UNDERGROUND GALLERIED BUILDING AT RENNIBISTER, ORKNEY.
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On the 12th of November 1926, as a steam-thresher was coming out of the stackyard gate at the farm of Rennibister, in the parish of Firth, Orkney, the ground suddenly gave way beneath the wheels, and the machine stuck in a large hole 2 or 3 feet outside the stackyard gate. A message was sent in to Kirkwall (4 miles distant) for assistance, and with some difficulty the threshing machine was got out without much damage. It was then found that the accident had been caused by the collapse of the roof of an underground structure under the unusual weight that was passing over it. The same afternoon three members of the Orkney Antiquarian Society went out to inspect the structure, and found it to be a building very similar to the so-called gallery grave at Grain, St Ola, quite close to Kirkwall. The following morning I went out along with two workmen to throw out the debris that had fallen in-a task that proved too much for one short winter The following day was Sunday, but the workmen returned on Monday and Tuesday and completed the work-clearing the chamber of earth, stones, and clay, down to the solid rock, and taking great pains to detect anything in the way of antiquarian interest. A fence was then erected round the opening, and operations ceased for the time.

As the structure appeared to be of unusual interest, the Ancient Monuments Board were informed about it, in the hope that they might schedule the site and take it over for preservation. The proprietor,

Mr Baikie, of Tankerness, kindly handed over his rights to them, and that body has now assumed the guardianship. A good deal of work will be necessary before the structure is fully explored and roofed over again, but it is in the highest degree gratifying that this will now be done in the careful and thorough manner one has learned to expect from that most admirable Government Department.

Until such further exploration is accomplished it will be realised that any account of the structure can be only provisional and incomplete. I shall set down here, then, merely the bald facts that are already accessible, leaving all speculation on the origin of the building until all the facts are known.

The farm buildings of Rennibister have been erected on the slopes and around the skirts of a very extensive mound, and it is probable that for convenience a good deal of the original top

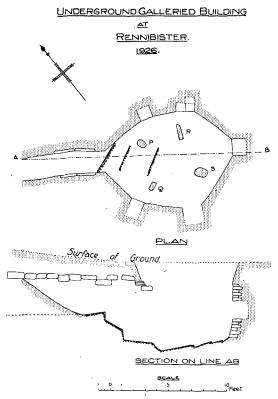


Fig. 1. Plan and Section of Underground Chamber at Rennibister, Orkney.

of the mound has been levelled down. This structure is situated not far from the present highest part of the mound. At first sight the chamber gives one the impression of being oval in shape, but closer inspection shows that impression to be inexact (fig. 1). It is an hexagonal chamber, with sides of irregular length, and the oval impression is given by the series of wall recesses that are found at five of the angles. At the sixth angle, a passage runs out in a north-westerly direction.

The main axis of the chamber, so to speak, is in line with this

passage, and thus lying roughly north-west and south-east. It is, as nearly as one can gauge it, 11 feet 3 inches long by 8 feet 5 inches broad at the widest part. The roofing is effected in the fashion usual in such ancient structures, by overlapping stones. In this type of building, however, the span is too great to be covered wholly in that way without further support, and hence in this chamber are four pillar-slabs, arranged in a rough square, and standing free—each rather over a foot out from the nearest wall-face. Large lintels, extending inwards from the converging walls, are supported on these pillar-slabs, and though the bulk of the central portion of the roof has collapsed, it has doubtless been domed over by further series of overlapping flag-



Fig. 2. Interior of Underground Chamber at Rennibister, Orkney, viewed from Entrance Passage, showing Ambry in East Wall.

stones. The side wall below where the overlapping begins varies much in height, but may be taken as roughly about 3 feet, and when the roof was complete it was probably about 5 feet above the floor-level in the centre; the pillars are about 3½ feet high.

The ambry-like recesses (fig. 2) at the wall-angles are of different sizes and at somewhat different levels. The smallest is about 16 inches in height by 13 inches in width, while the largest is 30 inches high by 18 inches wide. These run in from 1 to 2 feet or thereby, and at the back no building appears, but simply the natural clay face. One of these recesses is divided into two by a stone shelf half-way up.

The mouth of the passage is 29 inches wide at the top and about 26 inches wide at the bottom, and roughly 29 inches in height. For a distance in of about 9 feet it is perfectly clear, but thereafter the passage is blocked right to the top by black earth mixed with shells—

whelks, cockles, and "cow-shells" (Cyprina islandica) being most in evidence. It is lintelled by heavy water-worn slabs about a foot in breadth. One of the lintel stones far in was broken, and it is not certain whether lintels are present at all in the portion of the passage blocked with earth.

The bottom of the chamber was saturated with water, and it was found impossible to distinguish between the earth, stones, and clay that had fallen in when the thresher passed over it from what was in the bottom before. But after most of what was assumed to be "top" earth had been removed, human skulls and bones were found in large The disposition of these remains showed perfectly clearly that rearrangement of the bones had taken place at some time subsequent to the decomposition of the bodies. Most of the skulls were found round the base of the pillar marked S. Four of the five that were found the first day were lying side by side practically touching the inner side of that pillar. These I saw myself before they were lifted out of the puddle in which they were lying, and I noted particularly that they were lying upside down as it were—the hole at the base of each skull being uppermost. Underneath each was a lower jaw, though whether its own proper jaw I cannot say for certain. The fifth skull found that day was in fragments, and lying in the recess at the extreme south-east of the chamber, opposite to the passage.

I was not present when the remaining skulls were found on the following days, but the workmen informed me that most of them were found between pillars S and Q. One was found, however, between Q and the passage. The greater part of the other bones were found lying on the other side of the chamber—between pillars P and R—though casual bones were found here and there elsewhere.

Fortunately, most of the skulls were in an excellent state of preservation, and they, along with the bones, were all carefully packed and sent off to the National Museum for examination.

Professor Thomas H. Bryce, F.S.A.Scot., who has examined the bones, has very kindly supplied me with the following preliminary report:—

"The bones from this site consisted of the remains of a considerable number of individuals mixed together. Six of them were of adult age, the remainder were children or young persons. The adult long bones in the collection represented some six individuals of fairly robust build but of relatively low stature, varying from 5 feet 3 inches to 5 feet 5 inches. There were six adult skulls, all well preserved. Three of these were the skulls of men and three of women. One of the men may have been between forty and fifty at the time of his death, but none of the

others, judging by the state of the sutures of the skulls, can have reached forty. One of the women was probably about thirty or rather younger. As is usual in ancient skulls, the teeth are well preserved—show no signs of decay—but the older specimens show a good deal of wearing of the crowns.

"Much the larger number of the long bones in the collection are young bones. Twelve or thirteen young persons are represented, and these are varied from about five years to about seventeen years of age, and there was a regular gradation between these ages. There are, however, only some nine skulls preserved in whole or in part. The mixture of the bones, if this was the condition in which they were found, does not suggest a burial vault—although, of course, ossuaries are known. The regular gradation of ages of the children suggest a family group or groups. Two, perhaps three, families are represented. There is some dubiety about the sex of two of the skulls, but the balance of evidence is in favour of the statement that three are male and three female, perhaps the parents of the children."

I had instructed the workmen to keep separate as far as possible the layer of earth they judged to be the original floor. That, however, was found impossible to estimate. The bottom was saturated with water that kept percolating in, and when they removed all the clay and earth right down to the solid rock the bottom of the chamber proved to be extraordinarily uneven. From Mr Traill's section it will be seen that in the middle there must have been approximately 3 feet of earth and clay below the presumable level of the floor prior to the collapse of the roof. The men, however, loyally tried to carry out my directions, and six sacks of earth were brought in to Kirkwall. These I examined most minutely, hoeing the sticky earth, and passing every bit of solid residue through a $\frac{2}{3}$ -inch riddle; but beyond a few small bones and teeth not a single thing could be found that could be said to have human associations.

However, amongst the human bones which were forwarded to the National Museum was found the scapula of a small ox that showed signs of having been used as a spade.

The rest of the earth cleared out is still lying at the site where it was thrown out, and will, I trust, be carefully examined; but from experience with the most promising layer I am not sanguine as to further possible discoveries.

A final word may be added regarding the type and distribution of this kind of chamber. It seems peculiar to Orkney, though somewhat similar structures have been reported from Latheron in Caithness, and from South Uist, where one curious building has radiating walls serving instead of pillar-slabs. In Orkney, besides the example at Grain, three others are on record—one at the old house of Saverock, St Ola; one in the Links of Pierowall, Westray; and one at Yinstay, in Tankerness. A sixth seems to have been discovered at Dale, in Harray, since Rennibister was found, but as that has not yet been excavated, nothing can be said of it in detail.

My best thanks are due to Mr W. Traill, C.E., F.S.A.Scot., for his excellent plan.