

III.

REPORT ON EXCAVATION AT MONZIE. By ALISON YOUNG,
F.S.A.Scot., AND MARGARET CRICHTON MITCHELL, M.A.,
Ph.D., F.S.A.Scot.

An opportunity arose in August 1938 to excavate the standing stones in the policies of Monzie Castle, Perthshire. Nine stones appeared above the turf in the form of a rough circle, the highest showing little more than 2 feet. One of these stones, a boulder of schistose grit which later proved 4 feet in depth, was carved on top with deep cups with connecting channels (Pl. XXXVI, 2). This stone formed a part of the circle though actually within the arc of a line taken through the centre of the other standing stones and giving a diameter of 17 feet. Pl. XXXVI, 1 shows the outlier, at a distance of approximately 15 feet from the centre of the circle, measuring from the centre of the ring-marked stone. This is a boulder of metamorphosed grit covered with cup and concentric rings, some channelled, some cups alone and one well-preserved and unusually deeply cut single ring round a cup, this had been covered by turf. The stones are shown on a plan given by Romilly Allen,¹ and on the 6-inch ordnance map, $\frac{2}{3}$ mile S.S.E. of Monzie and 300 yards from the East Lodge. They lie on the 400 feet contour on fairly level ground between the Shaggie Burn and the Knock of Crieff which rises sharply to 911 feet.

The geological description kindly given by Dr Simpson describes the stones as "situated on a high level sand and gravel terrace of fluvio-glacial origin deposited by the melt waters of ice which was retreating northwards in the Shaggie Burn and westwards in the Earn and Turret valleys. As the ice advance had been from the west, the boulder content of these terraces comprises schistose grit rocks of highland origin as well as examples of the more local rocks. The geological formation at the site is Lower Old Red Sandstone, and rock outcrops are frequent; three distinct rock types are to be noted: (a) volcanic rocks northwest of Monzie, (b) coarse conglomerate with pebbles of lava, and (c) fine grained sandstones and marles with limestone concretions starting at Gilmerton about $\frac{1}{2}$ mile S.E. of the site."² Approximately 300 yards west of the stones is a standing stone 4 feet 9 inches at the highest point, and 12 feet in circumference at ground level.

The standing stones are, without exception, set with the broad faces on the arc of the circle which measures 17 feet in diameter.

For the purposes of examination the site was enclosed in a 45-foot square, a central turf strip of 1 foot was retained, and numbered 3-foot strips were taken from this key to the edge of the square.

¹ Romilly Allen, *Proc. Soc. Ant. Scot.*, vol. xvi. p. 90; Coles, *Proc. Soc. Ant. Scot.*, vol. ix. S. iv. p. 82.

² *Ibid.*, vol. ix. S. iv. p. 82.



1. Ring-marked boulder at Monzie.



2. Stone 1.



3. Stones forming cist.



1. Showing cist to right of marked stones.



2. Sand level showing two stones from loam level (marked by dots).

Fig. 1 shows the stones which appear above turf level marked black, and the stones which lay immediately below turf level and within the circumference of the circle in outline. The latter were of varying size and were set

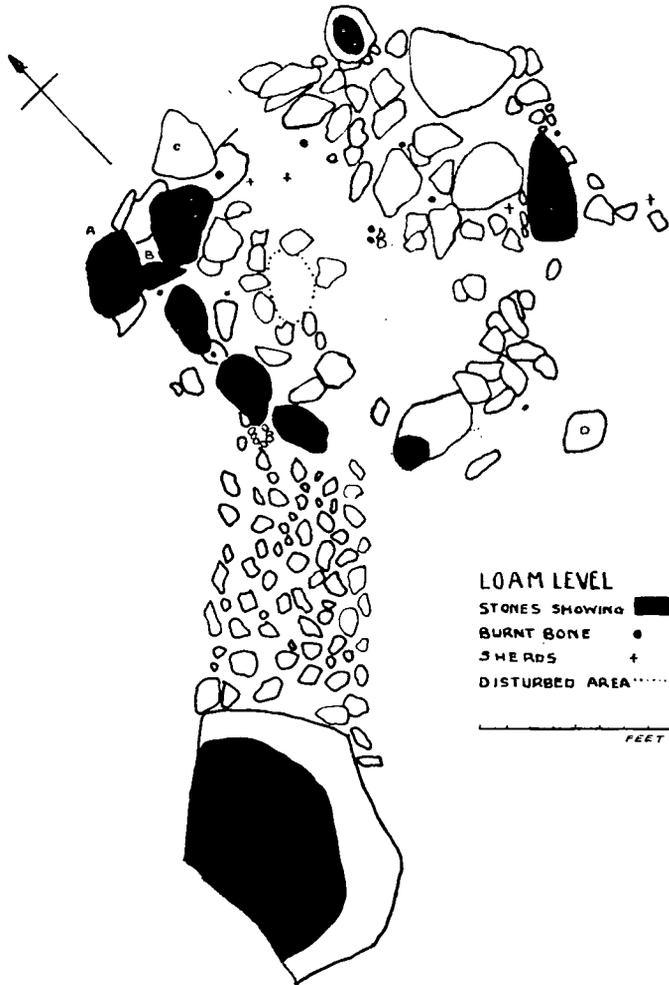


Fig. 1. Circle at Monzie; plan at loam level.

in the loam in haphazard fashion. At this level a causeway appeared between the ring-marked slab and the standing stones. The stones of the causeway were of different sizes, and were laid at the natural angle of repose on one level; this could not be called a paving, nor were the stones hard-set as in cobbling.

After consideration stones A, B, C, and D were discarded as no part of the original monument, A and B resting on the turf; these had most probably

been brought in off the field after causing some obstruction to agriculture. The disturbed area proved to be the fairly recent burial of a sheep, happily well defined. Within the circle, in the grass roots immediately below the turf, were the remains of at least two bottle decanters of free blown glass which Mr Thorpe of the Victoria and Albert Museum dates *circa* 1700; outside the arc were several sherds of mediæval glazed ware. In the mixed filling were found two lumps which Dr Desch identifies as bloomery slag. Charcoal was scattered over all. Small pieces, apparently twigs or brushwood, occurred outside the arc on the east while large lumps were found on the west and within the circle. Mr Orr of the Royal Botanic Garden has kindly reported on the charcoal which is in a very large proportion hazel. In one lot of charcoal sent for examination, 374 pieces were of hazel, 11 of Scots fir, and 3 of oak. This preponderance of hazel is noteworthy.¹ In Mr Hemp's report of Bryn Celli Dhu, Dr Hyde "particularly noted the extraordinary abundance of hazel."

Fragments of burnt bone occurred at this level, while outside the arc, in the loam, one flint flake and a small piece of cannel coal were found.

A key trench dug outside the stripped area showed the natural stratification as gravelly loam approximately 16 inches below the humus; a 6 inches to 9 inches band of sand, and below this sandy gravel. The section (fig. 4) demonstrates the different levels inside the circle. Taken from the bottom upwards, there is a floor of sand over the entire area corresponding to the natural stratification but apparently added to in the centre; against stone 1 a dark loam stretches for $2\frac{1}{2}$ feet, meeting the gravel which in the key trench was the sub-soil or natural, and here overlies the sand. This dark loam appears at the west side against stone 7. Above the gravel a gravelly-loam stretched across the whole area underlying the black layer. (The line of the section does not touch the black level.) This black layer was a compacted black substance of which fig. 2 shows the extent. It was of varying thickness, the greater part about 1 inch in depth widening to 5 inches at the edge, and contained many fragments of burnt bone and charcoal; it was defined by a thin red crust above and below and was apparently due to extensive fire. Above the black layer the earth was a mixture of loam, sand, and gravel which gave the impression of a random infilling of the three soils natural to the site.

Immediately over the black layer was a rim sherd (fig. 4), and in the compacted black substance another rim sherd was found at a distance of 2 feet. These are dealt with in a separate report. Two feet from stone 5 this black layer split, the upper portion continuing out to the stone, the lower sloping to the base where it widened to 3 inches. This sealed a clean gravel in which lay small boulders, such as were found wedging the base of all the standing stones. Above this double black layer occurred

¹ *Archæologia*, vol. lxxx. p. 214, Hemp.

the only hint of post holes found on the site, two breaks in the upper level but not piercing the lower, filled with dark earth.

Below the causeway a slab was exposed, midway between the cup and ring-marked outlier and the circumference of the circle (fig. 2). This was raised and found to cover disturbed earth down to sand level. The outlier stone had wedge stones packed in mixed earth, as though to steady it in position. No evidence of its having stood upright could be found.

In fine black earth so noticeably free from stones as to suggest turf or moss packing, and which we found nowhere else on the site, there appeared a stone which proved to be the diorite cover of a rudimentary form of cist, shown in fig. 2; the sides of the cist were formed by four stones laid on the sand (Pl. XXXVI, 3); the space between them was closely packed with comminuted burnt bone and fragments of the unrolled quartz¹ which was such a feature of the whole site. Professor Waterston examined the bone fragments and distinguished two individuals, an adult and a child

of six to eight years of age.² "The heat to which these bones had been exposed must have been very considerable and prolonged."

At this level outwith the arc, there appeared two curious patches of black earth which had an odd consistency like greasy powder. One occurred

¹ Among references to quartz in connection with burial: *Archæologia*, vol. lxxx. p. 193; *Proc. Soc. Ant. Scot.*, vol. vi. p. 343; vol. xxx. p. 201; vol. xxxii. p. 216; vol. xxxvi. p. 635; vol. xxxvii. p. 60. Compare double cremation at Ury.

² *Proc. Soc. Ant. Scot.*, vol. lxxxix. p. 386.

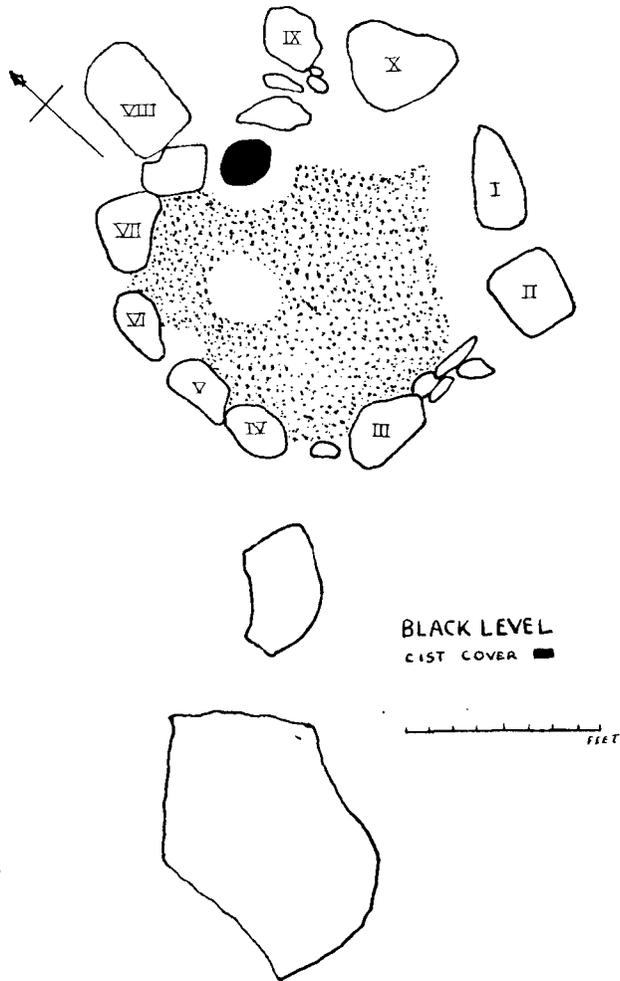


Fig. 2. Plan at black level.

between stones 6 and 7 and had three small sandstone slabs over it but no stone defining it; it contained two fragments of bone among a quantity of unrolled quartz mixed with black earth and large charcoal lumps. The larger of these fragments is unidentifiable and apparently not calcined, the surface has what Professor Waterston calls a "soapy feeling." The other patch was at the base of stones 4 and 5. This was defined by water-worn pebbles and covered by a split stone of metamorphosed grit 10 inches by 4 inches. The same greasy powdered earth and quartz chips were found here, but neither bone nor charcoal.

Fig. 3 shows the stone settings at sand level, below which we found no evidence of disturbance. The four stones of the little cist are marked in black. These were green water-worn pebbles of metamorphosed grit on the north and south, and red felsite on the east and west. The colouring was very striking on removing the cover slab when the stones were wet. Big lumps of unrolled quartz were closely packed end to end inside the broad bases of the standing stones, too regularly to have been accidental. These packings were at or below the black layer against stones 3, 4, 5, and 6, and with the exception of 3 were in charcoal and dark earth. Stone 2, which had fallen outward and which was subsequently raised as far as possible in its socket, had a pocket of quartz at its base, and at stone 10, which had also fallen outwards and jumped its socket, there were two pockets of sharp quartz lumps, one numbering 70 stones. Large quartzes had also been packed under the overhanging edge of the cup and ring-marked slab.

The stone on the north side shown in figs. 2 and 3 had also fallen outwards, but this could not be raised with the means and man-power at our disposal. This outward tilt was observed in all the standing stones.

No evidence of a ditch could be traced. The standing stones 1, 2, 3, 4, 6, 8, 9, and 10 were all bedded in sand, while 5 and 7 are on the gravel, the sand having been moved in the course of their erection. This would account for the disturbance shown on the west side of the section (fig. 4). The cist must have been laid when the area was stripped so as to present a compact floor of sand. From the character of the quartz packing round the ring-marked slab and the stones of the circle, the setting of these would appear contemporary. The two black layers enclosed sandy gravel free from any appearance of disturbance at stone 5, the lower was compacted, and ran out to the base of the stone; therefore, presumably, a short time elapsed between the first and second fire; this is borne out by the appearance of the narrow black layer with red crust above and below and with no hint of intervening deposit. The sherds were found in and lying on this black level, and it would appear that the circle, cist, black level and sherds are contemporary. This circle conforms to the last stage of Dr Callander's typology of megalithic monuments,¹ and the Iron Age

¹ *Archæologia*, vol. lxxvii, p. 97.

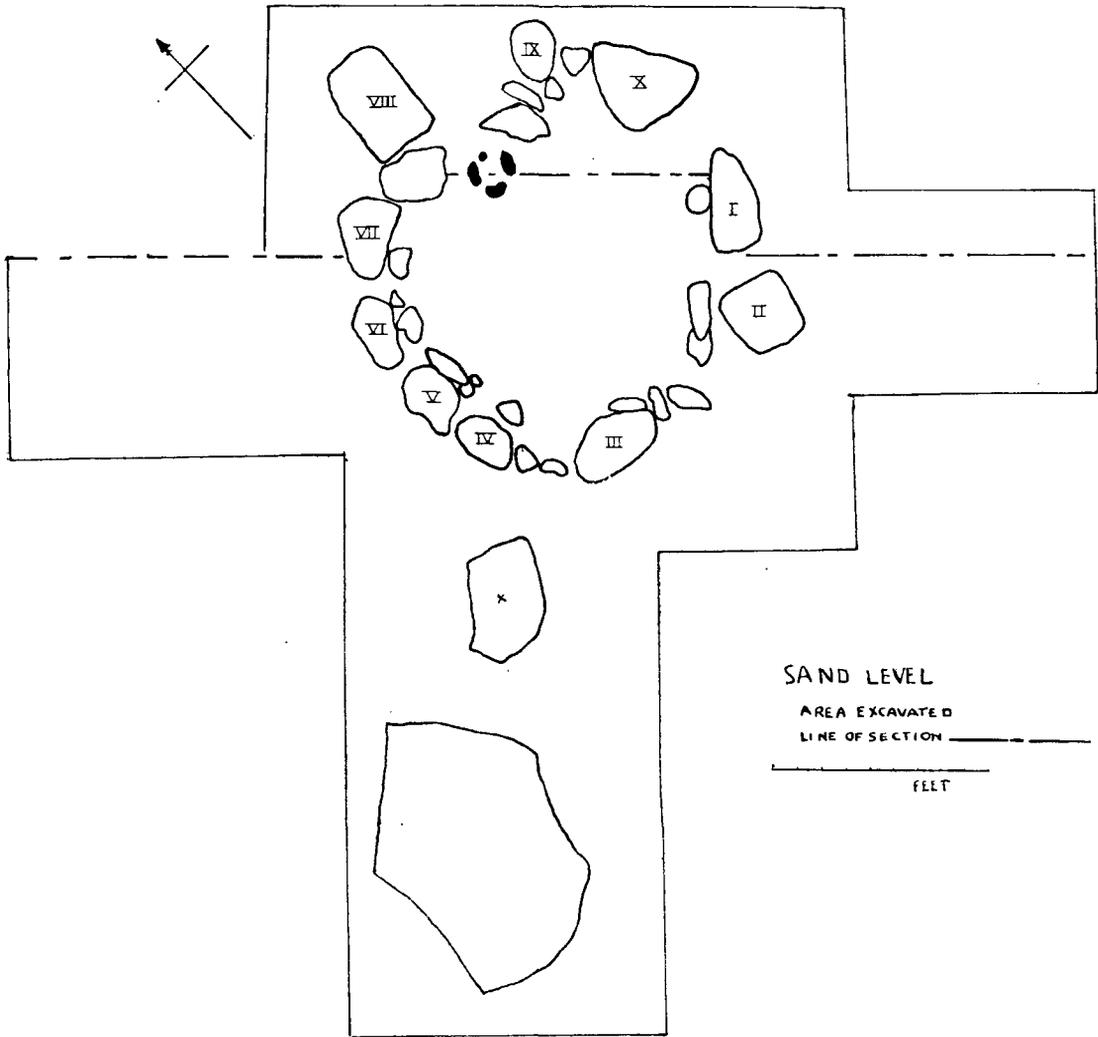


Fig. 3. Plan at sand level.

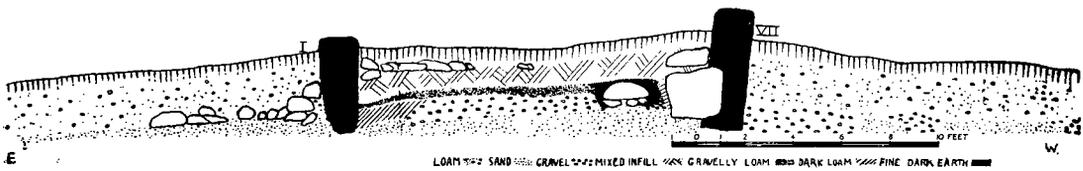


Fig. 4. Section on line shown in fig. 3.

character of the rim-sherds,¹ points to that dating with a native late Bronze Age tradition.²

The circle presents certain characteristics. The small diameter; close setting of a single ring of stones, with broad faces on the arc; the fact that the whole area within the stones was stripped to sand level; the absence of a ditch, the traces of fire, and the eccentric position of the cist seem worth noting.

These structural records may correlate with other investigations more fruitful in dating material and so fit this type of monument into place in the prehistory of our country.

We should like to thank the owner, Mr Maitland Makgill Crichton for his co-operation, and for putting at our disposal the services of two of the estate workers. We were fortunate in having the help of Miss Stirling and Miss Dimsdale. We have to acknowledge reports from Professor Waterston, Mr M. Y. Orr, Dr Simpson, and Dr Desch. Our gratitude is also due to Mr MacLaren, whose plan of the stones made before our arrival was of the utmost aid.

REPORT ON RIM FRAGMENTS. By MARGARET CRICHTON MITCHELL,
M.A. Ph.D., F.S.A.Scot.

The prehistoric pottery from the stone circle at Monzie, Perthshire, consists of two rim fragments from the same vessel (fig. 5).

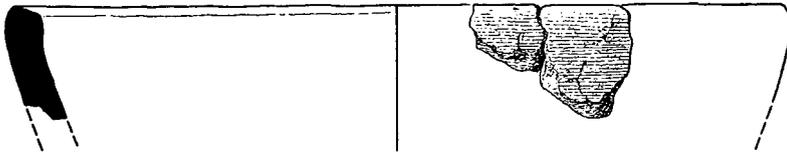


Fig. 5. Rim sherds from circle.

The ware is well fired, coarse, and black throughout with a fair admixture of grit. There is no slip and no signs of burnishing. The rounded rim has been slightly pulled, giving an inner ridge below which the internal profile tends to be slightly concave. The exterior wall shows a practically straight line.

The fragments have affinities with the pottery recovered by Professor Gordon Childe from the Recumbent Stone Circle at Old Keig, Aberdeenshire.

The analogies lie within the Old Keig class II variety which was found with cremated human bones and was apparently contemporary with the erection of the monument.

For comparative study, reference should be made to fig. 5, p. 46, in *Proc.*

¹ *Proc. Soc. Ant. Scot.*, vol. lxxvii. p. 48.

² Childe, *Prehistory of Scotland*, p. 176; *Annual Report*, Institute of Archæology, London, vol. ii. p. 36.

Soc. Ant. Scot., vol. lxxvii. (1932-33), and to p. 48 in the same volume where a Hallstatt date is ascribed to this pottery after a very thorough investigation.

REPORT ON BONES. By Professor D. WATERSTON, University of
St Andrews.

The specimens sent to me consisted of a large number of fragments of bone, measuring 2·5 to 4 cm. in length, or smaller.

Most of the fragments were too small to be identified, but a few could be recognised, and are described separately.

Evidence of exposure to great heat was found in the presence of fine linear fissures on the surface of many of the fragments. A few had been incompletely calcined and were black. Some fragments of calcined wood were found among the bones.

The fragments of special interest were the following:—

(1) The terminal phalanx of the left thumb, of an adult.

(2) Portions of skulls, one a portion including a part of the lamboidal suture. The suture was open externally but closed on the inner surface. The age cannot be more definitely stated than that the skull from which it came was that of an adult. Portions of the petrous temporal bones, including the acoustic meatus, one that of the left side from an adult, the other from the skull of a young person, whose age cannot be definitely stated.

(3) Portion of the body of the mandible from a child. The fragment showed the presence of an alveolus for the first permanent molar (the six-year-old molar) which had erupted, and alveoli for two milk molars and a canine. The age was therefore about six to eight years.

(4) Portions of teeth, in the examination of which I have had the benefit of the experience of my colleague Professor Gordon Campbell, who kindly examined them; they are an upper milk molar, probably the first, and several probably "deciduous" incisors. These may all well have come from the mandible described and its corresponding maxillæ. There was also an adult low premolar, probably lower, the apex of which root was almost completely calcified. This could not have come from the same mandible as the others.

A fragment of bone from outside the circle could not be identified.

It was of a whitish colour, the surface had a "soapy" feeling, and it apparently had not been calcined.

REPORT ON SLAG. By Dr C. H. DESCH, The National Physical
Laboratory.

The two slags sent from the site at Monzie are typical bloomery slags, consisting essentially of ferrous silicate. A represents the more fluid portion, and B the more solid or earthy part.

It is impossible to suggest the age of the slags, even if an analysis were made, as the bloomery process underwent no significant change, except in scale, from the Iron Age to mediæval times.

MONDAY, 13th February 1939.

PROFESSOR THOMAS H. BRYCE, LL.D., Vice-President,
in the Chair.

On the recommendation of the Council, Professor Andreas Alföldi was elected an Honorary Fellow.

A Ballot having been taken, the following were elected Fellows: J. Kevan MacDowall; Murdoch McIntosh, Sheriff Clerk of Inverness; Horace Victor Pitt-Kethley.

There was exhibited by the Zetland County Council a Viking Axe, which was found in a stone-lined grave in the Churchyard, South White-ness, parish of Tingwall, Shetland.

Donations to the Museum and Library, as per lists at end of volume, were intimated and thanks voted to the Donors.

Purchases for the Library, as per lists at end of volume, were announced.

The following Communications were read:—