

VII.

ON THE CAIRNS OF ARRAN. No. III. WITH A NOTICE OF A MEGALITHIC STRUCTURE AT ARDENADAM, ON THE HOLY LOCH. By THOMAS H. BRYCE, M.A., M.D., F.S.A. Scot.

Since the publication of my last communication on the Cairns of Arran in 1903,¹ I have become acquainted with certain chambered structures which had escaped me in my earlier investigations. I owe the knowledge of these sites to the kindness of Mr J. A. Balfour and members of the Arran Society, who have been engaged in locating all the objects of archæological interest in the island with the object of compiling a complete inventory of the monuments, to be published in the forthcoming *Book of Arran*. I owe, further, to the Arran Society, who provided the necessary labour, the opportunity of excavating these sites, as well as two others mentioned in my former paper. All the chambers had been more or less disturbed, and the yield of relics has not, therefore, been large, but the investigations have brought to light some fresh evidence regarding structural detail. One cairn supplies further proof that a frontal semicircular setting of stones formed part of the original design of the typical monument, while two remarkable cairns near Lamlash furnish examples of stages of degeneration of the monument, in respect that they show great departure from the original plan, and also contraction of the chambers. In this latter connection I shall take this opportunity of describing a megalithic structure at Ardenadam, on the Holy Loch, which I examined and excavated in 1904, but have not yet reported upon.

CAIRN AT EAST BENNAN.

The cairn occupies an elevated ridge which lies athwart the valley of the Struey Burn, on the farm of East Bennan, about one-eighth of a mile from the sea. The ridge lies W.N.W. and E.S.E., and rises about 20 feet

¹ *Proc. Soc. Antiq. Scot.*, vol. xxxviii.

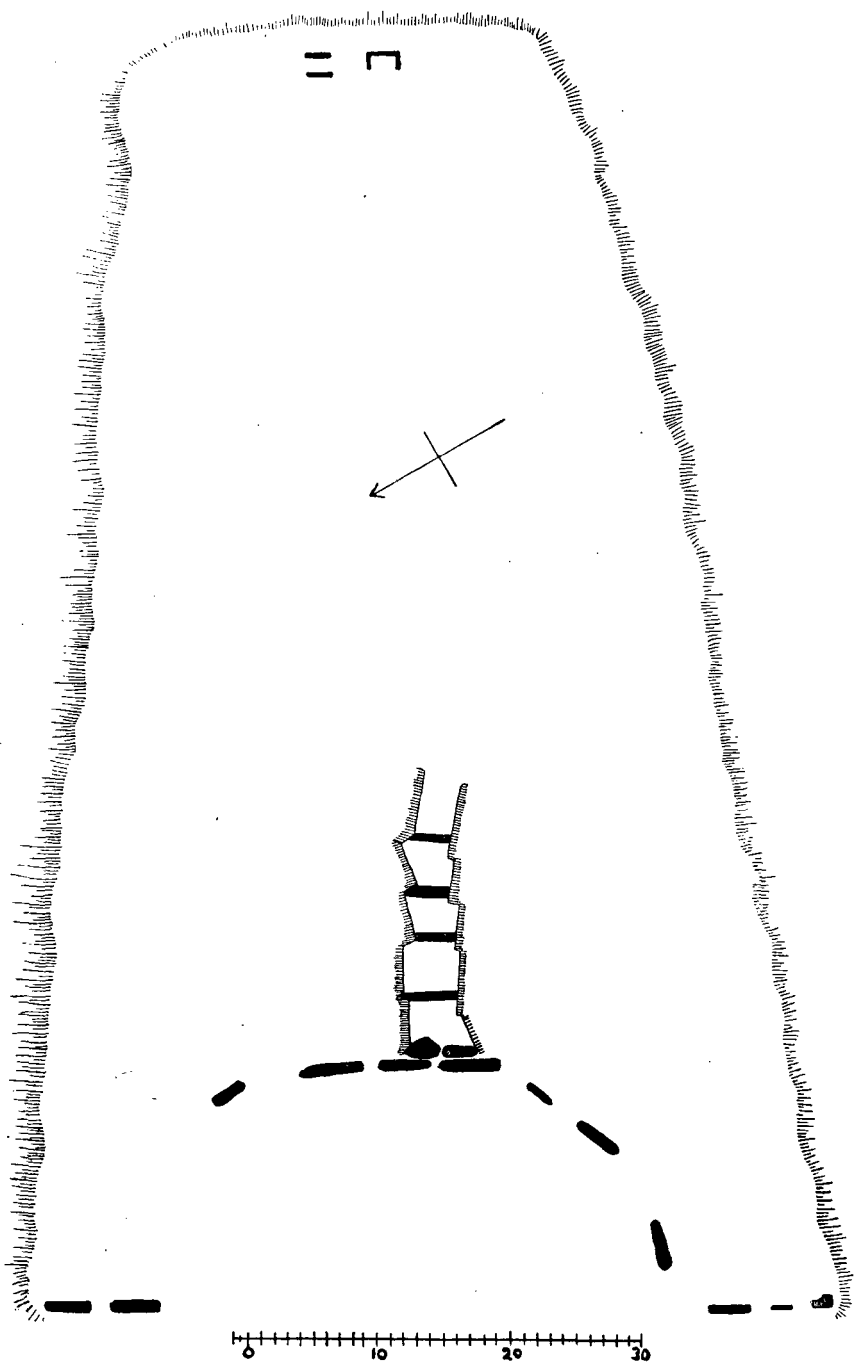


Fig. 1. Plan of Cairn at East Bennan.

above the stream. It runs out to the level at its western end, but at its eastern end it falls sheer in a rocky face down to the burn. The cairn crowns the ridge, and must at one time have occupied its whole breadth. The south side has been extensively quarried, and the greater part of the stones have been removed, exposing the chamber and laying bare the base of the cairn. The north side has been less disturbed, and coincides with the edge of the natural eminence. The cairn has here all the appearance of having been built up, large blocks of stone laid horizontally being seen along nearly the whole face. A few vertical slabs occur along the outer edge, some still standing, others displaced outwards, and it is possible that these once formed a continuous series. Over the surface of the cairn numerous large stones project above the turf. The total length of the cairn is about 100 feet, and the breadth at the western end is 63 feet (fig. 1). The west end of the ridge, as already explained, runs out to the general ground-level; and here, in front of the portal of the chamber, is a semicircular area marked off by standing stones. The semicircle is 38 feet in diameter, and from its horns the stones are carried out in a straight line on each side to

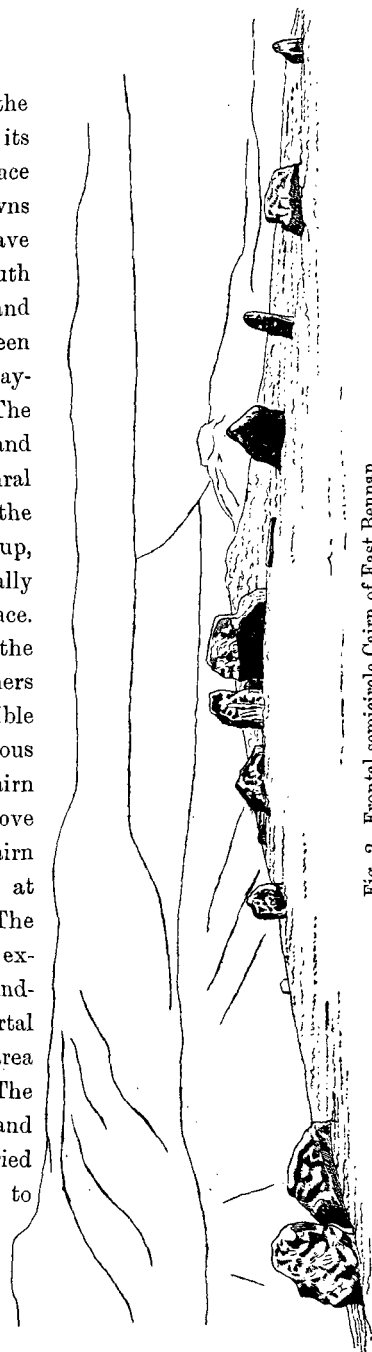


Fig. 2. Frontal semicircle Cairn of East Bennan.

the upper angles of the cairn (fig. 2). The central stones of the semicircle form the portal stones of the chamber.

This setting of stones is of considerable interest. It clearly corresponds to the similar setting of flags marking off the frontal semicircle at Carn Ban, in Kilmory Water, but here the stones of the cairn have been removed, and the blocks stand free. The slabs are, moreover, rather heavier; thus, starting from the right horn of the semicircle,—

- No. 1 is 3 feet 6 inches broad, 6 inches thick, and 3 feet high.
 ,, 2 is 3 ,, 4 ,, ,, 8 ,, ,, ,, 3 ,, 8 inches high.
 ,, 3 is 3 ,, 8 ,, ,, 7 ,, ,, but is broken at the
 ground-level.
 ,, 4 is 5 feet broad, 1 foot 6 inches thick, and 4 feet high.
 ,, 5 is 2 ,, 3 inches broad, 1 foot 8 inches thick, and 3 feet 7 inches
 high.
 ,, 6 is 3 feet 10 inches broad, 11 inches thick, and 1 foot 4 inches high.
 ,, 7 is 2 ,, 7 ,, ,, 7 ,, ,, ,, 1 ,, 9 ,, ,,

The East Bennan Cairn is the only chambered cairn I have yet seen in which a denuded frontal semicircle has been in great part preserved.

The portal of the chamber is a narrow space of at most 10 inches between the edges of the portal stones. Behind these there are two heavy blocks which do not rise above the level of the denuded megalithic section of the chamber, and serve to support the portal stones. The chamber (fig. 3) itself has lost its roof and its upper section of horizontal flags. The basal megalithic portion alone survives, the upper edges of the stones standing on a level with the present surface. There are in all five pairs of heavy blocks set on edge, bounding a vault of 22 feet long and from 3 feet to 3 feet 6 inches broad, divided by four septal slabs into five compartments. The stone completing the chamber at its eastern end has been removed. The compartments vary in depth from 3 to 4 feet below the upper edges of the side stones. The first measures in the long axis of the chamber 4 feet, the second 4 feet, the third 3 feet, the fourth 3 feet 8 inches, and the fifth 4 feet.

I was informed by the present tenant of the farm on which the cairn stands that the chamber was dug out many years ago by his father. When we cleared it out again we accordingly found the original conditions much disturbed. Only in the first two compartments was evidence found of the presence of a layer of black earth with charcoal, such as seen at other sites. The only relics recovered were a small



Fig. 3. Portal Stones and Remains of Chamber, East Bennan Cairn.

flake of Corriegills pitchstone and a fragment of a clay vessel. The latter is composed of a black ware, and its shape clearly indicates that it formed part of a round-bottomed bowl-like vessel.

CAIRNS AT BLAIRMORE, LAMLASH.

On the eastern slope of the valley through which runs the road from Brodick to Lamlash, about three-quarters of a mile above Lamlash there are two heather-covered cairns, one associated with a standing-stone.

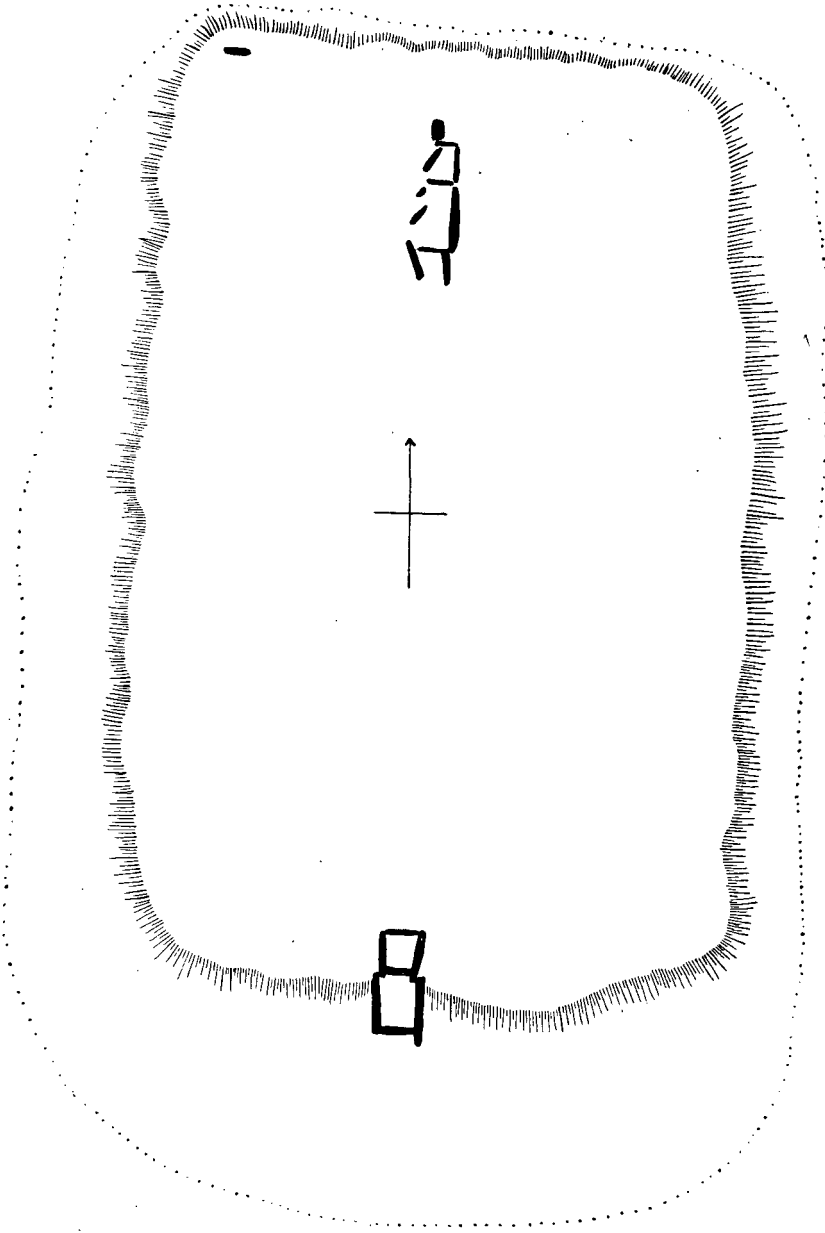


Fig. 4. Plan of Dunan Beag Cairn, Lamlash.

The first stands at a level of 400 feet above the sea, the second on the ridge of the hill 100 feet higher. Both have been extensively quarried.

THE LOWER CAIRN—DUNAN BEAG.

This cairn (fig. 4) is rectangular, and measures 121 feet long by 65 feet wide. Its long axis runs north and south, and 11 feet from its eastern edge there is a standing-stone 3 feet 3 inches broad and 7 feet high.

The southern edge of the cairn is ill-defined, and emerging from its sloping bank before excavation were two massive blocks placed parallel to one another. These proved to be the side stones of a small chamber which had been partially denuded during the quarrying of the cairn. At the north end a small vertical block marks the western horn of the cairn, while 16 feet from the present margin a single block, associated with two others in line, suggested the presence of a second and possibly the principal chamber. When heather and soil were removed the surmise proved correct.

The **south chamber** was first examined. It consists of two pairs of lateral stones set on edge parallel to one another, enclosing a space of 10 feet long, divided into two compartments by transverse slabs (fig. 5). The chamber is directed nearly due N. and S. (magnetic). The north end of the trench is closed by a cross stone standing on a level with the side stones, and 5 feet 9 inches deep. The septal slabs are placed, the first 2 feet, the second 3 feet, below the upper edges of the lateral blocks. The first compartment measures 5 feet long by 3 feet 3 inches broad, the second 3 feet long by 2 feet 10 inches, narrowing to 2 feet. The side stones are massive blocks of schist, the pair bounding the first compartment measuring 5 feet 1 inch and 6 feet 6 inches respectively, the pair forming the second compartment, 4 feet 6 inches and 4 feet 10 inches (figs. 5 and 6).

The tall flag closing the chamber at the northern end is clearly the original end stone of the vault, but the absence of portal stones, and the fact that the cairn has been quarried inwards from the margin, suggests

the possibility that these two compartments are the survivors of a larger series.

Each compartment was completely filled with soil and stones. There

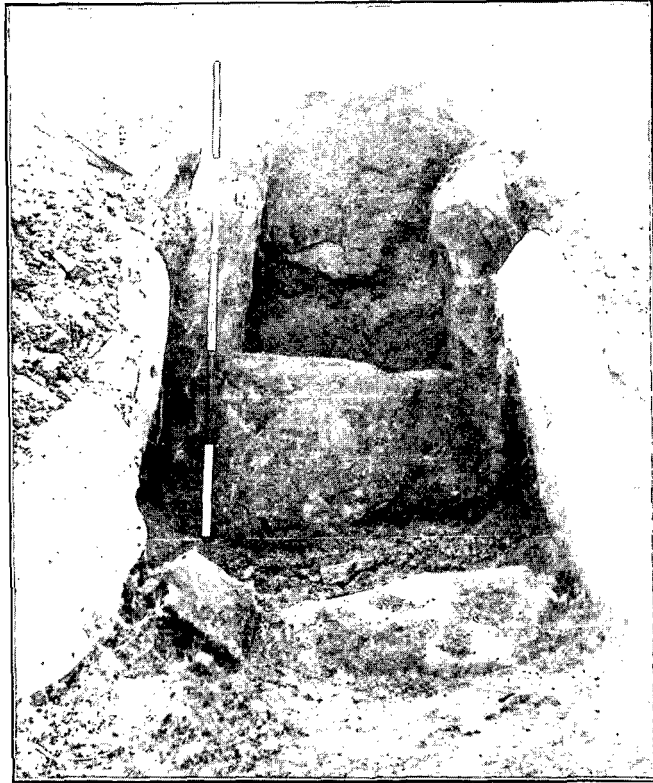


Fig. 5. South Chamber, Dunan Beag Cairn, after excavation.

were numerous small sandstone flags of varying dimensions, probably representing an upper built section of the chamber wall. The floor of each compartment was covered with a layer of black earth, and numerous fragments of charcoal were found in the deeper strata of the soil.

In the first compartment two unburnt burials were laid bare, one along the west and the other along the east wall. The bodies lay in the doubled-up position, and the bones were those of adult persons, but they were so much decayed and softened that they could not be recovered

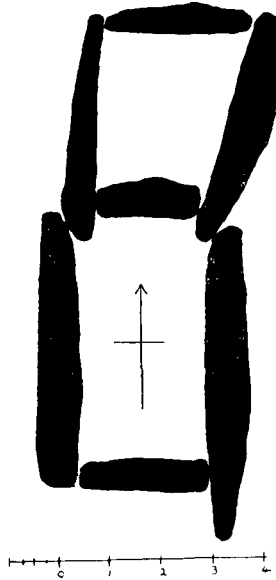


Fig. 6. Plan of South Chamber, Dunan Beag Cairn.

entire. A number of animal bones, chiefly of the ox, were found in this compartment, and also teeth of ox and pig.

In the second compartment fragments of unburnt bone representing a burial were found in the south-west corner.

The relics recovered were a flint flake, some fragments of Corriegills pitchstone, and two distinctly flaked portions of this mineral; also a fragment of dark-coloured pottery, portions of an ornamented vessel of a red ware, and a triangular perforated plate of jet.

The fragments of the urn recovered are all very small, and do not piece together so as to show the height of the vessel from base to lip. But it has been evidently a smallish vessel of the beaker type, with an approximately semi-globular lower part and a low everted rim. The

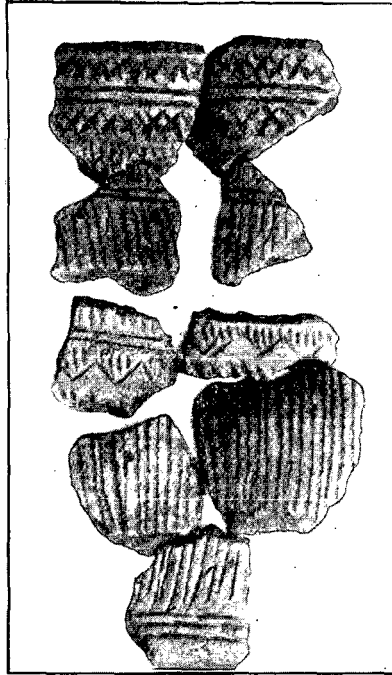


Fig. 7. Fragments of Urn from South Chamber, Dunan Beag Cairn.

lip is bevelled from both sides so as to present a triangular section, the inner bevel being slightly larger than the outer. Both are ornamented with short parallel lines drawn obliquely across, and a band of similar ornament runs round the top of the inside face of the lip. Below the bevel on the outer surface of the everted lip is a double band of criss-cross lines, separated by a band of two horizontal lines running round the

vessel a little more than an eighth of an inch apart. The decoration on the neck seems to have been in straight parallel lines arranged vertically and set closely together, bordered above and below by bands of two horizontal lines running round the vessel. The shoulder seems to have had a band of zigzag lines set horizontally, with three or four short lines placed vertically in the upper angles. Below this, on the bulge of the lower part, is a zone of parallel lines placed vertically and close together, bordered at the lower part by a band of three parallel horizontal lines just above the bottom.

The plate of jet (fig. 8) is the terminal piece of a necklace. It is tri-

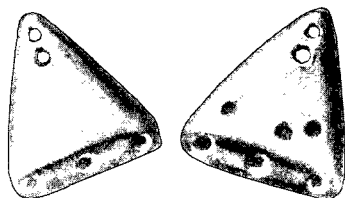


Fig. 8. Terminal of a Necklace in Jet, from the South Chamber, Dunan Beag Cairn.

angular in shape, with smooth rounded borders and blunted angles. It is 7.6 mm. thick at the base, and tapers slightly to the apical angle, which is sharper than the basal angles. The base measures 21 mm., and the sides are slightly unequal, measuring 25.5 mm. and 23 mm. respectively, so that the triangle is not quite equilateral. One face is smoothly polished and slightly convex; the reverse is flat and rougher. The face view shows two equal and neatly-bored perforations; the reverse shows, besides these two perforations, three others near the base, which open on the basal border. The three openings on the border are placed one at each angle, and the third exactly midway between them, but the middle perforation has run obliquely, so that the opening on the face lies nearer the right than the left lateral aperture.

A small piece of iron which had been melted was also found among the soil. It does not seem to have been part of any particular object, and must clearly be a casual deposit.



Fig. 9. North Chamber, Dunan Beag Cairn.

The north chamber (fig. 9) at the opposite end of the cairn is much dilapidated. It consists of three compartments, and one of the portal stones is still in position. The long axis of the chamber runs approximately north and south (magnetic).

The portal stone is a block of schist 2 feet 6 inches broad. It stands in line with the west wall of the chamber, and 3 feet 6 inches above

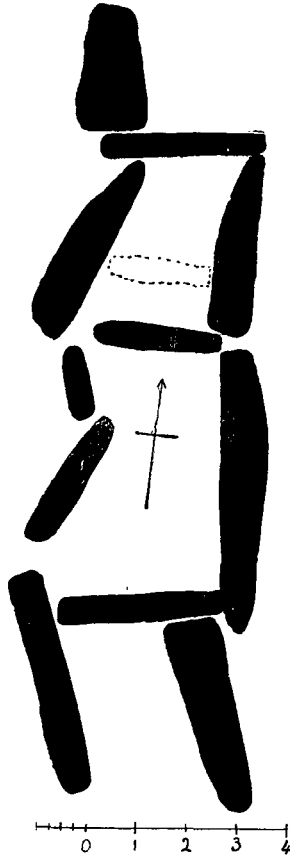


Fig. 10. Plan of North Chamber, Dunan Beag Cairn.

the transverse stone which forms the sill of the portal. There are now no remains of a frontal semicircle, but it is probable that the stone near the N.W. corner of the cairn, which measures 3 feet broad and has

its axis directed east and west, is a survivor of such a setting as that at the East Bennan cairn.

The east wall of the chamber is formed of three large blocks: the first measures 4 feet by 1 foot; the second is 5 feet 6 inches long, 1 foot broad, and 3 feet 6 inches deep, but it is tilted inwards out of its original vertical position; the third stone is 5 feet 3 inches long by 1 foot 3 inches broad at its widest part, and overlaps the second on its inner side.

The west wall is much broken down and the stones are displaced (fig. 10). The first compartment is bounded by a stone 4 feet long; the second is completed by two smaller stones, 1 foot 9 and 2 feet 3 inches respectively; the third is bounded by a stone 4 feet 8 inches long, 13 inches thick, and 3 feet 9 inches deep. The end stone of the chamber is absent, but the septal stones are still in position, dividing the trench into three compartments. In the first compartment there is a third cross stone, which probably represents a stone fallen in from the upper built section of the wall or the roof, and the space is nearly filled by a large block, which is in all probability the second portal stone, which has fallen into the chamber.

The chamber was filled by soil and large stones. It had certainly been disturbed on some previous occasion. The only trace of an interment was a small piece of burnt bone, and the only relics recovered were a flint flake with signs of working, a piece of pitchstone, and a small fragment of dark-coloured pottery without ornamentation.

THE UPPER CAIRN—DUNAN MOR.

The cairn has now an almost circular outline (fig. 11). It measures 78 feet in diameter. It has served as a quarry out of which a dike running over the hill has been built. In the process of quarrying the workers had laid bare certain megalithic structures, and most of the large slabs of schist which formed these have been removed. Some of the blocks, however, proved too massive for removal; these, when the cairn was first examined, projecting out of the heather, revealed the nature of the cairn.

When the stones were freed from heather and cleared of surface soil, it became plain that the cairn had been occupied by three chambers,

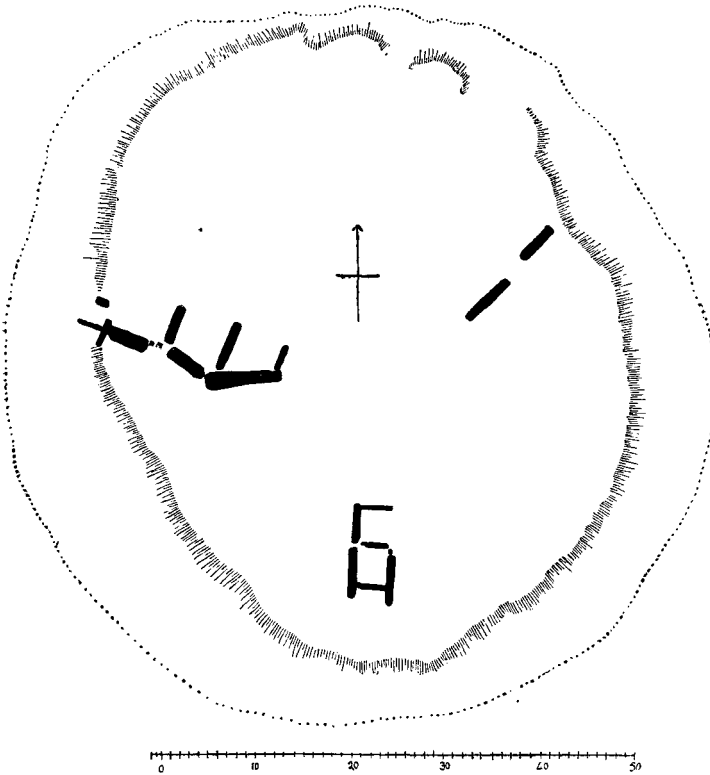


Fig. 11. Plan of Dunan Mor Cairn, Lamlash.

arranged in radial fashion, one at the southern margin, a second at the western, and a third at the north-east corner.

The chamber at the south edge (figs. 12 and 13) is the most perfect. It runs nearly due north and south, with an inclination to the east. It now consists of two compartments, though it is of course possible that

these represent only a portion of a larger structure. The stones bounding the first compartment are massive blocks: the east stone measures 6 feet 1 inch by 1 foot 8 inches, tapering to 10 inches, and stands 5 feet high; the west measures 5 feet 10 inches long by 1 foot 7 inches thick. The second compartment has lost its east stone; the west is 3 feet



Fig. 12. South Chamber, Dunan Mor Cairn.

11 inches broad, 12 inches thick, and 6 feet deep. Of the cross stones, the third is clearly the end stone of the chamber; it stands above the level of the other two, being 4 feet 6 inches deep. The other two septal slabs are vertically placed, and stand 2 feet 6 inches and 2 feet 3 inches above the floor of the chamber.

The internal measurements of the first compartment are 3 feet 6 inches by 2 feet 11 inches, and of the second 3 feet 5 inches by about 3 feet. The compartments were filled with soil and stones, many of which were

small slabs, probably representing portions of an upper built section of the chamber wall. The floor of each compartment showed the usual layer of black soil and charcoal. Fragments of burnt bone were found in this soil, but in very sparing amount, and pieces of a large vessel of pottery, a flint knife, three flint flakes, and portions of Corriegills pitchstone were recovered.

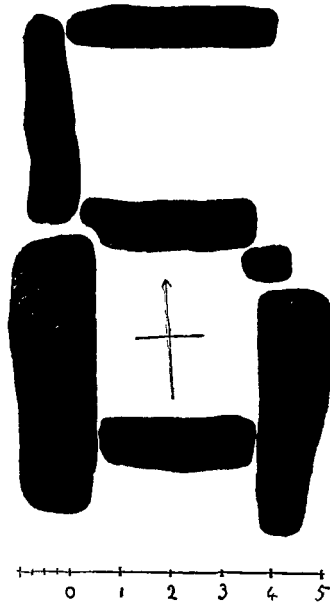


Fig. 13. Plan of South Chamber, Dunan Mor Cairn.

The flint knife (fig. 14) is 8 cm. long by 3.2 broad. It is made of an opaque flint, and is worked along both borders.

The urn is represented only by a fragment of the flat bottom, $2\frac{1}{2}$ by 2 inches, and half an inch in thickness, three or four small pieces of the side at its junction with the bottom, and a single fragment of the side at a part higher up measuring $1\frac{1}{2}$ by 1 inch, with ornamentation of

parallel incised lines crossing each other obliquely. The fabric is an earthy clay of a dark reddish colour, mixed with whitish comminuted fragments of felspar and darkish fragments of hornblende or pitchstone,



Fig. 14. Flint Knife from the South Chamber,
Dunan Mor Cairn.

and the texture is loose and pliable. So far as can be judged from the scanty remnants of the vessel, it seems to have been somewhat straight-sided, with a flat bottom, nearer to 4 than 3 inches in diameter. It thus resembles the cinerary type more than the food-vessel type of urn.

The bones are too fragmentary to yield evidence as to age or sex, but the probability is that they represent the remains of an adult individual.

The second chamber at the north-east corner is now represented only by two stones placed on edge, and in line with one another.

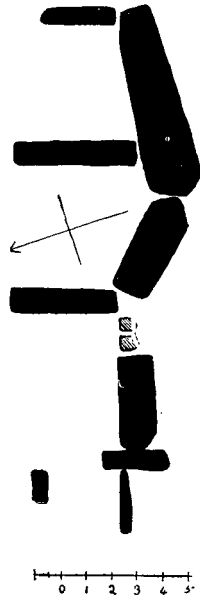


Fig. 15. Plan of West Chamber, Dunan Mor Cairn.

The third chamber (fig. 15) is rather more complete, though one wall has been removed in the quarrying of the cairn. It runs from the western bank of the cairn towards its centre in a direction 70° south of east (magnetic). It measures over all 22 feet, and is divided into three compartments by two septal slabs. At the western end a slab of 2 feet 4 inches broad by 6 inches thick is set at right angles to the chamber wall, and clearly forms one of the portal stones. Beyond this, and prob-

ably to support it, is a thin slab (2 feet 6 inches by 3 inches), set on edge, while 2 feet 8 inches from this is a smaller stone (1 foot 3 inches by 9 inches), which probably served the same purpose for the second and missing portal stone. The blocks forming the wall of the chamber are specially heavy. The stone furthest removed from the portal is 7 feet 1 inch long by 2 feet thick, the second is 4 feet 7 inches long by 12 inches thick, and the first is 4 feet long by 19 inches at its base, where it rests on the ground. Between this stone and the first septal stone there is an interval of 1 foot 4 inches, which is filled up by a building of small flat stones, piled horizontally. The cross stones are unusually heavy, and their upper edges are only about a foot below the upper edges of the side stones. The third cross stone is 18 inches higher than the others, and is the end stone of the chamber. The compartments are larger than usual, the first measuring in its long axis 5 feet 4 inches, the second 5 feet, and the third 4 feet 9 inches. The depth of each is about 3 feet 2 inches. The breadth of the chamber cannot be determined, owing to the absence of the north wall. The septal stones stand 3 feet 2 inches above the floor.

The central compartment was first completely cleared. It was full of large stones from the surface of the cairn, firmly impacted; it had obviously been thoroughly emptied on some previous occasion. No relics were found. The other compartments being in the same condition, it was not considered worth while to expend further labour on them.

The cairn is specially remarkable in possessing three chambers. It is the only cairn in Arran or Bute in which such an arrangement prevails. At Glecknabae, in Bute, a cairn occurs with two chambers, but these are formed of one compartment only. The point will be discussed in a later paragraph.

SANNOX CHAMBER.

On the high ridge above the old sea-cliff near Sannox, nearly opposite the so-called "Rocking Stone" on the shore, is the remnant of a cairn. It measures 50 feet long by 31 feet broad, and exposed on the surface

before excavation were three open and rifled cists. I noted the site of these cists in my paper in volume xxxviii. of the *Proceedings*. One of these was definitely a short cist, 2 feet 6 inches square, neatly built, and having all the slabs on the same level. The other two cists were larger, ran in the same line E.S.E. and W.N.W., and were only 4 feet apart. The appearance and the large size of these cists suggested that we had to do with a chamber. There was no appearance, however, of side stones between the cists, and on surface examination the only possible description of the structure was that of two cists in juxtaposition. I mention these details because this structure is an excellent example of the futility of surface descriptions. When the space between the cists was explored, it was discovered that the structure was in reality a chamber of three compartments, the middle compartment having the peculiarity that one of its walls was formed by a thin flag considerably below the level of the transverse stones, while the other was represented by a rude building or piling of stones on one another.

There is no sign of a pair of portal stones and no evidence of a frontal semicircle. The chamber measures over all 12 feet 10 inches (fig. 16). The north compartment measures 3 feet 8 inches in the long axis, by 4 feet in the transverse axis of the trench. The east stone is a large flag of hard red sandstone, 5 feet 3 inches long, and overlapping the side stone of the middle compartment on its outer side by 18 inches. The west wall is formed of two slabs of sandstone, the one 4 feet and the other 15 inches, the latter acting as a wedge between the larger slab and the transverse stone. The north wall of the chamber has a double tier of small and thin sandstone flags built upon its upper edge. The middle compartment measures 3 feet 9 inches by 4 feet. Its west wall is formed entirely of small slabs and rounded granite blocks piled on one another; the east wall has a similar construction above, but below is completed by a thin sandstone flag 5 feet long, the upper edge of which falls 15 to 18 inches below the level of the transverse stones. The south compartment measures 4 feet 1 inch long, and 3 feet broad at its north end, narrowing to 2 feet 4 inches at its south end, which is closed by a

granite slab rising $5\frac{1}{2}$ feet above the chamber floor. The upper edge of this slab, which is the end stone of the chamber, is tapered, and is 18 inches higher than the side stones. The transverse stone is a slab of conglomerate, measuring 3 feet long, 6 inches thick, and 3 feet deep. The west wall is formed of two sandstone flags, a longer, 4 feet long,

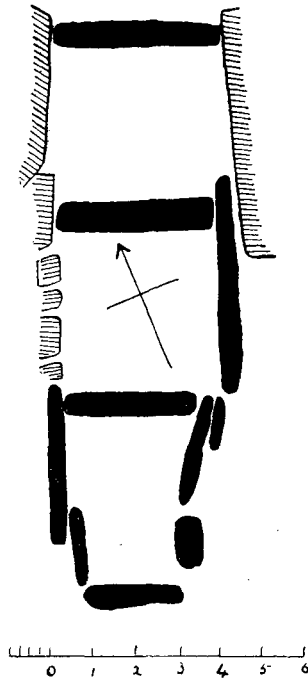


Fig. 16. Plan of Sannox Chamber.

overlapping a shorter, 18 inches long, on its outer side. The east wall is formed of a sandstone slab 3 feet long, between which and the end stone is a space nearly but not quite filled by an oblong block of granite.

The second and third compartments were filled with earth and large stones, probably filled in by some previous diggers; the first compart-

ment had been left empty. The only thing found was a considerable deposit of burnt human bones in the north-east corner of the middle compartment.

CHAMBER ON MACHRIE MOOR.

The chamber which is here the subject of description is situated a few hundred yards south-west of the Moss farm and the celebrated group of

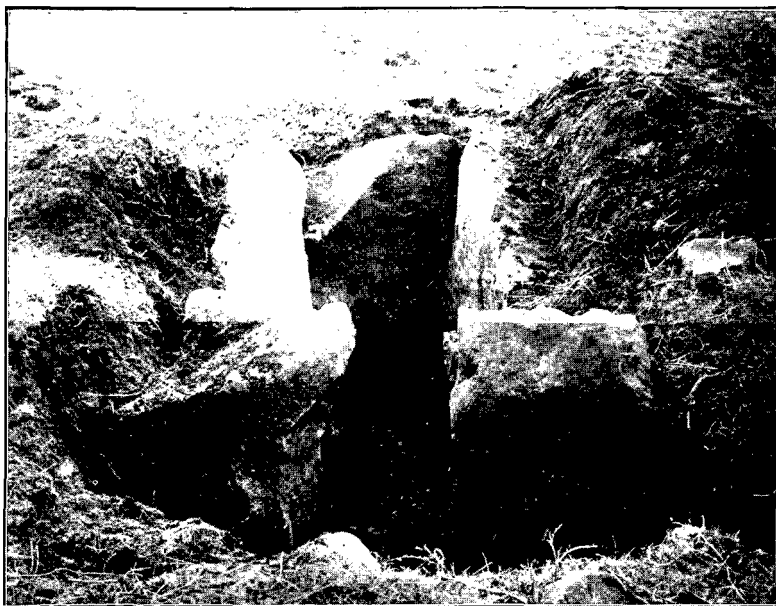


Fig. 17. Small Chamber on Machrie Moor after excavation.

circles on Machrie Moor. There is now no trace of the cairn associated with the chamber; the roof has been removed, and the side stones are buried to their upper edges in the layer of peat which here covers the subsoil. The interior of the chamber has been completely cleared out by some earlier diggers, and the floor is covered by a layer of peaty soil. The chamber (fig. 17) provides an example of a short unsegmented vault,

with a distinct portal of entrance ; and I considered it advisable to clear it out again and to define the stones, in order to better describe the structural features. As was to be expected, nothing in the way of relics were recovered in the soil upon the floor of the vault.

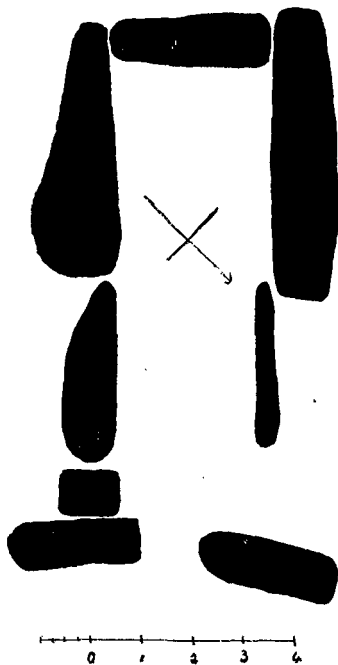


Fig. 18. Plan of small Chamber on Machrie Moor.

The chamber measures 9 feet 10 inches from the portal to the end stone. The portal is guarded by two stones. The left of these measures 1 foot 8 inches broad, 10 inches thick, and 3 feet 6 inches high ; the right measures 2 feet 4 inches broad, 10 inches thick, and 3 feet high. The space between the mesial surfaces of the portal stones is 1 foot 3 inches. The axis of the chamber runs north-east and south-west, the

portal to the north-east (fig. 18). Its south wall is formed of three stones : 1st, a cubical block of 10 inches diameter and 3 feet in depth ; 2nd, an irregular slab 3 feet 11 inches long, with a maximum thickness of 1 foot and a depth of 3 feet 6 inches ; 3rd, a block of 4 feet 6 inches long, 1 foot 3 inches thick, and 3 feet 4 inches deep. The north wall is formed of two stones, a massive flag of 5 feet 5 inches long, 1 foot thick and 3 feet 7 inches deep, and a small flag of 3 feet long, 6 inches broad, and 2 feet 9 inches deep. Between the end of this and the portal stone is a gap which must have been filled either by a cubical block like that of the opposite side or by building of small stones. The end stone measures 3 feet by 1 foot, and it stands 3 feet 6 inches above the floor of the chamber. There is no septal slab at the point of junction of the two pairs of slabs forming the walls of the chamber, but it is possible that it has been removed, because both the stones nearest the portal were displaced inwards, and, I think, must originally have been provided with a cross stone to keep them in position. Although there was a certain amount of doubt as to whether the chambers of two compartments in the Blairmore cairns represented the original form of these structures, here there can be no question that we have to do with a complete chamber, because of the presence of a portal, and also because the end stone is on the same level as the side stones.

BALLYMEANOCH CAIRN.

This structure is situated at the head of Ballymeanoch glen, on the left bank of the Loch Burn, a small stream issuing from Garbad Loch. The cairn has been largely removed : the base only remains, extending over an area of 31 feet by 25 feet. It is wholly covered with heather, out of which a few slabs on edge appear, and indicate the nature of the monument.

The plan annexed (fig. 19) shows the disposition of these stones, and it will be recognised that we have here the remains of a chamber with a portal of entrance and a portion of a frontal semicircle. The ruined and disturbed state of the chamber did not promise any results from

excavation. I therefore contented myself with planning the remnant, and include the plan here only to complete the record of the remains of this class of structure in Arran.

CAIRN AT NORTH SANNOX.

At the mouth of the North Sannox Water, on the north bank of the stream, there is a cairn of stones of considerable size and nearly circular

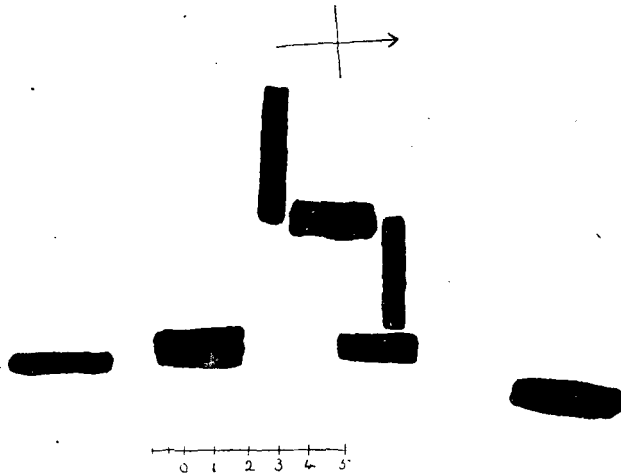


Fig. 19. Plan of remnant of a Chamber in Ballymeanoch Glen.

form, already noted in my paper in volume xxxviii. of the *Proceedings*. It measures a little more than 50 feet in one diameter, and a little less than 50 feet in the other. The south and west sides run out to the general level of the bank on which it is placed, but the north and east edges form a steep slope of about 7 to 10 feet. On this slope there are three or four large flags of sandstone lying horizontally. On the eastern edge there is a single upright stone measuring 3 feet high, 2 feet broad at the base, and 9 inches thick, its faces looking nearly north and south. Nine feet east of this is another slab, lying on its face, and measuring

6 feet 6 inches long, 2 feet broad, and 9 inches thick. Eleven feet east of the standing stone, just at the edge of the sloping face of the cairn, there is a sandstone flag measuring 4 feet 8 inches by 3 feet 8 inches, and 10 inches thick. *It has the appearance of a capstone, but has obviously been displaced.* On turning it over, a short cist, measuring 2 feet 5½ inches long by 1 foot 8 inches broad, was laid bare. It was filled with earth and stones, and had clearly been rifled. When cleaned out it was found to be only a foot deep; it was formed on three sides by single thin slabs of sandstone, but on the fourth side by two small flags. It did not contain any deposit of bones, and no relics were recovered in the riddlings of the soil.

It is impossible now to say whether this was the primary interment in the cairn or not. An examination was made at the foot of the standing stone, on the idea that it might represent with the fallen stone the portal of a chamber. The excavation was extended about 8 feet to 10 feet from the stone, both east and west and north and south, but no structure was discovered. Another trial was made to the south of the short cist in what may possibly have been the original centre of the cairn, but nothing was found. One of the slabs lying on the sloping face of the cairn was also turned over, but there was nothing beneath it.

The cairn has been much quarried, and no doubt the original outline has been greatly interfered with. It is therefore impossible to class the monument with any certainty. The chief difficulty is the upright stone. It is not a portal stone of a chamber; on the other hand, it is hardly possible to recognise in it a member of a circular setting, if the short cist be the central primary interment. I must therefore leave the true character of this cairn undetermined.

MEGALITHIC STRUCTURE AT ARDENADAM.¹

This monument (fig. 20), which is locally known as "Adam's Grave," stands in a field near Ardenadam, on the Holy Loch. It occupies a

¹ A brief notice, with a drawing of this structure, was published in vol. xxiii. of the *Proceedings* by Mr Mackintosh Gow.

slight elevation, representing the base of a cairn which has been reduced by the cultivation of the surrounding land to an area measuring 30 feet by 27 feet.

The structure itself is a small chamber, roofed in by a massive flag and complete on three sides. The fourth side is open, and constitutes



Fig. 20. Megalithic Structure at Ardenadam.

a portal of entrance guarded by two tall pillar stones which rise, the one about 2, the other about 3 feet, above the roof of the chamber. The actual vault measures 7 feet long, 3 feet wide, and 3 to 4 feet high. Its long axis is directed W.S.W. and E.N.E., the portal being at the eastern end (fig. 21).

The pillar stones at the portal form a striking feature of the monument. They stand 2 feet 1 inch apart. The right stone is a somewhat irregular block of schist, measuring at the base 3 feet in the axis of the

entrance and 2 feet 6 inches in the opposite direction. It rises to a somewhat bulbous top, 5 feet 6 inches above the level of the floor of the chamber, but is sunk 14 inches in the ground, giving a total height of 6 feet 8 inches. The left stone, also of schist, is a more regular pillar,

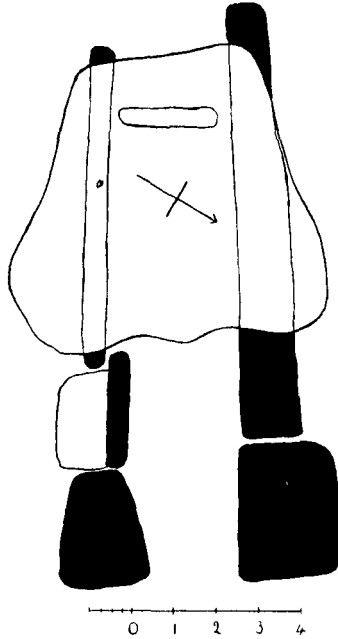


Fig. 21. Plan of Structure at Ardenadam.

tapering somewhat at the top, which rises higher than its neighbour, being 6 feet above the floor, and having a total height of 8 feet. It measures at its base 2 feet 6 inches in the axis of the entrance, and is 2 feet 2 inches across.

The chamber is formed of irregular flags of schist set on edge. The north wall is formed by a single flag 10 feet 6 inches long, 18 inches broad, and 4 feet deep. Its upper edge is not level, but is higher at

the portal end, sinking at the closed end below the level of the top of the end stone. The south wall is constructed with two flags, one underlying the capstone, 7 feet 6 inches long, 6 to 8 inches broad, and 3 feet deep; a second intervening between this and the portal stone, 2 feet 7 inches long, 4 to 6 inches thick, and 3 feet 2 inches deep.

The end stone of the chamber, which closes it at the western end, stands some distance within the ends of the side stones. It is a flag of schist set on end, 6 feet in height and 2 feet 6 inches broad. It is wedged between the side stones below, but narrows at the top.

The capstone is a massive slab of schist, of irregular outline and unequal thickness. It measures 7 feet 8 inches in the transverse axis of the chamber, 6 feet 8 inches in the opposite diameter, and is 1 foot 1 to 1 foot 4 inches thick. It rests on the side stones and end stone of the chamber, and lies on an inclined plane, owing to the fact that the north wall is fully a foot higher than the south wall.

The chamber has lain open for a great many years, but I cleared out the floor to the level of the subsoil in the hope of finding some relics of the builders. Nothing, however, was discovered, even by careful riddling.

ANALYSIS OF DATA.

Structure.—In my earlier papers on the Cairns of Arran and Bute, I was able, by piecing together the data regarding the various cairns examined, to reconstruct the original form and plan of a type of chambered cairn occurring in the south-west of Scotland. My definition of the typical monument ran as follows:—"It is a large rectangular cairn with a definite ground-plan, once marked off in all probability by a setting of flagstones. At one end this setting is disposed in a semi-circle, and bounds a space leading to the portal of a chamber which occupies one end of the cairn. The chamber is formed of two sections, a deeper, built of large stones set on edge, bounding a trench-like space, divided into compartments by septal slabs set right across the floor; and an upper, built of small flags placed horizontally upon the upper

edges of the stones forming the basal portion. The object of this upper section is twofold: to afford head-room within the chamber, and to provide a level surface for the roofing flags to rest upon. There is no passage of approach, but merely a portal of entrance placed some distance above the floor. The compartments contain the remains of several successive interments, the bones being in some cases unburnt, in others burnt. Associated with the interments are found implements of stone only, and vessels of pottery made of a dark paste and with rounded bottom."

The present investigations have yielded in the cairn at East Bennan a beautiful example of the typical structure, in a stage of denudation where the surface of the cairn has been removed, the roof and upper built section of the chamber demolished, but the frontal semicircular setting preserved. It forms a connecting link, not hitherto observed, between the still further denuded monuments, such as the Giants' Graves at Whiting Bay, where only single stones remain to suggest the original frontal semicircle. If any doubt existed as to the original plan of these monuments, it is removed by the knowledge we now have of a continuous series, from the nearly perfect monument at Carn Ban, at the head of Kilmory Water, through all stages of denudation and demolition, down to such a structure as the Torlin Cists at Lagg.

The fact that the base of the cairn at East Bennan is edged on the steeply-sloping side of the knoll on which it is placed, by an under-structure of large stones laid on the flat, is of interest, as revealing a feature not before observed at any other site in Arran, while a vertical slab here and there on the lateral margin confirms the conclusion previously arrived at, that, as in the northern series of chambered cairns, the outline was marked off by a setting of stones, such as we see at the horned end.

In my account of the cairns in Bute I was able to bring forward some evidence in favour of the idea that the culture of the chambered cairn degenerated *in situ*. I described certain contracted chambers, and one cairn at Glecknabae, in which there were two chambers reduced to

a single compartment or megalithic cist. Regarding these chambers I wrote: "It will be noticed that they differ from the typical structures within the field of my personal observation; yet, notwithstanding the structural differences, the essential idea is the same. They are chambers provided with a portal of entrance, indicating the custom of successive interments in one vault. Taking the cairn as a whole, however, there is no indication that it is a structure with a definite relationship to one or other of the chambers, nor that it formed with a chamber a monument expressive of a single structural idea.

"The outline and general plan is no doubt gone beyond recall; but as both chambers must have been placed at the edge of the cairn from the first, their relative position indicates that it cannot have been a structure such as the great cairns associated with the larger segmented chambers."

The Ardenadam monument now described is another example of a reduced chamber, but it differs in the relatively great height of the portal stones from the Glecknabae chambers, in which they did not rise higher than the chamber wall, while there is no stone in the Ardenadam chamber set across the portal to complete its fourth side, as in the Bute examples. The absence of the covering cairn at Ardenadam prevents our knowing whether, as at Glecknabae, the plan of the cairn related to this type of chamber departed from the original idea.

In the two cairns at Blairmore described in this paper we seem to have examples of a departure from the original plan of the cairn without serious departure from the original structural idea of the chambers. In the Dunan Beag cairn it is possible either that the smaller south chamber is a secondary intrusion on a typical monument, or that the cairn was originally horned at both ends. In the case of the Dunan Mor cairn, however, it is not possible to avoid the conclusion, either that two of the chambers are secondary and placed without respect to the structural idea of the whole, or that the entire structure represents a departure *ab initio* from the typical plan. In either case the cairn must, I think, be taken as representing a stage in the degeneration of the chambered cairn which seems to have culminated at Glecknabae.

Implements.—Such implements as have been found are of stone. As yet no evidence is forthcoming that a knowledge of metal had reached our area when chambered cairns were building. The occurrence of fragments and flakes of Corriegills pitchstone is repeated. They have been noted at all the sites excavated in Arran and Bute, and Mr J. A. Balfour has at last solved the problem why they should be found along with flint flakes by demonstrating to the Society that arrow-heads were actually manufactured in Arran out of this material. It seems to have been used as a substitute for flint.

Pottery.—The pottery recovered is unfortunately fragmentary. A piece of typical black ware forming the wall of a bowl-like vessel was found in the East Bennan chamber, but the special interest under this head centres in the urns found in the south chamber in the lower cairn at Blairmore, and the corresponding chamber in the upper cairn.

The urn recovered in the south chamber at Dunan Beag is a richly ornamented flat-bottomed vessel resembling in the style of its decoration vessels of the beaker class. It is unfortunately too fragmentary for reconstruction, but it has clearly been a smallish vessel of the beaker type, and its association with the end piece of a jet necklace, such as is generally associated with unburnt interments in short cists, brings it into the category of the Bronze Age ceramic. It has already been suggested that the chamber in which it was found represents a secondary intrusion in a typical cairn. In the absence of any signs of a secondary short cist within the chamber, we must assume that the urn and jet plate belong to the primary deposit. They therefore constitute a strong proof of the contention that the chamber is a transitional structure, belonging to a phase in which the chambered cairn culture was merging with the intrusive short cist culture.

The urn found in the south chamber in Dunan Mor cairn is too fragmentary to be taken as evidence, but its characters in general corroborate the conclusions drawn from the structural features of the monument.

Character of Interment.—As on former occasions, the floor of the compartments was invariably, when it was undisturbed, covered by a layer of black earth, and in every chamber fragments of wood charcoal occurred. In the south chamber of the lower cairn at Blairmore the three interments were of unburnt bodies; in the north chamber in the same cairn incineration was doubtfully indicated by the finding of a fragment of burnt bone, while in the south chamber of the upper cairn the matter was put beyond doubt by a definite deposit of burnt bones. The result of the recent investigations therefore leaves us in the same uncertainty as to the original practice. No data have yet emerged to determine whether inhumation succeeded or preceded incineration within our area during the chambered cairn period. The conclusion seems forced upon one that both practices coexisted during the whole period and from the first arrival of the chamber builders in the Clyde Basin.

Human Remains.—Unfortunately the bones in the south chamber at Dunan Beag cairn were so pulpy that no fragments could be recovered sufficiently complete to provide data for conclusions regarding the anatomical features of the skeletons. At most it can be said that the persons interred were of adult age.