

# Excavation of a promontory fort, broch and souterrain at Hurly Hawkin, Angus

D B Taylor\* with contributions by A S Henshall and others

## SUMMARY

Excavation of the site revealed a broch with an inner courtyard 12·48 m in diameter and a surrounding wall 5 to 6 m thick. Most of the wall had been quarried away to foundation level although the inner face did survive in places to a height of c 1 m. The entrance was in the SW quadrant and traces of two probable wall chambers were exposed in the NW and SE quadrants. The floor was partially paved and had a number of post holes inserted into it.

Investigation of the possible ditch revealed a souterrain of the Angus type, 2·3 m wide and c 29 m long with walls still standing to a height of 1·5 m. The well-defined entrance lay at the W end and opened on to a paved area with traces of occupation. The broch had been built within and partly overlying an earlier promontory fort, defended by double ditches and rampart and the broch, in turn, had been succeeded by the souterrain.

In the W quadrant of the broch, a series of post holes was revealed, individually constructed and set into a low bank of clay c 0·5 m high. They seem to have formed a possible timber-walled hut or stockade which, if circular, would have been c 15 m in diameter; they were certainly pre-broch and formed no part of the defence of the promontory fort.

## INTRODUCTION

Liff Church is situated 3 miles (5 km) to the W of Dundee on the Braes of Carse overlooking the Tay estuary to the S. Immediately W of the churchyard, two streams from the NE and NW flow together to form the Liff Burn. Now rather insignificant, they have carved steep-sided gullies, creating a small promontory called Hurly Hawkin (NGR NO 332328) which stands at a height of 80 m OD overlooking the whole of the Carse of Gowrie (fig 1).

Surface indications before excavation began suggested a broch-like structure with walls 16–19 ft (5–6 m) thick, enclosing an inner courtyard 39 ft (12 m) in diameter. The tops of only a few boulders were visible and there was no indication of an entrance. A slight depression extending across the promontory to the N of the main structure suggested a protecting ditch.

The local rock is a grey sandstone which makes excellent building material but on the site itself this has been overlain by a glacial deposit of light brown boulder clay, in places 2 m in depth. This, in turn, was covered by a layer of darker, loamy material, 11–15 in (0·3–0·4 m) thick. Trees had been planted but these had been cut down; when excavations began the entire area was covered with secondary growth and a mass of nettles and willow herb. A dwelling house had been erected close by a few years previously and the site of the excavation lay within the boundaries of the land taken in for the purpose. The use of mechanical aids was thus impossible

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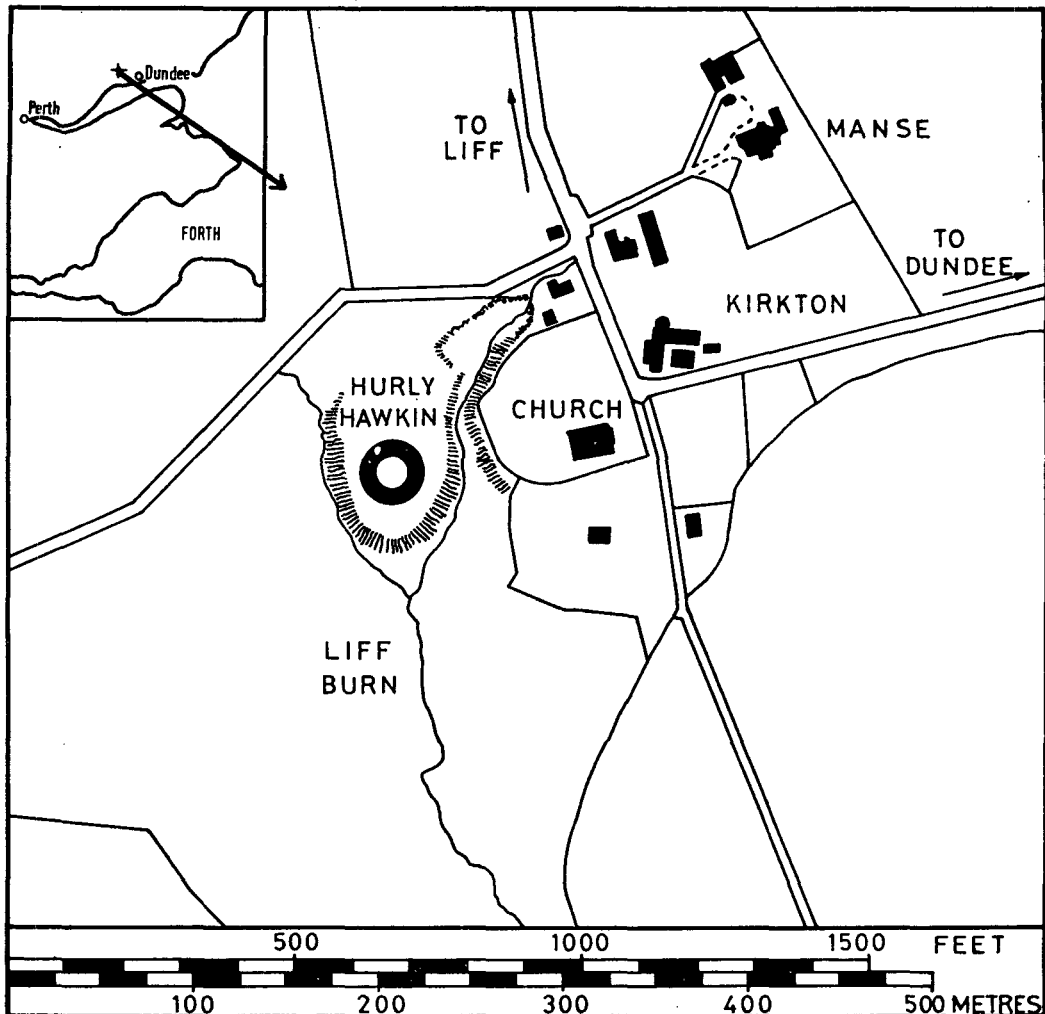


FIG 1 Hurly Hawkin: location map and site plan

since the only approach, from the N, lay across a well-kept lawn. Operations began in the summer of 1958 and continued until the autumn of 1968.

#### HISTORY

The name Hurly Hawkin is intriguing and although many attempts have been made to explain its meaning, these have been unsuccessful. According to Nicolaisen (pers comm) the most likely possibility is that the name is derived from Gaelic but lack of early spellings make this uncertain.

On the 1923 edition of the 25 inch OS Sheet the site is described as the 'Supposed Palace of Alexander I, 12th Century'. This probably follows repeated references in local histories to the story in Fordoun of the building by Alexander of a royal palace at Liff. From time to time the site had been 'dug over' with little result but, in 1865, Andrew Jervise of Brechin carried out the

first systematic excavation and it was he who first suggested that Hurly Hawkin was a possible broch. Although Jervise (1865) produced a plan (fig 2) which gave some confirmation of this suggestion, his description of the excavation was brief in the extreme and his plan shows an entrance without reference in the text which was found to be non-existent in that position. However, in spite of this, and the fact that his investigation took place over a period of only two days, the evidence he did obtain was sufficient to suggest to him the similarity between Hurly Hawkin and the 'burgh' of Mousa.

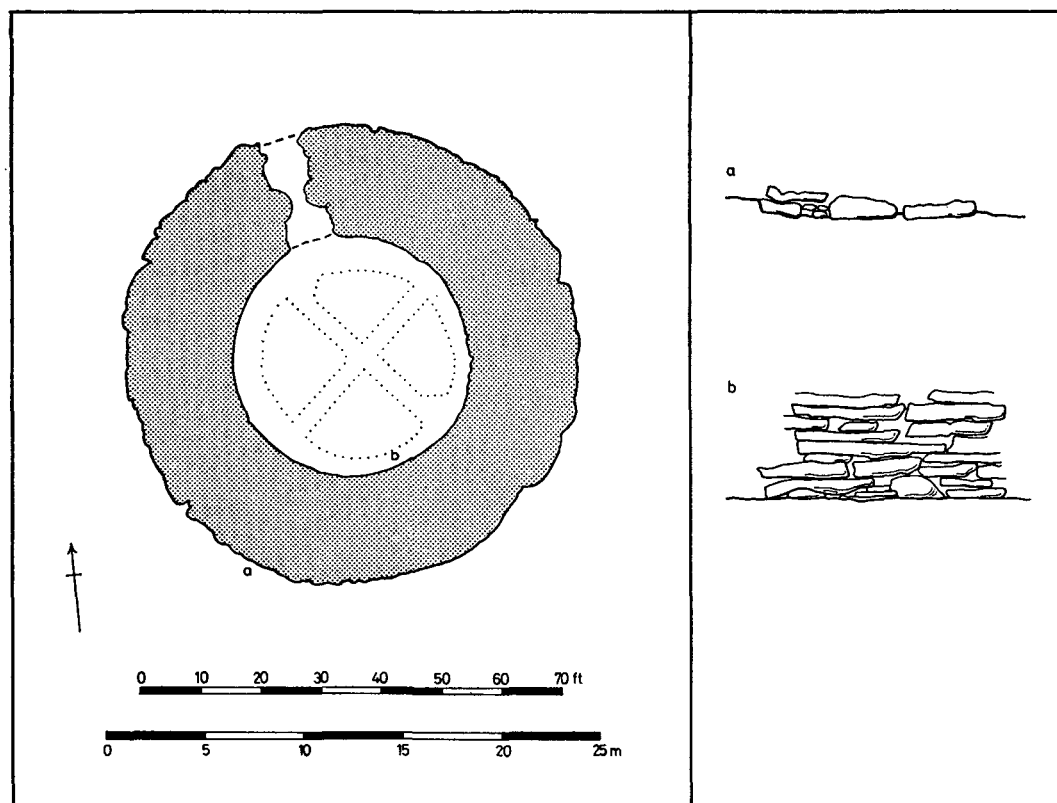


FIG 2 Hurly Hawkin: Jervise's plan, 1865

Gordon Childe (1939) saw Hurly Hawkin, St Bride's Rings and the Laws of Monifieth as outliers of the ring forts of central Perthshire.

## EXCAVATION

### THE BROCH WALL (figs 3-4, pls 15-16)

Operations began with the cutting of one trench along the N-S axis of the broch and another at right angles to it. These confirmed the existence of the denuded inner and outer faces of the wall and revealed also a partially paved inner courtyard. The NE, NW and SW quadrants were then opened up, the SE quadrant remaining unexcavated because of the existence of several large trees upon it.

Of the broch wall, only fragments remained. The outer face was represented by a number of foundation slabs and boulders, some of which exceeded 3 ft (1 m) in length and 18 in (0.5 m) in width (pl 15a). These had been laid directly on boulder clay and had been carefully packed with small stones. A number of boulder holes were also found which indicated the outline of the wall. The inner face was more continuous, although again it survived only at foundation level except in the E and W where it reached a height of 3 ft (1 m). The foundation stones were generally smaller than those of the outer face but a number of large slabs were also incorporated and such walling as survived had been carefully built (pl 15a). Of the wall filling, no trace could be found except in the E where the remains of a wall chamber were uncovered and here again the filling consisted of carefully laid slabs which extended only about half way through the wall, at which point the whole structure became ruinous. The entire wall was remarkably consistent in width, being 19 ft (5.7 m) except in the eastern sector where it narrowed to just over 16 ft (5.1 m).

A trench was extended in a northerly direction from the NW quadrant across the possible ditch. Between the inner and outer faces of the broch wall a large slab, 3 ft 5 in (1.05 m) long and 2 ft 11 in (0.9 m) wide, with a cupmark surrounded by two shallow rings incised upon it, was uncovered (pl 15b). It was lying horizontally on the clay surface, 5 ft 9 in (1.8 m) from the inner face. A second slab lay beside it. The fact that these had been carefully laid suggested paving and, on widening the trench at this point, a short section of walling at right angles to the inner face was uncovered on the W side, barely 4 ft 9 in (1.5 m) in length. Between that and the inner face was a boulder hole which fitted the base of a large pillar-like slab over 3 ft 4 in (1 m) in length and nearly 19 in (0.5 m) thick which had been found nearby on the surface. These traces, fragmentary as they were, suggested either an entrance or a wall chamber. Since the entrance was found in the SW quadrant and since the large foundation boulders of the outer face were continuous at this point, it seems more likely that this was the entrance to a wall chamber (fig 4, section GH).

More convincing were the remains of a second chamber, found in the eastern sector of the broch wall. Here the inner face still stood to a height of just under 3 ft (1 m) and on the E-W section across the broch a further fragment of walling extended at right angles to the inner face for a distance of 8 ft (2.52 m) (pl 15c). The width of the chamber at this point was 4 ft 6 in (1.4 m). The structure could, in fact, have been the base of a stairway, although none of the steps had survived. The floor had been carefully paved and one of the stones used was a saddle quern of red sandstone 2 ft (0.6 m) long and 11 in (0.3 m) wide with the typical dished and well-rubbed depression on the surface (fig 4, section EF).

Excavation in the SW quadrant revealed the remains of the entrance. It extended in a south-westerly direction from the interior and again only the lower courses of the wall on both sides had survived along with an area of well-laid slab paving. Both the inner and outer faces of the broch wall on either side of the entrance had disappeared with the exception of one foundation slab in the outer face forming the SE corner of the entrance. The entrance walling which still existed extended for 8 ft (2.46 m) on the N side and for 10 ft (3.06 m) on the S. The surviving paving, shattered in places, was 11 ft 6 in (3.6 m) in length and 3 ft 8 in (1.14 m) wide. 4 ft 1 in (1.26 m) from the conjectural position of the outer face of the broch, a slab 3 ft 7 in (1.1 m) in length had been set on edge across the entrance, forming a sill. Part of this had been broken off, but immediately behind it on the N side was a well-made socket, 9 in (0.23 m) deep and 4 in (0.1 m) square, stone-lined and with a rounded pebble as a base. This had obviously supported the post of a door closing against the sill. No door checks survived nor were there any traces of a guard chamber.

The excavation of the entrance passage was extended in a south-westerly direction for a distance of 25 ft (8 m) beyond the outer face of the broch wall (fig 4, section CD). Immediately

# HURLY HAWKIN ANGUS

B. H. BOULDER HOLE

0 5 10 15 20feet

0 1 2 3 4 5 6m

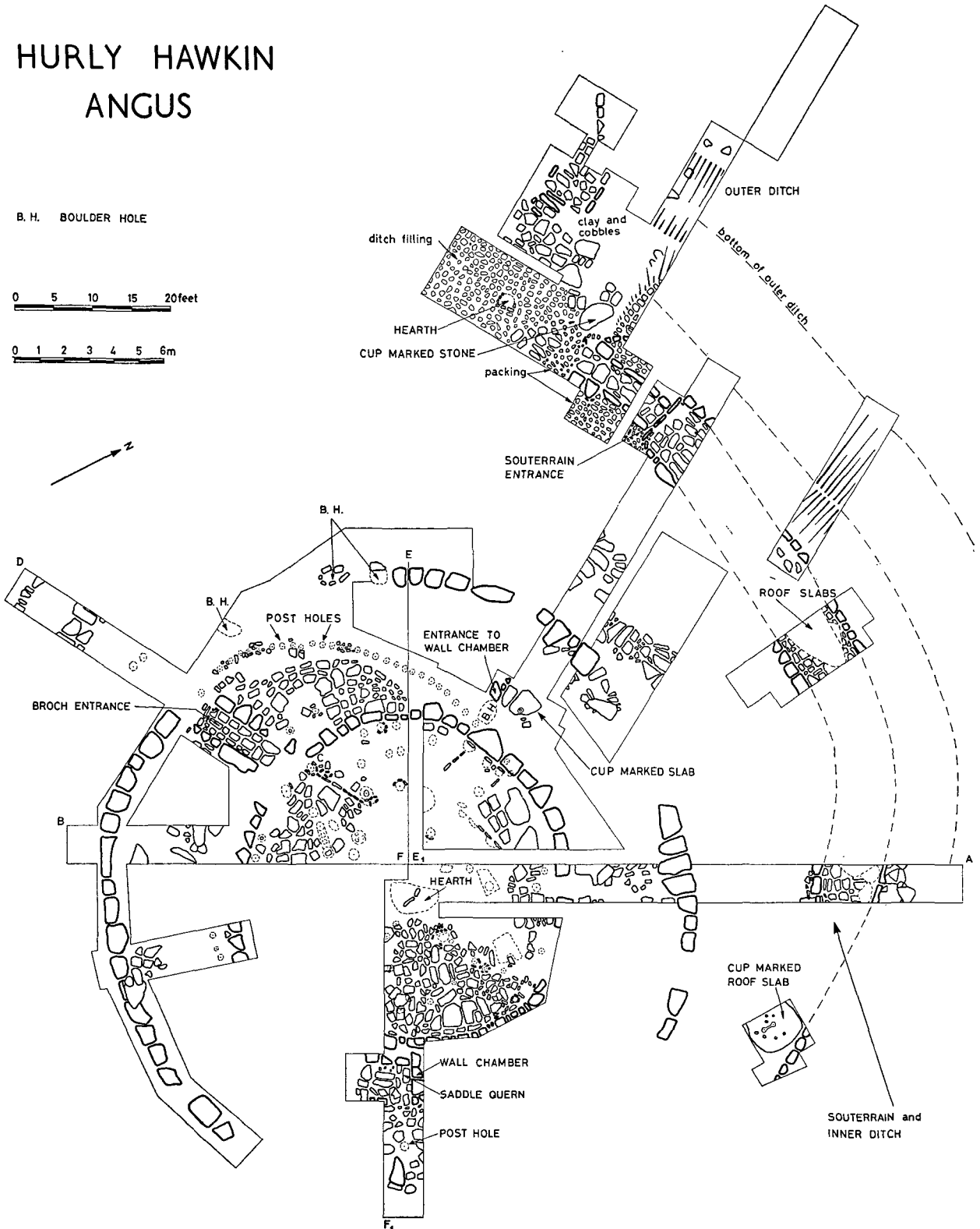


FIG 3 Hurlly Hawkin: plan of excavation

outside the entrance the ground sloped downwards for a distance of 12 ft (3.7 m) at which point it dipped sharply before levelling out into what appeared to be a paved platform a little over 3 ft 3 in (1 m) in width, although there were indications that the paving had originally been wider. Thereafter, the ground level sloped down steeply, marking the western edge of the promontory. Similar areas of paving occurred outside the broch wall in the northern sector suggesting a paved roadway round the broch to the entrance. Certainly, the entrance had been constructed in the most inaccessible sector of the broch.

The northern sector of the broch wall had been built on top of a levelled rampart, and in the sections cut across the broch wall and ditch, it was possible to distinguish the spread of rampart material. The foundations of the outer face were higher than those of the inner face and a good deal of levelling had taken place in the interior (fig 4, section GH).

#### THE INTERIOR (fig 3, pl 16)

The central area enclosed by the broch wall was roughly circular, measuring 40 ft 6 in (12.48 m) along its N-S axis and 41 ft (12.6 m) along its E-W axis. Fragments of paving survived, particularly in the NE quadrant (pl 16a), and this paving was covered by a layer of burnt material up to 2 in (50 mm) deep which possibly represented destroyed roofing material. The texture of this layer was very fine and it contained little trace of what could have been sizeable roof timbers. A number of postholes were found penetrating the paving: that these were contemporary with the courtyard is suggested by the fact that in most cases the paving had been carefully fitted round them. Some were located close to the inner face of the broch wall, suggesting roof supports for timber buildings. Four large postholes seemed to constitute an extension of the entrance passage into the broch interior for a distance of nearly 13 ft (4 m). These ranged up to 19 in (0.5 m) in diameter and 8 in (0.2 m) in depth. If, in fact, there was a range of timber buildings round the inner face and extending into the interior for 13 ft (4 m) then such an extension of the entrance passage becomes understandable (pl 16b). In the NW quadrant, three well-defined postholes were found along the inner face. From the most westerly of these thin slabs on end extended at right angles towards the centre. From the most easterly, further upright slabs with a posthole followed a similar pattern and, apparently linked with it, another line of slabs and sockets ran at right angles for a distance of 7 ft 9 in (2.4 m) parallel with the inner face. This, with an area of paving within the rectangle, indicated a wooden hut abutting on to the inner face. Similar postholes occurred in the NE quadrant although not in such numbers as elsewhere in the interior and without the low, upright, thin slabs. It thus seems fairly certain that a series of huts had been built around the inner face for at least part of its circumference; the upright slabs may well have formed a protection for a lightly built house wall of wattle and daub or some similar construction.

A little off-centre and slightly to the E of the line of the entrance were the remains of a hearth. Only two upright slabs, presumably part of a kerb, remained, but around these was an irregular area of ash and burnt clay measuring 6 ft 6 in by 4 ft (2 m by 1.2 m). At a distance of 2 ft 10 in (0.9 m) from the hearth was a well-defined depression in the floor, 2 ft 10 in (0.9 m) in diameter and 8 in (0.2 m) deep, lined with small flat stones, which may have provided a solid base for a water container.

#### THE SOUTERRAIN (figs 4-5, pls 17-18)

Three trenches were cut across the possible line of the ditch, the most easterly of these being an extension of the original N-S trench across the broch. At a distance of 15 ft (4.6 m) from the outer face, the S wall of a souterrain was uncovered, the N wall appearing at a distance of 7 ft 2 in (2.2 m) from it (pl 17a). The walls were still standing to a height of 4 ft 9 in (1.5 m) and a paved

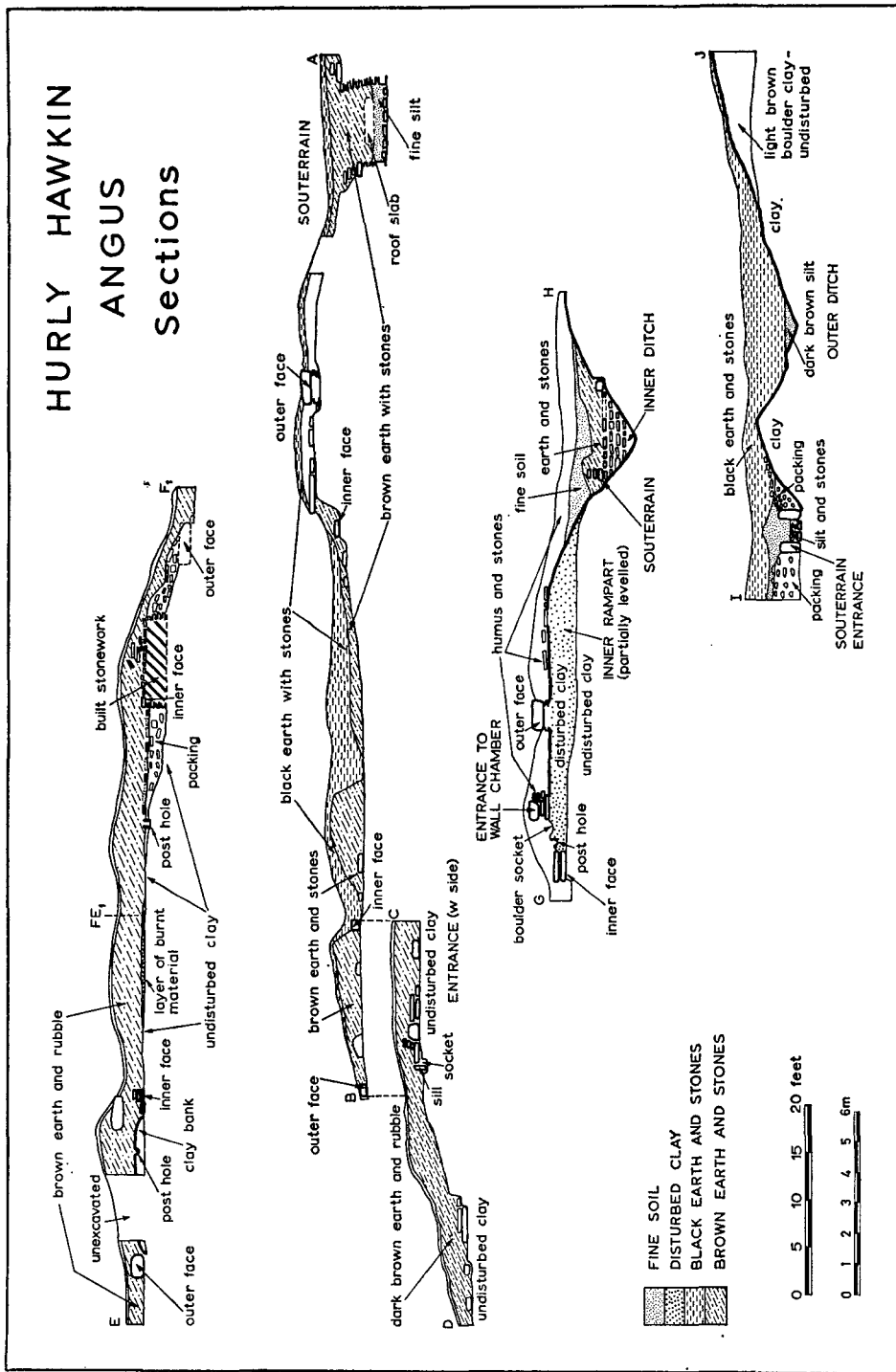


FIG 4 Hurlly Hawkin: sections

floor was encumbered with fallen roof slabs. These rested on a layer of fine soil, 8 in (0.2 m) thick on the paving, suggesting that the souterrain had remained unused for some time before the roof collapsed or had been deliberately thrown down. On the side walls large boulders formed a foundation course and the slab construction above corbelled inwards towards the top of the wall (fig 4, section AB). At a distance of 23 ft 6 in (7.2 m) to the W of this trench a second section was cut across the line of the ditch and again the walls and paved floor of the souterrain were discovered. A massive fallen roof slab prevented investigation below the level of the paving so that neither of the sections just described confirmed the existence of the ditch. However, a third trench, over the broch wall and across the line of the ditch, revealed a length of the souterrain where there were no roof slabs and where the floor paving could be removed (pl 17b). Beneath the floor, carefully laid packing, 2 ft 5 in (0.72 m) deep, rested on top of a layer of silt and small stones 11 in (0.3 m) thick. When this was removed, the bottom of a V-shaped ditch was revealed (pl 17c). The walls of the souterrain were then carefully dismantled and the method of construction became clear. The souterrain had been inserted by filling up the ditch until the desired width was reached; the sides of the ditch had then been cut away to provide a base for the foundation boulders and upper courses of the walls. The gap between these upper courses and the sides of the ditch had been packed with soil and rubble (fig 4, section GH).

During the dismantling of the souterrain the base of an upright slab set at right angles to the N wall was uncovered and a cut was made into the western side of the trench to reveal the souterrain entrance passage. The doorway had been formed by inserting upright slabs at right angles to the walls, narrowing the passage to 2 ft 9 in (0.84 m). A sill had been placed in position between the upright slabs and thereafter the entrance passage continued 2 ft 9 in (0.84 m) wide for a distance of 12 ft 6 in (3.84 m). The floor was paved and did not slope upwards. Throughout its entire length the passage had been blocked by slabs, carefully laid horizontally. On the S side, the entrance wall ended in a massive block of sandstone while on the N side, the terminal stone was missing. However, the socket and packing into which it had been placed survived and fitted the base of an elongated boulder, on the surface of which nine cupmarks 40 mm in diameter and 25 mm deep were found.

The entrance opened on to an extensive area of small slabs and blocks which were obviously filling. This area would appear to have been paved as fragments of paving still remained above the filling, while a well-kerbed hearth, semi-circular in shape, 2 ft (0.6 m) in diameter, was found 11 ft 9 in (3.6 m) from the entrance. The area N of the entrance was opened up and revealed a number of interesting features. To the N of the ditch containing the souterrain, a second ditch was discovered, V-shaped in outline and 5 ft 4 in (1.62 m) deep below the present ground level (fig 4, section IJ). A further trench to the N, which reached the limit of the area where excavation was possible, revealed no further construction. The area to the W of the second ditch had a level surface of well-beaten clay and small pebbles and, on this, further paving led to two carefully built narrow steps giving access to a stone built platform 5 ft 10 in (1.8 m) wide whose limits were clearly defined by slabs on edge (pl 18a-b). Further excavation here was impeded by trees which could not be removed but it was possible to trace fragmentary paving which came to an ill-defined end. Thus the limits of this platform or its function could not be clearly established.

Beyond the westerly limits of the souterrain courtyard, the ground sloped away steeply, marking the edge of the promontory. Surface indications suggested that the two ditches, the outer of which had not been suspected, ran together at this point. A trench through the filling at the westerly end of the souterrain courtyard revealed a sloping side to the S but, at a depth of nearly 6 ft 6 in (2 m), a very much wider bottom than the previous V-shape would have suggested, indicated that at this point the two ditches ran into each other. Further investigation here was



impracticable because of the nature of the ground and the vast amount of filling encountered.

In an attempt to find the extent of the souterrain, a section was opened on the eastern edge of the promontory. The side walls continued and once again a massive roof slab, still in position as far as could be ascertained, impeded investigation. On the upper surface of this slab, a cluster of seven cupmarks surrounding a further pair linked together by a narrow channel were found. This feature measured 0.22 m overall, the cups being 25 mm in diameter (fig 5). The proximity of the edge of the promontory suggested that the end of the souterrain had collapsed, undermined by erosion.

The souterrain was thus of the Angus type, at least 95 ft (29.4 m) long, approximately 7 ft (2 m) wide and at least 4 ft 10 in (1.5 m) high, with a paved floor, corbelled walls and a slab roof. A level entrance passage, 2 ft 9 in (0.84 m) wide and 12 ft 6 in (3.84 m) long opened on to a courtyard which carried traces of occupation. No further entrances were discovered, although the structure was not completely excavated. There were no traces of occupation on the surface, nor, as will be seen later, was there more than one phase of occupation in the broch, suggesting that the builders of the souterrain had not re-used the broch interior. Immediately to the N of the end of the entrance passage and just below present ground level, a few paving slabs were discovered with a number of pottery sherds. There may have been a possible hut in that quarter but the evidence was by no means conclusive.

#### THE PROMONTORY FORT (figs 3, 4)

On a visit to the site in the early stages of the excavation, R B K Stevenson suggested the existence of a promontory fort. As investigations proceeded it became clear that such a structure did exist. In the northern sector of the broch wall, the foundation boulders of the outer face were 2 ft (0.6 m) higher than those of the inner face. In section GH (fig 4), across the ditch and souterrain, it was possible to identify the disturbed boulder clay of a rampart on which the broch wall had been built. This rampart had been levelled but the remains of the upcast from the ditch which had formed the core of the rampart were still 2 ft 7 in (0.8 m) deep below the broch wall. The inner ditch, later occupied by the souterrain, extended across the neck of the promontory and had been 21 ft (6.5 m) wide and was still 8 ft 2 in (2.5 m) deep below ground level. To the N of this an outer ditch was found 16 ft 8 in (5.1 m) wide and 5 ft 6 in (1.7 m) deep below present ground level. Thus, in pre-broch times, the promontory had been defended by a massive rampart and double ditches. The possibility that at the western side of the promontory the two ditches ran into each other has already been noted.

Inside the fort, largely occupied by the broch, there was little to indicate the function of the area enclosed. The natural surface of that area must have sloped downwards towards the S and E, for during the excavation of the broch it was noted that a good deal of building-up had taken place in that area (fig 4, section EF). The broch builders had followed existing contours and then levelled off the interior. Thus in the SE quadrant, the foundation of the inner face was 1 ft 11 in (0.6 m) below the level of the floor paving while the foundation of the outer face was 2 ft 7 in (0.8 m) below that again. Moreover, six possible postholes were found on the original surface below the paving and packing of the broch floor. Other postholes in the western and northern sectors of the broch interior where no build-up had taken place were found immediately beneath the level of the floor paving and may have belonged to the promontory fort. However, no recognizable pattern was traceable.

#### THE TIMBER STRUCTURE (figs 3, 4, pl 18c)

As already noted, in the western sector of the broch, the inner face still survived to a height of 3 ft 3 in (1 m). In an attempt to establish the nature of the wall filling, excavation was carried

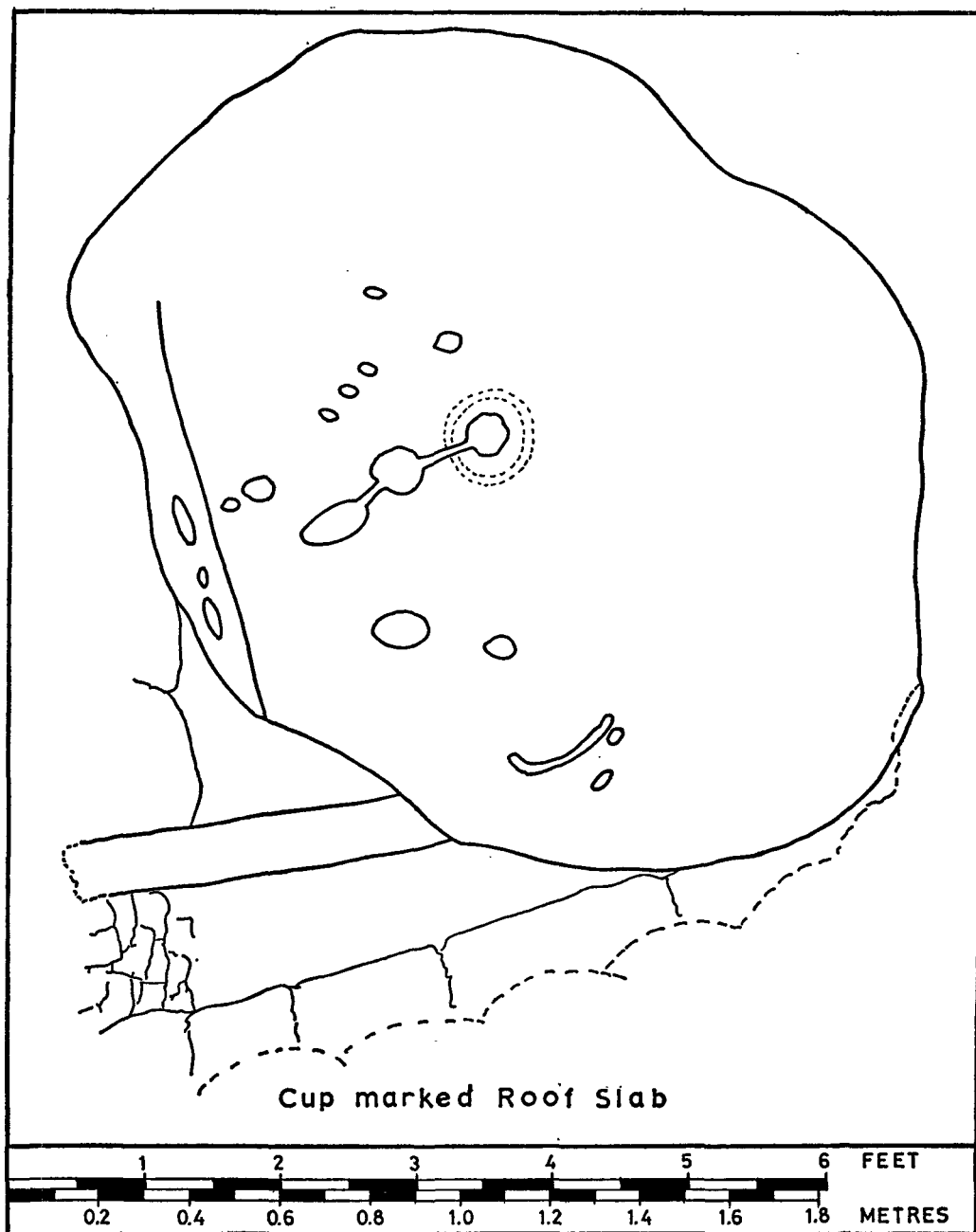


FIG 5 Hurly Hawkin: cupmarked roof slab

out behind the inner face. No stone filling was found, the core at this point consisting of boulder clay mixed with relatively small slab fragments. At foundation level, an area of paving was uncovered on which the broch wall had been built. This paving, 9 ft 1 in (2.8 m) wide, began immediately N of the entrance passage and extended for a distance of 12 ft 8 in (3.9 m) behind the inner face. A low bank of clay 11 in (0.3 m) high formed its westerly limit and curved round to meet the inner face of the broch some 14 ft (4.3 m) from the entrance (fig 4, section EF). A series of 28 postholes had been inserted into the top of this bank, 9 in (0.24 m) apart and the same in depth and diameter (fig 3). They followed the curve of the bank and finally disappeared under the foundations of the inner face. Two further postholes were found under one of the foundation stones (pl 18c). The broch floor at this point was 11 in (0.3 m) below the base of the wall foundations and no further postholes in the series were found.

All the postholes had been inserted individually; there was no suggestion of a palisade trench and they formed an arc of what might have been a circular structure of wooden posts 50 ft (15 m) in diameter. None of the postholes in the interior of the broch could be linked with the series but a trench cut across the broch wall in the unexcavated SE quadrant revealed three further postholes just behind the inner face, similar in size and spacing to those already uncovered. These could have formed part of the timber structure.

There can be no doubt that this timber structure preceded the broch. The only traces of it were confined to the area between the inner and outer faces of the broch wall and, as already noted, a foundation stone of the inner face rested on top of two of the postholes. In every case, the postholes were covered by a layer of disturbed boulder clay similar to that of the levelled rampart on which the northern sector of the broch wall had been built. The relationship of the postholes to the promontory fort was, however, much more obscure. They may have formed part of the arrangement within the fort interior, although the solidity of the resulting structure would appear to be somewhat unnecessary in view of the strength of the defences. They were more likely to have been independent of the fort and therefore to have preceded it.

One final feature may possibly be associated with the timber structure. In the broch interior and below the level of the paving, a large rectangular pit was excavated. It measured 3 ft 6 in (1.08 m) by 2 ft (0.6 m) and its greatest depth was 2 ft (0.6 m). Its long axis lay SW-NE, and the SW end sloped inwards to link with a circular posthole, 1 ft 4 in (0.42 m) in diameter, at the bottom of the pit. A flat circular stone lay at the base of this posthole. A careful search was made for others of a similar nature but without success. It seems likely that the pit was constructed to permit the erection of a massive post which may have formed part of the entrance to the stockade. The filling consisted of a mixture of stones and dark soil with no trace of timber remains.

## THE FINDS

(starred entries illustrated)

A S Henshall and others

The following catalogue was prepared in 1970 and has not been updated, except for adding references to a few subsequent publications. For 'earth-house' read 'souterrain' throughout.

### 1-31 BRONZE (figs 6, 7)

- 1 Shank of a pin, 53 mm long. The thickness is similar to the shank of the ring-headed pin, 23. From base of filling of Ditch 2.

- 2 \*Parts of six bell-shaped studs or rivet-heads, each with a vertical pin inside, in one case projecting below the rim of the stud. Three of the studs are little more than a thin layer of oxide on the gritty substance which has filled them. One of these has a hollow in the top where the pin has broken away. Four more studs were found in the 1865 excavations (GA 438–441 in the National Museum of Antiquities). From the broch floor.  
One similar stud was found at Edinshall, Berwickshire (unpublished). What may be a comparable object but with a hollow in the top and lacking the pin, and with a wider flange, came from Castle Law, Abernethy, Perthshire, published as half a bead; others are known from Dun Mor Vault, Tiree, and Traprain Law, and yet others strictly domical in shape from Newstead (Christison & Anderson 1899, 31; MacKie 1974, 130–1; Burley 1956, 132, 188; Curle, J 1911, 154, 163). One of those from Traprain Law came from an early level, and Burley indicates a 1st century date for the type. The objects appear to have been decorative studs or mounts probably used on a heavy leather or wood object, and may be compared with the smaller and shallower studs used for instance on the leather chamfrein and military girdle from Newstead or on highland targes.
- 3 Butt-joined tube of sheet bronze 20 mm long.
- 4 Eight tiny distorted fragments of sheet bronze. 2–4 were found in close proximity, and just possibly all were fittings on the same object.
- 5 \*Pin with projecting ring-head, made from bent wire, slightly flattened round the front face of the head, the tip of the shank missing (see also 23). From the broch floor, near the hearth.  
The type has an almost exclusively Scottish distribution, mapped and listed by Clarke (1971, 31, 49–54). These pins made of wire had a long life, at Dun Mor Vault certainly dated to the 1st century BC, and possibly as early as the 5th century (MacKie 1974, 128–30), continuing into the 2nd century AD (Stevenson 1955, 288–9; 1966, 22; Burley 1956, 133, 168). MacKie indicates a distinction between an early large-headed variety and a later small-headed variety to which the Hurly Hawkin examples belong (quite apart from the later cast variety). At several sites there has been apparent association with spiral finger rings such as 27 below, and at Clickhimin certain association with both ring and a bracelet fragment similar to 7 (Hamilton 1968, 116, 120).
- 6 \*Spiral armlet in the form of a snake, diameter only 45 mm, in three coils except for the overlap of the two stylized heads. The outer coils are plain, the inner coils decorated by paired transverse grooves, the decoration greatly worn, badly corroded in parts. From the broch floor.  
Eight armlets of this distinctive type are now known, seven from Scotland and three from Angus of which one is from an earth house (listed and mapped by MacGregor 1976, 116, 117). All seven except that from Hurly Hawkin could be worn by the writer, but this is distinctly smaller being two thirds the diameter and quarter the weight of the next smallest, Grange of Conan. It could not be worn by an adult. The most recent study confirms the dating already accepted for these armlets (MacGregor 1976, 103–5), and the Hurly Hawkin specimen being stylistically late must belong in the 2nd century AD.
- 7 \*Fragment of bracelet with transverse ribbing, estimated diameter 76 mm. From the broch floor.  
It can be paralleled at the native sites of Traprain Law and Clickhimin by fragments which are Roman or copies of Roman bracelets (Burley 1956, 176–7; Hamilton 1968, 116). The cross-sections of bracelets from Roman sites are often nearer to that from Hurly Hawkin than those from Traprain. The Hurly Hawkin bracelet may have been either annular or penannular.
- 8 \*End of a patera handle. From the broch floor.  
The handle belonged to a shallow patera, a type probably used in connection with the toilet. The key-hole perforation is for a ring on which small objects used during bathing could be strung. Late 1st century AD (Wheeler 1926, 107–11; Eggers 1966, 67–164, nos 14, 37, 38, 57; Robertson 1970, table 2, fig 7.1).
- 9 \*Piece of chain (and one loose link), made of double wire links of slightly varying size. From the broch floor.  
A similar fragment came from Clickhimin, but otherwise it is difficult to find parallels in Scotland (Hamilton 1968, 80).
- 10 \*Harness mount with flat disc head. The attachment of the loop at the back is clumsy and the rivet heads are just visible on the front. The surface of the disc is somewhat corroded and may have been decorated. From the broch floor.  
Roman disc harness mounts have a variety of arrangements for the attachment of the straps at the back, but the clumsy wide rivetted bar is distinctly unusual, perhaps a native copy (see also 26).

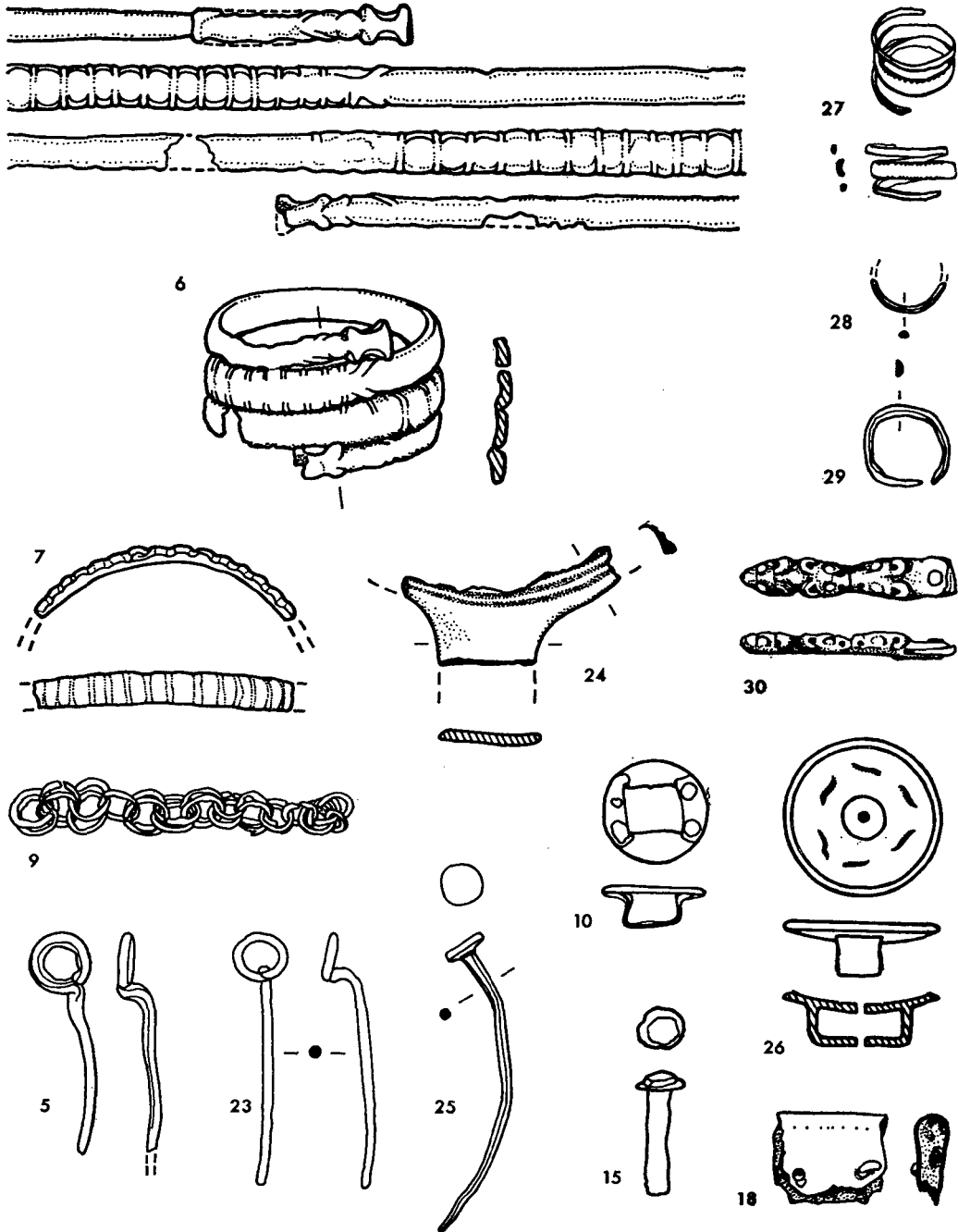


FIG 6 Hurly Hawkin: metalwork (scale 2:3)

- 11 \*Half a ring, round to oval in cross-section, c 51 mm in diameter, somewhat distorted. From the broch floor.  
Its purpose is uncertain, for it is too slight to be part of a bridle bit, and too heavy for a penannular brooch. Plain rings of various sizes are quite common on Iron Age and Roman sites (see also 12–13, 21).
- 12 *a* Half a ring, round cross-section, 6 mm thick, diameter 42 mm (see 21). *b* Segment of a ring, possibly part of the same. From the broch floor.
- 13 Segment of a ring, round cross-section, slightly tapering, 20 mm long. From the broch floor.
- 14 Shank of a nail, or possibly of a pin, broken off at the head, tip of the shank missing, 24 mm long. From the broch floor.
- 15 \*Rivet or bolt with stout round-section shank, small round head, the other end broken. From the broch floor.
- 16 Square head of a rivet 18 mm across, with stump of the shank. From the broch floor.
- 17 Small curved bar, 24 mm long, with slight groove along the outer face. From the broch floor.
- 18 \*Rectangular piece of sheet bronze folded double to enclose a substance, the ends held by a rivet in each corner. From the broch floor.  
Similar pieces at Traprain retain wood in the centre.
- 19 Various small fragments of sheet bronze: \*two of thinner bronze with cut edges, much corroded but apparently from rectangular plates and having numerous rivet holes of at least three sizes; the others shapeless and thicker. From the broch floor.
- 20 Distorted and 'run' fragments of bronze, presumably residue from bronze founding (see 227). From the broch floor.
- 21 \*Ring, identical to 12 except that it is fractionally smaller. From the broch filling.
- 22 \*Part of a three-link bit of Arras type, so greatly worn that the interlocked loops have been worn through. The object has not been of first quality, irregularities in the casting especially at the inner ends of the holes in the centre link, and hammer marks on the outer link, have not been removed by the maker. From the broch filling.  
The following note is based on correspondence with R Haworth. The Arras (or Yorkshire) type of bit consists of five separate units, a central double-link, two side links, and two rings. It is clear that the Hurly Hawkin fragment is not one of the three-link derivative bits where the outer links and rings are cast as one, the only three-link type hitherto recorded in Scotland, as this type required a longer centre link. The essential features of the Hurly Hawkin fragment are its material, bronze (the alternatives being iron or bronze-coated iron), its central moulding with median groove (the alternative being a plain roll moulding), and the piriform hole in the outer link though this is not as pointed at the outer end as in other examples (the alternative being a round hole). The incompleteness of the specimen prevents any comment on decoration or the material of the rings.  
I M Stead has pointed out the difficulties in accepting the typology implied by Ward Perkins in his initial study of the bits, and elaborated by later writers (Stead 1965, 40–2; Ward Perkins 1939; Fox 1946, 27–33; Clarke 1951, 216–19; Barber & Megaw 1963). The bits require re-study at first hand. At present we can note the other four pairs and the single specimen with grooved centre links: Swanton Morley, Norfolk; Hagbourne Hill, Berkshire; Ulceby, Lincolnshire; King's Barrow and Lady's Barrow, Arras, Yorkshire (Green 1962, pl 52; Ward Perkins 1939, 181, pl 19, fig 6; Stead 1965, 36,) and the related specimens from Hunmanby, Yorkshire and Hunsbury, Northamptonshire (Stead 1965, 36; Fell 1937, 66). The distribution is markedly eastern English with the exception of the Berkshire example. In all the first five the links are of bronze, though the rings may be of bronze-coated iron, and in all but the last the holes are piriform. The Arras graves in which the two pairs of bits were found are now considered to belong to the 2nd or 1st centuries BC but at present a more precise date is not possible (Stead 1965, 82). The three-link derivative bit seems to have emerged about the middle of the 1st century AD (Ward Perkins 1939, 181–3; MacGregor 1962, 23). This leaves a fairly wide date bracket for the Hurly Hawkin bit, which as an extremely worn piece regarded as scrap is likely to have been old when lost on the site.
- 23 \*Ring-headed pin similar to 5 but more delicate, the tip of the shank missing. From the broch filling.
- 24 \*Fragment of a strainer or small pan, from the junction of the rim and flat handle, the rim having a narrow flange thickening towards the edge and a faint moulding on the upper side. The piece is somewhat distorted, and the angle of the rim to the body is uncertain. From the broch filling.

A very corroded fragment apparently with a similar moulding was found in the 1865 excavations. The small diameter suggests that this is part of a Roman strainer or its accompanying ladle, such as those from Glenshee, Perthshire, or Helmsdale, Sutherland (Curle, J 1932, 306, 308), the very narrow handle of the latter being closer to the Hurlly Hawkin specimen, but there is no precise parallel for the rim form in Eggers (1966), or elsewhere as far as is known.

Fragments of another larger dish with thickened rim and flat edge were found in the earlier excavations.

- 25 \*Pin with a flat disc head, square-section right down the shank. From the broch filling. There are several similar pins from Traprain Law, no T 34 being especially close (Burley 1956, 125, 152-3). These appear to belong to the Late Bronze Age occupation, having parallels for instance at Heathery Burn (Britton 1968, 10).
- 26 \*Harness mount with disc head, a central hole through both the disc and the loop behind; the disc is slightly dished, an incised line round the perforation, six roughened 'leaves' between this and rim probably a seating for niello, remains of silver plating (see also 10). From the broch filling. A precise parallel, except that it is fractionally smaller, came from Newstead, found in Pit LXXVIII, late 1st century (Curle, J 1911, 300, pl 73.1). The central hole probably held a stud, such as still remains in other Newstead specimens (*ibid*, pl 74.2-3).
- 27 \*Spiral finger-ring, ribbon type, curved in cross-section, tapering to pointed ends, the central part having decorative nicks along the edges, probably once ridges across the whole width but now worn down. From the broch filling. The type generally has been considered to have been introduced to Scotland from Wessex or Somerset in the 2nd or 1st centuries BC, thereafter having a long life, but Clarke has warned that other interpretations of the evidence are possible including a later introduction to the north (Clarke 1971, 25-8). The ribbon type (as distinct from the wire type) tends to be common in Romano-British contexts, but even decoration with transverse ribbing has no chronological significance. The distribution in Scotland is scattered but with greater numbers in the Forth-Tay area (mapped and listed in Clarke 1971, 29, 45-9). Where the rings are in dated contexts they are mainly 1st-2nd century AD as at Traprain Law, but even an 8th-century example is known (Stevenson 1966, 22).
- 28 \*About a third of a very thin finger-ring, lentoid cross-section, estimated diameter 18 mm. From the earth-house entrance floor. Two silver rings of similar fineness were found at Traprain (Burley 1956, 173, nos 150, 151).
- 29 \*Plain finger-ring, a small segment missing through corrosion, D-shaped cross-section, the surface pitted with corrosion. From the earth-house filling.
- 30 \*Strap-end, with a single rivet at the split end; the back plain, the face decorated with three animal masks in fairly high relief, one at the tip and two facing each other in the centre. A fragment of leather remains in the split end. From the earth-house filling. The following note has been contributed by Dr D M Wilson. 'This object belongs to a small group of similar strap-ends of which the closest parallel (unpublished) was found during excavations in St Mary's Abbey, York; this is a less worn example with slightly more stylized masks. A related example in the British Museum has a provenance which depends on the label stuck on the back of the object, "LINKS COSWICK". The first letter may be "G" in which case the object might be from Goswick in Northumberland, but no place in the British Isles known as Coswick is recorded in the Gazetteers. This example has formalized animal masks at the tip and facing the butt-end (Wilson 1964, 128, pl. 17.12). The two heads are connected by a plain ridged bar. A similar design to that of the Hurlly Hawkin example is perhaps provided by the slightly less distinct object from Snotra, Årfjorden, Sør Trøndelag, Norway, which is a little shorter, 49 mm in length (unpublished, in Trondheim Museum). Another example of related form is from Bledlow, Buckinghamshire (Head 1955, 99, fig 32), but this is not as good a parallel as that from York, although it has been used elsewhere in comparison to the Hurlly Hawkin example (Wilson 1964, 105). 'The problem of dating this group of strap-ends is not easy, but the probability that the Norwegian example was found in a grave of the Viking period makes a ninth-century date likely. Such a date is perhaps supported by comparison with the mount of the seal-die from Eye, Suffolk, which probably belonged to Æthelwald, Bishop of Dulwich 845-70, which bears similar masks in cast bronze (Wilson 1964, 131-2, pl 18).'
- 31 Roughly rectangular piece of thin bronze sheet, 23 mm by 8 mm, a small rivet hole at each end. Probably used for a repair. Found with 30.

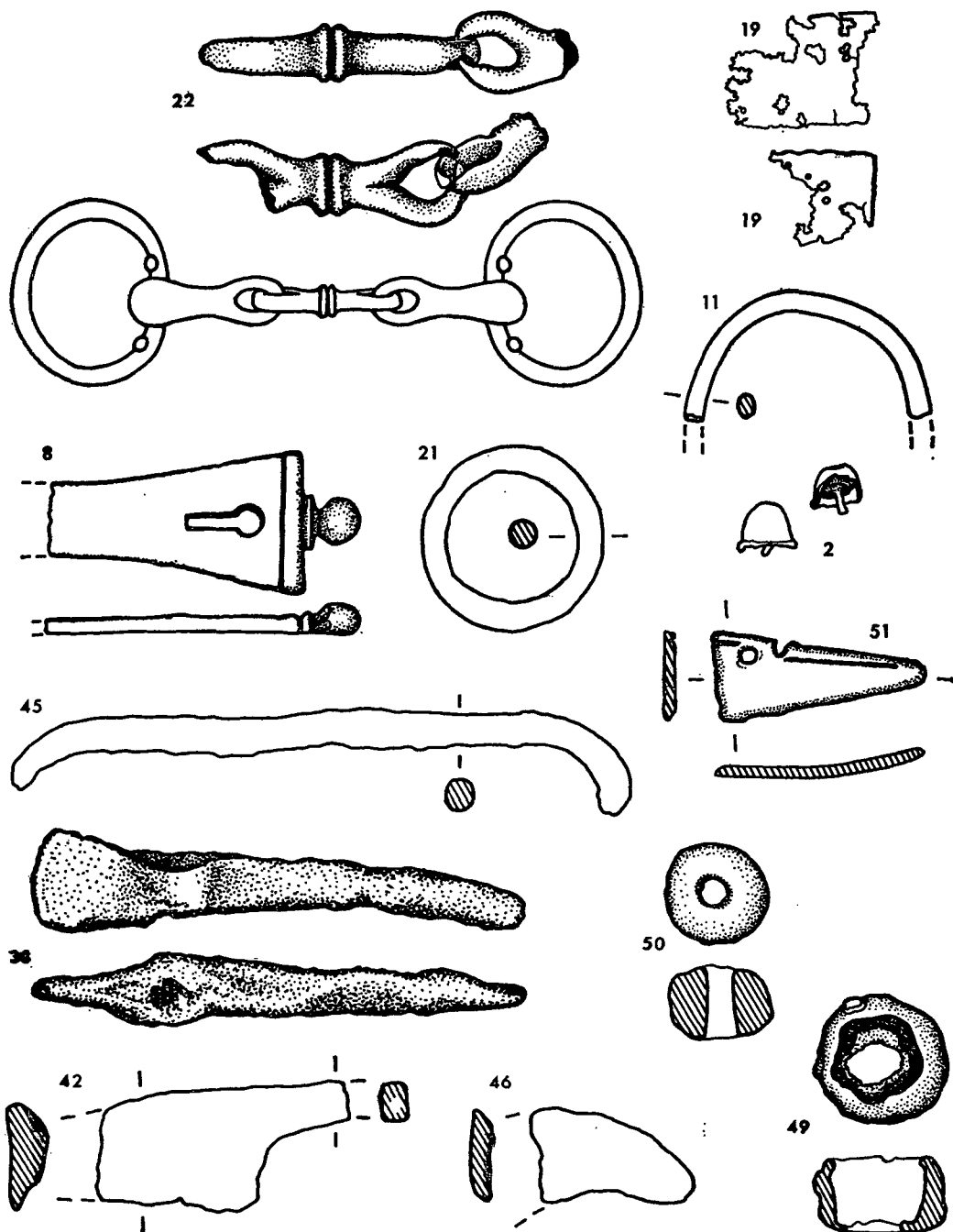


FIG 7 Hurly Hawkin metalwork (scale 2:3)



## 32-48 IRON (fig 7)

- 32 Thin plate with one cut edge, 33 mm by 26 mm. On the broch floor.
- 33 Irregular piece of thin plate, 50 mm across. From the broch floor.
- 34 Nail, disc head 16 mm in diameter, square-section shank, 49 mm long, the point missing. From the broch floor.
- 35-6 Nail, disc head 13 mm in diameter, 56 mm long if straight, and part of another. From the broch floor.
- 37 Much corroded piece of iron, 104 mm long, with fragment of wood adhering, probably the shank of a large nail. From the broch floor.
- 38 \*Object with round-section shaft expanding to a chisel-like end. From the broch floor.
- 39 Shapeless piece of iron, 60 mm long. From the broch floor.
- 40 Link of a heavy chain, round cross-section, 56 mm long, broken and distorted. ?Modern.
- 41 Shaft of a nail, 53 mm long. From the broch filling.
- 42 \*Piece of a knife, from the junction of the tang and blade. The blade was originally c 0.11 m long, apparently with a straight back. From the earth-house floor.
- 43 Tapering fragment, 39 mm long. From the earth-house floor.
- 44 Fragment, probably from the shaft of a nail, 31 mm long. From the earth-house filling.
- 45 \*Bar, round cross-section curved down at each end. From the blocking of the earth-house entrance.
- 46 \*Tip of a sickle. From the filling of the earth-house courtyard.  
A Roman and native type, eg at Newstead and the Blackburn Mill hoard (Curle, J 1911, 283-4; Piggott 1953, 47-8).
- 47 Nail, 64 mm long. From the earth-house courtyard.
- 48 Nail, lacking the head, 91 mm long. From the earth-house courtyard.

## 49-51 LEAD (fig 7)

- 49 \*Small 'cup', an irregular hole in the base.  
Abrasion outside suggests that the hole has been made deliberately, or that the lead tipped an object and became worn. From the broch floor.
- 50 \*Weight, flattened globe with central perforation.  
This could well have been used on a Roman steelyard or balance: a similar weight still exists on a small steelyard in the National Museum (FT 85) said to be from Cramond, Midlothian. A bronze wire would have passed through the perforation, ending in a hook or loop for attachment. From the broch floor.
- 51 \*Triangular thin piece of lead with cut edges, the long section slightly curved, only 3 mm thick, one perforation and part of another, a deep scoremark on the inner face. From the broch filling.

## 52-58 GLASS (fig 13)

- 52 Fragment of bangle. From the paving of the broch wall chamber. Dr R B K Stevenson has contributed the following note. 'The fragment is cloudy ice-green with translucent cobalt capping and remains of yellow enamel inlay on each side. The surface is greatly damaged, but in a way which suggests that there were two bands of colour on one side (the lower yellow) and one band on the other (also yellow), with the blue showing as a narrow band along the spine.  
'The piece is a hybrid between Kilbride-Jones's types 1 and 2, the double-coloured matrix being a class 2 feature, but the section and ornament of broad bands of yellow and ? missing red, belonging to class 1. First or 2nd century AD. The absence hitherto of bangles in the region N of the Tay, which in the 1st century lay within the Roman frontier, contrasting with the concentration of bangles to the S, has been remarked (Kilbride-Jones 1938; Stevenson 1956; 1966, 27-8)'.
- 53 Fragment of green bottle-glass. 17th century or later. From the broch floor.
- 54 Fragment of clear olive-green glass. Modern, possibly part of the same bottle as 58. From the broch floor.
- 55 \*Ball of clear ice-green glass inlaid with seven 'eyes' each containing a spiral of black and mixed turquoise/yellow opaque glass. Some of the 'eyes' are damaged and it can be seen that they are hemispherical in shape with the rounded back set into the ball, and the 'straight' side curved slightly to suit the exterior surface. In each of the four well preserved 'eyes' the black spiral (possibly really dark purple) is crisp, but the other two colours tend to merge and to vary in relationship. If the eyes

are sections of a glass rod, this understandably varied somewhat down its length. On two of the damaged 'eyes' a grey substance is probably decayed yellow glass. From the broch filling.

Only three other balls of this type are known, all of clear green glass, varying only slightly in size, but bearing different numbers of spots. The example from Traprain, with plain 'eyes', came from the highest level in 1915, and thus is probably of 3rd- or 4th-century date (Curle 1915, 179). The two balls from Cairnhill, Monquhitter, Aberdeenshire, have 'eyes' of blue and white spirals (Anderson 1902, 678-9); they are part of a hoard containing objects dating from the 1st to 3rd centuries judging by the moulded glass intaglio, the piece of glass bracelet, and the 'eggs' of steatite and lithomarge with their closely dated parallels at Carpow Roman fort. A fragment of glass with spirals from Mumrills Roman fort, Stirlingshire, may be from a bead with a very small perforation similar to that from Mochrum Loch, but may equally be from a ball; it dates from the second half of the 2nd century AD (Macdonald 1929, 549). Beads technically related to the balls have been found at Mochrum Loch, Wigtownshire, and Traprain Law (Stevenson 1956, 211), the latter again from an upper level (Cree 1924, 269, fig 17.6).

The balls strikingly resemble at first sight the unique set of gaming counters found in the La Tène III burial at Welwyn Garden City, Hertfordshire (Stead 1967, 14-17). But the Welwyn counters are double the size of the balls, are domical in shape, and almost all the 'eyes' have more complex inter-locked spiral designs. The burial dates from the last quarter of the 1st century BC. Yet in spite of the differences, and the chronological and geographical gaps, it is tempting to suggest that the balls were in fact counters, as already suggested by Curle, implying the use of a dimpled board or sand (Curle, J 1932, 296).

- 56 Fragments of green bottle glass, 17th century or later. From the broch filling.
- 57 Two tiny fragments of clear amber-coloured glass, the smaller much thicker than the larger. The larger fragment may be one of the 1st-century types of unguent bottles. From outside broch wall at base level.
- 58 Fragment of clear olive-green glass with slight moulding, from the wall of a vessel; modern, probably 19th century. From the filling of the earth-house courtyard.

#### 59-67 BONE AND ANTLER (fig 8)

- 59 \*Needle made from a delicate bone, the hollow centre partly exposed, the head damaged. Below the broch floor paving.
- 60 \*Plate or mount made from an animal rib, worn smooth, three rather rough perforations, perhaps secondary. From behind the inner face of broch walling, below paving.
- 61 \*Tool handle made from whalebone, a flat hemispherical shape with square-section perforation for the slightly tapering tang of a tool. From the broch floor.  
This is likely to be the handle of an auger or similar tool which was used vertically and needed a twisting movement. A somewhat similar handle came from the Broch of Burrian, Orkney, and a less close parallel from Midhowe, Orkney (MacGregor 1974, 76-7). The Hurly Hawkin specimen might have been regarded as a sword pommel, comparable with that from Newstead, except that the perforation is smaller and tapers in the opposite direction.
- 62 \*Toggle made of antler. From the broch floor.  
Toggles may be made of bronze, bone, antler, or glass. The metal ones are of Roman origin, but the type became popular with the native peoples who used other materials, bone being most popular (including the allegedly horn example from Newstead) (Burley 1956, 177).
- 63 \*Peg. From on the broch floor.
- 64 \*Tool, made from a rib, the end rounded by rubbing, split down one side, scorched. From the broch floor.
- 65 \*Shaped bone, both ends broken, a slight shoulder as if shaped for the tip to be inserted in a socket; scorched. From on the broch floor.
- 66 Shaped bone, one end cut on a bevel, the other broken; scorched. From the broch floor.
- 67 \*Fragment from a long bone, shaped to a point. From the broch filling.

#### 68-182 STONE (figs 9-11)

There was a large number of stone artefacts recovered from the site, but as the whetstones and discs are repetitive it is convenient to comment on them before continuing the catalogue. The fifteen whetstones and fragments may be divided into six types:

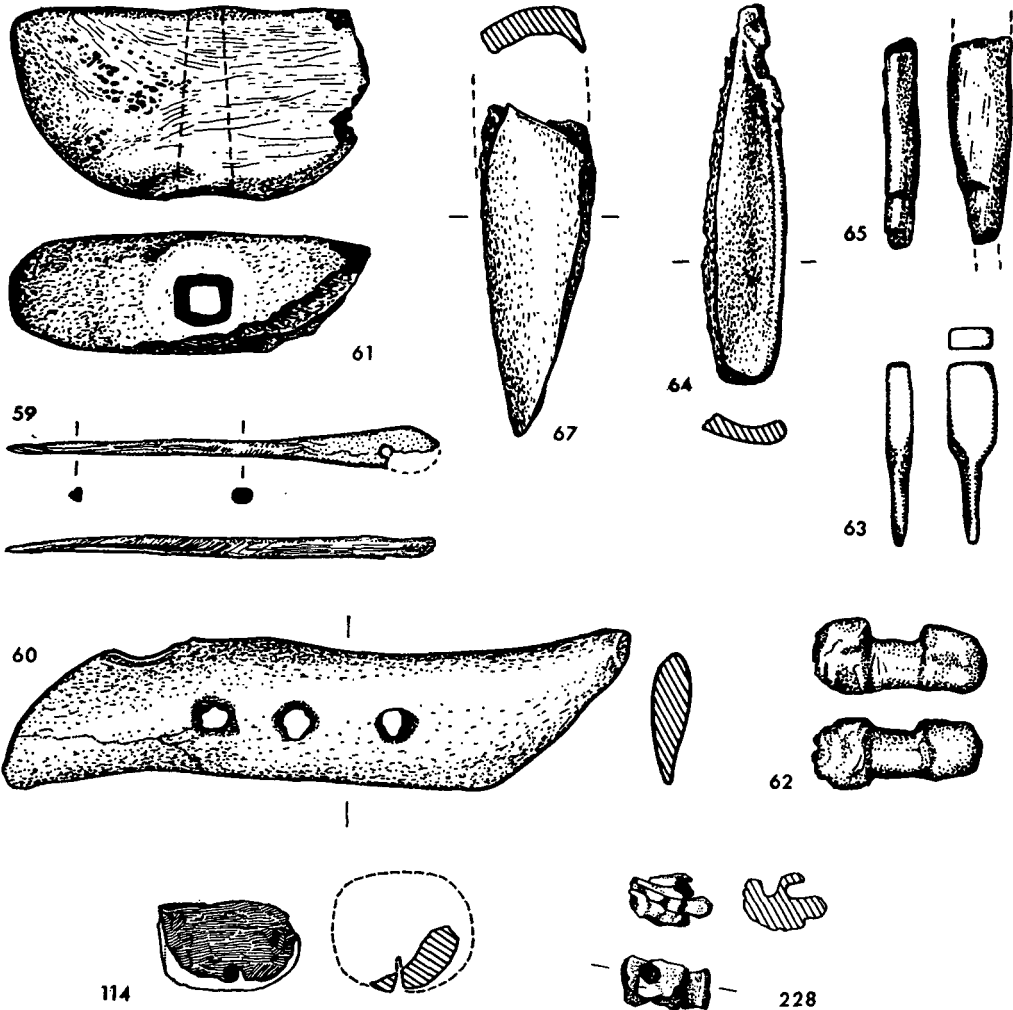


FIG 8 Hurlly Hawkin: bone (scale 2:3)

*a* carefully shaped rectangular stones which were laid flat for a small blade to be worked against them leaving concave faces and sharp edges (120, 123).

*b* similar but with rounded edges, one of these perforated (73, 122, 156).

*c* similar to *a* but held in the hand, the use producing lengthwise striations and bevelled long sides with some transverse striations (153).

*d* long tapering stones with square cross-section, a distinctive type often made of quartzite; seldom found in any archaeological context, though the end of one was found at the Broch of Gurness, Orkney (118, 154).

*e* unshaped long slivers of stone held in the hand for sharpening small blades (102, 144, 157-9).

*f* similar but longer, the only type approaching the size required for a sickle or large tool (143, 140 but see also 181).

The surprising number of 50 discs were recovered (excluding perforated discs), and for the purpose of description they have been divided into four types. They are of sandstone or siltstone, often micaceous, unless otherwise stated. Most of the discs have been ground, varying from over the

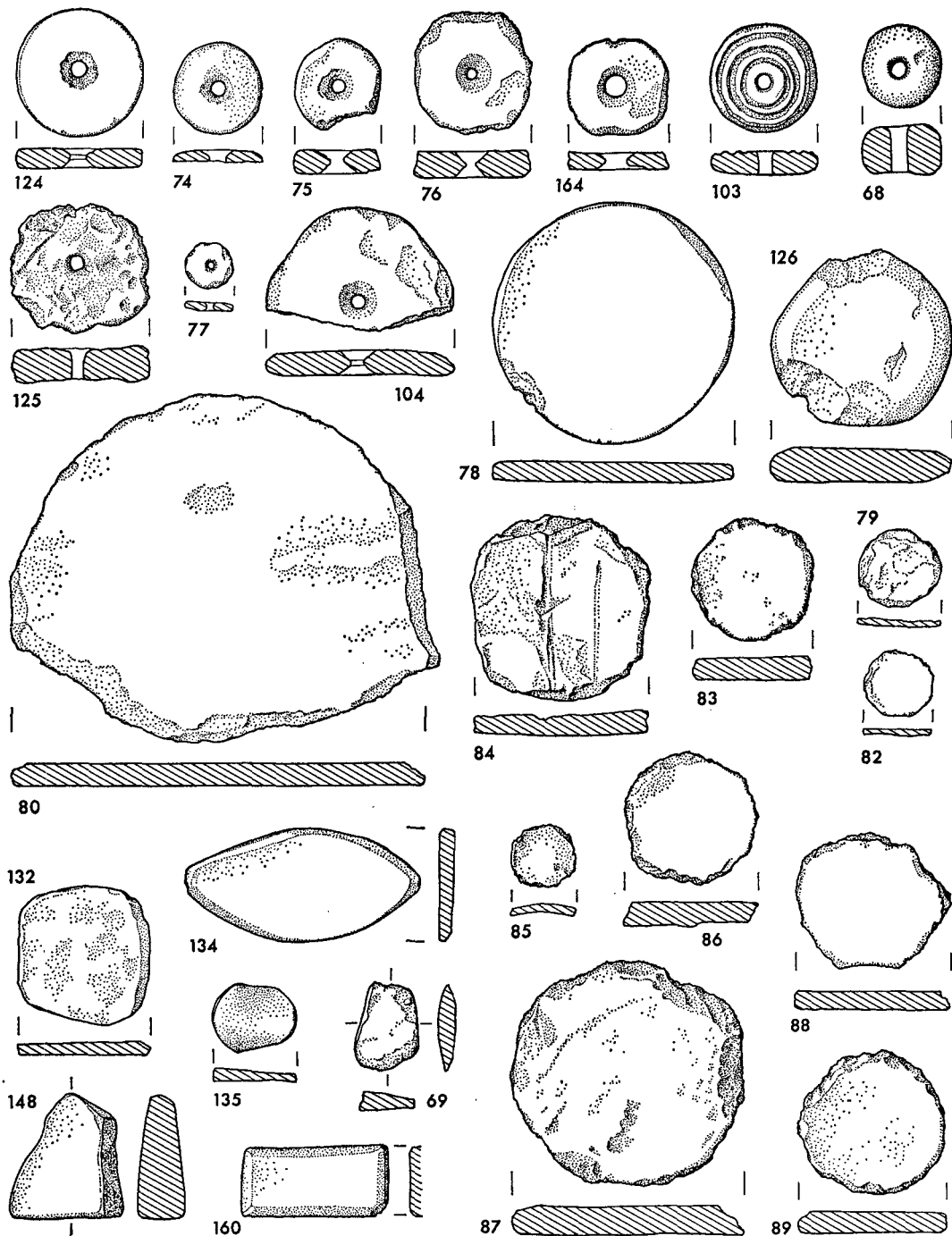


FIG 9 Hurly Hawkin: stone discs (scale 1:3)

entire surface to mere traces on roughly chipped sides. The grinding of the sides appears to result from using the disc held vertically for a rubbing or grinding process, and as the original roughness was worn away the disc took a fairly regular circular shape. A few discs however have become faceted (eg 164, 168). A few also have partly bevelled edges due to holding them at an angle (eg 123). The surfaces of the discs were used for a fine rubbing process which eventually left the disc with an extremely smooth, almost glassy, finish. Normally the discs have been worn on both the sides and the faces, sometimes on the sides alone (as 125-7, 147), and only three times on the faces alone (84, 115, 133).

The four types are not distinct and the classification is somewhat arbitrary, depending on the extent of wear in whatever manufacturing process they were used. The classification is as follows:

*a* Regular discs, all surfaces ground smooth, thin relative to diameters which vary between 74 and 104 mm (78, 162-3).

*b* Similar discs but rather irregular, not sufficiently ground to remove all signs of flaking, diameters 46-112 mm (106-7, 119, 126-7, 145-6, 164-8). Another was also found in the 1865 excavations.

*c* Roughly flaked discs with the sides and faces partly ground, or just the sides ground (sometimes very little grinding), three with the faces only ground. Diameters 25-107 mm, one 183 mm. The last is an exceptionally large thin disc which may be a pot lid, but the edges have been used for rubbing (79-84, 108-9, 115, 128-32, 147, 169-73, 150).

*d* Roughly chipped discs without grinding. Diameters 18-102 mm (85-9, 110-12, 174-5).

Type *a* discs have formerly been regarded as a distinct class of artefact (sometimes thought of as mirrors or palettes), especially as they sometimes occur at sites otherwise producing only type *d* discs (Stevenson 1966, 28; Hamilton 1968, 79), but the series of worn discs at Hurlly Hawkin makes it difficult to separate type *a* discs and to regard them as anything but the tool of some manufacturing process. Some superb examples of type *a* are known, either from graves or chance finds, where the precision of their form is deliberate, in particular the example with a scalloped edge from Glen Muick, Aberdeenshire (*Proc Soc Antiq Scot*, 80 (1945-6), 152-3, pl 27); these may perhaps have been used for special or ritual occasions.

At least six type *a* discs have come from broch sites in Sutherland, Caithness and Orkney, one each from brochs in Skye and Tiree, and others from four hillforts in southern Scotland. Their chronological range is indicated by several examples from the pre-broch phase at Clickhimin, Shetland, and the post-broch 3rd-century specimen at Dun Mor Vaul, Tiree (Hamilton 1968, 80, 83; MacKie 1974, 136), while at Traprain Law they seem to extend throughout the Iron Age occupation into the 4th century.

At the other extreme type *d* discs are common enough finds on Iron Age sites, at Jarlshof continuing in quantity through the Norse period. Discs of types *b* and *c* occur sporadically at Iron Age sites, but apparently in small numbers. At Jarlshof the Iron Age settlement produced a few of types *b/c*, though they also were common in the Norse settlement.

There are also five perforated discs from Hurlly Hawkin, three of type *d* and two of type *b* or *c*, which may well have been perforated for secondary use. It is also difficult in some cases to distinguish the spindle whorls, for some of the perforated discs might have been classified as such except that they seem too irregular in shape, or the perforation is too small to fit a spindle. Perforations are generally by pecking first, finished by drilling, but some spindle whorls are drilled.

Other stones besides discs were used as rubbers, some having facets or bevels along their edges (69, 94, 134, 136, 160), and some pebbles being worn smooth on one side or face (141). Other stones again have been used for rubbing on, some having a very smooth flat surface like the discs (99, 100, 134, 178), some having an undulating surface (70, 135, 137).

68 \*Spindle whorl of sandstone. From below the broch floor.

69 \*Piece of a small pebble of siltstone indurated with haematite, the sharp edge worn into a facet by use as a rubber. From below the broch floor.

70 Two fragments of soft mudstone, one with a smooth undulating surface due to being rubbed on. From below the broch floor.

71 Cup-and-ring marked slab, 1 m square, 0.15 m thick, one corner broken off, a well-defined cupmark within concentric rings 100 and 160 mm in diameter. This stone with Bronze Age scribings was apparently used as a paving slab at the entrance to the probable chamber in the NW quadrant of the broch wall.

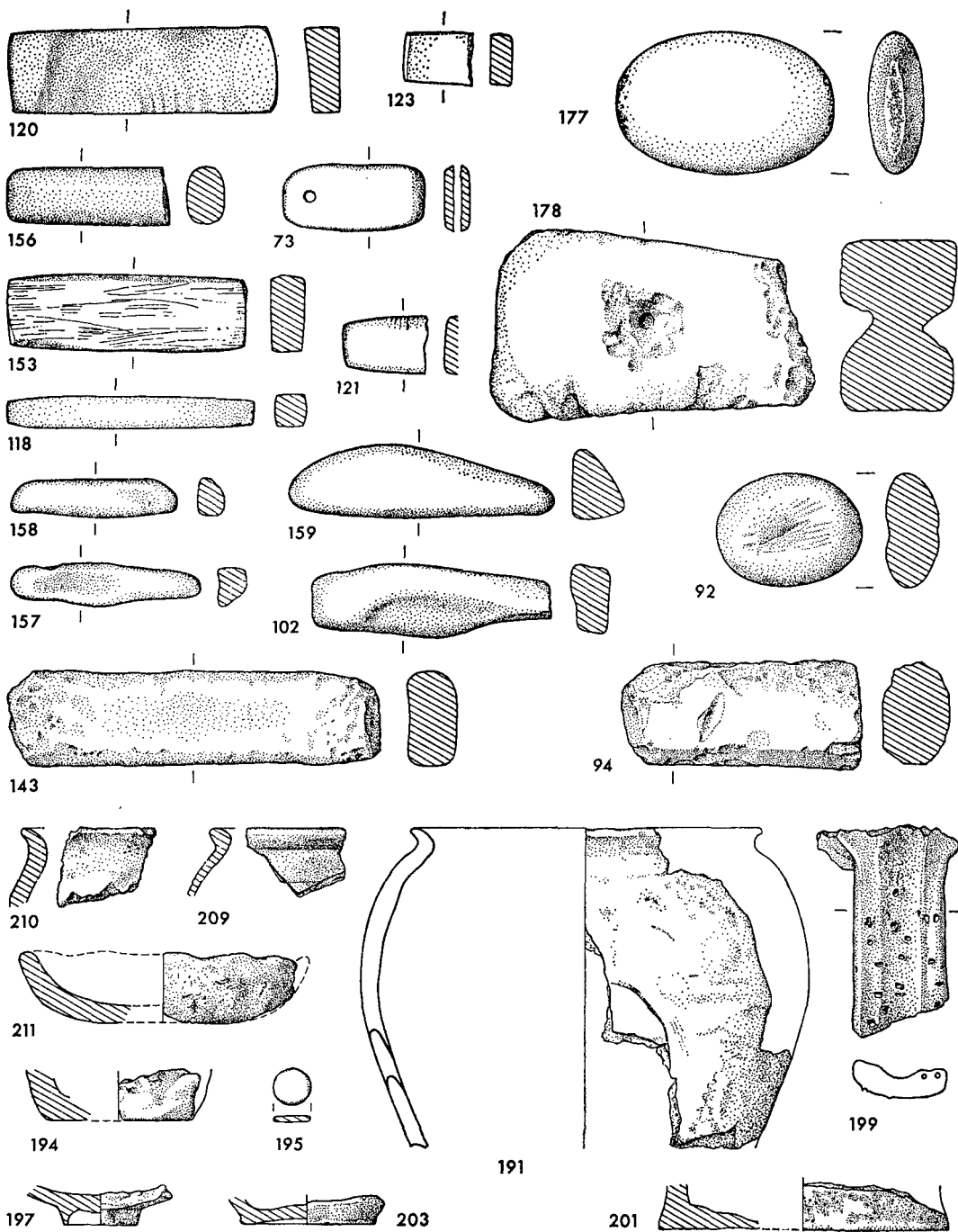


FIG 10 Hurly Hawkin: stone and pottery (scale 1:3)

- 72 Slab, 0.6 m by 0.3 m and 50 mm thick, one surface pitted with what may be a large number of cupmarks. Found beside 71 (see also 116, 117).
- 73 \*Whetstone of siltstone, perforated at one end, the front and back faces split away from the missing centre portion so the original thickness is unknown. From the broch floor. Perforated whetstones are unusual in Iron Age contexts, but there is a flat oval example from Traprain (Curle 1915, 189).
- 74 \*Spindle whorl of sandstone, one face split off. From the broch floor.
- 75 \*Spindle whorl of sandstone, hour-glass perforation, damaged. From the broch floor.
- 76 \*Disc, the edges roughly chipped, small ground hour-glass perforation. From the broch floor.
- 77 \*Disc or bead of mudstone, smooth faces, the edges chipped but partly smoothed, drilled central perforation. From the broch floor.
- 78 \*Disc, type *a*, of calcareous siltstone, the sides slightly irregular and the edges bevelled in places. From the broch floor.
- 79-84 \*Six discs, type *c*, diameters 28–90 mm, the two smallest very thin, and one (damaged) 183 mm in diameter. Five have ground edges, the sixth one smooth face (81 not illustrated). From the broch floor.
- 85-89 \*Five discs type *d*, diameters 28–102 mm. From the broch floor.
- 90 Fragment of large thin disc or pot lid, no grinding, estimated diameter 230 mm. From the broch floor.
- 91 Heavy disc, 224 mm in diameter, 25 mm thick. From the broch floor.
- 92 \*Strike-a-light made on an oval quartzite pebble, a hollow worn diagonally across each face. From the broch floor.  
This distinct class of artefact, sometimes known as ‘tracked stones’, has been found unstratified at many broch and wheelhouse sites and in a 3rd-century context at Dun Mor Vaul, Tiree, but the distribution extends to S Scotland and Northumberland: the Borness example is dated to the 1st–2nd century AD by the limited occupation of this site (MacKie 1974, 140; Childe 1936).
- 93 Roughly chipped sandstone bar, one end broken, 107 mm long, perhaps the handle of an implement (see also 139). From the broch floor.
- 94 \*Similar bar, one face and two adjacent bevelled edges smoothed by use as a rubber. From the broch floor.
- 95 Elongated quartzite pebble, the ends bruised by use as a hammer, one side smoothed and faintly grooved by transverse wear. From the broch floor.
- 96 Tip of a stone, ? of felsite, the end damaged by use as a hammer. From the broch floor.
- 97 \*Half a lower quern-stone, 368 mm in diameter, of andalusite–staurolite–muscovite–schist. From the broch floor.  
The stone probably came from the coast between Stonehaven and Aberdeen. Although the stone has a complete perforation it appears to be a lower stone because the grinding surface rises slightly around the hole.
- 98 \*Fragment of a similar quernstone, of andalusite–garnet–mica–schist, but from an upper stone with a vertical handle-socket. Possibly the stone is ‘ratchet’ rock from the Correen Hills, 3 miles E of Lumsden, Aberdeenshire. From the broch floor.  
The Hurly Hawkin disc querns are notably thin, and contrast with the bun-shaped and bee-hive querns, which continued in use in southern Scotland into the 2nd century AD. A disc quern was found in an early context at Dun Mor Vaul, Tiree, slightly ante-dating the broch in the 1st century BC (MacKie 1974, 138), and the same relationship, though at a later date in the 2nd century AD, seems to have recurred at Torwoodlee, Selkirkshire (Piggott 1951, 109). Nearer to Hurly Hawkin, the sites of Ardestie and Carlungie produced flat querns, to be dated to the 2nd century or later (Wainwright 1963, figs 37, 43). The difficulties in relating quern types to a chronological, geographical or cultural framework have been summarized by Clarke (1970, 219–20), and a partial solution has been offered by MacKie (1972).
- 99 \*Triangular flat piece of sandstone, broken through a roughly pecked hour-glass perforation, one face absolutely flat and smoothed by rotary rubbing centred on the hole though this shows little sign of wear; two edges appear to be original. This does not appear to be part of a quern. From the broch floor.
- 100 Fragment of sandstone slab, 84 mm by 97 mm and 18 mm thick, both faces worn smooth, a pecked

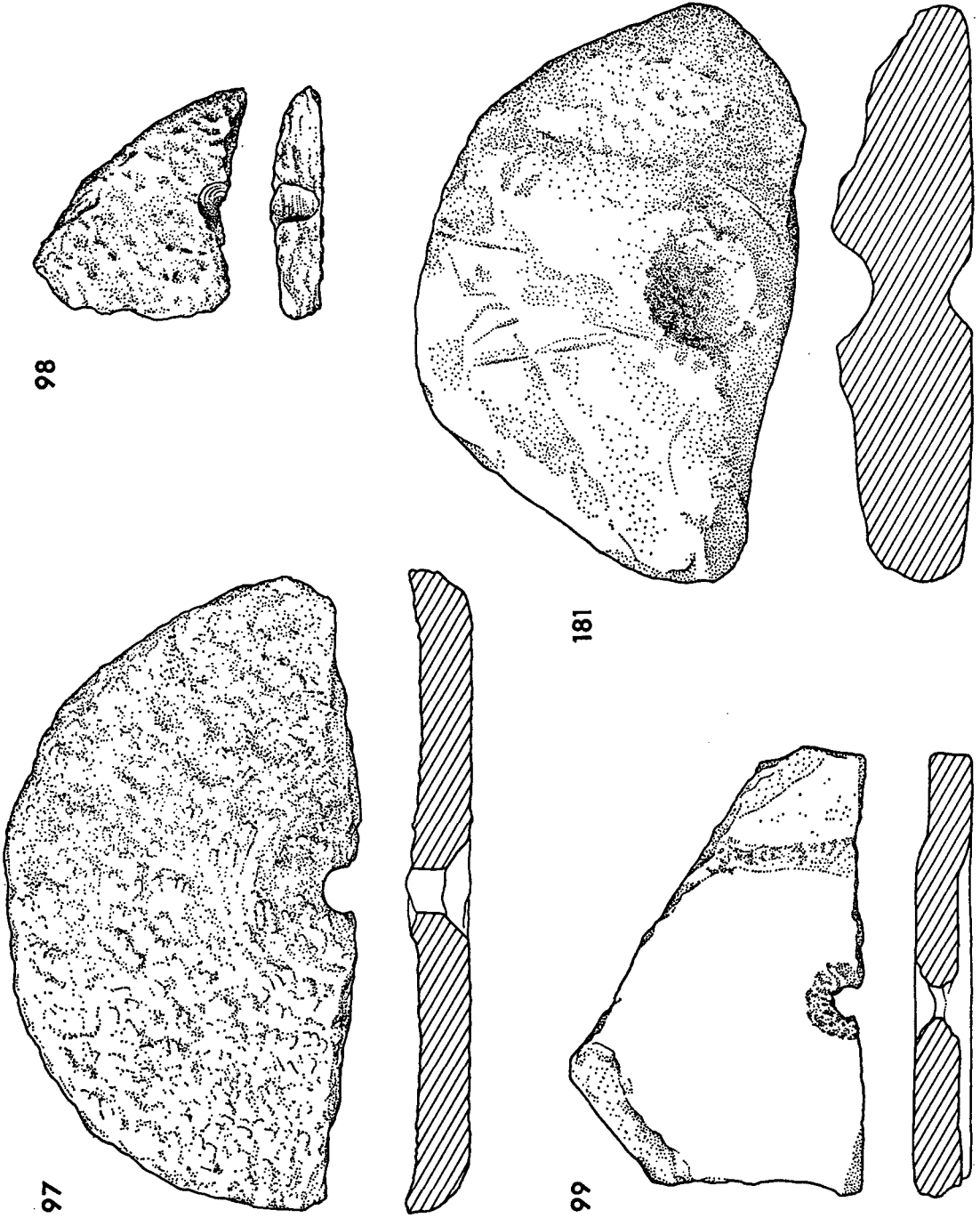


Fig 11 Hurly Hawkin: quern stones (scale 1:6)



- hour-glass perforation, a pair of pecked hollows back-to-back as if for another perforation, part of another hollow on one face. From the broch floor.
- 101 Flake of white cherty flint, the edges utilized. Presumably an intrusive item of earlier date. From the broch floor.
- 102 \*Whetstone, an irregular long thin sliver of micaceous sandstone, broken where it has been worn thin. From the broch filling.
- 103 \*Spindle-whorl of siltstone, three concentric grooves (not turned) on one face, rather small perforation. From the broch filling.  
A similar whorl was found at Yarhouse broch (GK 32 in the National Museum of Antiquities), and another at Mote of Mark, Kirkcudbrightshire, but this type of decoration is unusual (Curle 1914, 161). A much finer turned specimen in antler was found in cave no 1 at Archerfield, East Lothian, with glass armlet fragments and other Iron Age material (Cree 1909, 254).
- 104 \*Disc, broken, one face and sides partly ground smooth, central perforation partly chipped and partly ground. From the broch filling.
- 105 Similar disc, diameter 54 mm, but surface not ground. From the broch filling.
- 106-7 Two discs, type *b*, diameters 46, 54 mm. From the broch filling.
- 108-9 Two discs, type *c*, diameters 46, 76 mm. From the broch filling, one in the broch entrance.
- 110-112 Three discs, type *d*, diameters 18, 67, 76 mm, the last of biotite schist. From the broch filling.
- 113 Lump of haematite, 51 mm long, the surfaces smoothed and one face and side rubbed flat.
- 114 \*Fragment of jet retaining semicircular polished edge and fine perforation. From the 1865 excavations, presumably from the broch filling (GA 444 in the National Museum of Antiquities). Perhaps it is a segment of a ball head for an iron pin of the type discussed by Stevenson (1955, 292-3). Jet examples occur at Traprain Law in the upper levels (eg Curle 1915, 176). The perforation is very fine; possibly the pin-head broke during manufacture.
- 115 Disc, type *c*, diameter 46 mm. Outside the broch wall, in filling material.
- 116 Boulder, 1.52 m by 0.76 m, oval in cross-section, 0.46 m thick, the surface bearing nine cupmarks. Found lying flat at the end of the N wall of the earth-house entrance; it had originally stood upright at the end of this wall where the socket and packing stones were found undisturbed.
- 117 Boulder, 1.83 m by 1.52 m and 0.46 m thick, bearing nine cupmarks two of which were joined by a narrow channel to form a dumb-bell. The boulder was a roof-stone at the end of the earth-house, found displaced, and was not entirely uncovered during the excavation (see also 71, 72, 116). An interest in cupmarked stones has been noted at other earth-house sites where they have been incorporated into the structure (Wainwright 1963, 20).
- 118 \*Whetstone of siltstone (see also 154). From the floor of the earth-house.
- 119 Disc, type *b*, diameter c 50 mm.
- 120 \*Rectangular whetstone of micaceous siltstone, considerably worn. From the floor of the earth-house entrance.
- 121 \*Piece of a rectangular whetstone of siltstone, slightly tapering towards the end, original thickness not known as one face has split off, light transverse grooving across one edge. From the floor of the earth-house entrance.
- 122 Piece of a rectangular whetstone of siltstone, the sides ground smooth but the faces not used; either the faces have split off, or the whetstone was unused. From the floor of the earth-house entrance.
- 123 \*End of rectangular whetstone of siltstone. From the floor of the earth-house entrance.
- 124 \*Spindle whorl of micaceous siltstone, small central hour-glass perforation, finely pecked though the middle part of the perforation is bored. From the floor of the earth-house entrance.
- 125 \*Roughly chipped disc of coarse sandstone, central perforation bored slightly obliquely. From the floor of the earth-house entrance.
- 126 \*Disc, type *b*, the edges bevelled. From the floor of the earth-house entrance.
- 127 Disc, type *b*, biotite schist, 44 mm in diameter, the edges ground smooth (? the faces split off). From the floor of the earth-house entrance.
- 128-131 Four discs, type *c*, diameters 38, 72, 74, 87 mm. From the floor of the earth-house entrance.

- 132 \*Irregular disc, of mudstone, almost square, type *c*, the edges partly ground, in one place bevelled. From the floor of the earth-house entrance.
- 133 Disc, type *c*, diameter *c* 71 mm, only the faces smoothed. From the floor of the earth-house entrance.
- 134 \*Flat pointed oval piece of micaceous siltstone, one face worn very smooth, the edges irregularly bevelled by use as a rubber. From the floor of the earth-house entrance.
- 135 \*Disc, entirely ground smooth but the faces undulating and the sides worn to a thin edge in two places. From the floor of the earth-house entrance.
- 136 Fragment of shale, the edges slightly worn by use as a rubber. From the floor of the earth-house entrance.
- 137 Small fragment of siltstone, one face striated by rubbing. From the floor of the earth-house entrance.
- 138 Pebble of tuffaceous siltstone, 100 mm long, the ends roughened and flaked by use as a hammerstone, faint transverse grooving similar to 95. From the floor of the earth-house entrance.
- 139 Bar of roughly shaped sandstone, 110 mm long, 53 mm wide, broken at both ends, similar to 93, 94. From the floor of the earth-house entrance.
- 140 End of a rectangular piece of sandstone possibly used as a whetstone but having little sign of wear, 41 mm by 35 mm and 41 mm thick. From the floor of the earth-house entrance.
- 141 Thirteen siliceous pebbles including two of bright red jasper, and two small pieces of stone, some of the pebbles flattened by use as rubbers. Found together, on the floor of the earth-house entrance.
- 142 Flake of mottled grey flint, the edges utilized. Presumably an intrusive earlier item. From the floor of the earth-house entrance.
- 143 \*Rectangular whetstone made from a rather irregular piece of micaceous sandstone. From the blocking of the earth-house entrance.
- 144 Part of an elongated pebble of micaceous sandstone used as a whetstone, 49 mm long. From the blocking of the earth-house entrance.
- 145- Two discs, type *b*, diameters 33 and 61 mm. From the blocking of the earth-house entrance.
- 6
- 147 Disc, type *c*, *c* 100 mm in diameter. From the blocking of the earth-house entrance.
- 148 \*Irregular lump of soft red stone or ruddle (lithomarge) (51 mm by 48 mm by 25 mm), all faces worn smooth by use as a rubber. From the blocking of the earth-house entrance.
- 149 Small flake of red flint. From the blocking of the earth-house entrance.
- 150 Disc, type *c*, 25 mm in diameter. In the earth-house courtyard.
- 151 Flake of reddish-brown flint. Below the paving. In the earth-house courtyard.
- 152 Roughly rectangular sandstone slab, 0.39 m by 0.37 m, 51 mm thick, a neatly pecked hour-glass perforation 51 to 36 mm in diameter, 36 mm from one edge. From the paving of the earth-house courtyard.
- 153 \*Rectangular siltstone whetstone, the long sides faceted by use which has left the surface striated. From the filling of the earth-house courtyard.
- 154 Centre portion of a siltstone whetstone of the type of 118, but from a larger specimen, 20 mm by 13 mm. From the filling of the earth-house courtyard.
- 155 Thin square piece of siltstone, all surfaces ground smooth, 25 mm by 28 mm by 6 mm. Perhaps part of a small rectangular whetstone, the broken edge re-used. From the filling of the earth-house courtyard.
- 156 \*Rectangular whetstone, oval in cross-section, broken. From the filling of the earth-house courtyard.
- 157- \*Three elongated pebbles of siltstone and sandstone, used as whetstones. From the filling of the
- 159 earth-house courtyard.
- 160 \*Rectangular rubbing stone of mudstone, one face broken away, the remaining face smoothed, the edges bevelled by use as a rubber. From the filling of the earth-house courtyard.
- 161 Roughly chipped disc, *c* 44 mm in diameter, the edges partly ground smooth, central ground hour-glass perforation. From the filling of the earth-house courtyard.
- 162- Discs, type *a*, diameters 74, 96 mm, 162 of green phyllite. From the filling of the earth-house
- 163 courtyard.
- 164 \*Disc, type *b*, 100 to 110 mm in diameter, the sides faceted. From the filling of the earth-house courtyard.
- 165- Four discs, type *b*, diameters 33 to 66 mm, the last hexagonal. From the filling of the earth-house
- 168 courtyard.

- 169– Five discs, type *c*, diameters 56 to 74 mm; on one the sides are faceted. From the filling of the  
173 earth-house courtyard.
- 174– Two discs, type *d*, diameters 82, 102 mm. From the filling of the earth-house courtyard.  
175
- 176 Three roughly circular flat pebbles, diameters 27 to 39 mm, perhaps used as counters. From the  
filling of the earth-house courtyard.
- 177 \*Flat oval quartzite cobble, the ends roughened and slightly flattened by use as a grinder. From the  
filling of the earth-house courtyard.  
This tool is extremely common at wheelhouse sites in N and W Scotland, but relatively rare else-  
where. Its purpose is unknown, but sometimes the ends are ground into well-marked facets.
- 178 \*Block of sandstone, 140 mm by 76 mm and 50 mm thick, centrally on each face a conical hollow,  
the upper part pecked but the lower part ground, on one side the base of the hollow is slightly  
undercut by the grinding; one face slightly smoothed. This stone might be the rest for a bow-  
drill. From the filling of the earth-house courtyard.
- 179 Irregular lower stone of a sandstone ? quern with spindle socket, the upper surface pecked and traces  
of concentric striations from use; a pecked hollow in the lower surface opposite the spindle  
socket as if a complete perforation had been contemplated. From the filling of the earth-house  
courtyard.
- 180 Quadrangular piece of micaceous sandstone, 180 mm by 140 mm, 40 mm thick, an opposed hollow  
in each face, the cone-shaped hollows roughly pecked but the base of each smoothed by grinding.  
Possibly a socket stone for a door pivot. From the filling of the earth-house courtyard.
- 181 \*Roughly half a bun-shaped piece of micaceous sandstone, the flat side with traces of pecking later  
smoothed by grinding wear, the irregular domed side with areas of pecking and a pecked hollow  
in what would have been the centre of the whole stone; secondary use of the smooth face as an  
anvil has produced three roughly pecked hollows c 25 to 39 mm in diameter; also two fine radial  
grooves; the apparently broken edge worn smooth probably by use as a whetstone. From the filling  
of the earth-house courtyard.
- 182 Roughly quadrangular piece of sandstone, 280 mm by 200 mm, maximum thickness 72 mm, a  
rough flat-bottomed hollow in one face, 66 mm in diameter on the surface, the side but not the base  
striated by grinding. From the filling of the earth-house courtyard.

### 183–225 POTTERY (fig 10)

The Roman wares have been identified by Mr B R Hartley. There are six pieces of samian (183, 187–8, 206–8) and a small counter probably made from a samian sherd (195), also two sherds of a cooking pot (209). The edges of some sherds are worn down by use as a rubber, a feature noted on samian sherds from other broch sites (eg Okstrow, Orkney, Nybster, Keiss, Caithness). It will be seen that in both deposits where datable sherds occurred, the broch wall filling and the filling of the earth-house courtyard, both late 1st-century and 2nd-century sherds were found, including a sherd probably belonging to the later 2nd century. (Also listed in Robertson 1970, tables 2, 4.)

The native wares are all of good quality, fine and hard. Some are remarkably similar to Roman coarse wares: the foot-ring of 197 should also be noted as an imitation of a Roman beaker, and likewise the black burnish on 184 and 196. Most of the pottery is of a sandy fabric without grit tempering, mainly dull brown to black. There are at least 11 vessels of this ware represented, two by complete small bases (197, 203), the rest by one or two distinctive sherds including two from bases (184, 192, 194, 196, 205, 212–15).

There are also sherds of similar wares but with varying amounts of grit tempering, and some also with vegetable matter tempering. The recognizable forms are an unusual open bowl (211), and two jars (191, 210, a considerable part of the former surviving), and single sherds of other vessels (189, 190, 217–19), representing five or six pots in all.

The fine sandy ware compares well with the very high quality native-wares from the souterrain sites of Carlungie and Ardestie, Angus (Wainwright 1963, 131, 136, 140, 147–8), particularly with the pots I–III from the latter site, and the rim form of Hurly Hawkin 191 is similar to Ardestie I. The fabric of sherd VI includes some grits and fine vegetable matter impressions, in which it is similar to 191. Hurly Hawkin has also produced medieval sherds of the 13th–15th centuries (185, 198–202, 225), and one of still later date (186).

- 183 Chip of samian ware, probably South Gaulish. On the broch floor.

- 184 Small worn native wall-sherd, sandy fabric, burnished dark outer surface, interior orange probably due to burning. From the hearth on the broch floor.
- 185 Sherd from the flat base of a medieval pot, gritty grey ware, pink on one surface, cream on the other. From the broch filling.
- 186 Wall sherd of stoneware, 17th century or later. From the broch filling.
- 187 Rimsherd from samian bowl, form Dr 18; South Gaulish, Flavian-Trajanic. From interior of the broch wall, on clay (post-broch).
- 188 Samian wall-sherd, form Dr 31; Central Gaulish, Antonine, probably late in the period. From interior of the broch wall, on clay (post-broch).
- 189 Native wall-sherd, hard uneven ware with rounded grits of various sizes, buff-grey-pink, 5 to 8 mm thick. Similar to 190 but thicker. From the interior of the broch wall.
- 190 Native wall-sherd, hard with small grits, grey core, pink-buff surfaces, only 5 mm thick. From the interior of the broch wall.
- 191 \*Sherds from rim and wall of a native pot, ring-built, fine fairly hard ware with sparse sandstone grits and impressions of vegetable matter (? including pine needles) used as tempering, a fine thick slip with wiped surface outside tending to flake away; brown outside becoming red at rim, red-buff inside probably due to secondary burning which has made the surface soft and chalky in places. From the earth-house entrance. Other sherds 204, 222-24.
- 192 Small native wall-sherd, fine sandy ware, red surfaces, dark grey core. From the earth-house entrance.
- 193 Tiny native sherd, sandy ware, with pieces of vegetable matter and shells. From the floor of the earth-house.
- 194 \*Native wall-sherd and another from the angle of the wall and base, hard, dark sandy ware. From the paving of the earth-house courtyard.
- 195 \*Small counter, made from a samian sherd but lacking any of the original surface. From the blocking of the earth-house entrance.
- 196 Small native wall-sherd, hard dark sandy ware, smooth inner surface. From the blocking of the earth-house entrance.
- 197 \*Base of native pot with foot-ring, 30 mm in diameter, fine gritless grey ware. From the earth-house filling.  
The vessel is hand-moulded, not thrown on a wheel, and is presumably an imitation of a small Roman jar. A wall sherd with an applied ring came from Balevullin, Tiree (MacKie 1963, fig 4, 77) and might have been considered a parallel of pre-Roman date, though the technique differs in that it is applied as a disc whereas on the Hurly Hawkin sherd it is applied as a ring, and the latter should be much later in date.
- 198 \*Incomplete moulded figure of a medieval knight, broken from the neck of a jug. From the earth-house filling (fig 12).  
The following note, and comments on the other medieval sherds, have been contributed by Mr L R Laing. 'The low relief model is of a knight on horseback carrying a kite-shaped shield. The heads of both the knight and his horse are missing, as is the horse's tail and the upper part of the

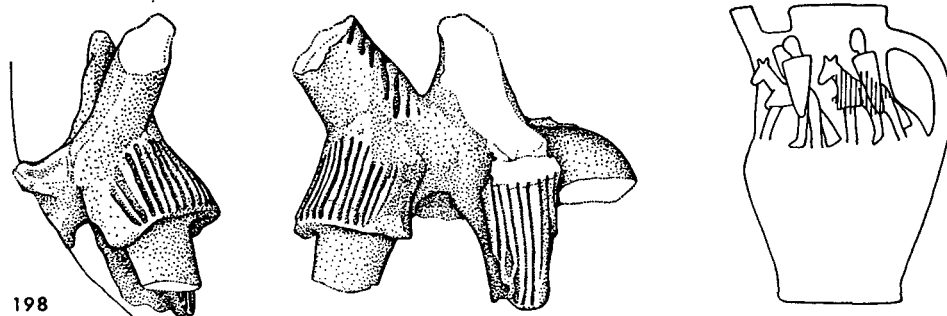


FIG 12 Hurly Hawkin: Knight jug (scales - fragment 2:3, reconstruction 1:9)



FIG 13 Hurly Hawkin: glass bead (scales - main drawing 1:1, details 2:1)

shield to which the knight's head would have been attached. The fabric and glaze are distinctive: the figure is in a fine sandy light orange ware with a greyish core, and is covered with a dark green lustrous glaze.

'The knight was attached to the shoulder of an elaborately decorated jug of a type which is represented by a number of finds, the most important of which was recovered from a midden at the Moot Hall, Nottingham (Dunning 1955, 18-23). When the jug was published in 1955 it was believed to be a Nottingham product, but there is no evidence that jugs of this design or in this fabric and glaze were produced in Nottingham kilns and it is more likely that they were made in Yorkshire, probably in the neighbourhood of Scarborough. The Hurly Hawkin knight is not in true "Scarborough Ware" but in a closely related fabric (Rutter 1961, 7-8). The date of these knight jugs must be about 1300 (Dunning 1955, 21).

'The other finds hitherto recorded consist of a similar fragmentary knight from Whitby, Yorkshire (Dunning, *in* Rahtz 1962, 604-18), a fragmentary jug from Cambridge (Dunning 1955, 22), examples from Dartford, Canterbury and Stonar, Kent (Dunning, *in* Rahtz 1962, 617), a head from Stoke Bardolph, Nottinghamshire (unpublished, in Nottingham University Museum), a fragment from London in the Guildhall Museum (Webster & Dunning 1960, 123) and a complete jug from Bruges, Belgium (unpublished in Grutehus Museum, Brugge, no 1341). A related type of jug is recorded from Hatterboard, near Scarborough, Yorkshire, (Rutter 1961, 16-17).

'The Nottingham Moot Hall jug is a tubular-spouted vessel with an applied figure on the spout. Round the neck are four figures of mounted knights on caparisoned horses carrying shields. Below them, on the body of the vessel, is a zone showing hounds attacking stags modelled in relief. The general theme is that of the manly pursuits of warfare and the chase (Dunning 1955, 21-2). The technique of the Hurly Hawkin knight is identical to that of the Nottingham jug and it is very probable that both are from the same workshop. The evidence of the Bruges jug suggests that each of the four knights were different (they have been restored as two pairs on the Moot Hall vessel). The Hurly Hawkin knight is noteworthy as further proof that eastern Scotland enjoyed the benefits of a flourishing trade in pottery from Yorkshire and had tables sometimes graced with vessels as fine as any to be found in England.'

- 199 \*Handle of a medieval jug, gritty buff-pink ware, sparse pale green glaze outside, many small perforations. Probably made locally, early 14th century. From the earth-house filling.
- 200 Three medieval wall sherds, from two pots, fabric similar to 199. From the earth-house filling.
- 201 \*Sherd from the lower wall and base of a medieval pot, fine chalky grey ware, red surface with spots of green glaze on outside of both wall and base. 14th or 15th century. From the earth-house filling.
- 202 Two medieval sherds, fine brown ware, one with thick yellow-green glaze outside. 15th century. From the earth-house filling. 198-202 were found together.
- 203 \*Base of small native pot, 63 mm in diameter, fine hard sandy ware. From paving to the N of the earth-house entrance, outside the limits of the courtyard.
- 204 Wall sherd, same pot as 191. Findspot as 203.
- 205 Small native wall-sherd, very hard black sandy ware. Findspot as 203.
- 206-207 Samian sherds from the rims of different bowls, form Dr 37, the rim edges worn flat by use as rubbers; Central Gaulish, probably Antonine. From the filling of the earth-house courtyard.
- 208 Small samian sherd with part of footring, form 18 or 18/31, burnt, the edges worn by use as a rubber. Late 1st or early 2nd century. From the filling of the earth-house courtyard.

- 209 \*Rimsherd and wall-sherd of Roman coarse-ware jar, thin gritty grey ware; Flavian-Trajanic. From the filling of the earth-house courtyard.
- 210 \*Rimsherd of native pot, fine, fairly hard brown ware, small grits including mica, a few rather larger grits. From the filling of the earth-house courtyard.
- 211 \*Sherd from rim to base of a native shallow open bowl, hard relatively heavily gritted dull brown-grey ware. From the filling of the earth-house courtyard.
- 212 Sherd from the angle of the wall and base of a native pot, very hard fine sandy ware, black but reddish-brown outer surface. From the filling of the earth-house courtyard.
- 213–221 Nine native wall-sherds of similar ware from several pots. From the filling of the earth-house courtyard.
- 222–224 Three native wall-sherds from the same pot as 191, one actually joining it. From the filling of the courtyard.
- 225 Wall sherd of large medieval jug or jar, faint rilling, hard grey ware with cream outer surface. From the filling of the earth-house courtyard.

## 226–231 MISCELLANEOUS

- 226 Specimens of slag and clinker, clearly iron-working residues: a small piece of slag from the floor of the broch; a piece of clinker from the floor of the earth-house entrance; a lump of slag in the blocking of the earth-house entrance; four pieces of clinker from the filling of the earth-house courtyard.
- 227 Two tiny fragments of a large thick-walled crucible. From the floor of the earth-house. This implies the casting of bronze on the site (see 20).
- 228 \*Two small fragments of charred wood, one having two drilled hollows at right angles to each other (the other not illustrated). From below the broch floor (fig 8).
- 229 Two pieces of occipital of human skulls, probably adult and probably not from the same skull; also part of the head of a humerus. Possibly part of the skeleton found in 1865. From the filling of the broch wall (post-broch).
- 230 Two human teeth. From the floor of the earth house.  
The following note has been contributed by Dr D A Lunt. 'One of the teeth can be identified as the mandibular left first permanent molar. The degree of attrition exhibited by this tooth is relatively slight (dentine just exposed on two buccal cusps and one lingual cusp), and using the scale of attrition published by Miles (1963, 191–209), it may be suggested that the individual was aged 16–18 years at death. Two hypoplastic lines encircling the crown indicate either feverish illnesses or severe malnutrition when the individual was c 2 years old. The other tooth is a maxillary left second premolar from a much older individual, perhaps 30–35 years old at death, though age is more difficult to assess from the premolars. Neither tooth shows any evidence of caries.'
- 231 The following note has been contributed by Dr Anne Robertson. 'Sestertius of Geta, AD 210; much corroded, fairly worn. *Obv* IMP CAES P SEPT GETA PIVS AVG, bust of Geta, laureate, r, slight drapery on l shoulder. *Rev* PONTIF TR P II COS II S C (in exergue), Caracalla and Geta, facing one another, each holding patera over altar between them, behind altar flute-player and dead bull (C 145, RIC 156a) (Robertson 1971, 117, 134).' Found in the adjacent garden.

## DISCUSSION

D B Taylor, with comments on the finds by A S Henshall

## THE TIMBERED STRUCTURE AND PROMONTORY FORT

From structural evidence alone it is possible to establish the sequence of the various structures on the site. Of the earlier structures, the most outstanding were the double ditches and ramparts of the promontory fort. The broch builders found these to be added protection and there are numerous examples of the re-use of earlier fortifications in the main broch area of the N (Fairhurst, forthcoming). Locally, the broch on Monifieth Laws was built over the rampart of an earlier fort (Neish, 1862) and at Craighill, NE of Dundee, another broch occupied a similar promontory, defended by a rock-cut ditch (*Discovery Excav Scot* 1957, 39). The broch at Hurly

Hawkin was built on the slighted inner rampart for the surface area within the inner rampart and the constricting sides of the promontory left little choice. But the levelling operations in the broch interior which followed the building of the wall removed much of the evidence of the layout of the interior of the promontory fort. A number of postholes beneath the filling of the broch floor in the SE quadrant must relate to this early phase but these were insufficient to form any recognizable pattern.

Nor is it easy to place the timber structure under the broch wall in its context in relation to the promontory fort. It was certainly pre-broch, but its full extent could not be established because of the levelling operations within the broch. The posts had been inserted individually into a bank of clay and there was no trace of a palisade trench, but the fact that the posts were no more than 0.25 m apart and 0.2 m in diameter suggests a palisade or a stockade rather than a hut 15 m in diameter. Moreover, ground level within the timber structure sloped towards the SE and this would have made it difficult if not impossible to erect a hut. No trace of an entrance was found apart from a single large posthole beneath the paving of the broch interior and on the line of the arc formed by the postholes. If the purpose of the posts was defensive, as seems likely from their size, then they would be unnecessary within the existing ramparts of the promontory fort and this in turn suggests a date earlier than the promontory fort.

The paving behind the inner face of the broch and the postholes are undoubtedly contemporary. They had nothing to do with the broch – there was no entrance in that sector nor could they have formed the floor of an intra-mural chamber or guard cell with a doorway in the broch entrance. The paving also followed very closely the line of the low bank into which the posts had been inserted. Two postholes were also discovered apparently associated with this paving.

The bone mount, 60, was found under the broch floor 'the only find which can be associated with the earlier structures' (Taylor, 1971, 12). Other objects from below the broch floor paving were the bone needle, 59, spindle whorl, 68, faceted piece of haematite, 69, the stone used for rubbing on, 70, and two fragments of charred wood, one having two drilled holes, 228. None of these finds is particularly informative.

Ritchie (1970) classifies the timber structure as an enclosure and certainly no exact parallels can be traced. On the other hand, it is very small when compared with other examples although that could be explained by the restricted area of the site. In short, while no specific period can be proposed for either the timber structure or the promontory fort, both must be pre-broch and the probability is that the timber structure is earlier. There are a number of promontory forts in the region, from Pole Hill, a few kilometres to the W (Christison 1900), to those in the vicinity of Arbroath. All of these are very much larger than Hurly Hawkin and dating evidence is lacking except in the most recently excavated example at West Mains of Ethie, near Arbroath, where a brooch and armlet date to the second century AD (Wilson 1980).

#### THE BROCH

One immediate problem which is presented in discussing the broch arises from the fragmentary nature of the wall. Only in the SE quadrant near the wall chamber was there any evidence of a stone-built core. It could be argued that the partial infilling of the inner ditch of the promontory fort, especially at the western end, and the building of the souterrain and its courtyard would account for the disappearance of much of the broch stonework. If we estimate the broch to be more than 4 m high, a simple calculation would indicate that the broch wall at Hurly Hawkin would contain in volume five times the amount of material required to build the souterrain with its courtyard and the infilling of the ditch on the most generous estimate. It must be questioned whether the broch here ever extended to the height associated with these structures in the north,

say 10–13 m. Moreover, recent excavations at Crosskirk produced unmistakable evidence of a clay and rubble core and this must be a distinct possibility at Hurly Hawkin also (Fairhurst, forthcoming).

The souterrain builders certainly used the broch material: stone slabs, neatly stacked as if ready for use, were found on the broch floor. That they quarried the broch wall to foundation level in the northern sector, at least, is suggested by the discovery of a samian sherd, 188, behind the foundations of the inner face on the surface of the clay base of the wall core. The broch wall may never have been completed but the occupation material in the interior suggests a reasonably extended use of the structure and it is difficult to visualise folk living and working while the walls were being built round them.

The existence of a chamber or perhaps the base of a stairway in the SE quadrant is clear enough. As already indicated the evidence was insufficient to allow a positive identification. Even more fragmentary, however, were the traces of an entrance from the interior to a wall structure in the NW quadrant. Again, this must be either a chamber or a stairway. Jervise's excavation plan (fig 2) shows the broch entrance in this quadrant but there is no doubt that he was mistaken in this, since the true entrance was found in the SW quadrant and there was no suggestion in the outside wall face that a second and possibly later entrance had been cut through the broch wall. The remains of the entrance in the SW, fragmentary though they were, were sufficient to indicate that this was typical of brochs elsewhere. The stonework was well built without the usual door check and without any visible sign of a guard chamber, although this may have been destroyed.

The extent to which Jervise had excavated the interior was clear from surface indications. As shown on his plan (fig 2), a narrow trench had been dug around the inner face of the wall and two similar trenches more or less at right angles were dug across the interior. During the present excavation, these trenches were recognizable as their filling was of a different nature to that of the remainder of the broch. A number of finds of a date comparable with others from the broch floor were uncovered just below the present surface, probably the result of Jervise's excavation and previous operations when the broch was 'dug over' (fig 13.55).

An unusual feature of the interior was the narrow paved pathway leading from the entrance towards the centre, bordered on the W side by thin slabs on edge and on the E side by a stretch of low drystone walling only a few centimetres high. The four corners of this pathway were marked by well-made postholes. Similar features occur in brochs elsewhere, eg at Crosskirk (Fairhurst, forthcoming), and their function is not clear. As already suggested, in this case, the pathway may have provided access to the interior between two lightly-walled huts, the upright slabs and walling protecting the base of these huts. In none of the postholes was there any trace of decayed wood.

A considerable number of objects was found on the floor of the broch, and nearly as many in the filling. In view of the known severe disturbance of the broch interior in the 19th century, and the probability of disturbance in antiquity, there seems little point in distinguishing between the two levels. The lack of pottery in contrast with the souterrain and courtyard is noticeable.

In the first group of finds was a surprising collection of personal ornaments: a bronze ring-headed pin, 5; part of a bronze ribbed bracelet, 7; a piece of fine bronze chain, 9; piece of a glass bangle, 52; a bone toggle, 62; and the most remarkable of all a small bronze snake-armlet, 6. The bronze harness-mount, 10, and small bronze studs, 2, are ornaments for leather horse-equipment, or the studs may be for a belt or shield or other ornamented leather object. The bronze rings, 11–13, may have had a function connected with harness. The small patera, of which only the handle, 8, survived, was also a valuable object. More mundane were the bronze nail, 14, bolt,



15, and rivet head, 16, the iron nails, 34–7, and the well-made bone peg, 63. Evidently both bronze casting and iron working were undertaken nearby, for ‘run’ fragments of bronze, 20, and iron slag, 226, were found. It is possible that the broken bronze objects already mentioned, and the fragments of bronze sheet, 3, 4, 18, 19 (evidently mountings on some object), and the odd pieces of iron, 32, 33, 39, were scrap intended for re-use. Metal tools are only represented by the iron object with a chisel-like end, 38, and the bone handle for an auger or something similar, 61. The only lead objects were a weight for a steelyard, 50, and a puzzling small cup-shaped object, 49. Bone was occasionally used for tools, the rib with a rubbed chisel-shaped end, 64, or the even more obscure objects, 65 and 66.

Among the stone objects recovered from floor level were a perforated whetstone, 73, two spindle whorls, 74, 75, part of an upper and a lower quernstone 98, 97, a quartz pebble strike-a-light, 92, and two hammerstones, 95, 96. The precise function of the other objects is less certain. A feature of the site was the quantity and variety of stone discs, described p 233–5, a number, or at least one, occurring in each area and level examined. As explained (p 235), they seem to represent varied degrees of use in some unrecognized rubbing and polishing process. On the broch floor was one disc, 78, of type *a* (fine and thin, ground all over), six, 79–84, of type *c* (roughly flaked, partly ground), and two perforated which do not appear to be spindle whorls, 76 because the perforation seems to be too small, and 77 as the object itself seems too small. There were also six discs, 85–9, 91, with no signs of wear. A particularly large disc, 90, may have been a pot lid. The stone bars, 93, 94, may have been the handles broken from stone tools though no suitable tool was discovered; the latter bar had also been used for some rubbing process. The fragment of slab, 100, had been worn smooth on both faces and had a pecked perforation, and slab, 99, was worn by rotary grinding centred on a similar perforation.

The finds from the broch filling repeat to a considerable extent the list from the broch floor. Among the bronze personal ornaments and horse gear there is a ring-headed pin, 23 (cf 5), a harness mount, 26 (cf 10), a ring, 21 (cf 12). The fragment of a Roman strainer or small pan, 24, is a counterpart to the patera handle, 8, and fragments of another larger Roman pan were found during the earlier excavations. Additional items in these categories are the bronze pin with a flat disc head, 25, the spiral finger ring, 27, and the piece of the three-link bit, 22. A fragment of jet, 114, may be part of a pinhead. Other repetitive items are an iron nail, 41, piece of lead, 51, a whetstone (of different type) 102, spindle whorl (albeit decorated) 103, or seven stone discs both ground and merely flaked, 104–112. A lump of haematite used as a rubber, 113, and a pointed fragment of long-bone may be noted. The outstanding item, though, is the glass ball or playing man with spiral inlays, 55.

In the filling of the broch wall, a deposit post-dating the broch, were two sherds of samian, 187, 188, two sherds of native ware, 189, 190, and fragments of a human skeleton, 229.

The shank of a bronze pin, 1, similar to the shank of 23, was found at the base of the filling of ditch 2.

If all the objects from the broch are taken together there are eight pieces which are specifically Roman: the lead weight, 50, the fragments of patera, 8, 24, the harness mount, 26, and three samian sherds, 183, 187, 188, to which may be added the fragments possibly from an unguent bottle, 57, found outside the broch wall at base level. Other items are strictly Romano-British: the second harness mount, 10, and ribbed bracelet, 7, are close copies of Roman types if not actually Roman, and the bronze studs, 2, and toggle, 62, could be included also. Yet other items can be regarded as essentially native, the bridle bit, 22, ring-headed pins, 5, 23, spiral finger-ring, 27, the snake armet, 6, glass bangle, 52, glass ball, 55, and strike-a-light, 92; also the globular pinhead if the jet fragment, 114, has been correctly identified.

The earliest item is the Late Bronze Age pin, 25, which has no connection with the rest of the collection from the broch, and possibly should be associated with the pre-broch structures.

Three items belong in the late 1st century AD, the harness-mount, 26, the samian sherd, 187, and the patera handle, 8. The bridle bit is 1st century or earlier, but considering the condition of the fragment could well have reached Hurly Hawkin late in the century or later still. The glass fragments, 57, and bronze studs, 2, may also belong to this century. A group of ornaments may be assigned to the 1st–2nd centuries, the glass bangle, 52 certainly, but the ring-headed pins, 5, 23, the ribbed bracelet, 7, the toggle, 62, and the spiral finger-ring, 27, with the possibility of being earlier or later. The snake armlet, 6, can be placed fairly confidently in the first half of the 2nd century, but the samian sherd, 188, is probably late in the century. The glass ball, 55, is likely to belong in the second half of the 2nd century or 3rd century, and a similarly late date is possible for the jet ?pinhead.

The confusion within the broch deposits is quite evident, for instance the two samian sherds of the 1st and later 2nd century were both in the post-broch wall fillings, the early pin, 25, was in the broch filling, and on the broch floor were 17th century and modern bottle glass, and in the filling were medieval and 17th-century sherds.

In summary, there is little doubt that the structure at Hurly Hawkin was a broch, built and occupied towards the end of the first century AD and, so far as excavated examples are concerned, this seems to be true of other brochs outside the main area.

#### THE SOUTERRAIN

Souterrain builders elsewhere used existing defences where these seemed suitable, notably at Castle Law (Piggott & Piggott 1952). In the case of Hurly Hawkin, they were presented with a ready-made ditch and ample material close at hand with which to build the structure. The result was a typical Angus-type souterrain, 29.4 m long, 2 m wide and at least 1.5 m high with a paved floor and a slab roof. In plan it followed similar examples at Ardestie and Carlungie and elsewhere in the neighbourhood (Wainwright 1963), differing only in that there appears to be no indication of a side entrance. The main entrance was again typical except that its floor was horizontal, at the same level as that of the souterrain itself, and opened on to an extensive courtyard. The promontory fort ditches under the courtyard floor had been filled in. There were traces of occupation of this courtyard in the area of paving, the hearth and the low platform reached by two steps.

The artefacts from the floor and the filling of the earth house are relatively few. From the floor the sole decorative item was part of a simple thin bronze finger-ring, 28, and the only other metal objects were part of an iron knife, 42, and an odd piece of iron, 43. The fragments of a large crucible for casting bronze, 227, indicate again bronze-working somewhere nearby. A native sherd, 193, is similar to those in the filling. The only stone objects were a single disc, 119, and a whetstone of the distinctive square-section tapering-bar type, 118.

The infilling of the earth-house produced a miscellaneous range of objects. A plain bronze ring, 29, was like the one from the floor; the piece of bronze sheet, 31, the piece of iron nail, 44, and the native sherd, 197, are unremarkable. In contrast with the large numbers of stone objects from the earth-house entrance and the courtyard, there were no stone objects, and as noted, only two came from floor level. The bronze strap-end, 30, is a highly unusual piece, the only item recognisably of Dark Age date from the site. In addition there were eight medieval sherds, 198–202, spanning the 14th and 15th centuries, the earliest piece from a luxury-class imported knight jug.

Except for the strap-end and medieval sherds, the finds from the souterrain are presumably Iron Age: the two finger-rings and sherd, 197, which copies a Roman jar, may be regarded as

Romano-British. The strap-end is an exotic piece probably of the 9th century. These finds give little indication of the date of the destruction of the souterrain. It is likely that the tipping of the roof slabs into the building allowed spaces in the filling into which objects of much later date could fall; the relatively large number of medieval sherds may be noted.

The entrance to the souterrain produced, in contrast, a large number of objects of a purely utilitarian nature, similar to what was recovered from the courtyard. The assemblage of stone objects found on the floor included four or five whole or part whetstones, 120–3, 140. These were of a distinctive type, thin carefully shaped rectangular stones. The varieties of whetstones found at the site are described in the catalogue (p 233). Only one whetstone was found in the broch, and one in the souterrain itself, but a large number including the same rectangular type was recovered from the courtyard. On the souterrain entrance floor there were also a spindle whorl, 124, ten discs of types *a* to *c*, of which one was perforated, 126–133, 135, 125, a hammerstone 138, and a bar 139 similar to two from the broch floor. The sherds, 191, comprised most of a native jar, sherds of which were also found in the courtyard filling, and on an area of paving.

The blocking of the souterrain entrance was inserted when the earth-house plan was modified. From the blocking came a small iron bar, 45, and a lump of slag, 226, again indicating the working of iron somewhere in the vicinity. A single native sherd, 196, and a counter made of samian ware, 195, were the only pieces of pottery. A whetstone of a size suitable for a large blade, 143, and a smaller simple one made on an elongated pebble, 144, three stone discs, 145–7, and a soft red rubber-stone, complete the list.

The souterrain entrance led into a wide courtyard which had had a paved floor and a hearth. To achieve this the inner and outer ditches of the promontory fort had been filled in. This may have been a feature of the earlier defences, however, since, as already suggested, the two ditches appear to have run into each other in this sector. A good deal of destruction had occurred in this courtyard and it was impossible to be precise about the original layout. That it continued to be occupied after the abandonment of the souterrain seems obvious from the careful blocking of the entrance passage. Just when this took place is not clear but the late date of the finds from the souterrain filling may provide some indication of this occurrence. The same pattern of post-souterrain occupation was observed at Carlungie (Wainwright 1963). Hurlly Hawkin is perhaps unusual in that there were few traces of surface dwellings, apart from a small area of paving some 20 cm below ground level on which lay a few sherds of native pottery, 203–205. Oddly enough, one of these sherds, 204, belonged to the same pot as a number from the floor of the souterrain entrance, 191, and three further wall sherds, 222–224, of the same pot were found in the filling of the courtyard (fig 10.191). No precise date can be given for the building and occupation of the souterrain. It is likely to belong to the period of Ardestie and Carlungie, tentatively placed at around the end of the 2nd century AD (Wainwright 1963).

The filling of the courtyard was rich in objects, though mainly of a pedestrian kind. There was the tip of an iron sickle, 46, and two iron nails, 47, 48, also four pieces of iron clinker, 226. The 15 native sherds, 210–24, including the three just mentioned, represented seven or more pots, some imitating Roman wares. There were also three samian sherds, 206–8, and one from a Roman coarse-ware jar. The samian pieces had been used as rubbers, having much the same effect as the piece of ruddle, 148, from the blocking of the souterrain entrance. There was a formidable number of stone items including seven whetstones, of which 154 is part of one of the distinctive type of which a whole specimen was found on the floor of the souterrain, and 153, 155–6 are of the rectangular type already noted in the souterrain entrance on the floor and in the blocking. Three more whetstones, 157–9, are of the elongated pebble type. A rectangular rubbing stone, 160, had been carefully shaped. There were 14 discs and one perforated disc, 161–175.

Several large flattish slabs bore pecked hollows some of which had been smoothed by a rotating spindle, and others bore signs of grinding on their surfaces: 179 seems to have been part of a lower quernstone, 178 was perhaps the rest for a bow-drill, 180 had perhaps been used as a socket-stone for a door. The sandstone block, 181, had served several purposes, for grinding, as an anvil, and as a large whetstone, and 182 similarly bore pecked hollows and had been used for grinding. The quartzite pebble, 177, is a small version of a distinctive type of grinder found in quantity on wheelhouse sites in the N of Scotland. Three flat roughly circular pebbles, 176, may have been used as counters. Finally there were the sherd of a medieval jug, 225, and a piece of modern glass, 58.

The number and range of objects from the floor and filling of the souterrain entrance seems to have much in common with the filling of the courtyard, in particular linked by the scattered sherds already mentioned, the re-used samian sherds, and the rectangular whetstones. The nature of the filling of the courtyard has not been indicated. It is possible that some or all of the entrance blocking, and possibly of the courtyard filling, was brought from another part of the site, and may derive from the middens of the builders and users of the souterrain, who presumably inhabited surface dwellings in the immediate vicinity. The souterrain itself seems to have been kept fairly clean. The Roman sherds date from the late first century, 209, late 1st – early 2nd century, 208, and two probably from the later 2nd century, 206–7. The native wares, 28 sherds in all from at least 16 vessels, are mainly from the courtyard, only one coming from the broch floor (and similar in its black burnishing to one other sherd for the blocking of the souterrain entrance), two from the post-broch filling of the broch wall, two from the souterrain entrance, three from the paving of the possible hut. The best parallels for the native pottery come from the souterrains at Carlungie and Adestie, which do not help further with the dating. It seems reasonable to view them all as more or less contemporary, and probably of 2nd-century date in view of their good imitation of Roman wares. One more find should be mentioned, the worn sestertius minted in 210 AD, found in the adjacent garden.

#### GENERAL

At Hurly Hawkin, a large number of animal bones, predominantly sheep and cattle, was found. Spindle whorls and rotary querns are also represented among the stone artefacts, so that if cattle- and sheep-herding, with the associated leather-working and spinning, provided the main occupation of the souterrain builders, arable farming was not neglected; there is plenty of good land to the N of the site. The same pattern of subsistence must to a large extent be true of the broch-builders on the site.

If the irrelevant early finds (the cupmarked stones and flints) are discounted, and also the irrelevant late finds (the medieval and post-medieval pottery and glass), there remains the Late Bronze Age pin which may be regarded either as belonging with the pre-broch occupation or as scrap brought to the site. The bulk of the remaining datable objects fall in the later 1st and the 2nd century, though if most of these objects are in fact metal scrap or re-used Roman sherds, none of them may have appeared at Hurly Hawkin before the 2nd century. Yet looking at the contents of the broch and its filling and comparing them with the souterrain and its filling, and the souterrain entrance together with the courtyard, there is a real difference between these three areas, even though there has been some confusion in stratigraphy and from area to area. The finds suggest that the broch-builders appeared in the first half of the 2nd century, which would agree with the evidence, as far as it goes (eg Piggott 1951; summarized RCAMS 1963, 30–31) that the Tay–Forth–Tweed group of brochs were established during the withdrawal of

the Roman army at that time. The latest Roman and native finds point to occupation into the 3rd century at least. The question of continuity of occupation must be left open.

Hurly Hawkin falls into line with those brochs S of the main area of broch concentration, those, that is, which have been excavated. Recently, new discoveries have added to the number of brochs recognized in the Tay–Forth–Tweed province. Edinshall, Bow, Torwoodlee, Torwood, Coldoch, Monifieth Laws and Teroy have figured largely in the literature; to these have been added Buchlyvie (*Discovery Excav Scot* 1976, 62); Leckie (*ibid*, 1973, 54); Craighill (*ibid*, 1957, 39); Stairhaven (*ibid*, 1977, 39); Hurly Hawkin; Drumcarrow (Maxwell 1969); and Calla (RCAMS 1978). Possible brochs at Ardwell (RCAMS 1912), Brae of Boquhapple (*Discovery Excav Scot* 1975, 42); and Craigie (*ibid*, 1961), add to the total. Other possible sites remain to be identified. From this it is obvious that infiltration by the broch builders took place on a more massive scale than has been previously realized.

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a Foundation boulders of outer face of broch, SE quadrant



b Cup and ring stone from chamber entrance in N quadrant of broch



c Chamber entrance in E quadrant of broch. Inner face in foreground, saddle quern in centre





a Broch interior, E quadrant



b Broch entrance from N



a Souterrain – N wall with fallen roof slabs



b Section across inner ditch with foundation of souterrain wall, paved floor and levelled rampart



c Packing below souterrain floor



a Souterrain entrance from W: paving and packing of courtyard in foreground



b Raised platform in NW of souterrain courtyard



c Postholes of timber structure continuing under inner face of broch wall