

Dun Cul Bhuirg, Iona, Argyll

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SUMMARY

Excavations carried out on Dun Cul Bhuirg, Iona, by Professor A C Thomas and Dr P J Fowler, between 1957 and 1959, and by Dr R Reece in 1968, are described, together with a catalogue of the pottery and small finds recovered from the site on a number of other occasions. The pottery from the rubble core of the fort wall belongs to the decorated Hebridean styles of the Iron Age, making the site one of the most southerly from which such wares have been found. A date between 100 BC and AD 300 is suggested for the construction and occupation of the fort.

INTRODUCTION

Only two prehistoric monuments are known on the small but fertile island of Iona, which lies off the western tip of the Ross of Mull: at NGR NM 284243, W of the Columba Hotel, are the remains of what is probably best interpreted as a small Bronze Age burial-cairn; and, on the other side of the island is situated the fort that is the subject of this report (RCAMS 1980, 53, no 15 & 76–7, no 133). The precipitous rocky outcrop known as Dun Cul Bhuirg (pl 14 a–b) stands to a height of 51 m OD overlooking the N end of Camas Cuil an t-Saimh ('The bay at the back of the ocean') on the W coast of Iona (NGR NM 274247); it commands extensive views in all directions, though the ground on the NE flank is exceedingly broken. The summit area measures some 45 m by 35 m, and has been defended by a single stone wall on the NE, E and S sides, the steep rock faces on the western and NW flanks making any additional protection unnecessary. The distinction between a fort and the smaller and more regular dun is discussed in the *Inventory of Argyll* (RCAMS 1971, 15–19; 1975, 16–20). Much of the interior of the fort is occupied by rock outcrops, and habitation must have been concentrated on the E and S sides. The line of the wall is clear on the S, where several outer facing-stones remain *in situ*, including one stretch measuring some 3 m in length and standing to a height of 1 m in four irregular courses. On the E, the line of the wall is indicated in part by a band of displaced wall-material (a on fig 1), which has resulted from the robbing of the facing-stones. The entrance was probably on the NE where access up the landward flank of the hill is easiest; the final stages of this line of approach was, as an added protection, partly overlooked from the wall above, but the point at which the summit is reached is now blocked by rubble and no structural features of the entrance-way can be detected.

The fort does not appear to have attracted the attention of visitors to the island until the middle of the 19th century, when Graham recorded 'the remains of a tower' on 'Dun Bhuirg'

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(1850, 2 & pl 2, map). Thereafter, until the excavation of 1957, it was noted mainly in discussions of the identity of the '*monticulus qui latine munitio magna dicitur*' ('little hill named in Latin the great fortification') mentioned in Adomnan's *Life of Columba* (Bk ii, ch 4), from which the saint looked northward and saw a pestiferous cloud. Reeves (1857, 107, 422), without expressing any preferences, discussed the relative claims of Dun Cuí Bhuirg, where he noted the existence of the fort wall, and of Dun I, the most prominent hill on the island but one which displays no traces of fortification (NGR NM 283252). The identification of *munitio magna* with Dun I was favoured by Skene (1876, 335), Crawford (1933, 462) and the Andersons (1961, 331), but Dun Cul Bhuirg is preferred by Thomas (*Discovery & Excavation in Scotland, 1957*, 11). *Munitio magna*, as Reeves pointed out, was probably a direct equivalent of the Gaelic *Dùn Mór* (1857, 107); while it may be relevant that the original Irish name of the fort on Dun Cul Bhuirg is unknown, having been replaced by the Scandinavian *borg*, it is likely that the name Dun I is also of comparatively recent origin, and that it was indeed Adomnan's *munitio magna*.

Between 1957 and 1959, as part of a programme of research on Iona directed by Professor A C Thomas under the auspices of the Russell Trust, selected areas within the interior of the fort were excavated by members of the Department of Archaeology, University of Edinburgh, under the supervision of Dr P J Fowler. In 1968 further excavation was undertaken by Dr R Reece, of the Institute of Archaeology, University of London, in order to collect a sample of animal bones which might be compared with those from the excavation on the site of the Early Christian monastery (Reece 1973, 42-3). This account of the excavations and of the small finds has been prepared by the Royal Commission on the Ancient and Historical Monuments of Scotland as the basis for their summary account of the site in the *Inventory of Argyll*, vol 4 and is published with the permission of the Commissioners; the Commissioners are indebted to Professor Thomas, Dr Fowler and Dr Reece for their assistance in making this information readily available and for giving their approval for the examination and publication of their material.

EXCAVATION

Excavations were conducted in four areas: Site 1 was a small flat terrace between two rock outcrops on the SW; Site 2 was a cutting made through the band of displaced wall-debris on the SSE; Site 3, an area on the E side, included the discovery of the foundation of a small hut; Site 4 was a platform below a small cliff on the N side. The extant finds are listed on pp 220-3.

Site 1

A flat grass-covered terrace between the rocky outcrops was excavated by quadrants (pl 14c); an area some 4.5 m by 3.3 m was stripped during the 1958 season with further extensions in 1959. A pebble 'floor area' was uncovered with dark gritty soil on top, possibly representing an occupation layer. About forty sherds of pottery were recovered, including a rim with 'dimple' decoration, but the pottery is lost. A concentrated patch of burning against the rock face on the N side of the site may indicate the site of a hearth. Several fragments of charcoal, including birch (p 224), were found in these trenches. No formal remains of walling were recovered, but at the W end of the trench on the seaward side there was some rudimentary stone-work (pl 14c). The most likely interpretation of the presence of occupation debris in the area is that the terrace had been used as an open camp site, possibly taking advantage of the rock face behind it as the back wall of a simple lean-to structure (*Discovery & Excavation in Scotland 1958*, 15). A pebble smoother (no 90) and a flint (now lost) were the only other small finds.

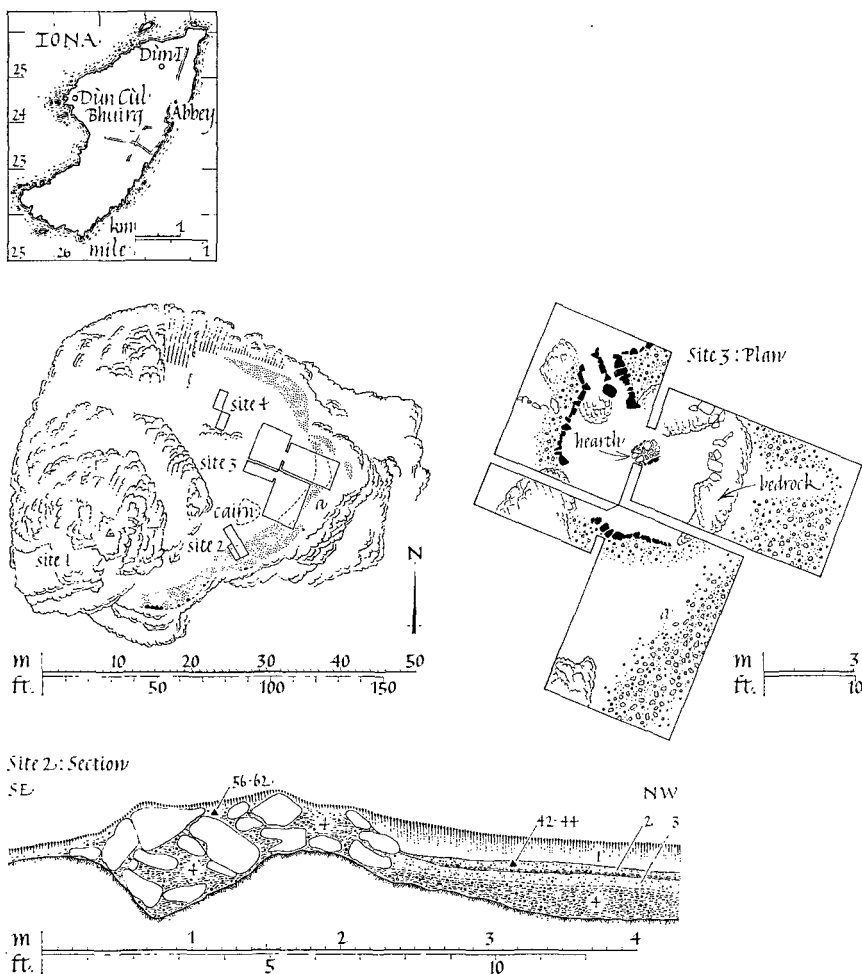


FIG 1 Dun Cul Bhuirg, Iona: site plan

Site 2

In 1959 a section, measuring 15 ft by 4 ft (4.57 m × 1.21 m) was cut through the band of displaced wall-debris on the S side of the fort; in 1968 an extension made on the SW side of the trench exposed more of the stone-work. Neither section, however, reached the outer facing-stone shown on fig 1. The band of displaced debris that occupied the SE half of the section (fig 1) was some 2.2 m wide and stood up to 0.7 m above the irregular underlying bedrock. It was composed of a mixture of large stones, loose soil, beach pebbles and patches of shell. In the NW half of the trench five layers of material were distinguished (fig 1, showing the W side of the trench): 1, turf and black humic topsoil; 2, gritty, stony layer with a thin lens of a more earthy consistency beneath; 3, a second gritty stony layer comparable to 2; 4, a thick layer of dark humic soil, possibly an original land surface; 5, a gritty sandy layer, ginger in colour, which seemed to be the top of weathered natural rock. This trench yielded animal bones (Appendix 3) and small finds: nos 30-3 and 104 from layer 1; nos 34-41, 86 and 94 at a depth of about 0.2 m below turf-level, among the earth and small stones within the wall-debris, together with a quantity of bones

and charcoal (alder, birch and oak; pp 224-5); nos 42-4, at the NW end of the trench in layer 2; nos 45-7, at the NW end of the trench in layer 4. Nos 56-62, shells and bone were found within the upper levels of the debris. A further collection of pottery (nos 66-78) and a glass bead (no 105) were discovered in the extension made in 1968 to the original section through the wall debris. A considerable quantity of animal bone was also recovered (pp 225-7). While it is possible that this band represents a rough refurbishing of part of the perimeter, it is more likely that its tumbled nature results merely from the robbing of usable stones from the wall faces. The use of midden material within the core of a wall can be paralleled in a Neolithic context at Knap of Howar, Papa Westray, Orkney, (Ritchie & Ritchie 1978, 39-40), and in the Iron Age within the outer wall at Dun Mor Vaul, Tiree (MacKie 1974, 53); in neither site does the domestic rubbish appear to be of very different date from the structure in which it was used, but it would clearly be wrong to imply that this was a general rule (see p 220). It is also possible that some of the midden material was piled against the inner face of the wall in a manner that can be paralleled in a number of forts on Tiree. Sherds 45-7, from layer 3, and sherds 48-52, discovered in the layer of dark earthy soil with small stones (layer 4), come from undisturbed occupation levels within the fort.

Site 3

On the E side of the fort the remains of a hut were discovered and excavated in quadrants in 1958 and 1959. Two lines of inner facing-stones on the W side of the hut provided a revetment above which the wall must have been built; on the E flank the rock outcrops in an arc, and the roof must merely have rested on the rock, but the E part of the site is obscured by the debris of the fort wall. The internal area thus formed measured some 4.5 m by 4.3 m. The position of the entrance was not altogether clear, but it is likely that it was on the N side where two lines of stones run across the wall. At the centre of the hut there was a well-built hearth measuring 1.0 m by 0.75 m over all and formed of flag-stones bounded by a kerb of uprights along each side but not at the ends; there was no trace of either charcoal or burning. The large amount of pottery recovered during the excavation of Site 3 in 1958 has been lost; material recovered during the excavation of the NE quadrant in 1959 included sherds nos 19-29 and a yellow glass bead (no 103), which were found on the floor-level associated with bones and charcoal. Three fragments of fired clay (no 26) may possibly be fragments of an oven. The assessment of the date of the occupation thus depends on a discussion of this small body of material (*see* p 220).

Site 4

This is a platform on the N side of the fort with a low cliff forming the rear of the level area; in 1959 two trenches were cut across the centre of the platform in order to test whether or not this might have been an area of occupation. Bed-rock was quickly encountered and no structural remains were discovered. Pottery, including nos 11, 53-4 was found. It is possible, however, that the trenches were not extensive enough to prove conclusively the absence of settlement on this terrace.

SMALL FINDS

The first mention of the discovery of pottery on Dun Cul Bhuirg occurs in the advance notes provided by the Cumberland and Westmorland Antiquarian and Archaeological Society for their tour of the Hebrides in 1904; a piece of pottery and 'a mould for celts' found in the fort are said to have been in the possession of the Reverend A MacMillan. The stone (no 95) is now

at the Nunnery on Iona, but, though there are sherds in the collections which might include the one mentioned above, none are properly catalogued, and there is no sherd that falls happily within the categories discussed below. Apart from a small number of sherds found by Ludovic McL Mann in the early years of this century (nos 79–82), the majority under discussion, 154 in total, were found during the 1957–59 seasons; some 52 sherds were found in 1968.

Each of these groups of pottery is here catalogued separately, but though the sherds come from a variety of sources over a period of years, they are discussed here as one assemblage. Most of the pottery included in the catalogue is still extant, but some rim-sherds have been lost and are only recorded in the excavation notes and in drawings. These have been used to allow discussion of the sherds, but some of the reconstructions (diameters, for example), have been rejected; the use of this material has been possible because enough pottery is still available for study to suggest the general homogeneity of the assemblage. Most of the sherds recorded in the site drawings can be matched by the extant pottery or closely paralleled in other comparable assemblages.

The pottery assemblage from Dun Cul Bhuirg comprises 32 rims, 13 base-sherds and 161 body sherds, giving a total of 206 sherds of hand-made pottery. In addition there is a fragment of a pottery disc (no 86), one glazed wheel-made sherd (no 106) and eight fragments of fired clay (nos 13, 26 and 61); all the sherds discussed below are of simple hand-made type.

The pottery is in general fairly well-fired, with colours ranging from buff to black; but colour alone has not been used to define fabrics, since colour variations seem unlikely to be controlled and regular. The exterior surface of sherds is often blackened and in some cases has a sooty encrustation, but it is not clear whether this is the result of exposure to fire in manufacture or in use.

Rock inclusions in the pottery are largely of granitic gneiss; Mr G H Collins has examined three sherds and has noticed that although these rock inclusions are compatible with the geological make up of Iona (p 224), such rocks can be found widely elsewhere. He also notes that the inclusions are likely to be of crushed rock rather than beach sand. In addition to the grit-tempered pottery, 22 sherds have organic inclusions. These vary in both density and type, from sparse fine sinuous impressions (eg no 77) to quite dense grass or chaff inclusions (eg no 7). Mrs C A Dickson has noted the presence of grain impressions, probably barley, on one of these sherds (p 224), thus suggesting that the term grass-tempering is inappropriate. Barley impressions were noted on the pottery from Dun Mor Vaul, Tiree (MacKie 1974, 210–13); a large number of sherds from the site contain organic tempering, though few of these have been botanically examined. Barley has likewise been recognised on Anglo-Saxon pottery, but no information about the tempering agent of these examples is available (Jessen & Helbaek 1944, 23).

Although the inclusions vary in density and type there is no evidence that these variations indicate pottery from different sources or of differing dates. The general similarity of the sherds, in colour and texture (with one exception noted below) suggest that no firm fabric division can be usefully made. Consequently, each sherd or group of sherds is described specifically in the catalogue and not listed as a fabric type.

All of the pottery is hand-made but only five sherds show evidence of construction-fractures, in one case (no 35) of shallow 'tongue-and-groove' type (Childe & Grant 1947 38, fig 7, no 3; Stevenson 1953). None of the sherds with construction-breaks is large enough to provide certain evidence of manufacturing technique, but they suggest that the vessels were hand-built with a series of horizontal rings or slabs of clay. Some of the sherds have finger-smoothed surfaces but, while a few have dense glossy exteriors, none are burnished.

Eleven sherds, including five rims, have exterior striations, and two have interior marks.

The exterior striations are close-set but irregular shallow grooves (eg no 20) which run vertically down the outside of the sherds; these may be the result of trimming the vessel to make the walls thinner. The two sherds with interior marks are slightly different; one (no 70) has close-set parallel striations quite unlike the other sherds, and they may be a crude form of internal fluted decoration. The marks on the other sherd (no 71) look more like brush marks and may be the result of grass-wiping. Another sherd (no 74) has shallow arcing impressions on its exterior surface, again possibly caused by grass-wiping (cf Young 1956, 313). None of these surface marks are well understood but some sort of manufacturing or finishing process seems the likely explanation.

There are 32 rim sherds in this assemblage. Only ten are extant as sherds, but drawings of the remaining 22 are available. Eleven rims are short sharply-everted forms, and six of these are sufficiently well preserved to indicate that their walls were convex (eg no 34). Three everted rims have some form of decoration. One (no 19) has a thick finger-pressed neckband cordon in the junction of its rim and body. Another (no 32) has a finer applied zigzag cordon at the junction of the rim and the body. A third rim (no 63) has shallow finger-channelled decoration on its body immediately below its rim angle. This consists of three shallow grooves, probably forming arched decoration (cf Young 1966, 53, fig 4, nos 5 & 6). The rim itself has slight traces of shallow fluting or smoothing on its inside. Another everted rim (no 34) has been finger-smoothed along its rim edge to produce an effect similar to fluting.

Twelve rims have a slightly out-turned profile. Six of these have only the rim-top turned sharply out (nos 28, 46, 51, 62, 78 & 84) whereas the remaining six have longer more gentle out-turns (nos 11, 47 & 50). Three of these rims indicate a convex profile to their lower walls (nos 46, 51 & 78) and two seem to have straighter, bucket-like profiles (nos 47 & 50). Two of the out-turned rims are decorated. One (no 78) has three stab-marks and shallow zigzag grooving on its exterior. The other (no 11) has a series of stabbed impressions, perhaps made with a piece of bone, along the outside of the junction between the rim and the body.

The remaining rims show a variety of shapes and profiles. No 40 is rolled over, whereas no 44 appears to be a rolled or bead rim. Nos 2, 29 and 75 are too fragmentary to indicate profiles though they may have broken from everted rim forms. Both nos 9 and 52 are from inturned forms though their precise profiles are uncertain. No 79, from the collections of Ludovic MacL Mann, is unusual in that the softness of its fabric and its shouldered profile distinguish it from the remainder of the pottery. Although it is very abraded it appears to have a flat-topped and sharply everted rim, with a short neck and a globular body; since it is so unlike the rest of the assemblage its provenance may perhaps be doubted. One other rim (no 14) may not derive from a pottery vessel; this thin hard rim may be a crucible fragment, though the absence of heat glazing or metal residues precludes certainty. No rim diameters are measurable among the extant sherds.

Only 13 base sherds are recognisable in the assemblage. These all derive from flat-based vessels. Five sherds preserve basal angles (nos 48, 53 & 56). These all have sharp angles and slightly 'footed' bases (eg no 48). The only one that is sufficiently preserved has a globular profile (no 56). Three diameters are measurable, one of 90 mm and two of 100 mm (nos 48, 53 & 56). Two base-sherds (no 7) appear to have had dense organic temper burnt out of their fabrics, but none of the bases are grass-marked.

There are 161 body sherds in the assemblage, of which 98 are too small to provide useful information and are consequently only listed in the catalogue. Of the remaining 63, 11 are decorated. Eight sherds have cordoned decoration. One (no 76) has an applied finger-pressed cordon. Five sherds have applied zigzag cordons (nos 16, 23, 35 & 82) and two (nos 24 & 64) have worked-up zigzag false-cordons – these are tooled up from the surface of the sherd and

not applied. One sherd (not extant) had a single straight incised line (no 1) and another (no 30) has a shallow groove, perhaps a fragment of finger-channelled decoration, on its outer surface. In addition, one body sherd (no 77) has two impressions, probably made with a ring-headed pin; although the impressions are incomplete, their size compares well with other impressions formed by such pins (MacKie 1974, 128–30).

As a group, the majority of sherds indicate an assemblage of flat-bottomed globular and bucket-shaped vessels with everted, out-turned or, more rarely in-turned rims. Decoration occurs on about 8% of the sherds but the percentage of decorated vessels is unknown. Cordoned decoration is the most common, but channelled or lightly grooved decoration occurs on two rims.

In addition to the pottery from the site, there are eight fragments of fired clay which do not derive from pottery vessels. These are all of similar fabric – a hard-fired clay with a buff or orange surface and black core. Superficially the clay has a twisted appearance, and several fragments have impressions of thin branches or withies running at different angles on their surfaces (nos 13, 26 & 61). These impressions suggest branch diameters of about 12–15 mm which are somewhat larger than the wattle impressions of some 3–6 mm in diameter from the pre-broch occupation at Dun Mor Vul, Tiree (MacKie 1974, 151). The clay of the Iona fragments has been subjected to heat, perhaps comparable to the firing of pottery, though the black cores might suggest a short, if fierce, heat rather than any prolonged use. These fragments have been variously identified as daub, mould or tuyère. However, the transverse angle of the withy impressions is best explained as indicating some sort of oven or furnace-capping. The fragments were found scattered in three different areas, and consequently no coherent site-distribution aids their interpretation.

No changes in type or frequency can be seen through the recorded site-levels; the pottery comes from occupation levels, floor levels and wall-debris. Two well-stratified groups have already been noted: sherds 45–52 from Site 2 come from undisturbed occupation-deposits within the fort and sherds 19–29 from the floor of the hut in Site 3.

Layer 3 on Site 2 produced a short, out-turned rim (no 46) and an out-turned rim with vertical striations on its outer surface (no 47). Layer 4 had four rims of the slightly flaring, out-turned type on a bucket-shaped vessel (no 50) together with an in-turned rim (no 52) and a short out-turned rim (no 51). The absence of decorated sherds and everted rims, which occur in the topsoil layer 1 on this site, may be of chronological significance, but the sample size (only 15 sherds in layers 3 and 4) is too small to be helpful. Although this material does not include any decorated sherds, the range of forms and fabrics can be matched among the Site 3 sherds, which include everted and out-turned rims, cordoned decoration, striated exteriors and organically tempered sherds, and consequently the assemblage has been regarded as belonging broadly to one period.

As already noted, the assemblage is fairly homogeneous, and seems to represent one main period of occupation, even if of unknown duration or complexity. The pottery is a typical Iron Age assemblage as known from various forts, wheel-houses and brochs in the Hebrides. The short, sharply everted rims (eg no 34) and channelled arch decoration (no 63) can be easily paralleled at Clettraval on North Uist (Scott 1948, 59, fig 5, pl viii), A' Cheardach Mhor on South Uist (Young & Richardson 1960, 145, fig 6, nos 28, 30 & 31) and Dun Mor Vul on Tiree (MacKie 1974, 117, fig 12, no 97; 119, fig 14, no 179). The slightly fluted rim (no 63) finds similar parallels (eg Young 1960, 145, fig 6, no 31). The short out-turned rims (eg nos 28 and 51) can be compared to the small 'vase-shaped' vessels at A' Cheardach Mhor (Young & Richardson 1960, 144, fig 5, no 2) and Balevullin on Tiree (MacKie, 1963, 167, fig 3, nos 26 & 27). Though most of the Iona rims are undecorated, the similarity in shape is quite close. The stab decoration

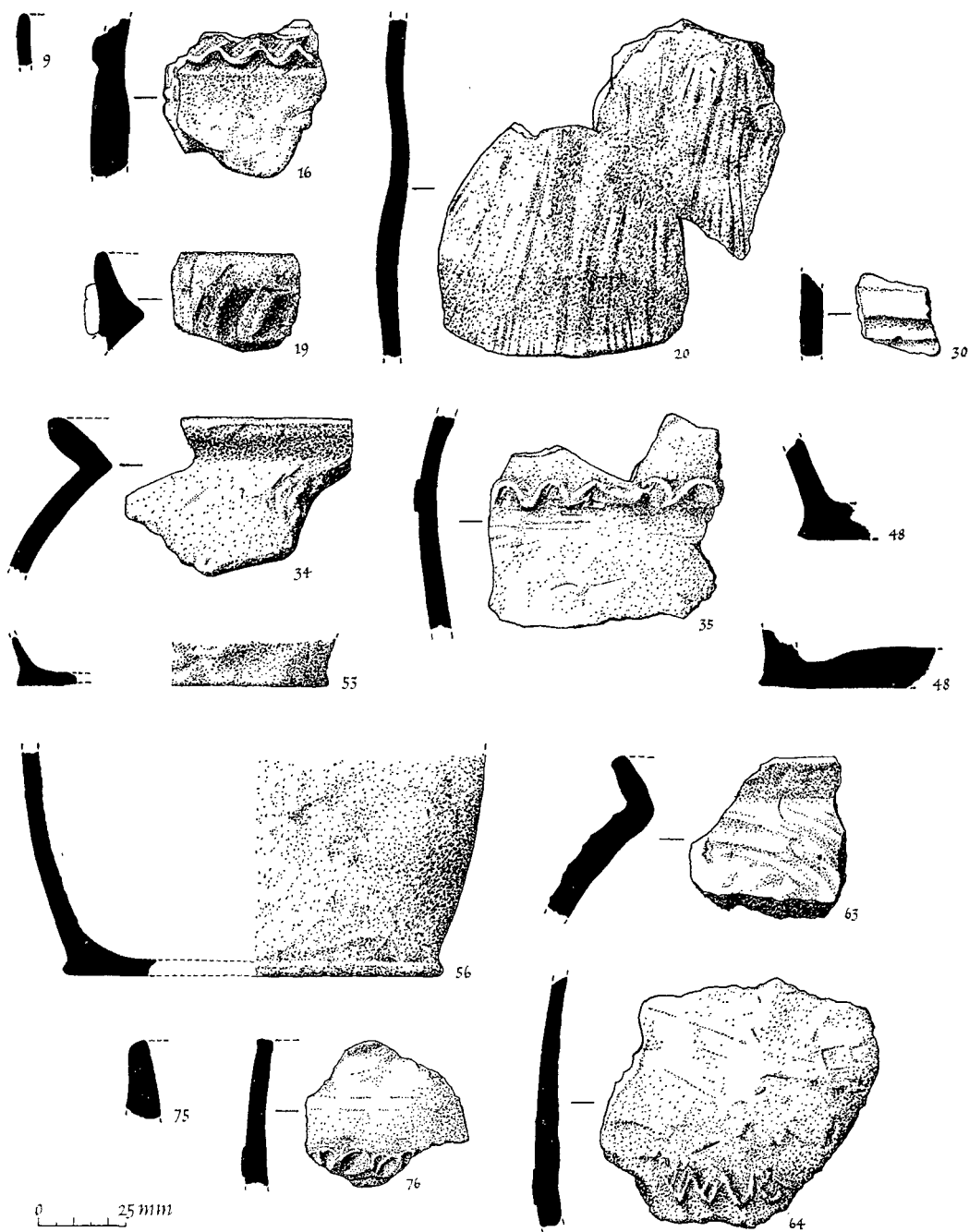


FIG 2 Dun Cul Bhuirg, Iona: pottery

below the rim on no 11 finds general parallels in the Vault assemblage (eg MacKie, 1974, 116, fig 11, no 20B: 122, fig 17, no 314) and at Balevullin (MacKie 1963, 167, fig 3, no 44). No 78 is harder to parallel. The brushed or lightly incised zigzag might be compared to the common channelled arch motif as at Cletraval but the parallel is by no means exact.

The neckband cordon (no 19) can be seen at A' Cheardach Mhor (Young & Richardson 1960, 114, fig 5, nos 13 & 15) and Dun Mor Vault (MacKie 1974, 123, fig 18, nos 363 & 379). Similarly the rolled rim (no 44) and the inturned rim can be matched at Cletraval (Scott 1948, 59, fig 5, Type 2 & Type 4) and at Dun Mor Vault (MacKie 1974, 116, fig 11, no 12; 118, fig 13, no 145; 120, fig 15, no 228). The slightly out-turned rims of no 47 and no 50 are more difficult to parallel though their profiles resemble some of the 'Vault Ware' vases (MacKie 1974, 116, fig 11, nos 20 & 22B) and the 'barrel-shaped' vessels from Balevullin (MacKie 1963, 167, fig 3, nos 39, 40 & 42). The striated exteriors of the Iona sherds appear to be a manufacturing trait rather than decoration, but may be comparable to the linear 'brush marks' on the Balevullin pots (MacKie 1963, 167, fig 3, nos 39-42, 50 & 54) and the brushed surfaces from Cletraval (Scott 1948, pl x, nos 3, 6 & 7). The cordoned sherds and ring-headed pin-marked sherds can be found on numerous Hebridean sites (eg Young 1966, 53, fig 4, nos 2-6). The assemblage thus finds close parallels in sites throughout the Hebrides on islands to the N and W of Iona, which is at present one of the most southerly islands to produce this material (MacKie 1971, 40, fig 3).

The organically tempered pottery has not been separated from the remainder of the assemblage; it includes the cordon-decorated sherd (no 16) and the sherd with ring-headed pin impressions (no 77). Organically tempered pottery occurs in other Iron Age contexts at Dun Mor Vault, where several hundred sherds have such inclusions (eg MacKie 1974, 177, no 225); and at Dun Rockside on Islay where a cordon-decorated sherd of Iron Age date and a number of undecorated body and rim sherds all contain organic temper. Organic temper (or 'grass temper') is not a closely datable cultural trait but is most probably a simple manufacturing device to render coarse clays malleable and to aid firing (van der Leeuw 1976, 335-6, pl 3; Brown 1978, 100-1). Such pottery is known from a 'Bronze Age' context at Jarlshof, Shetland (Hamilton 1956, 8-13), from the 2nd-millennium BC settlement at Scord of Brouster, Shetland; from the three Iron Age contexts noted above (Iona, Islay and Tiree), from both Dark Age and Viking Age contexts at the Udal, North Uist, and in medieval layers at Jarlshof (Hamilton 1956, 187-9), and Freswick, Caithness (Curle 1939, 103-6). It is also known from various sites in England and Europe (Hurst 1976, 294, 309-11; Hope-Taylor 1977, 170, 180; Brown 1978, 100-1) and it is clear that 'grass-tempered pottery' in itself can no longer be regarded as a diagnostic 'Norse' culture-trait in Scotland.

Although the individual motifs and forms found at Dun Cul Bhuirg can be paralleled on various sites in different phases, as an assemblage it is best matched with the wheel house occupation at A' Cheardach Mhor (the Phase I floors) (Young & Richardson 1960, 143-6), the broch and secondary occupation at Dun Mor Vault (MacKie 1974, 157-65), and the aisled round-house occupation at Cletraval (Scott 1948, 60-3). The out-turned rims might be compared with the pre-broch activities at Dun Mor Vault (MacKie 1974, 157-8) and the unstratified material from Balevullin (MacKie 1963, 162-8, fig 3), but the virtual absence of incised decoration in the Iona assemblage suggests a later date. The pottery from Site 2 (layers 3 and 4) may represent an early phase of the occupation of the site, which preceded the introduction or development of the everted rim; but the stratified sample is too small to prove this hypothesis.

There are few radiocarbon dates for sites in the Hebrides which have produced similar pottery. Mrs Young suggested a date in the 1st- or 2nd-century AD for the beginning of phase I at A' Cheardach Mhor, and consequently for the everted rims, channelled arches, fluted rims

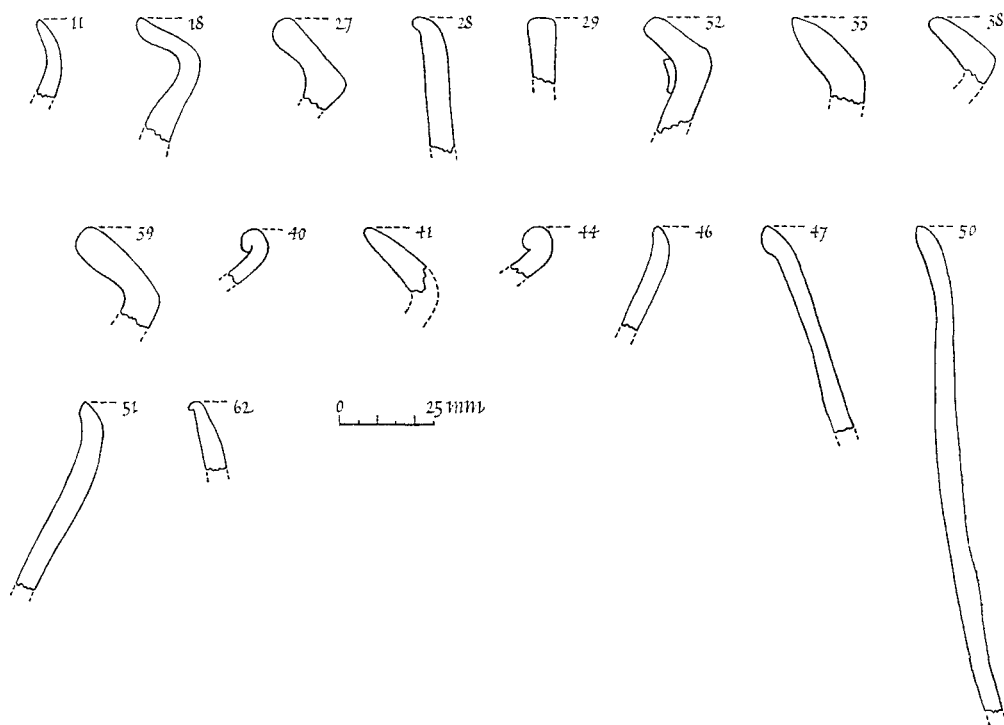
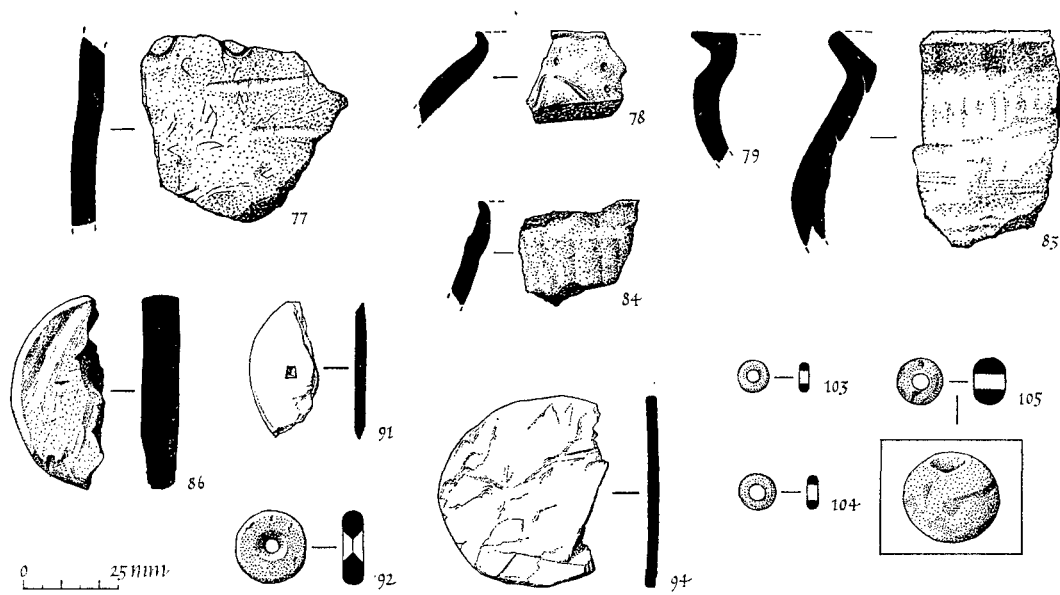


FIG 3 Dun Cul Bhuirg, Iona: above; pottery (77-9, 83-4, 86), stone (91-2, 94) and glass (103-5), with detail of 105 approximately full size; below rim profiles of lost sherds

and cordons of the pottery of the whole area (Young 1966, 55–6). Dr MacKie's work at Dun Mor Vul, Tiree, and Dun Ardtreck, Skye has produced a series of radiocarbon dates (MacKie 1969, Table I), which, together with his belief in southern English and French influences on Hebridean pottery, led him to suggest that everted rims and channelled arch decoration had developed by the 1st-century BC (MacKie 1974, 106–8).

Two yellow glass beads (nos 103 & 104) belong to the distinct group of small opaque yellow annular beads of Mrs Guido's Class 8 (1978, 73–6, 179–82); no 103 was found within the hut (site 3) on the floor level of the NE quadrant, associated with sherds of pottery (nos 19–29), bone and charcoal. No 104 was found in the section through the wall debris (site 2) in layer 1, along with sherds 30–3. Such beads are widely distributed in Scotland from Wigtown to Shetland – a wider geographical range than the pottery discussed above. Examples have recently been found in the King's Cave, Jura (Mercer 1978, 54, fig 4, nos 5 & 6). From Dun Mor Vul, seven comparable beads have been found from several contexts, including the construction of the broch, the floor deposits early in the history of the broch, in the ash spread overlying the occupation layer within the broch, and in the deposits of the outer court (MacKie 1974, 42–4, 44–5, 59–62, 147). A radiocarbon date for a period equated with the construction of the broch of $ad\ 60 \pm 90$ (GaK-1097) indicates a date in either the 1st-centuries BC or AD for the construction and occupation of the broch (MacKie 1974, 92, 230), and thus for the use of such beads in Tiree. In her initial discussion of this class of bead in the report on the excavation of the wheel house of Tigh Talamhanta, Allasdale, on the island of Barra, Mrs Guido put forward a date of the 1st- to 2nd-centuries AD for the introduction of this type into Scotland, probably from Meare in Somerset, though she favoured a production centre in the Culbin Sands, whence beads were traded to other parts of Scotland (Young 1953, 104). Examples have since been discovered from sites in SW England and the Marches which have rather earlier radiocarbon dates, and it now seems likely that they were distributed from Meare in the 3rd- to 2nd-centuries BC; the northern examples were possibly manufactured at Culbin in the 1st-century BC or 1st-century AD or were perhaps part of the 'cultural package' of SW artefacts that has been inferred in W Scotland (MacKie 1971, 48, 68; Guido 1978, 76). The third bead (no 105), found in the 1968 extension through the displaced wall debris (site 2), belongs to Mrs Guido's class 14 (1978, 87–9); examples of this class have more frequently been found in E Scotland than in the West. A necklace from Dun Ardtreck, Skye includes beads of Class 8. Other examples come from Dun an Iardhard on Skye and Dun Mor Vul, and at both sites beads of Class 8 were also found (Guido 1978, 88). The chronological value placed on such beads therefore depends on the interpretation placed on such exotic material as a whole.

The absolute dating evidence for most of the sites with assemblages comparable to Dun Cul Bhuirg is not very secure. Young's dating for everted-rim pottery is based principally on finds of yellow glass beads at A' Cheardach Mhor and Tigh Talamhanta (Young 1966, 55). As has been noted, such beads may range in date from the 3rd-century BC to the 1st- or 2nd-centuries AD (Guido 1978, 76). At Dun Mor Vul, everted-rim pottery is found in the early occupation levels of the broch, which also produced Roman glass and pottery (MacKie 1974, 92–5). A piece of glass of mid 2nd- or mid 3rd-century date comes from the 'upper part of the primary broch floor' (MacKie 1974, 94). The glass was found at the top of the primary floor and may well indicate a long occupation from the mid 1st-century BC to the mid 3rd-century AD; the interpretation of the bead-rim bowl as an indication of the arrival of people from Wessex in the 1st-century BC has not been unquestioned (MacKie 1971, 46–7; for the contrary view Clarke 1970, 220). Consequently even at Dun Mor Vul the dating to the 1st-century BC for everted rim pottery involves assumptions about southern English contacts.

The terminal date of the pottery style found at Dun Cul Bhuirg is similarly problematical. At Dun Mor Vault, the secondary occupation of the site may have ended by AD 300 (MacKie 1974, 95) but, strictly the dating evidence only produces a *terminus post quem*. Young had no real evidence to date the later decorated phases, but could show an apparent change and development in the pottery through several site sequences (Young 1966). If this sequence of development is basically correct, then Crawford's identification of a phase of plain undecorated bucket forms at the Udal, may provide a *terminus ante quem* for the decorated pottery styles; this would imply a date earlier than about AD 400 (Crawford & Switsur 1977, 129). The chronological aspects of the final stages of such decorated Hebridean wares have been discussed by Dr MacKie (1965, 120-1) and by Dr Close-Brooks (in Tabraham 1977, 166-7). Clearly the chronology of the Hebridean Iron Age pottery sequence is still insecure; in general, however, a range of between about 100 BC and AD 300 may be suggested for the pottery at Dun Cul Bhuirg.

The pottery and beads have been discussed in detail before their relationship to the fort itself is examined, because the presence of midden material within the wall debris found on Site 2 is capable of interpretation in two different ways. It might either be suggested that existing domestic refuse of an earlier period on the site, or indeed nearby, had been incorporated within the rubble core of the wall, or that the midden material represents the rubbish of the occupants themselves. The comparatively unabraded condition of the pottery, notwithstanding the poor state of preservation of the bone, suggests that the latter interpretation is the more likely. The rubble core of the rampart of the outer wall at Dun Mor Vault on Tiree contained not only sherds decorated with applied zigzag cordons, but also possibly an everted-rim sherd decorated with channelled arches (MacKie 1974, 53); many fragments of bone and some shells were also discovered. Dr MacKie infers a date of between the second half of the 1st-century BC and the first two centuries AD for this context. The broader dating suggestions put forward for the date of the pottery from Dun Cul Bhuirg on the basis of comparable material, can also perhaps be accepted for the building of the fort itself. It is possible that the presence of yellow annular beads both within the rubble of the wall and on the floor level of Site 3, as well as the similarity of the sherds from the floor level of the hut to those from the wall section imply that the hut is contemporary with the use of the fort, but it is unfortunate that the complete assemblage of pottery from Site 3 is no longer extant.

CATALOGUE OF SMALL FINDS

This catalogue includes all recognisable small finds at present available as well as a number of sherds which are known to exist from drawings and descriptions. The extant material has now been presented to the National Museum of Antiquities of Scotland; items 79-82, formerly in the collection of Ludovic McLellan Mann, are in Glasgow Art Gallery and Museum. The original excavation numbers have also been provided for ease of cross reference to the site-notes which have been deposited in the National Monuments Record of Scotland.

Pottery

- 1 1957/14 One body sherd; not located; buff exterior, grey-black interior; one shallow incised straight line.
- 2 1957/15 Rim sherd; not located.
- 3 1957/20 Base sherd; not located.
- 4 1957/53 One body sherd; black; hard fabric; clear construction marks.
- 5 1957/53 One body sherd; buff exterior, black core; fabric contains rare organic inclusions.
- 6 1957/53 One body sherd; buff exterior, grey interior; fabric contains quartz and other rock fragments.
- 7 1957/53 Two possible base sherds; fabric contains dense organic inclusions and rare grits.

- 8 1957/53 Fifteen small body sherds.
 9 1957/53 Rim sherd; pale brown; fabric contains organic inclusions; very slightly inturned rim. Fig 2.
- 10 1959/1 Two small body sherds.
 11 1959/2 Rim sherd; not located; short, out-turned rim with horizontal line of impressed marks on the neck. Site 4, SE quadrant. Fig 3.
- 12 1959/4 Five small body sherds.
 13 1959/4 Four fragments of hard-fired clay; buff exterior, black core; one fragment has slight transverse impressions of two withies. Possibly derived from an oven or furnace capping.
 14 1959/6 Sliver of pottery.
 15 1959/7 One small body sherd.
 16 1959/8 One body sherd; pink-buff exterior, grey core; sooted exterior; fabric contains rock fragments (p 224) and organic inclusions; applied zigzag cordon on exterior. Fig 2.
 17 1959/8 Six small body sherds.
 18 1959/8 One rim sherd; not located; short everted rim. Fig 3.
- 19-29 *Site 3; NE Quadrant; Floor level with bone and charcoal*
- 19 1959/9 Rim sherd; blackened buff exterior, with black core; fabric contains quartz and other rock fragments (p 224); short sharply everted rim, with applied neckband cordon, decorated with finger-tip impressions. Fig 2.
 20 1959/9 Two body sherds; blackened buff exterior, black core (p 224); striated exterior surface. Fig 2.
 21 1959/9 One body sherd; blackened buff exterior, black core; fabric contains grit and organic inclusions; hard fired.
 22 1959/9 One body sherd; buff exterior, black sooty interior; clear construction fracture.
 23 1959/9 One body sherd; buff exterior, black interior; abraded remnant of applied zigzag cordon.
 24 1959/9 One body sherd; blackened buff; very abraded remnant of a zigzag cordon.
 25 1959/9 Seven small body sherds.
 26 1959/9 Three fragments of fired clay. Possibly oven fragments of no 13.
 27 1959/9 Rim sherd; not located; short sharply everted rim. Fig 3.
 28 1959/9 Rim sherd; not located; out-turned rim. Fig 3.
 29 1959/9 Rim sherd; not located; possibly broken from an everted rim. Fig 3.
- 30-52 *Site 2; section through wall debris*
- 30 1959/10 One body sherd; blackened buff; one shallow groove. Fig 2.
 31 1959/10 Nine small body sherds.
 32 1959/10 Rim sherd; not located; short everted rim with applied zigzag cordon at the neck. Fig 3.
 33 1959/10 Rim sherd; not located; short sharply everted rim. Fig 3.
 34 1959/11 Rim sherd; blackened buff, short sharply everted rim, finger-smoothed along rim edge. Fig 2.
 35 1959/11 Two joining body sherds; blackened buff exterior, black core; hard fabric; construction & 12 fracture at bottom of sherd; applied zigzag cordon. Fig 2.
 36 1959/11 Seven small body sherds. & 12
 37 1959/11 Two body sherds; buff exterior, blackened interior; construction breaks on both sherds; & 12 finger-smoothed exterior surfaces.
 38 1959/11 Rim sherd; not located; short sharply everted rim. Fig 3. & 12
 39 1959/11 Rim sherd; not located; short sharply everted rim. Fig 3. & 12
 40 1959/11 Rim sherd; not located; rolled-over rim. Fig 3. & 12
 41 1959/11 Rim sherd; not located; short sharply everted rim. Fig 3. & 12
 42 1959/13 One body sherd; buff exterior, black core, burnt; fabric contains quartz and organic inclusions; possibly broken from lower wall at basal angle.

- 43 1959/13 Six small body sherds; one with a striated surface.
- 44 1959/13 Rim sherd; not located; rolled rim. Fig 3.
- 45 1959/14 Four small body sherds.
- 46 1959/14 Rim sherd; not located; out-turned rim. Fig 3.
- 47 1959/14 Rim sherd; not located; out-turned, slightly flaring rim; exterior surface has vertical striations. Fig 3.
- 48 1959/15 Two base sherds; buff exterior, black core; flat bases slightly footed basal angle; diameter c 100 mm. Fig 2.
- 49 1959/15 One small body sherd.
- 50 1959/15 Four rim sherds; not located; slightly flaring out-turned rim; possibly bucket-shaped vessel; exterior surface has vertical striations. Fig 3.
- 51 1959/15 Rim sherd; not located; slightly out-turned rim. Fig 3.
- 52 1959/15 Rim sherd; not located; inturned rim.
- 53-5 Site 4; *NW cutting*
- 53 1959/16 Two base sherds; buff exterior, grey core; flat base, slightly footed basal angle; diameter c 90 mm. Fig 2.
- 54 1959/16 Three small body sherds.
- 55 1959/16 Two fragments of fired clay; orange exterior, black core. Possibly oven fragments of no 13.
- 56-62 Site 2; *section through wall debris*
- 56 1959/20 One body sherd and one joining base sherd; orange exterior and black interior; fabric contains rare quartz fragments and a few organic inclusions; flat base, slightly footed basal angle, globular body; diameter c 110 mm. Fig 2.
- 57 1959/20 Two body sherds; buff exterior, black core; hard fabric.
- 58 1959/20 Four body sherds; buff exterior, black core; fabric contains plentiful organic inclusions.
- 59 1959/20 Two small body sherds.
- 60 1959/20 Two body sherds; buff exterior, black interior; fabric contains organic inclusions, including grain impressions (*see* p 224).
- 61 1959/20 One fragment of fired clay; buff exterior, black core; one clear impression of a withy of no 13.
- 62 1959/20 Rim sherd; not located; out-turned rim. Fig 3.
- 63 1959 Rim sherd; buff exterior, black core; hard fabric; short sharply everted rim, on a globular body; slight trace of fluting on inside of rim; three shallow finger-channelled grooves, probably arched decoration, on body below rim. Fig 2.
- 64 1959 One body sherd; black with sooty interior; fabric contains quartz, hard gritty texture; worked-up zigzag cordon. Fig 2.
- 65 1959 Thirteen small body sherds.
- 66-78 Site 2; *section through wall debris; extension cut in 1968*
- 66 Sixteen small body sherds.
- 67 Twenty body sherds; buff or blackened exteriors, black cores, buff or sooted interiors; hard fabric.
- 68 Three base sherds; buff exterior, black core; flat bases.
- 69 Two split base sherds; buff exterior, black core; fabric contains a few organic inclusions; steep basal angle.
- 70 One body sherd; black exterior, buff interior, hard fabric, crude shallow parallel striations on interior.
- 71 Two body sherds; buff exterior, black core; fabric contains organic inclusions; close-set parallel interior striations, possibly grass-wiped.
- 72 Two body sherds; buff exterior, grey core; fabric contains organic inclusions; one sherd is the shoulder of an everted rim vessel broken at the rim.
- 73 One body sherd (p 224) black and sooty interior, buff exterior.
- 74 One body sherd; sooty buff; exterior surface has shallow arcing impressions, possibly due to grass-wiping.

- 75 Rim sherd; sooty buff exterior, black core; hard fabric; rounded rim-top. Angle in fact more everted than shown on Fig 2.
- 76 One body sherd; blackened buff exterior, black core; hard fabric; applied finger-pressed cordon. Fig 2.
- 77 One body sherd; buff exterior, black core; fabric contains organic inclusions; on the edge of the sherd are two arcing impressions, probably made with a ring-headed pin. Fig 3.
- 78 Rim sherd; sooty buff exterior, black core, buff interior; short slightly turned-out rim; three stab-marks on exterior, possibly made with a bone fragment; shallow zigzag grooving occurs beside these dots, possibly made with a brush or piece of grass. Fig 3.

79–82 *Formerly in the collection of Ludovic McL Mann*

- 79 Rim sherd; buff exterior, grey-blue interior; soft fabric; abraded everted rim, with flattened rim-top and globular body. Fig 3.
- 80 Three body sherds; buff exterior, black core.
- 81 Three body sherds; blackened-buff exterior, black interior; striations on external surface.
- 82 One body sherd; blackened buff; hard micaceous fabric; remnant of applied zigzag cordon.

83–4 *Found by R W Feachem, in the course of survey by the Royal Commission on the Ancient and Historical Monuments of Scotland, May 1959; Site 3 (NMA cat nos HH 648–9)*

- 83 Rim sherd; blackened buff exterior, grey-black interior; short everted rim, globular body, angled construction joins at rim, shallow 'tongue-and-groove' join in lower body. Fig 3.
- 84 Rim sherd; brown exterior, black core; fabric contains few organic inclusions; short out-turned rim. Fig 3.
- 85 One small body sherd presented to NMA in 1966 by Rev Ian Renton (NMA cat no HH 674).
- 86 1959/11 Fragment of a pottery disc, about 50 mm in diameter, buff outer surfaces, black interior; trimmed edges; probably cut from the base of a pot. Fig 3.

Bronze

- 87 1958/3 Scrap of sheet bronze; 15 mm by 13 mm, 0.5 mm thick. *Site 3; SE quadrant.*

Iron

- 88 1968 Fragment of corroded iron; ? tang; 74 mm long, 8 mm broad, 3 mm thick. *Site 2; section through wall debris.*

Stone

- 89 1957/48 Pebble rubber; one face flat; fractured by heat; 104 mm by 50 mm and 30 mm thick.
- 90 1958/1 Pebble smoother, sinuous profile, worn at the ends; 95 mm by 23 mm and 15 mm thick. *Site 1; NE Quadrant.*
- 91 1958/4 Fragment of a small shale disc; 36 mm by 17 mm and 3 mm thick. Fig 3. *Site 3.*
- 92 1958/4 Small stone bead with hour-glass perforation; 19 mm diameter, 3 mm thick. Fig 3. *Site 3.*
- 93 1958/7 Pebble hone; 130 mm by 44 mm and 25 mm thick. *Site 3; NW Quadrant, adjacent to hearth.*
- 94 1959/11 Fragment of a shale disc, about 50 mm in diameter and 3 mm thick. Fig 3. *Site 2; cutting through wall debris.*
- 95 A large boulder 'ingot-mould' measuring 410 mm by 280 mm and 220 mm thick, possibly trimmed, probably of sedimentary rock, with ovoid depressions on two faces; one contains a single ovoid depression measuring about 180 mm by 80 mm and 20 mm deep; the other has three differing ovoid shapes, two 120 mm by 40 mm to 45 mm and 10 mm deep, the other 150 mm by 65 mm and 15 mm deep.

Flint

- 96 1958/2 Small flake of grey flint; 34 mm by 17 mm by 11 mm thick. *Site 3; NW quadrant.*
- 97 1958/2 Small flake of grey flint; 27 mm by 25 mm by 5 mm thick. *Site 3; NW quadrant.*

- 98 1958/5 Two fragments of quartz and a piece of pumice. *Site 3; SE quadrant.*
 99 1958/6 Fragment of flint; 62 mm by 53 mm by 10 mm thick. *Site 3; NW quadrant.*
 100 1959/7 Fragment of pale honey-coloured flint; 50 mm by 32 mm by 12 mm thick.
 101 1959/17 Flint fragment; 35 mm by 29 mm by 10 mm thick. *Site 3; NE quadrant.*
 102 1968 Fragment of yellow flint; 40 mm by 25 mm by 17 mm thick. *Site 2; section through wall debris.*

Glass beads

- 103 1959/9 Opaque yellow annular bead; 8 mm in diameter, 2 mm thick, perforation 3 mm in diameter. Fig 3. *Site 3; NE quadrant; floor level with bone and charcoal.*
 104 1959/10 Opaque yellow annular bead; 10 mm in diameter, 3 mm thick, perforation 4 mm in diameter. Fig 3. *Site 2; section through wall debris.*
 105 1968 Bead of translucent glass with yellow swirls, 12 mm in diameter, 9 mm thick, perforation 3 mm in diameter. Fig 3. *Site 2; section through wall debris.*

Glazed pottery

Lisbeth M Thoms, Dundee Museums and Art Galleries

- 106 Only one unstratified glazed sherd has been found on Dun Cul Bhuirg; it comes from the body of a wheel-thrown, externally-glazed vessel, probably a jug. The fabric is hard, well fired with a fairly smooth feel. It is tempered with sand (quartz) which seems to be well mixed and spread through the clay. The internal surface is oxidised (orange in colour); the external surface shows evidence of glaze, now almost vitrified, and badly abraded, and also two parallel, horizontal, lightly incised lines of decoration executed on a slow turntable. A date somewhere in the span AD 1250–1350 may be suggested, though there is little comparative material for dating-purposes from adjacent areas.

APPENDIX 1

Petrological examination of pottery sherds

G H Collins, Petrology Unit, Institute of Geological Sciences

Sherds nos 16, 19, 20 and 73 were examined; all contain abundant fragments of granitic gneiss, up to 8 mm in length. Hornblende crystals, up to 2 mm, are present in subordinate amounts. No 73 appears to contain rock fragments crushed more finely than the other specimens submitted. Since both granite and hornblende-gneiss occur in the Lewisian of Iona, upon which the fort is sited, it is suggested that the pottery is of local origin. The fines are very angular, suggesting that crushed rock has been used rather than beach sand.

APPENDIX 2

Grain impressions and charcoal identification

C A Dickson, Department of Botany, University of Glasgow

The larger of the fragments of pot-herd no 60 was submitted for examination; the sherd has one impression with a carbonised fragment of a glume. Since the shape and size of the original grain are obscure one cannot be certain that it is a cereal grain, but the faint cell pattern on the carbonised fragment is similar to that of a barley glume. A second grain impression on the side of the sherd could also be barley. The identification is thus as follows:

cf *Hordeum* sp (hulled barley) – fragment of carbonised glume.

cf *Hordeum* sp.

Charcoal was submitted from areas in Sites 1 and 2. From Site 1, SE quadrant, layer of small pebbles were found fragments of *Betula* (birch) charcoal.

From Site 2, the section through the wall debris, were found: (i) in an upper layer *Alnus* (alder), *Betula* and *Quercus* (oak); (ii) at the NW end (layer 3), at the bottom of this gritty stony layer, *Betula* and

Quercus; and (iii) layer 4 (a dark humic layer), *Betula*, *Corylus* (hazel) and *Quercus*. The charcoal is thus unexceptional but adds to our limited knowledge of island woodlands.

APPENDIX 3

Animal Bone from Dun Cul Bhuirg, Iona

Barbara Noddle, Department of Anatomy, University College, Cardiff

The animal bones derive from the 1957 and 1959 seasons of excavation, and from the small-scale work by Dr Richard Reece in 1968 in order to provide bone material which might be compared with the contents of a midden belonging to the Early Christian monastery (Reece 1973, 42–4), and the bones found in 1968 have been listed in detail in the forthcoming report excavation. The opportunity has been taken to compare the total known assemblage from Dun Cul Bhuirg with those from the broch of Dun Mor Vaul on Tiree and the semi-broch of Dun Ardtreck on Skye (MacKie 1974, 187–98; 1965).

The bones are listed according to the finds numbering given in 1957 and 1959, and the numbers of associated small finds may be collated from the second column on pp 220–4; there were no identifiable bones in bags 10, 16 and 17; bag no 9 was found on Site 3, NE quadrant, bags 11–15, 18 and 20 were found on Site 2, and are thus directly comparable with the material excavated in 1968, when the trench was extended.

1957/52	Cattle. Upper molar. Occiput of skull. Temporary premolar. Pig. Scapula fragment. Ulna fragment.
1959/1 & 2	Cattle. Astragalus (new born).
1959/4	Cattle. Premolar, upper molar. Sheep. Femur, upper molar, temporary premolar. Pig. Tibia, distal immature. Red Deer. Antler fragment.
1959/5	Cattle. Humerus fragment, upper molar. Red deer. Antler fragment.
1959/7	Cattle. Upper molar.
1959/9	Cattle. Premolar, upper molar.
1959/11	Cattle. Upper molar unworn, upper molar in wear, temporary premolar. Sheep. Lower molar, upper molar, temporary 4th premolar. Pig. Premaxilla juvenile, lower canine adult.
1959/12	Cattle. 1st phalanx length 60 mm, 2nd phalanx. Mandibular condyle, lower molar, 4th temporary premolar unworn. Pig. Femur immature distal, two premolars, lower 3rd molar part worn, length 25 mm, lower canine massive, perhaps wild pig. Red deer. Lower molar, two immature cervical vertebrae, antler fragment.
1959/13	Cattle. Lower molar, upper molar. Sheep. Lower 3rd molar well worn, length 20 mm. Pig. Lower molar unworn, lower 3rd molar unworn, length 30 mm. Astragalus, length 37 mm. Red deer. Humerus proximal epiphysis, 1st phalanx proximal immature, antler fragment.
1959/14	Cattle. Upper molar. Pig. Two lower molars unworn.
1959/15	Sheep. Left metacarpal distal immature. Length 94 mm, midshaft width 11 mm. 1st phalanx. Length 30 mm. Spine of thoracic vertebra. Pig. Calcaneum immature, 1st phalanx immature lateral metapodial. Rib with healed fracture.
1959/18	Cattle. Premolar worn.
1959/20	Cattle. Astragalus max length 56 mm, 2nd phalanx length 38 mm, 2nd phalanx fragment. Pelvis fragment. Occiput of skull. Temporary premolar. Sheep. Temporary premolar. Seal. 1st phalanx.

This collection is too small to be statistically significant. The bone was not in a good state of preservation, and is probably the remains of larger quantities of bone which have decomposed, with consequent large numbers of loose teeth. However, the bulk of the material would seem to be from the less edible parts of the animal, head and feet, as opposed to upper limb and axial skeleton. The majority of the individuals in the collection are immature. The few measurements indicate animals of very small stature, particularly the pigs, with the exception of the bovine 1st phalanx measuring 60 mm in length.

The species distribution of the Dun Cul Bhuirg material is compared with the other Hebridean sites in Table 1, the proportions of animals represented at Dun Mor Vaul varied considerably between some of the early phases on the site and Table 1 can provide only a general picture; a more detailed representation may be found in MacKie 1977 (196-9, fig 29). This lists species distribution as both number of identified fragments and minimum number of individuals. These have been expressed as a percentage for comparison, but the numbers in the case of Dun Cul Bhuirg are rather small for this purpose.

From this table it can be seen that there is no common pattern for the species distribution from the three sites. At Dun Cul Bhuirg cattle predominate, at Dun Mor Vaul sheep and at Dun Ardtreck cattle and red deer. The sites are of course very different, in that Iona is a very small island, although it is not far from Mull, Tiree is fairly small and remote, and Skye is a large island near the mainland. One of the larger groups of bone from Dun Mor Vaul is believed to be the food waste of the builders (MacKie 1974). Table 2 sets out the age range of the individuals in so far as it can be determined; the stages are newborn, juvenile, immature and mature, which in modern terms (perhaps not wholly applicable to these animals) are under 3 months, under 18 months, under 4 years and over 4 years. Again the data includes percentage for the sake of comparison. However, it is clear that the majority of animals did not reach maturity, but the proportion of animals which did not reach their second winter is much lower than at Neolithic sites in Orkney (Noddle 1978).

The dimensions of the Dun Cul Bhuirg bones are set out in Table 3, with comparable measurements from the two broch sites where available. Again there are no consistent differences in size between any of the sites, though it might have been expected that the small island of Iona had a dwarfing effect on the animals. Owing to the small numbers involved, frequently a single measurement, some of the difference may well be due to sex differences, marked in primitive breeds of domestic livestock and very marked in the red deer. It is unfortunate that so few sheep and pig bones were measurable. Altogether, there are insufficient bones available from Dun Cul Bhuirg to come to any firm conclusions, for a minimum of 1,000 identified fragments, and preferably more, are required for trustworthy results.

TABLE 1

Distribution of species*

		Dun Cul Bhuirg		Dun Mor Vaul		Dun Ardtreck	
Total	a	190		1384		1307	
	b	42		285		190	
Cattle	a	80	42%	348	26%	666	50%
	b	15	36%	75	26%	68	35%
Sheep	a	34	15%	574	41%	107	7%
	b	7	17%	84	30%	31	15%
Pig	a	36	19%	54	4%	166	13%
	b	12	29%	27	9%	44	23%
Red deer	a	30	16%	256	19%	364	27%
	b	6	15%	45	16%	42	24%
Roe deer	a	3	2%	111	8%	29	2%
	b	1	2%	36	13%	9	5%
Seal	a	7	3%	37	2%	13	1%
	b	1	2%	13	5%	2	1%
Goat	a	—	—	10	1%	17	1%
	b	—	—	1	1%	4	2%

Key*

- a number of fragments
- b minimum number of individuals

TABLE 2

Ages of individual animals expressed as a percentage

		Total	Newborn	Juvenile	Immature	Mature
Cattle	Dun Cul Bhuirg	9	22	22	34	22
	Dun Ardtreck	45	20	10	35	35
	Dun Mor Vaul	37	14	45	35	7
Sheep	Dun Cul Bhuirg	6	—	16	78	16
	Dun Ardtreck	15	6	34	34	26
	Dun Mor Vaul	40	20	25	39	16
Pig	Dun Cul Bhuirg	11	—	35	45	20
	Dun Ardtreck	23	2	2	11	8
	Dun Mor Vaul	Insufficient data				
Red Deer	Dun Cul Bhuirg	4	—	25	75	—
	Dun Ardtreck	12	—	—	60	40
	Dun Mor Vaul	8	13	37	50	—

TABLE 3

Measurements in mm

				Average measurement	Number of specimens
Cattle	Metacarpal	Length	Dun Cul Bhuirg	170	1
			Dun Ardtreck	170	1
			Dun Mor Vaul	169	1
	Astragalus		Dun Cul Bhuirg	53.5	5
			Dun Ardtreck	55.8	11
			Dun Mor Vaul	58	7
	1st phalanx		Dun Cul Bhuirg	60	1
			Dun Ardtreck	51.8	21
			Dun Mor Vaul	65	1
	2nd phalanx		Dun Cul Bhuirg	38	1
			Dun Ardtreck	31	18
			Dun Mor Vaul	35	2
Sheep	1st phalanx		Dun Cul Bhuirg	30	1
			Dun Mor Vaul	31.6	5
Pig	Lower 3rd Molar		Dun Cul Bhuirg	20	1
			Dun Cul Bhuirg	37	1
			Dun Cul Bhuirg	27.5	2
Red Deer	Tibia	Distal width	Dun Cul Bhuirg	49	2
	1st phalanx	Length	Dun Cul Bhuirg	57	1
			Dun Cul Bhuirg	29	1
	2nd phalanx		Dun Ardtreck	32	2

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a The site from the W



b The site from the E



c Site 1 from W (scales in feet and inches)