## IV.

DESCRIPTIVE NO'IES ON THE STONE CIRCLES OF STRATHNAIRN AND NEIGHBOURHOOD OF INVERNESS,-WITH PLANS, \&c. By james Fraser, M. Inst. C.E., Inverness.

Stone circles (locally known as "Druidical circles") are found in various states of preservation, from the lower end of Strathnaim to a point twenty-five miles up the river. There are, or rather, there were, twenty-five of these circles within the drainage area of the River Nairn, and twelve or fourteen between the western watershed of the Nairn and the River Ness.

List of Circles.-Beginning at the upper end of the Strath, the following are the localities of the circles in this district:-

1. Duhallow of Aberarder,-now entirely removed.
2. Tordarroch,--five miles farther down.
3. Croftcroy, near Tordarroch.
4. Gask,-a mile and a half farther down.
5. Midlairg,--a mile and a half still farther down.
6. Daviot,--alout midway of the Strath.
7. Culdoich of Clava.
8. Milltown of Clava,-with site of ancient chapel.
9. Milltown of Clava,--near the same place.
10. Balnuaran of Clava,-with chambered cairn.
11. The same place,-with central cairn and radiating causeways.
12. The same place,-with chambered cairn.
13. Mains of Clava,-one stone only left.
14. Mains of Clava,-traces only remaiuing.
15. Culchuinneig.
16. Leanach,-near Culchuinneig Circle.
17. Cantraybruich, -on bank of river.
18. Cantraybruich,-in centre of field,-now entirely removed.
19. Dalgrambich of Cantray,-one stone left.
20. Balanrait, Cawdor,--one stone left.
21. Little Urchany, Cawdor.
22. Little Urchany, close to No. 21,-now entirely removed.
23. Auldearn,-a quarter of a mile east of the village.
24. Mains of Moyness.
25. Gulford of Moyness,-now removed.

The following are the circles between the watershed of the Nairn and the River Ness:-
26. Aldourie, near Loch Ness,-shifted.
27. Kinchyle of Dores,-near Scaniport.
28. Torbreck.
29. Culduthel.
30. Druid Temple Farm of Leys.
31. Stoneyfield of Raigmore.
32. Allanfearn,-near Culloden Railway Station.
33. Culloden Tile Works.
34. East end of Cullearnie of Culloden.
35. Newton of Petty.
36. Mains of Dalcross.
37. Balnalual of Dalcross.

38 and 39 ( 8 ). Flemington,-entirely removed.
General Description of Circles.-Wherever the structures are sufficiently preserved, they exhibit the following characteristics in common :-

1. They consist of three concentric, or nearly concentric, rings of boulder stones, or of flag stones, fixed on end in the ground, and without hewing or dressing of any kind.
2. There is an outer ring of stones, varying from 60 to 126 feet in diameter, outside, and consisting of long stones, from nine to twelve in number, standing at nearly regular intervals,-the tallest being on the south side, and their size gradually diminishing towards the north.
3. A smaller interior, and concentric, or nearly concentric ring, varying from 32 to 88 feet in diameter outside, made of smaller boulders (very few, if any flags being used in this ring), the stones being set on end, close together, with a slight slope inward, and with the best, or flattest and broadest, face outward. As in the outer ring, the large stones are on the south side, and the smaller stones to the north.
4. A third, and still smaller concentric ring, from 12 to about 32 feet in diameter inside, and consisting of stones set on end, close together.
5. They are all built on flat or low-lying ground, sometimes in a slight hollow or amphitheatre (with perhaps some not very decided exceptions on slight eminences).

As a rule the circles are found where stones are plentiful. It is also a general characteristic of the structures that the standing stones are only slightly sunk into the ground.

Drawings and Details.-Such peculiarities of structure as do not appear to be common to the whole will be understood from the following particulars, and from the drawings, which are all constructed from actual measurements, and on a uniform scale of 30 feet to the inch.

Referring to the drawings, it will be seen that the standing stones are shaded dark, while the fallen stones are simply in outline without shading. The dotted circular lines are the outlines of exact circles, and show how far the rings of stones correspond with true circles. The ground plans of the circles are so placed on the pages that, as in a map, a vertical line through the centre points to the north. The developed views of the outer or intermediate rings are constructed from continuous horizontal measurements taken around the outside of the circles, the height or outline of each stone being taken at the same time. Where the developed views are divided into separate sections or pieces, the highest section, it will be understood, forms the left hand, end of the developed view; and the sections below it should be placed, successively, end to end to the right hand of it, to form the complete developed view.

Circle No. 1.-The circle at Aberarder was entirely cleared away by agricultural improvements about twenty-five years ago. So far as I have been able to learn, it showed indications of a small internal chamber and cairn, built on the inner circle. But no dimensions can now be got.

Circle No. 2.-The Tordarroch circle (fig. 1) is remarkable for the large size of the stones, and in other respects. It has a complete outer ring 115 feet in diameter outside, and consisting of nine immense blocks of gneiss, two of which are prostrate on the ground-one indeed slightly buried, but still in place. The greater part of the intermediate ring, 70 feet in diameter outside, still remains; but most of the stones are fallen, or almost fallen, inward, and a few are fallen outward. Four years ago five stones, indicating an interior ring 24 feet in diameter inside, could be seen in place; but every trace of it has now disappeared. It must be specially remarked of this circle that it was constructed in a flattish hollow or low-lying ground, overlooked on two or three sides, especially on the south and west, by higher ground, which one would suppose to be more suitable sites for such an imposing structure. One or two stones of the outer ring, indeed, are standing in a willowy marsh; but from excavations for agricultural purposes that have been recently made within the circle, it would appear the marshiness is of recent origin. The fact remains, however, that the circle is in lowlying ground, and without anything like the broad outlook over the surrounding country that is sometimes supposed to be a special feature of these circles. In the circumference of the intermediate ring, at a point $\mathrm{S} .25^{\circ} \mathrm{W}$. from the centre of it, there is a large flat stone from 5 to 6 feet in diameter, and from 2 to $2 \frac{1}{2}$ feet thick, with a considerable number of "cup-markings" on the top of it. It seems to have fallen outward from the ring, in which it would just fill the gap opposite to it. If that is the case, and if the space between the two inner rings was filled with stones, as is the case at Balnuaran of Clava, then it would appear that the cup-markings were made since the loose stones were removed, and also most probably, since the stone was laid flat, as it is now,-for the cup-marks are so much spread over the surface of the stone that some of them could not be made while it was partially sunk into the ground, even if there were no loose stones heaped up against the inside of it.


Fig. 1. Ground Plan of Tordarroch Circle.

Circle No. 3.-The Croftcroy circle (fig. 3) is near the county road, about a quarter of a mile east of the Tordarroch circle, but not within view of it. Of the outer ring, which was about 63 feet in diameter outside, only three large stones, from 8 to $12 \frac{1}{2}$ feet long, are now found; and these are lying prostrate on the ground. A considerable number of the


Fig. 2. Developed View of Outer Ring of Tordarroch Circle, in the direction C, B, A, D on Plan.
(See Note to Fig. 1.)
stones forming the intermediate ring, which is 35 feet in diameter outside, are still standing; and others are sloping inward or outward or fallen flat. An entrance passage, from 2 to $2 \frac{1}{2}$ feet wide, is indicated by a double line of stones extending from the south side of the intermediate ring, just described, to the centre, and turning slightly to the
left; and as the intermediate ring is one of the smallest, there appaers to be no space for an inner chamber, unless of a very small size, nor for an inner ring, unless more than usually excentric. No indications of an inner ring can now be seen. In these particulars this circle appears to be exceptional. It may be also noted that, although not in so low a situation as the one at Tordarroch, the view from it, generally speaking, is confined to the valley of the Fearnaig branch of the river.


Fig. 3. Ground Plan of Circle at Crofteroy. (See Scale and Note to Fig. 1.)

Circle No. 4.-The Gask circle (fig. 4) is remarkable for being the largest in the whole district. The outer ring is 126 feet in diameter outside, and appears to have originally consisted of ten stones, of which four are still standing, and four lying flat. The intermediate ring is 88 feet in diameter outside, and is nearly complete; but several stones have fallen outward and a few inward. Of the innermost ring or


Fig. 4. Circle at Gask, Strathnairn.
(See Scale and Note to Fig. 1.)
chamber only two flags sunk on edge into the ground can be seen; and, assuming it to be concentric with the other rings, it was about 32 feet in diameter. The area, within the intermediate ring, is raised from 2 to $2 \frac{1}{2}$ feet above the surrounding ground by what appears, by excavation, to be a mixture of stones and black soil grown over with grass, but which is quite reconcilable with the inference that there was a large central cairm within the intermediate ring, as in the principal group at


Fig. 5. Developed View of Intermediate Ring of Circle at Gask, in the direction
C, W, B, E on Plan.
(See Scale and Note to Fig. 1.)
Clava. No trace of an entrance to the central space can be seen in the circumference of, or within, the intermediate ring. By cutting trenches across the area, however, important discoveries might possibly be made in this circle. It may be stated that it is situated on the top, and near the edge of, a slightly elevated plateau or terrace, facing eastward. Outside the intermediate circle, and on the north-west side of it, there is a flat sandstone about 6 feet in diameter, with three cup-markings.

This is probably one of the two stones that are awanting in the northwest portion of the outer circle. ${ }^{1}$

Circle No. 5.-The circle at Midlairg (fig. 6) is situated on a slight eminence on the top of the great terrace of boulder clay and gravel at that place.

It is in a very fragmentary condition, as may be seen by the drawing. The diameter of the outer ring cannot now be ascertained. The inter-


GROUND PLAN
Fig. 6. Circle at Midlairgs.

- (Sce Scale and Note to Fig. 1.)
mediate ring was 32 feet in diameter outside, and the inner ring about 14 feet inside. The latest incident in its history shows in a striking

[^0]vol, xvili.
manner how these interesting relics are disappearing. The largest stone at the south side came under the eyes of a squad of masons building a house in the locality, as an excellent piece of granite; and they cut it up into five lintel pieces, and were dealing in the same way with the rest of the stones, until a gentleman interested in such relics prevented its entire destruction. One of the stones, which appears to have formed the intermediate ring here, and which faces the south-east, is somewhat peculiarly marked. The face of the stone is marked by three vertical grooves or cracks in the stone. The middle crack is slightly enlarged by an iron tool, and a rude cross is formed by cutting another groove across near the top of it. Whether the cross thus formed is a relic of early Christian times, or simply the prank of an idle mason, has not been ascertained. The site of the circle is surrounded by a stone dyke, forming a four-sided enclosure, which is not shown on the drawing.

Circle No. 6.-The Daviot circle is situated on the fat bottom of a. slight hollow or amphitheatre, with a partial opening towards the north-east, so that the prospect from the circle is limited in all directions. Of the outer ring, only two stones are now found standing, all the rest having entirely disappeared. Assuming it to have been concentric with the intermediate one, the outer ring was about 94 feet in diameter outside. The intermediate ring is 49 feet in diameter outside, and the imer ring 18 feet in diameter inside. Of the two inner rings nearly one-third of the stones are found standing in their places. Both inner rings are found to be exactly circular in form, but they are not concentric, the centre of the inner ring being $2 \frac{1}{2}$ or 3 feet northeast of the centre of the intermediate one.

Circle No. 7.-The Culdoich circle is situated on the flat land below Culdoich Farm, and is the first of the group of eight circles (No. 7 to No. 14 of the list) all situated on the plain of Clava, and within a distance of 1 mile. The general disposition of the whole group on the ground may be seen on the 25 inches-to-the-mile Ordnance Plan. Returning to the Culdoich circle, we find that the outer ring is entirely removed, except one large stone, $11 \frac{1}{2}$ feet in height, standing on the south-west side. About 40 per cent. of the stones are in place in the intermediate ring, and about 60 per cent. in the imner ring. The imer and


Fig. 7. Circle at Daviot, Ground Plan and Section on line A B.
(Sec Scale and Note to Fig. 1.)


Fig. 8. Circle No. 7, at Culdoich.
(See Scale and Note to Fig. 1.)
intermediate rings are, as nearly as possible, concentric, but were carried out with less than the usual attention to the circularity of the curves. The space between the two interior rings is partially filled with small stones to a depth of from 2 to 3 fect. A gravel pit, recently cut into the south-east side of the intermediate ring, has broken down a portion of the structure ; and the greater part of the loose stones between the rings has also been recently removed.

Circles Nos. 8 and 9.-All that seems to remain of the circle No. 8, at Milltown of Clava, is a standing stone at the south-west corner of the ruin of the ancient chapel, which is said to have been built within the area of the circle. The grassy mound, representing the walls of the chapel, indicates a building about 30 feet long by 19 or 20 feet broad, with a door on the side facing the south-east. Along with, or rather around the chapel, was enclosed a space, nearly rectangular in shape, and about 130 feet long by from 65 to 70 feet broad, the surrounding fence of which is still clearly marked out by a mound of earth and stones. The space thus enclosed was at one time used as a buryingground. Of the circle itself there remain only one large standing stone and four or five smaller ones. The design of the original structure is so very much defaced that nothing can be said regarding this circle, except that the large stone remaining is 20 yards from the chapel enclosure, and that the circle was on the north or north-east side of the stone.

Circles Nos. 10, 11, and 12.-There is a group of three circles at Balnuaran of Clava that are sometimes mentioned as chambered cairns, and that have been the subject of much notice and discussion by antiquarians for the last two or threc generations. In common with the other circles of the district, they have the general characteristics which have been mentioned at the outset. The middle circle of the group is 80 feet north-east of the westward one; and the farthest east is 123 feet north-east of the middle one. The centre of the middle circle, again, is 44 feet north of the straight line drawn through the centres of the other two.

Circle No. 10.-The western circle of the Balnuaran of Clava group (fig. 9 and fig. 10), may be concisely described as follows:-


Fig. 9. Western Circle No.10, at Balnuaran of Clava (with central Cairn).
(See Scale and Note to Fig. 1.)

The outer ring is 108 feet in diameter outside, and consists at present of eleven standing stones (as seen in fig. 9, and developed view, fig. 10), but there is a vacant space for a twelfth pillar. Four of these fell to the ground, and have been restored; ${ }^{1}$ and two others have been slightly shifted, to make room for the road across the south side of the circle. All except one of the stones of the


DEYELOPED VIEW GF OUTER CIRCLE A.B.C.D.


Fig 10. View of outer ring of Circle No. 10, in the direction C, B, A, D.
outer ring are of the shaly sandstone flags found plentifully, in situ, in the district. The intermediate ring which forms the base of the central cairn is 53 feet in diameter outside, and consists principally of granite
${ }^{1}$ Of the four that have been restored to the standing position, one appears to have been tilted up inwards, instead of outwards, by a mistake as to the direction in which it fell. Another was twisted a little, to stand parallel with the road made across the south side of the circle, and another twisted to stand square to the head of a new stone wall of which it forms the head on the other side of the same road! It is a great pity that the whole group of circles in this locality have been so much interfered with in recent times.
and gneiss boulders, covered in some places by small stones which have rolled off the cairn. The inner ring is $12 \frac{1}{2}$ feet in diameter inside, and is made of stones better selected. On this inner ring is bailt this circular chamber. The wall of the chamber is vertieal for a height of about 4 feet, and is then built in the form of a dome, with the stones laid horizontally, and each slightly overhanging or projecting beyond the course below it. The masonry is of good flat stones, but otherwise of a rude deseription, and not well bonded nor closely jointed. The present height of the chamber is $7 \frac{1}{2}$ feet; and it would require to be 4 or 5 feet higher in order to form a complete dome. The cairn of loose stones is heaped up around the chamber, and the highest point of the cairn is at present 9 feet above the surface of the


CROSS EECTION OFENTRANCE.
Fig. 11. ground. There is an entrance to the central chamber from the south-west ( S . $39^{\circ} \mathrm{W}$.), 2 feet wide at the outer end (fig. 11), and 3 feet at the inner end, and which appears to have been from 4 to $4 \frac{1}{2}$ feet in height. The chambered cairn of this circle is the one that was opened by Mrs Campbell, then residing at Kilravock Castle, in 1828 or $1829 .{ }^{1}$ The result of clearing it out is given by Sir Thomas Dick Lauder in his book on the Moray Floods, as follows :-
"I received a most interesting communication from Miss Campbell, informing me that the fragments of two earthen vases were found in the chamber in the interior of the Druidical circle opened at Clava, by Mrs Campbell's orders. ' It was about 18 inches below the earth,' says Miss Campbell, speaking of the more perfect of the two, 'exactly in the centre of the circle. It was found in a broken and very mutilated state, the whole body of the stones having lain upon it. A quantity of calcined bones were in it and about it, all of which we have. The clay is of the coarsest kind, and the vase is of the rudest make, It has apparently had no cover, but is rounded at the top like a garden pot. which it resembles more than anything else. The bottom is flat, the inside very black, from having been burned, the outside red; across the exterior of

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Fig. 12. Eastern Circle No. 12, at Balnuaran of Clava (surrounding a Cairn).
the bottom it measures $6 \frac{1}{2}$ inches, and across the interior exactly 5 inches, and the height, in its fractured state, is $4 \frac{1}{2}$ inches. After clearing away the stones, the interior of the cairn was found to be composed of gravel, but the vase and bones were enclosed in a portion of clay quite distinct from the natural soil." "

Circle No. 12.-The eastern circle at Balnuaran of Clava (fig. 12), is almost the same in every respect as the western just described. The outer ring, which is irregular in shape, is 110 feet in diameter


DEVELORED VIEW OF OUTER CIRCLEAB.O.D.


Fig. 13. View of Outer Ring of Circle No. 12, in the direction C, B, A, D.
outside, and was originally formed of either eleven or twelve stones, ten of which still remain. (See the developed view, fig. 13.) Three of the stones have been restored; and one of these also appears, from the marks on the ground, to have been tilted up, like the stone in the western circle, in the wrong direction. The intermediate ring is 58 feet in diameter outside, and the inner ring $12 \frac{1}{2}$ feet diameter inside. The chamber is at present 8 feet in height, at the


Fig. 14. Middle Circle No. 11, of Bahuaran of Clava Group (surrounding a flat Caim).
highest point, and the passage leading to it $2 \frac{1}{2}$ feet wide. This chamber was cleared out by the late Mr Forbes of Culloden, about thirty years ago, when a few bones were found in it. .

Circle No. 11.-The middle circle of this group at Balnuaran of Clava (fig. 14) is different in several respects from the chambered circles east and west of it. Its outer ring is 107 feet in diameter outside, and con-


Fig. 15. View of Outer Ring of Circle No. 11, in the direction E, D, C, B, A, G, E. (See Scale and Note to Fig. 1.)
sists of nine stones (see the developed view, fig. 15), but may have originally contained ten or eleven stones. The intermediate ring is 57 feet in diameter outside, and is rather irregular in its shape. The innermost ring is considerably larger than those of the chambered circles east and west of it, being 22 feet diameter inside. There is a mass of loose stones about 3 feet deep in the space between the inner and the inter-
mediate rings, and a less depth of loose stones within the innermost one. There is no trace of a wall having been built on the top of the inner ring, nor of an entrance passage. It may also be remarked that the rings are not strictly concentric,-for the centre of the inner ring is about 5 feet north of that of the outer ring, -while that of the intermediate ring again lies about half-way between the other two. A singular and unique feature of this circle is its having three rudely formed projections or causeways of small stones, about 7 feet in width, in lines radiating from the intermediate ring to three of the stones of the outer ring, one of them pointing to E. $10^{\circ} \mathrm{S}$., another to S. $10^{\circ} \mathrm{E}$., and


GROUND PLAM OF SMALLER CIRCLE'


SECTION OF SMALLER GIACLE
Fig. 16. Smaller Circle at Clava.
the third to $W .25^{\circ} \mathrm{N}$. No feature corresponding with these projections has been yet discovered in any other circle. About 50 feet west of this circle is a small ring of stones (fig. 16)-not standing, but simply showing themselves above the surface of the ground, and about 16 feet in diameter ontside, which seems to have been an ordinary grave-mound circle. One of the stones forming it is cup-marked.

There is a cup-marked stone in the inner ring of the westward circle, another in the intermediate ring of the middle circle, and a third in the entrance passage of the eastward circle of the group. Another stone at the outer end of one of the canseways is marked on the inner face with small holes, part of them as if made with a pick, and part as if done by
the point of a borer half an inch broad. The marks on this stone are not like those known as cup-markings.

Circles Nos. 13 and 14.-Of these two other circles at Mains of Clava, only one standing-stone and other slight traces remain.

Circles Nos. 15 and 16.-Of two circles at Culchuinneig and Leanach, which were within 200 yards of each other, only two or three standingstones and some heaps of smaller stones remain.

Circles Nos. 17, 18, and 19.-Of the circle No. 17, on the north bank of the river, at Cantraybruich, only a fragment (fig. 17) remains.


Fig. 17.
(See Scale and Note to Fig. 1.)
It was partly destroyed by the river, and partly by the construction of a mill and other houses (which have now disappeared in their turn) within its area, and more recently by agricultural improvements. The circle No. 18 at Cantraybruich, which was entirely removed many years ago, was in the middle of the adjoining field, in a spot once known as Croit-an-t-Sagairt, or the Priest's Croft. Of circle No. 19, on the farm of Dalgrambich, near Cantray House, only one large pillar remains.

Circle No. 20.-Of the circle at Balanrait, Cawdor, only one tall pillar


Fig. 18. Circles Nos. 21 and 22, at Little Urchany, Cawdor. (See Scale and Note to Fig. 1.)
of conglomerate sandstone remains. The other stones were buried in the ground, or broken up and removed by the farmer, forty or fifty years ago. Several of the stones were buried where they stood; and an ingenious method was used for breaking some of them. They, were first heated by fire, and then suddenly deluged and cracked by cold water. There is a local tradition connected with this circle, that an old man who lived near the spot used to walk three times round the circle each morning before going to his work.

Circles Nos. 21 and 22.—Circles Nos. 21 and 22 were a pair of circles which stood quite close together at Little Urchany, Cawdor. One


Fig. 19.
is entirely gone, and the other, No. 21, is in the fragmentary state shown in fig. 18.

Circles Nos. 23, 24, and 25.-The circles Nos. 23 and 24 were, respectively, at Auldearn village (fig. 19), and at the Mains of Moyness. Both are in a very imperfect state. No. 25, which was at Golford, near Moyness, has entirely disappeared. The circle at Moyness is often spoken of as having a rocking stone, or ordeal stone, and a causeway in the inner ring. But it will be seen in vol. ii. p. 217 of the Proceedings of the Society of Antiquaries of Scotland that the supposed existence of the ordeal stone was entirely a mistake; and I fear the
"causeway" is also a mistake-at least I could not find it. What is stated by two or three authorities as to there being a "very perfect


Fig. 20. Circle No. 30, at Leys. Ground Plan and Section on line A, C.
(See Section and Note to Fig. 1.)
Druidical circle" on the top of Lethen Bar, in the same neighbourhood, is also an entire mistake, for, being very anxions to see a "very perfect vol. xviII.
circle," I made a special journey to the spot, but found no stone circle at all, but merely a faint indication of a circular mound or onclosure of earth and small stones covered with heather.

Circle No. 30.-The circle at Druid Temple Farm of Leys, 2 miles south of the town of Inverness (fig. 20), is the most complete one in this neighbourhood. It is situated on a slight eminence, and in a prominent and beautiful situation, overlooking the town of Inverness and the whole valley of the Ness and Moray Firth. The outer ring is about 77 feet in diameter outside, and appears to have been intended to consist of nine, or possibly ten, stone pillars, six of which are still in a standing position. (See the developed view, fig. 21.) Three or four of the


Fig. 21. Developed View of outer ring of Circle at Leys, in the direction C, B, A, D. (See Scale and Note to Fig. 1.)
pillars are very massive blocks. The intermediate ring is about 43 feet in diameter outside, and is not exactly circular in form, nor drawn to the same centre as the other ring, the extent of excentricity being about 3 feet, as may be seen on the plan (fig. 20). Very little trace of the innermost ring can be seen, two stones only being in a standing position; but it appears to have been about 12 feet in diameter inside, and still more off the centre than the intermediate ring. An entrance passage is indicated by an irregular double line of standing stones, of a smaller size, pointing in the direction of S. $5^{\circ}$ E. From the irregularities in the form of its different rings, and from the number of large stones that are lying promiscuously on the ground on the outside and inside of the outer ring, it would seem either that this circle has been very ronghly handled as a
quarry for stones or otherwise, or that its construction was stopped when half finished, and before the materials collected had been properly placed.

A portion of a twisted three-cornered torc of gold about 22 inches long, and hooked at both ends, was turned up by the plough in a field adjoining in 1824. ${ }^{1}$


GROUND PLAN


DEVELOPED VIEW OF CIRCLE
Fig. 22. Ground Plan and Developed View of Circle No. 28, at Torbreck. (See Scale and Note to Fig. 1.)

In 1881 a small vase or urn was found in a stone cist in the edge of a gravel pit 14 or 15 yards north-west of the circle. It was of burnt clay, reddish outside, and of a bluish-black colour in the inside and in fracture. It was of a plain barrel-shaped pattern, 4 or 5 inches high,
${ }^{1}$ See Inverness Courier of March 13, 1851.
$3 \frac{3}{4}$ inches diameter in the middle, $2 \frac{5}{8}$ inches at the bottom, and $3 \frac{1}{2}$ at the top. There appears to be no reason, however, to suppose that this burial had anything to do with the circle.

Circles Nos. 26 to 29 and 31 to 39..-Of the other circles, between the western watershed of the Nairn and the River Ness, very little can be said, as they are generally in a very fragmentary condition. Circle No. 28, at Torbreck (fig. 22), seems to have been interfered with in improving the field in which it stands. The large stones in it appear to belong to an outer ring obliterated. There are drawings of the most complete of the others, namely, Nos. 27 at Kinchyle of Dores, near Scaniport (fig. 23) ; No. 31 at Stoneyfield of Raigmore (fig. 24) and No. 35 at Newton of Petty (fig. 25), which show nearly all that can be said regarding them.

Points of Difference in Circles.-A few remarks as to the particulars in which the circles differ from one another :-

They are not uniform in the dimensions, either of their outer or interior rings. The outer ring, so far as they admit of measurement, are from 63 to 126 feet in diameter outside, and are on average about 96 feet; the intermediate rings are from 32 to 88 feet outside, and on average about 53 feet; and the innermost rings from 12 to about 30 feet inside, and are on average about 19 feet. The number of stones forming the outer rings, judging from the eight or nine cases in which they can be counted, ranged from 9 to 12 in number, the average number being between 10 and 11.

An entrance to the central ring can be distinguished in four or five instances only, and its direction varies from S. $5^{\circ}$ E. to $S 41^{\circ} \mathrm{W}$., the average direction being S. $18^{\circ} \mathrm{W}$., or nearly in the direction of the sun at one o'clock in the afternoon.

Of those cases in which the different rings are clearly defined, about one-third are decidedly excentric,--that is to say, the outer and interior rings are not drawn from one fixed centre.

It is only in two circles at Clava that a chamber is found to be constructed on the innermost ring. In four others, as well as in these two circles, traces are found of a cairn of stones having existed between the intermediate and innermost rings. It has been argued by some


Fig. 23. Cirele No. 27, at Kinchyle of Dores, near Scaniport, Inverness.
(See Seale, and Note to Fig. 1.)


Fig. 24. Circle No. 31, at Stoneyfield of Raigmore.
(Sce Scale and Note to Fig. 1.;


Fig. 25. Circle No. 35, at Newton of Petty.
(See Scale and Note to Fig. 1."

Table of the Dimensions and other Particulars of the Circles.

|  | Locality. |  |  |  |  |  |  |  |  | General Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Circles in Strathnairn. | Feet. | Feet. | Feet. |  |  |  |  |  |  |
| 1 | Aberarder | $\ldots$ | $\ldots$ | $\cdots$ | $\ldots$ | $\ldots$ |  | $\cdots$ | S.W side of | Cleared away. |
| 2 | Tordarroch . | 115 | 70 | 24 | 9 | Concentric |  | $\{$ | S. W. side of Intermediate Ring | (Stones of outer ring ) very heavy. |
| 3 | Croftcroy | about 63 | 35 | ... | ... | ? | $\left\{\begin{array}{l}\text { (Entrance } \\ \text { only seen) }\end{array}\right\}$ | S. $3^{\circ} \mathrm{E}$. | - Ring | $\left\{\begin{array}{l} \text { Much destroyed. } \\ \text { Internal chamber } \\ \text { small, or excen- } \\ \text { tric. } \end{array}\right.$ |
| 4 | Gask . . | 126 | 88 \{ | $\begin{array}{\|c} \text { about } \\ 32 \end{array}$ | $\} \quad 10$ | Concentric | $\left\{\begin{array}{c}\text { Remains of } \\ \text { Cairn }\end{array}\right\}$ | $\ldots \quad\{$ | N. side of Intermediate Ring | Only two or three stones of inner ring left. |
| 5 | Midlairg - | ? | 32 | 14? | $\ldots$ | $\cdots$ | ... | $\ldots$ | , | $\left\{\begin{array}{l}\text { Rude cross on one } \\ \text { stone. }\end{array}\right.$ |
| 6 | Daviot | about 94 | 49 | 18 | ... | Excentric |  | $\ldots$ | $\cdots$ | $\left\{\begin{array}{c}\text { Only two stones of } \\ \text { outer ring left. }\end{array}\right.$ |
| 7 | Culdoich, Clava | about 116 | 62 | 21 | $\ldots$ | Concentric? | $\left\{\begin{array}{c}\text { Central } \\ \text { Cairn }\end{array}\right\}$ | $\ldots$ | ... | Much destroyed. |
| $\begin{aligned} & 8 \\ & \& \\ & 9 \end{aligned}$ | $\}$ Miltown of Clava | ... | ... | $\ldots$ |  | $\ldots$ | , | $\ldots$ | . $\cdot$ | $\left\{\begin{array}{l} \text { Ruin of an ancient } \\ \text { Chapel on site } \\ \text { of No. \&. } \end{array}\right.$ |
| 10 | Balnuaran of Clava. | 108 | 53 | 121 | 12 | Concentric | $\left\{\begin{array}{c}\text { Chambered } \\ \text { Cairn }\end{array}\right\}$ | S. $39^{\circ} \mathrm{W} .\{$ | S.W. side of Inner Ring | $\left\{\begin{array}{l} \text { Two urns with } \\ \text { bones found in } \\ \text { chamber, } 1829 . \end{array}\right.$ |
| 11 | Balnuaran of Clava . | 107 | 57 | 22 | 10 or 11 | Excentric | $\left\{\begin{array}{r}\text { Central } \\ \text { Cairn }\end{array}\right\}$ | $\ldots$ | Intermediate Ring | $\left\{\begin{array}{l} \text { Radiating Cause- } \\ \text { ways ; no en- } \\ \text { trance passage. } \end{array}\right.$ |
| 12 | Balnuaran of Clava . | 110 | 58 | 121 | 11 or 12 | Concentric | $\left\{\begin{array}{c}\text { Chambered } \\ \text { Cairn }\end{array}\right\}$ | S. $4 \mathrm{I}^{\circ} \mathrm{W} .\{$ | In Entrance Passage | $\left\{\begin{array}{l} \text { A few bones found } \\ \text { in chamber about } \\ 1850 . \end{array}\right.$ |
| 13 | Mains of Clava | $\therefore$ | $\cdots$ | $\ldots$ | ... | $\cdots$ | ... | ... | ... | $\left\{\begin{array}{l} \text { One stone of outer } \\ \text { ring left. } \end{array}\right.$ |
| 14 | Mains of Clava | ... | about 50 | 18 | ... | ? |  | $\cdots$ |  | Fragmentary. |


archæologists that the complete design, in every case, would include a central chamber and surrounding cairn, like those at Clava; and, with regard to this point, it must be admitted that the intermediate ring is in all cases built in such a way as to lend weight to such an inference. There is too little information, however, to conclude that there was a regularly built central chámber in every case. One thing is certain, from the various irregularities of construction which have just been referred to, and that is, that there was no mathematical correctness or precision applied in the laying out or building of these singular structures. From the occasional excentricity of the different rings it might be further inferred, with some probability, that the outer rings were first set up and afterwards the interior rings. This seems to be as much as can be fairly inferred from mere measurements, so far as the group of circles in this district is concerned.

Tabulated Particulars.-A table on which the dimensions and certain other particulars of the circles can be seen, in one view, is inserted on preceding page.


[^0]:    ${ }^{1}$ The cup-markings here referred to, and the others mentioned in this paper, were described by Mr William Jolly in his paper on Cup-Markings ; but I cannot concur with him that some other "cup-markings" mentioned by him in connection with these circles are proved to be anything but natural hollows in the stoues. The tallest stone at the south side of this circle of Gask, mentioned by Mr Jolly as bearing cup-markings, seems to me to be simply a shaly sandstone flag of rough ripple-marked stratification, in some places roughly imitating cup-markings.

[^1]:    1 It has been sometimes stated that it was the eastern circle that was opened by Mrs Campbell; but that is not the case, as may be still ascertained from people on the spot.

