

Excavations at Geirisclett chambered cairn, North Uist, Western Isles

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ABSTRACT

This report describes the results of excavations undertaken within the burial chamber and entrance area of the chambered cairn at Geirisclett, North Uist, Western Isles in 1996–7. The chamber of this cairn had been investigated by Erskine Beveridge in the early years of the 20th century, and the work described here was conducted because of the threat of tidal scouring of any remains which had survived previous attention. The excavation revealed evidence of disturbed Neolithic and Beaker funerary deposits within the two compartments of the chamber, which on architectural grounds falls into Henshall's Clyde group. The burial chamber appears to have been used over the same time period both by humans as a burial place and by otters as a holt. The application of palaeoenvironmental studies has allowed the formation processes of the deposits and artefacts in the chamber to be understood, permitting the character of the burial rites to be better appreciated. The past and present landscape setting of the chambered cairn is considered briefly. The excavations, post-excavation studies and publication of this report were funded by grants made by Historic Scotland.

INTRODUCTION

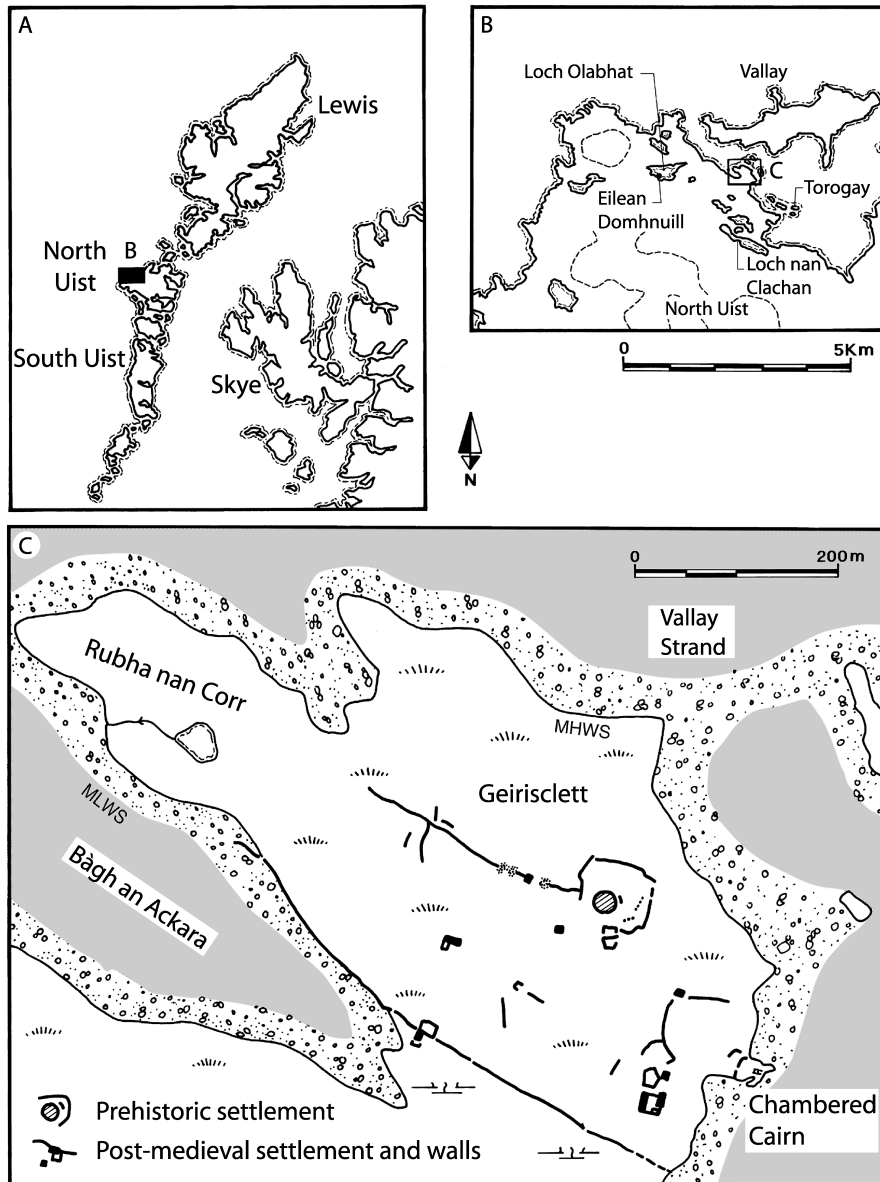
This report describes the results of excavations undertaken in May 1996 and May 1997 by the Centre for Field Archaeology, University of Edinburgh, and Dr Ian Armit at Geirisclett chambered cairn, North Uist (NGR: NF 7684 7520; illus 1). The cairn occupies a low rocky promontory on the eastern shore of the Geirisclett peninsula, which projects from the western shore of the Vallay Strand, a sandy expanse of inter-tidal former coastal plain (illus 2). At high tide the sea reaches the kerb of the cairn and enters its exposed burial chamber (illus 3).

The tidal inundation of this site, as well as of several other later prehistoric sites in the Vallay Strand, has long been recognized as key evidence for demonstrating that relative sea levels have risen since prehistory (eg Callander 1929, 318–9).

Geirisclett chambered cairn was first investigated by Erskine Beveridge (1911, 255–6), who appears primarily to have cleared out its burial chamber, probably in the early years of the 20th century. Descriptions of the site were published subsequently by RCAHMS (1928, no 80) and more recently by Audrey Henshall (1972, 515–7, UST 18) based

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ILLUS 1 Site location. (Based on Ordnance Survey maps © Crown copyright)

upon field visits made in 1914 and 1962 respectively. The latest excavation was instigated after the site was reconnoitred in 1995 by two of the authors during a landscape survey conducted as part of the Vallay Strand Project (Armit & Dunwell, in prep). It was recognized

that any surviving deposits in the burial chamber, which had been exposed by Beveridge's work, were at serious risk of scouring by repeated tidal inundations (illus 3). An exploratory excavation was therefore carried out in 1996 by one of the authors (IA) to establish



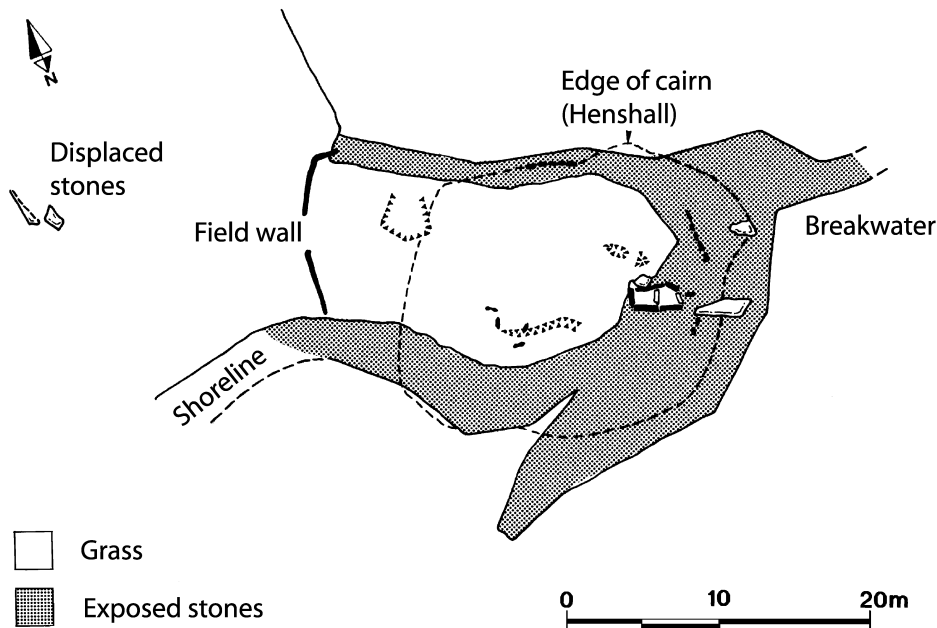
ILLUS 2 Geirisclett chambered tomb at high tide, from the south; the remains of Erskine Beveridge's house on Vallay are visible in the background



ILLUS 3 The burial chamber prior to excavation, with seaweed testament to tidal incursions

what undisturbed archaeological deposits remained within the burial chamber. A detailed survey of the principal surface features of the site was undertaken at this time (illus 4). With the discovery of intact deposits, a more extensive excavation was undertaken in

1997 by two of the authors (AD, MJ) of all deposits in the burial chamber and the accessible part of the area outside this. Both excavations and consequent post-excavation work were funded by grants from Historic Scotland.



ILLUS 4 Plan of site produced in 1996, incorporating details from Henshall (1972, 515)

THE CAIRN

Henshall (1972, 515–7, UST 18) classified the cairn as belonging to the Clyde group on the basis of the visible architecture of the burial chamber. Survey conducted during the present project confirmed Henshall's observations of the principal visible architectural features of the tomb, and added a few additional details (illus 4).

The cairn has been heavily denuded by stone robbing and now stands to no more than 2m high. Its surface is mostly grass-covered and irregular, although towards the edges, principally from the high water mark downwards, its stone core is exposed and merges into the rocky foreshore. The limits of the cairn are thus difficult to define with confidence, except where lengths of a boulder kerb are visible within the rubble on its north side, and on its east side to the north of the entrance to the burial chamber. Henshall noted a possible kerb alignment to the south of the entrance, although this feature could not be clearly detected in 1996. There is no evidence

to suggest that the kerb represents either an internal revetment within the cairn or an external kerb later buried within a secondary, enlarged cairn. The kerb runs close to the outer surviving limits of the stone spread to the north; to the east the cairn had been substantially modified to form a breakwater (see below). However, the kerb could represent the outer edge of a secondary enlargement of the cairn, a hypothesis for which there is no visible support and which could be tested only by excavation within the body of the cairn. It seems probable therefore that the cairn was round or sub-rectangular and was c 16–18m across.

The burial chamber is located on the ESE side of the cairn at the high water mark, and is orientated ESE/WNW. The current excavations (illus 5) have augmented details of the surviving architecture of this feature, and description is therefore reserved until later. A large prone slab (3.8m long, up to 1.1m wide and 0.3m thick) lies outside the chamber entrance. It was postulated by Henshall as a

fallen standing stone or less likely as an entrance portal (depending upon which end of the stone had originally been earthfast), but alternatively as a roofing slab by Beveridge (1911, 255). Two further large slabs are present to the west of the cairn, c 40m west of the burial chamber (illus 4). These had been investigated by Beveridge (1911, 255–6) who found no trace of structure associated with them. They may be fallen standing stones or elements of the cairn structure removed and subsequently dumped in an aborted attempt to transport them for reuse elsewhere. They seem unlikely to form in situ elements of the cairn, as tentatively suggested by Henshall (1972, 516).

Evidence of robbing and reworking of the cairn is abundant, and is no doubt testament to the long history of prehistoric and later settlement and land use which can be detected on the Geirisclett peninsula (Armit & Dunwell, in prep; depicted on illus 1). A low boulder wall crosses the neck of the promontory, and is probably related to post-medieval land-use on the peninsula. A breakwater has been constructed to the east of the cairn, undoubtedly from robbed stone. The irregular and pitted surface of the cairn could reflect either stone robbing or the presence of secondary structures inserted into the cairn, although nothing certain can be traced.

BEVERIDGE'S INVESTIGATIONS

Beveridge published only a brief account of his work at the site (1911, 255–6). He recorded having cleared the burial chamber of 'accumulated rubbish'. This material appears to have included a fallen capstone at its inner western end, but no other detail relevant to its composition or depth was provided. Removal of this debris revealed what Beveridge interpreted as paving throughout the chamber, the inner half at a lower level than the outer. He recovered several decorated potsherds, a flint scraper and a hammerstone during his investigation, although the contexts of recovery of these items

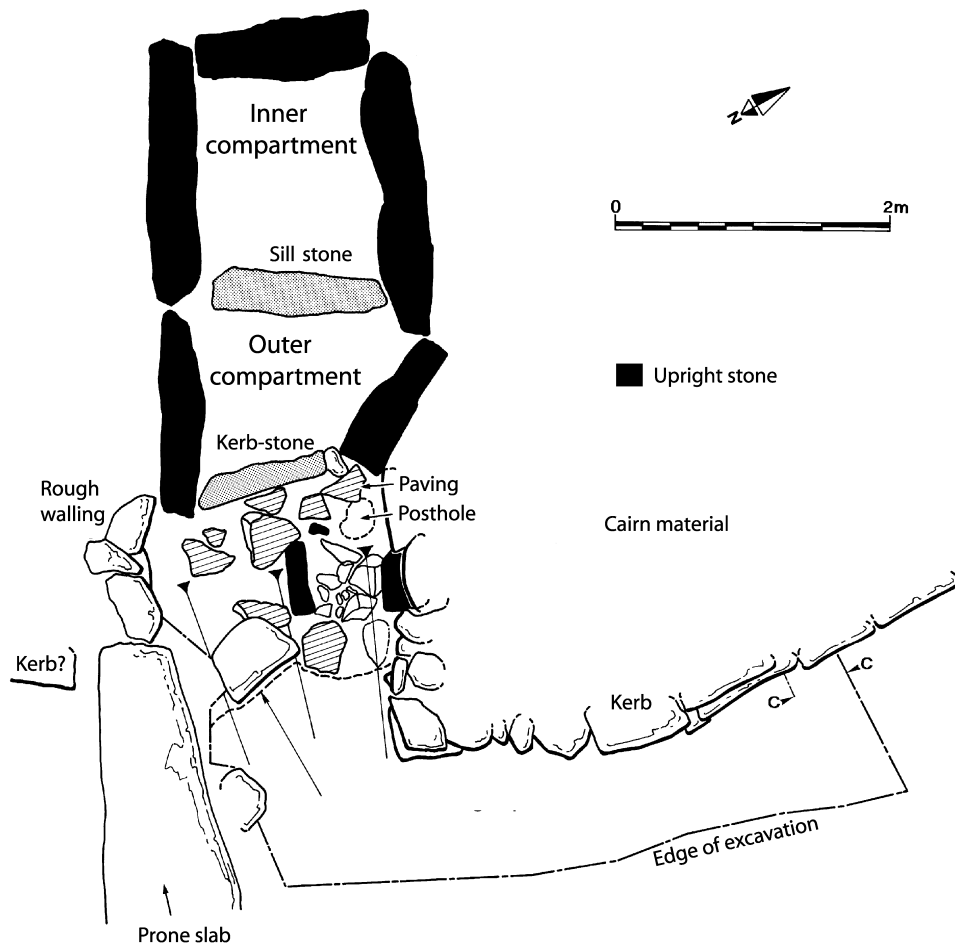
were not specified. The artefacts were catalogued by Henshall (1972, 516–7), who identified potsherds from at least three Beaker vessels and carinated vessel sherds of Neolithic character. It is possible that the pitted appearance of the surface of the cairn could reflect additional investigations by Beveridge, although his published account does not make any reference to such efforts having taken place.

EXCAVATION OF THE BURIAL CHAMBER

The exploratory excavation of 1996 was restricted to the clearance of tidally-deposited debris (mainly seaweed) from within and immediately outside the burial chamber, followed by hand excavation to re-expose the paved layers originally discovered by Beveridge and to establish the presence and degree of survival of still earlier deposits. Following excavation the exposed surface was re-covered and a drystone barricade was built across the entrance to the chamber in an attempt temporarily to limit further inundations.

In 1997 the deposits within the burial chamber were fully excavated. The entrance area was investigated as far as was practicable (illus 5) – loose stone intermingled with shingle was removed to expose in situ remains, although the immovable large prone slab and the level of high tide both limited the extent of excavation which was possible in this area. A length of the kerb of the cairn was exposed immediately to the north of the chamber entrance, including part of the alignment previously mapped by Henshall (1972, 515; illus 4). The body of the cairn and the structure of the burial chamber were left intact, as these features of the site were not considered to be under significant threat of erosion. The excavated areas were filled with stones upon the completion of fieldwork.

The cramped conditions within the burial chamber, combined with the often waterlogged and clayey soils, made for slow progress and hampered identification of artefacts and ecofacts. As a result of these practical difficulties, and as the site lay 0.8km from the nearest road, 50% of each excavated context was 'wet-sieved' in the sea for the recovery of artefacts. Bulk samples were taken from excavated contexts for wet-sieving under laboratory



ILLUS 5 Excavated areas and principal structural features

conditions, to recover botanical and faunal remains and to establish whether the difficulties of artefact identification during excavation had led to recovery biases in the size range and types of artefacts and ecofacts represented. Laboratory work demonstrated that the limited range of artefactual and ecofactual material identified during fieldwork (pottery, lithics, human and animal bone, charred plant remains) was representative of types contained in the tomb but that, inevitably, field techniques had been biased towards recovery of larger items.

ARCHITECTURE OF THE BURIAL CHAMBER, ENTRANCE PASSAGE AND KERB OF THE CAIRN

The architectural characteristics of the burial chamber are firmly within the Clyde tradition discussed by Henshall (1972), and constitute the type referred to by Barber (1985, 30) as gallery graves. The chamber is an irregular rectangle, c 2.7m long by up to 1.4m wide (illus 5). Its side and rear walls are defined by five large upright slabs retaining the rubble core of the cairn. Three of these orthostats



ILLUS 6 The architecture of the burial chamber, from the east

are c 1.15m high, whereas the south-west slab stands to 1.85m and the stone forming the rear wall of the burial chamber reaches 2.0m (illus 6). Whereas the three lower stones have relatively level upper surfaces, those of the higher two are notably slanted, both increasing in height towards the south-west corner of the chamber. The north-east side slab was positioned at an angle to the axis of the chamber, thus reducing its width at the entrance to 1m (illus 5).

The interior of the burial chamber is divided into two compartments by a sill stone 0.35m wide and standing 0.55m high. A kerb-stone, 0.22m wide and 0.45m high, lies at the entrance to the burial chamber, and divides the outer compartment from the entrance passage. Its surface dips markedly to the north. Beveridge's investigations had exposed the surfaces of the sill stone and kerb-stone and removed any stratigraphic links between the deposits surviving in the two compartments and the entrance passage. The chamber walls are held in

place by the transverse slabs and packing stones placed between and beneath them and the orthostats. Henshall's statement (1972, 50) that the sill stone and kerb-stone were too slight to have supported the side walls reflects the incomplete exposure of these features at the time of her field visit. The bases of the wall slabs and transverse stones were observed to have settled into the subsoil beneath the cairn – there was no excavated evidence to suggest that sockets had been dug to accommodate them, although for reasons of safety the chamber foundations were not fully explored. Nonetheless, there was no evidence to suggest that the burial chamber was anything other than a single-phase construction.

Little survives of the roof of the burial chamber, the presence of which presumably would also have helped to stabilize the chamber wall orthostats. RCAHMS (1928, no 80) reported that dry-stone walling and a corbel stone were still preserved above the north-west orthostat in 1914. This evidence seems to suggest that the burial chamber had a corbelled roof (cf Camster Round, Caithness: Davidson & Henshall 1991, pl 6 & 7), perhaps capped by one or more slabs. Only the corbel stone now remains, supported by a tall upright present behind the chamber orthostat (illus 6). The upright could have formed part of a 'core-cairn' (Barber 1985) carefully constructed around the chamber to support the corbelling before the main body of the cairn was added around the core-cairn (cf Barber 1985, 32 & pers comm). There is no reason to suppose that the differing heights of the chamber orthostats reflect different roof heights to the two compartments. The deposits excavated within the chamber contained no evidence for collapsed corbel stones or capstones. It is therefore suspected that the roofing material had either been robbed in antiquity for other uses, or collapsed into the chamber at some stage and had been removed subsequently by Beveridge (1911, 255–6) as part of the unspecified 'accumulated rubbish' (including a capstone) he encountered in the chamber.

Outside the chamber, a kerb was identified on the northern side of the burial chamber entrance (illus 5). It continues the line of the chamber eastwards for c 2.1m, as if defining one side of an approach passage. Here it comprises for the most part roughly coursed boulders, with an upright immediately beside the burial chamber, and survives to 0.6–0.7m high (illus 7). The kerb of the



ILLUS 7 The kerb of the cairn, from the south

cairn then changes direction sharply and can be traced for c 4.5m running in a gentle arc to the north. Here it survives mostly as a single layer of blocky boulders, although in some places a second course was visible. No trace of a kerb or passage wall could be identified on the south side of the chamber entrance; the two stones proposed by Henshall (1972, 515) as the southern kerb alignment are unconvincing (one of these is depicted on illus 5). A rough boulder wall, 0.9m long and 0.45m high and abutting the south-east corner of the burial chamber at first had appeared to form a southern passage wall, defining a passage 1.7m wide. However, this wall had been inserted between the chamber and the large prone slab and also lay on beach shingle, together indicating that it is not an original feature of the cairn.

An earthfast upright stone, c 0.5m long and c 0.7m high, stands c 0.45m outside the kerb-stone at the entrance to the burial chamber. It is aligned approximately on the long axis of the burial chamber, and also directly faces the orthostat embedded within the northern kerb, which was of similar dimensions (illus 5 & 7). These uprights may have defined the outer end of a short, roofed antechamber or passage c 1m long, 0.7m high and 0.6m wide. Such a constricted passage would have required the

chamber to have been entered on all fours, but its height and width both lie within the ranges recorded and estimated for entrance passages to chambered cairns in other parts of northern Scotland (eg Sutherland, Henshall & Ritchie 1995, 20–1 and Caithness, Davidson & Henshall 1991). Due to the partial preservation of the cairn in this area, and in the absence of any excavation within the body of the cairn, this proposed reconstruction remains speculative and the precise morphology of the entrance area unknown. Similarly, the suggestion that the cairn material consists of a primary core-cairn supporting the burial chamber, surrounded by outer material, remains unproven, but is a reasonable supposition on present evidence.

INNER COMPARTMENT

The inner compartment of the burial chamber was approximately 1.4m square, and contained a sequence of deposits c 0.4m thick. Its excavated fills could be divided into four distinct units. These were sealed beneath modern debris that must have accumulated in the compartment since the time of Beveridge's excavations at the site, which had exposed the paving sealed beneath it.

Unit 1: basal floor

The basal floor was made up of irregular patches of flat stones, possibly laid as paving, set within a sandy soil matrix (037). A patch of cremated human bone lay on this surface towards the centre of the compartment. This represents one of the earliest surviving deposits within the tomb. It could, but need not, reflect its first use, since it is possible that other deposits relating to previous activities had been removed prior to the deposition of the cremated deposits.

Unit 2: lower fills

A band of soil and stones (041), up to 0.8m wide, overlay the basal floor and was banked up against the sill stone (illus 8a & 9, A–A). Most of a small carinated pottery vessel (N1) was preserved in this deposit, laid on its side in the lee of the sill stone. This vessel contained fragments of cremated human bone, although in quantities insufficient to suggest that this was the remains of an inurned cremation. It seems likely that fill 041 had been originally more extensive and was subsequently disturbed, as sherds of other pottery vessels (N3 & N4) were found both in this deposit and in others in the outer compartment. However, this interpretation is not certain as the possibility that sherds of broken vessels were deposited in different places at the same time cannot be discounted.

A thin spread of burnt mottled sandy soil (040), at one point forming a low mound, overlay 041 in the southern half of the compartment (illus 8a). The deposit did not extend as far north as the line of the drawn section (illus 8a, A–A) and is therefore not present on illus 9. Phytolith studies have confirmed fieldwork observation that this deposit was formed principally of peat ash (a full account of this analysis, by Michael Cressey, forms part of the project archive).

Unit 3: Upper fills

A substantial deposit of mixed gritty clay (005) overlay the lower fills and filled the compartment almost to the level of the surface of the sill stone (illus 9, A–A). The majority of the finds from the inner compartment were recovered from this deposit, with a scatter of potsherds from several vessels present throughout the layer indicating its reworked nature. No intact burial remains were identified within this deposit.

Unit 4: paved surface and associated hearths

The disturbed fill (005) had been sealed beneath the layer of paving first exposed (but not removed) by Beveridge (006, illus 8b & 9; illus 10, to rear). This paving was carefully laid and formed an even surface across the inner compartment. Deposits of peat ash in the north-east and north-west corners of the compartment (015, 016: ‘hearths’ on illus 8b) had scorched the paving stones beneath them, and appeared to represent informal hearths.

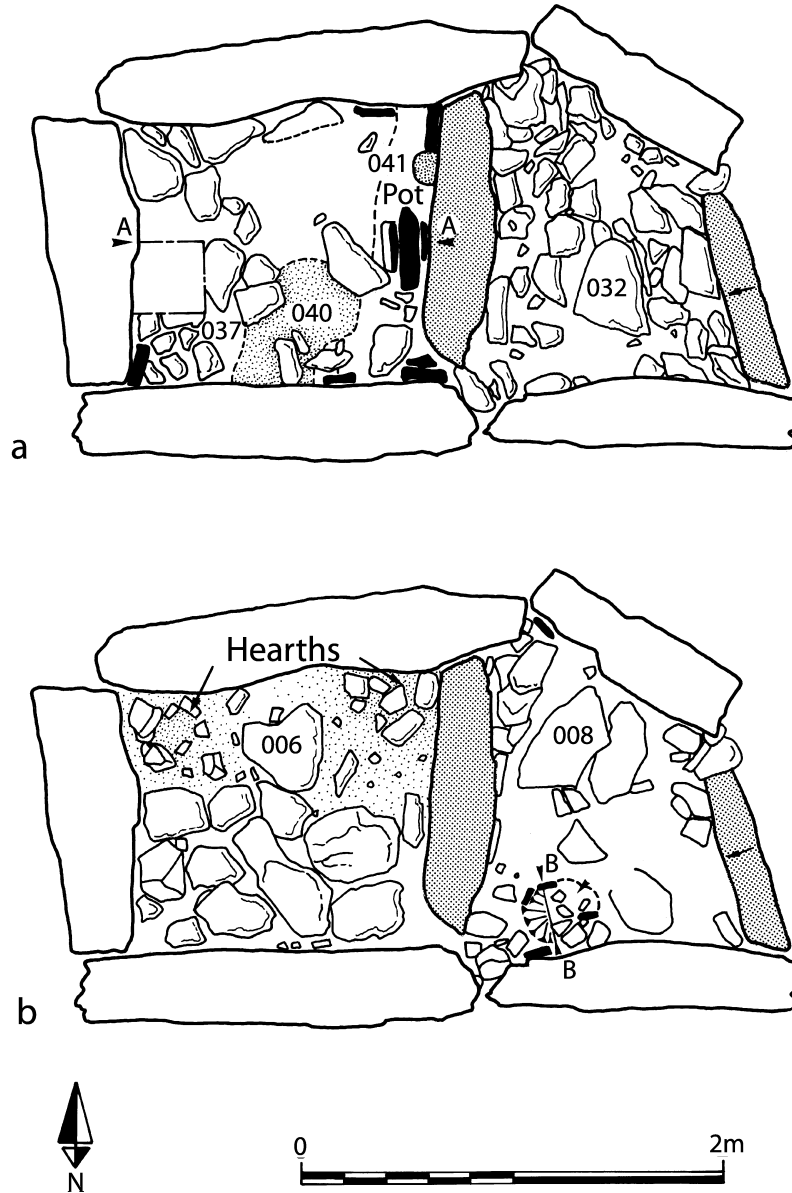
OUTER COMPARTMENT

The outer compartment is an irregular rectangle measuring 1.0–1.4m across. A sequence of three major fills was recorded beneath modern debris, none of which appeared to represent in situ burial deposits. There was no trace of a laid basal floor. The basal fill comprised a layer of brown sandy silt containing many cobbles and occasional flat slabs (032: illus 8a). Above this was a similar layer of brown silty clay containing more stones, some possibly forming patches of paving (008: illus 8b; illus 10, in foreground). Stone slabs, up to 0.2m across, present on the surface of this layer (illus 8b) formed the uppermost surviving feature in the outer compartment, and may represent the paving exposed in this compartment by Beveridge. However, unlike the paving in the inner compartment (illus 8b: 006), these slabs did not form either a flat or a continuous surface. It is possible that Beveridge had been optimistic in interpreting these remains as paving, and that the slabs instead represent collapsed structural material. However, it seems more likely that the slabs are the remains of the paving, disturbed either by Beveridge or as a result of tidal scouring or other processes during recent decades.

A small post-hole (004) had been cut through fill 008 in the south-west corner of the compartment (illus 8b). This feature of course could have been cut from a higher level, through deposits subsequently removed by Beveridge. Several small flat stones and pottery sherds (Vessel N11) had been wedged vertically around its sides, presumably to pack a timber post (illus 9: B–B).

ENTRANCE AREA

This area had been heavily scoured by tidal action, and only fragmentary remains were preserved, in a band c 1.5m wide immediately outside the burial

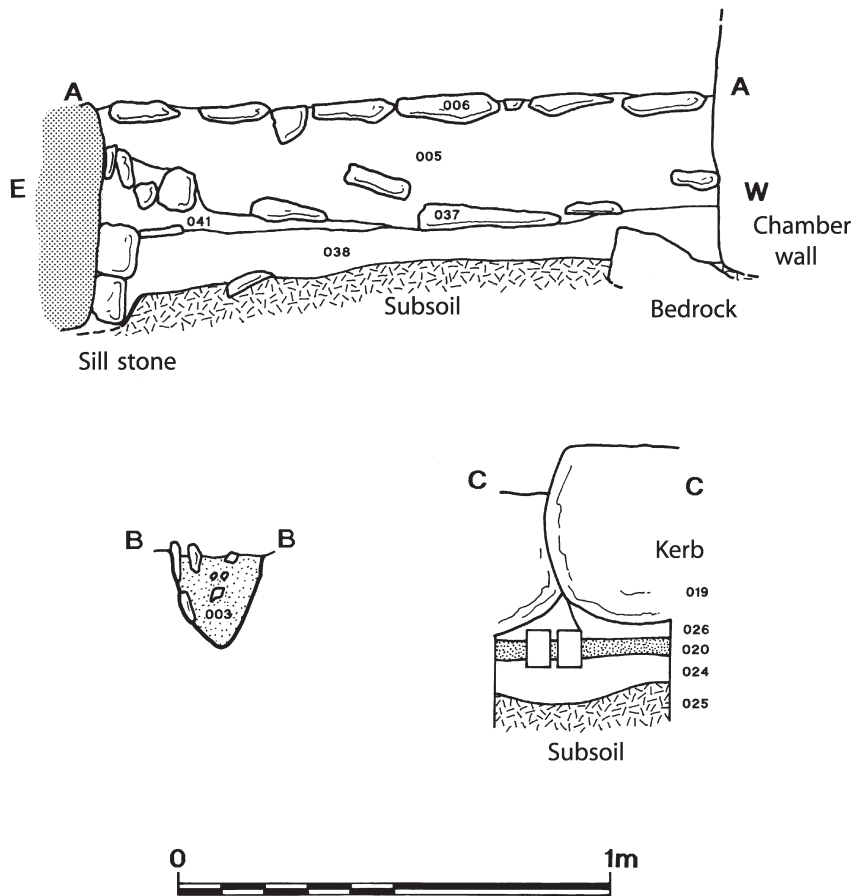


ILLUS 8 Plans showing coherent deposits identified in the compartments of the burial chamber; remains shown in adjacent compartments are not necessarily contemporary

chamber (illus 5). The identified remains comprised a rough and uneven stone surface similar in character to the paving found uppermost in the adjacent outer compartment. The stones had been fitted around the earthfast upright stone. A post-hole appeared to have been cut through the paving from

a higher level, and lay adjacent to the northern side of the chamber entrance.

Elsewhere outside the chamber, patches of brown sand (026) preserved between modern debris and pre-cairn layers, and infilling gaps in the face of the kerb (eg illus 9, C-C), represented the only



ILLUS 9 A-A, cross-section through deposits in the inner compartment (the depiction of the upper paving (006) is schematic, although its level is accurate; B-B, post-hole 004 section; C-C, elevation of a section of the kerb and deposits beneath it. Section locations are indicated on illus 5 & 8

surviving traces of archaeological deposits possibly associated with the use of the cairn.

PRE-CAIRN DEPOSITS

A greasy sandy clay layer, c 40mm thick, was identified running across the whole of the excavated area (illus 9: C-C; location of section shown on illus 5). It ran beneath the structural elements of the chambered cairn (as context 020), and its formation therefore appears to have pre-dated the construction of the cairn. Within the outer and inner compartments this layer (as contexts 036 and 038 respectively) contained lumps of charcoal and the occasional potsherd, and appeared to have been

disturbed by human activity. This deposit lay directly above a coarse sandy subsoil (024).

Stephen Carter undertook the examination of two soil thin sections taken from the pre-cairn soil (020/024 from beneath the outer kerb; illus 9, C-C, and 036/024 beneath the kerb-stone), in order to determine the nature and condition of the possible soil, and has reported as follows. On the basis of field evidence alone, it seems reasonable to assume that 020/036 is the topsoil of a buried soil profile. In thin section it is clear that this horizon has been highly modified after burial but sufficient evidence survives to show that it was enriched in organic matter, relative to the underlying sediment 024. This would support the field identification of a soil



ILLUS 10 The upper paving in the compartments

although it does not provide conclusive proof. It is not possible to offer any detailed comment on the pre-burial nature of the soil. The fact that a significant quantity of amorphous organic matter survives, despite the evidence for its partial loss over the past four to five thousand years, suggests that the original soil was highly organic at the time of burial. The survival of an intimate organo-mineral mix in 020/036 suggests that the soil did not have a surface O horizon (effectively a shallow peat) but was a highly organic Ao horizon to a shallow ranker-type (A and C horizons) profile. The buried soil was found not to be suitable for pollen analysis, nor was the charcoal within it suitable for radiocarbon dating. A full report forms part of the site archive.

THE POTTERY

A range of Neolithic and Beaker vessels was recovered during the excavations, totalling 301 sherds and fragments (including those recovered from soil

sample residues), and weighing some 1.5kg. The minimum number of vessels, based on diagnostic sherds alone, is 19, while a quantity of featureless body sherds may increase that number. There are 11 Neolithic vessels represented, some by only a single sherd, while others form substantial, reconstructable parts of vessels. There are also eight Beaker vessels represented. Sherds collected by Erskine Beveridge (1911) in the early part of this century are re-examined in the light of the recent excavations, although this assemblage is treated separately due to uncertainties over its precise provenance.

Radiocarbon dates cited in this section use the 2σ calibrated ranges presented by Ashmore et al (2001).

NEOLITHIC POTTERY

The sherds have been divided into 11 vessels on the basis of fabric, form and decoration, which are described individually in Table 1. Vessel numbers are prefixed with the letter 'N' to distinguish them from the Beaker pottery. A few featureless body sherds could not be assigned to any of these vessels and, although they may be Neolithic on the basis of fabric, these are not included below. The vessels were found in a variety of contexts beneath the upper paving in the two compartments, except a sherd from the entrance area (N7), and those from the post-hole (004) in the outer compartment (N11).

The pottery is very well made, hard and well fired. The walls are generally quite thin, and the surfaces are usually very smooth, almost burnished (illus 11). The fabric includes small grits of quartz and gneiss and flakes of mica, generally under 5mm in size, all of which would have been locally available or present already in the clay. There is very little evidence for use of these pots – they are very clean, for example with no charred residues. Vessel N1 has very slight sooting on its exterior and interior. The heavy abrasion visible on some of these pots is likely to be due to disturbance of the deposits in antiquity, while variability of abrasion is particularly notable on Vessel N2, where the rim sherds from context 032 are very much more abraded than the sherds from context 036. This indicates that different post-depositional processes were occurring within the tomb during and after its period of use. This has also had implications for

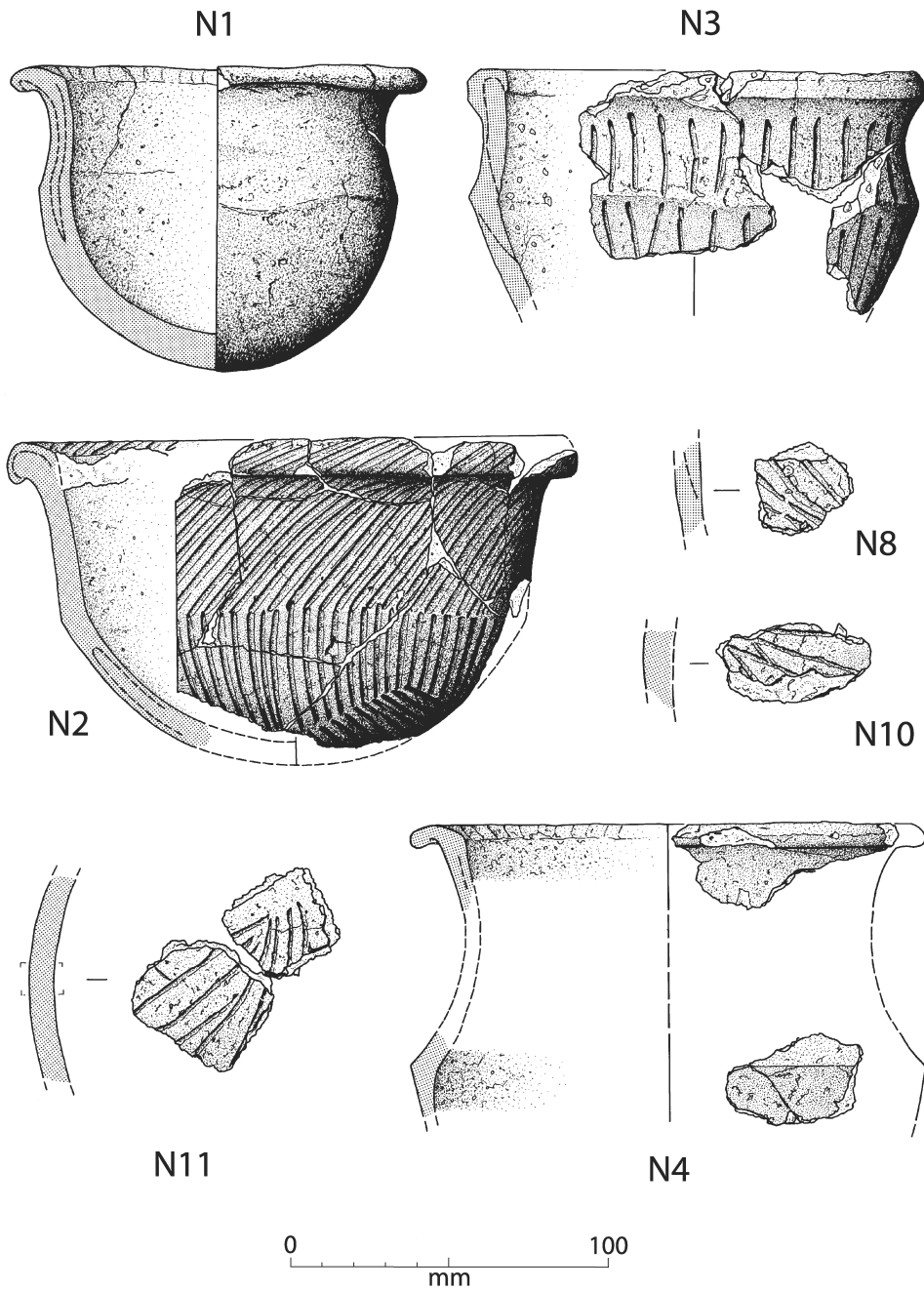
TABLE 1
Catalogue of Neolithic and Beaker vessels

Vessel	Description
N1	Almost complete; conserved (Forkes 1997); small, plain, round-bottomed vessel, with carination and elongated 7-section rim; 'neutral composite unrestricted' form (Cleal 1992). Very smooth, almost burnished surfaces with slight sooting on interior and base's exterior, along with some iron concretion. Sherds found in the inner compartment, beside the sill stone (context 041) and in context 005. Height 95mm; rim diameter 130mm. 32 sherds, 472g.
N2	Substantial portion of small open bowl, round-bottomed, with slight carination and slightly collared rim; 'open composite unrestricted' form (Cleal 1992). Decorated with parallel diagonal incised lines along rim interior and exterior and across body below rim; the lines then change direction and continue below carination, and also across base, changing direction again. Very smooth, almost burnished surfaces, but very abraded towards base; parts of the rim very abraded (especially that from context 032). Partially conserved. Height 100mm; rim diameter 170mm. Sherds found in outer compartment (contexts 032, 036). 23 sherds, 284g.
N3	Carinated bowl with flattened rim, diameter 140mm. Decorated with parallel vertical incised lines above and below carination. Very smooth exterior; interior much rougher. Sherds found in both compartments (context 041, inner compartment; context 032, outer compartment). 5 sherds, 125g.
N4	Very fragmented rim and body sherds from plain, carinated vessel with concave neck and elongated 7-section rim, similar to N1; rim diameter 160mm. Fabric very fine, orange-brown. Very smooth, almost burnished exterior. Sherds found in both compartments (context 041, inner compartment; contexts 008, 032 & 036, outer compartment). 50 sherds, 62g.
N5	Represented only by body sherds and one carinated sherd. Decorated with parallel incised lines, with exterior smoothed and much of inner surfaces missing. Sherds found in both compartments (contexts 005, 038, inner compartment; contexts 008, 032, 036, outer compartment). 16 sherds, 34g.
N6	Represented only by plain carinated sherds and associated body sherds. Very friable and powdery fabric with smoothed surfaces. Sherds found in the inner compartment (context 041). 7 sherds, 36g.
N7	Very abraded, plain carinated sherd (4g). Found in superficial deposits in entrance passage.
N8	Decorated body sherd (7g) with incised converging lines on exterior; found in outer compartment (context 036).
N9	Decorated body sherd (4g) with incised lines on the exterior; very smooth, almost burnished external surface. Found in outer compartment (context 036).
N10	Decorated body sherd (10g) with a smoothed exterior with incised lines, forming some kind of triangle or zigzag motif. Found in outer compartment (context 032).
N11	Four decorated body sherds (31g); decorated with incised lines on the exterior forming a stacked 'V' motif. Sherds found in outer compartment, seemingly forming part of the packing of a small post-hole (context 004).
B1	Decorated with incised parallel lines beside a row of stacked chevrons, motifs typical of Beaker pottery. 1 sherd, 14g.
B2	Decorated with parallel horizontal rows of twisted cord impressions, with very smooth, almost burnished, exterior. 1 sherd, 32g.
B3	Decorated with parallel horizontal rows of twisted cord impressions. Residue present on the interior of sherds. 3 sherds, 31g.
B4	Two decorated joining rim sherds (13g), with simple upright, slightly flaring rim, diameter 180mm. Very smooth, almost burnished surfaces. Decorated on interior, just below rim, with eight parallel horizontal rows of twisted cord impressions, in a single zone. Exterior surface plain, but very little of profile present.
B5	Four rim sherds (23g) probably from same vessel with pointed rim with small internal bevel. Charred residue present on exterior and top of rim.
B6	Plain rim sherd (11g) with a pointed rim, small internal bevel; shallow groove visible in section where sherd broken along the join between coils. Charred residue present on both surfaces.
B7	One plain rounded, uneven rim sherd (9g).
B8	Small piece of basal angle from flat base. Slight charred residue on exterior.

context 041, which was originally believed to have been largely undisturbed, but through analysis of the ceramics this context has been shown to contain stray sherds, and parts of Vessel N1 from this context were found to have been moved upwards to context 005. The vessels, where rim diameter can be determined, are small, no larger than 170mm in

diameter, and Vessel N1 sits quite comfortably in the palm of one hand: this size range does, however, correspond well with the range of vessel sizes found in other Neolithic contexts.

The Geirisclett assemblage fits very well into the Hebridean Neolithic pottery tradition. Good parallels for the vessel forms and decorative motifs can



ILLUS 11 Neolithic pottery

be found throughout the islands, both in tombs and at contemporaneous domestic sites. There are examples of carinated bowls very similar to Vessel N3 from, for instance, Eilean Domhnuill, North

Uist (Armit 1987, fig 9; Brown nd) and Eilean an Tighe, North Uist (Scott 1951, fig 8), although the decoration tends to be in diagonal incised lines rather than the vertical lines seen on Vessel N3.

However, vertical lines are seen on vessels of slightly different form at Allt Chrisal, Barra (Gibson 1995, fig 4.34). Although there are as yet no published drawings of the Neolithic material from Northton, Harris (Simpson 1976), the assemblage does include ridged jars and carinated bowls with incised herring-bone decoration and diagonal, vertical and horizontal incised parallel lines, along with Unstan bowls (Johnson, forthcoming). The deep multiple-ridged jar is distinctly Hebridean, but is absent from Geirisclett.

Vessel N2 has no exact parallels within the published assemblages, but the collared rim form is seen on open bowls from Eilean an Tighe (Scott 1951, fig 6) and Rudh' an Dunain, Skye (Scott 1932, fig 12) where it is also decorated with diagonal lines. There is also a good parallel from Unival (Scott 1948, fig 7), although the decoration does not continue across the base of the vessel, a trait which is more unusual in Hebridean pottery of this period. The collared rim form is common at both Northton (Johnson, forthcoming) and Eilean Domhnuill (Brown nd) although it is more often seen on the distinctive deep ridged jars. Vessels N1 and N4 are very similar to many of the so-called Plain Bowls – plain, carinated, round-bottomed bowls, which are well documented at Allt Chrisal (Gibson 1995, fig 4.29–31) and Eilean Domhnuill (Armit 1987, fig 11; Brown nd).

Other typical decorative motifs such as alternate triangulate blocks of diagonal lines, herring-bone, stab-and-drag, impressed dots/fingertip, and curvilinear incision can be seen at many of the sites mentioned, while lugs are rarer but have been documented at Eilean Domhnuill (Brown nd), Cletraval (Scott 1935) and Eilean an Tighe (Scott 1951). Ready parallels can be found for the simple incised decoration on Vessels N5 and N8–N11, and the sharp carinations of Vessels N6 and N7 are typical of a Hebridean Neolithic assemblage. There are no traits such as lugs at Geirisclett and the decoration is restricted to incision only; however, the assemblage is small and the range of variation will therefore inevitably be limited.

It is perhaps significant that there are no deep multiple-ridged jars and Unstan bowls (as defined by Sharples 1981) present at Geirisclett, when they are so common on settlements. Although the Geirisclett assemblage is not large, these types do however also appear to be absent from the excavated tombs of Unival and Cletraval (Scott 1948; 1935), which

contained 14 and 18 Neolithic vessels respectively, and from excavations at Calanais stone circle (Henshall & Johnson, in prep). There must, therefore, have been some difference in what was considered to be acceptable pottery for tomb deposition, but this phenomenon has yet to be fully explored. The absence of vessels which could be described as Grooved Ware, a pottery type uncommon in the Western Isles but recorded at Unival chambered tomb (Scott 1948), is also noteworthy.

A sequence of deposition for the vessels within the tomb cannot be determined. There are no stratigraphic links between the two compartments, while the incomplete nature of the vessels, apart from Vessel N1, suggests a great degree of disturbance of the tomb in antiquity, possibly during the insertion or re-arrangement of the burials, with portions of the vessels perhaps being removed from the tomb for deposition elsewhere or because of their talismanic properties. Vessel N1 is probably so complete only because it was protected by being tucked in behind the sill stone dividing the two compartments, and even then there is a small portion of the rim missing. Vessels N3, N4, and N5 have sherds found in both compartments, while the rest of the vessels are represented by sherds found in only one compartment. Many vessels are represented by just a handful of sherds. It would have been acceptable in older excavations to use a sequence within the tomb as the basis for a typological sequence of pottery (eg Cletraval and Unival: Scott 1935; 1948). However, it is now appreciated that the depositional history within tombs is complex and it can never be known how much of the original contents were removed during their period of use, as the disturbance at Geirisclett demonstrates.

The plain carinated bowls would have previously been seen typologically as the earliest vessel type, based on the assumption of a simple to complex evolution. However, in recent years, it has been recognized that they appear on sites in association with all of the other types of Neolithic pottery found in the Hebrides, and in fact the vessel form can also be found decorated (eg Allt Chrisal, Gibson 1995, fig 3.32–33; Unival, Scott 1948, figs 6 & 7). They thus form a plain component of a larger Hebridean assemblage which incorporates the ridged jars and Unstan bowls, as well as a variety of open bowls and small cups, in use throughout the period (see Brown nd; Gibson 1995; cf Henshall

1972; Scott 1935). In no case can it be suggested that plain carinated bowls are typologically earlier than the more elaborately decorated carinated bowls and jars, and this is borne out at Geirisclett where decorated and plain vessels are found in the same contexts.

In the past it would have been usual to have derived pottery dating based upon the diffusion of forms and styles from the south of England or even the continent (eg Scott 1948; McInnes 1969). However, there are now four Hebridean Neolithic domestic sites that have been radiocarbon-dated. Northton, Harris has one date for the later Neolithic levels of 3350–2890 cal BC (BM-705) (Burleigh et al 1973). Bharpa Carinish has Neolithic dates from 4550–4050 (GU-2669) to 3350–2450 cal BC (GU-2672) (Crone 1993), although the earliest dates should be treated cautiously. Allt Chrisal has dates spanning 3710–3370 (GU-3922) to 3360–2920 cal BC (GU-3923) (Gibson 1995). Eilean Domhnuill has produced a range of dates indicating the settlement was occupied from before c 3650 cal BC until c 2600 cal BC (Armit, forthcoming). The ranges of these dates together suggest considerable longevity in the Hebridean Neolithic pottery tradition, as the highly-decorated vessels and typical vessel forms are present throughout this period. There is as yet no detailed sequence published that can demonstrate small-scale changes within the broad assemblage, as either the sites were excavated many decades ago or have no depth of stratification. In this respect the recently excavated and deeply stratified settlement of Eilean Domhnuill, Loch Olabhat (Armit, forthcoming), as yet not fully published, is very important.

BEAKER POTTERY

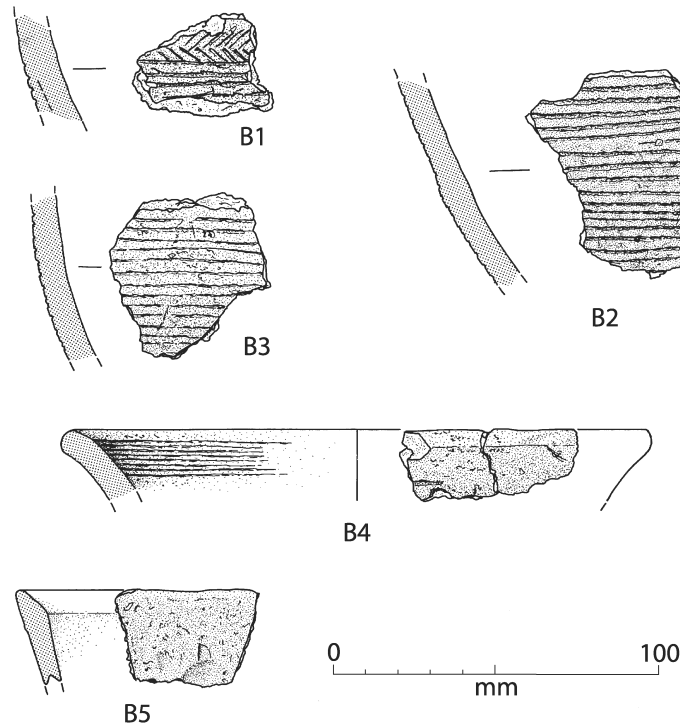
The sherds could be divided into eight vessels on the basis of fabric, form and decoration (illus 12). Vessel numbers are prefixed with the letter 'B' to distinguish them from the Neolithic pottery (Table 1). Amongst the large quantity of featureless body sherds found in this context, at least two different vessels could be distinguished; however, as the vessels' forms could not be determined and no decoration is evident, these will not be included but could be Beaker on the basis of fabric. Each vessel is represented by fewer than four diagnostic sherds. Unfortunately there is very little of any of the

profiles of vessels B5–B8 present. All of the diagnostic Beaker pottery comes from context 005 in the inner compartment.

The Beaker pottery is generally thicker-walled than the Neolithic assemblage, with the surfaces usually less well finished. The fabric contains grits of quartz, gneiss and mica generally under 5mm across, all of which would have been locally available or already present in the clay, and includes occasional grass marks on the surfaces. There is some evidence for use of these pots, with charred residues present on several sherds. The vessels are fairly abraded, which again is likely to be due to disturbance of the deposits in antiquity. The sherds are generally small, with the vessels represented by only a few sherds each. There are no substantial portions of vessels or even profiles present, and it has been possible to determine only one rim diameter.

There is a wealth of Beaker material known from the Hebrides, much of it collected from midden sites eroding from the machair, such as Garrafad and Elishader on Skye (Close-Brooks & Ritchie 1978) or Paible and Scalpaig, North Uist (MacLean & Crawford 1978; Crawford 1978). The excavations at Calanais stone circle also produced a significant Beaker pottery assemblage (Henshall & Johnson, in prep). There are also excavated domestic settlements, associated with buildings and large middens, which have produced Beaker pottery in considerable quantities. These include Allt Chrisal, Barra (already mentioned in connection with Neolithic pottery: Gibson 1995); Rosinish, Benbecula (Shepherd 1976); Northton, Harris (Simpson 1976); and Dalmore, Lewis (Ponting et al 1984). The last two of these sites have Neolithic levels as well as Beaker, but all except Allt Chrisal await full publication.

The rim forms of vessels B4–7 found at Geirisclett are typical of Beaker pottery, while flat bases (vessel B8) appear late in the Neolithic with Grooved Ware and Beakers, superseding the traditional Neolithic round base. A range of decorative styles is known from the Hebridean Beaker assemblages which have ready parallels with the present assemblage: for example, the middens on Skye have produced both AOC decoration (see Vessels B2–3) and incised zonal patterns including chevrons (Close-Brooks & Ritchie 1978, fig 11). The range of decoration at Northton includes comb, shell and



ILLUS 12 Beaker pottery

cord impressions, while the most common technique comprises incised zonal motifs such as incised parallel lines and stacked chevrons very similar to vessel B1 (Simpson 1976, figs 12.3–4). The Beaker layers at Northton have been radiocarbon-dated to 2140–1740 cal BC (BM-706) and 1940–1640 cal BC (BM-707) for the earlier and later phases respectively (Burleigh et al 1973). The Calanais assemblage (Henshall & Johnson, in prep) also incorporates All-Over-Cord (AOC), shell and comb impressions, and some incision, in geometric zonal motifs, and includes rows of cord on the rim interior in a similar manner to vessel B4.

Very little has so far been published from Rosinish and Dalmore, although the excavators suggest that a wide range of Beaker types is present (Shepherd 1976; Ponting et al 1984). At Allt Chrisal (Gibson 1995) AOC is the most common decorative technique, including cording on the rim interior (ibid, fig 4.38), along with comb impressions, and there is very little incision although motifs like multiple chevrons do appear as comb impressions (ibid, fig 4.36).

There have been no individual burials with Beaker accessory vessels found so far in the Western Isles (Cowie 1995, 284; Armit 1996, 96). This contrasts with the rest of the British Isles where single inhumations with Beaker grave-goods, either in a stone cist or under a round cairn, are much more common than domestic deposits of Beaker pottery (Simpson 1971; Gibson 1984). The discovery closest to the Western Isles is that at Sorisdale on Coll, where skeletal remains were found in an unlined grave-pit, accompanied by an AOC Beaker which had an undecorated cordon at its shoulder/carination and four rows of cord impressions on the interior of the rim (Ritchie & Crawford 1978, fig 3), very similar in fact to the decoration on Geirisclett vessel B4. The skeleton at Sorisdale has been dated to 2200–1950 cal BC (BM-1413) (ibid).

Although it had previously been generally accepted that the AOC Beaker was the earliest type to appear in Britain (eg Henshall 1972), with complex incised motifs developing later, this sequence has been called into question by the British Museum dating programme (Kinnes et al 1991). It

seems that the main currency of Beakers is about 2600–1800 cal BC, and that within that time span it is very difficult to determine a stylistic succession through radiocarbon dating.

UNDIAGNOSTIC SHERDS

A total of 134 small featureless body sherds, weighing 301g, was recovered from both compartments of the tomb. These probably represent a range of vessels, though none of the sherds could be assigned specifically to any of the Neolithic or Beaker vessels described above, due to their small size. The vast majority of this material came from context 005, with at least two different vessels represented, although the mixed and reworked nature of this deposit makes any inferences difficult; however, it could be Beaker pottery on the basis of fabric, although the vessels' forms could not be determined and no decoration is present.

BEVERIDGE'S ASSEMBLAGE

16 sherds of pottery were recovered by Erskine Beveridge (1911), when he cleared the contents of the tomb above the levels excavated in 1996–7. These sherds are in the collection of the National Museums of Scotland (accession nos GT 49–53). The pottery was included in Henshall's survey of the chambered tombs of Scotland, with descriptions and illustrations of a selection of the sherds (1972, 310; 516–17). This material was re-examined by the author; the sherds can be correlated with the photographs published by Beveridge and with Henshall's illustrations.

The sherds represent six different vessels, none of which were represented by sherds within the 1996–7 excavated assemblage, and therefore increase the minimum number of vessels from Geirisclett to 25. The decorated sherds are all Beaker, one vessel with characteristic cord impressions, interspersed with circular impressions (GT 52), and three others with incised stacked chevron motifs (GT 49 & 51). A group of three plain rims (GT 50) from the same vessel is not typically Beaker, the rim moulding being too heavy and pronounced for it to be accepted as a cordon below the rim, a trait which is fairly common on Beakers in the west. This group has similarities with some of the heavy Neolithic rims from Northton (Johnson, forthcoming), where they appear more usually to be highly decorated, and also with two of the

illustrated plain vessels from Allt Chrìsal (Gibson 1995, fig 4.31, nos 55 & 57), and therefore is probably Neolithic in date.

POTTERY DISCUSSION

Of the chambered cairns in the Outer Hebrides, many have been disturbed by antiquaries, no doubt because they were highly visible and attracted the curious, but few tomb sites have been the focus of recent excavation – the last in the Western Isles was that at Calanais examined by Patrick Ashmore in the early 1980s, although the contents of the tomb were found to have been cleared out in antiquity (P Ashmore, pers comm). Also, despite these more recent excavations, there is still a lack of published material with which to compare the current assemblage.

Chambered cairns could also be the focus of activity or re-use during prehistory. For example, the construction of a later Iron Age roundhouse at Clettraval resulted in the robbing out of part of the earlier chambered cairn to provide building stone, and the reuse of the burial chamber (Scott 1935). The disturbance of funerary deposits during the life of the tomb is evidenced at Geirisclett by the partial and abraded nature of the vessels and the fact that several of them have sherds found in both compartments. The Beaker deposits also seem to have been disturbed in antiquity, with only very partial vessels present in a reworked deposit (005).

In this context, then, Geirisclett provides a valuable addition to the known assemblages of Neolithic pottery from chambered cairns in the Outer Hebrides. The Neolithic assemblage is smaller than those from Clettraval (Scott 1935) and Unival (Scott 1948), despite the disturbance of these tombs by Iron Age structures, although a greater number of fragmentary Beaker vessels is represented at Geirisclett. However, as an illustration of the variety inherent within tomb assemblages, which again may be the product of a variety of depositional processes and disturbance, Rudh' an Dunain (Scott 1932) produced only parts of two Neolithic vessels and one Beaker. It is interesting to compare this assemblage with that from the domestic settlements and discover that there is a marked difference between the pottery being used as grave-goods and that being used as cooking pots on settlements, namely the notable absence of Unstan bowls and deep ridged jars from tombs.

It is striking too that the Neolithic pottery is very clean and free of charred residues, while the Beaker pottery more often than not has charred residues adhering to its surfaces, indicating that the Neolithic and Beaker pots had different uses before they were placed in the tomb. Following the series of dates relating to Beakers provided by the British Museum's programme (Kinnes *et al* 1991), we can expect the cessation of human use of the tomb to have occurred some time after the introduction of Beakers to the Western Isles, which may have occurred as early as 2600 cal BC.

LITHIC MATERIAL

Bill Finlayson

An assemblage of 1030 pieces of quartz, eight pieces of flint, and three pieces of unidentified raw materials was recovered from stratified contexts during the excavations at Geirisclett. An important question, arising out of the presence of large numbers of fine fraction material and the depositional context of this material within the chambered tomb, was how much of this material had been worked to produce tools. The assemblage has been analysed following a standard method developed to study quartz artefacts from Scottish sites (Finlayson 1998).

Although the number of quartz artefacts is inflated by the presence of small material, including items recovered from flotation, the proportion of such material is much lower; 444 pieces are less than 10mm in maximum dimension, but of these only 174 are less than 5mm. Two of the unidentified raw material pieces (possibly mudstone) are less than 10mm in dimension. Nearly all the quartz used appears to have a relatively good conchoidal fracture, is fine-grained and homogeneous, although there are a small number of pieces that are much less homogeneous in texture and more coarse-grained. It seems unlikely that these latter represent material that could have been used for tool manufacture. Similar material elsewhere has been interpreted as material that was broken down to use as a pottery temper.

More than half of the quartz assemblage is composed of chunks (660 pieces), but this does include all the <5mm material and much of the <10mm material. There are 209 splinter flakes and 139 flakes. These quantities of flaked material both indicate the good quality of the quartz, but also

suggest that much of the material has been deliberately knapped in a controlled manner. This is supported by the presence of 14 bipolar pieces, possibly used as cores, or possibly representing a crude tool form, and three other core elements. Two of these have evidence of platform reduction, while the third is a large amorphous core. A further piece appears to be a platform rejuvenation flake, while one chunk shows some evidence for having been started as a core. The presence of three quartz blades confirms both the quality of the material and the controlled knapping undertaken. Three small bashed pebbles are present, but it is not clear why these were not further reduced.

It therefore appears that, even if some of the material has been deposited as simply shattered quartz, much of it probably relates to controlled quartz working. Given the large number of pieces present between 5mm and 10mm it even appears possible that much of that knapping was undertaken in situ. The alternative explanation would require a considerable effort taken in gathering up this small material for redeposition in the tomb with the larger pieces; of course, if knapping was undertaken on something like a blanket, such an operation would not have been difficult.

At present there are too few analysed quartz assemblages, and too many variations in the quartz used, to allow reliable comparison with material from domestic contexts to determine whether the proportions of material recovered here are likely to be entirely the product of knapping, or whether (as might be suggested by the coarse material) at least some of the material has simply been broken up for some ritual purpose. The two activities need not, of course, be mutually exclusive. Because of its scarcity on many domestic sites, it has been argued that the deposition of lithic material may at times have been a carefully controlled activity (G Warren, *pers comm*).

The small flint collection comprises one blade and seven flakes. There is no evidence for secondary modification on any of these artefacts.

DISTRIBUTION

Andrew Dunwell

The distribution of the lithic material within excavated contexts is highly significant. Material was present in varying quantities in almost all excavated deposits within the burial chamber. The recovery of

TABLE 2
Distribution of lithic material, by context

Inner compartment	No	% total	Outer compartment	No	% total
Disturbed subsoil	9	1	Disturbed subsoil	42	4
Basal floor	8	1	Basal fill 032	78	7
Intact fills	46	4	Upper fill 008	11	1
Disturbed fills	672	64	Total	131	12
Paving and hearths	173	17	Entrance passage	2	1
Total	908	87			

only two lithic pieces from outside the chamber, from either natural or anthropogenic deposits, and the low frequency of lithic material in the disturbed subsoil beneath the compartment deposits, combine to indicate first, that the lithic material was deliberately introduced to the burial chamber and was not naturally occurring in considerable quantities at this location, and second that its presence does not reflect activity on site prior to the construction of the chambered cairn. Within the burial chamber, the occurrence of lithic material concentrated particularly in the inner compartment, from where over 85% of the total lithic assemblage was recovered (Table 2). Given the similar volume of deposit excavated from each compartment, and the similar post-excavation treatment these deposits received, this variation can be seen to be a true reflection of past activity. Within the inner compartment, the majority of the material derived from the disturbed fill (005), although it should be noted that this formed by far the most voluminous deposit in that compartment.

THE HUMAN REMAINS

Jacqueline McKinley

Bone from ten contexts within the chambered cairn was analysed using the writer's standard procedure for the examination of cremated bone (McKinley 1994, 5–21). Age was assessed from the stage of development and fusion (McMinn & Hutchings 1985). Full details are presented in an archive report.

Three of the contexts contained no human bone, the material comprising a combination of burnt and unburnt animal bone (see Thoms below for further details), and three of the deposits containing cremated human remains also included fragments of burnt and unburnt animal bone. A total weight of only 32.7g of cremated human bone was recovered (ie <3% of the minimum expected weight from a

cremated adult: McKinley 1993). Most of the bone was worn to some degree, with a 'chalky' appearance, indicative of the acidic nature of the burial matrix and, possibly, the effects of tidal incursions. The bone from the primary surface and disturbed subsoil surface of the inner compartment (037, 038) was least affected. There was no evidence to suggest that the human remains could not have comprised those of a single adult. No evidence indicative of the sex of the individual survived and no pathological lesions or morphological variations were observed.

Cremation appears to have been efficient, most of the bone being the buff/white colour indicative of full oxidation (Holden et al 1995a; 1995b), but with so little of the bone surviving it is difficult to be conclusive. A small fragment (0.2g) of material which may be charred soft tissue (McKinley 1994, 83) was recovered from context 038, suggesting incomplete cremation of all the organic components of the body.

Most of the bone (94%) was recovered from dispersed deposits within the inner chamber, probably reflecting the original place of deposition of the bone; fragments from elsewhere may indicate contemporaneous accidental or deliberate scattering, or subsequent disturbance. Charcoal flecking from layers within the outer chamber could be indicative of pyre debris, as may the areas of burnt

TABLE 3
Cremated human bone

Context	Cremated bone	Age
Inner compartment		
005	2.3g	> infant
037	10.9g	subadult/adult
038	5.1g	Adult
040	1.6g	> infant
041	10.9g	Adult
Outer compartment		
008	1.2g	> infant
032/036	0.7g	?

material within the inner chamber. Burnt animal bone was found in certain deposits (Thoms, below) and, although the inclusion of animal bone in cremation-related deposits is often characteristic of the rite, these deposits may indicate some other unrelated activity.

Undoubtedly, some bone may have been lost from the chamber subsequent to deposition, through a range of potential mechanisms. However, the quantities of cremated bone commonly recovered from such Neolithic burial deposits are generally relatively small and it is equally likely that either only a small quantity of bone was originally deposited, or that some was removed as part of the 'curation' commonly indicated in Neolithic chambered tombs (eg Saville 1990, 262; Whittle 1991, 96).

ANIMAL BONE

Jennifer Thoms

The bone fragments were examined to investigate species present, where possible, and to determine whether any information on site taphonomy could be obtained from the bone assemblage. The bone fragments were scanned to determine whether any remains from microfauna (rodents, small birds etc) were present. Fragments smaller than 4mm were then disregarded. The indeterminate fragments were categorized as burnt or not burnt and quantified by weight. The quantities of both taphonomic categories were noted. Identifiable bone fragments were, as far as possible, identified to element and species. The majority of the bone fragments were not identifiable to element and species. The results are presented in Tables 4 and 5.

Context 005 is a gritty clay underlying and surrounding the paving covering the inner compartment. The presence of burnt bone in context 016

TABLE 4

Indeterminate bone fragments. * uwf — this fragment had soil attached and could therefore not be weighed

Context	Unburnt (weight, g)	Burnt (weight, g)
Inner compartment		
005		15.6
016		0.1
041	0.6	
Outer compartment		
003	3.0	
008	9.2 + uwf *	0.8
032	0.2	<0.1

TABLE 5

Identifiable animal bone fragments

Context	Element	Species	Age
Surface	1 molar tooth	Ovicaprid	> 3–5 months
008	Tooth fragment	Cattle	–
008	Distal tibia	Ovicaprid	> 1.5–2 years
032	Phalanx 1	Sheep	< 13–16 months

would appear to support the excavators' suggestion that the deposit may have been hearth waste resting on the upper paved surface in the inner compartment. Both contexts have apparently had burnt material within them, but the quantities of bone are too small to warrant further speculation.

Small fragments of unburnt, indeterminate bone were retrieved from contexts 003 and 008 in the outer compartment, as were a cattle tooth fragment and a tibia fragment from an ovicaprid (sheep or goat). Context 032 contained small quantities of indeterminate bone fragments, both burnt and unburnt, as well as a phalanx from an immature sheep.

The presence of animal and human bone fragments in chambered cairns in Scotland is commonplace when soil conditions favour preservation. In chambered tombs in Orkney various animal and bird bones have been retrieved during excavation. At Quanterness they have been interpreted as deriving from feasting and from ritual (Renfrew 1979). Human, animal and bird bones were retrieved from deposits excavated at Isbister, where animal remains were numerous (Hedges 1983). Animal remains may also have been introduced by carnivores, or may result from the natural death of sick animals seeking shelter in the tomb (eg Point of Cott, Westray: Barber 1997). Otters are known to have used the tomb at some point (Cerón-Carrasco, below) and the chance that the small amount of unburnt bone at Geirisclett represents material introduced by non-human agency cannot therefore be ruled out.

In summary, most of the bone fragments retrieved were not identifiable to element or species. The four identifiable fragments derived from cattle and sheep or goats. These could have been grave goods, or may have derived from funerary feasting, or may have been introduced by natural agencies. The possibility that the cremated fragments may have derived from human remains cannot be ruled out from the information presently available.

FISH REMAINS

Ruby Cerón-Carrasco

The fish remains from Geirisclett chambered tomb were recovered by wet-sieving through a 1mm mesh. All fish remains were analysed and identified to the highest taxonomic level possible, usually the species or to the family group, but otherwise were classed as unidentifiable when these consisted of mainly broken fragments. A full report containing tabulated data forms part of the site archive.

Five contexts produced fish remains: contexts 005, 016 and 041 in the inner compartment, and 008 and 032 in the outer compartment. Context 005 had the largest species representation, in which butterfish (*Pholis gunnellus*) was the most abundant species identified followed by the tadpole-fish (*Raniceps raninus*) and the stickleback (*Gasterosteus aculeatus*); shore rockling (*Gaidropsarus mediterraneus*), 4-bearded rockling (*Rhinonemus cimbricus*), sand goby (*Pomatoschistus minutus*) and salmon/trout were also present. Context 016 contained remains of flatfishes only; the only identified species was sole (*Solea solea*). Context 041 contained rock goby (*Gobius paganellus*), saithe (*Pollachius virens*), butterfish and freshwater eel remains. Context 008 contained remains of shore rockling, whereas Context 032 contained remains of saithe and butterfish.

There is every indication that the fish bone remains from Geirisclett chambered tomb derived from animal activity. There is no indication that any of these remains had been caught and eaten by man. All the species identified fall into the category of the Eurasian coastal otter's (*Lutra lutra*) favourite food (Gormally & Fairley 1982; Murphy & Fairley 1985; Watt 1992), small species of inshore rock-dwellers and bottom feeders. In addition, most of the specimens present in the assemblage represent 50–150mm long specimens; small fish up to 100–150mm are swallowed completely by the otter. A few of the elements were often flattened or distorted, which is also characteristic of offal and faeces from otter holts (Cerón-Carrasco 1999), where these animals hide during the day. Otter spraint, a territorial marker, would be more likely to occur in the open air (Kruuk & Hewson 1978).

CARBONIZED PLANT MACROFOSSILS

Mike Church & Mike Cressey

Ten samples were analysed, most of which produced carbonized remains. The bulk samples were taken

when the excavator deemed a context to be worthy of sampling – ‘judgement sampling’ (Jones 1991). The bulk samples were processed using a flotation tank (Kenward et al 1980) with the residue held by a 1.0mm net and the flot caught by 1.0mm and 0.3mm sieves respectively. All the flots and residues were dried and sorted using low-powered stereo/binocular microscope at x15–80 magnification. All identifications were checked against botanical literature and modern reference material from collections in the Department of Archaeology, University of Edinburgh. Nomenclature follows *Flora Europaea* (Royal Botanic Garden Edinburgh 1998) with ecological information taken from Clapham et al (1989), Stace (1991) and Pankhurst & Mullin (1991).

Charcoal identifications were made using a binocular microscope at magnifications ranging between x10–200. Generally identifications were carried out on transverse cross-sections on charcoal measuring 4–6mm. Anatomical keys listed in Schweingruber (1992), in-house reference charcoal and slide mounted micro-sections were used to aid identification. Asymmetry and morphological characteristics were recorded. Table 6 presents the charcoal and carbonized plant macrofossils recovered from the bulk samples. All of the samples come from the areas within the burial chamber, including trampled or otherwise disturbed pre-cairn deposits with evidence of contamination from above. The assemblage has been analysed as a single unit, as inter-block comparison of a demonstrably disturbed site is meaningless with such low counts. The contexts contain charcoal from birch (*Betula* sp), hazel (*Corylus* sp), pine (*Pinus* sp) and ling heather (*Calluna vulgaris* L Hull). These trees and shrubs were common throughout the Western Isles during this period (Coles et al 1998), and use of driftwood therefore need not be implied (cf Boardman 1995). There are also fragments of hazel nutshell (*Corylus avellana* L) and macrofossils from culms and roots.

Despite the very low frequencies of carbonized remains from the tomb, some conclusions can be drawn. First, the very low frequencies are consistent with what would be expected for a funerary, non-domestic site in the Western Isles (Church 2002). However, the lack of any cereal grains is in contrast with other early prehistoric funerary sites yielding archaeobotanical remains, such as the recently excavated Bronze Age kerb cairn near Calanais

TABLE 6
Carbonized plant remains

Context	005	013	014	016	028	032	036	037	038	041
Volume (litres)	6.5	1			0.25	7	6	1	6	9
Charcoal										
<i>Betula</i> sp	>4 mm (g)		0.26				2.4		0.11	
<i>Calluna vulgaris</i> L Hull	>4 mm (g)	0.02		0.01	0.01	0.01	0.01		0.01	0.01
<i>Corylus</i> sp	>4 mm (g)					0.05	0.28			
<i>Pinus</i> sp	>4 mm (g)	0.05								0.07
Plant macrofossils										
Monocotyledon	culm node (<2 mm)						1			
Cereal/monocotyledon	culm base (>2 mm)	1					2			
Monocotyledon	culm base (<2 mm)							1		2
<i>Chenopodium album</i> L	seed	1								
<i>Erica/Calluna</i>	capsule/ovary									1
<i>Hypericum pulchrum</i> L	seed									1
<i>Rumex crispus</i> L	fruit	1								
Poaceae undiff (small)	caryopsis	1								
<i>Carex</i> sp (trigonous)	fruit	3								1
<i>Corylus avellana</i> L	nutshell	1F					3F			
Indeterminate	rhizome						4F			
Indeterminate	seed/fruit	4								
Fungal sclerotia	sclerotia	4	16		3	200+	500+	100+	200+	100+
Total quantifiable components		10					3	1		5
Quantifiable components/litre		1.5	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.6

(Neighbour 1997), which have deposits rich in foodstuffs possibly relating to feasting activities marking the closure of the site. This suggests a difference in activities between these sites and Neolithic chambered tombs, such as Geirisclett.

The largest group of ecofacts from the samples comprised fungal sclerotia. Their existence can indicate decaying organic matter, ranging from plant refuse to human remains. The rest of the macrofossils are typical of the assemblages from Atlantic Scotland, with ecological affinities with slightly damp, disturbed ground. The single seed of Slender St John's wort (*Hypericum pulchrum* L) is of note, as Gaelic plant lore (Martin 1703; Bennett 1991) highlights it as having supernatural powers, a legend which is said to have had its roots in pre-Christian times in Western Atlantic Scotland. However, we must be careful not to overemphasize the importance of a single seed. The overall origin and taphonomy of the carbonized remains is not clear – bioturbation and human interference have been proposed, with the added complication of post-burial alteration apparent in the external pedogenic profile of the site (above).

DISCUSSION

Consideration of the results of the excavations at Geirisclett will be restricted to those aspects of chambered tomb studies for which this work has provided relevant information. The social landscape and distribution of chambered tombs on North Uist will not be considered, despite the recent interest in this area (for the Western Isles see Müller 1988, with critique by Chrisp 1990; also Armit 1996), since the results of the excavation add little directly to these discussions.

THE CHAMBERED CAIRN: FORM AND CLASSIFICATION

The recent fieldwork at Geirisclett has confirmed that the architecture of the burial chamber of the cairn is of the distinctive 'Clyde' type, defined by Henshall (1972, 32) as an entirely or partly slab-built structure which is often divided into multiple compartments.

The chamber has walls of large orthostatic slabs, which stand higher towards the rear of the chamber; the internal space is separated into two compartments by a transverse sill stone; and the entrance to the chamber is defined by an upright kerb-stone. The dimensions of the chamber walls and compartments lie comfortably within the range typical of such structures, and two-compartmented chambers are a common form (cf Henshall 1972). Little survives of the roofing material, although it is likely to have been corbelled, to judge from what little does remain. Beveridge (1911, 255) indicated that he removed a collapsed lintel from the chamber, which may have formed part of the capping of the roof. The prone slab to the east of the chamber is too large to have formed a roof slab, and must have performed some other function.

While the classification of the burial chamber at Geirisclett as being of Clyde type is assured, the form of the cairn in which it lies, from what little can be securely determined, is less readily classifiable. Problems in defining the extent, shape and structural history of the cairn have been discussed above, and would have required much more extensive excavation than took place. Certain architectural features of the Geirisclett cairn lie outwith the norm for Clyde cairns, although in no case are they without parallel elsewhere (cf Henshall 1972). Where exposed, the outer edge of the cairn, although potentially only in its final form (discussed further below), appears to have been formed by a simple boulder kerb, with no trace of an orthostatic façade, such as that present at Cletraval (Scott 1935). No evidence of portal stones or their settings was certainly identified. The partial remains in the entrance area to the chamber were difficult to interpret, although the two opposed low upright slabs in the entrance area, one embedded within the kerb, may be all that remain of a low ante-chamber.

Given the poor preservation of the cairn, as a result of stone robbing, the apparent insertion of secondary structures, and tidal

erosion, it would be unwise to pursue too far a reconstruction of the cairn's morphology. However, two alternative but not mutually exclusive explanations can be advanced for the observed remains – first, that the cairn was truly of atypical form for a Clyde group structure; second, that exposure of the outermost elements of the cairn during excavation revealed only the latest structural form of the cairn. There is no evidence one way or the other from this site or from elsewhere in the Western Isles; as yet, the excavation of Hebridean chambered cairns has been restricted almost entirely to the investigation of the contents of burial chambers.

In support of the first explanation, the absences of portal stones and orthostatic façades, and the presence of entrance passages (as an original design feature) are uncommon, but not unparalleled, characteristics of Clyde cairns. Henshall (1972) has discussed the wide range of structural forms attested within the group, and it seems clear that there was no universal building template and that regional variations are present. It is doubtless significant that most of the chambered cairns of the Western Isles are passage graves (Barber 1985, 30). To date only Geirisclett and Cletraval have been confirmed as having Clyde characteristics. The juxtaposition of these two chambered tomb 'traditions' has provoked much debate as to whether this reflects cultural or chronological factors (eg Piggott 1954, 224–32; Henshall 1972, 112; Armit 1996, 76), despite the apparently similar burial rituals and types of pottery deposited revealed by previous excavations at Unival passage grave (Scott 1948) and Cletraval Clyde tomb (Scott 1935). In this regard it is noticeable that the ESE-facing orientation of the chamber at Geirisclett is typical for Hebridean passage graves, although it also falls within the range of orientations of Clyde cairns (Henshall 1972, figs 8 & 10). The possibility that Cletraval and Geirisclett represent local hybrid forms, comprising Clyde chambers set within cairns

and approached by passages, can be countenanced.

Set against this, however, is the possibility that the Geirisclett chambered cairn contains evidence of multiple phases of construction which were not demonstrated by the limited excavations. More extensive excavations of chambered tombs elsewhere in western Scotland have on several occasions proved cairns to have a complex evolution of structural form (eg Ritchie 1997, esp 70–1, for Argyll). It is thus conceivable that the apparent passage leading to the chamber at Geirisclett, and the visible kerb, are secondary features resulting from an enlargement of the cairn (cf Henshall 1972, 60), although supporting structural evidence has yet to be identified. Such a possibility is not unlikely given the complex history of use of the chamber itself.

DATING

Although datable wood charcoal and plant macrofossil remains were recovered at Geirisclett, the context and taphonomy of these materials meant that they were not considered suitable for dating on their own, as it is far from certain what interpretation could be placed upon any dates obtained (Church & Cressey, above). The cremated human and burnt animal bones, as well as the organic pottery residues, did not produce single entity samples large enough to form viable radiocarbon samples. Mixed entity dating was not considered appropriate for these materials given that it could not be assumed that the entities to be combined were necessarily of the same date (see Ashmore 1999 for problems associated with dating mixed samples). The combined weight of the entire fish bone assemblage was below the minimum weight required for obtaining an AMS date. Finally, the unburnt animal bone did not come from securely sealed contexts and it may be of relatively modern origin (below). Samples of datable material have been retained with the finds assemblage, should future advances in

techniques mean that they become viable dating samples.

Consequently, no detailed discussion of dating and chronology of the construction and use of the chambered cairn can be presented, in the absence of radiocarbon dates from the site. Little is known of the chronology of the chambered cairns on the Western Isles, although there is little reason to suspect that this was very different from other areas of Atlantic Scotland. Scott's (1935; 1950) excavations took place before the advent of radiocarbon dating, and the more recent excavations at Calanais (Ashmore 1981), which have produced radiocarbon dates, are not fully published. It is also recognized that the excavation of burial chambers can only provide a partial, and potentially misleading, impression of the overall chronology and history of use of a chambered cairn. Fortunately, the general chronological range of Beakers is tolerably well understood (Kinnes et al 1991) and indicates that the secondary activity at Geirisclett post-dates c 2600 cal BC.

TAPHONOMY OF THE CHAMBER DEPOSITS

Excavations within the burial chamber revealed that a sequence of deposits had survived Beveridge's attentions, sealed beneath paving. These deposits showed evidence of considerable disturbance in antiquity (ie during the use-life of the tomb), potentially by both human and natural agencies. This disturbance is reflected by the presence of stratified and partial deposits within the inner compartment, through which the remains of pottery vessels were scattered. The fact that only fragments of most of the pottery vessels were present suggests that much material had been removed from the chamber in antiquity. As noted above, different sherds of the same vessel can be seen to have undergone different levels of post-depositional wear. Little was encountered which could be considered as an in situ funerary deposit. It is thus worth assessing the taphonomy of the excavated

deposits before considering what they reveal of prehistoric burial practices. The importance of this process as a part of interpreting chambered tomb deposits has been emphasized with the publication of Point of Cott (Barber 1997).

Examination of the artefacts and ecofacts recovered during the excavations indicates a range of potential mechanisms by which materials were introduced to the chamber. The pottery, lithic material and cremated human bone are clearly items which were introduced to the tomb by human agency, whereas the fish bone assemblage is typical of otter-derived activity and is unlikely to be directly related to human activities within the tomb. The fragments of burnt animal bone presumably are the result of human activity, possibly representing either the remains of offerings or pyre debris. The unburnt animal bone, of which only a few pieces were identifiable to species, could have been introduced by either human or animal agencies, or a combination of both. In the latter case, it could provide further evidence of the use of the tomb as shelter by carnivores or even sick animals (cf Barber 1997). The low levels of carbonized plant macrofossils present within the chamber deposits, combined with the absence of in situ deposits, preclude any meaningful interpretation of how this material entered the tomb. The presence of wood charcoal concentrated in the soil beneath the chamber (and also beneath the kerb of the tomb where this was exposed) indicates that at least some organic material was present on site before the chambered tomb was constructed, and that not all charcoal need represent pyre debris.

The interpretation of the fish bone assemblage as resulting from otter activity within the chamber indicates a potential source of disturbance to the chamber deposits. It is interesting to note in this regard that while fish remains occurred in both the upper and lower deposits within the inner compartment, clearly stratified soil units remained, including discrete deposits of peat ash. The implication to be drawn from this is that otters were using the

burial chamber repeatedly, possibly as a holt, at broadly the same time as humans were recurrently using the chamber for burial purposes. Had the otter activity entirely post-dated the human use of the chamber, the observed stratigraphic divisions would not have survived the intrusive burrowing or disturbance necessary (and for which there was no evidence) to deposit the fish bones in the distribution revealed by excavation. Moreover, the sealing of the excavated deposits beneath paving and between the walls of the chamber must have protected them from later physical disturbance by otters or other agencies. Otter activity broadly contemporary with the use of the chambered tomb has been demonstrated at Point of Cott through a radiocarbon-dated otter bone (Barber 1997, 59). The burial chamber at Geirisclett, a dark and perhaps infrequently visited shelter situated in proximity to both sea and fresh water, appears to have provided a desirable residence for otters between the episodes of human activity. Thus, it is apparent that the condition and distribution of the deposits and artefacts sealed beneath the paving within the chamber reflect a combination of human and animal activities. It is a matter for speculation as to which was the principal influencing factor.

Finally, some comment is necessary regarding the absence of inhumed bone from the burial chamber. This could reflect the deliberate removal of all inhumed bone in antiquity, prior to the laying of the upper paving within the compartments. In support of this, the fragmentary pottery assemblage does suggest that considerable quantities of material had been exported from the chamber in antiquity. An alternative possibility, that any inhumed bone left within the chamber at the time of its final human use may have completely decayed in situ, does not stand up to scrutiny. The pH values for the excavated soils within and beneath the chamber were fairly consistent and only slightly acidic (pH 6.61–6.74), at face value suggesting that soil conditions suitable for the preservation of

bone existed. However, these findings were surprising given that soil micromorphological studies of soils beneath the kerb (Carter, above & archive) indicated that the cairn had been constructed in an acidic soil regime. It seems therefore that soil pH must have altered since the cairn was built and used. The current pH results cannot be the result of a carbonate content to the soils (ie derived from windblown shell sand associated with machair formations), as there was no reaction between the soils and HCl. The most likely explanation is that the pH of the soils had been altered by the repeated percolation of seawater through them.

The model of changing soil pH may explain the very poor condition of the surviving fish bone. However, given that fish bone survived in some quantities, it would be contradictory to use the same evidence to explain the absence of human bone, unless it could be demonstrated that these materials would have survived differentially in the same burial environment. It seems likely also that the unburnt animal bones recovered from superficial contexts within the chamber were introduced relatively recently, probably even following Beveridge's investigation.

INFORMATION ON BURIAL RITUAL

Given the lack of in situ burial deposits, combined with the apparent extensive removal of material from the chamber in antiquity, comments regarding the nature of the burial rite are necessarily restricted in scope. The two compartments contained filling deposits of completely different character, suggesting strongly that they had fulfilled different functions. The inner compartment, from what survives, appears to have been the focus of burial deposits and offerings. It was in this compartment that 94% by weight of the cremated bone, 86% of the lithic items, and 65% by weight of the pottery sherds were found. Scott (1935, 535–6) came to the similar conclusion that the five compartments of the

Cletraval burial chamber were put to different uses, with the innermost the focus of deposition.

The lower deposits in the inner compartment appear to represent redeposited fragments of Neolithic burial remains, to judge from the absence of Beaker sherds from them. These deposits included a band of soil and stones with a disturbed and partly broken pottery vessel laid on its side and containing a small amount of cremated bone (although insufficient to confirm this as an inurned cremation), as well as quantities of quartz. Cremated bone was concentrated in this deposit and adjacent to it on the basal floor, although it may all have derived from a single individual. The principal Neolithic burial rite within chambered tombs in northern Britain was inhumation, often of disarticulated remains, although cremation deposits have been detected on occasions at other excavated tombs (eg Nether Largie and Kilchoran, Argyll; Cairnholy I: Henshall 1972, 78–80). The evidence of possibly only a single cremation from Geirisclett does little to challenge this pattern; the presence of cremated remains within the primary archaeological deposits is of interest, but need not indicate that the tomb was first used for cremation burials, since the remains of earlier burials could have been removed prior to the insertion of the cremation deposits. If inhumation had been the normal burial method at Geirisclett, then all human remains from such activity would appear to have been moved from the site in antiquity (see above).

The peat ash deposit (040) within the compartment is of interest, although little definite can be made of its presence. The mounding evident indicated that it represented a single, discrete dump of material, but in the absence of artefacts, ecofacts or human remains it is difficult to interpret the deposit as pyre or feasting waste.

The upper soil fill of the inner compartment (005), below the paving, is of particular interest in that this rank, greasy deposit contained all

the Beaker pottery recovered during the excavations (in addition to reworked Neolithic material). The taphonomy of this particular deposit is regrettably uncertain, although it can be reasonably interpreted as representing the disturbed and partial remains of Beaker-period deposits. It is assumed, on the basis of context, that the Beaker activity was also of a funerary nature, although nothing certain was recovered to confirm this. This deposit was thoroughly mixed, with no evidence of internal structure, and the Beaker pottery represents only fragments of vessels, suggesting again that much material had been removed elsewhere. The Beaker pots were frequently coated in charred residues, in contrast to the Neolithic vessels, implying differences between their treatment before and/or their contents at the time of deposition (and hence in the burial rite).

In the outer compartment the lower deposits contained much stone with little evidence of internal order. It is suspected that this stone was not deliberately deposited within the compartment, but reflects displaced structural material, possibly dry-stone walling formerly present above and perhaps also between the chamber orthostats. The dearth of quartz pieces and cremated bone from the outer compartment suggests that it was not the focus for the deposition of these materials, although the presence of sherds from vessels not recorded in the inner compartment indicates that Neolithic pottery vessels may have been deposited in this area. However, the principal focus for burial deposits was the inner compartment.

Particular mention is merited of the considerable quantities of quartz debris present within the burial chamber at Geirisclett. The presence of quartz has been noted by Henshall (1972, 97) at a number of other Clyde cairns, although only in three cases (Nether Largie, Kilchoran & Glecknabae) had quartz been consciously introduced in any quantity as a ritual offering into the burial chambers. At Nether Largie a secondary pavement of laid quartz pebbles was recorded during

Greenwell's excavations in 1864 (*ibid*, 338). Ritchie's (1970) excavations at Achnacreebeg also discovered deliberately-introduced quartz pebbles. In the north-west, quartz was recovered in limited quantities by Scott at Unival (nine probably struck flakes), Clettraval (several pebbles, although not from the chamber) and Rudh' an Dunain, Skye (pebbles from the 'Beaker stratum' within the chamber, although possibly not deliberately deposited). This suggests that quartz formed a recurrent component of the materials deposited with the dead, although the assemblage from Geirisclett remains exceptional in its quantity and (owing to the sieving strategy adopted) the representation of tiny pieces, which may reflect *in situ* knapping.

Finally, the pottery assemblage from Geirisclett reinforces the distinction which can be drawn between the range of Neolithic vessel types encountered in chambered tombs and that at settlement sites – a distinction which is striking between Eilean Domhnuill (Armit, forthcoming) and Geirisclett, which lie only c 2km apart. This is surely significant, as Geirisclett is the closest known Neolithic burial site to Eilean Domhnuill, and it is possible that Geirisclett was the communal burial site of some or all of the inhabitants of that settlement. If this notional link is accepted, the absence of Beaker settlement at Eilean Domhnuill would also be of particular significance, given the presence of Beaker deposits within the tomb, implying a discontinuity in settlement location, in contrast to continuity in use of the funerary site (either by the same or a different population). However, the link between Geirisclett cairn and Eilean Domhnuill settlement is tenuous, as the cairn could have belonged to a different community, whose settlement has perhaps been lost to post-glacial inundation (see below).

LATER USE OF THE BURIAL CHAMBER

The upper level of surviving remains in both compartments was defined by the laying of

paving across earlier deposits. It would be tempting to regard this paving as evidence of a Beaker closure or sealing deposit, for which many parallels have been claimed (but note reservations by Barber (1997, 7–8) regarding the quality and/or reliability of many of these observations). This apparent association of Beakers with deliberate blocking of Neolithic chambered tombs is common throughout the Hebrides, and has been recorded at sites such as Cletraval (Scott 1935), Unival (Scott 1948) and Bharpa Langass (Beveridge 1911), all on North Uist; and Cnocan nan Gobhar (Henshall 1972) and Rudh' an Dunain, on Skye (Scott 1932). However, at Geirisclett it is clear that reworked and abraded Beaker deposits were sealed *beneath* the paving. Moreover, the presence of hearth deposits on the paving in the inner compartment, combined with the insertion of a post through the paving in the outer, may suggest that the paving was associated with a secondary, non-funerary use of the burial chamber, possibly at a time when the chamber had become at least partly unroofed. The date of this later activity is uncertain, although it is noted that no post-Beaker artefacts were recovered during either Beveridge's or the current excavations, and that Beaker and Neolithic material appears to have been recovered by Beveridge from undefined contexts above the paving.

LANDSCAPE SETTING

The current location of Geirisclett at the high water mark does not reflect the landscape setting within which the cairn was constructed (eg Callander 1929). Based on his studies of inter-tidal and sub-tidal deposits at Borge (Benbecula) and Pabbay (Sound of Harris), Ritchie (1985, 175) has estimated sea level rise in the Uists in the order of 4–5m since 5100 BP (ie when Geirisclett chambered cairn was in use as a tomb). It seems certain from this evidence alone that Geirisclett chambered cairn had not been constructed at a coastal location. The nearest contemporary shoreline

is presumed to have lain to the north of what is now Vallay island, well over a kilometre from Geirisclett.

Evidence of former landforms within the Vallay Strand is preserved in the sequences of inter-tidal sand and organic deposits visible at various locations in the Strand (Ritchie 1985, 164). Ritchie & Whittington (1994, fig 1) and Whittington & Edwards (1997, fig 1) map Torogay, a peat-covered island in the Vallay Strand around 1km south-east of Geirisclett (illus 1), as one specific element. Armit (1992, 10) has argued that the current inter-tidal landscape of the Vallay Strand is a relatively modern environment, caused by the distinctive development of the Vallay Strand machair system. Its creation is believed to have occurred when rising sea levels breached the machair dune belt systems to the north (and surviving on Vallay), inundating the machair plain formerly stretching across the Strand. This landform change may have occurred relatively suddenly, and most probably at some time during the first millennium AD, to judge from the density of Iron Age occupation around the strand compared with the apparent marginality of the area in the medieval and later landscape (Armit 1992, 10).

However, it is now recognized that the formation of machair in the Uists was a Holocene development, with machair plain formation a complex and dynamic process resulting from episodes of sand-blow that submerged preceding landscapes (Ritchie 1985). Machair sand-blow leading to machair plain formation appears to have been initiated non-synchronously across the Uists. Millennia separate dated instances of initial sand-blow even in fairly localized areas, probably as a result of variations in local offshore conditions, as well as coastal and landward topography and the relative distances of sample points from ancient shorelines (Ritchie & Whittington 1994, 45). Ritchie (1985) established that the initiation of sand blow occurred as late as the mid third millennium BC at Quinish on Pabbay (Sound of Harris).

Therefore, it is possible that the chambered cairn at Geirisclett was not built on the edge of the machair plain that preceded the current inter-tidal environment, but adjacent to the undefined landscape that preceded the formation of the machair plain. Without further analysis and dating of appropriate sediment sequences from the Strand it is not possible to be certain about the landscape of the Strand during the use-life of the tomb. However, it is potentially significant that there was no evidence of aeolian shell sand in any of the excavated mineral soil deposits within or beneath the cairn, perhaps suggesting that there was not a machair landscape immediately adjacent. However, the range of fish eaten by the otters that sheltered in the cairn contemporary with its use as a tomb (Cerón-Carrasco, above) indicates the presence of a coastal, sandy environment within their home range (normally several kilometres for the coastal-dwelling Eurasian otter). Arguably this indicates that a machair environment fringed the northern coast of North Uist, but it had yet to migrate inland as far as what is now the Vallay Strand adjacent to Geirisclett. The very presence of otters suggests that a watercourse was close by, and was probably a river channel flowing northwards to the sea from what is now Loch nan Clachan. Otters also favour habitats upon which human activities do not impinge greatly, an observation which provides some circumstantial evidence that the chambered cairn at Geirisclett was located at a marginal location within the human landscape, away from settled or intensively farmed areas.

CONCLUSIONS

The excavations at Geirisclett represent the first modern investigation of a chambered tomb on the Uists, the last intervention being by Scott at Unival in 1939. While the general character of Scott's discoveries at Cletraval and Unival is reflected at Geirisclett, in terms of the nature of excavated deposits and the

range of artefacts, the present excavations have added much information through the use of palaeoenvironmental techniques not available to Scott. These have allowed the taphonomy of the deposits and artefacts in the chamber to be much better understood, and thus a more subtle appreciation of the character of the burial rites to be obtained. Combined with full publication of the Eilean Domhnuill settlement (Armit, forthcoming), the Geirisclett excavations should allow a much more rounded impression to be gained of early Hebridean life and death.

ARCHIVE

The records for this excavation will be deposited with the National Monuments Record of Scotland. Finds from the excavation were allocated through Historic Scotland's finds disposal procedures to the National Museums of Scotland (TT 35/98).

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