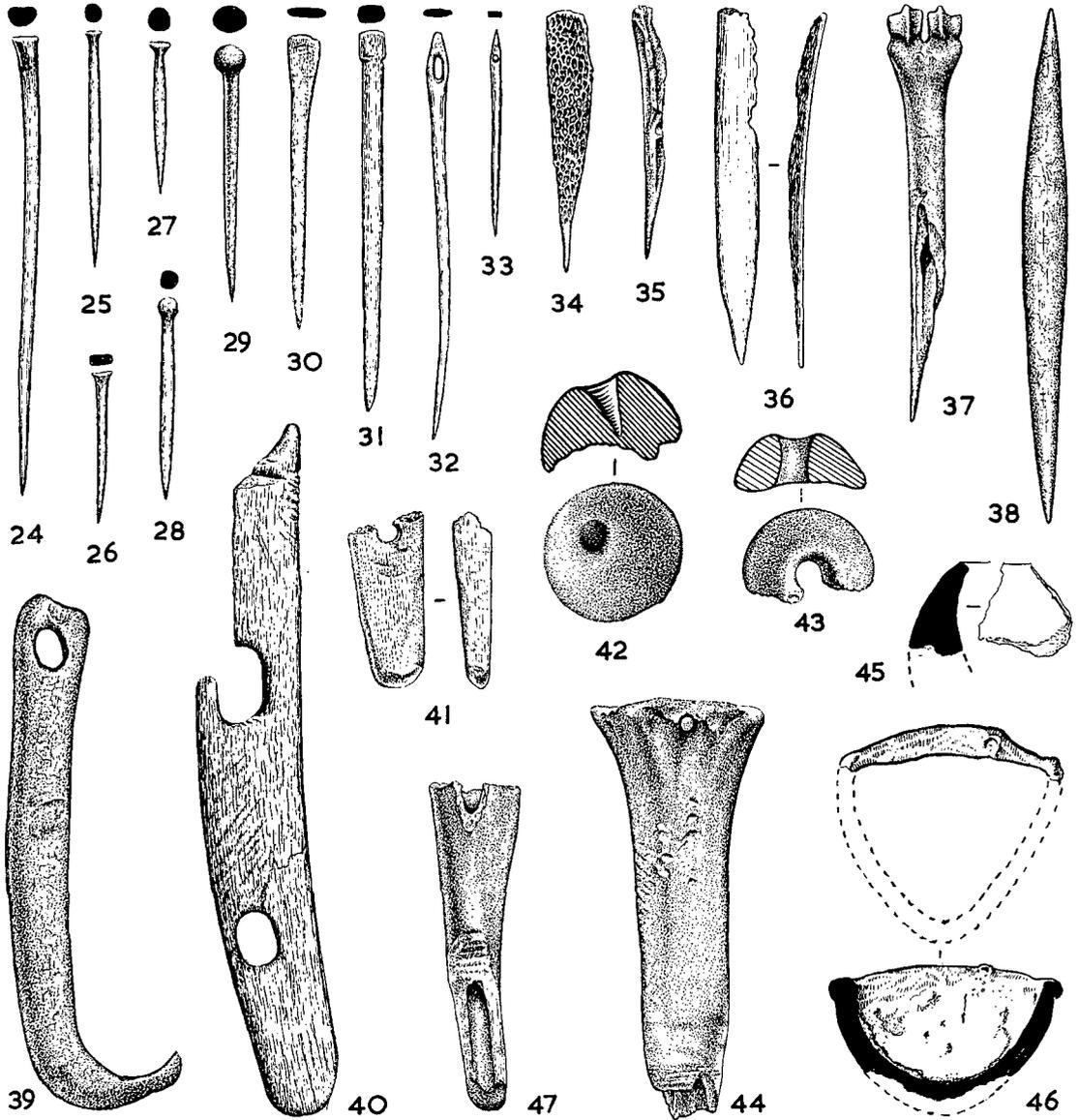


FIG. 13. Objects of bone, whale bone and antler: 47, Phase IA; 24-46, Phase III (No. 40 1/5, the rest 1/2)

fragments of coarse cooking pots in harsh, grey paste which tends to crack at the long joints of the ring-building, Nos. 45-57. The outer surface is roughened and encrusted with soot, the inside clean. These wares are closely comparable to material from *Dun Cuier*, where the larger pieces recovered from the peat-ash of the domestic hearth showed an irregularly made, wide mouthed pot, or with short rim fingered

onto the body. The only vessel from à Cheardach Mhor of which sufficient sherds were recovered for restoration shows a weak shoulder and a slightly flaring rim. One rim from this horizon, No. 50, is incurving, but it is too fragmentary to identify as a bowl form.

Bone (figs. 13 and 14)

Of the ten bone pins recovered, Nos. 24-31, four are nail headed, a type possibly used for moulds in casting bronze pins and found at *Dun Cuier*, Isle of Barra. Three are of simple, round headed type, one with characteristic swelling shank. Of two needles, Nos. 32, 33 one has a long 'eye', the other, very roughly made, is comparable to needles from *Dun Cuier* and *Foshigarry*, also from *Ballintoy* and other northern Irish sites. A hook with perforated head, ingeniously devised from an antler, No. 39, may be compared to three broken implements from *Foshigarry* with similar perforation. A whale bone artefact, No. 40, with rounded and oblong perforations, is possibly a tether. While the remains of this phase are fragmentary, either broken or unfinished, the workmanship indicates a marked advance in the manufacture and use of iron tools.

Stone (fig. 9)

Hand mills of this phase, Nos. 5 and 6, in common with the other querns from this site and a discarded quern built into the structure of the Kilpheder aisled house, have an oblique perforation instead of the hour-glass type recorded from many island sites.

Twenty-three hammer-stones were recovered from these levels. Only one whetstone is recorded from this horizon. Four lumps of pumice were from the occupation of this phase.

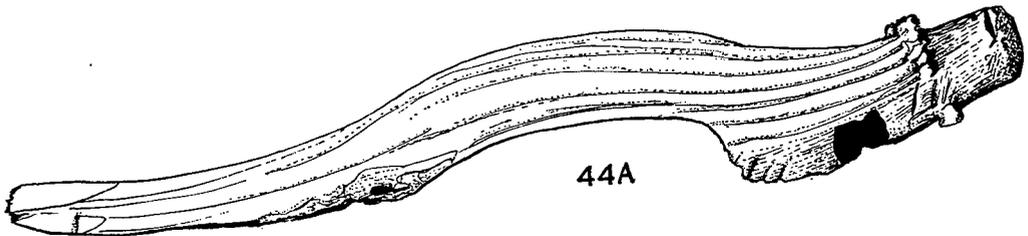


FIG. 14. Antler tool-shaft, Phase III (1/3)

Metal (fig. 13)

While no metal finds can be associated with Phase III, the broken remains of a crucible, probably of triangular type, can be related to this horizon, No. 46. Residue of bronze working remained in the crucible, and clay and bronze had fused on the lip. This was recovered from an otherwise sterile pit filled with peat-ash dug in Phase III through the Phase I levels. The small fragment of a second crucible comes from the blown sand above the Phase III robbing, No. 45.

PHASE IV

The dwelling of this phase was built in a hollow scooped out of the mounded sand (figs. 3 and 12 and Pl. IX, 3).

A semicircular hut wall of robbed wheelhouse slabs set vertically into and backing against the sand, showed traces of horizontal upper courses but nowhere more than two remained *in situ*. This structure had a somewhat dished floor of dirty sand, visible in section as a discoloured band 4 in. thick, but with no tangible trodden surface. One wall of a curving entrance passage remained, doubtless designed to keep out the blowing sand which, with the high winds, is a force to be

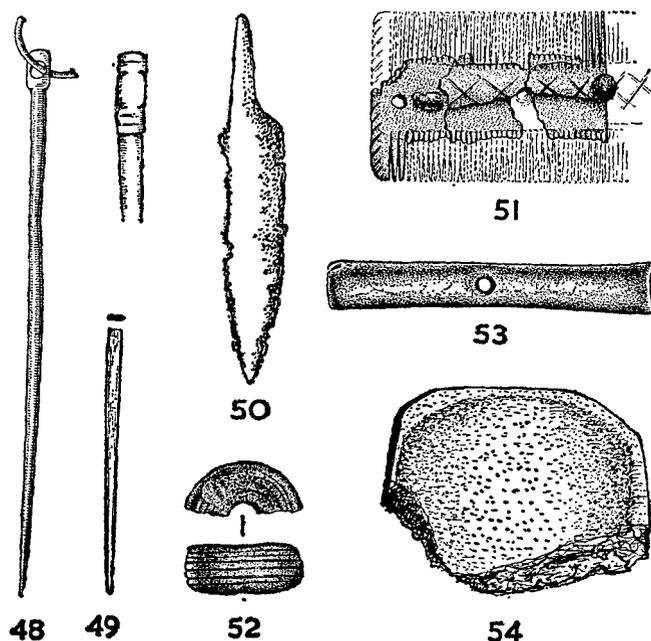


FIG. 15. Objects of metal, bone and stone: 48, 49, Phase IV; 50-54, Phase V (1/2)

reckoned with in the islands. Of double construction, this wall used stone settings of the preceding phase as part of the backing. The outer wall of the passage had been mainly demolished, but could be traced at the entrance. The builders were most probably responsible for the disturbance and partial rebuilding of the wheelhouse wall over which the entrance passage ended. To the east of the semicircular structure a T-shaped wall built of vertically set slabs was consolidated with smaller material. In an angle of this wall a stone-lined post-hole measuring 6 in. by 8 in. internally was firmly bedded in the sand (Pl. IX, 4). This characteristic type of building occurs at *Jarlshof*, where Mr Hamilton relates the structure to the Early Christian period.¹ From this horizon little occupation refuse was recovered. The finds include a finely made bone pin, a trimmed whale bone disc, and a cast bronze

¹ *Jarlshof*, p. 80, Passage House I of Phase IV.

pin¹ found in the stained sandy floor level related to the T-wall, (fig. 15, 48 and 49). Besides closely allied material from Ireland, the pin has parallels in another from Doune Hill, Relugas, on the Findhorn, a region where it is interesting to note the remains of early settlements. This brings the structure, built into the mound rather than on it, into a period not earlier than seventh-eighth century A.D., a dating further supported by the recovery of a sherd (fig. 10, 58), not strictly stratified, but from a disturbed level near the entrance passage to the Phase IV hut. This has been identified by Mr C. A. R. Radford as similar to imported wares known mainly from Irish sites.² The date ascribed by Mr Radford to this sherd is seventh-eighth century A.D.

EVIDENCE OF LATER OCCUPATION, PHASE V

Above the sand blow into which the Phase IV hut had been inserted there was much disturbance. Surviving stretches of straight walling, seldom more than one course high, occurred in these uppermost levels at a depth of only 7 or 10 in. below the humus (fig. 12). In a thin level of black greasy earth at the base of one of these walls (17 ft. long and 2 ft. 6 in. wide, in places three courses high) sherds of a plain pot were found caked with sooty material in which were embedded the fragmentary remains of a double sided composite comb (fig. 15, 51). From the same stratum came an iron knife (fig. 15, 50) and a whale bone shovel together with other fragments of pottery which included a sherd with applied boss (fig. 5, 18) and another (fig. 10, 49) comparable to Phase III cooking pot wares. Considering the incongruity of these sherds and the disturbance created by successive building at this level, material from this horizon cannot be described as stratified.

Fragments of worked steatite occurring in the subhumus included part of a lamp of a type ascribed to the Viking period at *Jarlshof* (fig. 15, 54).

Part of a human jaw was recovered from the sand blow at this level.

The mound, by now a landmark in the machair, had undoubtedly been used and re-used, and a fragment of late medieval pottery from the ground surface, dated by Mr S. H. Cruden to c. A.D. 1600, indicates the continuing use of this dry site.

CONCLUSIONS

The outcome of this excavation reveals a story, not continuous, but with significant stages of habitation. There is ample evidence in Phase I for describing that occupation as pastoral. A landfall not too hazardous for light craft, though subject to vagaries of wind and tide, would make occasional deep-sea fishing possible, while the proximity to the shallow waters of the South Ford, where there are oyster beds and an abundant supply of cockles, would provide an alternative source of food; shell refuse was plentiful at all levels of the excavation. Only the primary occupation, however, indicates more than temporary quarters.

¹ This pin has been fully discussed in *Ant. J.*, xxxviii (1958), 92.

² C. A. R. Radford, 'Imported pottery from Tintagel, Cornwall', in *Dark Age Britain* (1956), 59.

Among the finds from this phase, the yellow vitreous beads equate with a second-century dating, perhaps rather later in the extreme west. A long pottery sequence, however, includes simple rims with incised decoration of lattice, infilled ribbon, chevron and herring-bone, as well as applied rondels, characteristic of the earliest wheelhouse pottery. Links with *Jarlshof* II and *Foshigarry* also point to a long tenure of the wheelhouse, possibly covering several generations. Similarities between à Cheardach Mhor Phase I and Jarlshof Phase II, though tenuous, are unquestionable. A direct connection implies intrepid seamanship, and, moreover, boat building on a scale for which probably, then as now, the necessary material would be lacking.

The building technique of the wheelhouse as well as the equipment accords well with comparable sites and an outstanding characteristic is the practical use to which whale bone was put.

The first phase ends for reasons which can never be known with certainty. These could be climatic, possibly a temporary break in the coastal dune and the resulting necessity of a change in grazing lands. Whatever the reason for leaving the site, the wheelhouse walling was standing when the sands covered it. The occupants may have left precipitately, which the almost complete cooking pot standing mouth downwards in Bay 7 suggests, but any supports used in the whale's vertebra post-holes did not remain long enough *in situ* to rot away, for the holes were filled to approximately floor level with clean sand.

The second occupation of the site, Phase IA, cannot be far removed in time from that of the original builders, though, if these people had any knowledge of the primary structures, it is surprising that the horizon of this occupation does not extend beyond the wheelhouse forecourt. Theirs is, however, a shadowy tenure of the site with poorly built walls which fell before the sand covered them.

Pottery of the third occupation, Phase II, equates with that from the Galleried Duns in the neighbouring Isle of Barra.

For Phase III, comparative material is again quoted from Barra, and from Northern Irish sites.

The pottery is not of very high quality and is undecorated. Improvement in the iron tools used for shaping bone is also obvious, and the iron slag material as well as the triangular crucible, with its residue of bronze, suggest more than a purely pastoral use of the site. The closest comparisons are with *Dun Cuier* for which a fifth-seventh-century A.D. dating has been suggested.

For Phase IV there is parallel construction in the Far North. By this date there seems more likelihood of direct contact. From the sixth century A.D. onwards early Christian missionaries wandered the seas to the limits of the known world. East coast and Irish connections, implied by the bronze pin and the sherd of imported ware, to which a seventh-eighth-century date has been assigned, are further links in the evidence of movement by land and sea. From the dating of these finds and from that of the closely similar hut construction at Jarlshof, to which an early Christian date has been given, we may assume that Phase IV at à Cheardach Mhor falls into that period.

That the mound remained a desirable building site is shown by the material recovered from the greatly disturbed upper levels of Phase V. The knife, the comb and the stone lamp are related to later occupations. The long stretch of single course walling at high level, under which the knife and comb were found, could be the result of Norse penetration.

A sherd of glazed pottery from the surface of the mound dated to the seventeenth century points to activities on the site, probably still of pastoral nature, in late medieval times.¹

CATALOGUE OF THE FINDS

PHASE I

THE POTTERY

Figs 5 and 6

- 1 Much abraded rim sherd from a vessel in heavily gritted red paste, incised with lattice pattern in panels above applied wavy band. From Bay 7.
- 2 Weak abraded rim in fairly good reddish paste with coarsely incised lattice pattern. Cf. *Foshigarry*, fig. 24, 23-26; Tíree, see *Coll*, p. 174, Pl. 6 and 10. From Bay 5.
- 3 Fragment in burnt dark reddish ware, thin uneven potting, finger-pressed inside, brushed on outer surface over which is incised what appears to be a pattern of alternate hatched triangles above an abraded applied band. Cf. *Foshigarry*, fig. 24, 13. From Bay 5.
- 4 Sherd in hard, rather harsh grey paste, outer surface burnt, decorated with deeply cut incised pattern above a slashed, pushed up band. Cf. *Foshigarry*, fig. 23, 19; a rougher version is from *Tigh Talamhanta*, fig. 7, 64, 71 and 72. From levels disturbed by robbing.
- 5 Two fragments in burnt reddish ware with incised pattern, possibly similar to No. 3. Cf. *Foshigarry*, figs. 23, 12 and 19, fig. 24 1 and 12; *Tigh Talamhanta*, fig. 8, 77 and Ayre, *N.M.A.* No. L 194B.69. From Bay 4.
- 6 Fragment of small pot, the short rim, much abraded in fine red paste decorated with vertical rows of incised herring-bone pattern. Cf. *Foshigarry* figs. 23, 7 and 24, 7 and 11; *Cletravel*, Pl. IX, 4; *Cuier*, fig. 12, 108; Nighean, Tíree, see *Coll*, p. 174, Pl. VIII and X. From Bay 6.
- 7 Sherd of globular pot in reddish paste, decorated with double lines filled with vertical strokes; cf. *Foshigarry*, fig. 24, 15; *Cletravel*, Pl. IX, 2; Buaille Risary, see *North Uist*, p. 210, second plate. From wheelhouse midden.
- 8 Fragment in dark paste incised with decoration similar but much finer than No. 7 with additional 'stitched' pattern. From blown sand over floor of central area.
- 9 Fragment in dark paste with lightly drawn lines and 'stitched' decoration. From blown sand immediately over wheelhouse floor.

¹ Fuller discussion of the island pottery will be found in an article on 'The Sequence of Iron Age Pottery in the Hebrides' forthcoming in the Council for British Archaeology Research Report No. 6.

- 10 Fragment in yellow ware with large grits, smooth outer surface, with lightly scratched, uneven herring-bone pattern. From blown sand over central area.
- 11 Small sherd in dark brown paste with incised lattice pattern. Cf. *Foshigarry*, fig. 24, 24; *Dun Iadhard*, fig. 13,3 and 6; *Kilpheder*, fig. 7, 1; *Clettraval*, Pl. IX, 5. From Forecourt.
- 12 Fragment in red gritted ware with incised lattice pattern. From Bay 7.
- 13 Short rim in crumbly red paste, with inner bevel and applied band in angle of neck. For this group cf. *Coll*, Pl. I, p. 174; *Eilean Maleit* see *North Uist*, p. 208 and *Jarlshof*, p. 46, fig. 25, sherds from the broch. From Bay 5.
- 14 Rim in well prepared paste and smoothed surfaces, with double bevel, the upper slightly concave, the applied band is thumbled into the angle of the neck. Cf. *Clettraval* p. 59, fig. 5, type 1b; *Tigh Talamhanta*, fig. 5, 1 and 2; Cnoc a Comhdhalach, see *North Uist*, p. 204, second plate. From midden.
- 15 Rim with ridge at lower angle of bevel, the tooled band is applied to the neck angle and slightly slashed with the nail. The paste is reddish, finely gritted and burnt on outer side. From forecourt.
- 16 Fragment in well prepared buff paste, heavily burnt inside, smoothed outside, decorated with cordon of triangular section. From central area.
- 17 Sherd decorated with applied boss similar to No. 18. In addition half of a stamped impression made with a small shouldered pin is also present on the same sherd. For analogies see *Tigh Talamhanta* p. 92, Pl. VIII and IX and fig. 7 and *Cuier* fig. 12, 109 and Pl. XXVII. From midden.
- 18 Sherd with applied boss squeezed on and finger-pressed in centre. This was found in a disturbed level at the base of a later wall (see Phase V, p. 158), but probably derived from the wheelhouse horizon. Cf. *Tigh Talamhanta* fig. 8, 75, 76; *Foshigarry* fig. 24, 21; *Dun Iadhard* fig. 13.
- 19 Sherd with thin rouleau of applied decoration. From monolith pit.
- 20 Fragment with sharp carination in brown burnt ware with huge grits, and smooth surface very coarsely incised with an irregular pattern. This is the only sharply carinated vessel from the site, nor has a parallel been found amongst Hebridean material. From Bay 5.
- 21 Large vessel with everted rim, folded over and smoothed inside, the base is narrow and flat. The paste is gritted, with smooth outer surface slightly pink and burnt in places. From wheelhouse midden.
- 22 Abraded rim of a globular pot with slight fold on inside, in very fine reddish paste. From Bay 4.
- 23 Part of a small pot with short bevelled rim, slightly concave, in fine paste, buff inside, black outside, a cordon round the girth is represented by two incised lines filled with diagonal strokes, the lower line finely incised, the upper coarsely hand drawn. From Bay 4.
- 24 Large fragment with sharply everted bevelled rim and folded flap on the inner side smoothed away. The paste is pinkish and burnt in places, the potting is uneven, though the surface is smoothed. From wheelhouse midden.
- 25 Rim of weak shouldered pot with concave bevel, in burnt red paste with large grits, surface abraded. From Bay 7.
- 26 Short rim with long inner bevel on pot with swelling shoulder, in fine reddish paste with burnt surface. From forecourt.
- 27 Part of a small vessel with bevelled rim in pinkish paste with large grits, smoothed

- outside, inside abraded, decorated with a flattened applied plain cordon at maximum girth. Cf. *Jarlshof* Class II, p. 66, figs. 21 and 22; *Foshigarry*, fig. 23, 14. From Bay 7.
- 28 Vessel with bevelled rim in pinkish paste with some large grits, the inside is finger-pressed and corky looking. There is a folded-over flap in the inside and the walls are uneven in thickness, the surface is smooth above the applied band and very roughened below and burnt. Double finger-channelled arcs spring from the applied band. From Bay 7.
- 29 Everted rim with double bevel and folded over inner flap, in hard pink paste with some large grits, rather rough outer surface and much finger-pressed on inner side. The finger-channelling above the applied band shows no distinct pattern but the vessel closely resembles No. 28. From Bay 7.
- 30 Part of a vessel with bevelled rim in hard, light red paste, finger-pressed inside, smoothed above and below the applied band. Triple finger-channelled arcs spring from the band. Cf. *Clettraval*, Pl. VIII, 3, 5, 7 and 9; *Tigh Talamhanta*, fig. 8, 85, 86. From Bay 7.
- 31 Part of a vessel in well prepared, gritty reddish paste, the surface smoothed above and brushed below the applied band, and finger-pressed inside. The rim has a fluted bevel and double finger-channelled arcs spring from the carefully applied band. For the fluted bevel see *Foshigarry*, fig. 25, 3 and *Jarlshof*, p. 66, fig. 35, 3. From Bay 4. Another fluted rim, much abraded and too fragmentary for illustration is from Bay 7.
- 32 Vessel with rim abraded away, in well prepared red paste, much burnt on the exterior and with remains of a folded-over flap visible on the inside. Double finger-channelled arcs spring from a carelessly applied band. From forecourt.
- 33 Reconstructed vessel, very irregularly made, the rim is short and upright, swelling on the inside and showing folded flap of clay; five ring-buildings are visible on the inside, smoothed away on the outside. Thumbed-on ribbon decoration is found at the greatest girth. Found at base of Pier 7.
- 34 Small base fragment in dark paste showing finger-nail impressions round the foot. From midden.
- 35 Slightly dished base in coarsely gritted brown ware with decoration apparently similar to that on No. 36 below. From midden. For bases with comparable decoration see sherds in the collections of the N.M.A. from Dun Beag, Beveridge Collection, broch of Lingrow, West Howe, Burra, Cumlins, Sae Breck, broch of Keiss, Nibster, Road and White brochs.
- 36 Very thick base fragment, the underside burnt and scaled away, in coarsely prepared hard paste. The inside is divided into quarters by intersecting, finger-channelled grooves within a concentric groove and has deep thumb-prints, presumably in each quarter. From disturbed levels at the back of the wheelhouse wall.
- 37 Flat base in short, dry yellow ware. It is decorated on the inside with overlapping, shallow, finger-tip impressions surrounding a central thumb-print. From midden.
- 38 Base in rough, buff paste with large grits, burnt inside. From forecourt.
- 39 Base in well prepared pinkish paste, burnt inside. From Bay 6.
- 40 Base with splayed foot, in fine paste, though with large grits, and finger-pressed. From midden.
- 41 Dished base, roughly worked brownish paste, surface brushed. The inside shows ring-building. From midden.

BONE AND ANTLER

Figs. 7 and 8

- 1 Roughly made, blunt headed bone pin, the point polished, the other end trimmed. From forecourt.
- 2, 3 Bone pins from Bay 7 and midden.
- 4 Blunt headed antler pin, highly polished. Cf. *Galson*, p. 200, fig. 9, 13 and 14. From Bay 4.
- 5 Needle made from a thin strip of antler with round perforation at the widened head; though carefully rubbed down, the cortex is still visible. From Bay 7.
- 6 Short, double pointed bone needle, the oblong 'eye' is reamed on both sides. Cf. Broch of *Ayre*, p. 44, fig. 11; *Foshigarry*, fig. 19, 18. From Forecourt.
- 7 Bone needle of similar type to No. 6, but smaller and the point at the head is broken. From midden.
- 8 Antler awl with marks of knife trimming and rounded point. From the central area.
- 9 Gouge-like implement of antler, the point highly polished. From clay setting of the 'monolith'.
- 10 Whale bone peg. From central area.
- 11 Half of a polished bone pin head with socket for square shank retaining traces of iron. Cf. *Foshigarry*, fig. 8, 3 and 4, the latter of whale bone has a square shank hole; Broch of *Burray*, p. 237, fig. 210; see also *P.P.S.* XXI (1955), 282, R. B. K. Stevenson, 'Pins and the Chronology of the Brochs'. From the forecourt.
- 12 Half of an antler ring, semicircular in section, cut and polished on the rounded side; the cortex remaining on the flattened surface has been rubbed down. From central area.
- 13 Worn and grooved antler quern-handle. From wheelhouse midden.
- 14 Bone quern-handle, worn into a biconical shape, one end trimmed, the other end broken. From forecourt.
- 15 Part of a bone toggle or door sneck with straight perforation found with a fragment of bone with hour-glass perforation. Cf. *Freswick*, Pl. XLIX, 1 and 2. From Bay 7.
- 17 Perforated antler tool made from the burr end, broken at junction of second tyne, the brow tyne has been smoothed off, the surface rubbed down. From forecourt.
- 18 Ox scapula shaped to form a knife-like implement, perhaps used for scooping out shell-fish. From a crevice in the wall of Bay 5.
- 19 Handled 'cup' or lamp of whale vertebra, with the cancellous tissue hollowed out to a depth of 2 in. Cf. *Foshigarry*, p. 342, where 6 are recorded; Broch of *Burray*, p. 237, fig. 209. From Bay 1.
- 20 Handled 'cup' similar to No. 19, the centre scooped out to a depth of 1½ in. From beside Hearth 1.
- 21 Pick from shed antler trimmed and worn, the haft, from which the cancellous tissue has been removed, may be broken. Cf. *Foshigarry*, p. 338, fig. 21, 1-3; *Galson*, fig. 9, 27-28; *Bac Mhic Connain*, fig. 16, 1. From midden.
- 22 Shaped piece of whale bone, neatly perforated, possibly part of a drinking vessel. From forecourt.
- 23 Hollowed antler quern-handle, grooved with use. Cf. *Kilpheder*, p. 187; *Foshigarry*, fig. 13; *Galson*, fig. 9, 2 and Bellochban, see *North Uist*, p. 230, second plate. From Bay 5.

Pl. VIII, 1 and 2

Two whale vertebrae with the processes partly sawn off, hollowed out and set in clay below floor level, apparently to serve as post-holes. No. 1 is 1 ft. 2 in. in diameter, 9½ in. deep and, including the remaining portion of the spinous process, 2 ft. 3½ in. across. No. 2 is 1 ft. in diameter and 1 ft. 2 in. deep. For identification of the species see Appendix I, p. 170. A small trimmed whale vertebra 9 in. in diameter was found in the clay setting of post-hole 1.

Not illustrated

A disc, the unfused epiphysis of a whale's vertebra, with crude perforation, diameter 3 in., is from Bay 5. Part of a similar disc but unperforated, diameter 6 in., is from the wheelhouse midden. Cf. *Foshigarry*, fig. 12.

Whale bone peg, 4½ in. long, showing striations, possibly made by rubbing with pumice. From central area.

Distal end of a femur halved, with shallow hollow 2 cm. deep scooped out of the cancellous tissue. From blown sand over floor of central area.

GLASS

Not illustrated

Yellow bead of vitreous paste, 1 cm in diameter. Cf. *Tigh Talamhanta* p. 104, Appendix A. From the sand immediately over the floor of the central area. A second, similar bead is unstratified.

METAL

Fig. 7

16 Fragment of bronze ring, square in section. From central area.

STONE

Fig. 9

- 1 Flat upper stone of a quern with oblique central perforation and oval handle hole, partially perforated. The stone is from the banded granitic and micaceous hornblende gneiss layers, typical of the Lewisian Gneiss. A broken quern-stone built into the fabric of the *Kilpheder* aisled house has a similar perforation. From the forecourt. See also Pl. VIII, 4.
- 2 Possibly the lower stone of a quern, also very flat, with oblique central perforation and of similar stone to No. 1. From Bay 7. See also Pl. VIII, 3.
- 3 Saddle quern, broken and built into Pier 11. (Reconstructed)

Pl. IX, 1

Pivot stone with circular hollow 6½ in. in diameter, and a secondary hollow 3½ in. in diameter, and ½ in. deep. Cf. *Foshigarry*, p. 303, *Midhowe*, p. 500, fig. 43, 3, where mention is made of 23 socket stones of varying size; *Bac Mhic Connain*, p. 50.

Not illustrated

41 hammer-stones, 8 bolster shaped, 10 oval, 5 roughly triangular, 4 spherical, 4 flat, 3 pear shaped, 1 almost square, and 6 broken. These are of stone from the drift, or occurring in dykes in the island, the majority of the Lewisian Gneiss complex. Some are used at both ends and down one side.

22 pieces of pumice.

PHASE IA

THE POTTERY

Fig. 10

- 42 Ring-built sherd in reddish, well prepared paste burnt outside, decorated with finger-channelled parallel strokes above the applied band. The latter has been thumbled on and nail marks are visible along the upper edge of the pattern. Cf. *Clettraval*, Pl. VIII, 4 and *Tigh Talamhanta*, fig. 8, 86. From midden.
- 43 Large sherd, thin walled, in reddish, finely gritted paste, heavily burnt outside, inside unevenly smoothed. From midden.

BONE

Fig. 13

- 47 Bone trimmed to a gouge-like form. From midden.

STONE

Not illustrated

Three hammer-stones and one piece of pumice.

PHASE II

THE POTTERY

Fig. 10

- 44 Reconstructed pot, well made, of good paste, with everted rim and smoothed, inner bevel, interior showing folded over flap of clay. The applied decoration is of irregular pattern, in the same rather florid style as a pot from *Cuier*, fig. 12, 105. From under a large boulder on the occupation level of Phase II structure erected in Bay 3 of the wheelhouse.

STONE

Fig. 9

- 4 Part of a quern with hour-glass perforation. From the passage leading into the Phase II structure.

PHASE III

POTTERY

Fig. 10

- 45-57 These sherds are mainly from vessels in harsh, grey paste, heavily gritted, the inner surface light brown, the outer 'crêpey' and more or less burnt, with sooty material adhering, comparable to cooking pots from *Dun Cuier*, fig. 7, 1-10. In addition to the illustrated sherds fragmentary rims of 11 other pots in the same ware were recovered, all from the peat-ash midden tips of this phase.

Nos. 45-48, 51, 53, 54 and 56 were from the peat-ash middens in C12, F1, F3, F4 and E4. Nos. 50, 55, 57 were from levels disturbed by the robbing of wheelhouse walls in Phase III, in G8, J8 and J9. No. 52 was from the sub-humus and No. 49 from a disturbed level in Phase V(a).

BONE AND ANTLER

Fig. 13

- 24 Elegant antler pin, with curved shaft and swelling end not truly a head. Cf. *Ballinderry*, fig. 26, 123. From midden in E3.
- 25 Bone nail-headed pin, with slightly swelling shank. From stones of curving hut wall in F5.
- 26 Roughly made bone nail-headed pin, with straight shank. From midden in stained sand, in G5.
- 27 Well made bone nail-headed pin, highly polished, possibly a pattern for a mould. Cf. *Cuier*, p. 321, where comparable material is quoted. From same level as 26.
- 28 Fairly well made, round-headed bone pin with swelling shank, typical of broch and wheelhouse secondary occupations. From midden in F4.
- 29 Roughly made round headed pin. From same level as 27.
- 30 Roughly made bone pin with flat expanded head. Cf. *Cuier*, fig. 14, 26, 27. From midden in F5.
- 31 Coarsely made bone pin with squared head. Cf. *Coll*, plate facing p. 132. The Coll pin is perforated and the Uist pin may be unfinished. From same level as No. 30.
- 32 Long-eyed bone needle. From midden in E5.
- 33 Roughly made bone needle, with neatly reamed eye. Cf. *Jarlshof*, p. 51, fig. 28, 4 from the aisled house; *Galson*, p. 200, fig. 9, 12; *Cuier*, fig. 14, 39; *Foshigarry*, fig. 19, 20. From midden.
- 34-36 Awls made from splinters of bone. Cf. *Foshigarry*, fig. 18 the lower row. From blown sand in G9 and J9.
- 37 Awl made from a metatarsal bone. From midden in stained sand, H5.
- 38 Possibly spindle of well polished antler, with point at either end, oval in section. From midden in F5.
- 39 Broken antler hook, square in section, head perforated. Cf. *Foshigarry*, fig. 15, 2. From same level as 38.
- 40 Possibly a tether, in whale bone, 22 in. long, with round perforation $1\frac{3}{8}$ in. in diameter and oblong perforation $3\frac{1}{4}$ in. across; one end is nicked as though to take a cord. From peat-ash midden disturbed by a rabbit burrow and found a little below the modern ground surface in F4.
- 41 Broken latch or sneck in whale bone. From midden in F8.
- 42 Unfinished spindle-whorl, made from head of femur. From same level as 37, in H8.
- 43 Broken spindle whorl made from head of femur. From same level as 38.
- 44 Worn quern-handle made from the metatarsal of an ox. From midden in F1.

Fig. 14

- 44A Antler tool-shaft with roughly squared, transverse perforation, $\frac{3}{4}$ in. on one face, tapering to $\frac{1}{2}$ in. by $\frac{5}{12}$ in. at the other. Dr Clarke notes: 'basal 170 mms. antler cut off just below brow tine, which has also been cut off - distal end broken, proximal end trimmed and smoothed', possibly with pumice stone. From the blown sand over the robbed wall of the wheelhouse and probably therefore of Phase III.

Not illustrated

Two roughly made bone pins, one with a round the other with a flattened head and the shank broken; two roughed-out bone pins; three broken points of pins; part of an ox femur with stone inserted in the head as though in the process of cracking it for marrow, the shaft shows hack marks; a handled whale bone club, 10 in. long with blade marks which suggests use as a beater; two dolphin vertebrae, possibly used as gaming pieces. From midden tips and blown sand.

METAL WORKING

Fig. 13

- 45 Fragment of a circular crucible. From blown sand above wall of wheelhouse robbed in Phase III.
 46 Part of a crucible, probably triangular in shape, showing residue of bronze on lip. From Phase III pit.

STONE

Fig. 9

- 5 Part of a quern, the handle hole showing hour-glass perforation. The stone is a banded biotitic hornblende feldspar rock such as may occur in basic portions of the Lewisian Gneiss. From robber levels.
 6 Part of a quern with hour-glass perforation. The stone is a feldspathic hornblende-biotitic schist or sheared gneiss; this could have originated from the crush belt which occupies the eastern side of the Outer Hebrides. From midden F5.

Not illustrated

Part of a quern in very fragmentary condition. The stone is similar to that of No. 5 but more basic, and is from a similar level.

- 23 hammer-stones of which 6 were oval, 4 bolster-shaped, 2 triangular, 2 spherical, 1 pear-shaped, 1 almost square, 1 flat and 6 were broken.
 1 whetstone and 4 lumps of pumice.

PHASE IV

POTTERY

Fig. 10

- 58 Wheelmade sherd of reddish paste, burnt on the outside and with the outer surface regularly rilled. Not strictly stratified but recovered from a disturbed level near the entrance passage to the Phase IV hut. For photograph and analogies see *Ant. J.* xxxviii (1958), 92. Cf. also an abnormal sherd from *Tigh Talamhanta*, fig. 8, 88.

BONE

Fig. 15

- 49 Finely made bone pin with squared end, the tip is broken. Cf. *Jarlshof*, p. 126, fig. 59, 3. From stained sand floor level near T-wall of the Phase IV hut.

Not illustrated

Broken disc, 4 in. in diameter with central perforation, made from the trimmed epiphysis of a whale's vertebra. From below the stones of the T-wall of the Phase IV hut.

METAL

Fig. 15

- 48 Cast bronze pin, 5 in. in length with part of a plain bronze wire ring remaining in the perforated head. The unpierced sides of the square head have horizontal grooves at top and bottom of a lozenge shaped panel, the lozenge formed by chamfering the four corners, a convention common to a group of similar pins, and in this example not very definitely rendered. For a note on this pin see *Ant. J.* xxxviii (1958), 92. From close to the T-wall of the Phase IV hut, in stained sand.

PHASE V

Among the sherds from these disturbed levels are No. 18, which probably derives from a wheelhouse midden, and No. 49, which should belong to the Phase III occupation.

(a) *From the black horizon below the stones of Late Wall*

BONE

Fig. 15

- 51 Fragments of a double-sided bone comb perforated for suspension and with the teeth cut after the plates and cross-bars had been assembled. The decoration is with incised cross-hatched lines and strokes on end.

METAL

Fig. 15

- 50 Iron knife with V section, much oxidised.

(b) *From the subhumus*

BONE AND ANTLER

Fig. 15

- 52 Bone spindle-whorl decorated with five concentric lines incised on two faces and four lines incised round the girth. Cf. *Ballinderry*, 2 fig. 22, 627.
53 Bone 'dress-fastener'. Cf. *Freswick*, Pl. XLVIII, 11-14.

Not illustrated

Antler tool handle, 3 in. long.

STONE

Not illustrated

1 hammer-stone and 1 piece of pumice.

(c) *From peat-ash below subhumus unrelated to any structure*

STONE

Fig. 15

- 54 Part of a lamp in stone identified as a 'phlogopite-talc-schist', the most probable source being Shetland. Cf. *Jarlshof*, p. 117, fig. 54, 19. A perforated fragment of similar stone was also recovered from these levels.

Not illustrated

2 hammer-stones and 1 whetstone.

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<i>Tìgh Talamhanta</i>	<i>P.S.A.S.</i> , LXXXVII (1952-3), 80
<i>Unival</i>	<i>P.S.A.S.</i> , LXXXII (1947-8), 1

APPENDIX I

REPORT ON THE ANIMAL REMAINS

by Dr A. D. Clarke, Dept. of Natural History,
The Royal Scottish Museum

Three animal groups of economic value are represented – mammals, birds and molluscs. Fishes were clearly of no significance as only two bones were recovered. Molluscan shells were all of the common edible species – scallop, oyster, winkle, razor and whelk. Bird bones were few and mainly inedible. Of the six species identified – gannet (?herring-)gull, shag, puffin, swan and raven – all but the raven are aquatic, most are marine and all still common in the region, at least until very recent times (Harvey-Brown, J. A. and Buckley, T. E., *A Vertebrate Fauna of the Outer Hebrides* (1888)). The particular swan species was not determined owing to the lack of comparative material but the small size of the single coracoid recovered suggests a Bewick's swan *Cygnus bewicki* rather than a whooper swan *C. cygnus*.

Of the mammals, seal, probably grey seal *Halichoerus grypus*, is represented by a juvenile humerus at a low level and two human fragments were recovered from upper levels.

Whale occurred at a number of levels, mostly as specifically indeterminate, rather amorphous chunks of typical spongy bone. These had been broken off large limb bones or vertebral centra of animals at least the size of a lesser rorqual *Balaenoptera acutorostrata*.

One smaller vertebra might be assigned to the pilot or caa'ing whale *Globicephala melaena* as being the most likely, though the size and shape are compatible with several other species. The two large vertebrae used as post-holes (see p. 142) represent either the common rorqual, *Balaenoptera physalis* (L) or a Sibbald's rorqual *B. musculus* (L), or both.

Only three dog bones were recovered, all from moderately low levels but they are of interest as representing two distinct sizes of animal. A partial radius, length 160 mm. and distal width 29 mm., together with a nearly complete left ramus of a mandible indicate a dog roughly the size of a modern retriever and larger therefore than the breed represented by the almost complete skeleton recovered at Jarlshof (Platt, M. I., *Ann. Scot. Nat. Hist.* (1933), pp. 17-24); this was recovered from the blown sand over the wheelhouse, ante-dating Phase III. A partial right maxilla with five teeth is from a very much smaller dog comparable in size to a Skye or cairn terrier. This came from the wheelhouse midden levels. The value of this single item is enhanced by the discovery in the nearby excavations at a Cheardach Beg of a very small radius and ulna and another similar, ulna. The radius, length 86 mm. is little more than half the length of that of the Jarlshof dog (144 mm.) and is small even compared with the length (97 mm.) of the radius of a Skye terrier used for comparison. It is thus clear that at an early date two breeds of dog were on the island, a larger animal, perhaps for hunting, and a small working terrier comparable with and, surely, ancestral to, the ancient broken-haired Highland terrier from which have descended the Skye, cairn and Aberdeen (Scotty) terriers.

Red deer remains were found in ten of the twelve levels distinguished and, in most, bone as well as antler fragments were recognised. The most frequent pieces were tips of tines usually broken off at a notch cut, or sawn, into the outer hard layer of bone but usually showing no other sign of working. In only one case was there clear evidence that the antler had been cut from the skull and not seasonally cast.

By far the greatest amount of material was referable to the domesticated animals, pig, horse, sheep and ox.

Pig remains were recovered from all but two of the levels but only in small quantities and its value to the community is difficult to assess. None of the tusks showed the beading usually characterising wild pig and all the remains are assumed to belong to a domestic breed. It is not clear why pigs were kept, for Highland prejudice against eating pork seems to be very ancient. With few exceptions all pig remains recovered were from the head region and may, perhaps, reflect some totemistic or religious significance possibly in parallel with the ritual underlying the traditional English dish of a boar's head at a major religious festival.

Horse remains were numerically less frequent than those of other domestic animals except dog, but the proportionately large number of intact bones makes possible a comparison with known breeds. Measurements of the available bones were compared with corresponding ones from Shetland and Exmoor ponies and a modern Highland riding pony. In all cases the measurements of the South Uist breed fell into the range covered by those of the Exmoor breed and intermediate in size between the Shetland and the modern pony. The South Uist remains would therefore seem to represent a typical stocky Celtic pony of about twelve hands and, no doubt, closely related to the recent Island breed.

Sheep remains were very numerous and many intact bones, particularly metapodials, have been examined. The mean measurements of length, proximal and distal widths of metacarpals, metatarsals and radius are given in Table I with mean measurements of these bones from four present-day breeds.

TABLE I

Comparative mean bone dimensions (millimetres)

Bone	À Cheardach Mhor	Shetland	Mouflon	Soay	Blackface
Metacarpal length	114	117	116.5	124	115
Proximal width	20	22	19.5	23.5	27
Distal width	22	24	22	24.5	29
Metatarsal length	124.5	125	129.5	135	116.5
Proximal width	18	20	17.5	20	23
Distal width	21	23	21	23	27
Radius length	137.5	139	140	143	158
Proximal width	26.5	31	28.5	31	39
Distal width	25	27.5	24.5	30	33

From this table it is clear that the South Uist sheep differ from Blackface and Soay sheep but are closely similar, in these recorded dimensions, to the Shetland and Mouflon type.

Only six intact horn cores were recovered, varying in length of outer curve from 53 to 100 mm. The markedly oval section of the bases of the cores had greater diameters from 30 to 40 mm. and lesser diameters from 15 to 23 mm. respectively for the shortest and longest lengths. In size and appearance they closely resembled cores from Shetland sheep and support the conclusions drawn from other skeletal parts.

With the exception of the exceedingly numerous first and second phalanges, intact bones of ox were considerably fewer than those of sheep. They were sufficient however to show that the South Uist oxen were of comparable size and proportions to a skeleton of a Shetland ox in the Royal Scottish Museum, differing only in the form of the horn cores, some of which resembled those of the Celtic ox though measurements of their changing proportions with age revealed them to be fundamentally different. Direct comparison with horn cores of Highland cattle was not possible but it seems likely that the South Uist beasts were related to this ancient breed. Highland cattle show marked sexual dimorphism in the shape of their horns and horn cores, only the females possessing the typical long horn curving outwards and upwards; males have shorter downward tending horns. The bulk of the excavated cores show the forward and downward curvature of the male Highland ox while a single core is characteristically curved like the female. Though the vast majority of bones are from small, lightly built beasts, one, a damaged calcaneum, is very much larger and may reflect the size of a mature bull, the other remains may therefore be assumed to be largely derived from bullocks.

Although very tenuous, the evidence may be interpreted as indicating the existence on South Uist at this time of cattle similar to the old Highland Black Cattle or Kyles of which, in general, only bullocks were slaughtered.

Note. A complete catalogue of the material, and the bones themselves, are preserved in the Royal Scottish Museum, Edinburgh.

APPENDIX II

REPORT ON THE IRON SLAGS

by *K. W. Elliot, Geological Survey of Great Britain*

The sixteen specimens submitted for examination may be divided into three groups: (1) fused gneiss partly composed of vesicular glass charged with iron ore, (2) specimens composed of glass containing numerous grains or fragments of quartz and feldspar, and (3) slags.

In some samples the glass, containing grains of quartz and feldspar, occurs in association with slag. The origin of the glassy specimens is uncertain. It is unlikely that they represent fused rocks. Though some of the specimens might represent fused 'flinty crush-rock' or pseudotachylite, the absence of signs of crushing in the grains, including composite grains, of quartz and feldspar renders this unlikely. It is possible that the specimens may represent fused grits or sands and the textural evidence supports this. Is it possible that a sand or grit might have been used in the construction of a hearth or oven or alternatively as a moulding sand?¹

Phase I

- (1) A vesicular slag composed of a dense granular aggregate of iron ore with interstitial olivine. Locally the olivine occurs as subhedral crystals. From central area, Hearth 3.
- (2) A slag similar in composition and texture to No. 1. From Bay 2, near Hearth 3.

Phase IA

- (3) A slag containing well developed skeletal crystals of olivine with much iron ore in a dense glassy matrix. The iron ore also occurs as inclusions in the olivine. From core of wall related to Phase IA.
- (4) A slightly vesicular slag similar in type and texture to No. 9, the more massive slag is margined by vesicular slag or glass containing grains or fragments of quartz and feldspar. From core of wall related to Phase IA.
- (5) A slag similar in type and texture to No. 6. From Hearth 4.

Phase II

- (6) A slightly vesicular slag composed of rather elongated, often skeletal crystals of olivine and skeletal iron ore in a dense turbid patchily devitrified base. At the edges of the specimen contacts are seen with vesicular material containing grains of quartz and feldspar in a glassy base which is locally devitrified. From blown sand immediately above occupation horizon.

Phase III

- (7) A vesicular slag composed of skeletal iron ore and elongated skeletal crystals of olivine with an undetermined mineral of lower refractive index interstitially. Some brown glass occurs interstitially. From peat-ash midden.
- (8) A vesicular slag containing olivine as subhedral to euhedral crystals, commonly acicular, with skeletal iron ore in a dense devitrified matrix. The iron ore is often concentrated as aggregates in irregular patches. From peat-ash midden.

¹ Notes on specimens other than the slags have been omitted for reasons of economy in space. The complete report is obtainable at H.M. Geological Survey, 19 Grange Terrace, Edinburgh 9, Ref.: 61/232/E.

- (9) A slag composed of elongated skeletal crystals of olivine and skeletal iron ore, perhaps with some dense opaque glass. The slag occurs as a massive patch surrounded by vesicular slag containing numerous grains or fragments of quartz and feldspar. Also enclosed in the vesicular slag are patches of pale coloured glass, of low refractive index, containing many grains of quartz and feldspar. The feldspar is commonly rather altered to glass. From peat-ash midden.
- (10) A vesicular slag or ferruginous glass altered to a translucent reddish brown oxide of iron. From peat-ash midden.

*The Society is indebted to the Ministry of Works
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The Wheelhouse



1. Wheelhouse, hearths 2 and 3



2. Wheelhouse, hearth 3



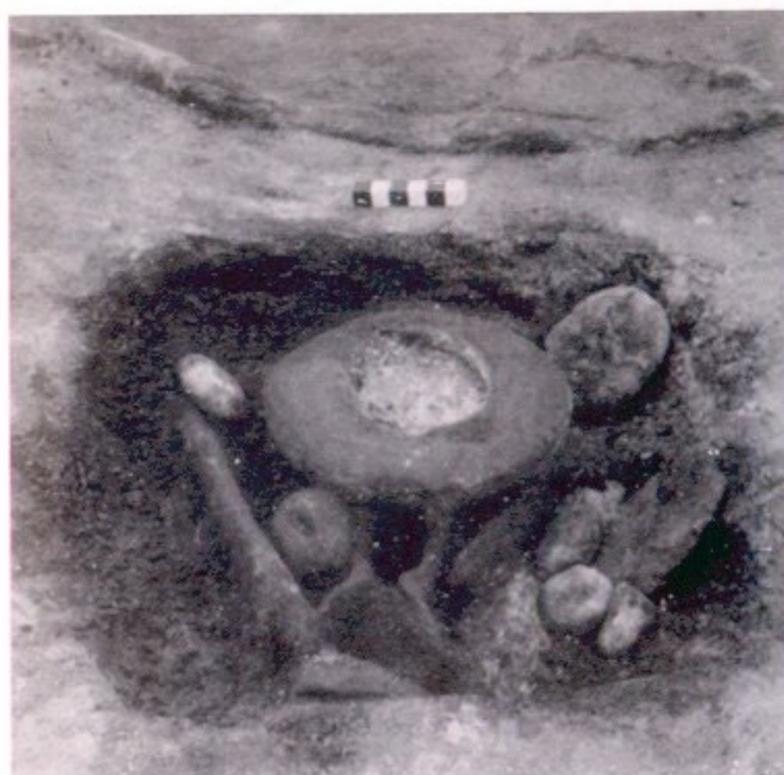
3. Wheelhouse, Bay 4, Piers 4 and 5



4. Wheelhouse, lintel-stone



1. Wheelhouse, whale bone post-hole 1



2. Wheelhouse, whale bone post-hole 2



3. Wheelhouse, quern 5 in Bay 7



4. Wheelhouse, quern 6 in forecourt



1. Wheelhouse, pivot stone



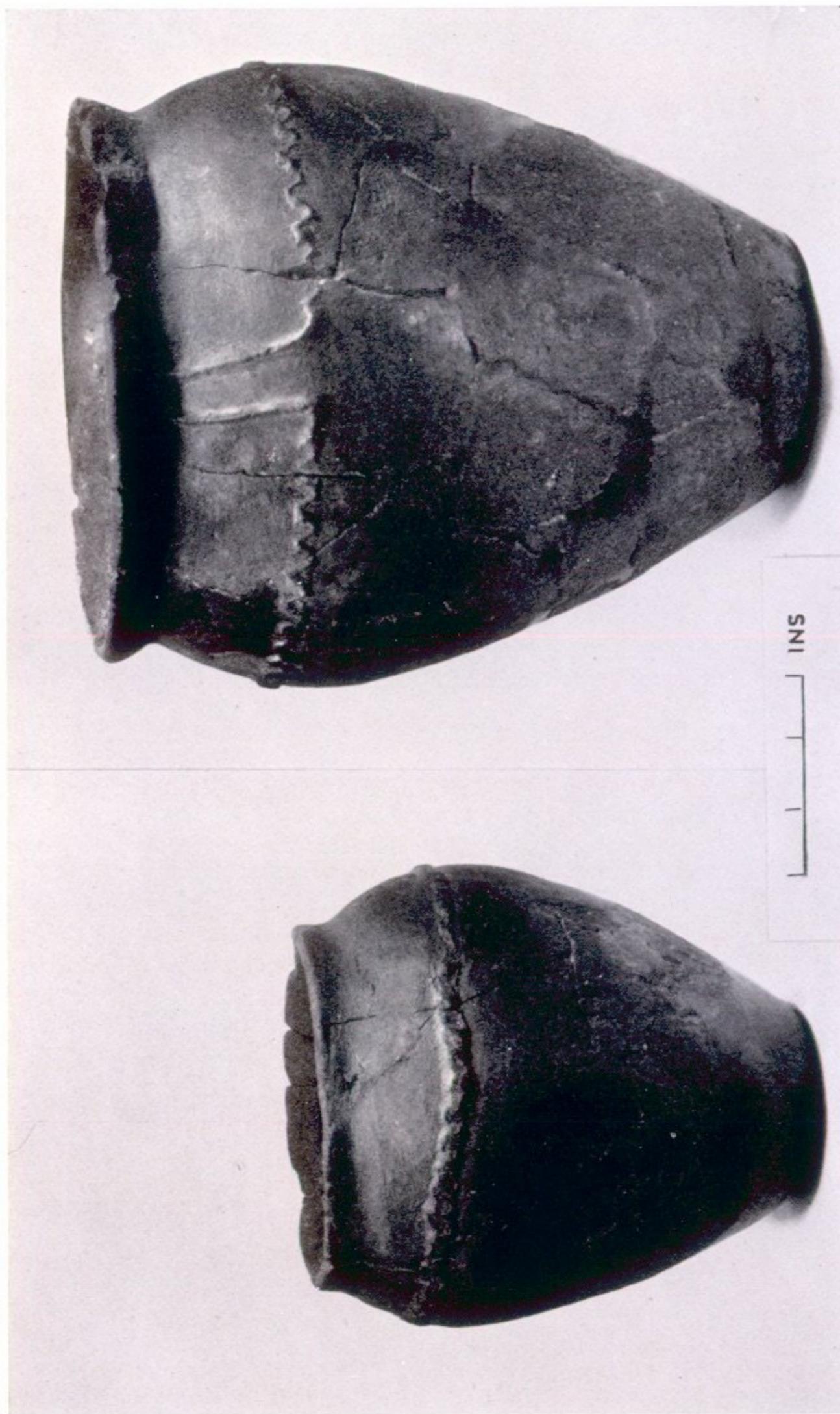
2. Hearth 4, Phase IA



3. Hut, Phase IV

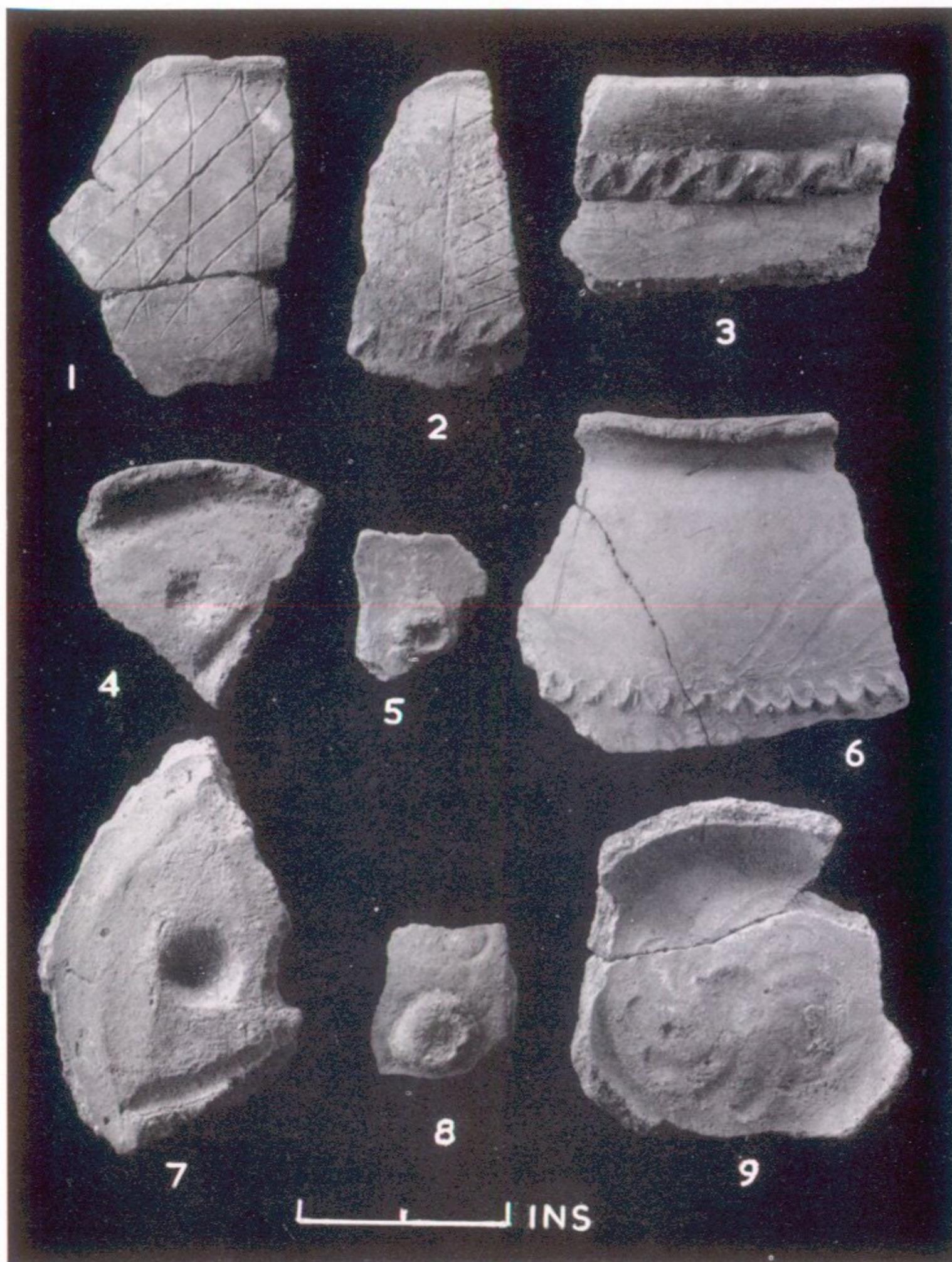


4. Post-hole of Hut, Phase IV



2. Pot from Phase II occupation (see fig. 10, 44)

1. Pot found at base of Pier 7 in Wheelhouse (see fig. 6, 33)



Pottery: for Nos. 1, 2, 3, 5, 8, see fig. 5, Nos. 2, 1, 15, 18, 17;
for Nos. 4, 6, 7, 9, see fig. 6, Nos. 35, 30, 36, 37

YOUNG AND RICHARDSON: À CHEARDACH MHOR