NOTICE OF THE DISCOVERY OF A STONE CIST AND URNS AT THE CUNINGHAR, TILLICOULTRY; BY R. ROBERTSON, F.S.A. SCOT. WITH NOTES ON THE CONTENTS AND THE SCULPTURED COVERING STONE OF THE CIST; BY GEORGE F. BLACK, ASSISTANT KEEPER OF THE MUSEUM: AND ON THE MICROSCOPICAL EXAMINATION OF THE FIBROUS OR HAIRY SUBSTANCE FOUND IN THE CIST; BY JOHN STRUTHERS, M.D. LL.D., EMERITUS PROFESSOR OF ANATOMY IN THE UNIVERSITY OF ABERDEEN.

The Cuninghar ¹ is an elevated ridge of sand intermixed with gravel, about $\frac{1}{2}$ a mile to the E. of Tillicoultry. It lies N. and S. at right angles to the Ochils. The turnpike road has been cut through it at the southern end, and a few yards to the N. of the road there formerly stood a stone circle. This circle measured some 60 feet in diameter, and the standing stones are said to have been about $5\frac{1}{2}$ feet of an average height. These stones have now entirely disappeared, having been removed, according to local tradition, some forty years ago to cover a built drain at Tillicoultry House. The site of the circle itself has also been reduced by a half, the place having been utilised for a good number of years as a sand-quarry. A small embankment which ran round the circle and the sites of some of the stones are still visible in the remaining half.

In April 1894, Mr Christie, teacher, Dollar, while visiting the place with a friend, observed the rim of a large cinerary urn protruding above the soil near the edge of the circle, and alongside of where one of the standing stones seems to have been. In attempting to remove this urn it unfortunately went to pieces. The pieces were all carefully collected, and the urn (which was filled with bones) is now exhibited in its restored condition. It is of the usual cinerary form, with a heavy overhanging

¹ Cunningar, Cunninghar, Cunningaire,—an obsolete word signifying a warren for rabbits.—Jamicson.

brim, and ornamented on the brim only, the ornamentation being composed of oblique lines of circular impressions made by the end of a round stick scarcely so thick as a pencil. The urn has been presented to the Museum by Mr Christie.

On becoming acquainted with this find I went to inspect the place, and on examining the site of the circle my attention was attracted by the end of a large block of stone, protruding from the face of the sand-It was about 4 feet below the surface, and exactly where the centre of the circle must have been. As I knew that stones of this size were not found in the sand-pit, I proceeded to investigate it more closely. I then saw that it formed the cover of a cist, and on some of the sand being removed the end slab was also visible. Considering the discovery one of considerable importance, I at once communicated with the proprietor—R. G. Wardlaw Ramsay, Esq.—who gave instructions that it should be left untouched until I wrote to the Society and endeavoured to get some one of experience to come and superintend the examination of the find. Shortly afterwards, from the position of the cist in the face of the sand-quarry, and the continual crumbling away of the sand, the covering block fell, bringing down with it one of the end and one of the side slabs of the cist.

Fortunately I was on the spot soon after, and found the remaining portion of the cist and contents untouched. Along with the Rev. R. Paul, F.S.A. Scot., I made a careful examination of what remained.

The cist was of the usual kind, formed of four rough slabs of freestone, the two longer sides of which lay N.E. by S.W. It measured 4 feet 9 inches in length, $2\frac{1}{2}$ feet in width, and 2 feet in depth. The cover was a huge block of grey granite, nearly 6 feet long, $4\frac{1}{2}$ feet at the broadest part, and of an average thickness over all of 2 feet.

It is calculated to weigh from $3\frac{1}{2}$ to 4 tons. The joints of the cist were carefully packed with clay; and so thoroughly had this been done, no sand or soil of any kind had found its way inside. The floor was composed of a layer of pure sand, a few inches deep, from which all gravel had been thoroughly sifted out.

At the S.W. corner a very fine example of a "food-vessel" urn (fig. 1) was found, in a perfect state of preservation. It stood mouth upwards,

and was perfectly empty. It is described in the subsequent part of this communication by Mr Geo. F. Black.

A few pieces of the long bones of the skeleton were all that remained, but there were sufficient indications that the body had lain in a contracted position, with the back towards the N. side of the cist. The place where the head had lain was also clearly marked, and several teeth were found, the crowns of which are in an excellent state of preservation, and show that the burial was that of an adult. No orna-



Fig. 1. Urn of food-vessel type, from the Cist, Tillicoultry.

ments, weapons, or implements of any kind were found, although the contents of the cist were carefully sifted.

At the spot where the head had rested was a quantity of a fibrous or hairy substance, of a dark-red colour; and underneath this was a layer of white pebbles, some of them deeply stained with the same red hue. The former has all the appearance of being the hair of some animal, and no doubt a microscopical examination will determine its character. If found to be animal, if may be the remains of a skin on which the head rested; it is, however, remarkable that it should have resisted decay for such a lengthy period.

The covering-stone (fig. 2), as I stated, had fallen to the bottom of

the sand-quarry, and lay nearly covered by sand and gravel brought down with it in its descent. On clearing this away a remarkable feature was brought to light. The block was found to be elaborately ornamented on its sides and upper surface with rings, spirals, and lines. The labour of cutting these in the hard granite with the primitive tools of the period must have been very great.

Several successful photographs of the stone and its carvings were

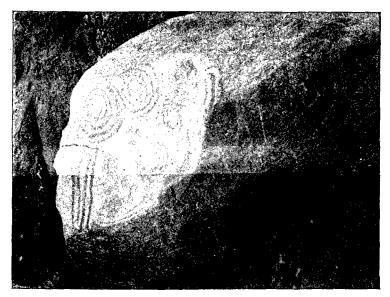


Fig. 2. Covering-Stone of Cist at Tillicoultry, sculptured with Cups and Circles.

taken by Provost Westwood, Dollar. These are now shown, and give a good idea of the size of this remarkable stone and its ornamentation. I may mention that granite is not a native stone of the district, but many blocks (probably ice-carried) are found scattered over the southern This stone has now been removed to the vicinity slope of the Ochils. of Tillicoultry House for safety, and can be seen there by any one interested in it.

I think it can be safely concluded that, judging from the character of VOL. XXIX.

the cist, its large and finely decorated cover, and its position in the centre of a circle of standing stones, this interment must have been that of a person of importance. The large cinerary urn is probably one of several extending round the circumference of the circle.

Many other urns have been found in former years in the Cuninghar and immediate neighbourhood. One found in a cist, while forming the western approach to Harvieston Castle, is now in the museum of Dollar Institution. It is a very fine example, and it is said it contained a flint implement when found. [See the description of this urn on p. 107 ante.]

Professor Struthers said that he had examined the fibrous substance under the microscope. He had compared it with human hair, and that of the horse and ox, and found it was neither of these. hair kept its characters well, in illustration of which he exhibited a slide containing hair he had found in a short stone cist at Parkhill, Aberdeenshire, in 1867, and a lock of hair found in 1858 in the cave in the island of Eigg, in which, towards the end of the 16th century, 200 persons of the clan M'Donald were suffocated by the clan M'Leod. In both of these the characters of human hair were evident. material from the Tillicoultry cist is of a dull golden or brown-red colour, in irregular tufts not longer than \frac{3}{4} of an inch, soft and easily broken, and composed of fine fibres about a sixth the thickness of the hair of man, the horse, or the ox. Interlacing with part of the red tufts are whitish fibres, like fine thread, from twice to thrice the thickness of the hairs above mentioned, branching abruptly at intervals, and apparently of vegetable nature. The fibres of the red substance show the characters not of wool proper, like that of the sheep, but of the under hair of various quadrupeds, sometimes termed their "wool." The strongly serrated edges (or surface) which wool proper shows, and to which its felting property is said to be due, are not here present. dark and light markings are so close as to resemble the markings of striped muscular fibre, and the serrations caused by the distal margin of the covering-scales are faint. It might be the "wool" of the dog or fox, which would suit the colour, or, for structure at least, that of the rabbit. It would require a great deal of comparative microscopic observation to determine the particular animal. It was to be noted that the tufting does not seem natural, but as if the "wool" had been crushed. The tufts and individual fibres easily break in the fingers, and there is a debris of broken-down fibres, approaching powder.

Mr George F. Black said:—As Mr Robertson has very fully described the circumstances relative to the finding of the cist at Tillicoultry, it only remains for me to draw attention to its contents and to the covering-stone.

The urn is of the food-vessel type, and measures $4\frac{3}{4}$ inches in height by $4\frac{1}{2}$ inches across the mouth. The whole of the outer surface of this urn is ornamented with bands of zigzag cord-marks, which have been impressed in the clay while in a soft state. In addition there are eight projecting perforated knobs or ears, placed at equal distances round the shoulder. Two of these unfortunately are broken off.

The pierced ears, which are a rare feature in these urns, are believed to be for the purpose of allowing a thong or cord to be passed through to admit of the vessel being suspended; but in the case of the urn before us, the holes, I think, are too small to admit of such a use. Canon Greenwell has suggested that urns of this type with pierced ears are of earlier date than those with the ears unpierced; and he adds, that when they ceased to be suspended, the ears were still retained, in accordance with the common principle of survival, but were not pierced, and so became mere ornamental appendages.

The matted substance found in the cist, at the spot where the head rested, appears to be of two materials—the lighter coloured, composed of the matting of roots; and the darker coloured, apparently a kind of felted or unwoven cloth. A discovery of a similar material was made in a cist containing urns and a spoon of ox-horn at Broomend, Inverury, Aberdeenshire, and is here shown for comparison. There are also on the table two small pieces of materials of similar texture, one portion of which enveloped the long bones of a skeleton in a cist at Barnhill, near Broughty-Ferry, while the other was found in a cist at Parkhill, Aberdeenshire.

The association of pebbles of quartz with burials of the Bronze Age is not common in Scotland, but a few instances have been brought together and discussed by Sir Arthur Mitchell in a paper printed in the 18th volume of the *Proceedings*.

Probably in one or two of the instances there quoted the pebbles may have formed merely a flooring for the cist, but in most of the cases they appear to have possessed a symbolic meaning.

The covering-stone of the cist, as will be seen from the photographs, (see the illustration on p. 193) bears on the face a series of concentric circles, and spirals springing from one of the groups of circles. Four grooves also unite the same set of circles with the left-hand edge of the stone. On the edge shown in the photograph there is another group, consisting of two concentric circles. The unevenness of the surface of the stone appears to have been of no moment to the sculptor of the circles, as the incisions follow the surface into its sinuosities and depressions.

As covering-stones of cists are very rarely sculptured in any way, I have thought it worth while to bring together all the recorded Scottish examples of circle-marked slabs, for comparison with that found at Tillicoultry.

In 1871 a cist was discovered in the course of clearing land on the farm of Westeryird Houses, four miles north from the village of Carnwath, Lanarkshire. On examination the cist was found to contain an urn of the drinking-cup type, ornamented, and about 9 inches high. At the same time the covering-stone, on being turned over, was seen to be sculptured with three groups of concentric circles and two curious triangular markings. Both the urn and the cist-cover are now in the Museum, and the latter has been figured in the *Proceedings*.¹

At Coilsfield, Ayrshire, in 1785, a large slab, bearing a series of concentric circles, was found acting as the covering-stone of a cist containing a portion of an ornamented urn of food-vessel type. In this instance it is not recorded what position the sculptured face held in relation to the cist, whether directed outwards or inwards.²

Another circle-sculptured slab was found about the year 1864 cover-

¹ Proceed. Soc. Ant. Scot., vol. x. p. 62.

² Wilson, Prehistoric Annals, vol. i. p. 480.

ing a cist at Carlowrie, near Edinburgh. The cist here was composed of rude unmarked slabs of freestone, and contained nothing beyond a stratum of unctuous, black, fatty earth, with traces of decomposed bones. The cover bore three series at least of concentric circles, and each series was five in number. In this case the sculptured face was directed to the inside of the cist.¹

When making a new road through Craigie Wood, about a mile distant from the place last mentioned, the end of a cist was left exposed at the top of the embankment. The cist consisted of two lateral stones and apparently two end stones, and was covered with a slab about 3 feet broad and at present only 4 feet long. The interior or under face of the slab is carved with several groups of concentric circles, and formerly one or more sets existed on portions of the slab that were broken off and lost. An urn is supposed to have accompanied this interment, as one of the workmen stated that on opening the cist they found within it an object which he irreverently described as "an auld can."

A fifth slab, now in the Museum, although not a covering-stone, may also be mentioned here, as it formed part of a cist. I refer to the slab from Carnban or White Cairn, a village on the line of the Crinan Canal, in Argyllshire. It bears on one face a series of five concentric lines of a lozenge form, and when found served as a panel in the cist, and had the carved face directed to the interior of the grave.³

From the evidence here adduced, I think we may safely conclude that at least some of the mysterious ring-marked stones are of Bronze Age date.

¹ Proceed. Soc. Ant. Scot., vol. vi., App. pp. 28, 29.

² Proc. Soc. Ant. Scot., vol. vi., App. p. 28.

³ Ibid., pp. 29, 30.