

# Excavations at Dun Carloway broch, Isle of Lewis

by Christopher Tabraham

with a report on the finds by Joanna Close-Brooks

## INTRODUCTION

The broch of Dun Carloway has been in the guardianship of the State since 1887, during which time periodic works of masonry consolidation have been undertaken. One such occasion was the summer of 1971 when work was begun on the NE section of the broch wall. The completion of this work necessitated the disturbance of the archaeological levels within the NE chamber and arrangements were made for the writer to undertake this over a 3-week period in June 1972. The broch (NGR NB 190412) stands upon a steep and rocky hillside a little over 50 m above sea level (pl 7a). From the wallhead, at present some 9.2 m above the ground, extensive views can be had of the western seaboard of Lewis. The structure has been described elsewhere (RCAMS 1928, 68), though at the time of the Commission's visit in June 1921 a great quantity of debris precluded the production of an accurate survey. An opportunity was taken therefore to re-survey the ground floor of the broch during the period of excavation.

On plan (fig 1) the broch is roughly circular, measuring 14.3 m in diameter externally and 7.4 m in diameter internally, with walls varying in thickness from 2.9 m on the SE to 3.8 m on the N. Access to the interior is through a low door in the NW. The chamber (chamber D), entered from the S jamb of the entrance passage, is independent of its neighbour (chamber C) and not formerly linked to it by a low passage as suggested in the *Inventory*. This latter feature seems merely to have served as a recess for chamber C. The chamber diametrically opposite the entrance (chamber B) is as described in the *Inventory*, but doubts were expressed as to what occupied the N and NE sections of the broch wall. The recent survey clearly shows that there was only one chamber (chamber A) in this arc and that the second chamber suggested is no more than a small wall recess set immediately above the rock outcrop within the interior on the N.

## EXCAVATION

The work was confined to the floor within chamber A and did not extend into the entrance passage (pl 7b). Excavation revealed an archaeological deposit, up to 0.7 m deep in the centre of the chamber, indicative of several periods of activity. The first was represented by a layer of ash lying directly upon the peat whilst above it was an assortment of ash deposits interspersed with layers of dark brown clay (fig 2). These are presumably a succession of hearths, though only one was recognisable as such. The natural subsoil was peat, which lay directly on the natural rock. The exterior wall of the chamber had been built directly on to the rock outcrop, and the relationship between wall, rock and peat was not known. The interior wall had also been founded on the rock but it is clear from the section that no overall removal of the overlying peat had been carried out prior to the broch's construction.

# DUN CARLOWAY BROCH

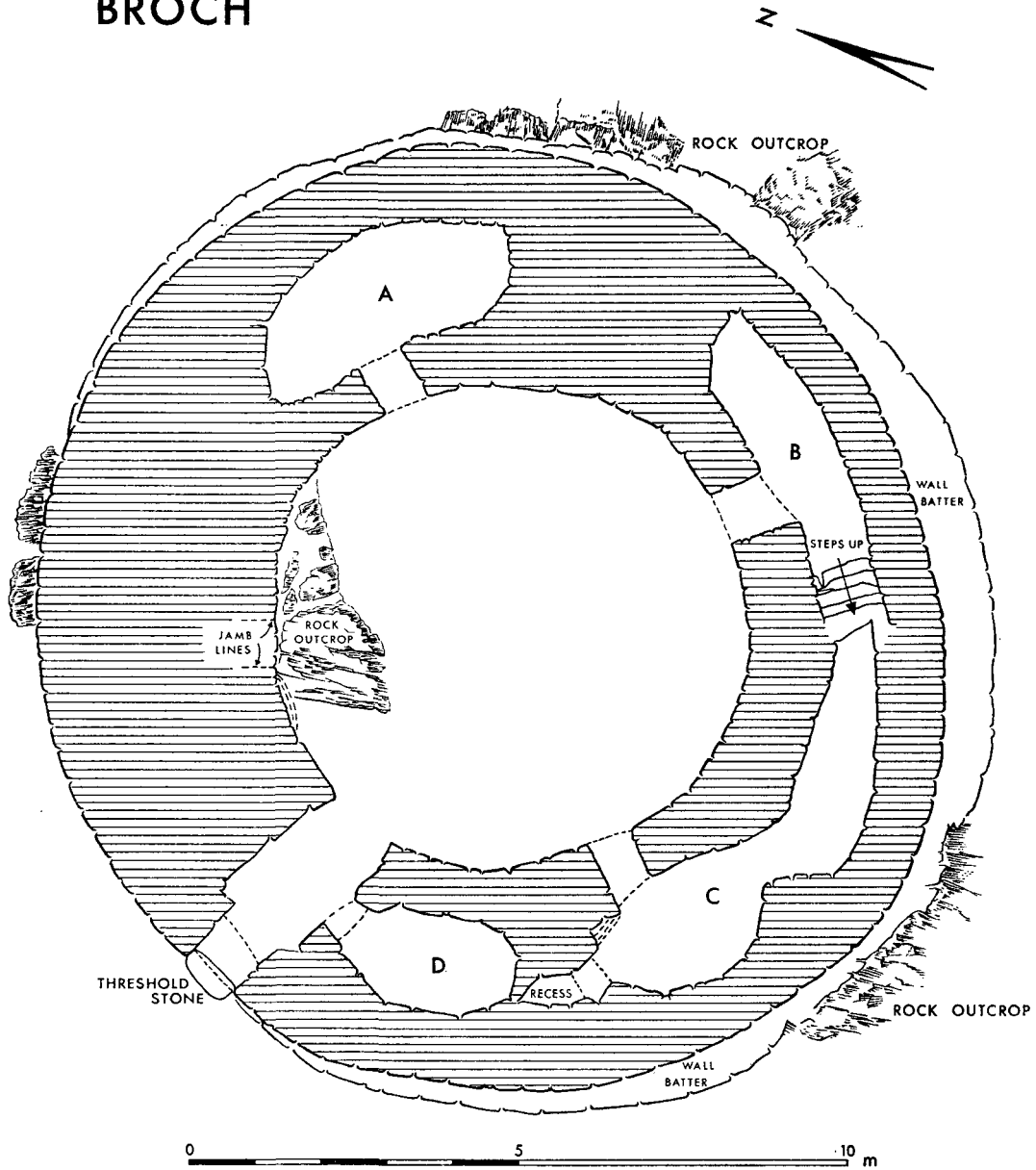


FIG 1 Dun Carloway: plan of broch

The earliest deposit was a layer of ash, sitting directly upon the peat and thickest towards the centre of the chamber. There was no sign that this had been a hearth, though two flattish stones were found lying towards the bottom of the ash deposit, and several others had been mixed in with the fill. The ash itself was an orange-yellow colour. Presumably this and the other ash deposits were derived from peat, judging by the complete absence of charcoal flecks and the

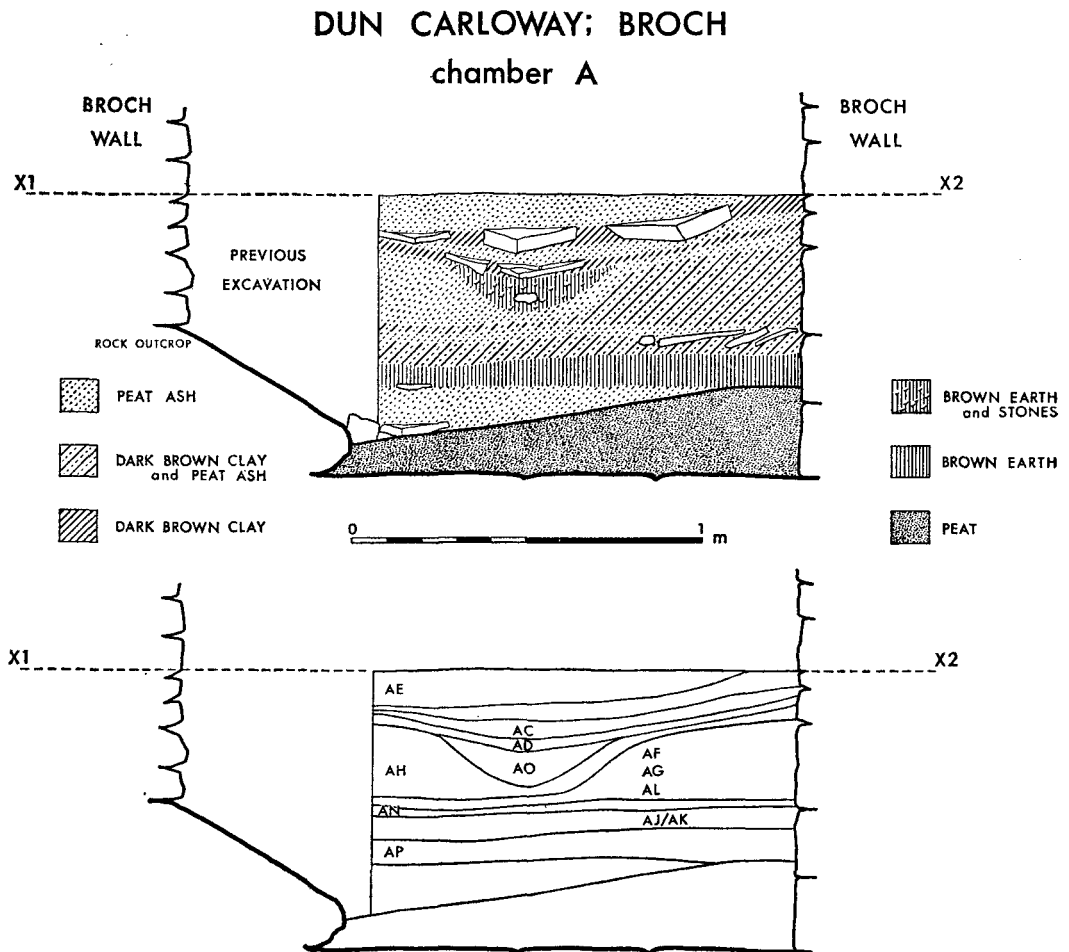


FIG 2 Dun Carloway: section of chamber A and diagram showing layers in which artefacts were found

existence of partially unburnt peats. This primary ash deposit had the appearance of being less intensely burnt than the ash layers above it.

Upon this ash lay a band of brown earth up to 0.1 m thick in places and occupying up to two-thirds of the chamber. The N third of the chamber had rock sloping gently up to the NW. Immediately above lay the only recognisable hearth within the chamber (fig 3). It was a complex structure comprising on the N a roughly flagged stone hearth containing ash, and on the S a shallow depression no more than 0.15 m in depth set into the underlying clay and having a drain, or soakaway, in the E corner of the chamber. A ridge of small vertically placed stones separated the hearth from the pit. Both hearth and pit had been constructed upon a layer of dark brown

clay containing small quantities of ash. The stones of the hearth were all flat and had been pressed into the underlying clay to hold them fast. The area covered by the overlying ash spread outward from the vertical ridge stones but did not exceed the area occupied by the hearthstones. The pit adjoining the hearth was sub-rectangular in shape and had been formed out of the dark brown clay. It was filled with earth and small stones. On the E of the pit a narrow channel had been formed out of the clay to provide a drain into the outer wall of the broch. A long flat stone protruding from the outer wall and partially covered by the clay formed the S side of the drain.

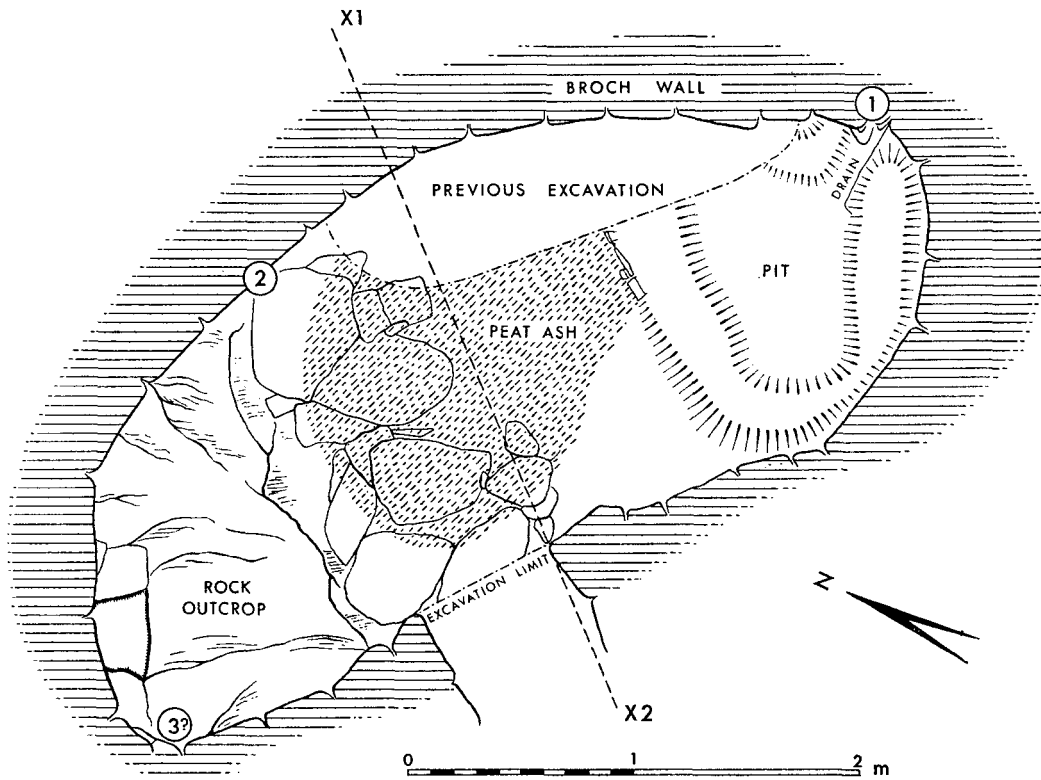


FIG 3 Dun Carloway: chamber A, plan of hearth

Immediately above the outlet in the wall was a void (fig 3.1) 0.25 m square and penetrating the wall a distance in excess of a metre. There was a similar void (fig 3.2) at a point a little over halfway along the outer wall and a possible third in the corner of the chamber diametrically opposed to the first. All three voids contained quantities of ash though in the case of the second void this was associated with a hearth from a higher level.

Overlying the hearth/pit was a deposit of dark brown clay mingled with earth and containing patches of burning and stones. It occupied the whole of the chamber but was thickest at the entrance passage where it attained a depth of 0.25 m. A fragment of rotary quern and a substantial quantity of coarse pottery, mainly small sherds, were recovered. The thickness of this layer of clay had been reduced to a mere 25 mm at the centre of the chamber where the void had at first been filled with ash of a very bright orange-red colour, which in turn had been disturbed by the intrusion of another pit containing brown earth and stones. The ash spread over much of

the central third of the chamber, but its breadth of 0.2 m at the point it met the outer wall of the chamber coincided exactly with the second void mentioned above.

The last remaining deposits comprised two dark brown clay layers. Both had large flat stones pressed into their upper surfaces and both were associated with ash deposits upon them. They too must be regarded as hearths. A quantity of mollusc shell was found against the inner wall of the chamber, 0.7 m S of the entrance passage. Unfortunately its location immediately above the latest ash deposit in a layer comprising traces of another clay layer and modern trample reduces its archaeological significance; nevertheless a radiocarbon date was obtained for it by courtesy of Geochron Laboratories, Cambridge, Massachusetts. They proved to have an age of  $650 \pm 150$  (GX 3428; using the best half-life of C-14). This implies that the sample can be dated to AD  $1300 \pm 150$  though this must be regarded as the maximum possible age since seashells characteristically give ages somewhat greater than 'true' due to apparent 'age' of seawater. On this basis the Laboratory favours a true 'age' not less than  $600-500 \pm 150$  years BP or AD  $1400 \pm 150$ .

### DISCUSSION

The evidence obtained from the excavation shows that the chamber had been used continuously over a period of time and had been abandoned only when access into it became almost impossible. At the outset of the excavation, for example, the headroom was only 0.87 m compared with 1.25 m from the surface of the first hearth to the underside of the door lintel. There is no evidence to suggest that the chamber had been anything but meagrely cleared of its accumulated debris during its occupation. However, the absence within the chamber of pottery typically associated with early broch occupation elsewhere suggests that any primary debris within the chamber had been removed prior to its reuse. The use to which the chamber had been put in this secondary phase is not readily apparent. The excavation revealed at least three hearths, all associated with heavily-burned deposits of peat-ash. A large amount of pottery was found both from the ashes themselves and from the clay make-up for the hearths but, apart from the fragment of quern-stone and the collection of limpet-shells, no other finds were recorded. Animal bone was conspicuous by its absence and a domestic use for the hearths is therefore unlikely. By the same token the lack of dross and slag rules out an industrial use in connection with the manufacture of iron or other metal objects. In the absence of any other explanation, it is possible that the chamber had been used by the occupants of the broch for the throwing and firing of pottery. There are certain features within the chamber that perhaps confirm this.

The three voids in the broch wall (fig 3) would appear to have been primary features in the broch's construction, perhaps originally serving as put-log holes. However, all three contained dense ash deposits and the second void (pl 7c) was clearly associated with the ash deposit immediately above one of the hearths. In this void the peat-ash was particularly heavily burnt and the surfaces of the stones that comprised it had also been exposed to a very high temperature. The hearth and the void had evidently been used together, and it could be that the void had served as a flue for the former, causing an up-draught sufficient to raise the temperature within the hearth to the required level.

Experimental work was done on iron-age pottery from near Blairgowrie (Thorncroft 1933), and the results suggested that the clay had been fired to a temperature within the  $500^{\circ}$ – $800^{\circ}$ C range in an ordinary fire of peat or wood without anything in the nature of a kiln. Only one probable candidate for an iron-age pottery kiln exists in Scotland – that found on the Calf of Eday, Orkney, and known as the 'Potter's Workshop' (Calder 1937; 1939). The arrangement here seems to confirm the Blairgowrie experiments. No formal kiln structure was built, the

thrown pots simply being baked in an open hearth using peat as a fuel. The Calf of Eday kiln also had a pit for holding water in close proximity to the hearth, an arrangement similar to Dun Carloway where the clay-lined pit and drain were an integral feature with the first hearth. Another similarity between the Eday 'workshop' and the Carloway chamber is the great amount and variety of pottery from so small an excavated area. Out of the whole assemblage from the latter there was only one partially complete vessel (no. 49) and one complete base (no. 29). The remainder of the material was chiefly a mass of small body sherds in an assortment of rough, gritty fabrics and variously fired. Only a very tiny proportion of the collection could be connected together and, though there were no recognisable 'wasters', it is tempting to see the fragments as discarded pots.

## SMALL FINDS

by Joanna Close-Brooks, National Museum of Antiquities of Scotland, Edinburgh

The unstratified finds are described first; then stratified finds in groups as excavated, starting with the lowest level and working upwards (fig 2). There were no finds from levels AT, AS, AR and AQ.

The pottery from Chamber A appears to form a homogeneous group. The ware is very hard and well fired with a certain amount of small stone grit. The wall sherds are surprisingly thin for the size of pots represented; most sherds are between 5 mm and 8 mm thick, though some thicker pieces occur. The fabric ranges from buff to dark brown; many pieces are sooted inside or out. A number of pieces, now light pink or orange, have been burnt subsequent to firing. A number of sherds, including pot 49, have a streaky surface, apparently caused by wiping with a bunch of straw or a coarse cloth that has left striations on the surface, usually horizontal.

A considerable number of tiny crumbs of pottery were not included in the sherd counts. In the illustrations, dotted lines at the rim indicate the angle is uncertain.

### *AA: Unstratified*

- 1 Rim sherd from a large jar, surface very weathered; lines accidental (fig 4).
- 2 Small flat-topped rim sherd, section similar to 34.
- 3 Large wall sherd from a rounded jar, irregular outer surface, inner surface indented by the working marks of the potter's fingers.
- 4 Twenty wall sherds.

### *AP*

- 5 Rim sherd from short-rimmed pot, irregular in shape (fig 4).
- 6-8 Rim sherds (fig 4).
- 9 Neck angle (fig 4).
- 10-12 Rim sherds; 10 burnt. Two other small rim sherds similar to 34 are not illustrated (fig 4).
- 13 Rim sherd, partly burnt. Horizontal wipe-marks on outer and inner surfaces (fig 4).
- 14 One small and very worn wall sherd with trace of a wavy cordon.
- 15 Thirteen sherds; one sherd with finger-marks inside as 3 is probably grass-tempered.

### *AK*

- 16 Pointed flaring rim sherd, unusually thin; fabric burnt orange and blackened outside (fig 4).
- 17 Flat-topped rim sherd, probably from an open bowl (fig 4).
- 18 Six wall sherds.

O

*AJ*

- 19 Rim sherd.
- 20 Rim sherd, burnt orange, blackened outside (fig 4).
- 21 Four small wall sherds from different pots with zig-zag cordons.
- 22 Forty-five wall and base sherds.

*AN*

- 23 Rim sherd from an open bowl, similar to 17. (This sherd may be drawn at the more correct angle) (fig 4).
- 24 Small rim sherd, flat-topped, similar to 6.
- 25 Twenty wall sherds.

*AL*

- 26 Two small wall sherds of different thickness with zig-zag cordons.
- 27 Thirteen wall sherds.

*AG*

- 28 Base of thick-walled pot, base diameter 13 cm (fig 5).
- 29 Base of smaller jar with irregular outer surface, and building-rings only casually smoothed down on inner surface. The basal surface is weathered and may have been thicker. Base diameter 7 cm (fig 5).
- 30 Rim sherd with neck angle, burnt orange, blackened outside (fig 5).
- 31 Two very similar flat-topped rim sherds, one illustrated (fig 5).

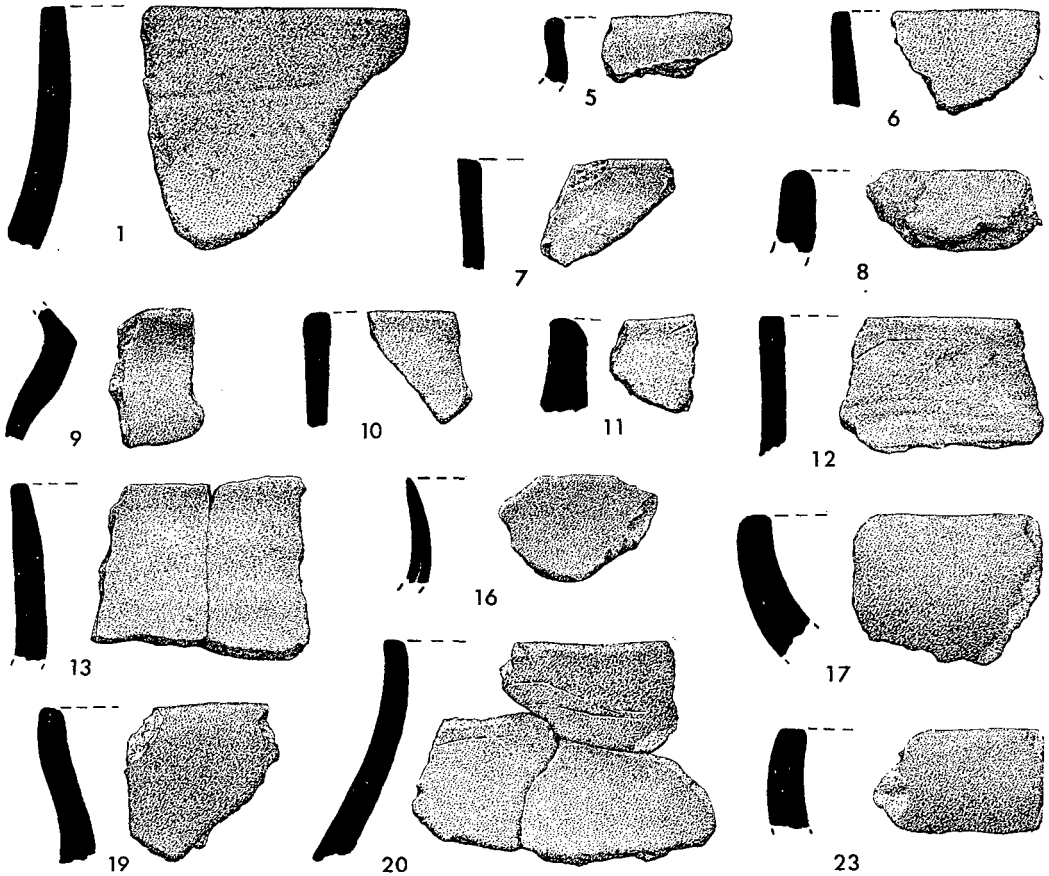


FIG 4 Dun Carloway: pottery (scale 1 : 2)

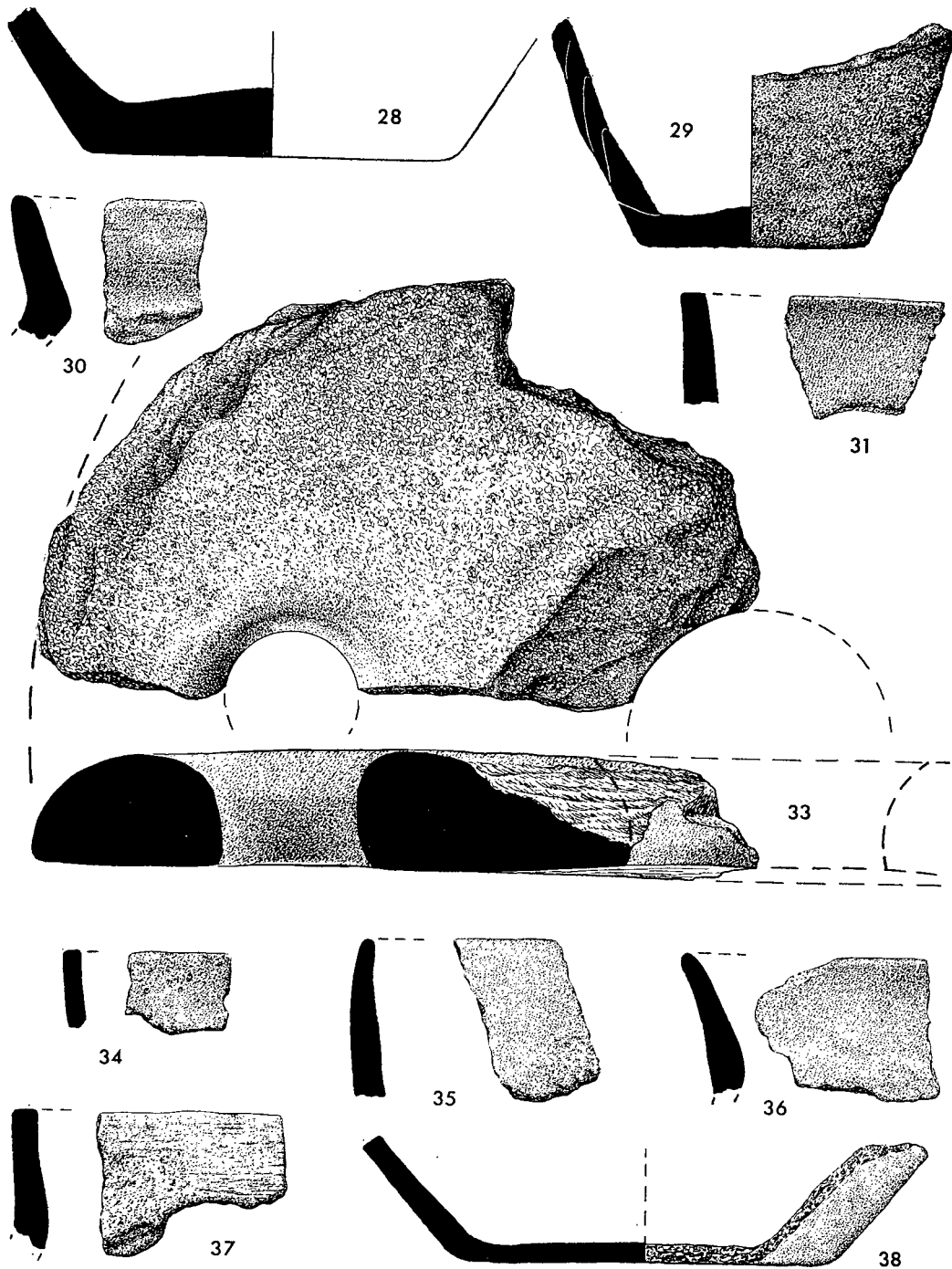


FIG 5 Dun Carloway: pottery and rotary quern (scale 1 : 2)



- 32 Seventy wall and base sherds, including two wall sherds with a light-coloured straight line on the surface, 6 mm wide, probably the mark of a loosely applied cordon that has come off. One of these sherds joins a similar sherd from group AG.
- 33 Part of the disc-shaped upper stone of a rotary quern, with a vertical perforation for the handle; the stone is thin and appears to be well worn. Estimated diameter 42 cm (fig 5).

Dr A Livingstone of the Royal Scottish Museum kindly reports that the material is an amphibolite. He has identified the following minerals in a very small crushed fragment: green amphibole, quartz, mica and an untwinned plagioclase. Amphibolites are common throughout the Outer Hebrides chain, and there is no reason to suppose the source of the rock was other than the Isle of Lewis.

*AF*

- 34-37 Rim sherds; 35 is irregular and has a straighter profile in part (fig 5).
- 38 Unusually thin base from a thin-walled pot, sooted inside. Base diameter approx. 11 cm (fig 5).
- 39-42 Four small wall sherds with zig-zag cordons, two illustrated (fig 6).
- 43 One wall or base sherd, the inner face finger-marked as 3, the outer face missing; the interior grass tempered. Three deep impressions made from the inside did not penetrate the outer surface when the sherd was complete (fig 6).
- 44 Seven small rim sherds, all flat-topped, not illustrated; six relatively thin, similar to 34, one thicker, similar to 37.
- 45 One sherd with gently curving neck angle, similar to 20, but rim not preserved.
- 46 Two-hundred-and-forty-seven body and basal sherds, very few of which appear to be from the same pot; some burnt.

*AB*

- 47 Rim sherd (fig 6).
- 48 Seven wall sherds.

*AH*

- 49 Substantial parts of a round-bodied pot with tall, slightly everted flat-topped rim and two neat finger-impressed cordons on the shoulder. The fabric is quite thin for the size of the pot. The ware is hard and mostly buff in colour, darkened in places. The outer surface has fine horizontal wipe marks; the inner surface has coarse wipe-marks on the rim and neck, finger-impressions on the lower body. Estimated maximum diameter 30 cm (fig 6).
- 50 Sixty-seven wall and base sherds.

*AO*

- 51-54 Four rim sherds (fig 6).
- 55 Base sherd of thin-walled pot (fig 6).
- 56 One wall sherd.

*AD*

- 57 Rim sherd with curious protrusion, perhaps for a lug, but could be part of an unusually thick building ring (fig 6).
- 58 Neck sherd (fig 6).
- 59 Sixty wall sherds.

*AC*

- 60 Rim sherd (fig 6).
- 61 Three wall sherds.

*AE*

- 62 Rim sherd, outer surface coarsely wiped.
- 63 Five wall sherds.

*Discussion of finds*

The pottery from Chamber A appears to form a remarkably homogeneous group from the base to the top of the deposits. The basic shape represented is a round-shouldered jar with a tall

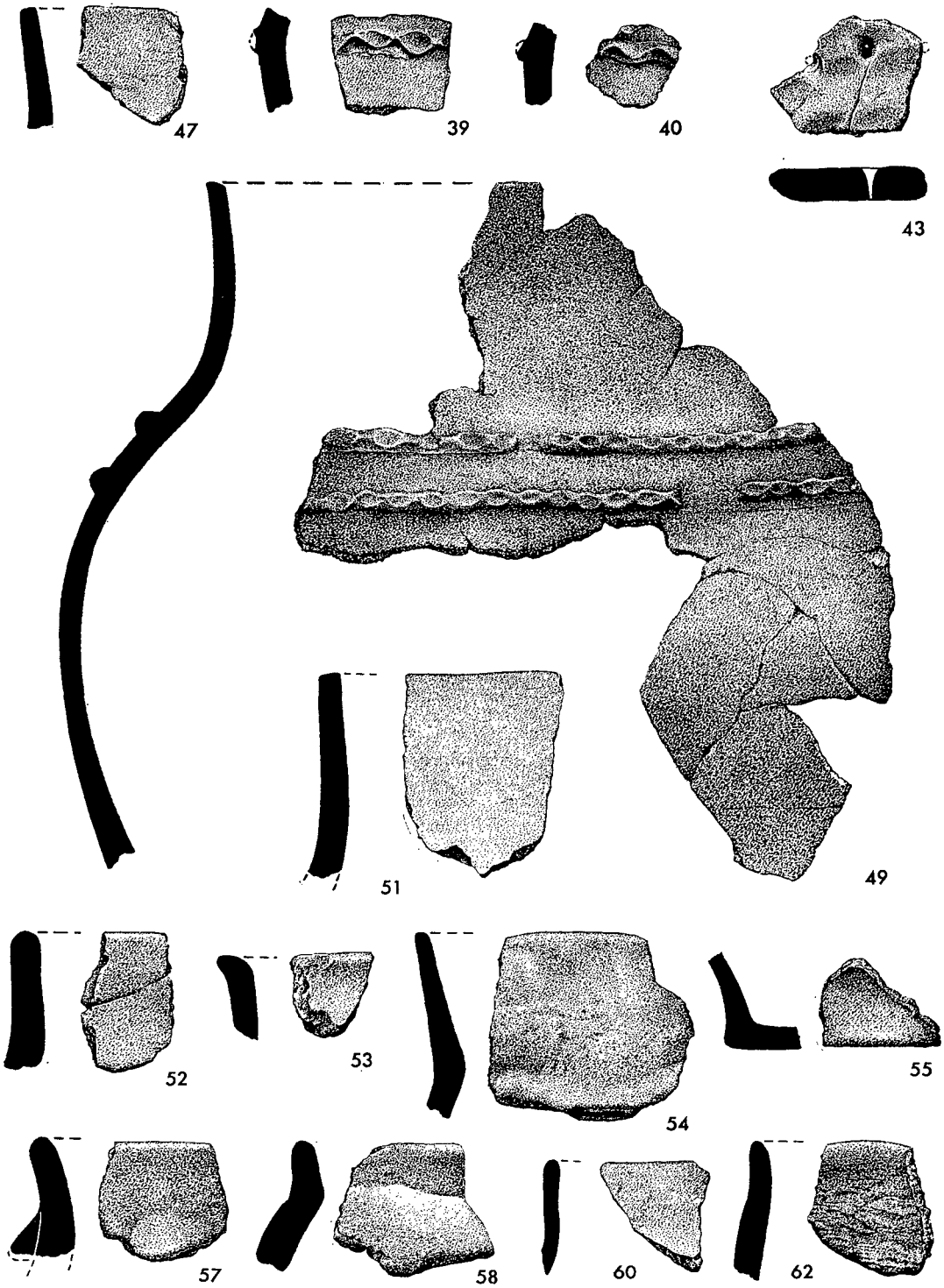


FIG 6 Dun Carloway: pottery (scale 1 : 2)

everted rim, there being some variation in the acuteness of the neck angle. The characteristic rim is flat across the top, occasionally it is rounded or even pointed. There are also a few sherds from jars with short everted necks (e.g. 5, 57), while numbers 17 and 23 seem to be open bowls. The only form of decoration present is an applied cordon given various wavy effects with the fingertips, and this seems to be quite rare; thus cordons were present on only four out of 251 wall sherds in level AF.

Typologically, this is not the sort of pottery one would expect to find in the early occupation levels of a broch. Rather one would expect the range of highly decorated rimless or short-rimmed jars found in the construction and early occupation levels of the broch of Dun Mor Vaul on Tìree (MacKie 1974); an assemblage often referred to as 'wheelhouse ware' because of its constant occurrence in excavated wheelhouses in the Outer Isles. However, an examination of the archaeological evidence within the fill of Chamber A at Dun Carloway suggests that all the deposits are associated with a secondary use of the broch; and this would also suit the presumed date of the pottery.

Two other assemblages of plain pottery, including large jars with tall everted rims, and occasional applied cordons, have been excavated in the Outer Isles. One small group came from phase III middens stratified above an abandoned wheelhouse with typical decorated pottery at A'Cheardach Mhor, South Uist (Young and Richardson 1960, 154-6, figs 10, 13). A number of bone and antler pins and tools were also found in the middens. A much larger assemblage came from Dun Cuier, Isle of Barra (Young 1956, figs 7-12). This site, conventionally a dun, is a sub-circular stone-walled structure measuring about 25 feet (7.62 m) in internal diameter, and must in reality be a very stoutly-walled house; perhaps a fortified house is a better generic term for such sites. While the pottery from Dun Cuier includes some forms not represented at Dun Carloway, such as the concave rims of numbers 48 and 49 and the bucket shapes nos 1-3, there is a close general resemblance, especially in the tall everted rims nos 51-68 at Dun Cuier with nos 44, 51, 54 etc at Dun Carloway. The open bowls 16 and 17 at Dun Cuier compare with 17 and 23 at Dun Carloway, and the jars 4 and 5 at Dun Cuier with the occasional short everted rims at Carloway. Cordoned decoration was possibly more frequent at Dun Cuier, but the single sherd stamped with a ring-headed pin, 109, was surely a rubbish survival from an earlier deposit, being more at home in the early levels at A'Cheardach Mhor and at Dun Mor Vaul.

Mrs Young dated the material from Dun Cuier and from phase III at A'Cheardach Mhor to the 5-7th centuries AD. The position subsequent to wheelhouse ware was clear from the stratigraphy at the latter site, but it was difficult to suggest a more precise date, since few of the numerous small finds were closely dateable. Mrs Young drew attention to the nail-headed bone pins, which are paralleled at the Mote of Mark, where they may be of 6th or 7th century date (Laing 1975, 100-102; Graham-Campbell 1976, 280) and to possible parallels with Irish pottery. She also suggested that the small stone mould from Dun Cuier (Young 1956, 315; fig 13, no. 19) was for the terminal of a Class G penannular brooch. In fact, it compares more closely with stone moulds from period 1b at Lagore identified as moulds for glass studs (Hencken 1951, 6-7, 129 and fig 62, especially no. 1287). The Lagore moulds may date to the 7th or 8th centuries AD. Triangular glass studs with one curved side similar to the Dun Cuier mould are set in penannular brooches from St Ninian's Isle and from Croy (Small *et al* 1973, pls 33c, 38a); and similar inlays were presumably used on various ornamented bronze mounts. This identification perhaps extends the date-range for the occupation of Dun Cuier into the 8th century AD.

At the other end of the range, excavations at the Udal in North Uist have yielded the first C14 date related to the end of wheelhouse occupation (340 ad  $\pm$  120; Q-1131). Crawford (1977, 129) comments 'Between 200 and 400 AD (future work should reduce this wide bracket) the

structure and artefacts of all types change character abruptly and completely from classic wheel-house types to a range of material comprehensively alien thereto.'

In the absence of small finds at Dun Carloway, the pottery there can only be dated by comparison with the closely similar material from Dun Cuier and A'Cheardach Mhor. Mrs Young's dating of 5th–7th centuries AD for this material cannot be really improved upon at present, while Crawford's work confirms the start of the phase in general terms. The assemblage from Dun Carloway should date somewhere within these three centuries. The pottery at Dun Cuier includes several shapes not found at Dun Carloway, and cordoned decoration is more frequent. This may indicate that the Dun Cuier material covers a longer time span. A short period for the fill of Chamber A at Dun Carloway is suggested by the consistency of the pottery styles in all levels. A few further points may be made. Apart from pot 49, remarkably few sherds could be joined up. In particular, of the 450 plus sherds from level AF, it is very difficult to find any two sherds that seem to be from the same pot. This may suggest that broken pots were not thrown straight into the chamber, but that they had been broken and scattered around elsewhere before final deposition. The surprising lack of finds other than pottery, in complete contrast to the corresponding groups from Dun Cuier and A'Cheardach Mhor, perhaps suggests some sort of industrial activity on the site rather than normal domestic occupation.

The quern fragment 33 offers little additional information. Similar querns are commonly found in brochs or duns, but may well belong to late phases of their use. A related fragment was stratified in a phase III level at A'Cheardach Mhor (Young and Richardson 1960, 156, fig 9, nos 5 and 6; the reference to an oblique perforation seems to be intended for querns nos 1 and 2 on fig 9).

#### ACKNOWLEDGMENTS

The excavation was carried out under the most appalling weather conditions and I must record my deepest gratitude to my only helper, Mr Colin Bowman, who struggled in and out of the chamber with me. I owe a special debt to Dr Joanna Close-Brooks for her report on the pottery. Mr Ingval Maxwell undertook the ground survey and Mr Tom Borthwick made my drawings acceptable for publication.

#### REFERENCES

- Calder, C S T 1937 'A Neolithic double-chambered cairn of the stalled type and later structures on the Calf of Eday, Orkney', *Proc Soc Antiq Scot*, 71 (1936–7), 115–54.
- Calder, C S T 1939 'Excavations of Iron-Age dwellings on the Calf of Eday in Orkney', *Proc Soc Antiq Scot*, 73 (1938–9), 167–85.
- Crawford, I and Switsur, R 1977 'Sandscaping and C14: the Udal, North Uist', *Antiquity*, 51 (1977), 124–36.
- Graham-Campbell, J 1976 'British Antiquity 1975–6; Western British, Irish and Later Anglo-Saxon', *Archaeological Journal*, 133 (1976), 271–89.
- Hencken, H 1951 'Lagore Crannog: an Irish royal residence of the 7th to 10th centuries AD', *Proc Roy Irish Acad*, 53 (1950–1), 1–248.
- Laing, L R 1975 'The Mote of Mark and the origins of Celtic Interlace', *Antiquity*, 49 (1975), 98–108.
- MacKie, E W 1974 *Dun Mor Vaul: an Iron Age Broch on Tiree*. Glasgow.
- Small, A, Thomas C and Wilson, D M 1973 *St Ninian's Isle and its treasure*. London.
- Thorneycroft, W 1933 'Observations on hut circles near the E border of Perthshire, N of Blairgowrie', *Proc Soc Antiq Scot*, 67 (1932–3), 187–208.
- Young, A 1956 'Excavations at Dun Cuier, Isle of Barra', *Proc Soc Antiq Scot*, 89 (1955–6), 290–328.
- Young, A and Richardson, K M 1960 'A' Cheardach Mhor, Drimore, South Uist', *Proc Soc Antiq Scot*, 93 (1959–60), 135–173.

*The Society is indebted to the Scottish Development Department for a grant towards the cost of this paper*



a Broch from the N



b Partial view of interior from N, chamber A on left



c Interior of chamber A, showing void (2) in outer wall