NOTICE OF THE DISCOVERY OF A CIST WITH A DOUBLE BURIAL AT RATHO QUARRY. By FRED. R. COLES, Assistant Keeper of the Museum.

On Wednesday, 24th November, a note from Mr L. Grant, dated Ratho Quarry, 23rd November, and addressed to the Society, contained the information that on that day workmen, in stripping the soil from the top of the quarry, had come on a flat stone, and below it a rudely-constructed space, about which the writer thought it was best to let the Society know. I at once set out, and found on arriving at the quarry that what Mr Grant had thoughtfully spared was a cist burial, some features of which, even on the most cursory survey, struck me as somewhat unusual. We proceeded forthwith to examine the structure; but I must preface this report with a few notes on the site.

The Ratho quarries consist of a deep bed of hard Syenitic green-

stone, irregular in surface, and chiefly massed at a point about 1000 yards up the bank of the canal, westwards of Ratho village.

The North quarry has a crown some 90 or 100 feet above the canal towing-path; and at almost the highest point of this, unmarked by any cairn or tumulus, was the cist discovered. Distant one mile from Ratho station, this eminence, 300 feet above sea-level, would, on a clear day, command a pretty extensive prospect; and within easy reach are the summit of Tormain Hill, with its cup- and ring-marked rocks, and the huge boulder, also cup-marked, known as the Witch's Stone.¹

Before my arrival the workmen had removed surface-soil to the depth of over 40 inches, and hard brown till, 34 inches thick, ere they struck on the oval cover-stone (see section, fig. 1), so that a covering of earth 6 feet $2\frac{1}{2}$ inches thick lay on the top of this, the uppermost stone of the This stone is of the greenstone of the site, in shape irregularly oval, 47 inches long by 28½ wide, of an average thickness of 3 inches. It has no artificial markings on it, but must have been exposed to some weathering before being used in the interment, as its under side showed hollows and irregularities traceable to no other cause. Its longer axis lay due east and west. On this stone being lifted, Mr Grant next observed a layer or course of smallish, unequal-sized stones, most of which were at once removed and put out of the way. Only by doing this was he enabled to state the existence of a squarish space below. Soil also had filled up this space, which, on further examination, proved to be 21 inches deep, and was in reality one end of a cist, lying south and north, and across which lay a long massive block of yellowish free-The order in which the several stones were superimposed will be best understood by the diagram (fig. 1) and descriptive table annexed. We then removed the soil out of this first-found cavity (which measured 26 inches by 18) till a stroke of the spade laid bare part of a leg-bone lying obliquely across and partly underneath the long freestone block. I argued from its position that the rest of the body must lie on the other or north side of the long stone, therefore we lifted the two stones (I

¹ Figured in Simpson's "Archaic Sculpturings," Proc. Soc. Antiq. Scot., vol. vi., app., pl. ix., and described fully by Dr J. A. Smith, in Proc. Soc. Antiq. Scot., vol. x. p. 143.

and K), and after removing a foot or so of soil came upon the skull. This, using our pocket-knives, we scraped around with the utmost care; but, owing to the extreme fragility of the bone, it was only possible to remove the skull in pieces. Of ribs or arm-bones there was not the

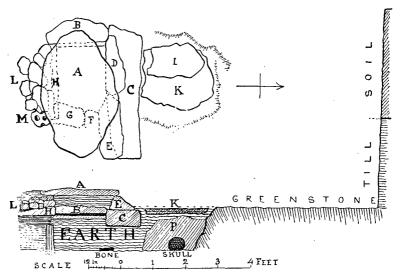


Fig. 1. Plan and Section of Cist at Ratho Quarry.

DESCRIPTIVE TABLE OF THE STONES IN THE CIST.

- A, the cover-stone of the south end.
- L, remains of packing of small stones.
- B, D, E, F, G, H, slabs forming upper layer of cist, and overlapping the second layer.
 - C, long block lying across the cist due E. and W., resting on earth.
 - N, slab on edge at south end.
- I, K, thinnish slabs, set sloping westwards over the north end of the cist.
 - P, slab on edge on west side of cist.
 - M, the cup-marked stone.

slightest trace. This part of the cist was partly scooped out of the "rotten" greenstone, upon which also the body seemed to have been deposited.

As no more useful examination could that dark afternoon be continued, all the stones were replaced very much in their original positions. They were so left till the next morning, when we began by removing the stones again and carefully examining each for any cup- or ring-The only one of all the larger stones, however, showing any unusual scorings was D, which originally rested on the long block, and supported one side of the cover-stone. This stone, like the cover-stone, is a piece of hard, rough greenstone, and the marks on it are most likely glacial groovings. At first sight they suggested the teeth-markings of a harrow; but the position of the stone, 4 feet 6 inches below the surface, quite forbids that explanation. When cleared of all the larger stones, the south end of the south cist still showed the packing of small stones (L), which originally had nearly surrounded it. We may here note that there was none of this packing about the two stones (I, K) covering the other end of the cist. During the removal of these small stones, one, when the damp soil was rubbed of, showed two cup-marks, about $1\frac{1}{2}$ inch wide each and $\frac{1}{2}$ inch apart. The stone itself measures 5 inches by $4\frac{3}{4}$, and appears to be but a fragment of a larger one, one edge showing part of a third cup. The cups all show the tool-marks usually noticed on these mysterious sculpturings. All the packing of small stones rested on three largish flat slabs, the edges of which formed part of the perpendicular sides of the cist, while their surfaces sloped downwards and outwards on each side of it, leaving thus only the space below to be fitted in with the breadth of stones set upon edge. same construction had been followed in making the lower parts of the walls of the other end of the cist; but the stones there used were much smaller, the reason for this probably being that pieces of rock happened to fall in line with the building conveniently enough. After the whole structure had been laid bare, further search was made at the spot where the skull lay, for any remains or relics.

Beyond finding the extremely decayed remains of the jaws (even of that, chiefly the dental enamel alone), we observed nothing whatever. As we had now reached the rocky bed upon which the body had been laid, I took the measurements of its depth, and ascertained that the bottom of the grave was 4 feet 6 inches below the surface of the till,

or, in other words, fully 7 feet 10 inches below the present actual summit of the quarry.

We then proceeded to examine the other end of the cist, where more fragments of much decayed bones were presently found. The soil here yielding nothing really tangible, and it being ascertained that south and westwards there had been no disturbance of the till, we were about to abandon the excavation, when curiosity prompted me to trace the exact run of the two stones below G and H at the S.E. angle. two stones overlapped the lower ones by 4 or 5 inches, so that, although the squarish cavity noticed at the outset measured but 18 inches each way, the true size of the cist beneath was 26 inches E. and W., by nearly 20 N. and S. Probing into this angle with a slender iron pin, there was dislodged a lump of earth pretty full of the enamel crowns of human teeth; and on further probing, others singly and by twos and threes were brought out-assured indication of what to me was matter of surprise, that here, within this confined space, measuring from the rocky north end to the south slab only 4 feet 4 inches, by 2 feet 6 inches E. and W., there had been a double interment. It may be worth while noting that these few relics of the second skull lay almost below the cup-marked stone M. This last-discovered body must have been deposited nearly at right angles to the first; and both must have been bent up with the knees touching the chin into the very smallest possible compass.

As the occurrence of double interments in short cists is by no means frequent, there is here appended a list of references to such as have been noticed in Scotland. It may be opportune to compare them, however, with the number of cist burials in general (noted in Scotland since 1782); and this I am enabled to do through having some months ago made a computation of that total, the result being shown in the subjoined table,—any such results, it is to be understood, being quoted merely as tentative.

Summary of Cists in various parts of Scotland described in "Arch. Scot." and the "Proc. Soc. Antiq. Scot.," from the year 1782 to 1896.

(a)	Cists	found	in Cairns ((heaps of	stone	s),		154
(b)	"	,,	Tumuli	(,,	earth	ı),		52
(c)	,,	,,	or near	stone cir	cles,			17
(d)	Cists	found	in natural	hillocks	, .			162
(e)	٠ ,,	,,	on flat gro	und,	•			168
<i>(f)</i>	,,	,,	in sites un	specified	l, .			$\bf 24$
(g)	,		iated with			· .		27
(0)	"		·		. 0.7			
								604

This total represents the number of cists actually enumerated at the discovery of the cairn, etc. Some accounts use the phrase "several," or "many," or "a large number." Allowing 3 for each time "several" is used, and 5 each time the other phrases are used, there fall to be added 110; and to these I may again add 19 cists noted by myself in the Stewartry (all but 2 in cairns). We thus have a grand total of 733 (probably an under-estimate) of so-called examinations of ancient burials in Scotland,—a fact it is as well to face when we set beside it the meagre amount of real knowledge we have gained during a period of excavation lasting over 105 years.

This Ratho cist, therefore, belongs to group e, burials on flat ground, that is, on sites which, though occurring upon plateaux or ridges, are not sharply defined as hillocks or even true hill-summits, the group apparently comprising the largest number of interments of any. So far as I have been able to ascertain, the only other accurately reported double burials in one cist, i.e., burials of two unburned bodies, are the following:—

LOCALITY.	NATURE OF BURIAL,	SIZE OF CIST.	Described by	Proc. Soc.
At Newbigging, Kirkwall.	2 male skeletons.	4·8"×3·1"×2·2"	Geo. Petrie.	VI. 411
At Isbister.	2 skeletons.	5.0"×2.3"×2.10"	17	,,
At Broomend, Inverurie.	2 male skeletons and urns.	5·3"×2·6"×2·6"	J. H. Chalmers.	VII. 111
" , "	1 male skeleton, 1 infant female, 2 urns.	4·2"×2·3"×1·7"	C. B. Davidson.	,,
At Carsecreugh, Wigtown- shire.	1 skull of female, 1 skull of infant.	2·6"× (?)	Rev. G. Wilson.	IX. 517
At Antabreck, N. Ronald- shay.	Portions of 2 skeletons.	2·0"×2·6"×1·6"	Dr W. Traill.	XI. 309
At Innertown, Stromness.	3 adult skeletons.	4·1"×2·5"×2·10"	W. G. T. Watt.	XII. 301
At Kirkbuddo.	1 skeleton and part of another skull.		J. Sturrock.	XIV. 264
At Harelaw Cairn, Fife- shire.	"at least two, adult and child."	1·6"×14}"×1·4"	G. W. Constable.	XXVI. 115