

The excavation of a succession of prehistoric round-houses at Cnoc Stanger, Reay, Caithness, Highland, 1981–2

Roger J Mercer*

with contributions by J Finlay & A K Howard

ABSTRACT

Rescue excavation of deposits eroding from a sandy cliff face near Reay, Caithness, recorded a succession of remnant prehistoric round-houses. These remains lay within deeply stratified wind-blown sands and tilled soils, rich in midden materials, with associated ard-marks. Radiocarbon dates suggest that the structures relate to occupation in the early first millennium BC. Fragments of possibly Beaker pottery suggest that the cultivation activity was of some chronological depth. The excavation was funded by Historic Scotland.

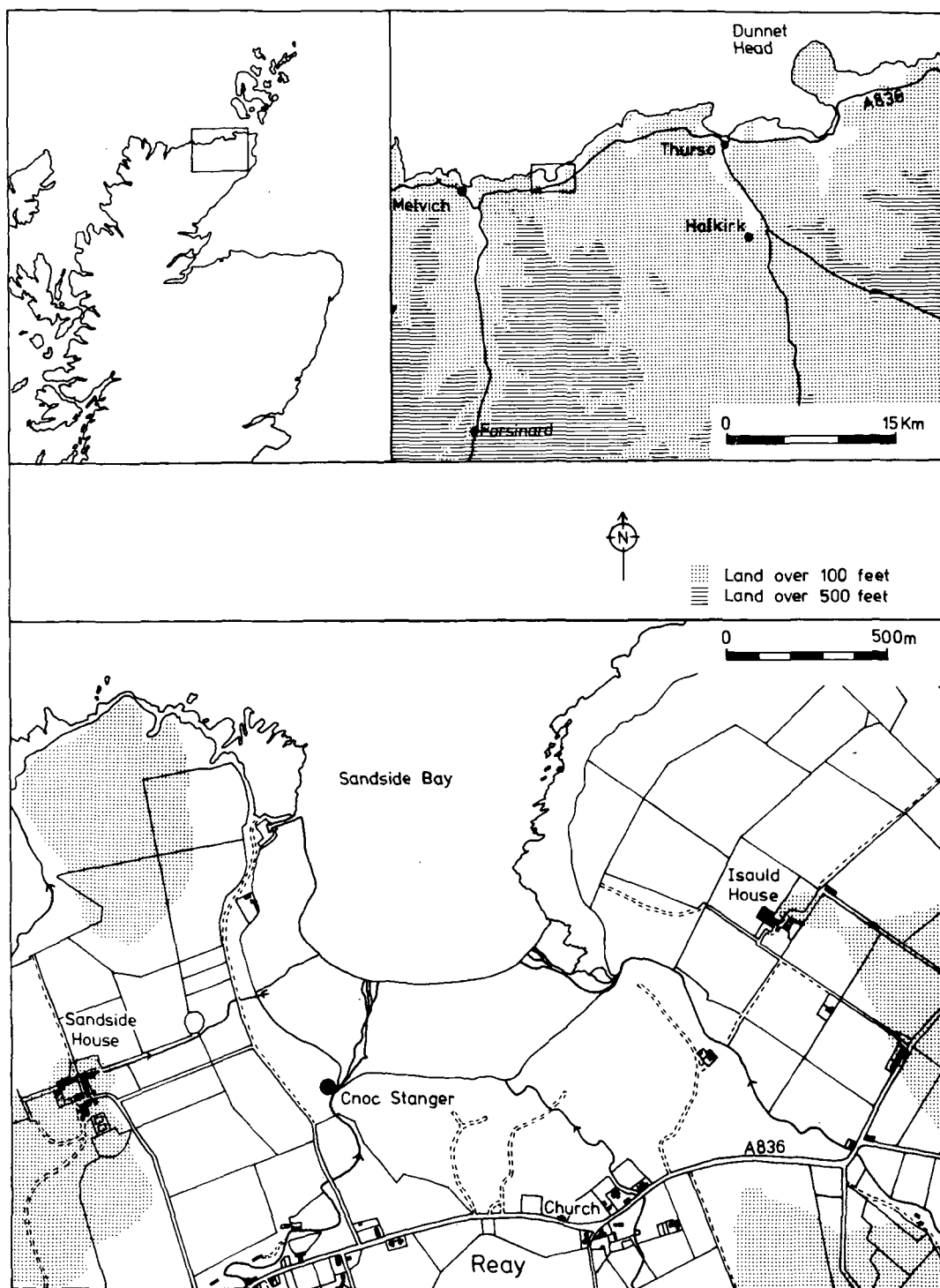
INTRODUCTION

THE CONDITIONS FOR COASTAL SETTLEMENT ON THE NORTHERN COASTAL FORELAND

The site of Cnoc Stanger is situated *c* 10 m OD on the very edge of the boulder clay bench at NGR: NC 950 652 on the south-west side of Sandside Bay, near Reay, in the Highland county of Caithness (illus 1). The site is set 700 m north-west of Reay church and an equal distance to the east of Sandside House, looking out directly north-eastwards to the sea. The site has clearly been truncated and is visible in section in the cliff which forms the limit of the boulder clay bench, the cliff being formed (and continuously eroded) by the Sandside burn which runs past its foot to outflow across the sandy beach into the Pentland Firth. The cliff has no equivalent on the east bank of the burn. There, marine erosion in the past has long ago cut out all vestige of the bench leaving a relict raised beach 300 m inland. In its place are the level Links of Reay with the fore-dune complex on their northern seaward edge. Norse relics, including burials, have consistently been located in the Links area and it is a tenet of local custom that the Norse village of Reay lies buried beneath the dunes. Immediately to the seaward side of the site stands the mound of Cnoc Stanger (Hill of the Flagpole or Standard) a fore-dune sand accumulation probably concealing further prehistoric structural complexity.

The site today occupies a commanding position and while it must remain uncertain how far the cliff-line upon which it is set has retreated since antiquity (the distance must be more than 20 m) it is likely that it always did occupy such a position during the period since the third millennium BC. It is close to a good freshwater supply and has direct access to fertile and easily cultivable land.

* RCAHMS, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX



ILLUS 1 Location map (based on the Ordnance Survey map © Crown copyright)

The coastline in question is a rugged one, north-facing, exposed to the direct force of prevailing winds and the scouring effect of tidal ebb and flow. Geologically it is divisible into two major sectors on either side of the Halladale river. To the east, the coastal interface is composed of the Caithness Flagstone group of Middle Old Red Sandstone, with the exception of the hard boss of Dunnett Head itself, composed of Upper Old Red Sandstone. To the west, with the exception of a few points where the Old Red Sandstone remains exposed, notably Strathy Bay, the sea breaks against rocks of the Moine Schist and Granite Gneiss complex (Whittow 1977).

The sea has sought out every weakness in this rock façade and has cut deep inlets into the land mass, producing a coastline of surpassing difficulty of access to man, but with certain well-defined corridors of access which have been, and remain, the foci of his settlement activity. With the Pleistocene glaciation of northern Scotland, the south/north movement of ice outwards from the central uplands deposited a blanket of boulder clay, even on the clifftops of the north coast, and within the declivities cut by the sea within that coastline. In this manner sheltered points of access were provided to a hostile coast and a fertile base prepared for the ultimate development of farming populations. Sadly, however, from an archaeological standpoint, with the progressive diminution, and ultimate disappearance, of the ice, the sea resumed the process of scouring out the inlets that it had formed long before, eating quickly, in geological terms, into the plugs of boulder clay that had been laid down. In many inlets only fragments of the boulder clay 'bench' now survive. Elsewhere, at Bettyhill/Invernaver, at Torrisdale slightly to the west of Bettyhill, at Strathy Bay, at Sandside Bay and in Dunnett Bay more substantial blocks survive. Indeed the sea has often broken through to points well inland from the present-day high-water mark but due to the combined influence of eustatic variation and isostatic recovery has moved back, and wind and sea have accumulated deposits of sand in front of, and on top of, the surviving boulder clay bench. Finally, a relatively mobile frontal dune formation has taken place in recent times.

The prehistoric occupation of these northern sea inlets possibly took place initially upon this fertile boulder clay 'bench' as it survived at the time of the first farmers' arrival, some 10 m above present-day sea level. Successive phases of the development of this most favourable environment, at the interface of marine resources and good ploughland, will also be registered upon these deposits, although only in the most favourable circumstances will the archaeological remains appear only as deeply stratified cultural successions. Archaeologically, we require extensive tracts of the boulder clay surface to survive, which have been capped by deep and stable deposits of sand since antiquity. We have already seen that the survival of such tracts is relatively rare and the value of these deposits to the archaeologist is further enhanced by the frequently unstable nature of the overlying sand deposits which may lead to the protection of early land surfaces and their subsequent revelation.

The best available illustration of this difficulty is the remarkable site at Invernaver 'raised beach' (NGR: NC 700 613) near Bettyhill (Mercer 1981a, 11–22). Here a substantial bench of boulder clay composition at 10 m OD has, set upon it, the visible traces of a number of phases and types of prehistoric and historic occupation. Circular structures of very substantial proportions, cellular structures and sub-rectangular structures witness successive phases of settlement in the area. Large numbers of clearance cairns and burial monuments may bear witness to other activities, possibly ranging widely in date. During the 18th century, in one night, the area was engulfed with sand, causing the desertion of the settlement of St Margaret's Town (comprising the small rectangular structures noted above). Since that date the sand cover of the area would appear to have been very mobile and today, once again, the boulder clay bench is largely exposed. These documented occurrences presumably represent only the tip of a chronological iceberg. Certainly the product, for us, is a conflated series of stone structures with little or no depositional evidence to be associated with them. Indeed at Invernaver the only depositional evidence that it proved possible to recognize during

a 1980 field survey was one thick activity horizon at the base of the massive column of sand blown against the cliff face behind the raised beach which had thus, perforce, achieved a measure of stability. Such deposits, however, are of limited archaeological value due to their very restricted size.

In stark contrast to the Invernaver raised beach is its neighbour set on the western side of Druim Chuibhe in Torrisdale Bay. Here the reversal of the bench's position *vis-à-vis* the prevailing north-west wind has resulted in sand accumulation not denudation. Nevertheless, 'blow outs' which have revealed at least one circle of small stones set on edge may be a further pointer to the likelihood of other concealed structures lying here. The site at Cnoc Stanger is similar to this latter situation – an instance where sand has blown onto the boulder clay bench to conceal pre-existing structures.

SITE DESCRIPTION

Alexander Curle visited the site during the compilation of the *Caithness Inventory* on 29 August 1910 (RCAHMS 1911, 375). His description was as follows:

Cairn. Knock Stanger. Sandside On the left bank of the burn that flows into Sandside Bay, about 100 yards (30 m) above its mouth, it is a high sandy mound on the summit of which there appears to be a cairn. The whole is overgrown with bents, but the diameter of the cairn seems to be about 55' (16.5 m) and its elevation 11' or 12' (3.5 m). It does not appear to have been excavated.

The first recorded recent recognition of other structures in the vicinity of Cnoc Stanger was during the visit by J Davidson to the site in May 1960 (OS Card NC 96 NE 8) when 'dry stone built structures' were noted 20 m south of the cairn in the bank of Sandside Burn 'c 3' (0.075 m) down and 40' (12 m) above the stream'.

Since that date Mr Robert Gourlay must accept much of the credit for vigilance over the site. Since 1972 his fairly regular inspection recorded a period of apparently accelerating change to the site. In an unpublished report of 1979 he stated,

Visits by the writer over the last seven years have monitored the progress of this erosion. It is considered that some 8–10 feet (2.7–3.0 m) have been swept away in that time. In July 1979, the section in the cliff-face to the west of the Sandside Burn revealed much more of occupational soils and structural remains than at any time in the past, and it seemed likely that a major area of settlement was actively eroding. Erosion here is caused by the strong and incessant winds attacking the bare cliff-face blowing out the unstable sand levels. Investigation of the site was therefore necessary before the site is wholly destroyed.

This timely concern for the ultimate fate of the site prompted Gourlay to carry out a very brief investigation in June 1978. 'A 3 m length of the eroding cliff face was cleared of collapsed material and the stratigraphy and structures thus revealed photographically recorded' (Gourlay 1979). Gourlay was able to isolate an occupation surface on top of paving which, he suggested, related to the structure visible within the eroded section. From this surface he retrieved a quantity of sherds of pottery of, generally, undiagnostic form but of a fabric somewhat reminiscent of later prehistoric fabrics from Jarlshof (Hamilton 1956), as well as a quantity of bone and charcoal fragments. Beneath the paving he noted a pre-existing old land surface which graded into substantial deposits of 'paler brown sand (Gourlay's Layer 5) which rested directly upon the basal boulder clay.

THE EXCAVATION

AIMS AND METHODS

In January 1981 the writer was asked by the Inspectorate of Ancient Monuments (Ancient Monuments Branch SDD, now Historic Scotland) to combine a small-scale investigation of the damaged structure at Cnoc Stanger with a more general reconnaissance of the site to establish its archaeological potential. This exercise was completed while working on the Caithness Archaeological Field Survey during 1981 and 1982 for reasons of convenience and economy.

It will be clear that the opportunity to investigate this site was most welcome to the writer, lying, as it did, very close to one of the research trajectories that were emerging from the 1980–1 coastal survey (Mercer 1981a): the accumulating evidence for the 10 m boulder clay bench/raised beach as a repository of an extensive chronological range of prehistoric settlement activity, possibly reaching as far back as the arrival of the first farming population in the area. The objectives of the excavation were firstly to record the nature, form and context of the structure known to exist to the south of Cnoc Stanger and perceived to be under imminent threat of destruction due to cliff erosion; and secondly to demonstrate the potential of the site, from the point of view of future archaeological investigation, as a repository of a wide variety of data through a long sequence of vertical stratigraphy.

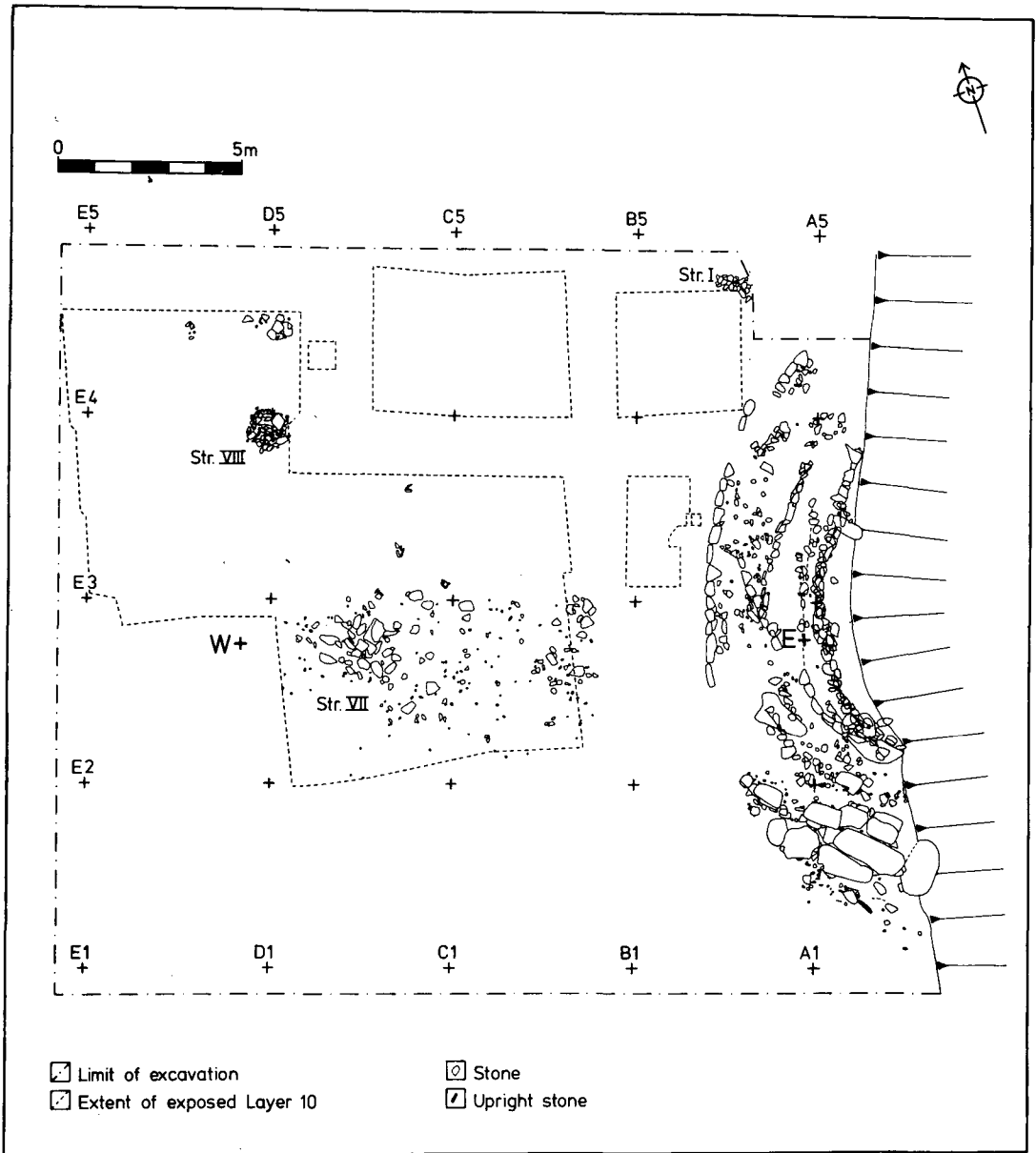
The site was excavated in two seasons of a fortnight each during the years 1981 and 1982. During the first season the site was explored over the area immediately subject to threat by a system of twelve 4 m by 3 m 'box' trenches deployed about a 5 m grid covering 20 m by 20 m. This system with its cumbersome and disruptive profusion of 2 m baulks (the minimum breadth feasible in this sand environment) was adopted in order to provide closely available stratigraphical reference points for features recovered in plan; and to facilitate sampling of a 1 m by 1 m column within each 4 m trench with the total extraction for laboratory processing of a 0.2 m by 0.2 m sample of that column.

The second season was directed to consolidate the findings of the first season and to excavate entirely all structural features in plan. For this purpose Layers 1 and 2 (consisting of dune sand) were removed over the whole site by mechanical digger. Selected deposits were sampled for sieving (using 500 micron mesh sieves) and flotation, in addition to the more randomly distributed column samples of 1981.

EXCAVATION RESULTS: SOIL SEDIMENTS (ILLUS 3)

It is proposed to describe the sequence of layering on the site from the uppermost level downwards in order to provide the reader with a template against which to assess the cultural evidence located during the excavation. The soil sequence on the site was entirely sand-based resting upon a C-horizon subsoil of boulder clay. Although the C-horizon was horizontally disposed, the superimposed sand layers, in nearly all instances, increased in depth as they were traced farther north towards the mound of Cnoc Stanger itself. This phenomenon caused soil layers to be much thicker at the north end of the site than at the south end, to the extent that horizons of activity or construction clearly discernible as separate and superimposed at the north extremity became so closely laminated at the south end as to call into question the degree to which occupation surfaces not defined by paving could be properly distinguished.

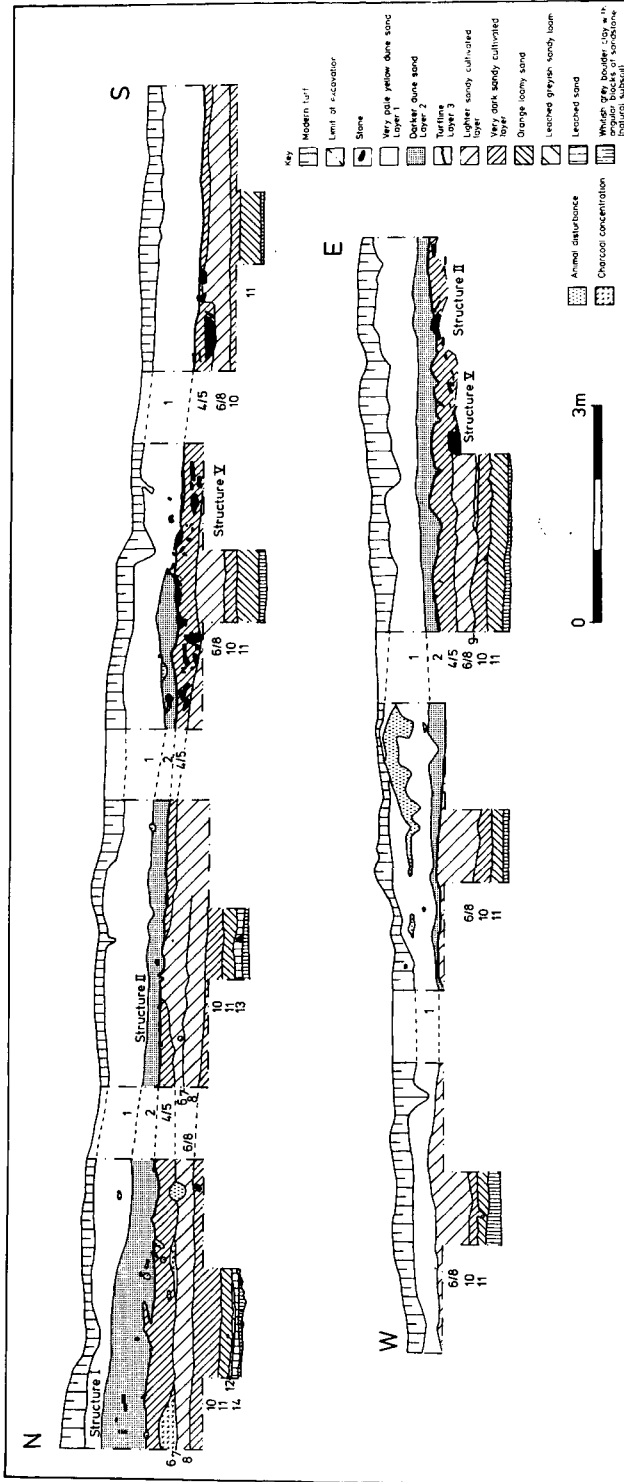
The depositional sequence (see illus 3), from the uppermost level, on the site may be set out as follows:



ILLUS 2 General plan of the excavated areas

Layer 1 lay beneath a modern turfline. It comprised a loose very fine grained pale yellow dune sand of clearly sub-aerial derivation. This layer represents, as exhibited in this record, the first evidence of sand accumulation against the mound of Cnoc Stanger on the inland (south) side. The layer contained no finds.

Layer 2 comprises a darker yellow, slightly heavier grained sand than Layer 1, which was, however, quite clearly of sub-aerial derivation and denotes a minor accumulation of the sand against the south side of Cnoc



ILLUS 3 Stratified soil layers and structured features in section

Stanger. Within this layer a fragment only of a roughly built dry-stone wall running NW/SE was located at the north-eastern extremity of the site (Structure I, see illus 2 & 3). Close to this feature, lying disarticulated within the loose sand matrix, were a number of fragments of human skeletal material, all post-cranial and representing at least two individuals, apparently adult (see faunal and human bone report). This deposit calls to mind the mention in the Ordnance Survey Name Book (ONB) in 1873 of large numbers of human skeletons being revealed by sand drifting in the vicinity of Cnoc Stanger. This context (as well as the evidence for rabbits burrowing in the same layer) probably explains the disordered and disarticulated nature of the material retrieved. The dunes may have been used as a cemetery at some later period, but the remains were too disturbed and fragmentary for this to be confirmed.

Layer 3 comprises a developed turfline (see illus 3) apparently directly sealed by the deposition of Layer 2. This turfline seals horizon of ploughmarks visible by virtue of their infilling by wind-blown yellow sand. The turfline appears to represent a stable horizon terminating the development of Layers 4/10, a deep succession of cultivation layers. Cognate with this horizon is the construction and the destruction of Structure II (see below).

Layers 4/5 This layer is dual-numbered to express its bimodal structure, gradually becoming lighter in colour with depth. This layer is the uppermost of a series of deposits consisting of dark brown sand with a considerable quantity of marine shell, charcoal and fragments of animal bone that would appear to represent the debris of midden clearance onto an agricultural surface. These inclusions occur in relatively small quantities and in a fragmentary condition. They are unlikely, therefore, to represent *in situ* midden dumping, although their condition may reflect damage by trampling as well as by tillage, especially in view of the succession of round houses which was recorded in close proximity (see Structures, below). Structures V and VI are basal to the sequence and lie directly upon the surface and occasionally dug slightly into the surface of the underlying layers (Layers 6/8). The sandy matrix is, however, lighter in tone.

The molluscan presence in layers 4/5 is significantly distinct from that in layers above (1 & 2). In those contexts *Littorina littorea* (common or edible periwinkle) dominates the assemblage entirely (85% in Layer 1, 65% in Layer 2) – a species at home on the rocky beach setting and one which might comprise a natural or unadjusted population for this area. With Layers 4/10 the proportion does change very markedly with *Patella vulgata* (common limpet) become far more prominent and an altogether wider range of molluscs being included within the deposits. This may reflect a wider range of collection outwith the immediate habitat and would support the interpretation of this material as midden debris. *Littorina littoralis* (Flat periwinkle) continued to occur in Layers 4/11, while found only in small numbers, and is an inhabitant of fronds of seaweed. While it is edible it may owe its minimal presence to seaweed spreading on cultivated areas rather than to collection of the shellfish themselves as an edible resource.

The animal and fish bone from these layers is very fragmented, both burnt and unburnt, and exhibits many cut-marks. Layers 4/5 produced bones of ovi-caprid (sheep/goat), some indicating animals over 30 months of age as well as very young if not foetal animals. *Bos* (cattle) is also represented with similar age range, as well as *Sus* (pig), *Canis* (dog), and *Cervus Elaphus* (red deer), *Crustacea* (crab) as well as *Raja clavata* (Thornball Ray), *Gadus Morhua* (cod), and *Melanogrammus aeglefinus* (haddock). Charcoals of *Corylus* (hazel), *Alnus* (alder), *Betula* (birch) are present while grains of barley (*Hordeum*) and hazel-nut shells were also located, in carbonized condition.

The context of this material is of very dubious value. The sample is small, it is almost certainly in some measure disturbed (bones occur of *Arvicola amphibius* (water vole), *Microtus agrestis* (common field vole) and their deadly enemy *Mustela nivalis* (weasel) although the absence of rabbit bones, common in Layers 1 and 2, may indicate that this disturbance was limited and ancient.

The disposition of Layer 4/5 in plan is of considerable interest. This cultivated layer extends over the entire extent of the excavated area in its north/south dimension with one very minor interruption. To the west, however, this deposit extends only 8 m from the cliff edge where it terminates in a line running NNE/SSW. It would seem that here perhaps we are witnessing a cultivation boundary with the deliberate cultivation of the area to the east of the line, where the ground was enriched by the remains of several earlier structures (Structures VI-III and Structure VII, see below) and associated occupation deposits. Thus, in terms of vertical stratigraphy,

inclusions in Layer 4/5 included not only manuring inputs during tillage of this area, but also a good deal of residual material which derived from the earlier, plough-truncated structures. Ultimately, Layer 4/5 was partly sealed by the construction of a later round house (Structure II).

Layers 6/8 comprise a major surface of cultivation underlying the Structure VI–II sequence with Structure VII built upon its surface. The deposit ranges from 0.3 cm to 0.8 cm in thickness and is generally of a lighter colour than the Layer 4/5 that lies above it. Its upper sector is light brown in colour (Layer 6) descending to what appears to be an horizon of stability (Layer 7) at which point the layer becomes much darker in colour and stickier in texture (Layer 8). Ard-marks were clearly visible (between Layers 6 and 7) where these had filled with the lighter material of Layer 6. Thus described the distinctions would appear clear enough, but such a clear tripartite division only existed in isolated instances. Elsewhere the cultivation of Layer 6 had eradicated any clear division between the upper and lower zones of the sequence. For this reason, from the point of view of context definition, this block of soils is now treated as one soil-group which again, appears to have been enriched by prehistoric farmers with domestic debris.

The molluscan record is essentially similar to that of the Layer 4/5 complex but with very slight variations in the percentage of *Patella vulgata* (common limpet) to *Littorina littorea* (edible periwinkle) and with a generally diminished array of species over those encountered in the upper layers. The bone record contains one right mandible of rabbit (a reminder of the risks of contamination from overlying deposits) and otherwise the same miscellany of fragmented bone, mostly unidentifiable. Again cattle, pig and sheep are represented as well as dog but there are no recognized deer remains. Fish bones included *Lophius piscatorius* (Angler fish), *Pollachius pollachius* (Pollack), *Gadus* (cod), and *Melanogrammus aeglefinus* (Haddock). Charcoals included Hazel (*Corylus*), Alder (*Alnus*), Birch (*Betula*) and Conifer.

The display of ard-markings is restricted to those planes where soils of different colour or texture are juxtaposed, facilitating the recognition of these features. The identification of these traces at these specific levels should in no way be taken to suggest discrete horizons of this activity. Ard working was in all likelihood a constant, but unmanifested, process in the creation of these deep cultivated soils. It is possible that points of discontinuity in the soil record (where ard-working traces survive) also represent episodes of fallow or even abandonment and some form of ‘breaking’ was necessary before arable cultivation could be resumed on the site (see Reynolds 1979). The more positive nature of this breaking activity may have led to deeper ard penetration and thus enhanced the chances of survival of the consequent traces. It is in this light perhaps that we should view the ard-traces that occur at the base of Layer 6/8, imprinted in the surface of Layer 10. The disposition of Layers 6/8 horizontally is interesting in the context of the distribution of Layers 4/5. The creation of Layer 4/5 would appear to have truncated Layer 6/8 on the east side of the site to which side the former layer is confined. Layer 6/8 to the west of this truncation is of even thickness and would appear to indicate a widespread cultivation horizon of c 0.5 m thickness, pre-dating all structures except one – Structure VII – a group of post-holes of uncertain form and extent set within Layer 6/8, although pertaining to no recognizable horizon within that layer complex (see below).

Layer 9 This layer is intermittently present over the site. Separating Layers 6/8 from Layer 10 is a thin filament of white sand representing an episode of dune sand blown onto the excavated area. This episode may have been brief but it seems likely that it marks a hiatus of some more profound significance represented by the transition of soil types from the Layer complex 6/8 to Layer 10 below.

Layer 10 While similar in composition to the layers above it, this deposit is considerably denser, stickier in texture, and considerably darker in colour. Again there is good evidence of the addition of midden debris and the creation of an excellent tilth by prehistoric farmers. Shells occur in quantity intermingled with this soil and the composition of the assemblage is similar to that observed in Layer 6/8. A quantity of fragmented bone was retrieved suggesting the presence of cattle, sheep, pigs and dog. Elements of the skeletons of *Merluccius merluccius* (Hake) and *Melanogrammus oeglefinus* (Haddock) were present as well as charcoals representing Hazel

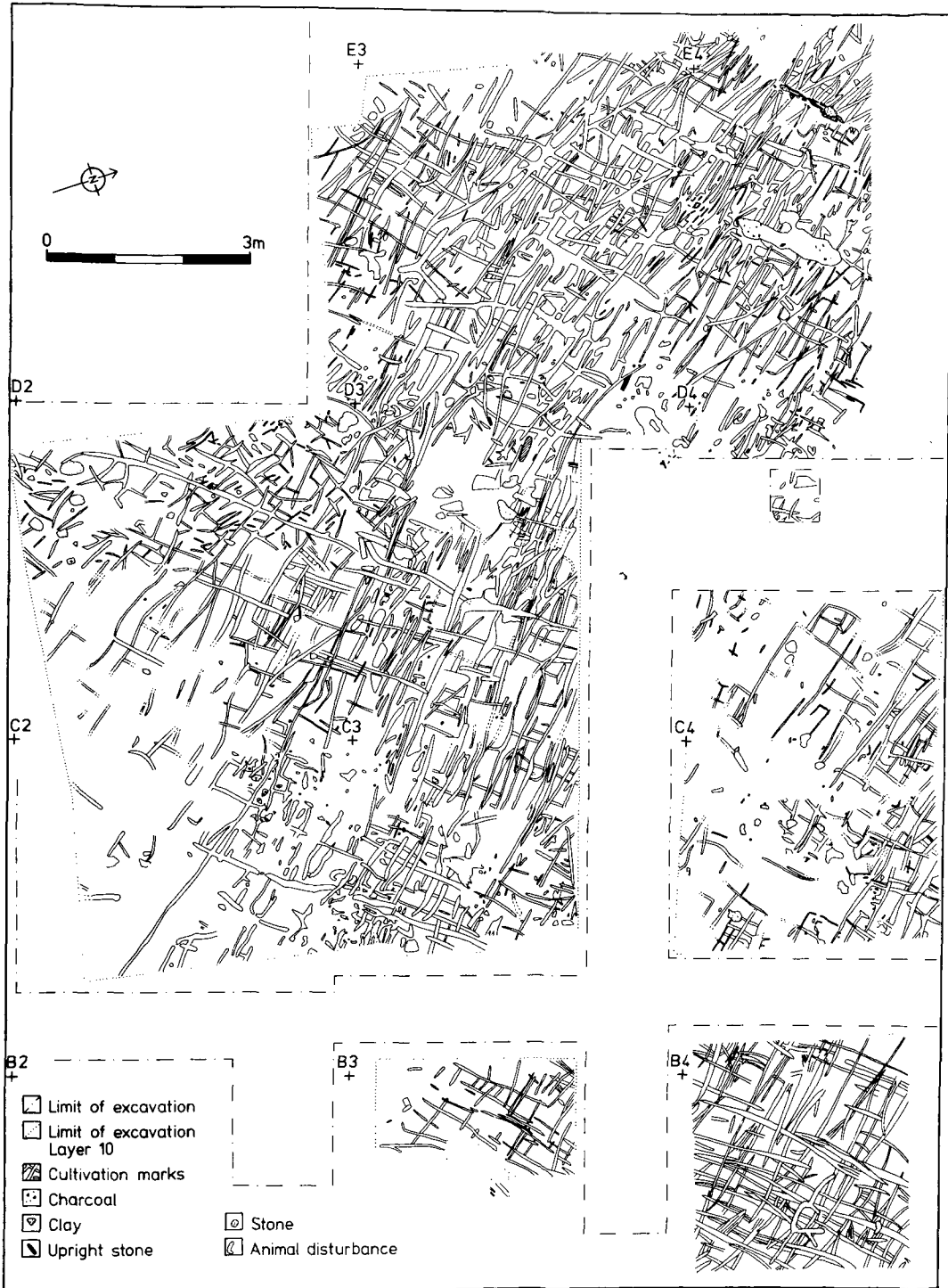
(*Corylus*), Alder (*Alnus*), Pine (*Pinus*), Birch (*Betula*) and *Prunus* type. Grains of barley (*Hordeum*) in carbonized condition and hazel nut-shells were located.

At the base of Layer 10 was displayed yet another plane of ard-traces. These were in particularly fine condition and were exposed and planned over a relatively extensive area. Luck did not favour this exercise in producing the field edges or evidence of working practices. It is clear that this well-preserved horizon of arding traces represents more than one episode of activity. At least two principal alignments are visible in the NE/SW axis and, similarly, two in the NW/SE equivalent.

One feature of note is the individual 'pulls' of the ard. The very longest is 3 m before, apparently, the ard is withdrawn and reset, the average length being between 1 m and 2 m. In such a tractable soil – even with a turf capping that required breaking – the writer finds it difficult to identify such short stabs with the use of oxen or any other draught animal. Insofar as it is possible to compare such markings with those from the South Street Long Barrow (Ashbee *et al.*, 1979) – the latter set on a chalk bedrock ploughing, probably, a forest brown earth in prehistory – the contrast is noteworthy. At South Street (pre-barrow phase) the *shortest* 'pull' would appear to be *c* 2 m with the average distance from engagement of the tip to withdrawal being *c* 3 m–4 m and often more. In this far more difficult stony soil with the likelihood of a more developed and tougher turf such energy input has been held by Fowler & Evans (1967) to argue for animal traction. Another factor requiring comment is the tendency of Cnoc Stanger furrows to curve in a shallow S form even through the diminished length of each 'pull'. This, the writer suggests, is the fossil imprint of over-exertion – the tendency of the power source to 'drift' to its stronger side as the exertion becomes greatest, as the ard tip is fully engaged and to straighten the pull again as the tip is disengaged. The writer would follow Fowler & Evans in their argument for the South Street 'furrows' being created by animal traction and would argue conversely that at Cnoc Stanger the puniness of the effort would point to human traction.

Penetrating into the base of Layer 10 and grounded within Layer 12, are a series of upright slabs of Caithness flagstone, with clearly broken upper edges. These slabs clearly represent the last vestiges of a structure which may have been a field wall of the type current in Caithness today although, sadly, often in rapidly deteriorating condition – the stone fence of upright slabs of flagstone. If such a fence had been removed and the bases of a few flags had sheared off then the extant remains are likely to be all that remain to us of such a feature. If these slabs do indeed represent some form of enclosure then their stratigraphy as well as the pattern of ard cultivation at the base of Layer 10 (which apparently ignores them) would indicate that they relate to a scheme that must antedate cultivation linked with Layer 10, and thus, in all likelihood, they would appear to be associated with the phase of activity on the site associated with the development of Layer 11 (see below). The horizontal disposition of Layer 10, like Layers 6/8, is total over the excavated area. It is notably thinner on the west and south sides of the site seemingly increasing in thickness towards the north and east – towards the mound of Cnoc Stanger itself.

Layer 11/13 In sharp contrast to the overlying Layer 10, this layer comprises an orange loamy sand. The layer can be up to 0.5 m thick on the east and north side of the site where it is thickest (like Layer 4/5), diminishing to 0.2 m in thickness to the west. Charcoal flecks were also present within this deposit but these only occurred in small quantities and as tiny flecks rendering identification impossible. A very few fragments of bone, mostly loose teeth of cattle and sheep, occurred within this deposit. The molluscan content is also much more limited in extent with only three species other than *Patella vulgata* and *Littorini littorea* present. These two dominant species were present in roughly equal proportions which represents a substantial proportionate increase in *Patella*. Fish bone from this deposit represents the presence of *Raja clavata* (Thornback Ray), *Scomber scombrus* (Mackerel) and *Pollachius virens* (Saithe). The presence of these ecofacts, albeit in very reduced quantity, suggests that this too is a tilled layer which has been fertilized by midden debris, an interpretation confirmed by further ard-marks visible at the base of the layer. Indeed there is some evidence in the form of the stone setting described above which suggests that the area at this time may have been part of an enclosed plot. The texture, colour and composition of the layer is, however, quite at variance with the succession of cultivated layers (Layers 10, 6/8, 4/5) that lie above it. This, together with the substantially reduced quantity of shell, bone and charcoal debris would suggest a radical change in land management techniques with manuring playing a less important role. Indeed it has a loamy, sticky texture that suggests that its parent material was not the



ILLUS 4 Ard-marks at the base of Layer 10

wind-blown sand of succeeding layers but the subsoil horizons lying beneath. In such circumstances the requirement for enrichment and bonding of the soil structure may well have been quite different. The base of Layer 11 is directly contiguous with a truncated natural subsoil horizon. At one point, however, at the north-east extremity of the site in the area closest to the mound of Cnoc Stanger a thin layer (0.03 m) of leached white/grey sand (Layer 12) overlay a thicker layer (0.08 m) of similarly leached sand (Layer 13). Interdigitated between Layer 13 and the C-horizon was a thin smear of iron staining – the consequent hard pan. Manganese nodules in the uppermost 0.05 m of the natural subsoil indicate periods of waterlogging. (I am indebted to Mr R J McCullagh for this identification.)

The difficulty that immediately presents itself in the appreciation of this evidence is the assignation of a firm chronological status to this (and other) layers of cultivation at Cnoc Stanger. The writer is content at present to accept the *terminus ante quem* of the dates associated with the structures superimposed upon these cultivated levels as an indication of the antiquity of these deposits. It remains for further work in the immediate area to locate the occupation areas that *must* be closely associated with these deposits. Doubtless these contexts will furnish more satisfactory dating material.

STRUCTURES (ILLUS 2, 5, 6 & 8)

With the stratified sequence set out it remains for the writer to describe and interpret the structures that were located within it. These have been mentioned in their requisite place within the stratigraphical account and will now be referred to by number with a brief notation of the relevant soil horizon in each instance.

Structure I (Layer 2) Little is known of this structure or its significance. It is represented by a single stretch of roughly built, dry-stone walling constructed of large angular stone blocks running NW/SE in the extreme north-east part of the excavated area. It was built within Layer 2, an apparently mobile deposit of dune sand, a deposit which also produced disarticulated fragments of human skeletal material. It would appear that the deposit (and consequently the structure) is post-prehistoric in date but no artefactual or other evidence was retrieved to confirm this supposition.

Structure II (surface of Layer 4/5—associated with turfline Layer 3). This structure is the uppermost of a sequence of directly superimposed buildings. A glance at the plan will serve to illustrate to the reader the vestigial fraction of this structural sequence that had survived the erosion of the cliff upon which it stood. In these circumstances it will be understood that only the most general observations may be made as regards the original form of the structures and these observations will be based upon one general assumption which cannot now be proven – that the arcs of walling recovered in the excavation area represent the remains of circular or sub-circular prehistoric buildings. The buildings would appear to have been deliberately destroyed, probably in order to furnish raw material for their successors. At the south extent of the structure-complex, the stratigraphy had become so compressed and wall robbing so frequent as to render the separation of the units of the sequence a difficult matter. It will become apparent that the conflation of stratigraphy towards the south side coincides with the location of a paved entrance in the south-west sector. This, however, has been cut in half by erosion at the cliff face. The surviving paving was of massive proportions and was certainly repaired and to some extent resurfaced, but appears to have sufficed for all the structures of the sequence.

Structure II comprises an arc of walling, 12 m long, faced on its inner side with large beach boulders up to 0.5 m in diameter. The outer face is quite different, composed of a most carefully constructed drystone wall, standing in places in the north sector of the arc to five courses of beach flagstones. In the southern sector this outer facing had almost totally collapsed. This mode of outer face construction is unique in this sequence of structures. The irregular outline of both inner and outer wall facings produced a somewhat lobate effect with three 'bays' visible on the inner face of the wall in particular. The two wall faces revet an earth and stone core ranging between 1.5 m and 1.7 m in width. Comparison of these features with those of the preceding structures (see below), where sufficient evidence survives, underscores the distinct form of Structure II, in that its wall is

significantly narrower in width than those of Structures IV-VI and also probably somewhat less regular in outline.

Associated with Structure II was a floor deposit on the very narrow ledge of floor surviving on the interior. This deposit could be linked to a deposit encountered upon the uppermost layer of paving in the south-west (entrance) area. Both deposits were very black in colour and gritty in texture – the grittiness contrasting quite sharply with the fine grained sand which both overlay and underlay the deposit. Such ‘fine grade gravel’ is present on the bed of the Sandside Burn and on the beach where the stream debouches into the sea and the writer is brought to wonder whether it was brought up to the site to consolidate the otherwise very soft floor-base.

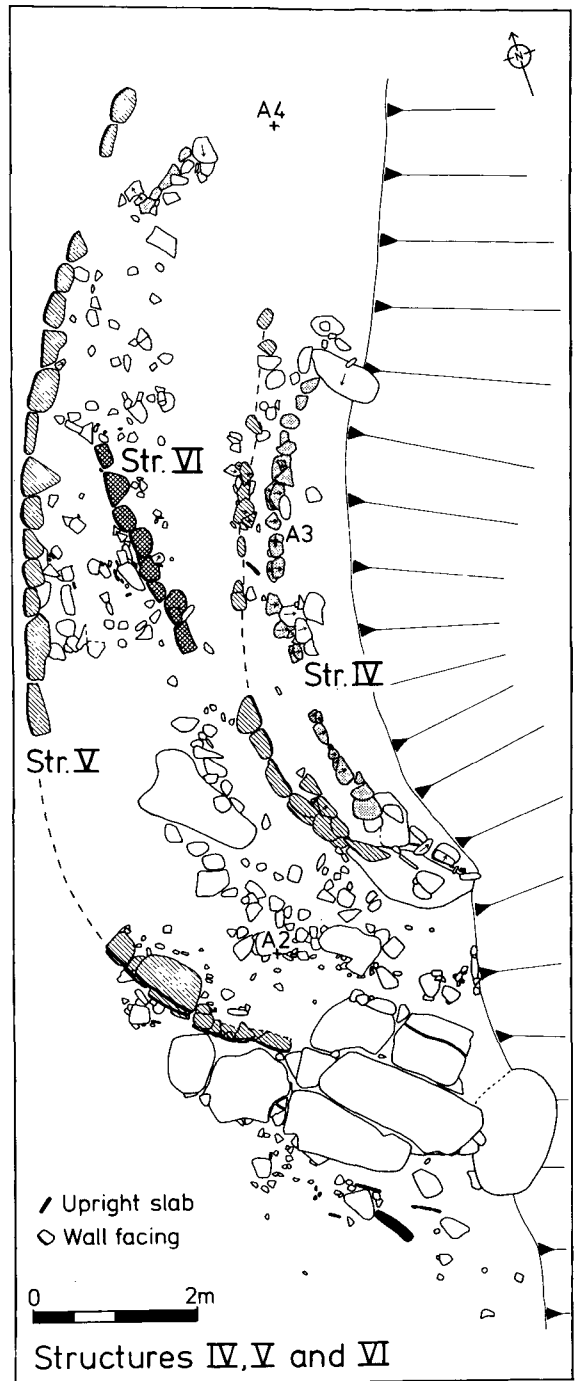
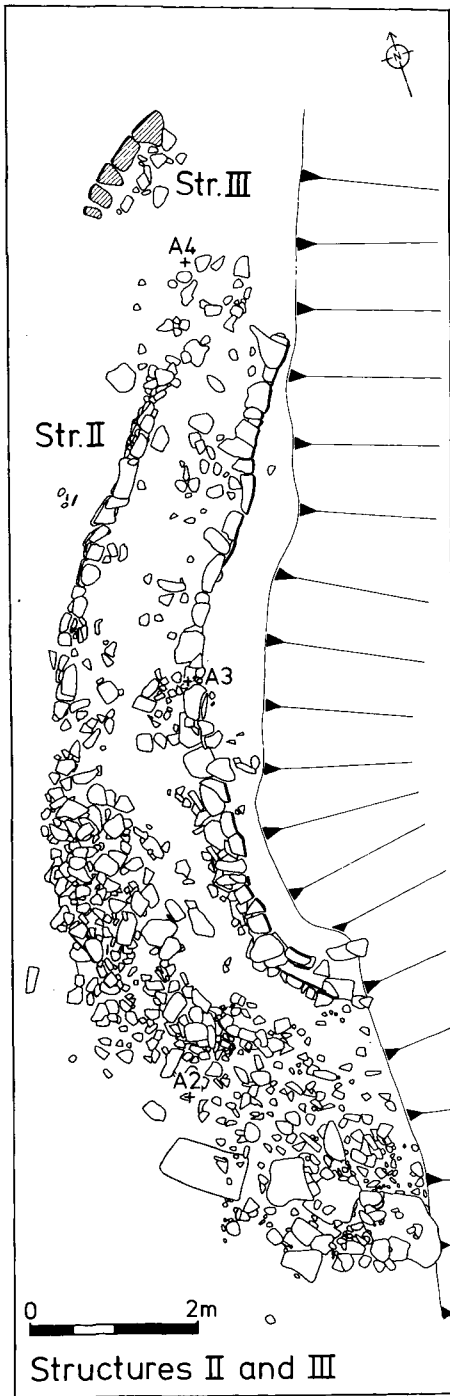
Samples from this floor deposit produced a suite of bone, mollusc shells and charcoal as well as some artefactual material. The mollusc shells comprised a range of species similar but not quite so extensive as those located in the cultivated soil Layer 4/5 which immediately underlies this structure. *Patella vulgata* (common limpet) and *Littorina littorea* (common or edible periwinkle) once again dominate the assemblage with however relatively sizable elements of *Littorina littoralis* (flat periwinkle) as well as the land snail, *Cepaea hortensis*. The *Patella* specimens seem to indicate by their high coned shells a selection of examples from the lower tidal zone (see Mollusc remains, below) and the shells of both *Patella* and *Littorina littorea* as well as of *Cepaea hortensis* would appear to indicate a gathering season in spring or early summer – perhaps the collection of bait at a relatively quiet period of the farming year. Fish-bone from the deposit witnesses the presence of cod (*Gadus Morhua*) – which can be trapped in coastal shallows as well as, of course, line- or net-fished in deeper waters. Fragments of crustacea are also present in the deposit.

Animal bone occurred in quantity within the floor deposits associated with this structure, 146 identified bones being retrieved. 82 (56.2%) are *Bos*, 43 (29.5%) *OviCaprids*, 3 (2.7%) *Sus*, 11 (7.5%) *Canis* and 6 (4.1%) *Cervus*. Rodent bones (*Arvicola amphibius* – watervole; *Microtus agrestis* – field vole and *Mus* – mouse) occur as well as rabbit (*Orycholagus cuniculus*) remains, once again to remind us of the problems of contamination. The range of percentages quoted are perhaps remarkable only for the very low occurrence of pig bone in the assemblage. The relative proportion of cattle and sheep bones are of little significance in so small a sample.

Substantial charcoal samples from the Structure II floor deposit yielded evidence for the presence of alder *Alnus* probably growing locally beside the burn and birch *Betula* growing perhaps more widely in sheltered locations on the hill land inland from Sandside Bay as well as within the Bay area itself. Birch, in the absence of oak (*quercus*), probably formed the principal source of structural or load-bearing timber. Fragments of willow charcoal *Salix* were far less common than birch or alder and may have also been present in the immediate vicinity by the river courses running into Sandside Bay. Scots Pine (*Pinus sylvestris*) was also present as were carbonized fragments of barley seeds (*Hordeum*) and hazel nut shells (*Corylus*).

Within the floor deposit and upon the paving of the entrance a considerable number of sherds of pottery were located of which those exhibiting diagnostic features are illustrated (illus 10) (P3–P8, P10, P13, P30, P21, P23, P24). A number of fabrics are represented (see Pottery below) and the predominant form would appear to be large, open, flat-based jars with flattened rims, exhibiting very little decoration, other than occasional shallow fluting below the rim (P3, P4 and P5). Argument will be adduced in this report for generalized parallels for this pottery lying in the early to mid-first millennium BC at Jarlshof (LBA Village 1), in Shetland (Hamilton 1956, 29–30) and at Later Bronze Age sites in the Orcadian Archipelago at Liddle and Beauquoy (Hedges 1975, 50–1) as well as Quoyscottie, (Hedges 1977, 137) and at the site of Kilphedir, Sutherland (Fairhurst & Taylor 1971, 75–7). The parallels indicated are, in the nature of the pottery under consideration, of a most generalized kind, but may indicate the existence of a *milieu* of pottery of this broad type in northern Scotland and the Northern Isles during a long period ranging from the late-second to mid-first millennium BC (see Pottery, below). Other artefacts comprise four fragments of worked bone (B3–B6). A radiocarbon assay upon charcoal extracted from the occupation deposit comprising alder, birch, heather and pine fragments yielded a determination of (GU-1681) 3350±90 BP.

But what can be said of the building represented to us by the surviving fragment of Structure II? The somewhat irregular form of the recorded fragment makes any assessment of the original size of the structure difficult. The judicious use of dividers, however, would suggest a building diameter of between 12 m and over



ILLUS 5 Surviving remnants of the principal structures



ILLUS 6 The eroding cliff face with exposed wall remnants of Structures IV, V and VI

16 m. The activity surface within the building has all the features that one might expect of an occupation surface – suggesting perhaps that this enclosure was roofed. If such be the case then we are in the presence of a house, or at any rate a building, of c 14 m diameter. This carries with it a number of *sequiturs* which must be recognized at this initial stage. If the wall thickness was reasonably consistent we are speaking of a building with a ground floor area c 95 sq m. If the roof was conical and set (as it must have been) at an angle of at least 45° then its total height at the centre would c 7 m. Rafters, whether composite or of one piece, would have had to span a total of c 9 m. If the roof was heavily thatched or turfed the supportive sub-structure (with a snow-loading) (Musson 1971, 365) would have been called upon to support over 27 tonnes. The Butser Farm experimental Pimperne-type house, 12.8 m in diameter, used some 200 trees in its roof construction and required a thatched covering that required six weeks input by professional thatchers to complete; the completed roof weighed 10 tonnes dry. (Reynolds 1979, 100). The writer makes these brief observations to emphasise the calibre of the building which would appear to be represented by Structure II. It will be indicated below (see Discussion) that such buildings are certainly not *without parallel* in northern Scotland.

The turf horizon (Layer 3) upon which Structure II was constructed had clearly developed over a layer of tilled soil (Layer 4/5) which had been worked over the remnants of a succession of earlier buildings (Structures III–VI). In turn, both the turf layer and Structure II were ultimately overwhelmed by dune sand (Layer 2).

Structure III (see illus 5) is represented only by a short stretch of walling at the northern extremity of the excavated area. Its interpretation as a building is based entirely upon the proximate existence of the far more completely represented Structures IV and V and no discussion of any reconstruction will take place at this point. The structure is assumed to represent the latest in a succession of four, all severely robbed and buried within

the cultivated soil of Layer 4/5. Suffice it to say that the remaining fragment probably represents an outer wall face and that the relict foundation stones represent a different building style than that noted in the outer face of Structure II. Here, and the pattern is established from Structures IV–VI, big beach boulders up to 0.4 m in diameter form the basal course of the outer wall.

The superimposition of one structure upon another in this manner, requires comment. In this instance it is certain that in the southern sector of the structures there may well have been ‘mutual’ utilization of the massive paved floor. Furthermore, it is also clear that reutilization of stone from one building to another is extremely likely and would have fostered proximity of reconstruction, although not necessarily superimposition. Such ‘engineering’ aspects aside, however, other issues are likely also to have played a part. Cultivation would appear to have been conducted right up to the direct purlieu of the houses and a desire to restrict ‘sprawl’ by domestic buildings onto fertile, carefully husbanded ground may well have encouraged superimposition. It is even possible that proprietorial limits may have existed which constrained movement. The visible trace of ‘time-honoured’ replacement of the houses may well have had important social implications for lineage validation, status enhancement and economic stability. It is, of course, entirely possible that superimposition carried with it ceremonial implications relating to an ancestor- or domestic- focused cult.

Sealed by the wall of Structure II is an activity surface of very black material containing a good deal of charcoal and other burnt inclusions. This probably represents a truncated spread of floor debris within Structure III sealed *in situ* by the construction of the overlying Structure II. This deposit yielded a molluscan content very similar to that associated with Structure II (see Mollusca below). Very few identifiable charcoal fragments were retrieved from this deposit; these largely replicate the species observed in Structure II with the addition of a single identified piece representing the presence of *Pomoideae* (eg apple of related species). One fragment of birch from this deposit appeared to have been tooled from a limb at least 0.06 m in diameter. Identifiable bone from this restricted deposit was also scarce, with only eight fragments of which all but one were *Bos*. Three featured sherds were recovered from this context (P1, P11 & P14) which appear to fall within the same range of fabric and form as those associated with the activity surface in Structure II.

Structure IV (illus 5) The existence of this building is again represented to us by the survival of a mere fragment, the inner wall face of a circular structure, which the spreading weight of superimposed Structure II has caused to pitch forward. Associated with this collapsed remnant, and sealed by it, is a narrow strip of occupation deposit. (This is distinguished from occupation debris associated with overlying Structure II by the intervening tilled soil of Layer 4/5.) Only a very short stretch of outer facing can be linked to this inner skin suggesting a wall thickness of 2.60 m (cf Structure V, below). By protraction the arc can be extended to suggest a structure of internal diameter of c 11 m (ground internal area 95 sq m) – evidently a structure of comparable size to that suggested for Structure II. The sealed activity surface produced a very limited amount of material – a mollusc suite of very small size, similar to that derived from Structures II and III, with no identifiable charcoals or bone fragments.

Structure V This relict structure quite clearly underlies all of the structures described above in the northern sector of the building sequence, although in the southern sector the compression of stratigraphy renders this succession more difficult to see. Its basal position has apparently, in some measure, protected this structure from later truncation. The basal course, comprising large beach boulders, is substantially intact for both the inner and outer wall facing, and is filled with a core of sand and rubble to form a wall 2.6 m in width. Such a wall is very substantially more impressive than the wall of Structure II which was 1.6 m wide and this contrast may well bear witness to some fundamental structural distinction. Be this as it may, the internal floor diameter of the Structure V building, if it is accepted that this was originally circular, lies again in excess of 11 m. This building, like its ultimate successor, Structure II, had a paved entrance in the south-west sector where three courses of the outer kerb wall survived as the west flank of the doorway. The paving flags of this entrance area were massive and were laid directly onto the Layer 6/8 cultivated horizon. They were overlain, in turn, by further paving slabs relating to the Structure II building with, sandwiched between the two, an occupation deposit of black greasy soil which may be associated with the use of Structure V.

This entrance area was of considerable interest and it is a matter of regret that it lay so close to the

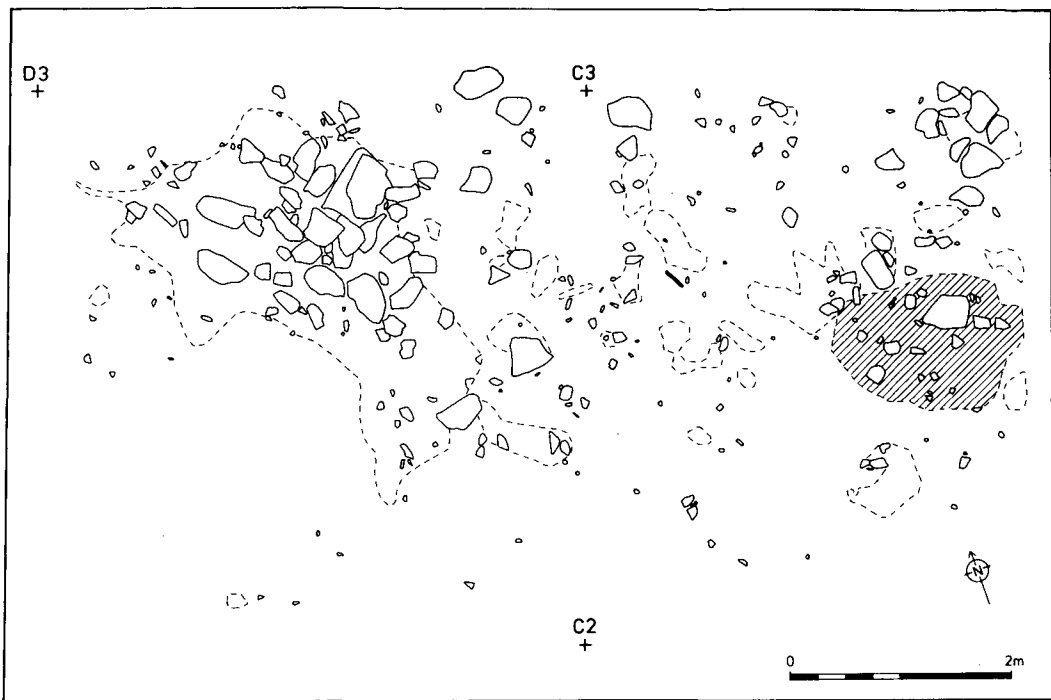


ILLUS 7 Entrance paving in Structure V

cliff-edge that only one side of it survived at all and then in much disturbed condition. As with the Structure II entrance, the principal key to its position was the paving slabs themselves (illus 5 & 7) and, in the instance of Structure V, the clear terminal, slightly inturned, of the outer wall face. No western wall lining the entrance passage, or indeed any trace of such, was located. Two possibilities can be considered. One is that this element in both instances has been robbed or eroded away. Another is that the entrance passage was lined with timbers of which there is now no detectable trace in the matrix of Layer 6/8 cultivated soil. Elsewhere in this layer post-holes were encountered which could only be identified by the packing stones within them (see below Structure VIII). Indeed at the outer extent of the paving there appeared to be traces of a linear setting of upright slabs set into the Layer 6/8 surface. These may also have been packing stones, but again it proved impossible to detect any other evidence for associated posts. Nonetheless it seems likely to the writer that, in conjunction with the extension of paving running to the west alongside the outer wall face, that this stone-setting is the remnant of a claw-porch arrangement with access gained from the west side with a left turn for the entrant leading him into the main entrance passage and to the interior. Such 'claw-entrances' are known from archaeological field survey evidence elsewhere in northern Scotland (see below) and indeed elsewhere in Britain (see Mercer 1980, Mercer 1985a, and southern parallels discussed there).

Samples from the surface of the paving produced a very small inventory of bone and a molluscan array showing a marked shift away from that of the later structures in including a sizeable proportion of *Patella aspera*, a common limpet found today in pools bearing calcareous seaweed and generally somewhat lower in the tidal zone than *Patella vulgata*.

Structure V, then, is of clearly more substantial foundation than the later Structure II. Structure II comprises a facing of drystone wall built in small flat beach boulders a wall facing that survives to five or six courses, the outer face of which is nearly vertical. The outer wall face of Structure V survives three courses high just by the west jamb of the entrance. This face is raked back in a pronounced fashion at an angle c 20°



ILLUS 8 Structure VII: the hachured area indicates a possible hearth

from the vertical. At such an angle a wall of 1.2–1.3 m height would have the same upper width as the narrower ‘Structure II-type’ wall with its vertical facings. The development of the vertical wall face would require less material, but would also create a greater interior floor space for any given building circumference. The mode and style of roofing need not have varied between these two structural types.

Structure VI was represented by a fragment of outer wall-facing set within the wall make-up of *Structure V*. Other than its antecedent status *vis-à-vis* Structure V, little is known of this building – the earliest of the five superimposed circular houses built on this site. The incorporation of a ‘paving-type’ slab within the Structure V wall immediately to the south of the surviving Structure VI wall fragment suggests that an entrance to this building existed in this sector somewhat to the north-west of the Structure V (V-II) entrance. Bone and molluscan assemblages that are clearly to be associated with Structure VI (sealed beneath the wall of structure V upon a fragment of interior surface relating to the Structure VI wall) are so tiny as not to allow comment.

Structure VII (illus 8) is quite distinct from the Structure VI-II sequence described above. It was set within the upper part of the Layer 6/8 complex therefore and on stratigraphic grounds pre-dates all but the earliest elements of the Structure VI-II sequence. Structures V and VI are set upon the surface of Layer 6/8 but the outer wall facing of Structure V has material of Layer 6/8 accumulated against it, rendering it unclear whether this structure and the immediately underlying Structure VI were built at the termination of Layer 6/8 formation or somewhat before. On balance the writer is inclined to accept that Structure VII is a separate structure both in time and space from the VI-II sequence, although it is unfortunate that no direct stratigraphic relationship existed. It is unfortunate that virtually no pottery survived from either Structures V or VI for comparison with the relatively abundant material from Structure VII. The prevalence of Fabric 5 on the Structure VII floor clearly sets this building apart from Structures II and III where only one sherd of this fabric occurs (on the floor of

Structure II) and where even this one example could be residual from a primary context elsewhere. Conversely, however, the occurrence of a number of sherds of Fabric 3 on the Structure VII floor might suggest some relationship with the structures VI-II sequence. The structure has been largely obliterated by cultivation (which may account for the high proportion of Fabric 5 material in the Layer 6/8 deposit) and consequently, its original form is unclear.

Structure VIII This solitary hearth-like feature (illus 2) may indicate the site of another, adjacent dwelling of which no structural remains have survived. The feature consisted of a small setting (*c* 0.5 m diameter) of flat, irregular stones.

ARTEFACTS AND ENVIRONMENTAL REMAINS

POTTERY

Roger J Mercer

Several hundred sherds of pottery weighing a total of nearly 2 kg were located in the course of the excavation at Cnoc Stanger and were retrieved from a range of contexts. The aggregate weight of all featured sherds (P1–P27) is 525 gms, representing *c* 25% of the assemblage by weight. In addition to these are a substantial group of sherds retrieved by Mr Robert Gourlay and Dr Joanna Close-Brooks, from the eroded cliff face prior to the excavation. Mr Gourlay very kindly placed these sherds in the author's hands. Weighing a total of 300 g, these sherds (including P9, P18 & P27) have to be regarded as unstratified in terms of the excavation record. However, Mr Gourlay's account of the location (on top of paving in the south sector of the site) makes it extremely likely that these sherds relate to the activity surface of Structure II. Three sherds (located by Dr Joanna Close-Brooks and weighing 40 g – P12, P17 and P22) were also kindly placed in the care of the writer. These were found in the eroding cliff-face during the summer of 1981. Again it seems likely that these sherds relate to Structure II but the writer was unable to visit the site with Dr Close-Brooks to confirm this suggestion and these sherds must also be regarded as unstratified.

TABLE 1
Distribution of pottery sherds by layer/structure

Context	Weight
Structure II activity surface	850 g (+ ?300g see above)
Structure III activity surface	275 g
Structure V activity surface	20 g
Structure VII activity surface and hearth	165 g
Layer 4/5	350 g
Layers 6/8 (Layer 6) upper sector	200 g
Layer 10	40 g
Total	1900 g

Fabrics

Nine distinct fabrics have been recognized by the writer in the assemblage retrieved from the site.

Fabric 1 A dark-faced ware – medium/dark brown/black on both inner and outer surfaces and evenly of similar

colour throughout its body. Ring built. The temper of this fabric would appear to be fine shell-sand with relatively few larger grits. The surfaces are smoothed to produce a fine rather greasy-feeling texture on a relatively soft fabric. There would appear to be a consistent tendency for the colour range on this fabric to progress from medium brown to black with increasing height on the wall of the vessel. Wall thickness is very consistent ranging from 6 mm to 7 mm. This fabric may also exhibit a pink exterior.

Fabric 2 A lighter colour-range ware – a buff-grey tone exhibiting traces of superficial black scorching in patches with enhanced scorching to a coral pink at points. Ring built. The temper of the fabric would appear to be shell-sand with a proportionately slightly higher heavier component than Fabric 1. The surfaces are smoothed to produce a fine smooth texture on a harder fabric than Fabric 1. The fabric is consistently colour-divided in its interior with an outer surface light buff, an inner band of grey/green colour and an inner surface reverting to the buff colour. The outer surface is generally a shade pinker than the interior surface. The colour of the vessel appears to remain relatively uniform throughout their height. Wall thickness is again consistent ranging from 8 mm to 10 mm with a greater degree of variation in a small area.

Fabric 3 A light buff/pink coloured ware on its outer surface with a black and grey internal surface. The temper of this ware would appear to include quite large elements (up to 3 mm) of sandstone with little shell-sand visible in the sherds examined. Only the outer surface is smoothed to produce, after firing, a slightly crazed effect. The fabric is, however, hard and well-fired. The fabric is consistently colour-divided buff/pink on its outer surface, a black core and inner surface somewhat variegated grey and black. Wall thickness on measures sherds is 7 mm.

Fabric 4 A medium pink/red coloured ware with the same colouring on both inner and outer surfaces. The temper of this ware would appear to include little or no shell or other sand and to depend upon large grits (up to 5 mm) of sandstone. Both surfaces appear to be roughly smoothed and firing has produced a relatively hard finish. The fabric is colour-divided in its interior with outer and inner surfaces reddish pink with an internal band of dark grey. Wall thickness = c 11 mm. One sherd only was retrieved.

Fabric 5 A buff/pink coloured exterior surface with a dark interior and interior surface. The temper comprises quite large grits (4 mm) with no visible shell-sand. The outer surface is very ‘knobbly’ with no attempt at smoothing – the knobbling apparently produced by covering the exterior of the pot when wet with chopped organic material which has burnt out with firing. Inner surface displays protruding grits. Wall thickness c 9 mm. Similar in fabric make-up to Fabric 2.

Fabric 6 Dark-faced fabric, medium brown-black – identical colouring to Fabric 1. Temper of large grits (5 mm). Fabric is dark all through with no colour division. Both surfaces smoothed to form a hard abrasive surface. Wall thickness c 8–10 mm.

Fabric 7 This occurred as two sherds on the Structure III activity surface. This fabric was in such poor condition that it could be lifted from its context only by liberal use of polyvinyl-acetate solution. The fabric is dark brown in colour with heavy grits (5 mm). Wall thickness 11 mm+. It is unlikely that a representative sample of this fabric has survived either the passage of time or, indeed, possibly, the rigours of excavation.

Fabric 8 One sherd only (in Layer 6/8). Red/pink on both surfaces and throughout – well-fired and hard surface. Both surfaces smoothed. The sherd in question is small (20 mm by 18 mm) and exhibits no certain decorative element although two short linear impressions on the surface may comprise part of a loosely knit pattern. The fabric is quite distinct from all others present on the site (with the exception of Fabric 4 – also represented by a single sherd in Layer 4/5 – which is much thicker walled). Wall thickness 7 mm. Beaker?

TABLE 2
Incidence of fabric type per context

	Fab 1	Fab 2	Fab 3	Fab 4	Fab 5	Fab 6	Fab 7	Fab 8	Fab 9
Layer 4/5	x	x	x	x	x	x	x	x	x
Layer 6/8				x					
Structure II	x	x	x		x				
Structure III		x	x			x	x		
Structure IV									
Structure V									
Structure VI									
Structure VII			x		x				
Structure VIII									

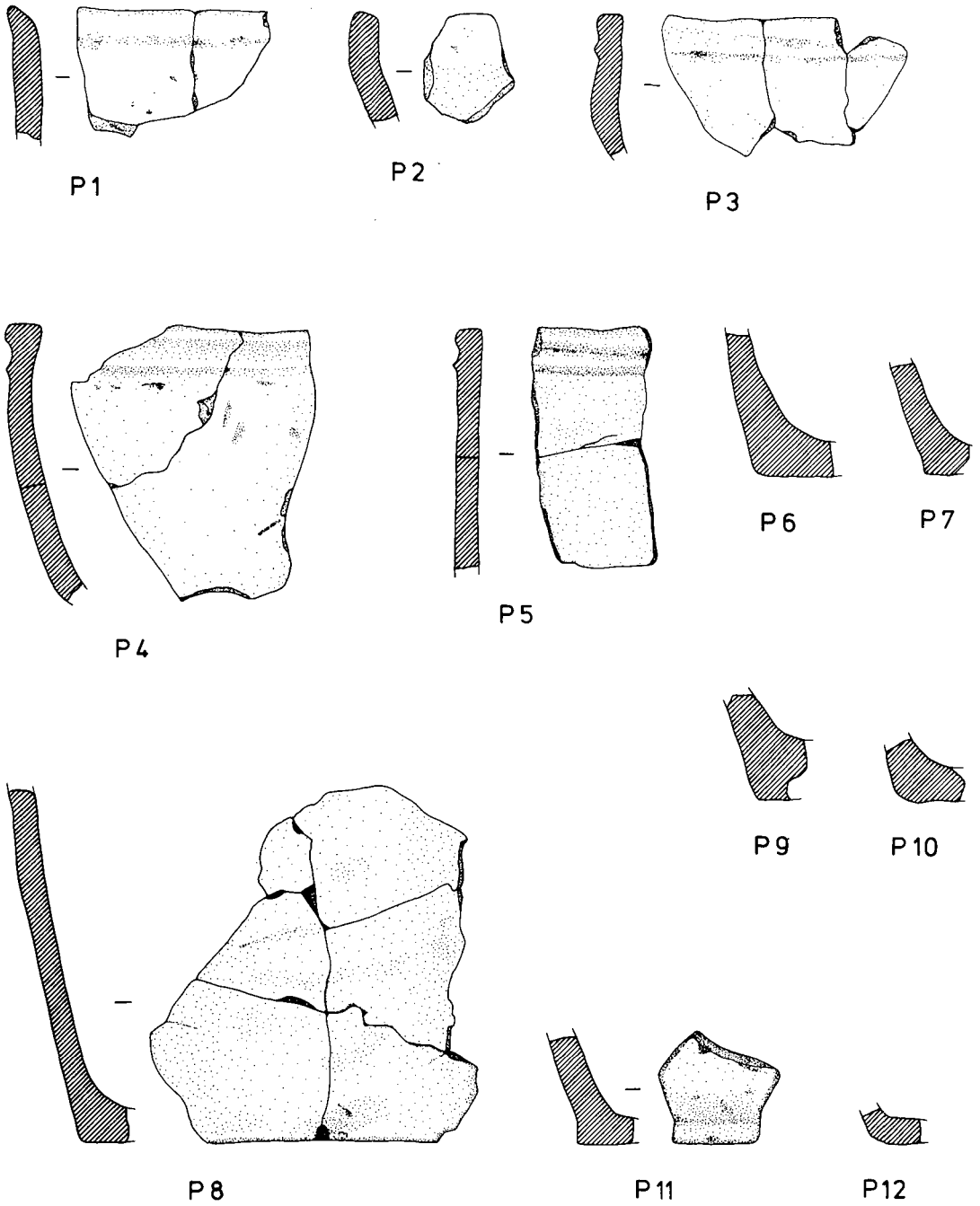
Fabric 9 One sherd only (in Layer 4). Grey/green on both inner and outer surfaces and throughout. Both faces burnished. The fabric is extremely hard with very small grits of, apparently, steatite. Wall thickness 9 mm.

The assemblage from Structure II is a small one, featuring vessels manufactured on a limited range of well-produced fabrics. The vessels comprise jar and bowl forms that appear to exhibit flattened or bevelled rims, and flat bases sometimes with a 'stand-foot'. Decoration would appear to have been minimal with simple cordons, lugs or shallow and broad grooving just below the rim. This assemblage is the only one on the site that merits individual and comparative study (see below).

The Fabric 1/2/3 group associated with Structure II produced enough featured sherds to allow some general remarks of comparison with other assemblages to be made. In Shetland any search for an assemblage featuring jar and bowl forms with flattened rims, rims with bevelling and stand-foot bases manufactured on hard smoothed fabrics, leads in the direction of the 'Early Iron Age' and 'Late Bronze Age' ceramic assemblages from Clickhimin, near Lerwick, Shetland (NGR: HU 464408) (Hamilton 1963, 25–44). The prevalence of Fabric 3 in association with Structure VII set on the surface of the layer 6/8 horizon, underlying the whole of the Structure II–VI sequence must suggest that the fabric types are long-lived but may have been differentially distributed both spatially and chronologically. It should also be noted that Fabrics 2, 3 and 5 bear the closest similarity one to another and may be confused in small sherd examination.

Catalogue of featured sherds (illus 9 & 10)

- P 1 Fabric 2. Rim of steeply internally bevelled profile of open jar form *c* 0.25 m in diameter. Structure 3 activity surface.
- P 2 Fabric 9 (Steatite gritted). Rim of open bowl. Fragment too small to allow reconstruction of diameter. Within Layer 4/5 cultivated surface.
- P 3 Fabric 1. Rim of flattened profile of open-necked jar approx. 0.25 m in diameter. A shallow groove 6 mm wide made with a broad blunt instrument defines the lower side of the rim. The lower edge of the groove is defined by a raised sharp ridge – reinforced by a further slight groove below. Structure II activity surface.
- P 4 Fabric 1. Rim of flattened profile of open jar/bowl form *c* 0.25 m in diameter. Decoration as with P3 and P5. Structure II activity surface.
- P 5 Fabric 1. Rim of flattened profile of steep-sided jar approx. 0.25 m in diameter. A shallow groove 5 mm wide made with a broad blunt instrument defines the lower edge of the rim. The lower edge of the groove is defined by a raised sharp ridge – reinforced by a further slight groove below. Structure II activity surface.
- P 6 Fabric 5. Base of flat-bottomed vessel with slightly protruding foot. Reconstructed diameter of *base* – 0.14 m. Structures II activity surface.
- P 7 Fabric 5. Probably also a base sherd from the same vessel as P6. Structure II activity surface.
- P 8 Fabric 1. Base and lower part of steep-sided jar *c* 200 mm in diameter at base. Activity surface of Structure II.



0 5cm

ILLUS 9 Pot sherds P1-P12

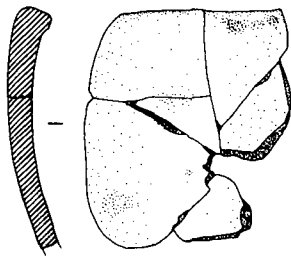
- P 9 Fabric 2. Base of flat-bottomed vessel. Located by Mr R Gourlay (1979) on paving revealed in cliff-face.
- P10 Fabric 2. Base of flat-bottomed vessel. Slightly protruding foot. Structure II activity surface.
- P11 Fabric 2. Base sherd of flat-bottomed vessel. Reconstructed diameter of base approx. 110 mm. Structure III beneath activity surface.
- P12 Fabric 3. Base sherd of flat-bottomed vessel. Located by Dr J Close-Brooks in eroded soil from cliff-face, summer 1981.
- P13 Fabric 1. Rim, of flattened slightly bevelled profile, of an open bowl 300 mm in diameter. Structure II activity surface.
- P14 Fabric 2. Rim, of flattened and internally bevelled profile, of apparently bowl-form vessel. Fragment too small to allow reconstruction of vessel diameter. Structure III activity surface.
- P15 Fabric 1. Rim of flattened profile. Fragment too small to allow reconstruction of diameter of vessel. Located in Layer 6/8.
- P16 Fabric 2. Rim of flattened profile. Fragment too small to allow determination of form or reconstruction of diameter of vessel. Structure VII hearth.
- P17 Fabric 1. Rim of flattened and bevelled profile of an open bowl form 130 mm in diameter. Located by Dr J Close-Brooks in eroded soil from cliff-face, summer 1981.
- P18 Fabric 1. Rim of strongly internally bevelled profile. Fragment too small to determine form or to reconstruct diameter of the vessel. Located by Mr R Gourlay on paving layer at the south end of the site.
- P19 Fabric 1. Rim of strongly internally bevelled profile. Fragment too small to determine profile or allow reconstruction of diameter. Layer 4/5.
- P20 Fabric 1. Rim of flattened profile. Fragment too small to determine vessel form or to allow reconstruction of diameter. Structure II activity surface.
- P21 Fabric 2. Rim of flattened profile. Fragment too small to determine vessel form or to allow reconstruction of diameter. Structure II activity surface.
- P22 Fabric 2. Rim of flattened profile of steep sided vessel approx. 250 mm in diameter. Located by Dr J Close-Brooks in eroded soil from cliff-face, summer 1981.
- P23 Fabric 2. Rim of flattened profile. Fragment too small to determine vessel form or to allow reconstruction of vessel diameter. Structure II activity surface.
- P24 Fabric 1. Rim of flattened profile of steep-sided vessel. Fragment too small to allow reconstruction of diameter. The lower edge of the rim is defined by a deep and broad (11 mm) groove formed by a broad blunt instrument. Structure II activity surface.
- P25 Fabric 2. Rim of flattened profile with simple applied lug on its outer face. Fragment too small to allow reconstruction of diameter of vessel. Located within Layer 4/5.
- P26 Fabric 1. Decorative cordon. Structure II activity surface.
- P27 Fabric 1. Rim of flattened and bevelled profile. Fragment too small to allow reconstruction of diameter. The fragment terminates at its lower point with a steep change of angle outwards – a lug or cordon? Layer 4.
- P28 Fabric 2. Rim of flattened profile of steep sided vessel. Fragment too small to allow reconstruction of diameter. Structure II activity surface.

FLINT

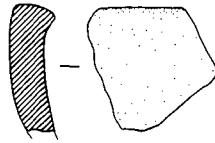
Roger Mercer

Ten flint fragments were located:

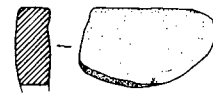
- 1 Within Structure II activity surface – a tiny inner flake of corticated amber-coloured flint.
- 2 Layer 6/8 – a tiny inner flake of corticated amber-coloured flint.
- 3 Layer 4/5 – a spool of corticated amber-coloured flint.
- 4 Layer 4/5 – a tiny spool of corticated amber-coloured flint.
- 5 Within Structure II activity surface – a chip 0.02 m long of corticated amber-coloured flint.
- 6 Layer 4/5 – an inner flake 25 mm long, 13 mm wide, of corticated amber-coloured flint.



P13



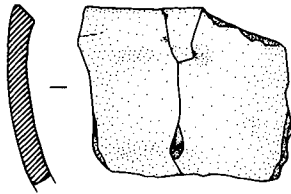
P14



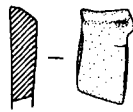
P15



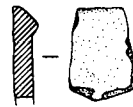
P16



P17



P18



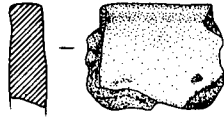
P19



P20



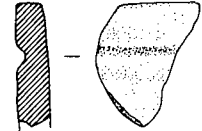
P21



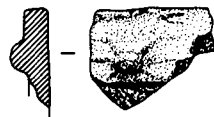
P22



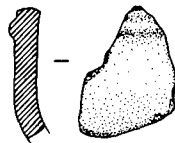
P23



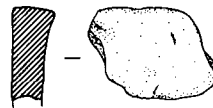
P24



P25



P26



P27



P28



ILLUS 10 Pot sherds P13-P28

- 7 Within Structure III activity surface – a chip of corticated amber-coloured flint.
- 8 Layer 4/5 – a tiny spool of corticated amber-coloured flint.
- 9 Within Structure II activity surface – an inner flake 12 mm long, 6 mm wide, of corticated amber-coloured flint.
- 10 Within Structure VII activity surface – an inner flake 10 mm long, 3 mm wide, of corticated grey flint.

Little can be said on the basis of this minimal and generally uninformative assemblage other than to indicate the presence of flint working in the vicinity at one or more stages of the occupation and to point to a certain uniformity of raw material that may indicate exploitation of one particular source. Wickham-Jones & Collins (1978) list a number of sources of chalk flint in Caithness in the Thurso River valley, Scrabster Harbour and in the Forss Water valley as well as in Wide Bay and the Dunbeath Water. The first three of these sources all lie within 15 km of the site at Cnoc Stanger.

STONE OBJECTS

Roger Mercer

No querns, rubber or vessel fragments were recognized during the excavation in 1981/2 of any context. No stone objects resembling ard-tips were located in the cultivated surfaces. Two objects were, however, recovered:

- S1 Sandstone block, carefully worked, heavily burnt and broken into multiple fragments. Possible mould fragment. Layer 4/5. It should be noted that, while sought consistently during the excavation, no slag or droplet waste, nor any other identifiable metal-working debris was located.
- S2 Schist block with highly polished upper surface – whetstone? Layer 4/5.

WORKED BONE (ILLUS 11)

Roger Mercer (identifications by Judith Finlay)

Again the small sample retrieved and its dispersed contextual relationships render it impossible to draw any significant conclusions from this assemblage.

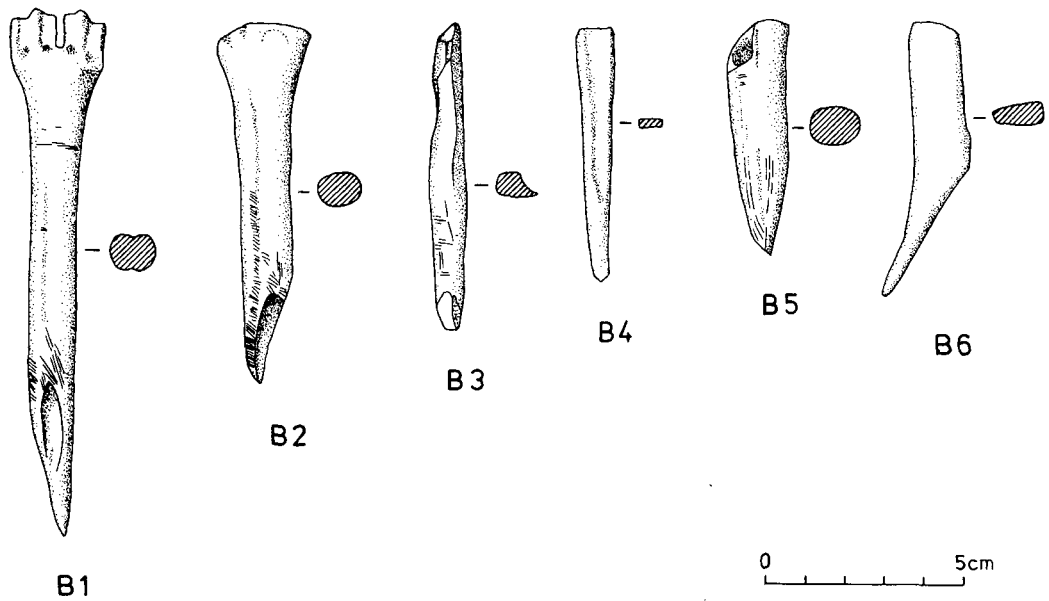
- B1 Bone awl. Distal right metacarpal, *Ovis*. Layer 10.
- B2 Bone awl. Left proximal metacarpal, *Ovis*. Layer 4/5.
- B3 Worked fragment of bone. Unidentified piece of long bone shaft. Structure II activity surface.
- B4 Bone point (broken). Unidentified shaft fragment. Structure II activity surface.
- B5 Bone point (tip broken) Ovicaprid metapodial. Structure II activity surface.
- B6 Bone awl. Left tibia (distal) *Ovis*. Structure II activity surface.

MOLLUSCA

Anne Kimble Howard

The majority of those marine species identified in Tables 3 and 4 are those inhabiting littoral areas: *Littorina* seldom being found at greater depths than the low water mark of the spring tides, and inhabiting rocky areas of beaches. *Patella* also inhabits rocks and shingly beaches in a strictly littoral situation. The rest, aside from *Helix hortensis* tend toward shallower waters.

Patella vulgata, *Littorina littorea*, *Mytilus edulis*, *Nucella apillus*, *Ostrea edulis*, *Pecten maximum*, *Artica islandica* are all edible species normally available all year round. *Echinus esculentus* is a common edible sea urchin. Based on the percentages of the species involved (Table 4) only *Patella* and *Littorina littorea* were being purposefully collected for dietary purposes or as bait. The



ILLUS 11 Worked bone objects

percentages involved in the other species could indicate an accidental collection of these specimens in the course of the collecting of *Patella* and *L. littorea*. Based on growth lines *Patella* and *L. littorea* were collected in the spring or early summer. *L. littorea* are of uniform size in all layers where they occur but there is a change in *Patella*. Specimens in Layers 1 and 11 are all fairly uniform flatter coned specimens, while those occurring in Layer 13 are very high-coned specimens which are normally found in a lower tidal zone. Meatweight was calculated only for *Patella vulgata* and *L. littorea*. Layer 4 indicates a large meatweight component in both species; other layers do not show the same large component, and there is a fluctuation in the amounts of the species being collected. Based on percentages of the actual numbers of the species being collected, Layers 1, 2 and 11A show a preference for *L. littorea*, although meatweight calculations would not indicate a primary food substance.

L. littoralis and *Trivia arctica* have sometimes been used for decoration. None of the Cnoc Stanger specimens shows any evidence of this, nor would their relative numbers indicate any such usage.

Helix hortensis is the only land mollusc present. This mollusc is present in northern Britain, inhabiting a fixed dune pasture and limestone grassland.

TABLE 3

Percentages of the molluscans species present by layer

LAYER	<i>Patella vulgata</i>	<i>Littorina littorea</i>	<i>Littorina littoralis</i>	<i>Littorina saxatilis</i>	<i>Gibbula cineraria</i>	<i>Trivia arctica</i>	<i>Mytilus edulis</i>	<i>Nucella lapillus</i>	<i>Ostrea edulis</i>	<i>Pecten maximus</i>	<i>Artica islandica</i>	<i>Echinus islandica</i>	<i>Helix hortensis</i>
1	14.8	85.2											
2	21	65											
4-5	48.9	47.3	0.7	0.8	0.09	0.06	0.2	0.2	0.02	0.01	0.02	0.01	1.7
6-8	41.6	54.1	0.8	1.5	0.1	0.07	0.2	0.1				0.01	1.4
10	38.5	58.2	0.7	0.7	0.1	0.2	0.2	0.2					1.4
11	35.6	60.1	1.0	1.8	0.25		0.25		0.5				0.75
13	43.75	45.2	5.5		0.04			0.3					5.21

TABLE 4

Meat weight in g of *Patella vulgata* and *Littorina littorea*

LAYER	1	2	4-5	6-8	10	11	13
<i>Patella vulgata</i>	6.3	32.8	14,140	5498	2476	273	1172
<i>Littorina littorea</i>	29.7	95.3	13,268	6883	3637	482	1375

HUMAN AND ANIMAL BONE

Judith Finlay

The faunal material from Cnoc Stanger represents a small assemblage from a range of contexts and, accordingly, is subject to certain biases and limitations in the degree to which it can be analysed and interpreted. The material was identified, as far as possible, with regard to species, anatomical element, any abnormalities evident and, where applicable, an estimation of the approximate age of the animal at death (after Silver 1969). Due to the fragmented nature of most of the bone material, measurements could not be made and sexing of the animals represented was not possible. The samples were also too small to show any distinct patterns of butchery practice from the bones. The information recorded from the faunal remains is itemized in tables held in the excavation archive. It is proposed here to briefly summarize the evidence and to point out the main features. Much of the faunal material consisted of unidentifiable fragments, many showing evidence of butchery and taken to represent domestic refuse. This material was not weighed (in volume it comprises over half of the total assemblage) since both burnt and unburnt fragments were mixed together, and since the wet or dry state of the bone was very varied: it was felt that the cost in time and effort thoroughly to dry out the wet bone and to separate out the, often minute, burnt fragments from the rest were not justified by the measurement of weight which would thus be obtained. Unidentifiable material was derived from every layer and from the structures, and burnt bone was likewise widely represented. Human bones have been reported in the past as occurring in quantities in the dunes near Cnoc Stanger and the occurrence of human bone in Layer 1 and 2 contexts on the site may be linked to this.

Domesticated species are represented mainly by *ovicaprid* and *bos* bones. Owing to the small sample sizes obtained from each context, no attempt has been made to estimate minimum numbers of individuals represented by the material since such an estimation can only be considered valid for a very large sample size. *Ovicaprids* are represented in almost all the contexts and the ages estimated from the bones range from neo-natal to over 48 months old; both teeth and bones were recovered. No horn-cores were recovered from which any indication of the sex of the beasts could be determined, or indeed from which a distinction between sheep and goat could be drawn. *Bos* is represented throughout the chronological span of the site and the age estimates range between neonatal and over 54 months old; both teeth and bones were recovered but only two fragments of horn-core were identified and these were too incomplete for study.

Sus is represented by the teeth and bones of young animals under 27 months old. The canine teeth do not show the beading characteristic of wild pig and the material is regarded as domesticated.

Equus is represented by a single tooth from layer 2.

Canis is identified from most of the layers and Structures by teeth and foot bones and the few age estimates possible show at least one large dog of over 16 months old, possibly about the same size as the modern Retriever breed. No evidence was discerned for the use of dogs as food.

Red Deer antler was recovered from the site in the form of tine tips, fragments and a single burr from a cast antler. There is no direct evidence for the working of antler into artefacts but the remains from the site may be the waste material from such working. Identified bones of *Cervus elaphus* are predominantly from the lower leg and foot area which suggests that this part was generally discarded and not submitted to cooking. Four of the seven metapodial fragments recovered have been longitudinally split, presumably for marrow extraction and/or implement manufacture.

TABLE 5
Incidence of human and faunal remains by layer/structure

Deposit	o-c	bos	sus	equ	canis	cervus	seal	homo	r/r	aves	fish	frog	crus- tacea
Layer 1	x	x							x				
Layer 2	x	x	x	x	x	x		x	x				x
Layer 4,5	x	x	x		x	A		x	x	x	x	x	x
Structure II	x	x	x		x	xA			x	x	x	x	x
Pre-Structure II	x	x	x		x	x			x	x			x
Structure V	x		x						x		x		
Pre-Structure V	x	x	x		x	x		x	x		x	x	x
Structure VI	x	x							x		x		
Pre-Structure VI	x		x		x	x		x	x	x			
Structure VII	x	x	x		x				x		x	x	x
(Hearth) Structure VIII	x	x	x		x				x		x	x	x
Layer 6/8	x	x	x		x				x		x	x	x
Layer 10	x	x	x		x				x		x		x
Layer IIA		x											x
Layer 11	x	x							x		x		x
Unstratified (surface clearance)	x	x	x		x	x		x	x				

Abbreviations:

o-c - ovi-caprid

r/r - rodent/rabbit

x - species represented in deposit

A - antler

The single bone of Grey Seal (*Halichoerus grypus*) suggests that a readily-available resource of food and raw materials was being exploited at the site, but without further evidence, its importance in the economy must remain unknown.

The small amount of identifiable fish bone from the site was mainly from *Gadoids* (eg Cod, Pollack, Saithe, Haddock), *Merluccius merluccius* (Hake) and *Scomber scombrus* (Mackerel), as well as teeth from *Lophius piscatorius* (Angler Fish) and bucklers from *Raja clavata* (Thornback Ray); presumably these species indicate inshore and offshore fishing.

The few bird bones recovered were mainly unidentifiable as to species and too few in number to justify any remarks on their significance. A single bone of Fieldfare (*Turdus pilaris*) and two from the now extinct Great Auk (*Alca impennis*) merely indicate their presence but reveal nothing of their importance to the economy.

Frog bones were identified from several contexts, but it must be borne in mind that while this may represent some dietary preference of the inhabitants, the practice of wintering in some crevice often associated with human occupation (and therefore heat) is well known with frogs. Thus the inclusion of the bones among the assemblage may be accidental.

A relatively large amount of rabbit and rodent bones was recovered, but the site was seen during excavation to be riddled with the burrows of these creatures in almost every layer and thus they must be treated as intrusive. The species identified are *Oryctolagus cuniculus* (Rabbit), *Arvicola amphibius* (Water Vole), *Rattus norvegicus* (Brown Rat), *Microtus agrestis* (Field Vole), *Sorexorex* (Shrew) and *Mus sp* (Mouse). Unfortunately the presence of these species also casts some doubt on the crab fragments present in small quantities throughout the site, since the Water Voles, in particular, are well known for their taste for small shore crabs. However, the presence of some burnt crab shell from the deposits suggests at least some human use of crustacea. A single jaw of *Mustela nivalis* (weasel) may also be taken as intrusive as this species shows a particular preference for voles and rabbits.

Stray finds of human bone were recovered from several contexts at the site. The fragmentary nature of the material recovered precludes sexing of the bones but some estimation of age was possible and this showed that the material came from at least two individuals over 19 years of age and one child. There is no evidence from the recovered remains for any pathological conditions.

DISCUSSION

Any conclusions drawn from the excavation account set out above can only be of a most tentative nature, as determined by the limitations of the keyhole nature of the exercise, and the unsatisfactory nature of the archaeological situation on the site where structures are founded upon, and set within, a matrix of cultivated soil which included a wide range of redeposited or residual materials. Such conclusions as can be drawn with any degree of confidence can be discussed under four headings: the cultivated soils, the radiocarbon chronology, the construction of the round houses and the material culture apparently associated with them.

The cultivated soils

The existence of well over a metre of cultivated soil on this site with a possible *terminus ante quem*, in the early first millennium does have important implications for the history of settlement in Caithness. It will, of course, come as no surprise to students of Hebridean or Orcadian archaeology that this should be the case. Nevertheless, the Cnoc Stanger excavation is the first demonstration, in Caithness, of the use of foreshore areas of subsequent machair development for agricultural purposes at an earlier prehistoric date. The two sherds of 'Beaker type' pottery (undecorated and judged on their distinctive fabric alone) may suggest, again, an *ante quem*, of a sort, for the start of this activity. Throughout the development of this soil we encounter the use of the ard to prosecute 'cross-ploughing', which fortuitous backfilling with blown sand suggests was carried out as one exercise. The consistent alignment of the ploughing at all levels (north/south & east/west) strongly suggests that the cultivation limits (ie the field boundaries) were visibly defined in a manner that persisted or was re-marked through time. The relatively short thrusts or pulls detectable among the furrows suggest, as discussed above, a human rather than a bovine source of traction. The tilth created seems to have been consistently fertilized by the distribution of quantities of domestic midden debris which included animal bone (much of which had been cooked), seaweed and shells, as well as some artefactual material.

The radiocarbon chronology

The archaeological circumstances of the site were unpropitious in so far as radiocarbon chronology is concerned. The entire matrix of soil, within which all the structural elements of the site were contained, was a cultivated soil containing organic material which not only originated from unknown and almost certainly multivariate sources but, due to the cultivation process, as well as the activities of burrowing mammals well in evidence on the site, has suffered the likely exigency of vertical transfer within the deposits. In addition, the likelihood exists that peat ash was present with the consequent dangers of the inclusion of fossil carbons that would distort any consequent assay. With these difficulties in mind samples for radiocarbon dating were taken only from *in situ* 'occupation deposits' on recognizable horizons associated with the structure for which dating was sought.

Of three samples submitted for radiocarbon dating, two derived from floor deposits in Structure V and a third from a similar deposit in Structure II. Of these, one of the samples from Structure V must be considered especially reliable (GU-1682), as it consisted of a single large birch fragment with possible tool markings. Such a fragment could not have been exposed to abrasion or trampling and, indeed, could well have been a structural component of the building itself. In contrast, the other two samples (GU-1681 & GU-1683) were both comprised of bulked charcoal fragments, of assorted species, from trampled floor deposits. The results of all three radiocarbon assays are given below.

The date derived from the carbonized birch fragment in Structure V is a key date which may

TABLE 6
Radiocarbon dating results

Lab no	Sample	Radiocarbon age	Context
GU-1681	Mixed charcoal	3350±90 BP	Structure II floor deposit
GU-1682	Birch charcoal frag.	2910±60 BP	Structure V floor deposit
GU-1683	Mixed charcoal	3620±95 BP	Structure V floor deposit

closely relate to the period of construction or occupancy of the building. There is a wide chronological divergence between this and the other, much earlier dates, although one of these (GU-1683) is actually derived from the same context. It is very likely that the earlier dates reflect the inclusion of residual charcoals, buried for some time within deep tilled soils, and brought to the floor surfaces of Structures II and V from their original contexts by processes of lateral and vertical transmission. Alternatively, these dates may reflect the use of fossil timber, from peat cuttings, as a source of fuel for the domestic hearths within these buildings.

The structures

The excavation recovered a stratigraphic sequence of seven structures. Five of these represent a succession of superimposed round, or slightly oval, houses at least 12 m in diameter with an entrance in the south-west sector. The assumption has been made that these structures were roofed and the implications of that assumption for the scale of building material which would have been required, as well as human effort, have already been examined above.

It is now, perhaps, possible to accept the assignation of a large circular or sub-circular house in Caithness to the first quarter of the first millennium BC. Two key reviews have been instrumental in sketching out the possibilities here, which are both broadly the result of excavation conducted only over the last two decades (Sharples 1984; Mercer 1985b). Sharples, discussing his skilful recovery of a tiny vestige of such a building in Pierowall Quarry, Westray, showed this to be a structure with a wall 3.1 m in thickness (although the writer feels the evidence could suggest a true thickness nearer 2.2 m) and a diameter estimated by Armit (1991, 187) at c 16 2510±80 BP for an occupation deposit, which immediately predate the house, and (GU-1681) 3350±90 BP for a deposit relating directly to it. Pottery from the site included stand-foot bases and flat rims on upright jars exhibiting a sharply delineated shoulder. Sharples went on to draw broad parallels with similar structures at Quanterness (Renfrew *et al* 1979) where a rather smaller house had been built using the passage of the chambered tomb as an earth-house with a carefully constructed entrance to give access. Here the wall of the round-house was about 1 m thick and this structure was about 10 m in overall diameter. Two radiocarbon dates were obtained from the occupation deposit of this structure: (Q-1464) 2440±85 BP and (Q-1465) 2570±85 BP. Very few artefacts were associated with this structure but shouldered jars with flattish rims and stand-foot bases also occur here (see Renfrew *et al* 1979, 189).

The rescue excavations conducted by Hedges (1987) at Navershough, Bu, recovered that which he has chosen to call a 'defended round-house' c 20 m in overall diameter with walls 5 m thick and a central living area 10 m in diameter.

The primary occupation was the subject of two radiocarbon assays: (GU-1228) 24700±95 BP nad (GU-1154) 2460±80 BP. The anomalous date from the associated earth house (GU-1153 2545±65 BP) may simply represent (*pace* Armit 1991, 206) the relativity uncleaned state of the earth-house floor compared to that of the house and may therefore hint at a longer life for the house than suggested by Hedges. The pottery associated with this structure was largely from secondary deposits,

and consisted of bucket and barrel forms with sharply defined shoulders, flattish rims and stand-foot bases.

The Navershough site at Bu is clearly a round-house on the way to becoming something rather more than that, and the variety and experimentation that may be in progress by the middle of the first millennium BC may be further represented by the round(ish) house on the Calf of Eday (Calder 1939). Similarly exploratory, and ultimately significant, in its development is the site at The Howe, near Stromness, another 'fortified round-house' in the earliest phase of full Iron Age activity on the site. Radiocarbon assays here offer only a *terminus ante quem* where a date of (GU-1799) 2380±50 BP was obtained.

A radiocarbon-dated horizon having been established for the existence of large round-houses in northern Scotland, Sharples (1984), in an exploratory paragraph, suggests on the basis of this evidence that 'These round-houses seem to conform to two different types of settlement. Very large round-houses, such as Pierowall and Navershough, are situated individually in prominent, visually dominant situations, in both cases on the edge of a low hill. Smaller structures with thinner, more obviously functional, walls tend to occur in agglomerations or villages.' Sharples also chose to examine the site at Jarlshof (Hamilton 1956) drawing attention to the round house with a souterrain, partly excavated by Curle. This Late Bronze Village II produced pottery of sharply shouldered form with flat rims and stand-foot bases. In this context were located secondary metal-working debris which included a V-type bronze sword mould fragment. The writer suggests that, interpreted instead as a mould fragment for a Ewart Park Sword, this would indicate that the development proposed here had already begun by 900 BC. Sharples chose not to include in his consideration the evidence from Clickhimin, also in Shetland (Hamilton 1963) where a combination of a round-house 14 m in overall diameter with walls c 2 m thick lay stratified beneath the broch that was eventually built on this site. The pottery here was similar to that at the stage described above at Jarlshof with two shouldered fragments of similar jars being located in this context.

Since the publication of Sharples discussion (1984) a further site has been described at Upper Suisgill, Sutherland, in Helmsdale (Barclay 1985). Here, after a period of agriculture of unknown date or length, a house was constructed (House 1A + B) which has a primary post-hole diameter of c 10 m and, very possibly, an original diameter of more than that (c 14 m is likely). Material from the post-holes of this structure was submitted for radiocarbon assay and yielded dates (GU-1490) 2835±90 BP and (GU-1492) 2775±105 BP.

The writer has suggested (Mercer 1985a & 1985b) that large round-house types of the kind described above lie antecedent to the development of the broch as it is known in the north and has drawn to his argument (in the context of archaeological field survey) a range of sites in Caithness and Sutherland that may offer further examples of the type (Mercer 1985a) and, indeed, refers back in particular to field survey in 1980 (Mercer 1981a, 11–21) where four circular house structures of a 20 m external diameter were recorded in the extraordinary circumstances applying on the raised beach at Invernaver, Sutherland.

SUMMARY

The survey conducted above tells us, perhaps, no more than that much work remains to be done. But the writer's object is to go a little further and suggest ways in which that future work might be directed. To do so he, like his predecessors, is compelled to place weight upon that which is perhaps not to be trusted and he asks for his readers' indulgence in so doing.

The writer has made no bones about the unreliability of radiocarbon dating at Cnoc Stanger. The archaeological circumstances were not conducive to such an approach and, while the best

samples were dated, they must be treated with due caution. Whatever the circumstances, however, large circular or sub-circular houses were apparently being built upon a prominent site around and largely after a date c 1000 BC. A wider view tells us that other such great houses were present at whatever date upon raised beaches in Caithness. A selective view tells us that the idea of a large round house is widespread in the north by at least 600 BC and Suisgill suggests an earlier date (Barclay 1985). Cnoc Stanger may well be even earlier.

This early establishment of the great round-house tradition with all its demands for massive and selected timber would appear to be associated with a pottery style which reflects developments farther south shortly after the turn of the millennium. The old idea of a diffusionist 'time-lag' may be rejected here, so that such an innovation may be seen to reflect contemporary developments elsewhere in the British Isles.

ACKNOWLEDGEMENTS

The writer owes a considerable debt of gratitude to Miss Jane Blair (now Mrs Green) who took on the day-to-day management of the excavation. He would also, in the same breath, wish to pay tribute to the undergraduates of the Department of Archaeology, University of Edinburgh, who worked very hard indeed to produce the information which is set out here. The landowner, Capt S Taylor, willingly gave permission for the work to take place, and many local people gave encouragement and assistance in various ways during our short sojourns in the area. The writer wishes also to acknowledge the advice and comments of Prof D W Harding. He has received and benefited greatly from the comments of Robert Gourlay and thanks him for permission to quote from unpublished notes of his own brief but vital appreciation of the site. Dr Carole Keepax carried out the identification of charcoals from the site and the writer is grateful to her as he is to Dr Judith Finlay and Kimble Howard who carried out work on the faunal and molluscan assemblage respectively. Mr Rod McCullagh helped to isolate the charcoal samples best suited for radiocarbon dating. I also owe an especial debt of gratitude to Christine Allan who has done much work in getting this text in final form onto disk.

Dr Finlay wishes to offer her thanks to Mrs L Barnetson of the Dept of Archaeology, University of Edinburgh; Dr A Clarke and Mr G Swinney of the Dept of Natural History, Royal Scottish Museum; Mr A Wheeler of the British Museum (Natural History); and the staff of the Anatomy Dept, Royal (Dick) School of Veterinary Studies, Edinburgh, for advice and for access to comparative material. She also acknowledges with thanks the support of the Dept of Education (Northern Ireland) and the Scottish Development Dept (Ancient Monuments Branch) (now Historic Scotland) in her study.

The whole project was funded by Historic Scotland to whom the writer offers his grateful thanks.

REFERENCES

- Armit I 1991 'The Atlantic Scottish Iron Age – five levels of chronology', *Proc Soc Antiq Scot*, 121 (1991), 181–214.
- Ashbee P, Evans J G & Smith, I F 1979 'Excavation of Three Long Barrows near Avebury, Wiltshire', *Proc Prehis Soc*, 45 (1979), 207–300.
- Barclay, G J *et al* 1985 'Excavations at Upper Suisgill, Sutherland' *Proc Soc Antiq Scot*, 115 (1985), 159–198.
- Calder C S T 1939 'Excavations of iron age dwellings on the Calf of Eday in Orkney', *Proc Soc Antiq Scot*, 73 (1939), 167–85.

- Fairhurst, H & Taylor, D B 1971 'A Hut-Circle Settlement at Kilphedir, Sutherland', *Proc Soc Antiq Scot*, 103 (1971), 65-99.
- Fowler, P J & Evans, J G 1967 'Plough-marks, lynchets and early fields', *Antiquity*, 41 (1967), 289-301.
- Gourlay, 1979 Manuscript notes copied to writer.
- Hamilton, J R C 1956 *Excavations at Jarlshof, Shetland*, Edinburgh.
- Hamilton, J R C 1963 *Excavation at Clickhimin, Shetland*. Edinburgh.
- Hedges, J W 1975 'Excavation of two Orcadian burnt mounds at Liddle and Beaquoy'; *Proc Soc Antiq Scot*, 106 (1975), 39-98.
- Hedges, J W 1987 *Bu, Gurness and the Brocks of Orkney*, Oxford. (=BAR Brit Ser, 163.)
- Hedges, M E 1977 'The Excavation of the Knowes of Quoyscottie, Orkney: a cemetery of the first millennium BC', *Proc Soc Antiq Scot*, 108 (1977), 130-55.
- Mercer, R J 1980 *Archaeological Field Survey in Northern Scotland, Vol I, 1976-79*, Univ Edinburgh Archaeol Dept Occas Pap 4, Edinburgh.
- Mercer, R J 1981a *Archaeological Field Survey in Northern Scotland, vol.II, 1980-I*; Univ Edinburgh Dept Archaeol Ocean Pap, 7, Edinburgh
- Mercer, R J (ed) 1981b 'Introduction, in Mercer R J (ed) *Farming Practice in British Prehistory*, ix-xxvi. Edinburgh.
- Mercer, R J 1985a *Archaeological Field Survey in Northern Scotland vol III 1982-3*; Univ Edinburgh Dept Archaeol Occas Pap, 11. Edinburgh.
- Mercer, R J 1985b 'Second Millennium BC Settlement in Northern Ireland', in Spratt, D & Burgess, C (eds), *Upland Settlement in Britain* (BAR Brit Ser 143), Oxford.
- Musson, C R 1971 'A study of the possible building forms at Durrington Walls, Woodhenge and The Sanctuary', in Wainwright, G J and Longworth, I F (1971) 363-77.
- RCAHMS, 1911 *Inventory of Monuments and Constructions in the County of Caithness*, Edinburgh.
- Renfrew, A C *et al* 1971 *Investigations in Orkney*, Rep Res Comm Soc. Antiq London, 38. London.
- Reynolds, P J 1979 *Iron Age Farm: The Butser Experiment*, London.
- Sharples, N M 1984 'Excavations at Pierowall Quarry, Westray, Orkney', *Proc Soc Antiq Scot*, 114 (1984), 75-125.
- Silver, I A 1969 'The Ageing of Domestic Animals' in Brothwell, D & Higgs, E (eds), *Science in Archaeology: A Survey of Progress and Research*, 283-302. London.
- Wainwright, G J and Longworth, I H 1971 *Durrington Walls: Excavations 1966-1968*, Rep Res Comm Soc Antiq London, 29.
- Whittow, J B 1977 *Geology and Scenery in Scotland*. London.
- Wickham-Jones, C & Collins, G H 1978 'The Sources of Flint and Chert in Northern Britain', *Proc Soc Antiq Scot*, 109 (1978), 7-21.

This paper is published with the aid of a grant from Historic Scotland