

# The excavation of the chambered cairn at Glenvoidean, Isle of Bute

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## INTRODUCTION

The chambered cairn near the deserted settlement of Glenvoidean on Kilmichael Farm, Isle of Bute (NGR NR 997705) was first noticed by Mrs I D Taylor during the summer of 1962. The name Glenvoidean, out of use in Bute for many years, was adopted from the OS map of the district of 1865 to distinguish this chambered cairn from the one known as Michael's Grave, also on Kilmichael Farm. The excavation began at Easter 1963 and continued intermittently, during the holiday periods, until 1971.

Excavation revealed an oval cairn 14.94 m by 8.84 m which covered a complex structure, trapezoidal on plan and defined by a kerb. It contained an axial chamber, with an outer chamber, portal and façade to the N, a lateral chamber with an outer chamber, portal and façade to the E and a lateral chamber with a small porch to the W. The axial chamber appeared to have been enclosed in a small round cairn and the two lateral cairns were also surrounded by an inner oval cairn. In addition a two-tiered bronze-age cist was found inserted just inside the E edge of the trapezoidal kerb and a corn-drying kiln, probably of medieval date, was discovered in the cairn material between the axial and the two lateral chambers.

Three pots were found in the axial chamber, one intact and the others crushed. A few rim sherds of another pot were found in the outer chamber. A single straight-rimmed pot with a triangular lump of quartz within it was found in the W lateral chamber. These finds have prompted a re-appraisal of the neolithic pottery by J G Scott (see Appendix). An inverted enlarged food vessel containing a few bones of an adolescent occupied the upper compartment of the bronze-age cist, while in the lower were found bones of another adolescent.

## SITE AND SETTING (fig 1)

The island of Bute lies in the Firth of Clyde, separated from Argyll to the N by the Kyles of Bute and from Renfrewshire and Ayrshire to the E by the main stream of the estuary. To the SW lies the larger neighbouring island of Arran. Centrally positioned as it is on the sea routes taken by the early colonists approaching from the S and W, the island offers the attractions of sheltered bays and waterways and the easily tilled soil of the raised beach which surrounds almost the whole island. The number of neolithic chambered cairns known and recorded in Bute suggests considerable settlement over a long period. Apart from the previously unrecorded cairn at Glenvoidean, there are four others which were described and partially excavated by Prof T H Bryce at the beginning of the century (1904). On the raised beach, about 270 m below Glenvoidean, is the two-compartment chambered cairn known as Michael's Grave; while on the same contour as Glenvoidean, about 3.2 km to the S at Lenihuline, there is a long cairn, at present 59.4 m

long and 9.1 m broad, containing two axial chambers and one lateral chamber. Others are said to have existed formerly. About 1.6 km further S, on the raised beach at Glecknabae, is a round cairn with two chambers which appears to be built on top of midden material from an earlier domestic site. It also contains an intrusive bronze-age cist. Further S and inland, W of the Dhu Loch, is another cairn containing an axial three-compartmented chamber, known as Bicker's Houses. A fifth chambered cairn, of which nothing now remains, was recorded at Ballycurry.

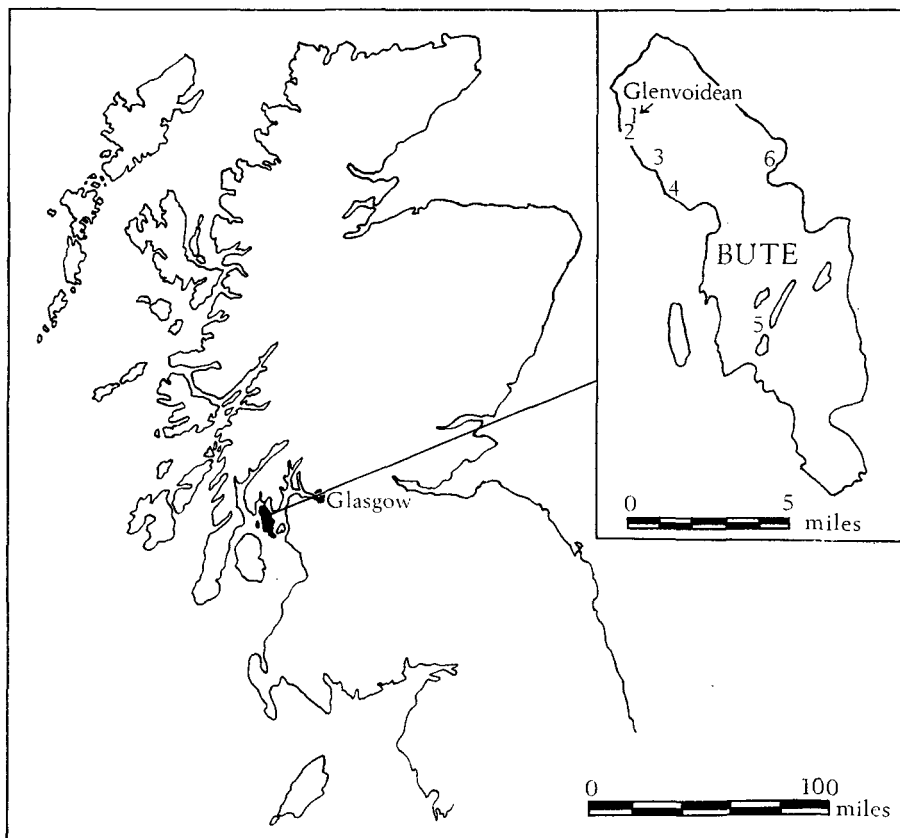


FIG 1 Glenvoidean: location map. 1 Glenvoidean, 2 Michael's Grave, 3 Carnbaan (Lenhuline), 4 Glecknabae, 5 Bicker's Houses, 6 Hilton

Hilton cairn (NGR NS 067685) discovered in 1972 was excavated 1973-76 (Marshall, D N 1976).

The chambered cairn at Glenvoidean is situated on the land of Kilmichael Farm, at the N end of the island. It lies along a N and S axis about 90 m above sea level on a steep grassy hillside facing the SW (pl 1a). Above the cairn, rising ground protects the site from the N and E, while about 180 m below there is an area of raised beach.

## EXCAVATION

Before excavation only the upper parts of two upright stones could be seen protruding 0.66 m above the present ground surface. A few smaller stones were visible between the uprights. Superficial clearing of the heather in front of upright A uncovered the massive cap-stone. Behind

the uprights was a level, circular, grassy area about 9.1 m in diameter, cut into the slope of the hill, which fell away steeply on the seaward side. Nothing on the ground surface indicated the actual nature and extent of the cairn which was uncovered in the course of excavation.

As uprights A and B seemed to be a pair, a trench was laid out between them on a line NNW-SSE which it was assumed would continue through the axial chamber. Another trench was laid out at right angles to the first, with the intention of discovering the limits of the cairn. Excavation showed, however, that, although uprights A and B were part of the structure of the axial chamber, B was one of the side stones of the outer chamber while A was the remaining portal stone and that the true axis of the chamber and cairn was N and S. The excavation was extended from these original trenches until eventually the whole cairn was uncovered.

The greater part of the E side of the cairn was found to have been buried under a downhill drift of soil. On the E, the uphill side of the cairn, the present ground surface is above the surface upon which the cairn was erected. On this side, soil covered the cairn to a depth of 0.38 m, lessening in depth to about 0.15 m on the W, the downhill side.

Most of the stones used in the building of the cairn had apparently been obtained from the surrounding outcrops of schistose grit, but three large slabs of conglomerate (about 0.69 m) were noted among the upper stones towards the N front. Quartzite is plentiful in the neighbourhood, but little was found amongst the cairn material. The location of the quartz stones which were used may be significant (see p 17). Once the turf and underlying soil had been removed, the outlines of the axial chambers, the two lateral chambers and the corn-drying kiln could be seen.

The forecourt was cleared and the stones around the sides of the cairn removed, including the masking of the kerb on the E and the blocking of the W lateral chamber. The kerb surrounding the trapezoidal cairn was thus defined. Further cairn material and the corn-drying kiln were then removed in an effort to establish whether the axial chamber and the lateral chambers were surrounded by smaller cairns within the larger one. The bronze-age cist was discovered at this stage, inserted near the E edge of the cairn between the axial and the E lateral chamber. Most of the S end of the trapezoidal cairn was removed to establish the relationship between it and the probable cairn round the lateral chambers.

The area immediately round the cairn was cleared to its original level, on which widespread traces of small fires were found. Four stake holes associated with an area of light cobbling and patchy greasy black soil were exposed on the W side of the cairn. The chambers were excavated and their contents removed. The chambers have been left in place along with the cairn material immediately round them. To the N the cairn was partly rebuilt to secure the axial chamber. Where the kerb was lifted in the course of the excavation, it has been replaced in its original position and the outline has been left exposed. The bronze-age cist has also been rebuilt.

### THE AXIAL CHAMBER (figs 2, 3; pl 1c, d)

The axial chamber lay on a N-S axis along the contour of the hill, more or less parallel with the shoreline below. The upper edge of the sides of the chamber was 0.18 m below the present turf line. A few stones lay immediately on top of the filling of the chamber, but in the main the covering consisted of soil. At the SE corner of the inner (or main) chamber a wedge-shaped stone, 0.61 m long and 0.61 m at its widest part, lay across the E slab, projecting 0.18 m into the chamber. From its position it looked as if it could have been the remains of corbelling.

The main chamber, 1.22 m in length by 0.61 m in breadth, was carefully constructed from four slabs of schist. The W slab was 1.47 m long at the top, 0.91 m at the base and 1.04 m high and varied in thickness from 130 mm at the N end to 254 mm at the S, where it projected beyond

the inner face of the chamber by 254 mm, bringing it into line with the outer face of the S slab, although there is a gap of 50 mm between the two stones. At the N end it fitted neatly against the N slab. The E slab, 1.58 m long, 1.02 m high and on an average 150 mm thick, fitted closely against the S slab but projected beyond the N end where the join was not so neat. The N end-stone was wedge-shaped, 0.74 m long, 1.02 m high and about 76 mm thick, while the S end-stone was 0.66 m at the top, widening slightly to a width of 0.76 m at a depth of 0.31 m from the base, after which it narrowed to 230 mm. Near the floor of the chamber where the edges of the slabs did not meet, the spaces were packed with stones and earth. The slabs appeared to have been set up on the former ground surface. The upper edges of all four stones were level.

The filling of the chamber appeared to be deliberate, rather than accidental. The chamber was loosely packed with a homogeneous mass of earth and stones none of which was more than 0.31 m in length, except for one long stone 0.97 m by 0.38 m by 0.18 m resting almost upright at the N end of the chamber. The pots were situated in the SE corner of the chamber. The unbroken small pot lay in the angle made by the S and W side stones. It was upside down, its rim 0.81 m below the top of the S slab, and it had been protected from the press of stones and earth of the filling by a fairly flat stone wedged in the corner above it. Whether this placing was intentional or accidental it was impossible to tell but it did succeed in preserving the pot intact. Two other pots lay, rim upwards, crushed but complete, 0.86 m and 0.89 m below the top of the S stone. Pot 2 lay on a patch of burnt soil. The soil around the pots was darker than the rest of the fill. The base of pot 2 was 102 mm above the floor of the chamber. Patches of burning of varying intensity were found at the same level as the pots and also on the floor of the chamber, where they extended under the W side-slabs. Fragments of charcoal were found among the burnt soil in the NW corner. No trace of bones was found. The N end of the main chamber formed the S side of the outer chamber, while the N side was a slab, 0.71 m by 0.64 m by 51 mm thick set on the ground at the same level as the base of the E stone, upright C, its top edge being 152 mm lower than the upper edges of the main chamber. Upright B, a large schistose slab, 1.78 m high and 0.76 m broad, bounded the chamber on the W side while the E side appeared at first to be constructed from a slab 0.97 m high and 0.86 m broad. The W stone, upright B, was sunk 0.31 m into the subsoil, while the other stones were erected on the former ground surface as in the main burial chamber. The filling in the upper part of the outer chamber was earth and stones of the same character as that in the main chamber. One flint (fig 7, 1), a flake with some retouch on one edge, was found. When this filling was removed a single flat stone was uncovered, completely filling the area of the chamber. This was discovered to be the upper part of the E side stone and when the two pieces were joined they formed upright C, which matched upright B exactly in height and in the angle of its upper edges. The height of the complete stone was 1.68 m. Under the fallen part of upright C were fairly flat stones laid horizontally, averaging 0.31 m by 0.31 m with clay packing in between them. Four sherds, fragments of the rim of a pot lying rim down, were found at this level, 0.66 m from the top of the dividing slab between the two chambers; a flint chip (fig 7, 3) with some secondary working was also found. Below the pot fragments were five layers of flat stones, average area 0.31 m by 0.31 m and about 25 mm thick, built carefully against the outer face of the end slab of the main burial chamber. The rest of the chamber was packed with similar stones which were not arranged in any way. The careful packing in the outer chamber had helped to keep the uprights B and C in place. The lower part of upright C was leaning slightly downhill to the W when uncovered and had to be pulled back to a vertical position in order to lift out the upper part. The neatness of the fit suggested that the placing of the upper part of upright C in the outer chamber was deliberate and that the stone had been used to cover a deposit associated with the fragments of rim found below it. On the other hand, it is perhaps just as likely that the stone may have been

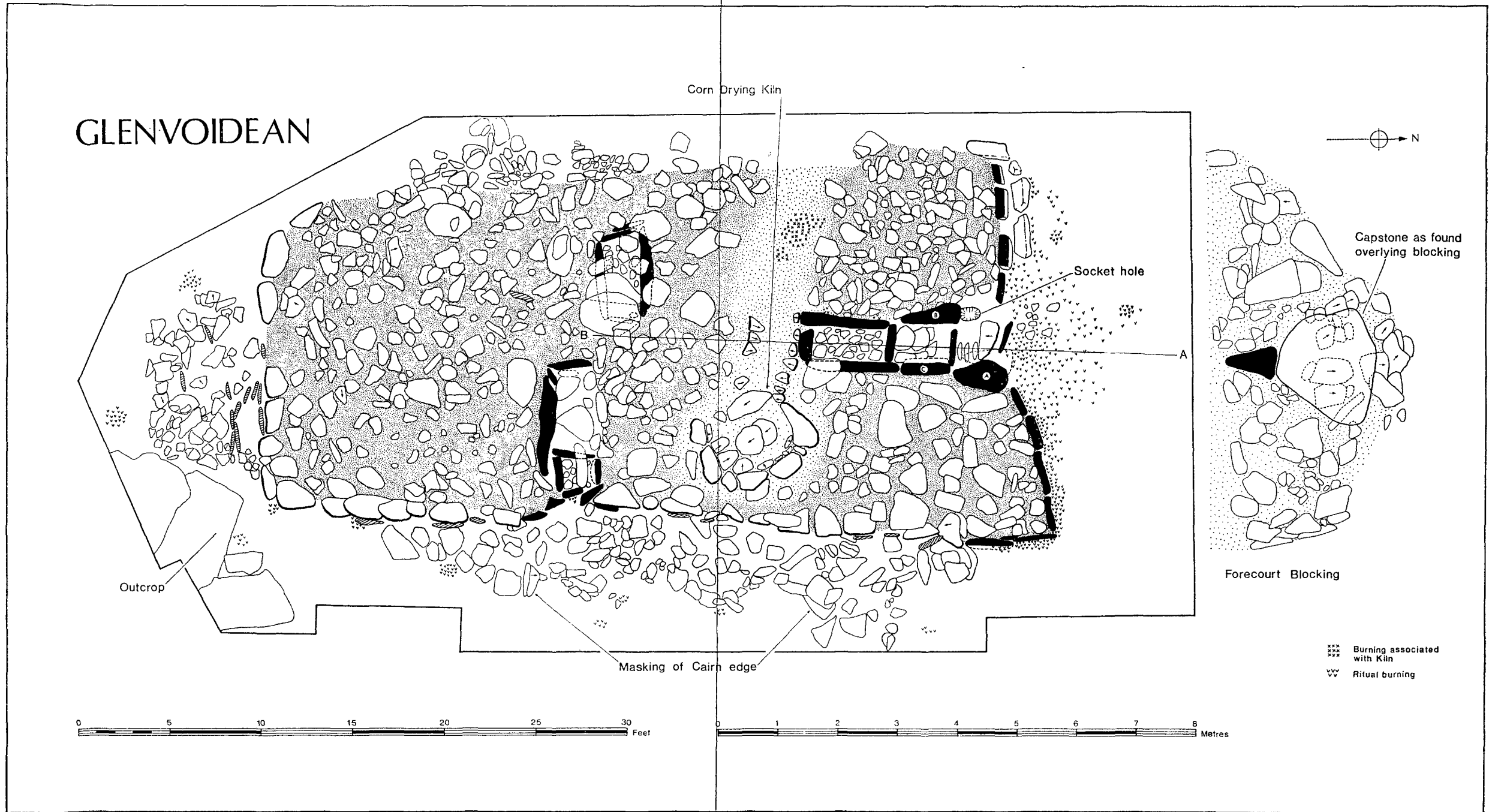


FIG 3 Glenvoidean: plan of later levels

# GLENVOIDEAN

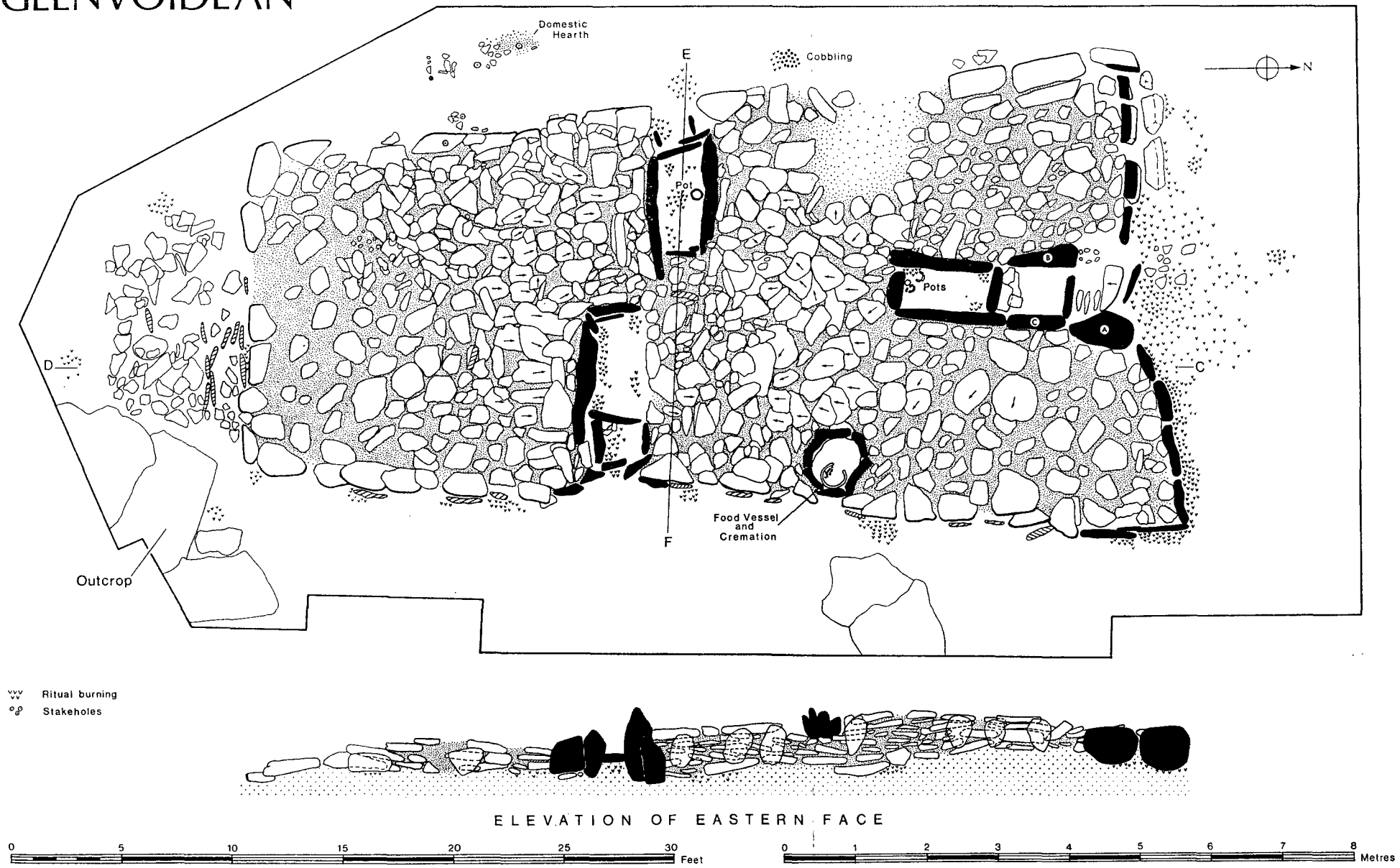


Fig 2 Glenvoidean: plan of earlier levels

broken accidentally during the manoeuvring of the capstone and fallen into the chamber. As cairn material covered the outer chamber and its contents this packing must have occurred some time before the final blocking of the cairn.

### THE ROUND CAIRN (fig 2)

The axial chambers were found to be within a cairn. To the S and E the edge of the cairn was clearly marked by slabs leaning inwards. To the W the edge was difficult to trace, probably due to the disturbance caused by the kiln builders. Two large stones to the E, in line with the front edge of upright C, possibly indicated the front of the cairn. There were few stones immediately in front of these stones and the soil differed markedly from the soil among the stones to the S of the chamber, being very dark and containing burnt soil and charcoal.

The gradient of the slope was steeper on the W, the seaward side of the chamber than it was on the E, the landward side. This dictated a marked difference in the technique used in the building of the round cairn between the E and W side. On the E most of the stones used were flat and were laid horizontally, whereas on the W the stones, irregular in shape, were placed at the angle of rest. Interspersed among them were a few much heavier stones, which could have prevented the cairn material from slipping downhill. The same use of larger stones was found at Crarae (Scott 1961, 6). One long stone was set as a buttress to support the W side slab of the burial chamber. More careful building was noted here than elsewhere on this side of the cairn.

### THE PORTAL STONES OF THE AXIAL CHAMBER (figs 2, 4; pl 1a)

In front of upright C stood upright A, an irregular weighty pillar of schist, 1.78 m high, with a circumference of 2.29 m at its thickest part, 0.86 m from the top. Its pointed base was not set deeply in the subsoil and when it was excavated it was obviously leaning farther towards the W than it had done originally. It was pulled back to a vertical position to prevent it falling. Now it probably leans more towards the E than it did when first erected. A careful arrangement of stones around its base suggested that it may always have been unstable, for behind it to the E two large flat slabs, over 1.07 m in length, were wedged horizontally against the angled side of the upright. These slabs rested on a short low wall. Below them large stones were wedged against the narrower part of the E side of the portal stone, while on the W side two upright stones, 0.91 m and 0.86 m long, had been rammed in on edge and at right angles to the face of the upright to give it added support. Another stone of similar character beside them may also have been arranged on edge as part of this packing, which filled the area in front of the N side-stone of the outer chamber. To the N of these packing stones was a slimmer upright slab, 0.76 m high at its apex, now tilting towards the S, which bounds the N side of the portal area. To the W, opposite upright A, was a shallow socket which probably marked the position of another upright, completing the design of the portal. A stone about 1.22 m long, broken in two parts, lay under the blocking to the N of the socket and, although the complete stone would have been slimmer and more lightweight than upright A, it could possibly be the missing portal stone. If so, it must have been displaced and broken before the final blocking of the forecourt.

A very large flat stone, measuring 1.50 m by 1.52 m by 2.03 m and from 203 mm to 381 mm thick, lay beside upright A, towards the front of the cairn, overlying the blocking and the façade. Its estimated weight was in the region of 2.03 tonnes (two tons). This was probably the capstone of the main burial chamber.

### THE FAÇADE AND FORECOURT (figs 2, 3, 4)

The portal, or outermost, compartment of the axial chamber was flanked by a flat façade. The two sides were very different in character. To the E the façade was constructed from four slabs 0.61 m high. When excavated they were seen to have been pushed forward by the weight of the cairn material behind them. They adjoin two similar revetment stones at right angles on the E side of the cairn. There was drystone walling behind the revetment stones but none behind the stones of the façade.

The W side of the façade was unlike the E in that it was made up of rectangular blocks of stone which would not have stood more than 254 mm high. The pressure of the cairn material had pushed them forward, making their line somewhat irregular. The W side of the façade also made a right angle with the edge of the cairn but, unlike the E side, the edging stone was a rectangular block.

The forecourt, roughly semi-circular in shape, stretched in front of the façade. Some flat stones, 152 mm to 203 mm, possibly paving, lay in front of the portal. Traces of burning showed over the whole breadth of the forecourt, extending by 2.13 m out in front of upright A. This burning varied in depth and in the intensity of its blackness. It ran up to and under the stones of the façade. It lay very black over and between the paving stones, but not under them. At places there were layers of ashy soil amongst the black. The largest of the black patches lay 64 mm thick in front of the portal of the axial chamber. No pits were found. Some six or eight stones lay on the soil of the forecourt.

The blocking which covered the whole forecourt fanned out in front of the portal. The flat, carefully selected stones, on an average 0.41 m by 0.51 m, overlapped as they spread outward. As some of the blocking stones rested on the fallen stones of the E façade, it seems that this collapse must have taken place before the final blocking of the cairn.

### THE LATERAL CHAMBERS – E LATERAL CHAMBER (figs 2, 3; pl 1b)

Two lateral chambers, one on the E side of the cairn and one on the W, were uncovered 7.93 m to the S of the axial chamber. They lay along an E-W axis, almost back to back, with a distance of 0.61 m between them. The E chamber (2) had an inner and an outer chamber flanked by portal stones, while the W chamber (3) had a chamber and a slight porch.

Stones and earth covered both the inner and outer compartments of the E lateral chamber. The top edge of W stone in its main chamber was 0.81 m below the present turf line. The inner chamber was 1.45 m long and 0.69 m wide. The W stone was wedge-shaped, narrowing from 0.91 m at the top to 0.38 m at the base. It was set into the soil, the slope of the ground making it 152 mm lower than the base of the E slab. Another stone, 0.46 m wide and 0.69 m high, was wedged against the inner face of the W stone, as if to brace it against the weight of the cairn material behind. The S side of the chamber was made of one massive slab, 1.75 m long, somewhat irregular in shape. At neither end did it fit exactly with the end stones; at the E end it extended beyond the S slab of the outer compartment by 0.31 m, while at its W end it did not reach the end stone, the gap being filled with a smaller stone. On the N side of the chamber there was no side stone, only a rough uneven section of walling made from irregularly shaped stones, the largest of which was 0.61 m by 0.53 m by 0.81 m, rounded and not at all suitable for walling. The possibility of a missing slab cannot be ruled out; the present width of the chamber would allow for another slab and the fact that there was no socket is not necessarily significant as the stone could have been set up on the former ground surface, as most of the slabs used in the construction of the chambers were found to be. The E end was 0.76 m by 0.79 m, narrowing slightly at the base. The



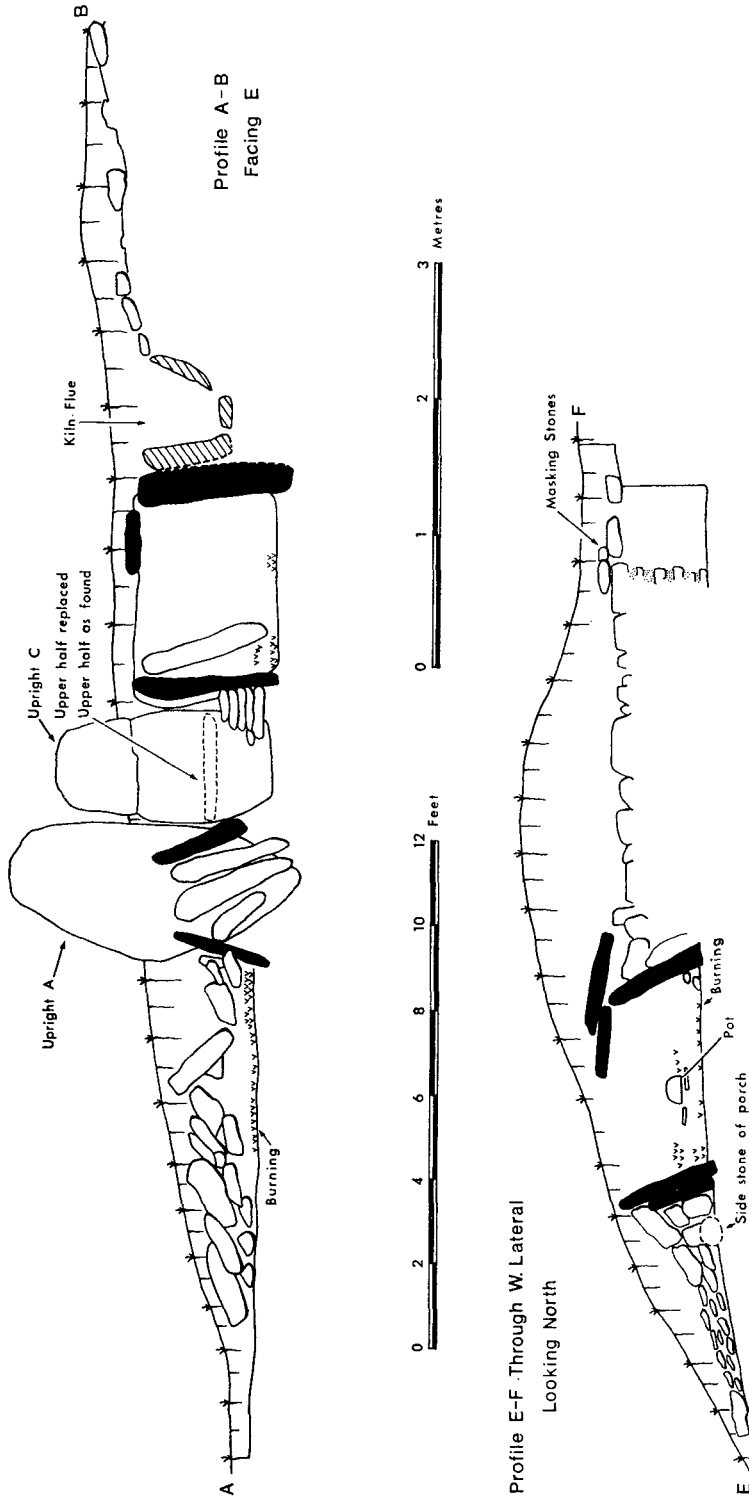


Fig 4 Glenvoidean: sections through axial and lateral chambers

filling of the chamber consisted of soil with some stones. Blackened earth was found over most of the floor of the chamber, especially beside the large S stone. No bones nor any trace of a burial was found in either chamber. As nothing was found in the filling of the chamber and as there was no indication as to how it had been roofed, it is probable that this was the most disturbed of the three burial chambers.

The outer compartment of the E lateral chamber was roughly 0.61 m by 0.61 m. The E stone of the main chamber formed the W side of the outer compartment. To the S it was bounded by a slab, 0.61 m broad at the top, 190 mm at the base and 0.79 m high, and to the N by a larger stone, 0.99 m high, 0.53 m wide narrowing to 229 mm at the base. This stone had tilted inwards but when upright it would have stood 152 mm higher than the other sides of the compartment. The edges of the stones fitted fairly well, the gaps of the wedge-shaped ones being packed with stones. On the E side a stone, 0.31 m high, 152 mm thick and 0.66 m long on its upper side and 0.43 m on the lower side, lay across the entrance of the outer compartment to make a shallow sill. It was found tipped forward, uphill. Diagonally across the fill of the outer compartment, just below the top of the side stones, a stone, 0.66 m by 266 mm by 140 mm, was wedged between the side stones. Under it was a packing of small stones with some lumps of quartz among them. At a level of 0.36 m below the top of the S stone were patches of dark soil and some flecks of charcoal. This lay on top of two large stones which had been pushed against the other wall by the tilted N stone, probably altering their original placing. At the bottom of the compartment in the SE corner were four flat stones 25 mm to 50 mm thick, laid carefully one on top of the other. A similar, but heavier, type of packing was found in the outer compartment of the axial chamber. A layer of black soil, 25 mm deep, lay under the sill but extended over the top of the flat packing stones.

The entrance to the outer compartment was flanked by two portal stones and a small dry-stone façade. On the N side the portal stone was 0.84 m high, while its partner on the S side was 0.61 m high. The top of this stone had been broken off so it may originally have matched the N one. Beside the portals, but against the drystone walling, stood two slabs on end. From the angle at which they were set it is probable that they were additional portal stones, or they may have been connected with the other upright stones which were found set against the kerb wall. The space between the portals was blocked by tightly packed stones, 150 mm to 230 mm, about half of them quartz. The slightly incurving drystone façade was incorporated into the otherwise straight kerb of the trapezoidal cairn. Despite its small size, less than 0.91 m high, this entrance to the chamber, with its portals and façade, was impressive in its compact and regular build. At the point where it meets the portal on the N side of the entrance, the wall was 0.76 m high and consisted of seven courses, while on the S side it had only four courses. About 1.52 m to the S of the S portal, the walling appeared to turn inward towards the curved line of the pitched stones around the inner cairn surrounding the two lateral chambers. The insertion of the bronze-age cist had disturbed the walling on the N side of the entrance at the point where it was in line with the pitched stones, but examination of the wall below the cist showed a break in the bonding there, possibly indicating where the trapezoidal kerb wall joined the earlier drystone façade.

#### THE LATERAL CHAMBERS – W LATERAL CHAMBER (figs 2, 3, 4; pl 3b, c)

Like the E lateral chamber (2) the W lateral chamber (3) lay on an E-W axis. Although the two chambers were set almost back to back they were not truly aligned. There was a distance of 0.61 m between their nearest points.

The main chamber, 1.22 m by 0.61 m, had the side walls formed of slabs of mica schist

which did not fit particularly well. The N slab, 1.47 m long and 0.58 m high, was rough and irregular in shape due to the veins of quartz running through it, which also made it friable causing it to split lengthwise. At the W end it fitted well with the adjacent stone but at the E end there was packing at its junction with the E slab. It had collapsed forward towards the S. The S side of the chamber was formed from a large flat-sided triangular stone, 1.78 m long at its base and 0.74 m high at the apex. It projected 0.56 m beyond the E slab but fitted pretty well with the W stone. Because of its triangular shape there was a gap at the top which had been closed with a fairly large stone placed across it. This triangular stone was set 50 mm into the clayey soil. In its present position the E slab was not quite at right angles with the side stones. It tilted inwards towards the W. This end of the chamber was not quite so well made as the W end; packing stones filled the gap between it and the N stone. A fairly regular slab, 0.71 m by 0.76 m, formed the W end of the chamber. It tilted towards the W and on the W side it was supported by another upright stone which also sloped towards the W. Two capstones were still in place at the E end when the chamber was uncovered. The larger slab, 0.61 m by 0.76 m, overlay the smaller one which projected 0.31 m beyond the chamber to the E.

The chamber was filled with a mixture of soil and stones, mostly small slabs of mica schist, some round stones and lumps of quartz. The filling seemed deliberate and undisturbed for, although the stones occurred at random, the small slabs tended to lie horizontally. About 76 mm above the floor of the chamber, in a central position near the N side stone, a small complete pot was uncovered. It was set upside down on some flat stones. Within it was a lump of quartz which looked as if it had been trimmed to fit the pot. Black soil, with flecks of charcoal, lay on the floor of the chamber. It was blacker and more concentrated at the centre, spreading more towards the W than the E. It did not run under the sides of the chamber. A small patch of black soil was found near the pot but 203 mm above the floor level.

The construction of the outer compartment or porch was very flimsy compared with that of the other chambers. The side stones were two small uprights, 203 mm by 178 mm and not more than 25 mm thick. A thin layer of black soil overlay red-brown soil in the porch and just in front of it. Under this lay another layer of black soil, extending under the kerb stones to the S. The inner stone of the kerb lay against the S side stone of the porch. The kerb edge to the N lay in front of the N edge of the porch. The porch had been carefully blocked with small flattish slabs. Larger flat stones lay horizontally on top of the blocking, then came flat sloping stones, which in turn were covered by a spread of much smaller stones which fanned out in front of the chamber.

An area of dark burnt soil lay 0.46 m in front of and to the N of the N stone of the porch. It was a distinct oval patch, 0.76 m by 0.46 m, but the blackened soil was not more than 25 mm deep. About 1.52 m N of this was an oval pit, 405 mm by 200 mm and 180 mm in depth. The N half was filled with pebbles, the other with dark gravelly soil.

#### THE INNER CAIRN ROUND THE LATERAL CHAMBERS (fig 2)

It was impossible to establish whether the E lateral chamber had preceded or succeeded the W lateral chamber, or whether they were contemporary. The stones between the two chambers lay at all angles under a covering of horizontal slabs. Long stones were uncovered lying beside and parallel to the N and S side slabs of the W lateral chamber and on the S side of the E lateral chamber.

As most of the slabs of the lateral chambers were set on but not into the natural soil, the long stones must have been placed to support the slabs or they may be all that is left of small tight cairns round the chambers.

Once the upper layers of fairly horizontal stones and those of the corn-drying kiln had been removed from the area N of and surrounding the lateral chambers, the outline of an inner cairn could be defined. To the S of the E lateral chamber was a curved line of stones, roughly rectangular in shape, set on end and pitched outwards. This line was reinforced by another line of large stones, also pitched outwards, and behind this line large stones were set as buttresses, indicating that the angle of the pitched stones was intentional and not the result of pressure of cairn material pushing them outwards. Among them, and against these buttressing stones, was much dark soil which had a little charcoal in it. This may have been the remains of turf, possibly burnt, used to support the stones and to make the edge of this cairn surrounding the lateral chambers. The line of pitched stones, well defined to the S of the E lateral chamber, extended less clearly defined towards the W lateral chamber. This pattern is repeated to the N, where flat stones had been set against the SE edge of the round cairn surrounding the axial chamber.

The lateral chambers lay off centre, to the S, within this cairn.

### THE TRAPEZOIDAL CAIRN (figs 2, 3)

The trapezoidal cairn, 12.80 m long, 6.71 m broad at the N and 5.18 m at the S end, was symmetrical in plan around the same N-S axis as the axial chamber. The edge of the cairn was marked for most of its length by a line of flat stones laid horizontally, which topped a kerb wall of widely varying height. Appearances indicated that the cairn had been fairly level from the axial chamber to the lateral chambers and had tapered towards the tail, possibly because of the difficulties of accommodating existing structures. The building of the cairn was not regular or uniform. This irregularity was noted especially in the building of the kerb which defined the limits of the cairn. On the E side the kerb was a drystone wall running the whole length of the cairn from the forecourt to the tail. It was three to four courses deep for 3.05 m S from the forecourt façade, then it gradually deepened to eight courses and continued at this depth until it met the N portal stone of the E lateral chamber 7.47 m from the forecourt façade. Because of the change in the ground level the wall deepened while its upper level remained the same. The drystone façade for the E lateral chamber gave a gentle inward curve to the otherwise straight edge of the kerb. S of the portal the wall consisted of four courses, decreasing gradually to only one course at the end of the cairn. The arrangement of five horizontal stones which overlapped each other showed that at this part the kerb had been built from the tail towards the N. Thirteen upright slabs had been placed against the wall, ten to the N, three to the S of the lateral chamber. The three largest of these facing stones were placed in a line adjoining the upright stones of the façade and at right angles to them. The stone to the S abutted on two larger stones which extended into the cairn in a line with the front of upright C, possibly indicating the original edge of the cairn round the axial chamber and its outer chamber. These three orthostats differed in character from the other ten which were set against the drystone walling. The ten stones were not regularly spaced. The tops of the facing stones were level with the top of the walling, but in places did not reach the bottom of it. Patches of burning found on the ground level at the foot of the wall and also on the level of the soil at the base of the upright slabs, suggested that they were a later addition, having been placed there after a period of time during which soil accumulated against the wall.

At the end of the cairn the kerb consisted of a straight row of flat stones. Although the gradient of the slope of the ground towards the sea was 1 in 6, the kerb at the end of the cairn was built two courses deep on the landward side and only one course on the seaward side, thus increasing the gradient of the slope on the top of the kerb stones to 1 in 5.

A roughly triangular area of stone packing, 2.13 m long, had been added to the end of the

cairn. In this tail flat stones were wedged in place by small stones set in upright with only the top showing; one was set 0.46 m deep. To the S and E of this area was an outcrop of schist which seemed to have been worked and may have been a quarry for stones used in the building of the cairn. A similar outcrop lay just N of the façade of the E lateral chamber, about 0.61 m from the kerb wall and below the level of the bottom course.

The kerb continued as one course of flat stones carefully set to make a straight even edge on the W side of the cairn until it met the entrance to the W lateral. At 1.52 m to the N of the entrance to the W lateral chamber the kerb disappeared, probably because of the disturbance when the corn-drying kiln was built, as the flue emerged at this point. The part of the kerb to the W of the axial chamber seemed to have been massive. The only kerb stone still in place was rectangular, 0.69 m by 0.38 m, and was set at right angles to the W arm of the forecourt façade. Four other rectangular stones, the largest 1.37 m long, were uncovered about 1.83 m downhill from the line of the kerb, apparently having been dislodged from their original position as part of the kerb. These stones were larger than any others used in the building of the cairn and must have made a massive and somewhat unwieldy kerb. The soil just under the kerb line was sandy, whereas under the slipped stones it was clayey, hard packed or tramped firm.

It appeared that the trapezoidal cairn had been built in such a way as to accommodate and enclose a cluster of existing structures and therefore only a small proportion of the whole cairn belonged to the time when the trapezoidal cairn was constructed. Once the upper layers of horizontal stones and those of the corn-drying kiln had been removed it was seen that the stones between the axial and lateral chambers lay at all angles. The area between the edge of the inner cairn round the lateral chambers and the end of the cairn seemed to have been built from the end kerb northwards, as the overlapping stones on the E kerb showed. Large stones were placed in regular ribs running E-W across the cairn. Between the ribs, stones lay at all angles and it was noticeable that the soil amongst the stones differed from one section to the other, particularly in the S section, where there was much dark burnt soil between it and the end kerb. On the E side of the cairn, 1.52 m from the end kerb, three fairly square massive stones 0.84 m were set one on top of the other. The bottom one was quartz. Black soil lay over it and under it. A line of stones, starting at a point on the end kerb 0.76 m away from the SW corner, ran NNE-SSW for 1.83 m. While this line had been distinctly built, it appears to have had no function.

There were indications of substantial burning towards the end of the cairn. Dense black soil lay in patches, the deepest towards the E where it was 100 mm thick. At 1.83 m in front the E kerb it stopped in a fairly definite line, but continued again in patches towards the W kerb.

Two neolithic sherds were found among the stones of the cairn S of the S slab of the axial chamber, one 180 mm and the other 0.46 m below the top of the slab. Low down among the stones of the cairn three small fragments of burnt bone were found.

About halfway between the entrance to the W lateral chamber and the end of the cairn, 1.52 m to 1.83 m from it, was an area of what appeared to be occupation debris. There was light cobbling, two cobbles deep in places, and the soil was patchy black among red earth. Connected with this vague floor were four stake holes, 88 mm in diameter and in depth. One was in earth under a kerb stone, one in brown soil and one built up slightly among stones. The fourth was sunk into a small but distinct hearth which lay under the cobbling. The dense black of the hearth, 0.76 m in diameter, was 100 mm deep at the centre. This black soil was different in character from the other burnt patches found round the cairn, being slightly greasy. No bone was found. The slight stake holes were set in a curve which, if continued round, would have made a circle of about 2.44 m.

**BRONZE-AGE CIST** (figs 2, 5; pl 2)

A two-tiered bronze-age cist was set into the cairn or masking material of the cairn, just inside the landward kerb, near the junction of the small round cairn and the cairn enclosing the two lateral chambers. It was set on a large flat stone, W of the line of the kerb and level with it. Under this stone was the packed earth and stone of the cairn.

Three of the six uprights which made the cist were similar in shape and size, 0.69 m tall, 0.25-0.31 m broad. Another stone was also rectangular, 0.25-0.31 m broad, but only 0.53 m tall. The other two stones, triangular in shape, were also about 0.69 m in height and were 0.61 m broad at the base. They were set with the apices to the top of the cist. The gaps between these triangular stones and the more regularly shaped ones were carefully packed with small stones.

Four stones, roughly square and 114 mm high, were set on the flat stone at the base. On them rested a rectangular slab, 0.66 m by 0.46 m and 51 mm thick, thus completing the lower compartment. In this lower compartment to the NW was a deposit of a few burnt bones of an adolescent. About a bucketful of earth was removed in the clearing of the compartment. This soil may have been fill but perhaps is more likely to have filtered in.

The upright stones fitted very closely round the slab which divided the two compartments. On this slab rested the rim of an enlarged food vessel, set off centre towards the W. The upper part

The Bronze Age Cist

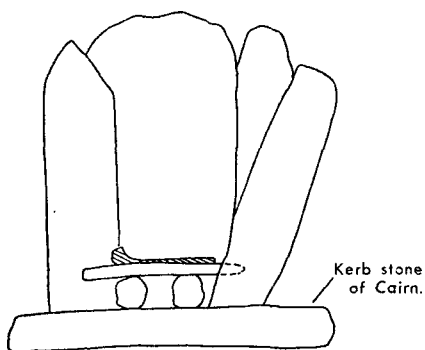
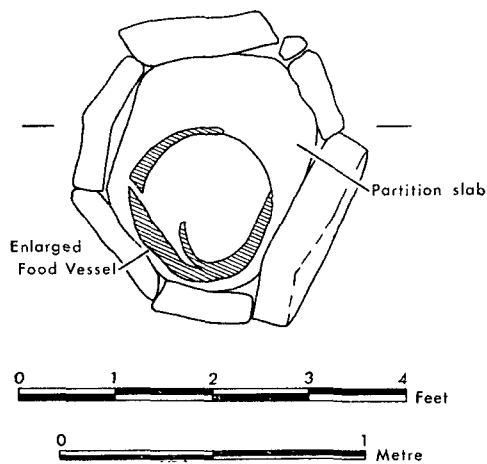


Fig 5 Glenvoidean - plan and elevation of bronze-age cist

of the cist was filled to the top with earth and surprisingly large stones, some of them 0.41 m long, many of them quartz. Under the uppermost layer of stones were sherds of the pot. Sherds and a few small pieces of bone continued mixed with the fill of earth and stones to the base of the compartment. Fragments of skull and a few bones were on the base outside the rim of the pot. It seems possible that the pot had been broken before it was put in the cist.

There was no capstone present but, if there had been one, it might well have been used by the medieval builders of the corn-drying kiln.

## DISCUSSION

The exact place to build Glenvoidean Cairn – on the slope of a hill – must have been decided by circumstances which are not obvious to us today. Admittedly the drift of the soil against the landward side of the cairn has been considerable, thus adding to the steepness of the present hillside. Nevertheless, the original slope of the hill must have been such that some levelling may have taken place before the cairn was built. Yet a much flatter site lies only about 15 m higher up the hill. This choice of a seemingly difficult site is noted at Beacharra (Scott 1964, 137, 142). Burning found in patches on the floor of all three chambers may have been the result of ritual fires.

Excavation proved that the cairn was a multi-period structure of some complexity and that it was in use for a long time. A sample of burnt material from under the W slab of the axial chamber gave a date of  $2910 \pm 115$  bc (I-5974). On the other hand, the three pots found in the main axial chamber, which were probably the last deposit in neolithic times, are dated typologically to *c* 2300 BC.

Glenvoidean Cairn falls into A S Henshall's category of Clyde Long Cairns (1972, 15–19) with many of the typical features, such as straight façade, trapezoidal cairn containing smaller cairns covering axial and lateral chambers, with imbricated side slabs. In plan the trapezoidal cairn was symmetrical, carefully orientated round the axial chamber, with its limits indicated practically all the way round by the line of flat stones horizontally laid; but the details of its construction varied greatly. This irregularity probably arose because successive builders of the cairn had to accommodate structures already in existence and so had to adapt their building accordingly. The axial chamber and its outer chamber were built with precision, their side stones well chosen to make rectangular compartments and their uprights matched exactly. Apart from this regular plan and the careful construction of the axial chamber, symmetry just did not seem to matter. This lack of interest in achieving geometrical regularity was noticed by Wilson (1975, 178). The two sides of the forecourt were different in character, one side made from slabs of stone set on edge, the other side from blocks laid on their side. The remaining portal stone at the entrance to the axial chamber is irregular in shape and unwieldy. It certainly would not have matched the fallen stone assumed to be its partner in shape or size. Within the cairn the two lateral chambers, similar in build, which may have been erected about the same time are parallel but not aligned. Their development is different; the E lateral chamber had an outer chamber, small façade and portal associated with it, while the W lateral chamber had only a slight porch. The trapezoidal kerb wall, too, has several different types of building in it, varying from eight to two courses high. The blocking and masking of each of the three chambers were also different.

Before excavation the E side of the cairn, totally covered by soil drift, had not been disturbed in historic times. The W side was covered by turf which, when removed, showed that the massive kerb stones to the W had slipped downhill and that much robbing of stones had taken place, possibly for use in the many old field dykes around. At each phase of construction of the cairn the builders themselves must have destroyed much evidence of the earlier structures.

With this cairn, incorporating so many features, in use for such a long time, so much disturbed and robbed, it is very difficult to determine the chronological sequence of the various stages in its development. Any attempt to do so must be regarded as conjectural.

The following is a tentative attempt to define the phases:

*Phase 1* The building of the axial chamber and its outer chamber within a round cairn. It is now generally accepted that simple chambers such as the axial chamber at Glenvoidean, within round cairns, came early in the sequence of the building of neolithic burial cairns. The early date of the deposit under the axial chamber ( $2910 \pm 115$  bc) indicates that the axial chamber was the first on the site. The pitched stones marking the line of the cairn could be clearly traced on the SE side and to the S under the flue of the corn-drying kiln. It is probable that there were two stages within this phase, the first being the simple chamber within a round cairn. In the next stage uprights B and C were added, making portals, and the cairn extended to the front of upright C. It is possible, of course, that this second stage may belong to a later phase.

The axial chamber is closely paralleled in Cairnholy I (Piggott and Powell 1949). J G Scott (1968b, 193-5) traces the development there from the simple enclosed chamber through the adding of the portal stones in line with the side slabs of the chamber to the turning of the porch into an outer chamber by a septal stone. This may well have been the sequence at Glenvoidean, though the closing of the outer chamber was probably done during a later phase.

*Phase 2* The building of the two lateral chambers and their surrounding cairn. The two lateral chambers, like the axial one, may possibly have been simple box-like chambers to begin with. This early feature suggests that not very long may have separated the construction of the two cairns. The lateral chambers, placed back to back on the same E-W axis but not in line, were probably built about the same time. They may have had small tight cairns round them but, if so, all trace of them was destroyed in the making of the curious oval cairn with its outward pitched stones. To the N the stones lay pitched against the S of the cairn round the axial chamber, making the sequence of building clear at that part at least. If the building of the lateral chambers was contemporary, their development was so markedly different that it seems likely that they were elaborated at different times. It is possible that the addition to the axial chamber and the extension of the round cairn to the N took place when the E lateral chamber was developed. It seems probable that the outer compartments of both the axial and the E lateral chambers started as porches before the addition of end slabs to turn them into compartments. In the E lateral chamber the side stones forming this porch were only very slightly higher than those of the chamber, while in the axial chamber the side stones of the porch stood up like portals, 0.64 m higher than the actual chamber slabs. Despite this difference of construction the lower blocking in both porches was similar, with flat stones laid horizontally against the end slab of the main chamber. The porches of these two chambers were blocked by flat stones laid horizontally against the end slab of the chamber. When excavated they lay five deep in the axial chamber, three deep in the lateral. This type of blocking was also found at Clach-na-Tiompan Chamber 2 (Henshall and Stewart 1956, 116-17) and at Mid Gleniron I (Corcoran 1969, 42-3). These two porches may have been blocked during the same period but their further development is quite different. The E lateral chamber had a low sill turning the porch into an outer chamber. A layer of black soil ran under the sill but over the three layers of stones packed against one corner of the end slab of the chamber. Probably it was at this time that the small portal stones were set flanking the entrance to the chamber with a slightly curving drystone façade. No capstone was found for this chamber. The W lateral chamber had only a slight porch in front of it, made of two stones not more than 0.2 m high.



When visiting the excavation in 1971, J G Scott thought that this cairn with its pitched stones would not have had a very long independent existence, so the development of the porch, portals and façade may not have taken more than a generation or two.

The occupation site on the W side of the cairn, with its cobbling, stake holes and hearth material, may have been in use during this phase. One stake hole was found under a kerb stone, so it must have preceded the making of the trapezoidal cairn. There was a break during this occupation as one of the stake holes was set into the hearth.

*Phase 3 The trapezoidal cairn.* During this phase the two cairns were enclosed by the trapezoidal cairn, thereby extending the cairn to a length of 12.8 m. The axial chamber was probably further developed by the addition of the two portal stones, one now missing, and the straight façade. The forecourt in front of this façade had evidence of many fires, showing the greater ritual associated with the more elaborate façade (Henshall 1972, 60). Some changes may have been made at the façade of the E lateral chamber when it was incorporated within the kerb of the trapezoidal cairn. It is probable that the kerb was built up several courses on either side of the porch of the W lateral chamber, thereby giving some protection to the little uprights which made the porch and which could not very well have stood the period of abandonment which followed this reconstruction.

It might have been in this phase that the pot was placed in the W lateral chamber but there is no real evidence as to when this was done. As it was found 76 mm up from the foot of the chamber and, as it was associated with a layer of carbon just above that level, it is unlikely that it was a primary deposit. It is difficult to date the plain, straight-sided pot but typologically it is earlier than the pots in the axial chamber.

It is not easy to place the adding of the tail to the long cairn, with its stones set upright as though to stop it slipping down the slope. It may have had some functional purpose, in which case it was perhaps a later addition either before or after the period of abandonment. Such additions are reported at Dunan Beag and Giant's Graves (Henshall 1972, 41) in Arran, but at these cairns no upright stones were described.

*Phase 4* Period of abandonment. Evidence for a period of abandonment can perhaps be seen in the soil drift against the E kerb wall. The facing stones against the drystone walling do not reach the bottom of the wall, some of them resting on a depth of from 0.05 m to 0.3 m of soil. This soil, of course, may have been filled in deliberately.

*Phase 5* The placing of the facing stones. Thirteen facing stones were set against the E kerb wall. Was this possibly an imitation of the 'post and panel' (Piggott 1954, 163) build seen at the façades of some cairns? The placing of orthostats against a cairn is considered a late feature (Henshall 1972, 71). There may have been other modifications or additions made at this time. Perhaps it was in this phase that the 'tail' was added.

*Phase 6* Further period of abandonment. There was a further drift or deposition of soil against the E kerb as it had reached the top of the walling by the time the masking of that edge was done. The stones of the E façade in front of the axial chamber had been pushed forward before the final blocking of the forecourt. Of course, this may have been happening gradually while other developments were taking place.

*Phase 7* The last deposit in the axial chamber, the final blocking and abandonment of the cairn. It is probable that the three pots found in the axial chamber were the final deposit. As in the W lateral chamber, they lay a little above the floor of the chamber indicating that they were not the primary deposit. There was no trace of bone or burial in the chamber. After the chamber had been cleared in 1963 water seeped into it after heavy rain to a depth of 0.3 m or more. Presumably the soil at the foot of the chamber would be repeatedly saturated with water so that any burial

remains would disappear. When the pots were lifted they were in an extremely friable condition. As no burnt bone was found, burial was presumably by inhumation. It was probably during this phase that upright C was broken, perhaps deliberately or perhaps by accident. It could have happened when the massive capstone was being moved for the last deposit. The upper part of the upright filled the outer chamber completely. Under it rim sherds of the same ware, though of a different form, as the pots in the main chamber were found. When excavated it seemed that the placing of the rims edge downwards was deliberate, indicating that it was part of the funerary offering. However, it is generally accepted that fragments of pots were not usually deposited (Henshall 1972, 86), sherds found at Unival and Cletraval being considered the remains of earlier deposits. So these sherds, with the flint blade found with them in the outer compartment, may be the remains of an earlier offering. As the wares were similar one burial may have followed on the other fairly quickly.

Once the accident to upright C had happened the cairn builders may have used the upper part deliberately in the blocking of the outer compartment. The earth and stones found on top of the upper part of upright C were of the same character as those found in the fill of the main chamber. When one knows so little of the working of the minds of these neolithic builders, it is dangerous to associate cause and effect without supporting evidence, but perhaps the accident to the upright may have influenced them in making this burial the final one.

It is very difficult to explain the position in which the capstone was found. It must at some time have been pulled round almost in front of upright A; if it had fallen off the top of the axial chamber it would have slipped down the hill. It may have been pulled to this position by the neolithic builders or by the builders of the corn-drying kiln. The second is perhaps the more likely suggestion as the capstone overlay part of the blocking and was covered by heather and very little soil when the excavation began.

The blocking of each chamber is so completely different that it is difficult to think of them having been done at one and the same time by one and the same set of builders. There is no evidence as to which lateral chamber was first blocked. In the E lateral chamber the space between the portal stones was tightly packed with eight stones, four of them quartz. A large stone was wedged on the top of the outer compartment. At the W lateral chamber two large stones were laid against the end of the chamber, perhaps to protect the little porch. Flat stones were in the porch itself. Larger stones covered these. Further W flat stones lay overlapping, sloping towards a stone set horizontal with packing under it to maintain this position. J G Scott suggests that these stones had originally been part of the kerb build and, as found at Beacharra, had been pulled forward to form part of the blocking (1964, 142). The soil seen under the cairn material behind the kerb is perhaps evidence for there having been a higher kerb in front of it. These in turn were overlain by a spread of flat stones, not more than 0.25 m, most of them smaller, fanning out to 1.52 m in front of the chamber. It seems likely that there were two stages in this blocking, the first perhaps after the deposition of the pot and the second during the final blocking of the cairn.

The final blocking and covering of the cairn was done with deliberation and care. The E edge of the cairn, with the façade of the lateral chamber, was masked by stones, not laid overlapping as in the forecourt blocking. This masking did not cover the whole length of the cairn but stopped 1.83 m from the S end. The main chambers were filled with stones and earth, the area between the uprights filled with larger stones and some earth. It is unlikely that the uprights were ever completely covered. Over the forecourt and covering part of the fallen façades was a careful blocking of overlapping stones. When these were uncovered it was impressive in the regularity of the pattern of the stones.

## RITUAL

Fire must have played an important part in the burial rites during the whole time that the cairn was in use. The patches of burning on the floors of all the chambers, those which extended under the side slabs and those under the actual cairn material at the E edge, show that there were fires before the cairn or chambers were built. These may be due to preparation of the ground for the first building. The blackened soil found in deep pockets among the stones towards the front of the cairn points to an abundance of burnt soil lying about when that particular part was reconstructed. The soil contained no kitchen midden material. In the forecourt there were successive fires, deduced from the ashy layers found in some of the patches of black. In places the heat must have been fierce as the soil and stones round the black deposits were reddened. No pits were found. This may indicate the greater ritual associated with the making of a façade (Henshall 1972, 77; Piggott 1954, 163). At each successive phase of building, fires were lit against the edge of the cairn; burning was found at the level of and, at places, running under the lowest courses of the kerb wall and again higher up against the foot of the facing stones. Six separate patches of burnt soil, some of them 50 mm in depth, were found outside the masking of the E edge of the cairn and of the tail. Apart from the fairly large area of burning in front of the W lateral chamber, none of these patches were found on the W side of the kerb. Soil drift on the E side no doubt preserved the evidence of fires; there was no such protection on the W side.

The burials were probably inhumations. In the axial chamber all traces of earlier burials and offerings were removed before the final ceremony with the placing of the three pots. There may be some significance in the fact that the smallest pot was put in upside down. The flint blade and sherds found in the outer compartment may have been left there when an earlier burial was cleared, although again there may be some significance in the placing of the sherds rim down. The flint found in the outer compartment but above the upper part of upright C may, like the other flint flake found in the cairn material, have been dropped accidentally. The pot found in the lateral chamber was also inverted. Stones were found above both this pot and the small pot in the axial chamber. They may have been placed there deliberately to protect the pots, as at Beacharra (Bryce 1902, 105).

The long stone found upright in the NE corner of Chamber 1 may have been a support for the capstone or it may have had some ritual significance as at Clettraval (Henshall 1972, 84) and the basalt 'pillars' associated with 'urns' in what was probably a *Clyde* tomb at Strathblane, Stirlingshire (Ure 1793, 222–3; Henshall 1972, 494).

The final blocking of the forecourt covered the entrance and outer compartment but left the portal stones A and B standing clear. The blocking was not covered and must have been visible when the cairn was abandoned. The blocking of both the lateral chambers was covered by the final masking of the cairn to the E and by cairn material to the W. The masking to the E had a definite edge which was not found to the W.

Quartz seems to have been important to the neolithic people. The 'Cairn-Ba'ans' – white cairns – were probably so named because the quartz used in them showed white from a distance. The cairn at Culcharron near Benderloch was set on a thick spread of quartz chips (Peltenburg 1972). Quartz pebbles were found in the blocking at Walton Farm and round pebbles were set in lines in the chamber at Achnacree (Henshall 1972, 422, 147). At Hilton, Bute, a row of quartz pebbles was found set against a rectangular stone near one of the uprights (*DES* (1973), 21).

In view of the amount of quartz in the vicinity of Glenvoidean, it is surprising that more was not used in the construction of the cairn. It was used but not to any great extent in the cairn

material. The use of it seems to be associated more with the trapezoidal cairn and the later phases than with the earlier phase. The most significant use was the placing of the wedge-shaped piece of quartz within the pot in the W lateral chamber. Half of the stones in the blocking between the portal stones in the E lateral chamber were quartz. Some quartz stones were on the floor of the forecourt. The largest block of quartz used was in the extension of the cairn to the S.

### BRONZE-AGE CIST

The cairn must have remained an impressive monument for many centuries after its final use by the neolithic people. It was probably this impressiveness which attracted the bronze-age people to it when they inserted their cist with its enlarged food vessel. Miss Henshall lists twenty instances of neolithic cairns re-used in bronze-age times (1972, 187), some with short cists inserted, some with beaker sherds and two with food vessels. As could be expected, these neolithic cairns have nearly all remained upstanding monuments even to the present day. Kilcoy S has a mound 6.4 m high, Loch Nell has a massive capstone, Bicker's Houses has its portals still in place and the name Giant's Grave in Arran suggests massive stones.

Two-tiered cists have also been found occasionally in several parts of Scotland, for example Orkney and Argyll (RCAMS 1946, 163-5 nos 433-4; 329-30, no. 951; MacLaren 1969, 113-14). Not one resembles the cist at Glenvoidean; in fact, no two are alike apart from the fact that they were made to accommodate a double or multiple burial, perhaps as the result of some family tragedy.

From its construction it seems as if the Glenvoidean cist was of one period and that the two burials took place at the same time.

Few enlarged food vessels have been found as far W as this one. Barber's distribution map shows that they have been found mainly in the E of Scotland, with one scatter in Ayrshire and Renfrewshire and a few in Wigtownshire. The chevron decoration of the rim is a common feature. It is more usual to find these large bronze-age burial urns, the cordoned, bucket, encrusted, bi-partite, and enlarged food vessels inverted. Morrison (1968, 81-2) gives figures of 56 inverted and 19 upright for the SW of Scotland. So while the actual construction of the cist was individualistic, the placing of the cremated bones in an inverted urn decorated with chevrons conforms to the usual bronze-age practice.

### THE CORN KILN (figs 3, 6)

Before the site had been identified as a multi-period cairn, the curiously flattened, slightly dished appearance of the central area of the cairn was puzzling. On excavation it was found that the cairn outline had been distorted by the insertion of a corn kiln in the area between the axial and lateral chambers. The corn kiln was built along an E-W axis immediately to the S of the end stone of the main axial chamber. The cairn had been partially excavated to accommodate the kiln and the displaced material re-used. The stones around the rim of the bowl appeared to have been roughly arranged to form a semi-circular platform. The bowl of the kiln was shaped like an upturned, truncated cone, whose diameter narrowed from 1.52 m at rim level to 0.9 m, across the base and it was 0.76 m deep. Several slabs on end, supported by earth and cairn material, formed the sides of the bowl and around the upper edge of the bowl, across the tops of the slabs, flat stones were carefully laid to make a rim. No attempt had been made to pave or level the floor or the upper edges of the three large stones which were lying at a slight angle, pitched towards the S,

protruding into the floor. Residue of burnt grain was recognised lying between the stones in the floor but it disintegrated on touch and could not be examined and identified.

The flue had been made by digging a channel into the side of the cairn and lining the sides with small flattish stones, about 0.34 m high. The flue was about 0.4 m wide at floor level, widening to 0.6 m, and it sloped gently downhill from the bowl of the kiln. The outer part of the flue had been disturbed and, although the existing length was 1.9 m, its original length was probably about 3 m. A quantity of burnt material, found 1.22 m beyond the disturbed end of the flue, marks the likely site of the kiln fire. Another pocket of burnt material, mainly charcoal and shells, was found among the cairn stones near the mouth of the flue, but this seems to have had no direct association with the kiln. No lintel stones were discovered but, as the walls were so flimsy and the side-stones so easily dislodged, any lintels that may have existed must have been supported by the cairn rather than by side-stones of the flue.

Three sherds of green-glazed pottery were found among the stones surrounding the bowl of the kiln. Similar pottery found at St Blane's Chapel (Milligan 1963) and at Little Dunagoil (Marshall 1964) has been dated to the 12th or 13th century. Absence of finds of later date suggests that the corn kiln belongs to this period. A roughly rectangular piece of lead, 50 mm by 20 mm by 7 mm was found among the stones near the mouth of the flue. It did not seem to be part of any recognisable object and was too rough to be a piece of molten lead.

Compared with other known kilns in Bute, this corn kiln is an extremely simple structure.

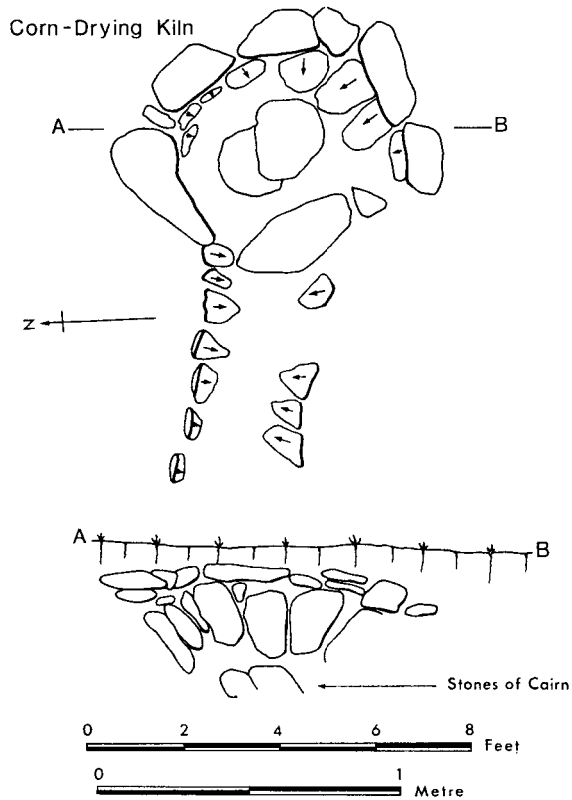


FIG 6 Glenvoidean: plan and section of corn-drying kiln

Locally it is unusual in having the side-walls of the bowl composed entirely of upstanding slabs, although vertical slabs were sometimes used in later kilns around the base of their funnel-shaped bowls. An example of this can be seen about 100 m uphill from the cairn in the corn kiln attached to the 18th-century settlement of Glenvoidean. The bowl of the corn kiln in the cairn is very shallow, and the upper edge of the flue is almost level with the rim of the bowl. The corn kiln associated with the medieval monastic settlement at St Blane's had similar features (Milligan 1963). The absence of lintel stones could be the consequence of robbing, but it may be that while the kiln was being used the flue and the bowl were covered in some other way, possibly with slats and turfs. It seems odd that the cairn should have been dug into and the corn kiln built without disturbing any of the burial chambers. It may be that the drift of soil downhill had so completely covered the top of the cairn that it looked like a natural knoll and that advantage was taken of a dip in the ground level at the point where the cairn around the axial chamber and the cairn around the lateral chambers met.

### ACKNOWLEDGMENTS

We are well aware that the excavation would have been impossible without the kind permission of the Marquess of Bute, on whose land the cairn is situated and to whom we give our thanks. We would also like to thank the members of the Buteshire Natural History Society, the Junior Naturalists, members of the Cowal Archaeological Society and the many friends who gave assistance in the course of the excavation. To Miss Audrey Henshall, Dr John Corcoran and others who gave us their expert help and advice we express our thanks and appreciation. In particular we are indebted to Mr J G Scott for his active interest and wise counsel throughout the excavation and for undertaking to review and report on the pottery. To Mr John Ferrier go our thanks for examining and reporting on the bones. We have also to acknowledge with thanks a grant from the Society of Antiquaries of Scotland for the campaign of 1971. The finds have been deposited in Bute Museum, Rothesay.

### APPENDIX 1

#### The Finds

##### FLINT (fig 7)

- 1 Part of a blade with some retouch. Found in upper fill of outer axial chamber.
- 2 Flake. Found in cairn material to E of chamber.
- 3 Ovoid flake with some secondary working. Found in upper fill of outer axial chamber.

##### POTTERY

###### *Primary neolithic*

Plain, almost hemispherical bowl (fig 8c), with slightly out-turned rim and uneven beaded lip, 146 mm in diameter and 89 mm high. The fabric is dark grey with buff exterior and almost black interior, containing small to medium grits, mostly of quartz, with a little fine mica. The exterior, apparently smoothed, though not burnished, seems slightly burnt in patches, and there are traces of black deposit just below the rim, part of which is abraded as though through use. Found inverted over a large piece of quartz in the W lateral chamber 3.

It is virtually impossible to assign so simple a vessel to any particular pottery style, but it looks early in the neolithic sequence. Its importance is to demonstrate the association of a simple, presumably early type of pottery with a burial chamber, also of simple type, akin to a protomegalith.

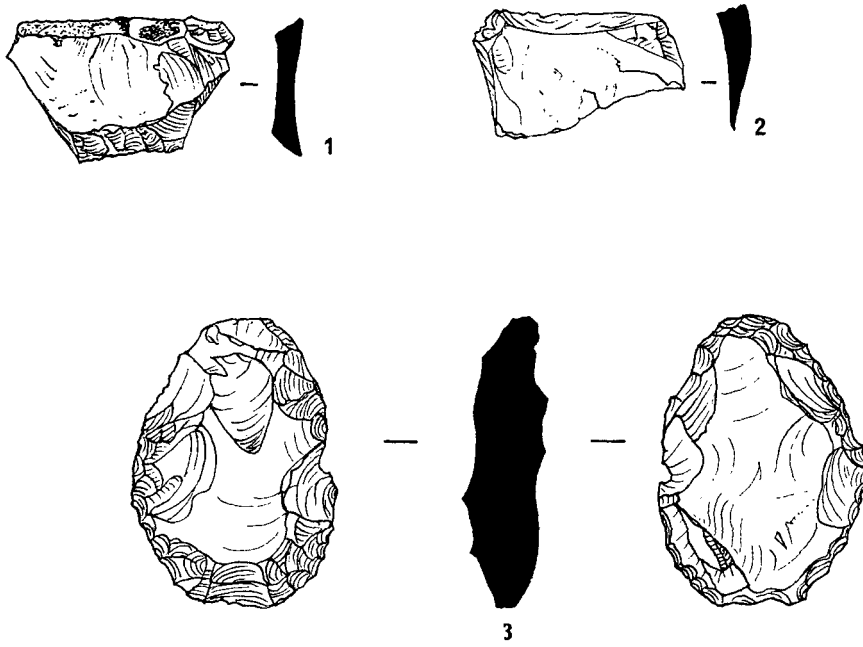


FIG 7 Glenvoidean: flint (scale 2 : 3)

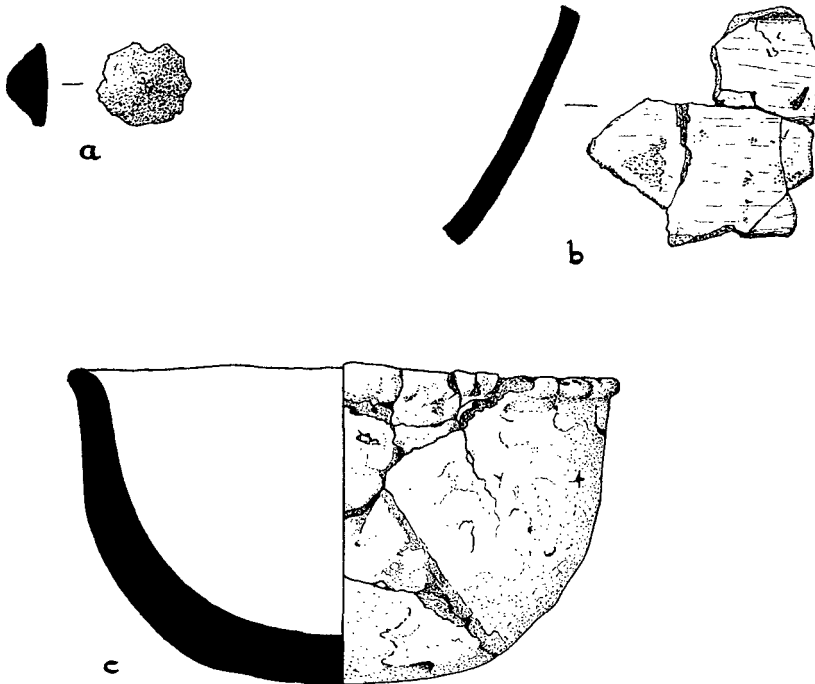


FIG 8 Glenvoidean: pottery (scale 1 : 2)

*Beacharra style*

Detached lug (fig 8a), presumably from a Beacharra stage I or II lugged bowl, of fine, almost gritless smoothed dark brown fabric, 25 mm by 22 mm. The lug, evidently made separately and attached to the wall of the pot, has broken away at the attachment surface. Found amongst sherds of the enlarged food vessel from the secondary cist.

Joining sherds from the neck and shoulder portion of a plain closed carinated bowl in Beacharra stage I or II style (fig 8b). A small part of what may be the lip survives, and the sherd has been drawn with this uppermost: it is, however, conceivable that what has been taken for the lip is part of the carination. The fabric is greyish-brown in colour, hard, with small quartz and mica grits. Both interior and exterior surfaces have been smoothed. The exterior has perhaps been burnished: patches of sooty material still adhere to it. From Area P.

Another small sherd, only 5 mm thick, of very similar fabric, could be from the same vessel.

*Indeterminate neolithic*

Sherd of rather soft fabric, greyish-black with browner outer surface; medium grits, including quartz; 25 mm by 23 mm, and 7 mm thick. Found amongst stones between lateral chamber 2 and kiln.

Sherd of rather soft fabric, 30 mm by 25 mm, and 7 mm thick; grey in colour, with slightly lighter outer surface; fairly coarse grits, mostly of quartz. Found under the centre of the blocking outside the septal slab of the axial chamber.

*Rothesay style*

All probably of stage II; for discussion see Appendix 2.

Rim and body sherds (fig 9c) from an incomplete plain bowl, of rather friable fabric containing large grits, mostly of quartz. Many of these grits protrude through the dark, occasionally reddish-grey, smoothed surface. The rim is strongly bevelled outwards, the bevel being somewhat concave, to produce a beaded edge. Parts of this edge seem to have been broken off in antiquity. Beneath the rim were slight traces of a sooty deposit. Found outside the septal slab of the axial burial chamber.

Carinated bowl (fig 9b) of fairly hard grey fabric, reddish in places, with plentiful but small grits, including quartz. To the rim and most of the exterior has been applied a shiny black slip, which has peeled off in places. The interior has been carefully smoothed, but does not have a slip. The carination is sharply defined on the exterior, less so on the inside. Above the carination the sides for the most part incline slightly inwards. The rim is strongly out-turned, bevelled and hooked. Restored as 22 mm apart, and 25 mm below the lip, are one certain and one probable hole, apparently pierced after the pot was fired. Fine rippled decoration, at 3 mm intervals, extends radially over the rim, vertically down the sides and over the carination to much of the base. Possibly use, shown by considerable traces of sooty material under the rim, has removed both decoration and slip from the bottom of the pot. The rim is much perished in the region of the two holes. Recovered almost complete, but broken and distorted, from the inner compartment of the axial burial chamber, along with the two succeeding vessels.

Carinated bowl (fig 9a) of fairly hard dark grey fabric, varying in parts through light grey almost to pink, containing medium grits, including some of quartz. The interior has been very carefully smoothed; the exterior may once have had a slip, for parts of it retain a burnished dark grey surface. The interior is evenly rounded. The exterior has the slightest of carinations separating the base from the somewhat convex and outwardly inclined sides. The rim is strongly bevelled outwards and hooked. Rather less than 25 mm below the rim, and restored as 25 mm apart, are one certain and one probable hole, apparently pierced after the pot was fired. For decoration a stick seems to have been used which produced a shallow track with slight ridges down the middle. Channels thus produced extend obliquely over the rim; on sides and most of the base they are arranged horizontally and vertically to give a continuous if irregular ladder pattern. The bottom seems worn, as though through use, and there was sooty material beneath the rim. Recovered almost complete, but broken and distorted, from the inner compartment of the axial burial chamber, along with the preceding and succeeding vessels.

Carinated bowl, with lugs (fig 9d), of fairly hard grey fabric, containing plentiful small grits, including some of quartz. Both inside and out there is a carefully smoothed gritless black slip, which has broken away in places. The interior is faintly ribbed, as though the pot had been built up in a coil or rings. The interior is rounded off. The rim is bevelled. The vertical sides are separated from the base by a distinct carination, along which are spaced six slight lugs, formed apparently by pinching out the clay partly from



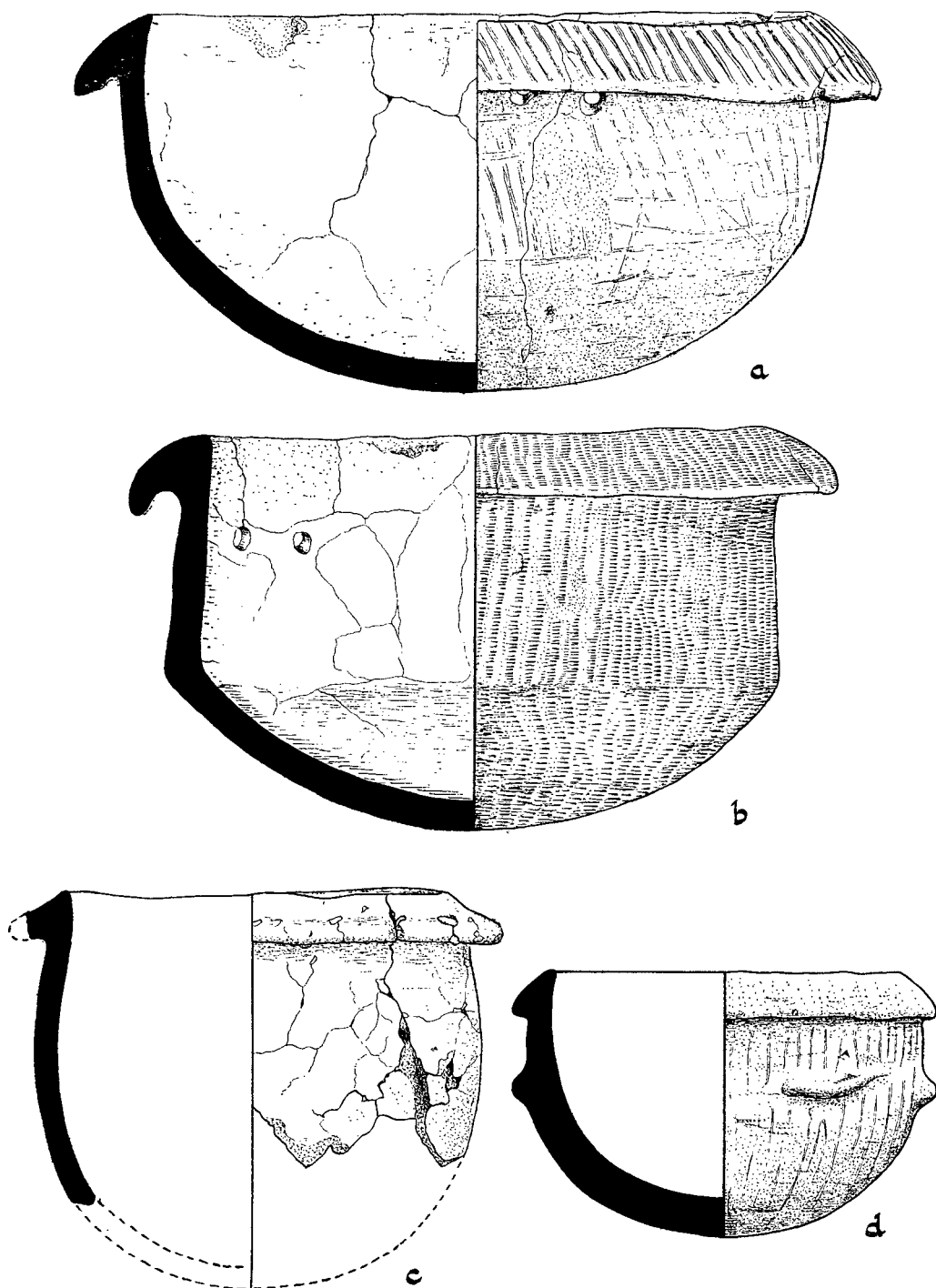


FIG 9 Glenvoidean: pottery (scale 1 : 2)

above but rather more from below. Faint radial rippling on the rim may be detected by touch. The sides are decorated by roughly vertical scored lines, 4 mm apart. These do not connect with a series of similar lines below the carination, which seem to have been continuous, though in two places they are now scarcely visible. The rim is much broken away internally, as though through use. Recovered whole from the inner compartment of the axial burial chamber, along with the two preceding vessels.

*Bronze age*

Enlarged food vessel or vase urn (fig 10), restored as 333 mm high and 333 mm in maximum diameter, generally brown in colour, ranging from yellowish through orange to almost chocolate brown in places. The fabric contains very large grits, and has been poorly fired: the average thickness of the walls

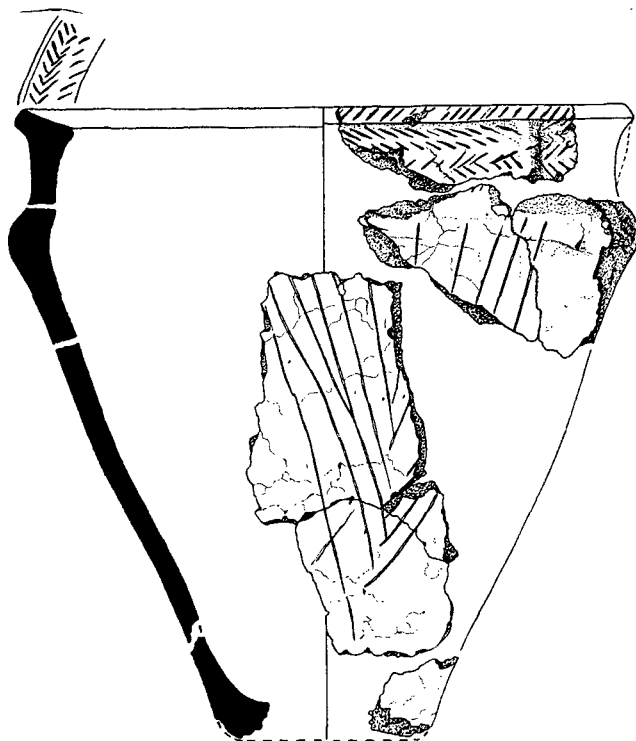


FIG 10 Glenvoidean: food vessel (scale 1 : 4)

is from 10-13 mm. The rim, bevelled both inwards and outwards, curves sharply inwards at the neck, then expands to a well marked rib. Below this the walls, with one slight bulge, slope otherwise evenly inwards to a base restored as *c* 100 mm in diameter. All decoration is incised. The inner rim bevel has a band of chevrons outside a band of oblique marks. The outer bevel has a similar band of oblique marks. On the neck, immediately below, are two rows of oblique marks, both sloping in the opposite direction to those on the bevel above. A row of chevrons is the lowest design to survive on the neck. Below the rib there seem to have been at least three groups of multiple pendant triangles, rather carelessly executed. One vertical rib survives, crossing the hollow of the neck. The spacing of such ribs is uncertain, but not less than 100 mm.

Although this vessel was most carefully excavated, and every possible sherd recovered, it is quite clear that only a portion has in fact survived. There has been root penetration into the surviving sherds, and the poor firing has aided destruction by natural agencies. The dimensions and proportions used in the drawing are therefore conjectural, though the rim diameter is acceptable as accurate.

The food vessel ancestry of the urn is not in doubt, and the vertical rib in the neck does not suggest

encrustation so much as a reminiscence and adaptation of the stop so typical of the Yorkshire Vase. Recently Waddell has suggested that the term 'Food Vessel' should be discarded, since it obscures the distinction between a vase and an urn tradition, which appears among cinerary urns, too. Under the alternative scheme which he puts forward the Glenvoidean vessel would be a vase urn of Type 1 (Waddell 1976, 284, 288).

### *Medieval*

#### A. From kiln

Two sherds (fig 11a, b), possibly refired, of hard orange fabric, each with a trace only of a thin, light olive-green glaze. Both probably from the same vessel, with decorative rilling on the exterior, possibly a jug with a maximum diameter of 83 mm.

Sherd (fig 11c) of hard orange fabric, grey in the core, with part of a divided applied rouletted strip, some of which has broken away.

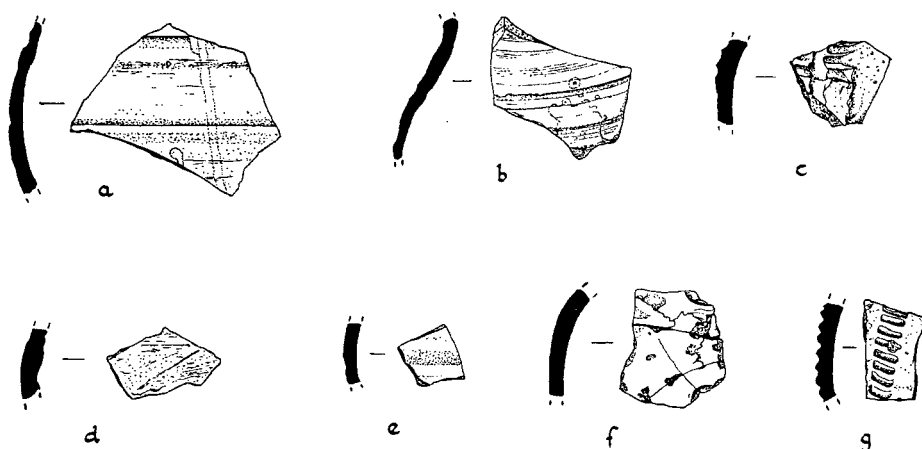


FIG 11 Glenvoidean: medieval pottery (scale 2 : 5)

#### B. Surroundings of kiln

Sherd (fig 11d) of dark grey ware, apparently unglazed, the inner surface cream in colour and strongly corrugated. Found above neolithic blocking, near kiln flue.

Sherd (fig 11e) of hard orange fabric, possibly from the first vessel described under A, above. Found among kiln stones.

Sherd of dark grey micaceous ware, apparently unglazed, the inner surface buff to cream in colour. Found behind kiln, in cairn material.

#### C. From cairn

Sherd (fig 11f) of dark grey micaceous ware, apparently unglazed, the inner surface buff to cream in colour, probably from the same vessel as the last sherd described under B, above. The sherd must be from a small vessel with a globular body, probably a jug. There are traces of what appears to be a partially completed perforation, made before firing. From area 6, probably behind the kerb.

Sherd of hard micaceous orange fabric, grey at the core, with thin but continuous olive-green glaze. From area 6, among stones below turf. Quite possibly from the same vessel as the sherd with applied rouletted strip described under A, above.

Sherd (fig 11g) of hard micaceous orange ware, slightly grey at the core, with a good apple-green glaze. The sherd has a slightly oblique, but nearly vertical, applied rouletted strip. From infill of trench III.

## APPENDIX 2

## The Rothesay style of neolithic pottery in Scotland

by J G Scott

*Introduction*

In her recent study of the neolithic pottery of the British Isles (1974), Dr Isobel Smith has produced a synthesis of the research carried out and the ideas put forward in recent years. In two respects, her valuable survey has particular relevance for the future study of neolithic pottery. In the first place she points out the very varied origins of the pottery found at Windmill Hill (1974, 110). This pottery includes gabbroic ware imported from Cornwall, made in the Hembury style, imitations of this in oolitic ware, also imported perhaps from the Bath/Frome area, and locally made imitations. In the Abingdon and Ebbsfleet styles were locally made imitations and imports in oolitic ware. In addition, the locally made pottery showed the influence of other stylistic groups, and included vessels in Hembury forms with added decoration. Isobel Smith suspects that the mixed character of the pottery from sites in Sussex may perhaps be interpreted along similar lines.

It will be obvious that, in so potentially complicated a study, it is essential to have a proper and logical nomenclature. Isobel Smith recommends that the generic terms formerly used in describing earlier neolithic pottery – neolithic A, western neolithic, Windmill Hill – should be discontinued, but that the familiar type-site nomenclature should be retained for individual pottery styles (1974, 106). She envisages that trade, or indeed trade competition, may have resulted in mutually exclusive or partially overlapping distributions and minor stylistic variations, but she does not rule out the possibility that some diffusion of pottery styles may represent actual folk movements (1974, 111).

*Principles*

With Isobel Smith's recommendations in mind the following principles for the study of neolithic pottery in Scotland have been formulated.

- (a) Various traits of shape and decoration together form a tradition: out of them may coalesce a style, or styles.
- (b) Groups of traits associated with the pottery tradition of one region may be transmitted to a further region, to be recognised in the pottery of that region. If sufficiently well established, this pottery may then merit a style name of its own.
- (c) A pottery style, once established, may develop in stages which, though differing from one another, may retain a family relationship.
- (d) The use of the term ware should be discontinued except where unavoidable, for instance in Grooved Ware.
- (e) Except in the case of imported pottery, the type of fabric used is unlikely to be of other than local significance. Imitations of imports would in all likelihood have been made in fabrics locally current, reflecting the local skills available.
- (f) There is probably no pottery tradition or style in Scotland which does not owe its origin to traditions or styles introduced from elsewhere in Britain or from Ireland.

In the second volume of *The Chambered Tombs of Scotland* (1972) Audrey Henshall has not only dealt with the monuments but has also discussed and illustrated their contents, including the pottery. She has used the terms 'Beacharra bowls' and 'Achnacree bowls', the first to describe bowls which belong to the Beacharra style, the second to describe bowls which it is argued here should be classified as Rothesay in style (1972, 100-2). In this she was no doubt influenced by Case's use of the term 'Ballyalton bowl' for certain pottery in the Irish neolithic series (1961, 186ff). But, as recently argued by the writer (1977, 241), the use of such terms is surely ill-advised, inasmuch as they transfer to individual vessels, from various sites, the geographical nomenclature which by general acceptance has been reserved for pottery groups, or styles. The only justification for the use of such terms would be to describe specialised potters' products, such as the fine vessels of gabbroic clay from the Lizard Head in Cornwall, presumably made in the vicinity and traded eastwards, as shown by Peacock (1969). There are no grounds for regarding either 'Beacharra' or 'Achnacree' bowls in this light, and the terms are therefore not employed here.

### *Summary*

It is argued that the Rothesay style had its origin in the Abingdon style of S Britain, influenced and modified by the Grimston and Towthorpe styles of the north, eventually to develop shapes and decoration of its own. The Rothesay style influenced and finally displaced the Beacharra style of pottery used in the Clyde region by the builders of chambered cairns. The influence of the Lyles Hill style upon the development of the Rothesay style was minimal, and it is recommended that the portmanteau term 'Grimston-Lyles Hill' should be discontinued, since its use has led to the assumption that there is a connexion between those two styles which the facts, in Scotland at least, do not justify.

To facilitate a full discussion of the Rothesay style, and in order to place the Glenvoidean pottery within that style, a fresh description of the pottery from the type site at Townhead is given. This is followed by a discussion of the Rothesay style, its origins in England, its manifestations and development in Scotland, its connexions in Ireland, and a conclusion.

### *Description of the pottery from Townhead, Rothesay*

The pottery found at Townhead, Rothesay, falls into three categories – the Beacharra and Rothesay styles, along with Grooved Ware – of which the Rothesay style has by far the greatest representation. All the pottery is in the Bute Museum, Rothesay, unless otherwise stated.

#### *Beacharra style*

Rim and three body sherds of a Beacharra stage III Clyde lugged bowl (fig 12d). The fabric is hard and coarse, with a dark grey core containing large grits, burnt on the outside and on top of the rim to a reddish-orange with patches of grey, and on the inside to a yellowish orange. The rim is thickened and bevelled outwards; a single imperforate lug survives about 51 mm below the rim. Decoration consists of punctulations made with a pointed stick or similar instrument, comprising a single row on the rim bevel, a double row above the lug, a row parallel with the lug and either one or two rows, akin to rustication, below the lug. Found in 1929 in association with the remains perhaps of rectangular timber-framed buildings (Marshall, J N 1930, 53, pl 4C; Scott 1964, 154, fig 11b).

Rim sherd, perhaps from a Beacharra stage II carinated bowl (fig 12f). The fabric is coarse, with large grits, including quartz; on the outside and over the top of the rim it is fawn to orange in colour; inside it is dark grey. The plain rim is slightly flattened on top; below this the pot seems to expand, and there would appear to have been a carination about 32 mm below the lip. Decoration consists of a row of punctulations on top of the rim, a band of parallel but slightly oblique and curving incisions on the neck, and below these at least two rows of punctulations, set obliquely. Found between 1914 and 1919 (Callander 1929, 59, no. 5).

Sherd from a Beacharra stage III Clyde carinated bowl (fig 12g). The fabric is thin and well fired, with a high percentage of fine quartz grits, burnt fawn to orange on the outside, but fawn rather than orange on the inside. Decoration consists of faint vertical flutings below the carination, and of horizontal lines of hyphenated ornament, possibly but not certainly made with a notched stamp, above the carination. Found between 1914 and 1919 (Callander 1929, 59, no. 13; Scott 1964, 154, fig 11g. This vessel was originally illustrated inverted, but recent discoveries suggest that the correct way is as now shown).

#### *Grooved Ware*

Two rim and two body sherds, all joining, from a bowl perhaps 247 mm in greatest diameter and 190 mm high. The fabric is hard, with large grits, and perhaps finished with a slip; it is orange to red in colour, the red being more noticeable on the inside, which possibly indicates refring. On top of the rim are traces of transverse notches. There are one internal and two external grooves just below the lip. Elsewhere on the outside obtusely angled bands, each of three parallel grooves, suggest an arrangement of lozenge-shaped panels. Found in 1929 in association with the remains perhaps of rectangular timber-framed buildings, but not in the same place as the Beacharra stage III Clyde lugged bowl sherds described above (Marshall, J N 1930, 53, pl 4B; Mackay 1950, 181, fig 1, no. 3).

Sherd of hard fabric containing fairly large grits, reddish on the outside and varying from dark red to dark grey on the inside. Decoration consists of pairs of parallel grooves arranged apparently in zigzag fashion. Found between 1914 and 1919, perhaps in association with the rim sherd of Rothesay pottery (fig 13e) described below (Marshall, J N 1930, 53, pl 4A; Callander 1929, 59, no. 9; Mackay 1950, 181, fig 1, no. 4).

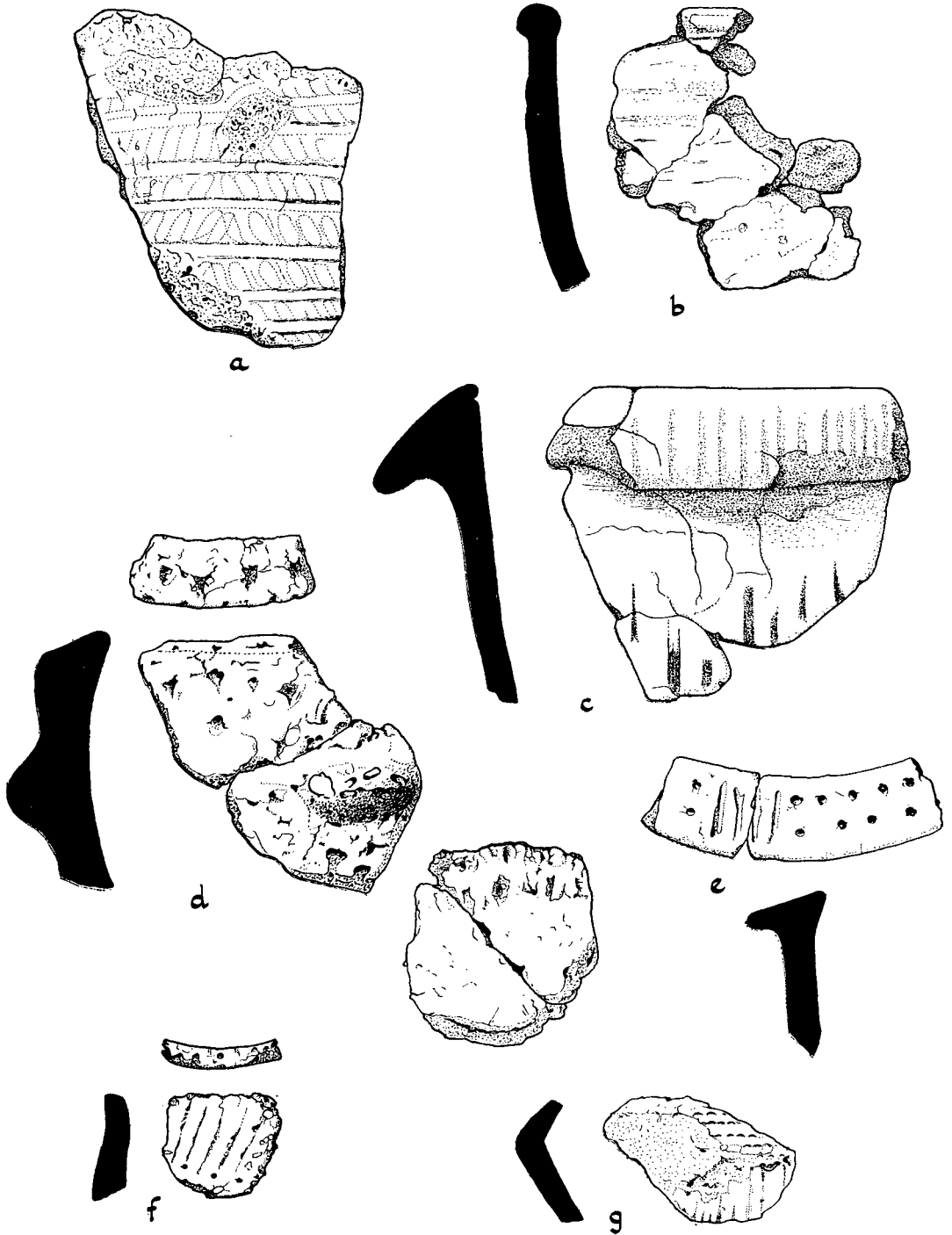


FIG 12 Townhead, Rothesay: pottery (scale 1 : 2)

*Rothesay style*

Rim and body sherds from an almost hemispherical bowl, 127 mm in diameter at the mouth and 114 mm deep (fig 13a). The fabric is of refined clay, with few grits, thin-walled and dark brown in colour, with a 'leathery' appearance. The rim is plain except for a well marked but irregular groove on the upper edge and occasional traces of another groove just below the lip on the inside. On the outer surface are shallow criss-cross markings, not amounting to a pattern. Found between 1914 and 1919 (Callander 1929, 59, no. 7).

Rim and body sherds apparently from a globular bowl of hard fabric, containing moderate grits, with smoothed outer surface, dark grey to brownish grey in colour (fig 12b). The rounded rim is thickened internally and externally: immediately below it on the outside are two faintly scored lines. About 25 mm further down are two broad shallow fluted bands. Found apparently about 1919 associated with charcoal and hazel nut shells, perhaps from a hearth. Glasgow Art Gallery and Museum, reg no, '55-96mq (Scott 1968a).

Rim sherd (fig 13b) from a plain bowl of hard fabric containing moderate grits, grey to orange on the outside and dark grey on the inside. The rim is slightly bevelled outwards. Found between 1914 and 1919 (Callander 1929, 59, no. 8).

Rim and body sherds (fig 13f) from a plain bowl of rather soft refined clay, with few grits, light reddish grey on the much flaked outer surface and on the inside. The rim is thickened and bevelled outwards. Found between 1914 and 1919 (Callander 1929, 59, no. 10).

Rim sherd (fig 13d) from a plain bowl of hard fabric containing fairly large, mostly quartz grits. The lip, thickened and bevelled outwards, is buff, with a grey band to the outer edge; below the lip the outer surface is orange and the inside dark grey. Found between 1914 and 1919 (Callander 1929, 59, no. 3).

Rim sherd (fig 13e) from a plain bowl of hard fabric containing fairly large grits, some of quartz, in colour reddish orange on the outside and over the rim, light grey on the inside. The rolled-over rim is slightly flat on top; below it, both outside and inside, the wall is slightly concave. Found between 1914 and 1919, apparently associated with a Grooved Ware sherd described above (Callander 1929, 58, no. 2).

Rim sherd (fig 13c) from a plain bowl of hard fabric containing fine grits, some of quartz, reddish buff in colour on the outside and over the top of the rim, light grey on the inside. The rim is bent outwards, and has a rounded lip. Found between 1914 and 1919 (Callander 1929, 59, no. 6).

Rim sherd (fig 12e) probably from an open bowl of hard fabric containing medium grits, some of quartz, buff to light grey in colour on the outside, buff to orange on the inside; the fabric was perhaps finished with a slip on the inside. The rim is flattened, bevelled and projecting. The flattened part is decorated with a double row of punctulations alternating with a group of four grooves arranged radially. Found between 1914 and 1919 (Callander 1929, 59, no. 4).

Rim sherd (fig 12c) probably from a bowl at least 380 mm in diameter and 228 mm deep. The friable fabric contains only a few small grits, some micaceous; it is light brown on the outside and greyish black on the inside. The surface is smoothed, and was perhaps burnished. The rim is sharply bevelled, thickened and hooked; on the inner side, just below the lip, there is a pronounced though irregular groove. There are traces of radial flutings on the rim, whilst on the body, starting about 63 mm below the rim, there are faint vertical flutings about 13 mm apart. Found between 1914 and 1919 (Callander 1929, 57, no. 1).

Body sherd (fig 12a) of rather friable fabric with small grits, including quartz, light red to buff in colour on the outside and buff to grey on the inside. The surface was originally carefully smoothed. Decoration is by shallow finger-tip fluting to produce a repeated horizontal 'ladder' pattern, covering the whole of the surviving outer surface. Found between 1914 and 1919 (Callander 1929, 59, no. 12).

*Discussion**The Rothesay style: origins and parallels in England and Wales*

It is a curious but surely significant fact that the distinction in the earlier neolithic period in England, between the Hembury style on the one hand and the Abingdon (and to a lesser extent the Ebbsfleet) styles on the other, should find a parallel in the Clyde region. Between Hembury pottery, as now defined by Isobel Smith (1974, 283, fn 28), and the Beacharra stage I style, with its plain and lugged bowls, mostly with simple rims and a minimum of decoration, there are obvious similarities (Scott 1964, 150-3). By contrast, Abingdon traits seem manifest in several of the Rothesay-style vessels described above – so

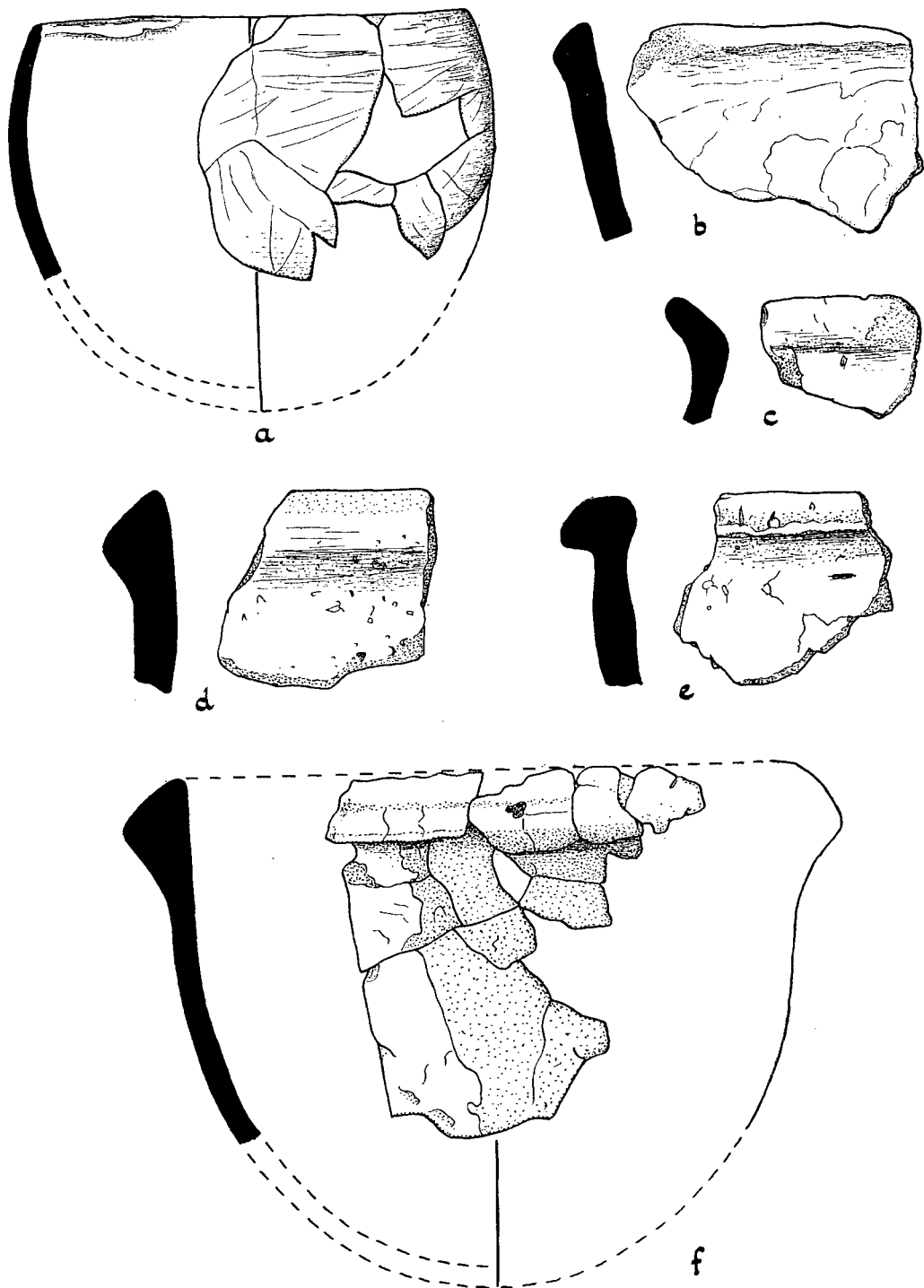


FIG 13 Townhead, Rothesay: pottery (scale 1 : 2)



much so that a basic connexion is here assumed between the two styles. Of course, the Rothesay style has characteristics not found in the Abingdon style. Some of these may be the outcome of internal evolution. Others may have been absorbed from other sources, for example the Towthorpe style discussed below.

Comparisons with the Abingdon style may be sought at Abingdon itself and at Windmill Hill. The Rothesay rims (figs 12c; 13c, d, e) recall rims at Abingdon (Case 1956, figs 3, 4, nos 2, 11, 24, 28). The parallels are less exact at Windmill Hill, but the same tendencies in development of rim form seem to be observable at Rothesay as at Windmill Hill (Smith 1965, figs 23, 26, 27, 28). However, at Rothesay it is noticeable that the actual lip of a thickened or bevelled rim may be brought up to a sharp peak (figs 12c, e; 13d, f), in a fashion found at Abingdon (Case 1956, fig 4, nos 24, 28) but not at Windmill Hill. One of these bevelled rims (fig 12c) is also hooked, and cannot be matched at either Abingdon or Windmill Hill. Nevertheless, both at Abingdon (Case 1956, fig 3, nos 9, 10, 14) and at Windmill Hill (Smith 1965, fig 26, P 175; fig 29, P 226, P 227) there are rims which show incipient hooking. These considerations seem to suggest that at Rothesay trends foreshadowed in the Abingdon tradition may have been carried beyond the limits reached at Abingdon and at Windmill Hill, to culminate in the bevelled, or hooked and bevelled rims of the kind found at Glenvoidean (fig 9a, b, d).

Decoration by punctulation and incision occurs widely at Windmill Hill (Smith 1965, 50–3) and at Abingdon (Case 1956, 20, 22). At Rothesay (fig 12e), the rim decoration of punctulations alternating with incisions may be compared with a similar pattern on the side of a bowl at Abingdon (Case 1956, 15, fig 3, no. 15; cf Scott 1964, 156). At Windmill Hill punctulations and incisions may also be associated, though in less organised and alternating patterns (Smith 1965, fig 26, P 161–3, P 165–9). Deliberate smoothing and indeed burnishing of the surface are found in the pottery from both Abingdon (Case 1956, 22) and Windmill Hill (Smith 1965, 48), and are to be seen at Rothesay (fig 12a, b, c, e). Rippling (possibly done with the fingers) and burnished patterns occur at Abingdon (Case 1956, 22), but at Windmill Hill fingertip patterns are said not to occur, though fluted or rippled decoration produced by short strokes of a broad rounded tool is found, but is exceptionally rare (Smith 1965, 51). A burnished pattern, closely akin to rippling, occurs on the carinated bowl, contracted at the mouth, found in the Fussell's Lodge, Wiltshire, long barrow (Ashbee 1966, 18–19, pl XVIIIa). At Rothesay fluting (fig 12b), fluting and rippling (fig 12c) and a burnished ladder pattern (fig 12a) are found. This ladder pattern invites comparison with the burnished lattice pattern on a bowl at Abingdon (Case 1956, fig 4, no. 28). At Windmill Hill the lattice pattern is extremely rare (Smith 1965, 51, fig 13), but it does occur on the interior of a bowl at the Fussell's Lodge long barrow (Ashbee 1966, 19–20, fig 5, W4).

A decorative feature to be seen on two Rothesay bowls (figs 12c, 13a), but apparently not found at either Abingdon or Windmill Hill, is a groove just below the lip, on the inside. This might have been a trait acquired by contact with grooved ware, for one of the two grooved ware bowls found at Rothesay shows just this feature.

Comparisons with other S English neolithic pottery series are less convincing than with those from Abingdon and Windmill Hill. Perhaps the most numerous parallels in rim forms are from Hurst Fen, Mildenhall, Suffolk (Clark *et al* 1960, 232, fig 21), where fluting and burnishing, as well as a rough form of incised decoration, were also found (Clark *et al* 1960, pls XXIV, XXV). At Whitehawk, in Sussex, fluting and burnishing occur, whilst impressions and incisions are used in contrasting groups (Williamson 1930, 64, pl IV; 66, pl VII). An incised lattice design, either on rim or on body, or sometimes on both, was found on Ebbsfleet style pottery at the type site in Kent (Burchell and Piggott 1939, 410, fig 3; 412, fig 4; 414, fig 5; 416, fig 6; 418, fig 7).

Further north in England, burnished patterns and rippling are known in the Grimston style (Newbigin 1937, 194). However, publication of neolithic pottery finds from Yorkshire makes it increasingly obvious that parallels for the distinctive rim forms of the Rothesay style are best sought in the style now called Towthorpe by Manby (1964, 198–202).

More recently Manby has published Towthorpe pottery from the pre-barrow occupation material of the Rudston Barrow LXII site (1972, 12–21). Here there are parallels for the bowls with rounded rims (figs 12b, 13e) and for the bowls with rims thickened and bevelled outwards (fig 13d, f), all from Rothesay (Manby 1972, 13, fig 8, no. 3; 14, fig 9, no. 1). From Glenvoidean the bevelled rim with beaded edge from the plain bowl (fig 9c) from outside the axial chamber finds a parallel, as does the bevelled rim of the carinated lugged bowl (fig 9d) from the pottery group inside the axial chamber (Manby 1972, 13, fig 8, nos 1, 8). Manby points to affinities for Towthorpe pottery in the developed Hembury style of the pre-causewayed camp occupation at Windmill Hill (1972, 20), and this argument would fit in well with the

course of development in Scotland. Other Scottish parallels for the Towthorpe style will be adduced later, but it may be said at this point that the case for a Towthorpe contribution to the Rothesay style seems well founded.

So far as Wales is concerned, Frances Lynch has pointed out (1976, 71-3), that the pottery from the Welsh Severn-Cotswold tombs, both in Glamorgan and in Breconshire, forms a coherent group, probably to be assigned to a middle neolithic horizon. She believes that this pottery compares well with the pottery from similar tombs in the Cotswolds and Wiltshire, where it is best ascribed to the Abingdon style. The characteristic feature of the Welsh pots is the heavy rolled rim. This rim does not seem to occur in Scotland, but some of the other emphatic rims to which she draws attention (1976, 73, fig 7) can be readily paralleled in both the Towthorpe and the Rothesay styles. This suggests that development of pottery styles in Wales and in SW Scotland may have proceeded along similar lines.

#### *The Rothesay style in Scotland*

One may envisage the Rothesay style as comprising basically two types of vessel, the simple and the carinated bowl, the latter upright rather than constricted or everted in its upper half, with a superior finish, with decoration which may be quite elaborate, and with a tendency to soften its carination. Development within Scotland consisted largely in the elaboration of the rim form, leading to the evolution of hooked rims, and in the increasing use in carinated vessels of fluting and rippling on prepared or burnished surfaces. It can now be seen that thickened and everted, as well as bevelled, rims are to be found in the Towthorpe style, and this may be the source of such rims in the Rothesay style. However, the bevelled and hooked rims from both Glenvoidean and Rothesay are not to be matched in the Towthorpe style. Indeed, the only convincing parallels for these rims, discussed below, are from N Ireland, but these are clearly very late and indeed likely to have been derived from Scotland. It seems, in fact, most likely that bevelled and hooked rims evolved in Scotland, within the Rothesay tradition, from thickened and everted rims.

It is possible that lugs were not used on simple Rothesay bowls, but that the carinated and lugged bowl, like that from Glenvoidean (fig 9d), was an established variant of the carinated bowl from the beginning. The type occurs at Abingdon (Case 1956, 17, fig 4, no. 25), at Windmill Hill (Smith 1965, 66, fig 24, P 140), and at Fussell's Lodge long barrow (Ashbee 1966, 20-1, fig 6).

As has already been pointed out, rippling and burnishing occur at Abingdon, so that these traits along with others might have been an Abingdon contribution to the Rothesay repertoire. However, it should be noted that Manby has classed the shouldered bowl from the barrow at Pitnacree, in Perthshire, as of Grimston style (1967, 307); if this is so then such burnished and ripple-decorated pottery must have been established in Scotland since early in the third millennium BC, anticipating the emergence of the Rothesay style by some centuries (carbonised wood from the old land surface beneath the barrow at Pitnacree has yielded a radiocarbon date of  $2860 \pm 90$  bc, GaK-601: Coles and Simpson 1965, 40). On Towthorpe pottery burnishing is uncommon, but not unknown (Newbigin 1937, fig 4). It is likely that all three styles - Abingdon, Grimston and Towthorpe - contributed to the development of the Rothesay style. So far as the Lyles Hill style is concerned, although there are similarities in fabric between some Rothesay and some Lyles Hill vessels, yet the differences in rim shapes and vessel forms are such as to discount any real connexion between the styles. Indeed it may be asserted that the Lyles Hill style is scarce within the Clyde region. Irish connexions are discussed in detail later.

The two carinated bowls from the *Clyde* chambered cairn at Glecknabae (BUT 4) have thickened and everted, but not hooked rims (fig 14a, b), one rippled, the other with finger tip fluting (Bryce 1904, 47-8, figs 20-1; Henshall 1972, 306). They are classified here as of the Rothesay style, though they are not directly to be paralleled at either Rothesay or Glenvoidean, and they may be early in the Rothesay series. Two incompletely published settlement sites - at Whitemoss, Renfrewshire, and at Knappers, Dunbartonshire - have produced not only sherds with thickened, everted and ripple-decorated rims but also pottery reminiscent of Manby's Towthorpe style (Mackay 1948, 235, fig 1, no. 2; cf Manby 1972, 14, fig 9, no. 2).

Evidence for the Rothesay style in more distant parts of Scotland may now be examined. From the chambered cairn at Achnacree (ARG 36) came two Rothesay carinated bowls and the rim of a probable third (Henshall 1972, 303). One (fig 14d) is a bowl with a sharp carination and slightly bevelled rim bearing traces of radial fluting (Callander 1929, 38, fig 2). The second bowl (fig 14e) is carinated, with lugs, and has a bevelled and slightly hooked rim with radial fluting, with similar vertical fluting decorating the sides and base (Callander 1929, 38, fig 3; the rim is incorrectly drawn). The rim sherd (fig 14c), with

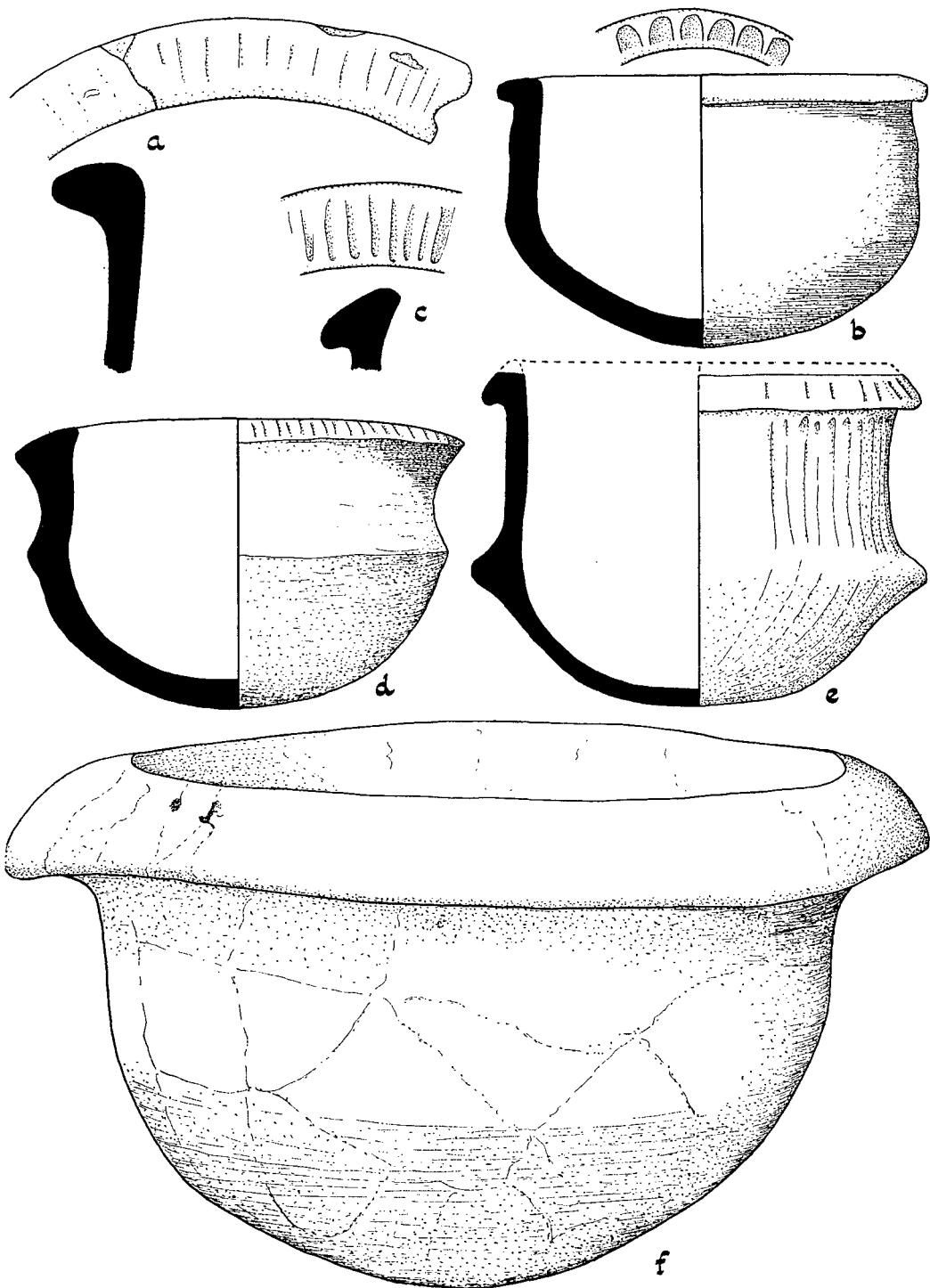


FIG 14 a, b Glecknabae, Bute; c, d, e Achnacree, Argyll; f Nether Largie, Argyll (scale 1 : 2)

radial fluting, may have come from a similar bowl, for it is bevelled and hooked (Callander 1929, 58, fig 39, no. 2; the rim is more sharply bevelled than is shown).

From the neolithic level in the Passage Grave burial chamber at the nearby Achnacreebeag (ARG 37) came sherds of at least three neolithic pots (Ritchie, J N G 1970). One of these is a Beacharra stage II carinated bowl (Ritchie, J N G 1970, 40, fig 3, no. 2). Another bowl, plain, has a rim thickened and bevelled outwards (Ritchie, J N G 1970, 40, fig 3, no. 1). The parallels quoted by Audrey Henshall (in Ritchie, J N G 1970, 39) from Cairnholy I (KRK 2) and from Pitnacree, in Perthshire, do not seem close, but rims of three vessels from Rothesay (fig 13b, d, f), though decidedly more peaked than the Achnacreebeag rim, impress as more akin. The writer has recently adduced reasons for believing that the 18th century BC date suggested by Audrey Henshall for the neolithic pottery from Achnacreebeag (in Ritchie, J N G 1970, 41) is much too late (Scott 1977).

Another chambered cairn, at Rudh' an Dunain (SKY 7), has produced two bowls with bevelled rims which seem to belong to the Rothesay series (Henshall 1972, 310). The better preserved of these has a burnished surface, and is decorated with diagonal fluting on the rim (Lindsay Scott 1932, 199-200, fig 12). The sherd representing the other bowl is undecorated, but appears to have had a burnished surface. It may also have had two holes pierced in the wall, after firing, like the two Glenvoidean carinated bowls (fig 9a, b; Lindsay Scott 1932, 200, fig 13). Among the far greater number of sherds excavated from the chambered cairn at Clettraval (UST 12), only two Rothesay vessels on published evidence seem likely to be represented (Henshall 1972, 308). Several fragments remain from a small carinated bowl, vertically pierced through the carination at least once, and undecorated save for faint diagonal finger-tip fluting on top of a thickened and everted rim (Lindsay Scott 1935, 502-3, fig 15; 520, fig 37). Another sherd is from a bowl with a bevelled rim (Lindsay Scott 1935, 524, fig 40, no. 6). Also in North Uist, at Eilean an Tighe, is a settlement site which among its varied output shows vessels with bevelled or hooked and bevelled rims which may reflect Rothesay influence. According to the excavator, 'out-bevelled' rims largely displaced all other types on decorated pots in the third and final period at the site (Lindsay Scott 1951, 14-15, fig 5, X1.43; 17, fig 6, Y1, Y11, Y24).

Similar echoes of an ultimately Rothesay tradition are perhaps to be recognised in pottery found in chambered cairns in Orkney, in Bigland Round (ORK 2) and Knowe of Craie (ORK 27), both in Rousay, and in Sandyhill Smithy (ORK 47) and Calf of Eday Long (ORK 8), both in Eday (Henshall 1963, 248-9). From the long horned cairn at Knapperty Hillock (ABN 5) came a sherd with a burnished exterior, bevelled, radially fluted rim and vertically fluted interior, which might be considered a Rothesay bowl (Henshall 1963, 255).

Two of the neolithic pots found by Greenwell (1866) at Nether Largie South Cairn (ARG 23) have been illustrated by Audrey Henshall (1972, 302). But there are others, and I am grateful to Dr J N G Ritchie for allowing me to make use of his notes on the finds. One sherd is from a closed carinated bowl, with impressed lines of arcading, which is probably in the Beacharra stage III style. Another bowl, with incised line decoration, seems to have a rim thickened and bevelled outwards, but with a somewhat rounded outer profile. It is not exactly matched at Rothesay, but it could be considered as Rothesay in style (cf figs 12b, 13e).

The same cairn has produced the closest parallel to the later Rothesay style, as represented by the strongly hooked and bevelled rims of the Rothesay bowl (fig 12c) and of the Glenvoidean bowls (fig 9a, b). The Nether Largie bowl (fig 14f) is carinated, and has a hooked, bevelled and ripple-decorated rim, whilst the burnished outer surface is decorated with vertical fluting (Greenwell 1866, pl XX, no. 1; Henshall 1972, 302). From the same cairn again are burnished and fluted sherds from a carinated and perhaps lugged bowl (Henshall 1972, 302; ARG 23, no. 2). This compares well with the Rothesay lugged bowl (fig 14e) from Achnacree (ARG 36).

Specific associations of Beacharra and Rothesay style pottery vessels have now been adduced at two other sites besides Rothesay itself, namely Achnacreebeag (ARG 37) and Nether Largie South (ARG 23). But there are suggestions of influence of one style upon the other in the Beacharra stage II carinated bowl from the type site (Scott 1964, 146, fig 8d). The fluted or channelled decoration above the carination of this burnished bowl, consisting of multiple concentric arches alternating with similar motifs upside down and with groups of vertical lines, has often been discussed, but the less well known vertical fluting below the carination recalls that on the Rothesay bowl (fig 12c; Scott 1964, 145). Another alternating pattern, of rows of radial comb-like impressions contrasting with zones of punctulations, on the rim of the Beacharra stage III Clyde lugged bowl, also from the type site, has already been compared with the decoration of the rim of a Rothesay bowl (fig 12e; Scott 1964, 146, fig 8f, 156). The Beacharra stage

IV Clyde carinated bowl from Clachaig (ARN 16) is decorated with alternating patterns both above and below its carination, in a manner reminiscent of the Rothesay decorative style (Scott 1964, 153; Bryce 1902, 90, fig 12).

*The Irish connexions of the Rothesay style*

Most archaeologists, following Atkinson (1962), have regarded the Glenvoidean and the Glecknabae bowls as Lyles Hill (McInnes 1969, 25–6) or as Grimston-Lyles Hill in style (Henshall 1972, 171; Smith 1974, 108). Yet hooked and bevelled rims, such as those of the Glenvoidean carinated bowls, do not occur at Lyles Hill (Evans 1953). Nor are the thickened and everted rims of the two Glecknabae bowls truly to be paralleled in the Lyles Hill style (Case 1961, 175, fig 1).

Atkinson (1962, 34) lists as Lyles Hill pottery from Urquhart, Moray, from Cairnholy I (KRK 2), and from Rothesay, the last now classified here as Rothesay in style. Both of the others are Irish in appearance, and the first acceptable as Lyles Hill in style. Atkinson then proceeds to list ‘Lyles Hill Ware with finger-tip fluting’ (1962, 34–5). If one examines his examples from the Clyde region – from the chambered cairns at Kilchoan (ARG 24), at Nether Largie South (ARG 23), at Glecknabae (BUT 4) and at Achnacree (ARG 36), and from the three settlement sites at Knappers, Dunbartonshire, at Whitemoss, Renfrewshire, and at Luce Bay, Wigtownshire – one finds that in all except two cases the rims are bevelled or thickened and everted: in fact, as argued here, they are in the Rothesay style. The two exceptions are from Kilchoan – a sherd with an internally bevelled rim which is certainly not Lyles Hill but probably Grooved Ware – and from Luce Bay, where indeed Lyles Hill pottery seems to be found. From within the Clyde region, but not noted in Atkinson’s list, two additional examples in the Rothesay style of ripple-decorated everted rims may be quoted from chambered cairns, from Giants’ Graves (ARN 11) and from the recently re-excavated Monamore (ARN 9), both in Arran (Bryce 1903, 50–1; MacKie 1964, 25–6, fig 4, no. 3).

All the sherds described above as having thickened and everted rims are ripple-decorated. If one seeks parallels in the Lyles Hill style, the two types of rim which most closely approximate are those which Case describes as ‘bulbous’ and ‘round out-turned’ (1961, 175, fig 1). Yet these two together account for only 6% of the rims at Lyles Hill (Case 1961, 175, fig 1). None of the Scottish rims described is of the T-headed type which provides the largest proportion (29.5%) of the Lyles Hill rims (Case 1961, 175, fig 1). There thus seems to be no evidence to justify seeking the origin of the Rothesay thickened, everted and ripple-decorated rims in the Lyles Hill style.

Case has drawn attention to the comparisons which may be made between the Abingdon style and Class I and Ia ware from sites near Lough Gur, Co. Limerick (Case 1956, 25). Thickened and everted rims, as well as bevelled ones, are to be found at Lough Gur (Ó Ríordáin 1954, 328, fig 11; 331, fig 14; 332, fig 15). Certain decorative motifs recall the Abingdon and Rothesay traditions, such as punctulations and incisions used in combination, the lattice pattern and the ladder pattern (Ó Ríordáin 1954, 331, fig 14, nos 10, 15, 16). But in general the exaggerated rim forms and the stepped shoulders of the carinated bowls from Lough Gur discourage direct comparisons with Abingdon and Rothesay alike.

Further north in Ireland the most obvious parallels to the Rothesay style are to be found in certain of the pottery traits grouped under the term Sandhills. Pottery from Lambay Island, Co. Dublin, includes bowls with thickened and everted rims decorated by alternating zones of punctulations and incisions very much in the Abingdon or Rothesay tradition (Case 1961, 192, fig 16, nos 4, 5). At Dalkey Island, Co. Dublin, thickened and everted rims occur among pottery in Sandhills style (Liversage 1968, 199, fig 1, p 1, p 9, nos 789, 2234; 200, fig 2, p 153, p 154; 201, fig 3, p 195, p 196, no. 1095). Decoration includes punctulation, incision and the lattice design (Liversage 1968, 199, fig 1, p 32, nos 2234, 2512; 202, fig 4, p 39), whilst alternating patterns occur on rims (Liversage 1968, 199, fig 1, p 28, p 32). Finally it may be mentioned that an upright version of the carinated bowl, with thickened rim, is found (Liversage 1968, 201, fig 3, p 195). From a cist burial at Linkardstown, Co. Carlow, pottery included a bowl with a thickened and bevelled rim, and the suggestion of a carination. Most of the body is decorated with a grooved ladder pattern, repeated also on part of the rim. But the rim pattern is interrupted by a zone of radial grooves, again recalling the Abingdon or Rothesay tradition (Case 1961, 208–9, fig 25, no. 1).

It would seem, therefore, that there might have been some direct connexion between the Rothesay style and certain traits in the Sandhills tradition. But the remarkable carinated bowl from the *Carlingford* chambered cairn at Ballyreagh, Co. Fermanagh, with its heavy bevelled rim, decorated with radial fluting, its vertically fluted interior and ribbed and fluted exterior, might be considered, in Scottish terms, either as a devolved example of a Rothesay carinated bowl or as a Beacharra carinated bowl affected by

the Rothesay style (Case 1961, 187, fig 13, no. 3). In fact, this bowl must at present be regarded as an entirely Irish product, the outcome of Sandhills influence affecting a devolved Beacharra tradition so far confined to Ireland, in a manner suggested by Waterman (1965, 31). At the Annaghmare court cairn, Co. Armagh, Waterman would evidently see a similar combination of influences as responsible for the carinated bowl, constricted at the mouth in the Beacharra manner, decorated with whipped cord impressions and, around the neck, with a series of small imperforate lugs (1965, 30, fig 10, no. 4). Collins would also see Beacharra traits in the three remarkable carinated bowls, constricted at the mouth, found by him in the Ballykeel dolmen, Co. Armagh, which seem to be related to the Annaghmare bowl (1965, 58-9, figs 7-8; 61, fig 9). At Dalkey Island, Co. Dublin, Liversage found a closely related bowl, decorated with peaked lugs at its sharp carination, and draws attention to the ultimately Beacharra parallels (1968, 151, 200, fig 2, p 159). All these vessels, with their echoes of earlier styles, must fall within the late neolithic period, and it has been suggested elsewhere that they should be ascribed to a Beacharra stage IV Carlingford style (Scott 1968b, 218-20). This classification combines a reference to their Beacharra descent with an indication of their sequence in that descent and of their entirely Irish (Carlingford) distribution.

The closest parallel in Ireland to any Rothesay vessel is the plain bowl with bevelled and beaded rim found by Collins and Wilson in the Ballymacdermot court cairn, Co. Armagh (1964, 16, fig 8, no. 5). This strongly recalls the plain Glenvoidean bowl (fig 8c), the comparison extending even to the concave bevel and beaded edge of the rim, whilst comparanda in Ireland are difficult to find (Collins and Wilson 1964, 19). No other such direct Rothesay parallel can be quoted from Irish court cairns, but the assemblage of pottery from the double-horned cairn at Audleystown, Co. Down, is curiously reminiscent of the Rothesay range of vessels in Scotland (Collins 1954, 7ff). There are at least four carinated bowls with upright walls and with thickened, with everted, or with thickened and everted rims, the last of which could be closely matched in Scotland with rims on earlier stage Rothesay bowls (Collins 1954, 22, fig 5, nos 1, 2, 5, 7). There is a small carinated bowl with five or six pinched up lugs on the carination; there are also plain bowls (Collins 1954, 22, fig 5, no. 6; 24, fig 6, nos 1-3). The stepped shoulders and in two cases the rim forms of the carinated bowls affirm their Irish origin, but although two are fluted they are by no means a typical Lyles Hill group. Indeed, Collins would see Beacharra influence in the decoration of one of these bowls (1954, 23).

#### *Chronology and conclusion*

If the evidence given above for the origin and development of the Rothesay style be accepted, it will be seen that any attempt to date that style in Scotland must take account of the Abingdon style in England. Isobel Smith has shown that, in radiocarbon years, dates for the Abingdon style at the type site in Berkshire cover the period 3110-2500 bc (1974, 108). If as suggested here the origin of the Rothesay style does indeed lie partially in such Abingdon pottery from S Britain, then the manifestation of the style in the north might not be expected until a century or two before 2500 bc.

In Scotland there are two radiocarbon dates with significance for the Rothesay style. At the *Clyde* chambered cairn at Monamore (ARN 9), MacKie obtained a radiocarbon date of  $2240 \pm 110$  bc (Q-676) for a charcoal spread just under the final blocking in the forecourt (1964, 15-17). The fluted everted rim of what was perhaps an earlier stage Rothesay carinated bowl was found in the layer beneath the blocking, and might in the excavator's opinion be as much as several centuries earlier than the radiocarbon date, though not necessarily so (1964, 24, fn 2; 26, fig 4, no. 3). More recently a radiocarbon date of  $2120 \pm 100$  bc (GaK-1714) has been obtained from charcoal from a hearth at the Rothesay site itself (Scott 1968a, 296-7). Associated with the charcoal, which was found about 1919, were hazel nut shells, small fragments of bone and the sherds of one of the Rothesay bowls (fig 12b).

The Scottish evidence, therefore, would suggest that the earlier Rothesay style did not develop in SW Scotland much before the close of the middle neolithic period. This would have been late enough to have permitted derivation of some elements of the style from the Abingdon tradition of S Britain, and derivation of other elements from the Towthorpe tradition of Yorkshire and the north, which Manby believes may have come into being early in the third millennium bc (Manby 1972, 21). The date of about 2100 bc from Rothesay would agree well with the observed conditions at the type site, such as the preponderance of the late over the earlier stages of the Rothesay style as defined above, the presence of Grooved Ware and perhaps most significantly the entire absence of beakers (Scott 1964, 157).

With the recognition that the Rothesay is a style in its own right, it will be seen that the use of the term 'Grimston-Lyles Hill' is not a helpful concept in the study of the neolithic pottery of Scotland, and

it is to be hoped that it will not henceforth be used (Henshall 1972, 100; Smith 1974, 108). The justification for the use of the term depended upon Atkinson's classification of much of what can be seen to be Rothesay pottery as Lyles Hill in style (1962), but this view is no longer tenable. This is not to say that neither the Grimston nor the Lyles Hill style is represented in Scotland. Manby's recognition of pottery in the Grimston style from the barrow at Pitnacree, in Perthshire, has been accepted (Manby 1967, 307; McInnes 1969, 19), and it is likely that the Grimston style, present in Scotland since early in the third millennium BC, provided the stimulus for the development of the burnishing and ripple decoration found in the Rothesay style.

All the indications are that, by contrast, the Lyles Hill style appeared very late in Scotland. This was pointed out by Walker in his study of the Easterton of Roseisle material; he realised also the difficulties inherent in the classification of Rothesay burnished and decorated vessels in the Clyde region as Lyles Hill in style (1968, 112). Audrey Henshall points to the apparent association at East Finnercy and at Loanhead of Daviot, both in Aberdeenshire, of fluted sherds (which she regards as in the Grimston tradition) with beaker sherds (1972, 171). However, the Grimston attribution can hardly be sustained, for as Atkinson pointed out certain sherds from East Finnercy have lugs of the 'eared' or upward-pointing variety particularly characteristic of Ireland (1962, 19).

The introduction of the Lyles Hill style into Scotland may, in fact, be one aspect of the increase of Irish influence in Scotland in the late neolithic period. Another aspect is, no doubt, the trade in Group IX axeheads from N Ireland (Ritchie, P R 1968). Penetration into NE Scotland in each case can be seen by comparing Atkinson's distribution map of Lyles Hill pottery (1962, 15, fig 2) with P R Ritchie's of Group IX axeheads (1968, 125, fig 22). It has been suggested that the final phases of development of *Clyde* chambered cairns were also influenced by Irish ideas, but that since the builders of *Clyde* cairns were still a strong and vigorous society, direct Irish influence was kept at a distance and confined to the fringes of the Clyde region, to the north and west, whilst within the region that influence was indirect (Scott 1973). The existence of this society, with its individual preferences, was no doubt the reason why Lyles Hill pottery and Group IX axeheads never achieved entire acceptance within the Clyde region.

It can now be seen that the development of the Rothesay style of pottery fits neatly into this framework. At first the Rothesay style affected the indigenous Beacharra style of the users of *Clyde* chambered cairns, but eventually, in the late neolithic period, it seems to have superseded the Beacharra style entirely. A side effect of this process was to inhibit the spread of the Lyles Hill style in the Clyde region. In Ireland, by contrast, the Beacharra tradition seems to have lingered on to produce such remarkable baroque pottery as the decorated carinated bowls, constricted at the neck, from the settlement site at Dalkey Island, Co. Dublin (Liversage 1968), and the Ballykeel dolmen, Co. Armagh (Collins 1965). Once established in the Clyde region, the Rothesay style seems to have spread its influence widely but thinly along the western seaways to the Hebrides, and perhaps even to Orkney. So far as Ireland is concerned, the influence of the Rothesay style seems to have been limited to rim forms and certain decorative traits on pottery of the late neolithic period still recognisable as in the Beacharra tradition.

There does not seem, on present evidence, to be any reason for supposing that the makers of pottery in the Rothesay style built chambered cairns. However, it is not to be forgotten that the Glenvoidean bowls were deposited in a *Clyde* chambered cairn, on the evidence adduced here, hardly before and possibly later than 2100 BC, at a time when the late neolithic period was nearing its close. The importance of Glenvoidean and its finds is to show, with all its implications, that the makers of Rothesay pottery had by then achieved some sort of *modus vivendi*, not to say *moriendi*, with the builders of those cairns.

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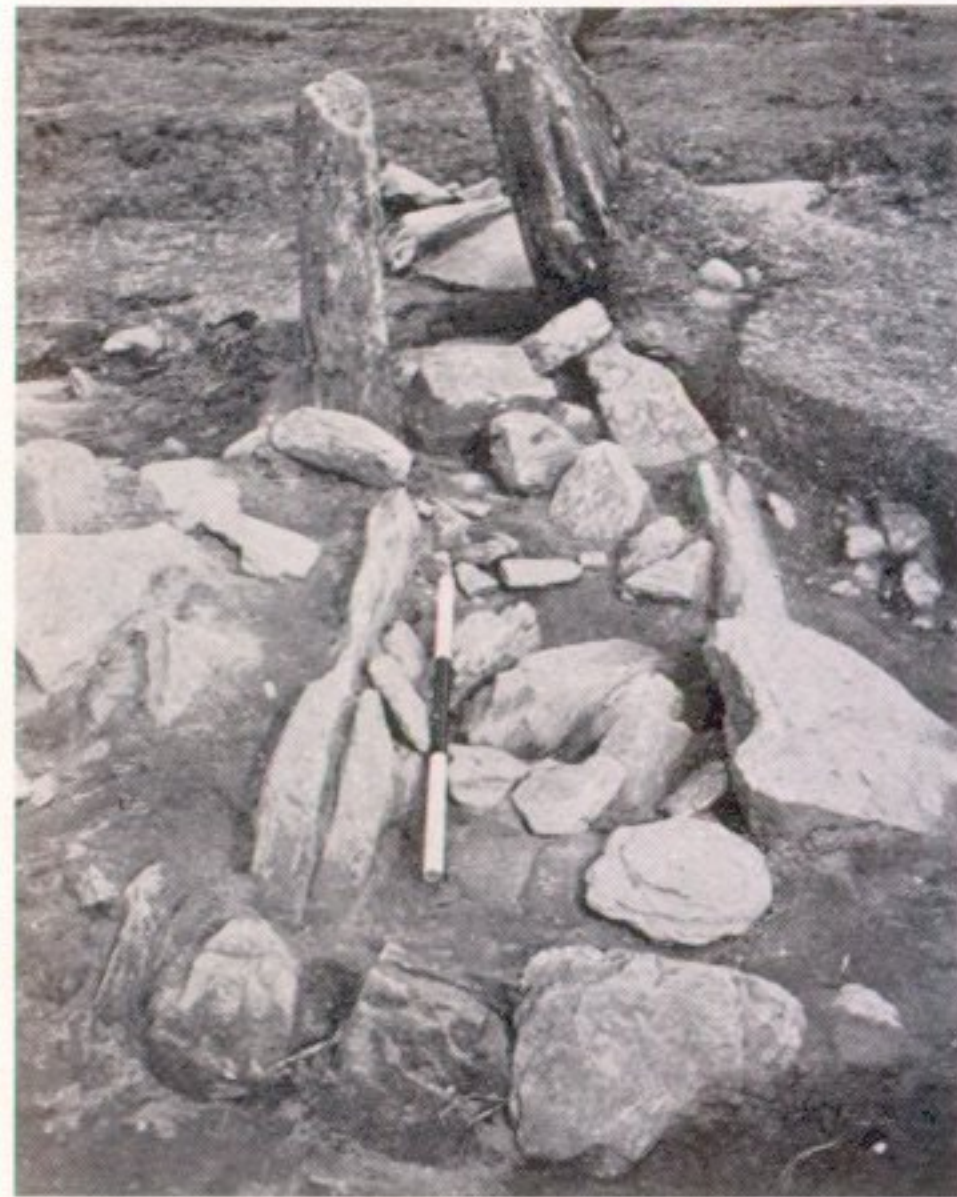


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a Forecourt with collapsed façade



c Axial chamber



b E lateral chamber showing small façade and walling on right



d Axial chamber, horizontal packing in outer chamber

(scales in feet)





a Top of two-tiered bronze-age cist



b Rim of enlarged food vessel on dividing slab



c Lower compartment of cist





a E kerb with cist and earlier chambers



b W lateral chamber showing masking of porch and kerb



c W lateral chamber porch with burnt earth in foreground