[The following Communication was read at a Meeting of the Society on the 13th March 1865, and should have been inserted at page 178.]
VIII.

NOTES ON THE EXCAVATION OF AN ANCIEN'T BUILDING AT TAPOCK, IN THE TORWOOD, PARISH OF DUNIPACE, COUNTY OF stirling. By colonel josepit dundas of Carronhall, f.s.a. Scot. (Plates XV. and XVL.)

Tapock is the highest point in the ancient forest of Torwood, and commands an extensive view of the whole district lying between the Forth and the Carron, as well as of the distant country and mountains beyond those rivers.

The general appearance of Tapock is that of a conical hill or mound, flat on the top; on the west side of the hill there is a precipitous crag of about 100 feet in depth, running north and south for about 800 yards; on the north, east, and south side the slope is gradual. At about 70 feet from the centre of the cone or mound there are the remains of a wall carried round the mound until it reaches the precipice on each side. Beyond this dyke there are the remains of a second wall. Both of these walls, on the earth being removed, are found to he built of large stones, roughly put together, and without cement.
On the south side there are the traces of a third wall extending along the face of the cliff, and filling up those places where the rock is not so abrupt as at the other parts (Plate XV. fig. 1).

The mound at Tapock is known by the country people as the "Roman Camp," and a subterranean passage is supposed by them to lead from it to the old Castle of Torwood, about three-fourths of a mile distant-a famous haunt of Wallace. When we discovered our second passage (fig. 1, $\mathcal{G} H$ ), this tradition was supposed to be verified. The whole of the mound was, till lately, covered with large fir trees, and the only signs of man's handiwork, besides the dykes above mentioned, was a hole of about four feet deep (fig. E F ). In this hole there was a mass of loose stones; and in addition, at about 3 feet below the surface, two large stones lying horizontally, one above the other. A few smaller
stones were visible, which were apparently parts of a piece of rude masonry. In August 1864, workmen were set to clear out this hole, under the superintendence of General Lefroy, R.A., and myself.

This hole was on the south side of the mound. When the large stones and rubbish had been removed, we found ourselves in a passage 113 feet in length and 3 feet in breadth, and terminating at the end near the mound in a doorway, the sides of which, composed of large stones irregularly built, have an inclination outwards. The top or lintel is formed by two large stones placed one above the other, of about 5 feet in length. These have large stones placed at their ends, apparently for the purpose of keeping them in their place. The height of the door space is 5 feet 7 inches. The walls of the passage incline outwards to the height of 5 feet 4 incbes. At that height the stones begin to overlap one another, until, at one place, the sides approach within little more than a foot of one another. Many large stones were taken out of the passage of a size and sbape suited to cover the space between the walls thus narrowed.

At the distance of $11 \frac{3}{4}$ feet from the doorway, the passage turns at right angles towards the west, and leads to a flight of eleven steps of the rudest form; the lowest step 42 inches, the highest 28 inches in breadth. These steps lead upwards to the outside of the mound. The length of the staircase passage is about 12 feet.
In clearing out this passage there were found a fragment of pottery, lathe-turned, and an iron-handled hammer, the heavy end of which is rounded off in a manner similar to those used by tinkers. These are probably the traces of some treasure-seeker of former days, who, finding the work harder than he expected, and perhaps the usquebaugh stronger, broke his "greybeard," and left his hammer behind him. These "vestiges," as well as all the other things found at Tapock, are now in the National Museum of the Antiquaries of Scotland.

The doorway was completely blocked up with rubble. We now commenced work on the top of the mound. The surface was irregular, and covered with heather, ferns, some large firs still standing, and the stumps of others which had been blown down. After the removal of an immense mass of large stones and rubble with which the chamber was filled, and which was thrown over on the east side of the mound to the amount of
upwards of 200 tons, we found ourselves in a large chamber, of an irregular circular form, 106 feet in circumference.

The floor is the solid rock (sandstone), and is inclined from N.W. to S.E. The height varies from 11 feet 4 inches on the north to 8 feet 6 inches on the south side. The floor is about 3 feet lower on the east side than at the highest part. In this portion of the floor the greater part of the smaller stone implements were found. The walls are built of large stones, irregularly but firmly built without cement of any kind. They are stained in many places with dark brown marks, as of smoke. Some of these stains, however, may have been made by the roots of the heather forcing their way down and affording a passage for water discoloured by the peaty earth on the surface.

At irregular heights and intervals in the walls there are about nineteen spaces of from 10 to 14 inches in width, and similar depth. These appear to be arranged without any order, and to have been left when a large stone afforded a good lintel or sole at a convenient distance from the ground.

These spaces are well adapted for cupboards or store places. Nothing was found in them, however, except some white clay peculiar to Torwood. The walls of the chamber have an inclination outwards. On the north-west there is a portion of 20 feet in length, at the height of six feet from the floor, where the upper part of the wall is put back 18 inches, thus forming a sort of shelf. ${ }^{1}$

This change of plan appears to have arisen from the builders finding that their wall did not slope back sufficiently to resist the pressure from without, and adopting the above plan as a remedy.

On every part of the floor a great deal of charred wood was found, principally oak, I believe; and in the centre there were several large stones much discoloured. Among these stones the charcoal was in great quantity, accompanied by a great deal of a red and brown earthy substance, apparently containing much animal matter. This was apparently the fireplace. There, and in other parts of the floor, were found the teeth of a large graminivorous animal, and some small pieces of bone.
${ }^{1}$ Subsequent examiuation shows that this ledge is carried round the whole of the chamber.

On the south-east side of the chamber, and at the distance of 8 feet from the doorway first discovered, we find another doorway similarly constructed, and 3 feet in width. This doorway leads into a passage $10 \frac{3}{4}$ feet in length, and which has a slight turn in it. This passage descends rapidly, and is 3 feet $2 \frac{1}{2}$ inches wide at the widest part (Plate XVI. fig. 2).

We now find ourselves at what we may suppose to be the great or principal entrance. This consists of pillars roughly squared, 8 feet 4 inches in height, 18 inches thick, surmounted by rough capitals 1 foot 5 inches square, the whole thus forming side posts of 7 feet 9 inches, and surmounted by two large lintels, as in the first doorway. In the walls on the inside of this doorway there are two holes of about 6 inches square, one of which is 5 feet in depth, and the other about 18 inches. These holes have, apparently, been for the purpose of "barring" the door.

Passing through this doorway, we find ourselves in a narrow passage 9 feet in length, of similar construction to the other passage, and having, like it, a slight bend in it. This passage brings us to the outside of the mound. It terminates in an opening formed of rough stones. There is no lintel remaining, as in the other doorway. Owing to the bend in the passage, the doorway into the central chamber can only be partly seen from this last opening.

The floor of these passages is much worn, whereas the steps above mentioned bear no marks of wear and tear. From this we may infer that the lower passage was the usual one of entry into the house, while the upper or staircase one was only occasionally used, and would probably be the means of retreat in the event of the mound being attacked, and the lower doorway being forced.

The roof-stones of the lower passage are not in position, but a sufficient number of large stones to form the roof were found in clearing out the passages. These, in common with the rest of the building, were completely filled with large stones and rubble, which had almost to be quarried out, so compact was the mass.

The opening, or doorway last described, is nearly at the base of the mound, and opposite to it there is a corresponding opening in the wall of circumvallation. At or near this gap there are some stones of large size, and one of them, a very large block, is remarkable from having deep marks in it of an attempt to divide it. These marks are about 3 inches
long and $1 \frac{1}{2}$ deep. One of these incisions is at right angles to the three others, showing, apparently, that the early stone-hewer found, after he had made his first incision, that he was working against the grain of the stone.

All the stones used in the building are of the same sandstone as the rock on which the mound stands. The mound, i.e., the backing of stones and earth on the outside of the walls of the central chamber, varies from 18 to 28 feet in thickness.

Below the mound, on the west and precipitous side, there is a series of caves in the face of the rock. Some of these have apparently been deepened by the hand of man; and from the largest of them a path leading up to the mound is traceable.

The sketch exhibited will convey an idea of them. They are dry, and may probably have been occupied by the builders of the mound during its erection. From the extent of the mound, and the large size of the stones, much time and labour must have been expended on it. One of these caves is now used by gamekeepers as a place of shelter and a look-out.

Near the doorway first discovered, there were found a number of eggshaped stones of various sizes; these are principally made of a sort of plum-pudding stone. Some are apparently fashioned artificially, while others are such as are found in the bed of the Carron river. Parts of querns of a rude and primitive make were found in different parts of the floor.

Three perforated stones, when found by the workmen, were at once named by them whorls, and such I believe is the name given to such stones by our learned antiquaries. One of the men tells me that be remembers seeing an old woman use such an implement in spinning. Whether these stones were used in spinning or as ornaments, it is curious that such an appendage to the spindle, though of different material, is used at present in the south of France, as I had occasion to remark last year when in that country. Together with these were found a piece of rude, thick pottery, and a flat oval piece of slatey stone, perforated at the narrow end, and covered with fine scratchings. These seem to have been made with the point of a needle. It may have been worn suspended by a string from the neck of some fair aboriginal, and used by her as a needle sharpener. One implement, made either of baked clay, or of a soft red stone, is hollowed out like a cup.

There are several stones slightly hollowed out in the centre, which
may have been made use of either as small lamps or cups. One of these has a concavity on each side, but so shallow as not to be capable of holding any quantity of liquid. I would suggest that it is probable that the early inhabitants of this dwelling would probably belong to a period when paint was an important article of dress, and that this may be the dressing-case or palette of some fair Briton, the red paint being on one side, and the blue on the other.

Near the centre of the floor were found three large stones, upon which are some of those mysterious markings which have been observed in different parts of England and Scotland, and which have, I believe, baffled the skill of the antiquaries to discover the meaning of. These markings seem to have been on the stones previous to their being used in the present building, as some of the markings are broken across. This would not have been the case had the marks formed an ornament of the sionework; the stones themselves are too large to have been broken across by the falling in of the roof, on the supposition that there was a roof with a rubble backing similar to the walls. I cannot imagine how the room could have been filled with so solid a mass, except by the falling in of the roof. I would therefore suggest that the marks were on the stones before they were hewn out of the rock. 'I would also remark, that one of these figures, which is composed of two concentric circles, is not unlike a rude ground-plan of-the-mound-itself and its-surrounding wall, and that two breaks in their circles correspond with the entrance into the mound and the gap in the wall. It may have been the plan of the master-builder, sketched by him on the face of the rock.

On the floor of the house there were found two iron axeheads, one of them of ancient, the other of comparatively modern form. From these I would gather that the roof of the house had not fallen in for a very long period after the owners of the querns had passed away, or at least that a sufficient space was left in the interior to allow of the entrance of the curious woodman. When we remember that this mound was in the centre of a dense forest, and had nothing to distinguish it, apparently, from other eminences, we can understand how it might remain unnoticed for ages. It is only since the timber has been cleared away that the conical form of the mound is observable.

It is, perhaps, worthy of remark, that the mound commands an exten-
sive view of the Roman wall, extending from Carriden on the east to some miles beyond Castle Carey westward.

The Roman road or Camelon Causeway passes through the Torwood about 100 yards from the foot of the rock on which the mound stands.

Immediately beyond' the point where this Roman road crosses the Torburn, there is a rough and rocky eminence, known in the country by the name of the Roman Camp on Carr's Hill. On this hill I have already excavated one building, similar in workmanship to that on Tapock, but with some peculiarities of structure.

A plan of this building is in the same sheet (Plate XV. figs. 7 and 8) which shows the plan of Tapock, and for which I am indebted to the kindness of the officer commanding the Royal Engineers engaged in the Government Survey.

As we hope to make further excavations at Carr's Hill, I will not enter into a description of the house there, but would merely point out an interesting feature in it, viz., that there are traces of a passage of 30 feet in length leading into it, and that for a portion of about 9 feet the large top stones are in position. One of the oldest inhabitants remembers the remainder being taken away to build a march fence. Carr's Hill is 1320 yards from Tapock.

A line drawn from Tapock to Carr's Hill, and prolonged until it cuts the hill above Sauchie, about five miles distant, will pass within a few yards of a flat-topped mound similar in shape to the one I have been attempting to describe.

I have lately visited this point, and found a mound, apparently artificial, with a precipice (the Lime Crags) of about 300 feet on the northwest side, and an entrenchment on the other side, the whole bearing a striking resemblance to the plan of Tapock.

About three miles north from Tapock there are certain grassy eminences called the Bury Hills on the estate of Polmaise. On one of them are traces of an encampment somewhat similar to that on the Sauchie Hill. Each of the three points commands a clear view of the other two, and each place possesses a most extensive view over the whole district.

Farther examination may perhaps show that these three fortified points-Torwood, Sauchie, and Bury Hills-have a further relation to one another.



Fig. 1. Interior of Chamber at Torwood.


Fig. 2. Interior of the Chamber at Torwood shewing the doorways.

