

Excavation at Ardeer, Ayrshire

by J Hunter

This site was discovered in June 1973 as a result of building operations being carried out by ICI in Stevenston at Ardeer Recreation Club, which occupies the site of Ardeer House. In the former gardens of the mansion (NGR NS 27054191), the cutting of a services trench revealed the capstones covering part of drystone walled passage. Several capstones were removed, causing damage to the side walls. At this point the matter was brought to my attention, and ICI agreed at once to suspend operations to allow an examination of the site. The structure is on a fairly narrow terrace formed by a 30-ft raised beach at the bottom of a west-facing slope, about 1 km from the present coastline, and a few hundred metres from the sandhills noted for finds of material of all archaeological periods.

It transpired that the existence of the passage, and of the cave into which it leads, had been known to a few local people for some time. They reported that the cave and passage had been

used as a refuse dump by the estate workers about the turn of the century, and that the end of the passage had once been open. About 1960 the cave had been partially excavated by ICI workers and then largely filled in with slag and other rubble. We found evidence of slightly earlier use also, probably as a grotto in the nineteenth century – the remains of a dressed stone frame for an iron grille over a hole in the cave roof. The rough checks cut in the side walls of the passage as it leads into the cave might be for an iron gate. Despite these indications of modern use and alterations, it did not seem that the passage itself was of recent origin (see fig 1). The corbelled drystone side-walls and massive capstones seemed out of character with any modern or medieval structure. The visible remains did suggest a souterrain but the absence of records of these in SW Scotland made this conclusion difficult to accept. A full-scale excavation was not practicable, so it was decided to clear the rubble from the area due to be covered by a road and to record this as fully as possible.

The passage is built into the 30-ft raised beach. The entrance could not be reached due to earth moving which had already taken place, but it was clear that the entrance must lie on the edge of the terrace, probably on the face of the slope. The sandstone rock forming the cave and floor of the passage is heavily wave-washed. The raised-beach material is sand with pockets of gravel. This provides excellent drainage, since, during heavy continuous rain, the bottom of the passage was never flooded.

It was not possible to determine the exact length of the passage due to the collapse of the S end, but it must be at least 13 m, and not more than 16 m (see fig 1). The upper surface of the capstones lay 1–1.5 m below the ground surface – the depth of the soil is likely to have increased due to the location at the foot of a cultivated slope. Headroom inside ranges from 1.7 m to 2.4 m, largely due to the uneven rock floor (see fig 2). Interior width is also variable and of course decreases with height due to corbelling. The maximum width is 1.55 m with a roof width of 0.75 m, the minimum being 1.20 m and 0.70 m respectively. The plan is almost straight at the S end, but distinctly curved at the N, the E wall following a rather irregular line. The side walls, especially the W, have right angled wings which flank the entrance to the cave, closing off the original natural entrance under an overhanging shelf of sandstone. It was not clear whether this entrance was open when the passage was built, but it seems likely that it was already below ground, since the beach material is piled over it. The cave can now be entered by a hole in the roof, and presumably this existed when the passage was built.

Part of the passage had been so badly damaged that it was too dangerous to clear it much below the level of the top side walls. At A and B the passage was cleared of recent rubbish, and then excavated down to bedrock (see fig 1). At A it was found that the recent disturbance was almost total. Black humus – rich loam with a heavy admixture of modern rubbish – continued down to bedrock – except at A1. Here a small slab of sandstone about 20 cm square seemed to have fallen on top of and protected a pocket of different material lying in a slight hollow in the bedrock. A band of clay about 2–3 cm thick overlay a pocket (up to 6 cm thick) of compacted loam with an admixture of charcoal. A fragment of glass showing considerable efflorescence lay at the junction of the clay and the underlying loam. This same stratification continued for a few centimetres under the projecting stones of the side wall. The stratigraphy at this point showed no sign of having been disturbed, and appeared to have been naturally deposited, the clay being washed in over an occupation layer. There is thus no reason to believe that the glass is modern; since it is clear glass it is tentatively suggested that it may be Roman.

At B modern rubbish was also encountered for some depth, but stopped abruptly at a layer of lime. Underneath lay hard-packed sand, stratified and undisturbed except for a few tree roots. Below some 20 cm of clean sand lay narrow bands of charcoal, containing fragments of

bone. These were interlayered with narrow bands of clean sand. A thicker band of charcoal and sand (15-20 cm) lay below, extending to bedrock at several places. The larger fragments in this layer seemed to be mainly pieces of animal long bone, one of them an ox cannon bone. Some of the charcoal could be identified as oak. A lump of iron slag was fused to the sand on which it lay. This level had a high concentration of charcoal in a circular patch, suggesting a hearth, which further investigations showed to be the case. Two distinct levels of use were found in it. The upper layer was a mixture of charcoal and ash with some bone fragments, 14 cm deep. The fire had originally been contained within a rough circle of stones, but the ash had risen above these and spilled over the surrounding area. At the edge of the ring of stones was a red deer antler. A thin layer of sand (2-5 cm) on which the stones rested, separated this level from the lower level of the hearth, 10-14 cm deep. This lay within a natural bowl-shaped hollow in the rock and consisted of a mixture of charcoal and ash. Embedded in this were several pieces of sandstone and 'potato

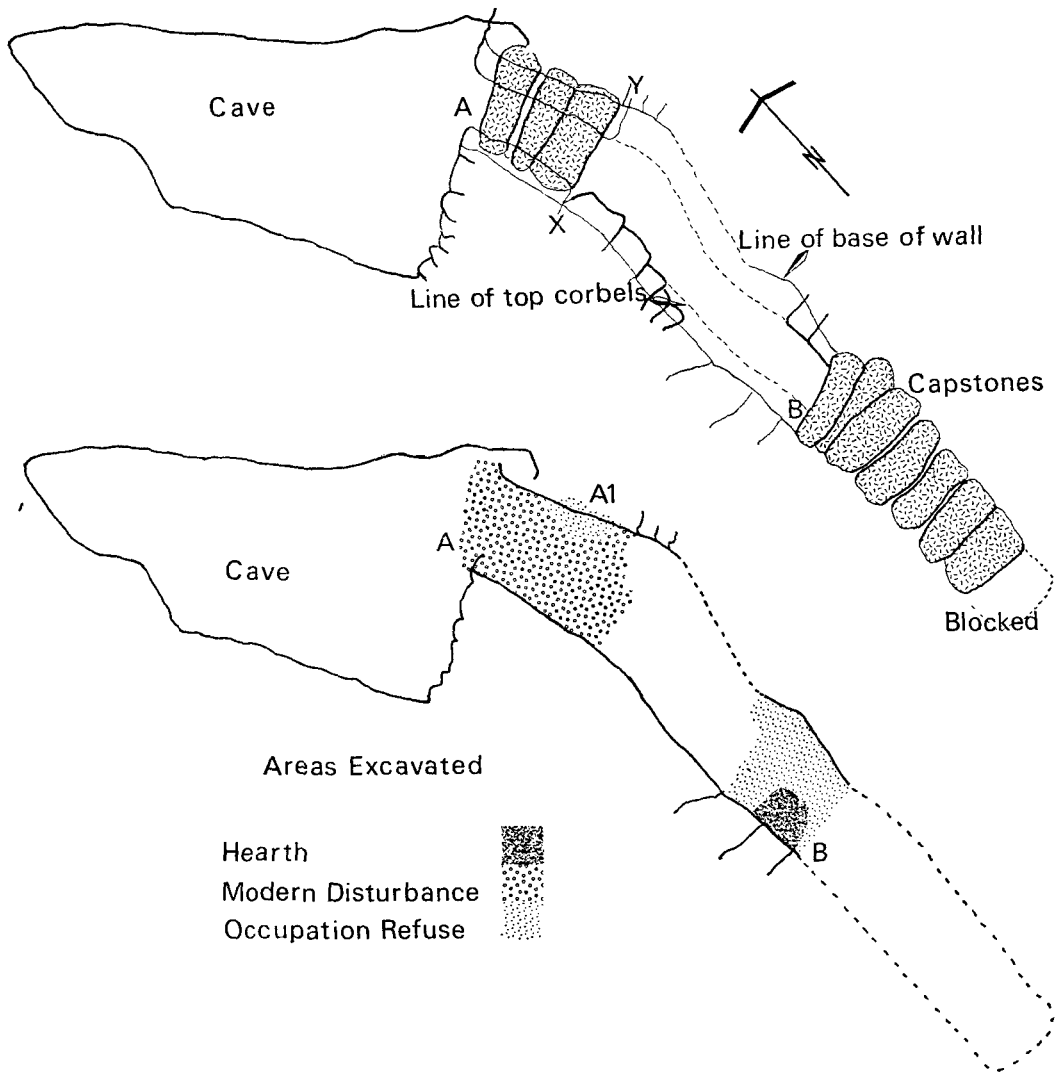


FIG 1 Ardeer, plans (1 : 200)

sized' masses of porous iron slag. The bottom of the hollow was lined with beach pebbles and grit, apparently wave packed. When in use this fire must have made it almost impossible to move along the passage – which does suggest that the passage could be entered from either end. Why the hearth was placed in such an inconvenient position is not at all clear.

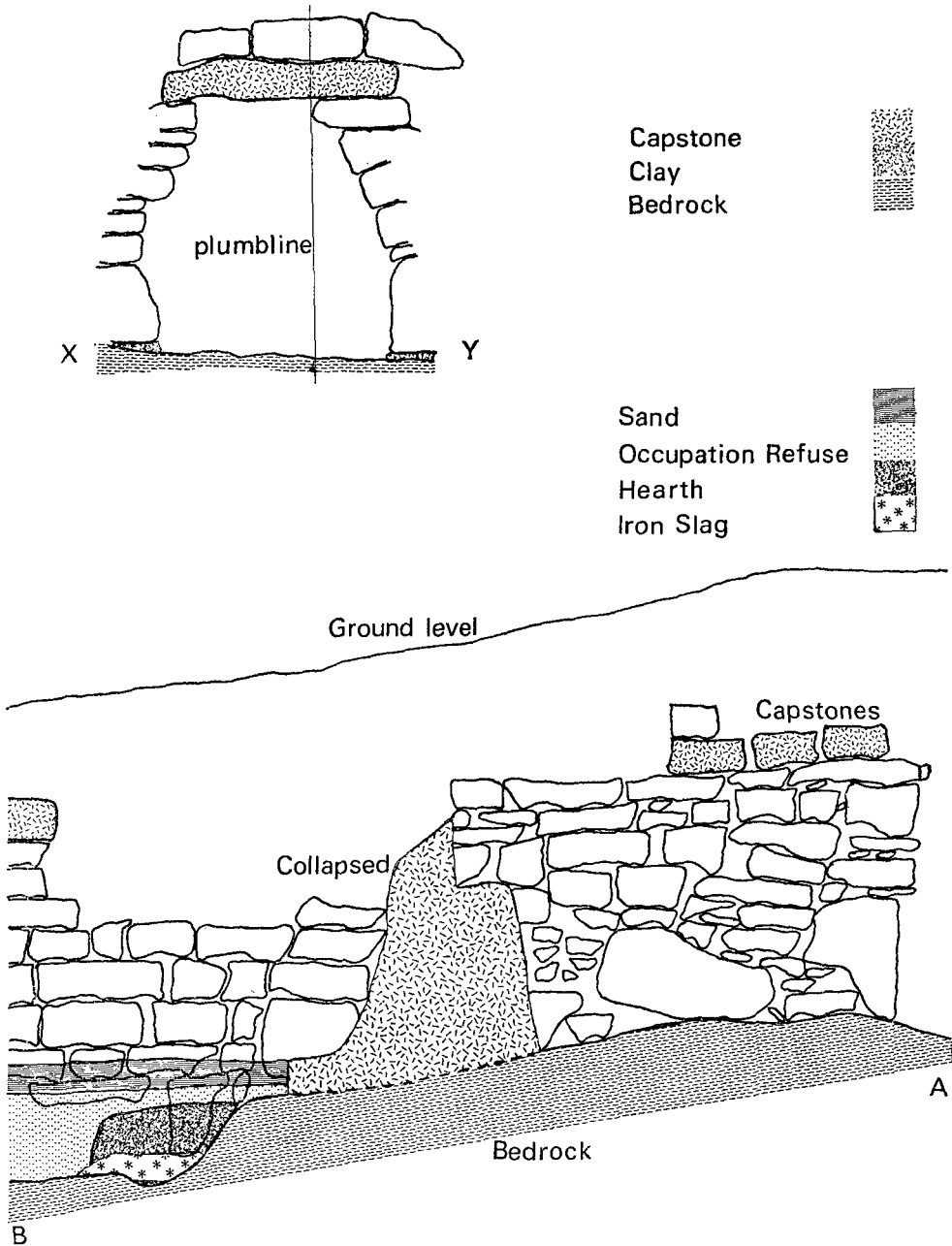


FIG 2 Ardeer, sections on X-Y and A-B (1 : 100)

The antler had been sawn off at the burr, the saw cuts being clearly visible. There is no apparent reason for sawing an antler off at this point other than to make it suitable to use as a tool. This seemed to be borne out by signs of abrasion on the first tine. The only other piece of bone large enough and sufficiently well preserved to be readily identified was the ox cannon bone, which had been cleanly broken, presumably to extract the marrow.

All material from the area of the hearth, and from A1, was removed and subjected to minute examination. This failed to yield even the smallest fragment of pottery, or any other artefact. There is thus ample evidence of occupation at this site, attested not only by the normal kitchen refuse of charcoal and bone, but also by the signs of iron working. The evidence found seems to indicate a fairly long initial period of occupation, associated with iron working, followed by a sporadic temporary use – with clean sand blowing over the floor in the intervals. The thick layer of clean sand lying on top of this and below the modern debris points to a long period of almost total abandonment. The total absence of pottery from the refuse is striking. The tiny fragment of glass is the only positive indication of date, and since it cannot be identified with complete confidence, it would be dangerous to hinge too much argument upon it.

CONCLUSIONS

Although there is no single decisive piece of evidence for dating this site, it is suggested that the overall pattern of findings both as regards the structure itself and as regards the occupation refuse conforms to the pattern of the souterrains of the Angus group. As shown by Wainwright's survey (1963), these characteristically have a curved passage lined with corbelled sandstone walling, and often with a terminal bulge. At Ardeer the place of the terminal bulge is taken by the natural cave, and instead of the flagstones commonly used for flooring there is the natural bedrock. Otherwise the structural details are closely comparable. Large boulders were used for the lowest courses of the walls and sandstone slabs for the upper courses. These were corbelled, especially the top three courses, the total projection of the corbelling amounting to over 50 cm in places (cf Wainwright 1956, 59). This means that the capstones are normally resting on the projecting corbels rather than on the side walls, and the stability of the whole structure depended on its being embedded in the earth. The structural advantages of building underground have been cited by Wainwright and others to help to explain the existence of souterrains, and the point is well demonstrated at this site. As regards its possible use, it is difficult to envisage this passage being used as a byre, as suggested for the wider passages of Ardestie and Carlungie. Unfortunately the ground surface around the Ardeer site had been so disturbed that there seemed no hope of the survival of any trace of surface buildings which may have been associated with the souterrain. There was certainly no sign of the deliberate dismantling and filling in of the souterrain which had been noted at many other sites where surface occupation continued after the souterrain fell out of use.

The finds at Ardeer were also consistent with those made at souterrains in Scotland. The glass (for what it is worth) can be compared with the Roman pottery found at Tealing and Ardestie, and with much greater confidence the animal bones and small-scale iron working can be paralleled at Carlungie.

While Ayrshire is outside the normal distribution range of souterrains it is submitted that this site cannot be placed in any other category. It should be borne in mind that several souterrains do exist in southern Scotland including a few in the Clyde Valley. The distribution map prepared by Charles Thomas (1971, 45) shows that a souterrain in North Ayrshire ought not to be completely unexpected. In the same way the scattering of brochs found in the Lowlands extends into

Ayrshire at Craigie. Thus a souterrain at Ardeer should not seem too much out of context. Whether it should be seen as an isolated stray, or whether it can be related to other sites in Ayrshire, is not yet known.

REFERENCES

- Wainwright, F T 1956 'A Souterrain at Longforgan in Perthshire', *Proc Soc Antiq Scot*, 88 (1954-6), 57-64.
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