A Metalworking Site at Kiondroghad, Kirk Andreas, Isle of Man

By P. S. GELLING

Senior Lecturer, Department of Ancient History and Archaeology, University of Birmingham

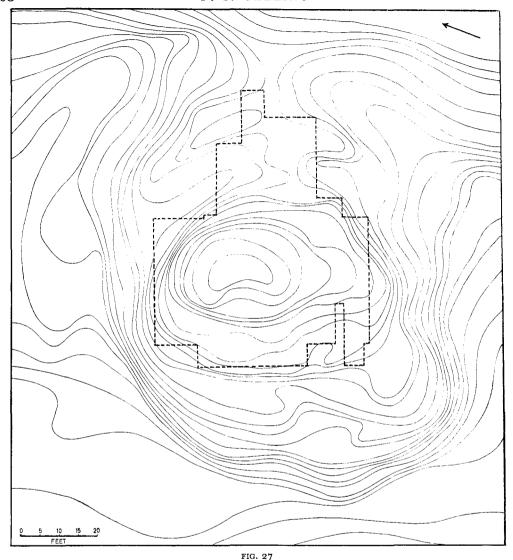
HE parish of Kirk Andreas occupies the central portion of the northern plain of the Isle of Man (FIG. 26). Its western boundary, which is part of the western boundary of the sheading of Ayre, follows a shallow flat-bottomed valley which must formerly have been wet and marshy, but is today drained by the Lhen Trench. On Kiondroghad farm, about a mile north-west of Andreas village there is a low mound on the valley bottom (NX 396002), close to where the ground begins to rise on its E. side. The Ordnance Survey 1-in. map

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FIG. 26 KIONDROGHAD, ISLE OF MAN (p. 67)

a, sketch-map showing position of Isle of Man; b, sketch-map of Isle of Man showing position of c; c, map with position of site marked by cross (c, based on O.-S. map with sanction of Controller of H.M.S.O. Crown copyright reserved)



KIONDROGHAD, ISLE OF MAN (p. 69) Plan of site contoured at 3-in. intervals. The excavated area is marked by dotted lines

describes it as a Round House, implying that it belonged to the same group as the round houses excavated by the late Professor Gerhard Bersu on Ballacagen and Ballanorris in the south of the island; and this indeed was what the site was considered to be before the excavation, here described, began. As a result of this

¹ The excavation began in April 1962, and was continued in the following August. Since then short excavations were carried out each April until 1967. The work was supported throughout by the Trustees of the Manx Museum and by the Isle of Man Natural History and Antiquarian Society; and in most years by grants from Birmingham University. We are most grateful to the owner of the land, Mr. J. C. Clucas (through Mr. S. F. O'Hanlon, his agent), and to the tenant, Mr. E. T. Corlett, for their unfailing cooperation.

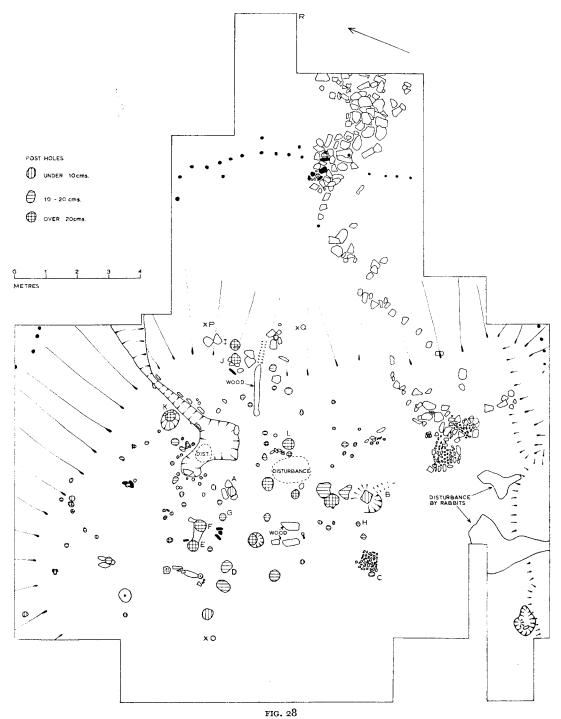
excavation, however, it now seems most probable that the site was a specialized metalworking establishment occupied at some time in the 7th to the 9th centuries and that there was no large timber building of the Ballacagen type.

The nature of the site can best be appreciated from Fig. 27, where the contours are drawn at 3-in. intervals. The rising side of the valley is to the east, while to the west the ground is almost level as far as the Lhen Trench. The mound projects some 115 ft. into the valley bottom, and is substantially of natural formation; but its surface features have been considerably modified by varying accumulations of occupation-deposit. This applies in particular to the highest part of the mound, which stood some 5 ft. above the general surrounding level, and to the suggestion of a causeway, with a low bank running athwart it, leading to the rising ground to the east.

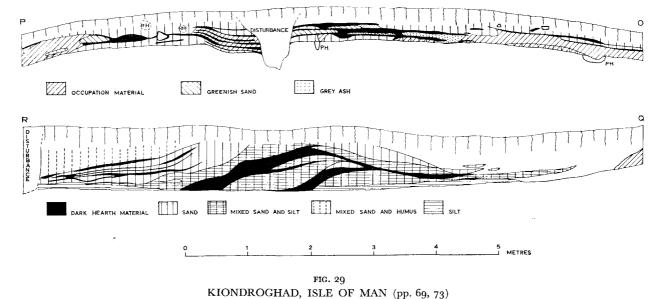
The site was dug in strips, 2 or 3 m. wide and up to 10 m. long, a method which was imposed by the smallness of the labour force. The characteristic deposit, which began immediately under the humus, consisted of patches of very dark hearth-material alternating with others of clean, or fairly clean, sand. A section through this deposit is shown in Fig. 29 (O-P). The suggestion of fairly coherent floors which the section conveys is to a large extent illusory. At any given point there was a fairly regular alternation of black hearth-material and much cleaner material, usually sand; but no patch, of either kind, formed anything like a coherent shape, and many did not spread far in any direction. The impression constantly conveyed was of a series of rather haphazard scatters.

It was not until this deposit had been entirely removed that post-holes could be discovered (Fig. 28). A few were quite large, with diameters of about 40 cm., but the majority had diameters of 15 cm. or less. Some of the larger ones appear to mark the position of a building, the four corners of which might be represented by post-holes A-D. There is a convincing line of post-holes between A and B, but only one between c and D, where at least two would appear to be required; and there is no substantial post-hole at all between B and C. On the other hand, the N. wall, between A and D, is intelligible if we assume that post-holes E and F represent a projecting porch. There is a fairly satisfactory line of post-holes between G and H, but no corresponding line along the opposite side of the building; so these are perhaps more likely to represent some feature built against the E. wall than to be part of a series of roof-supports. Near the centre of the building there were remains of some charred wooden planks. The length of the building, excluding the supposed porch, would be about 4.50 m., and the width about 2.50 m. Beside post-hole c there was a neat setting of small stones, under the centre of which there was the jaw-bone of a pig. This may have had nothing to do with the building, but from its position it could be imagined to be some sort of good-luck charm laid there by the builders. One small fragment of daub, bearing wattle impressions, was found, as well as ten small pieces of clay, smooth on one side but rough on the other, which might have been part of an oven, or may simply have been parts of a clay floor.

Immediately west of post-hole D there were two more of the larger post-holes. They may have formed some sort of alcove with post-hole E and the



KIONDROGHAD, ISLE OF MAN (pp. 69, 72 f.) General plan of excavated area



Above, section o-p across occupation-deposit; below, section q-R across hollow between mound and rising ground, showing dumping of occupation-material

post-hole immediately to the north of it. In the angle so defined there was a rough but probably not accidental line of stones, of which the one nearest post-hole D was the upper stone of a rotary quern (FIG. 35, no. 2), while the one at the other end was a flat stone with a hemispherical depression cut in its surface, perhaps a lamp or a mortar (PL. XI, B). There was an accumulation of occupation-deposit some 15 cm. deep underneath these stones, so they may belong to a later period than the post-holes.

About 4 m. north-east of post-hole A two more of the larger post-holes, I and J, along with two others south-east of them, may be taken to mark an entrance about I m. wide. Either I or J could have been used for hanging a door or small gate. It could not be determined whether they represented successive features, or whether there was here some sort of porch. The surface slopes down from the mound at this point, and it was perhaps to give a firmer footing in wet conditions that a thick plank was laid pointing through the entrance. Its charred remains were discovered stretching for about 1.60 m., and its continuation for another 0.80 m. was indicated by a shallow slot.

If there was a door or gate, there was presumably some continuous barrier in which it stood. This barrier could have run from post-hole $\mathfrak z$ to post-hole κ (a distance of $2\cdot 40$ m.) and then have followed the irregular series of small post-holes along the N. side of the mound. From the other side of the entrance it possibly ran towards the E. wall of the building, its principal support being marked by post-hole $\mathfrak L$; or it may have run more in the direction of post-hole $\mathfrak B$.

Between post-hole A and the entrance an artificial depression had been cut some 15 cm. into the subsoil. It was roughly square, except that in its NW. corner it was continued into an irregular extension. This extension was partly surrounded by small stake-holes, suggesting that it was at least fenced off, if not covered over. A drainage-channel ran from the depression down over the side of the mound, becoming progressively shallower. A few stones which remained along its edge may have helped to support some sort of cover. This would probably have been of wood, as suitable stone slabs would not have been easy to find in this part of the island. The filling of this whole feature (bands of hearth-material and of relatively clean sand) was indistinguishable from that of the surrounding area, but the presence of the drain suggests a phase when it was used for some specialized purpose.

South and south-west of the features so far described the occupation-deposit tended to die out, and a considerable area was found in which there were no postholes, but in the SE. corner of the mound there was a fairly substantial stone feature, beside which there was one relatively deep post-hole (22 cm.). These stones had been laid when only a slight depth of occupation-deposit had accumulated, but eventually they were almost buried, with only the tops of the highest of them showing. A few of the larger ones bore marks which suggested that they had been used as anvils. A special line of stepping-stones ran from the entrance-causeway to this part of the site.

In the extreme S. corner of the excavated area, where there was scarcely any trace of occupation-deposit, a small irregular pit was found which had a

maximum depth of 30 cm., within which a narrow column of the subsoil had been left standing. This was too fragile to have borne any weight, and there was no deposit, or discoloration of any kind to suggest what the purpose of the pit may have been.

A striking feature of the site was that nowhere did the layers of sand and hearth-material bear any relationship to the structures indicated by the post-holes. The natural conclusion is that the structures were no longer there when the layers were being deposited, and they may, therefore, have had no connexion with the activities to which the quantities of hearth-material bear witness. Such evidence as there is for supposing a connexion comes from the E. side of the excavated area, in the region of the causeway. As can be seen from Fig. 29, section o-R, there was a period in which large quantities of occupation-material, including a high proportion of hearth-material, was being dumped in the hollow between the mound and the adjacent rising ground. This had so pressed against the line of stakes which runs at right angles to the causeway that they were inclined outwards at an angle of about 45 degrees. Evidence for similar dumping, again with the stakes pressed sharply outwards, was found at both points where the line of stakes was picked up near the middle of the N. and S. sides of the excavated area. The rough causeway of stones which leads towards the mound from the east is itself built upon a deposit of this kind c. 75 cm. deep, a deposit which had completely buried some timbers, irregularly laid, which had presumably facilitated access at an early stage in the occupation of the site. There had been no dumping over the stones of the causeway, and nowhere had it accumulated higher than the level of the causeway, suggesting that at this stage dumping outside the area of the mound had come to an end. It is possible, therefore, to suppose that there were two phases, in the first of which the debris of occupation was systematically dumped on the lower ground round about the mound, while in the second it was allowed to accumulate where it fell. The timber structures would belong to the first phase, and since the material dumped outside the mound seemed to contain a much higher proportion of black hearth-material than would be normal in ordinary domestic refuse, phase one could also have seen some sort of industrial activity. For what it is worth, some of the evidence for metalworking, including the largest single store of lumps of haematite, was found resting on the original surface of the mound. The suggestion is, then, that in phase one there were metalworkers living on the mound, and making some attempt to dispose of their debris; and in phase two they lived elsewhere, and allowed their debris to accumulate on the mound. There was no trace of even the roughest shelter in this second phase.

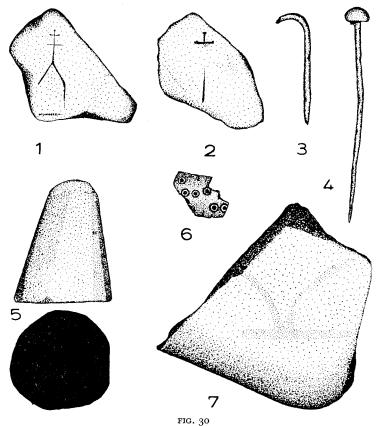
Apart from the small finds, which will be enumerated separately, the occupation-deposit was characterized by many small lumps of haematite, and by innumerable pieces of flint, mainly flakes, but including some clumsy tanged arrowheads of Bann type. It was thought at first that they might have been conveyed to the site in turves which were used for roofing, and that their distribution might give some idea of the extent of a building. It became clear, however, that they turned up wherever there was occupation-deposit, suggesting that they

may indeed have been conveyed to the site in turves from elsewhere, but that the turves were used for many different purposes. If the later occupation had disturbed a neolithic working-floor, the flints might have been expected to be more numerous in the deeper parts of the deposit; but this was not the case.

BRONZE

SMALL FINDS

1. Decorated disc (PL. X, A), probably from a latchet. Max. D. 4.3 cm. Preservation is poor, and the central triquetra pattern is partly obscured by a



KIONDROGHAD, ISLE OF MAN. Sc. 3

Nos. 1, 2, 7, pattern-stones (p. 76); nos. 3, 4, bronze pins (p. 74 f.); no. 5, stone (?)gaming-piece (p. 76); no. 6, worked bone (p. 75)

piece of wood which it has not been possible to detach. Traces of enamel, now faded to a dirty white, survive in the ray pattern round the circumference. There is a similar ray pattern on a latchet from Newry, co. Down (de Paor (1958), fig. 5, e)² but this has a hexafoil pattern in its centre.

2. Bronze pin with mushroom-shaped head (FIG. 30, no. 4). The space

² For key to shortened references see Bibliography, p. 83.

A METALWORKING SITE AT KIONDROGHAD, ISLE OF MAN 75 between the shaft and the concave under side of the head is filled by a small iron

- ring.
 3. Part of (?)crook-headed bronze pin (FIG. 30, no. 3). Both ends are broken, original size and shape uncertain.
 - 4. Three fragments of bronze pins (not illustrated):
 - i. Rounded shaft, L. 3·5 cm., T. 3 mm., tapering to 2 mm. Broken at both ends.
 - ii. Rounded shaft, L. 5·2 cm., T. 2 mm., tapering to point. Broken at thick end.
 - iii. Squared shaft, L. 4.5 cm., T. 2 mm., tapering very slightly at one end. Broken at both ends.

JET

One piece was found: a rather clumsy bead (FIG. 31, no. 5).

BONE

The only fragment of *worked bone* (FIG. 30, no. 6) bears a ring-and-dot pattern, and is part of the side-plate of a comb.

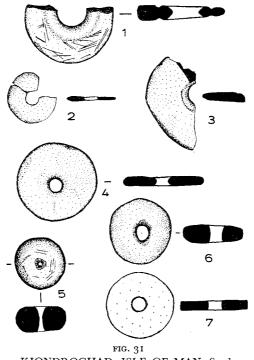
STONE

- 1. Pattern-stones, etc.
- i. Small piece of fine-grained red sandstone (PL. X, B-C), rich in mica. Max. L. 5·3 cm. On its flat surface (PL. X, B) is incised a roughly square frame demarcated by four lines, the inner two cut more deeply than the outer. At each corner of the square, and at the centre of three of the four sides, is an irregular rounded feature, demarcated by two lines. In the centre of the fourth (top) side the circular feature is replaced by a mask, of which one eye, part of the mouth, and possibly a trace of the nose, are visible. The rest has flaked away. Inside the frame are four irregular triangles, with a depression cut in the centre of each, and there is a further hole near the centre of the square.

On the other side (PL. x, c), which is more rounded and less smooth, an irregular squarish shape is demarcated by two fairly deeply incised lines, and within this frame there is a crudely executed interlocking-T pattern. This whole figure may be related (but at best only roughly) to a much more lightly incised pattern of straight and irregularly-curving lines and small loops, some parts of which are so faint as to be scarcely visible.

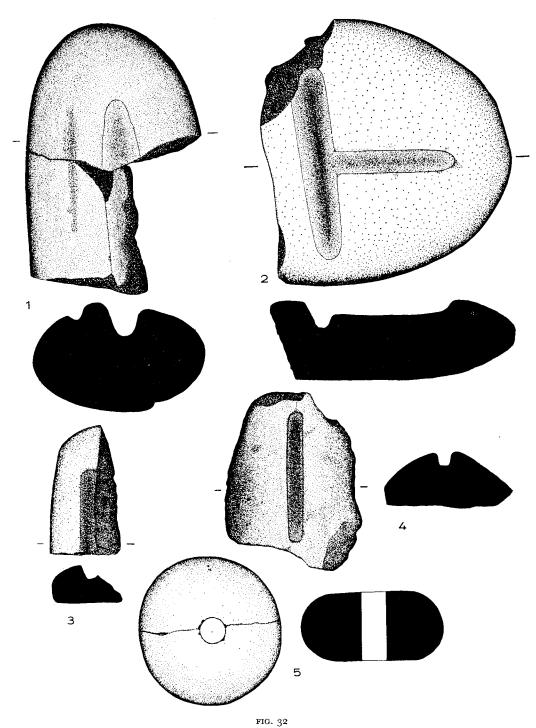
This might be a design for a piece of enamelling. It is conceivable—I owe the suggestion to Mr. Marshall Cubbon—that the interlocking-T pattern was intended to fill the centre of the square on the other side of the stone, and that the triangles which occupy that space are rough adumbrations of it. On the other hand, the design on the flat side bears a certain general resemblance to the Ballinderry (co. Offaly) gaming-board, itself possibly made in the Isle of Man (Henry (1967), pl. 15), so we may have on this stone a sketch for a piece of wood-carving.

ii. Two small stones with incised crosses (FIG. 30, nos. 1–2). On the first the design has been placed with some care in the centre of what was probably once a triangular piece of stone. The cross has rounded terminals, and the support on which it is set may, in spite of the disproportion, have been thought of as the gable end of a building. The horizontal line below the arms of the cross cannot be accepted without question as an original part of the design, as it appears to have been cut by a much sharper tool than the rest. The cross on no. 2 has squared terminals.



KIONDROGHAD, ISLE OF MAN. Sc. ½ Nos. 1-4, 6, 7, stone spindle-whorls (p. 76); no. 5, jet bead (p. 75)

- iii. Numerous stones were found on which patterns of varying degrees of crudity have been cut, that on Fig. 30, no. 7, being executed with more care than most. A favourite type of pattern (cf. Fig. 34, no. 2) consists principally of horizontal and diagonal straight lines.
- 2. (?) Gaming-piece (FIG. 30, no. 5), red sandstone, with faceted sides and rounded top, showing no sign of wear. Its general appearance is slightly reminiscent of the small fluted pieces among the chessmen of walrus ivory from the Isle of Lewis.
- 3. Spindle-whorls. Six (FIG. 31, nos. 1-4, 6, 7) were found, of which only three were complete. Only the first, which has a neatly cut groove surrounding the central hole on both surfaces, is decorated.



KIONDROGHAD, ISLE OF MAN. Sc. ½
Nos. 1-4, stone ingot-moulds (p. 78); no. 5, perforated stone (p. 80)

4. Ingot-moulds. Parts of four (FIG. 32, nos. 1-4) were found, all of red sand-stone. No. 2 appears at first sight to have been intended for casting some kind of clamp, but Professor M. J. O'Kelly, who has seen a drawing of it, suggests to me that the two arms of the T, which are not exactly at right angles to one another, may be separate ingot-moulds, the deeper one replacing the shallower. No. 1 has a rough groove cut in its upper surface, probably to make it easier to grasp with a pair of tongs.

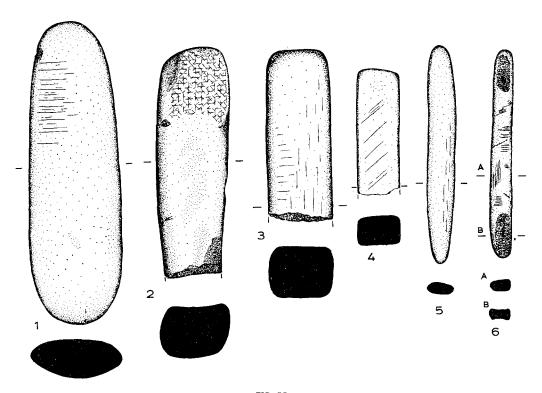
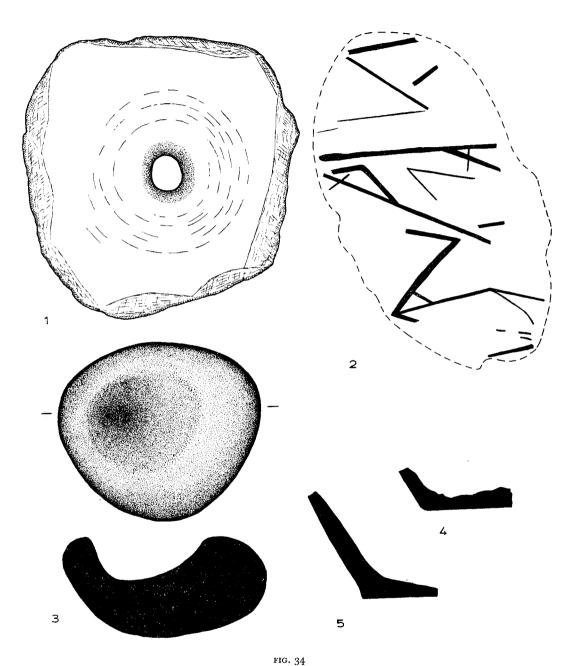


FIG. 33 KIONDROGHAD, ISLE OF MAN. Sc. $\frac{1}{2}$ Whetstones (p. 78)

5. Whetstones (FIG. 33, nos. 1-6). Thirty-six were found, twenty-seven of which are naturally rounded stones like no. 1, twenty-one being approximately of that size, and six bigger, up to 25 cm. in length. Nos. 3 and 4 are deliberately squared, and one other resembles them. No. 2 is notched for some sort of attachment, perhaps to enable it to be carried at the belt, and at its top end there are signs that an excrescence on the stone has been smoothed away. Six are of the slender type represented by nos. 5 and 6. At both ends of no. 6 both surfaces are cut away so as to be flat or slightly concave, presumably to enable it to be mounted in some way. These slender whetstones are very fragile, and can only have been used for very careful and delicate sharpening.



KIONDROGHAD, ISLE OF MAN. Sc. ½

No. 1, stone loom-weight (p. 80); no. 2, pattern-stone (p. 76); no. 3, (?) lamp (p. 80); nos. 4-5, base sections of pottery (p. 81)

6. Smoothing stones. Four stones bore a general resemblance to whetstones, but could be clearly distinguished from them by a glassy shine on one of their surfaces. Three of them (PL. XI, A, lower row) have maximum measurements, from left to right, of 18·2 cm., 19·8 cm., and 14 cm. The middle one has been photographed on its shiny surface, and the left-hand one on its opposite side, to show the depression which has been cut in it, as if to make it easier to grip. The right-hand one differs from the other two in having the shine on its left-hand edge instead of on one of its flat surfaces. These stones must have been used for smoothing rather than sharpening, and the material to which they were applied was possibly linen or leather.

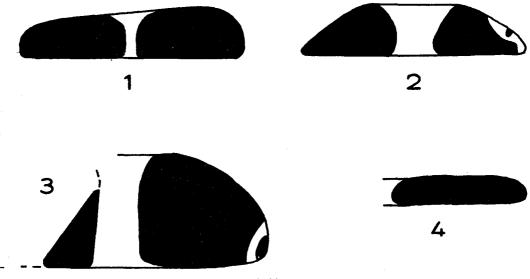


FIG. 35 KIONDROGHAD, ISLE OF MAN. Sc. ½ Quern-stones (p. 81)

- 7. Two large perforated stones (FIG. 32, no. 5, and FIG. 34, no. 1). The second is presumably a loom-weight, of a large coarse kind which has turned up frequently in the Isle of Man. The other might be a loom-weight, but seems to be too carefully made for that purpose. It is neatly shaped in red sandstone, and perforated with considerable precision. It could have been hafted and used as a hammer, but the stone is hardly strong enough for the purpose, and shows no sign of any such use. Perhaps it was the weight on a pump-drill, such as might have produced the circular striations on FIG. 34, no. 1.
- 8. Two lamps or mortars. One (PL. XI, B, on r.) is made from a small flat slab whose greatest measurement (l. to r. on PL. XI, B) is 18 cm. It was the most northerly of a short line of stones immediately west of post-hole E (FIG. 28). The other (FIG. 34, no. 3) is cut from a rounded stone. Neither bears any sign of discoloration. Among the unshaped stones were a few which could have served effectively as pestles.

- 9. Grindstone, red sandstone (PL. XI, B, on l.). D. 19·5-20 cm., T. 3·2-3·5 cm. The grinding edge is very flat and smooth, and it has clearly been treated with great care when in use.
- 10. Quern-stones (FIG. 35, nos. 1-4), granite. No. 2 is perhaps derived from Curwen's 'beehive' type, but it has a more elaborate handle-socket than the simple lateral Roman type. No. 3 reflects the iron-age B type, which is heavier, and sometimes tends towards a hemispherical shape. The handle-socket, which is nearly vertical, is set unusually low in the side of the stone. It is possible that this quern is appreciably older than the period of occupation of the site (Curwen (1937)).

The granite of these querns strongly resembles the Foxdale granite which outcrops some 16 miles to the south; this may be evidence that the outcrop gave rise at one time to a modest quern-making industry. The possibility cannot be excluded, however, that they are made from erratic blocks from the granite outcrops in Galloway.

They may have been thought of as having some talismanic value, as one was found under the paving of a hut in the iron-age coastal fort at Close ny chollagh in the south of the island.

POTTERY

Seven sherds of pottery were found, of which two could be joined (FIG. 34, no. 5, thus reducing the number to six). Two are very small pieces of samian ware, one of which appears to have been deliberately ground to a pear-shape. The others are:

- 1. Rim-sherd, hard, dark grey ware (FIG. 36, no. 1). This appears to be Romano-British, an identification which was confirmed by the late Sir Ian Richmond.
- 2. Three sherds of hard, wheel-made ware, with a cream surface (Fig. 34, nos. 4–5, Fig. 36, no. 2). The tempering includes fragments of mica and of a brick red material, probably haematite. The body is grey. Fig. 34, no. 5, is slightly less

well finished than the other two, and the biscuit is a slightly darker grey. The diameter of the base of Fig. 34, no. 4, is c. 8.2 cm., and that of Fig. 34, no. 5, is c. 11 cm. These sherds bear a very close resemblance to E ware, and were identified as such by my colleague, Mr. Philip Rahtz, and by Dr. H. N. Savory, for whose advice I am grateful (cf. Thomas (1959)).

Another piece of fired clay appears to be part of a *tuyère* (FIG. 36, no. 3). Part of the circular aperture through which the air passed into the furnace is preserved. Its outside is partly covered by a

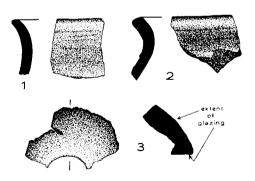


FIG. 36
KIONDROGHAD, ISLE OF MAN. Sc. ½
Nos. 1, 2, pottery (p. 81); no. 3, part of (?)tuyère (p. 81 f.)

dark greenish glaze. A number of other fragments of similarly glazed fired clay were found which are probably also parts of tuyères, but none had any significant shape.

GLASS

One piece was found: a tiny fragment of a yellow bead.

DISCUSSION

The two main problems which arise are: (1) the date of the occupation; and (2) the extent to which this site can be called a specialized metalworking establishment.

Two of the finds—the bronze disc (PL. X, A) and one of the pattern-stones (pl. x, B-C)—fit into a recognizable Early Christian context, and this is borne out by the two stones which bear cross patterns. The natural date would be the late 7th or the 8th century, and the presence of E ware at least does not contradict this. We know virtually nothing of what happened in the Isle of Man in the 9th century, but it might be guessed that a small undefended site like this, only 11/2 miles from the sea, would have succumbed quite soon to Viking raids. On the other hand there are two enamelled mounts from the pagan ship-burial on Balladoole, in the south of the island, which bear very simple patterns, and are possibly of local workmanship (Bersu and Wilson (1966), pl. i). If so, it is possible to imagine that when Norsemen came to settle in the island, perhaps in the 2nd half of the 9th century, they found craftsmen still surviving, valued their skill, and gave them employment. The second phase of occupation, when apparently there was no one actually living on the site, may, in fact, belong to the 9th century. One could imagine that the craftsmen continued to work at their traditional site, but left it in the evening for somewhere where they hoped to enjoy greater security.

The question whether this was a specialized metalworking site must be viewed in the light of the fact that sites of the Early Christian period very commonly produce some evidence for metalworking. The idea that Kiondroghad was slightly more specialized than average is perhaps a little subjective, but is based first and foremost on the fact that lumps of haematite and fragments of slag and clinker were found throughout the occupation-deposit, and that this deposit itself was characterized by innumerable overlapping spreads of dark hearthmaterial. More specific evidence is provided by the fragment of tuyère, and by the ingot-moulds, which must have been used for casting bronze, if not silver. More intriguing is the pattern-stone (PL. X, B-C), which bears what may be sketches for a piece of metalwork which was to have a central panel of champlevé enamelling forming an interlocking-T pattern. This raises the possibility, if no more, that the latchet-disc (PL. X, A) was made on the site, and permits the conjecture that the enamelled mounts from Balladoole may have been made in the Isle of Man. In addition, the number of whetstones (36) seems to be unusually high for an ordinary domestic establishment. Against all this must be set the remarkable fact that only one small fragment of crucible was found, compared, for example, with

43 fragments at Ballinderry crannog no. 2 in co. Offaly (Hencken (1942), p. 50), three complete crucibles and 24 fragments at Garryduff 1 in co. Cork (O'Kelly (1962), p. 95), and no less than 39 almost complete crucibles, and over 2,500 fragments at Garranes in co. Cork (O Ríordáin (1942), p. 135).

The answer is, perhaps, that Kiondroghad was in fact a metalworking establishment, but that delicate work of the kind suggested by the pattern-stone with the interlocking-T design was only rarely carried out there. Probably the routine activities were of the humbler kinds of blacksmithing, which would explain the quantity of haematite and slag. There was probably a lack of wealthy patrons on the island to commission elaborate metalwork, and a monastery like that at Maughold might be expected to have had its own workshop. Yet the quality of the crucifix from the Calf of Man (Kermode (1907), pl. xvi; Talbot Rice (1952), fig. 9) and its resemblance to the bronze openwork plaque from Athlone (de Paor (1958), pl. 28; Henry (1965), pl. 46) shows that in the Early Christian period the Isle of Man was by no means a complete backwater artistically. There may well have been craftsmen on the island in the 8th century who could produce as good work in metal as the artist of the Calf crucifix did in stone.

The only finds which suggest contact with the eastern side of the Irish Sea are the three sherds of Roman pottery. Fragments of samian ware may have been traded because of their intrinsic attractiveness as hard red material, but the sherd of coarse ware presumably reached the island as part of a complete pot. It is impossible to say when it may have done so. Roman cemeteries were probably still in the 8th century a source of good hard pottery for enterprising traders. In any case, the sherds from Kiondroghad are the first certain finds of Roman pottery in the Isle of Man, just as the site is the first secular site of its period to be firmly identified.

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