

II.

A PILLARED UNDERGROUND CHAMBER AT BIGGINGS, HARRAY,
ORKNEY. BY WILLIAM KIRKNESS, F.S.A.Scot.

The Orkney Islands possess a series of underground structures which seemingly have no exact parallels in Scottish archæology. The first of this series to be recorded was discovered in the island of Shapinshay, and the Rev. George Barry wrote the following description of it

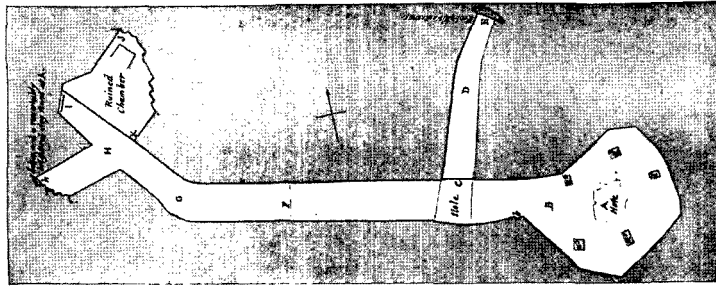


Fig. 1. Underground Structure at Saverock : plan.

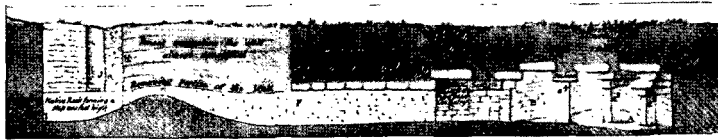
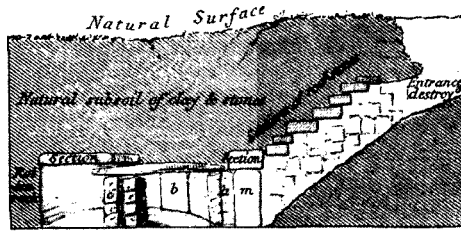


Fig. 2. Underground Structure at Saverock : section.

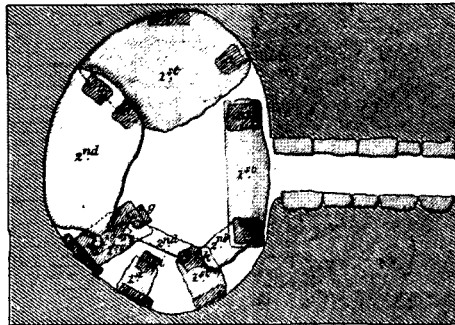
for the *Statistical Account of Scotland*, vol. xvii. p. 237: "Near Cliffdale, Shapinshay, some short time ago, when workmen were digging for the foundation of a house, they discovered a subterranean building of a singular nature. It had been formed by digging the earth about 3 feet deep and erecting pillars of stones, built one upon another to the height of 4 feet, to support a flat roof of broad stones or flags that covered the whole building, which was composed of two hexagons contiguous to one another, and their diameter about 8 feet, and of a rectangle as large as both. As the whole fabric was considerably below ground, no vestige whatever was seen on the surface." It will be noted that this structure had no built stone walls, that the roof was flat and supported by built stone pillars.

Another pillared structure was brought to light in 1848 at Saverock,

near the shore and about a mile to the westward of Kirkwall (figs. 1 and 2). It was excavated by Captain Thomas,¹ who states : "The principal and only chamber is an excavated hole, of which the floor is 9 feet below the natural surface of the ground. It is of an irregular pentagonal figure, and may be roughly stated to be 9 feet in diameter, though it measures 11 feet across where it is widest. The height of the enclosing



Section showing the East side, and the greatly inclined Gallery by which it is entered.



Plan of the first and second courses of the roof stones.

Plan & Section of subterranean Picts House situated in the Links of Pierowall

Fig. 3. Underground Chamber at Westray : plan and section.

wall varies from 3 feet to 4 feet 6 inches. The space within the chamber is very much reduced by the method taken to form the roof, which is by placing stone blocks or pillars (five in number, 2 feet 6 inches or 3 feet high and 1 foot square) from 6 to 18 inches from the walls. Triangular flags are then laid with one angle resting on the pillars; other flags, projecting a little forwards, rest upon these, and so on, till by continued overlapping a rude, conical-shaped roof is formed, which at the centre would be 5 or 6 feet in height. A large lintel, 5 feet in length and 18 inches square, rests on two pillars at the entrance of the chamber ;

¹ *Archæologia*, vol. xxxiv. p. 131.

from thence the passage extends in a straight line for 30 feet; then turning a little to the right it continues for 12 feet farther—42 feet in all." This building differed from the other, as the sides were built stone walls, and the roof not only was supported by pillars made of single stone blocks, but it was corbelled instead of being flat as in the Shapinshay structure.

The third pillared chamber to be recorded was found in the island of Westray (fig. 3) and was excavated by the same archæologist in 1851.¹ It consisted of a single subterranean chamber communicating with the surface by a short, steep passage. The chamber, the floor of which was 9 feet below the level of the surface, had been roofed with large flags. These were supported by short pillars, which were either single stones or square blocks piled upon each other to the requisite height, and flags were placed perpendicularly against the sides of the chamber to prop up

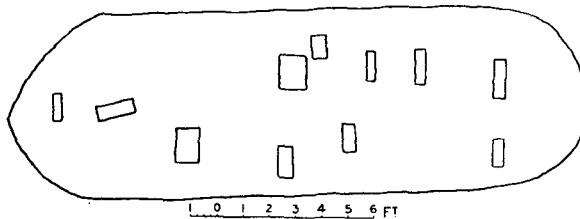


Fig. 4. Underground Chamber at Yenstay: plan.

the inner edges. One of these flags was of great size, for the length was 9 feet and the breadth about 6 feet; the second was nearly as large.

The roof on the opposite side of the chamber was commenced by oblong square blocks projecting from the wall to the pillars; flagstones were then placed on these. The roof was probably completed by a single large flag resting upon these before mentioned, and a trilith at the doorway or entrance. The floor of the passage rose very abruptly; the sides were rudely built, and about 2 feet 6 inches in height. The roof was formed of flags placed scalarwise, by which the roof was raised equal to the thickness of each succeeding stone.

We find here a structure which had no stone walls except in the passage, where single slabs formed the sides of the entrance. The roof was partly corbelled and partly flat. It will be noted also that at one side it did not rest on the clay which formed the wall of the chamber, but on pillars placed perpendicularly against the sides of the chamber which propped up the inner edges. No relics were found in the floor.

¹ *Archæologia*, vol. xxxiv. pp. 129 and 130.

The fourth building, which is of the same type as Saverock, was opened at Grain, near Kirkwall, by James Farrar in 1857. George Petrie¹ remembered it being opened many years before and described it as a chamber curiously constructed but very entire. Its length was 13 feet, its average breadth about 6 feet, and its greatest height 6 feet 6 inches. Four massive stone pillars, each in the form of a block, assisted in supporting the roof, which was strengthened by thick stones laid across it to serve as beams. The passage was curved, and extended altogether to about 26 feet in length. This building, which is now under the control of the Ancient Monuments Department of H.M. Office of Works, is in a perfect state of repair. The building had a corbelled roof and built stone walls.

Number five was opened at Yenstay, Tankerness, in 1909 by Major Cursiter (fig. 4). It was oval on plan, and measured 21 feet 6 inches in length, 7 feet in breadth, and 2 feet 6 inches in height. Twelve pillars supported a flat roof. Part of the wall had been cut out of a clayey sandstone and part out of clay. Apparently the obstruction of rock did not deter the builders from carrying out their work on this site. There were no built stone walls in this building. Access in recent times was obtained through a broken roof slab as the passage had not been cleared.

Number six in the series was unearthed in 1926 on the farm of Rennibister (figs. 5 and 6), three miles west of Kirkwall.² This building was found to be hexagonal in shape with sides of irregular length. The structure measured 11 feet 3 inches long, and 8 feet 5 inches broad at the widest part. Four pillars about 3 feet 6 inches high partially supported the roof, which was corbelled. Built walls formed the sides of the chamber.

¹ *Proc. Orkney Ant. Soc.*, vol. v. p. 20.

² *Ibid.*, vol. v. p. 85.

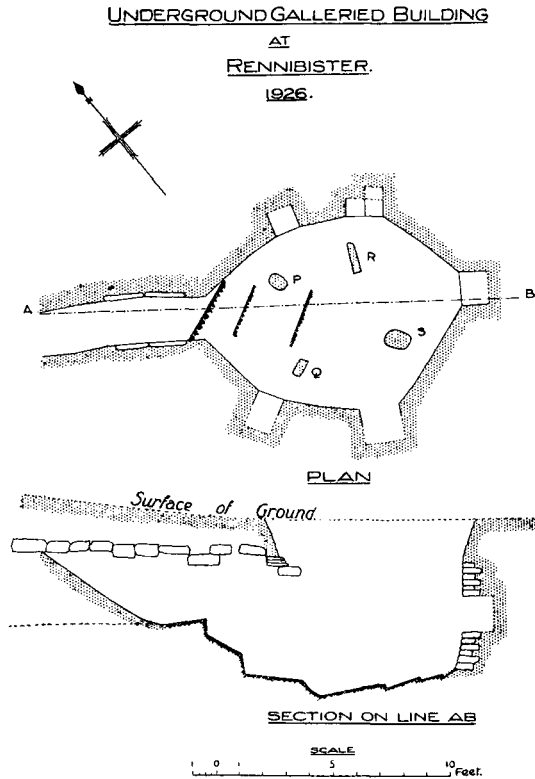


Fig. 5. Underground Structure at Rennibister: plan and section.

In 1926 I was asked to visit a site at Dale, Harray, where an underground structure had been discovered while the farmer was ploughing a piece of hill ground (fig. 7). I excavated this building in 1927 and described the discovery to this Society in 1928.¹ Apparently an irregularly shaped cavity, about 12 feet in length and 8½ feet in breadth, had been dug into the clayey soil to a depth of about 2 feet, forming a sub-oval chamber. Five pillars, varying in height from 2 feet 1 inch to 2 feet 5 inches, were arranged about 1 foot from the wall of the cavity. Each pillar supported the end of a lintel, the outer extremity of which rested on the clay wall; overlapping slabs were then placed on the lintels, and the roof was thus completed. Fig. 8 shows a lintel in position, and also the peculiar



Fig. 6. Underground Structure at Rennibister: interior seen from entrance.

shape of the pillars. The passage had been lined on either side by stone slabs set on edge. Three of these still remained on the northern side and two on the southern side, but it was evident that the latter had been displaced.

Last summer I surveyed another of these buildings, which I now propose to describe (fig. 9). A heathery track of ground was being reclaimed on the farm of Biggings, Harray, some years ago. While ploughing this ground, Mr Anderson, the farmer, noted a stone which, when uncovered, was of considerable size. There was no pronounced mound over the site, merely a gentle swelling of the ground over a considerable area which probably was natural. Mr Anderson's curiosity was aroused when he found that the earth surrounding the stone was darker and looser than at any part of the reclaimed ground. Digging down along the face of the stone Mr Anderson found an entrance

¹ *Proc. Soc. Ant. Scot.*, vol. lxii. p. 155.

to an underground structure. Having examined it, and finding that it was quite empty, he closed the entrance. In December 1928, at my request, the passage-way was cleared out, but as the floor was covered with water to a depth of 4 inches, I decided to again seal up the doorway and defer the excavation of the structure until August. It was possible, however, to say that the structure was similar to the building at Yenstay, Tankerness, which I had examined in 1928.

The work which I did last summer showed that a cavity had been dug in the clay to a depth of 2 feet and then roofed over. Eight

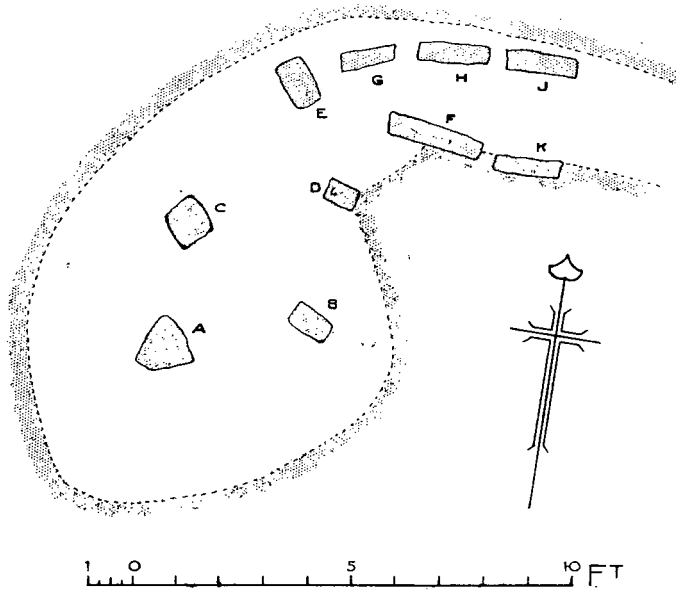


Fig. 7. Underground Chamber at Dale: plan.

pillars of stone supported the roof, which consisted of huge slabs of stone, the entire weight of which was carried by the pillars standing on the clay floor (fig. 10). It was apparent that the function of the pillars was to carry the entire weight of the roof, and that they were placed to meet the requirements of stones of different shapes. It would seem that the stability of two of the piers was questioned by the builders, and these were strengthened by buttresses built against the clay wall. It was impossible to ascertain the thickness of all the roof slabs, but one measured 11 inches thick. Large slabs are easily obtained here. Twelve years ago a stone measuring 19 feet long, 14 feet broad, and 5 inches thick was taken from a quarry on this farm. The length of the building is 14 feet, its greatest breadth 7 feet, and the height from floor

to roof 27 inches. The roof slabs of the passage, except the one at the doorway, had been removed before Mr Anderson made his discovery. There was no indication that the sides had ever been slab lined.



Fig. 8. Underground Chamber at Dale: view from south after removal of roof.

It may now be possible to show the development of the series. In no case are we told that there was a pronounced mound on the site. In every instance a cavity was dug into the ground, and quarried stones were used in all the buildings. The chamber at Biggings is certainly the most primitive. Undisturbed clay formed the walls of the building. Stones, which were quarried near the building, were used for the roof, and the pillars supporting it were so placed as to carry its entire weight. The structure at Yenstay, while larger, is of the same type. But, as we have seen, the builders were forced to quarry into the clayey sandstone to accomplish their task on the site which had been selected.

The position in relation to the sea gives no clue to the reason for this choice of sites. While they are not all close to the shore, all command an excellent outlook, and the ground is fertile, every one of the sites giving splendid crops to-day.

At Westray, while clay formed the sides of the chamber, the entrance passage had been lined on either side by stone slabs set on edge. The roof was partly corbelled and partly flat. At Dale, Har-ray, a stone-lined passage had been constructed, but the chamber walls were of clay. The roof was entirely corbelled. The buildings at Saverock, Grain, and Rennibister were built at a time when

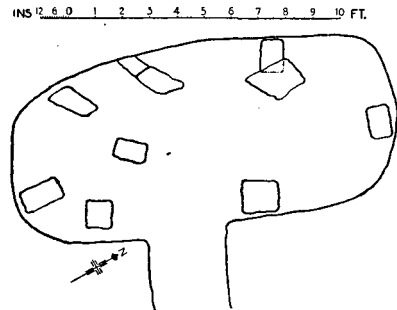


Fig. 9. Underground Chamber at Biggings: plan.

the builders were well acquainted with bonded masonry, when they could construct pentagonal and hexagonal buildings. It will be noted that these late buildings, though skilfully made, are not larger than the

more primitive examples, and that the walls are very little higher than those in the early structures.

In every case the buildings had been despoiled. Had the original furniture of any one been preserved, it might have been possible to determine who the builders were, and for what purpose the structures had been made. The only discovery in the Shapinshay building¹ "was a gold ring, the outside of which was broad and large, composed as it were of three cords twisted or plaited together; the inside was much narrower, and pretty well fitted the finger." These rings are products of the Northern and Western Islands, dating from the 9th century, so

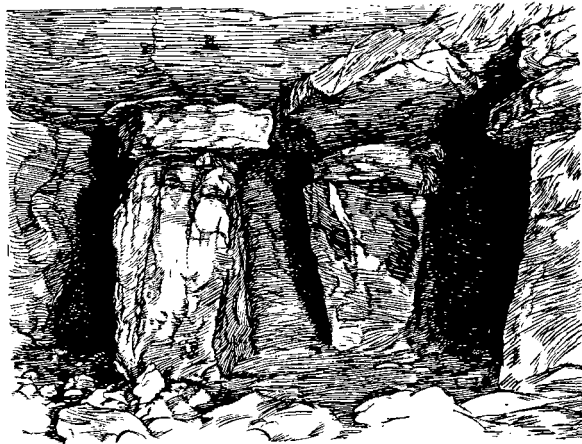


Fig. 10. Underground Chamber at Biggings: view of pillars from the north end.

that this building had been used at this or a later time. Possibly the buildings were commandeered at later times as stores, the original furnishings being thrown out. These buildings, situated in what might have been natural swellings of the ground over a considerable area, would have formed ideal hiding-places. That underground buildings were used for this purpose is well known, as we are told in Anderson's *Orkneyinga Saga*, p. 189, that Swein of Gairsay used in summer to harry the Southern Isles (Hebrides) and to steal everything that was not hid. The folks were so scared at him in the Southern Isles that men hid all their goods and chattels in the earth or in piles of rocks. But another purpose for these underground buildings is fully proved by Gerald du Barry (*circa* 1177), who states that when Miles Cogan made a raid into Connaught he destroyed everything except what the Irish

¹ *Statistical Account of Scotland*, vol. xvii. p. 237.

had hid in their underground granaries.¹ So these were in full use at that time. It is probable that the *Jard-hus* from which Leif got his sword was an underground building, for we are told that when Leif went forth in the west hunting-ground he harried in Ireland and found there a great earth-house; there he went in; there was darkness within; a stroke of a weapon which a man held was made at him; Leif drubbed (killed) the man, took the sword and much goods also. Ever since he was called Leif-of-the-Sword (*Hiörleif*).² This must have been before Leif settled in Ireland in 874.

The only relic got inside the building at Dale was part of a rudely dressed cylindrical stone of the type so frequently found in Shetland (centre, top row, fig. 11). It measured 10 inches long, 4 inches wide, and 3 inches thick. Goudie, in *Antiquities of Shetland*, referring to these stones, said of one place (beside the house of Braefield in Dunrossness):



Fig. 11. Objects found at Dale.

“The spot would appear to have been a regular manufactory, for so numerous were these implements found to be, after their character was first noted, at every place in the immediate surroundings of the house and garden where the soil was disturbed, that a cartload might, without much difficulty, have been secured.”

In 1846 Dr Arthur Mitchell wrote: “They may be called a new thing to the Scottish antiquary, though our museum has for some time contained one implement exactly like these from Shetland. . . . It was presented to the Society by Mr George Petrie.” This implement figures in George Petrie’s notebook,³ where I found the following entry: “Stone found by G. Petrie in a barrow in parish of St Andrews, Orkney. It was lying at the outside and close to the edge of the north-north-east end of a grave formed of upright stones placed in the centre of the barrow.”

¹ *Geraldus Cambrensis*, p. 283, Bohn’s Antiq. Library.

² *Antiquities Celto Scandica*, p. 14.

³ Petrie’s Notebook, No. 8, p. 14, in Nat. Museum of Antiquities, Edinburgh.

At Safester, in the parish of Sandsting, Shetland,¹ a find of these stones, amounting to some hundreds, was got associated with an underground structure. This structure was 45 feet in length, 16 to 19 inches in width, and 2 to 2½ feet in height. One end was closed up, and there a squarish expansion occurred which was nowhere wider than 30 inches. The stone-built sides of the structure were perpendicular, having no tendency to converge. The workmanship was extremely rude. The lintels were large and flattish, and many were displaced. At Houland, Shetland, similar stone implements were got associated with an underground building.² During excavations made at Monkerness, Eynhallow, I found a similar stone associated with a building, and another was found in the structure at Yenstay.

Two other relics were found at Dale, the first an oblong stone, 10½ inches long, 3½ inches broad, and 2½ inches thick, which had a broad groove picked out near one end; the second was of irregular shape, 17 inches long and 8 inches wide at the widest part, and 2 to 3 inches thick, also with a groove picked out round its narrower end.

Two very similar stones to these were found by Mr Robert Heddle on the hill near How, South Ronaldsay. A farmer had turned up coffins made of slabs of stone with their accompaniment of burnt bones. Mr Heddle observed in the rubbish two stones of a rather peculiar form.³ These objects suggest some of the rude anthropomorphic figurines found in various parts of the world, which have been looked upon as having a religious significance. As these at Dale were found in the immediate vicinity of the building they may have, at one time, occupied a place in the structure and have been discarded when the building was used for a secondary purpose. The fact that the other rude stone implements have on many occasions been associated with short cists in Orkney may indicate that the short cist people were the builders of these prehistoric structures. But the absence of any satisfactory data, such as pottery or other relics, makes the problem of dating short cists in Orkney an exceedingly difficult one, so difficult that we have not yet arrived at a stage that we can say definitely to which period of Scottish archæology they belong.

In addition to the human remains found in the Rennibister structure

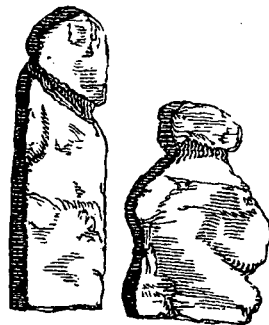


Fig. 12. Stone Objects from South Ronaldsay.

¹ *Proc. Soc. Ant. Scot.*, vol. vii. p. 119.

² *Ibid.*, vol. vii. p. 121.

³ *Archæologia*, vol. xxxiv. p. 122.

was a shovel made of the scapula of an ox, the spine on the back having been broken off. Two similar implements were found in the underground buildings at Skara Brae.

Since writing the above I have learned of the discovery of another example of these underground structures at Midhouse, Costa, Evie. Dr Marwick, who has drawn my attention to the matter, wrote me stating: "On Monday, 10th March 1930, I was informed by Mr C. W. Tait, Kirkwall, that an underground chamber of some sort had been found a few days previously on the farm of Midhouse, Costa, by the farmer, Mr Maxwell Horne. Two days later Mr Tait kindly drove me out to see the discovery, and Mr Horne himself kindly took us to the spot and gave us all the information he could.

"The structure is situated on the top of a low knoll, about 100 yards from the beach, in a field about 500 yards east of the farmhouse. The field was being ploughed somewhat deeper than previously, and in going over this knoll the plough struck a large stone. In clearing this away others came into view, and ultimately at a depth of about 3 feet the lintel of a doorway into the chamber was revealed. The sides of the entrance, which is roughly 2 feet square, are formed by stones set on end and capped by a large flat boulder 9 or 10 inches thick. There is no passage to speak of, and on squeezing down and looking in, I discovered that this chamber is another exactly of the type at Biggings in Harray recently described by you. An oval cavity roughly 12 feet by 8 feet had been hollowed out of the clay and clayey rock which forms the subsoil of the field. This was roofed over by immense slabs of stone just as at Biggings. In the middle a square block of stone, with one or two smaller 'pinner' on top, had been placed to support the weight of one of the immense roof stones. This was the only free-standing pillar, but at intervals round the sides there were placed three other pillars to support the roof, these, however, abutting against the clay walls. In addition, at one spot, a jutting portion of rock in its natural bed, served the same purpose.

"The height of the structure varied, as the floor sloped down from the sides to the middle, where the greatest height was only about 3 feet. Unfortunately a pool of water lay on the floor, so that it was impossible to make a careful examination. When first discovered, however, the floor was more or less dry, and Mr Horne had crawled round without discovering relics of any kind.

"I am glad to say that Mr Horne is not to disturb the building, but farming operations demand the filling up of the present opening. If I can manage, I intend to visit the site again when it is dry weather in order to make careful measurements and examination of the floor."