

VII.

NOTICE OF THE BROCH KNOWN AS BURWICK OR BORWICK, IN THE TOWNSHIP OF *YESCANABEE*¹ AND PARISH OF SANDWICK, ORKNEY. By WILLIAM G. T. WATT, KIERFIELD, STROMNESS.

This broch and its outhouses stands on a rugged promontory, and before excavations took place lay under a beautiful green sward, the growth of centuries. Its appearance was that of a natural mound of about 15 to 20 feet in height, rising immediately from the edge of the crag.

The walls of the broch on the west and east sides overlook precipices 60 to 80 feet high. Buildings other than the broch are to be seen jutting out here and there 9 or 10 feet down the face of the south-west cliff. Doubtless this has been caused by encroachments made on the land by seas and winds undermining and tumbling off pieces of the crag from time to time, as it is in a very exposed place, and has, moreover, the full force of the broad Atlantic waves beating against its sides.

On the south side the knowe sloped until it came in contact with the sward covering the out-buildings, then inclined more gradually for a distance of about 55 feet, when it reaches the big ditch or moat from 50 to 60 feet wide that runs across the neck of the promontory a distance of about 160 feet. Into this moat there could easily be conducted the water of a burn which runs from the east and falls over the crags close to the north-east end of the ditch.

The out-houses are numerous; they occupy the whole space of ground between the broch and moat. At a future date I shall hope to be in a position to give an account of them. In the meantime the excavations are not sufficiently advanced to enable me to enter particularly into the matter.

It is interesting to note that a cave, long known by the inhabitants of the district under the appellation of Hell's Mouth (a corruption probably

¹ Spelt in Rental of 1595, Yeskennabe; 1614, Zeskinaba; 1642, Yeskanabie; old Rental, Zescannabie.

of the Norse word *hellir*), runs for a considerable way inland, and immediately under the broch and out-houses thereof. At low tides I often explore it, in the hope of finding a way leading from it to the buildings above. As yet I have found none, though it is more than likely that the occupants of the broch have had a passage communicating with the cave; and this I thought was discovered when I came on the underground passage commencing close to the main entrance of the broch hereinafter referred to. The side of the cave where it is possible an opening may be found is thickly coated with stalactites.

The main wall of the broch is 11 feet 5 inches thick on the west side, on the south and east sides 14 to 15 feet, and on the north side 16 feet. The walls will average in height about 11 feet, and the highest part standing is at least 16 feet. It is dry built, with large stones well and regularly faced to the outside; the space between is merely rubble work. From the fact that close to hand there is a fine bed of limestone, out of which the builders of the broch seem to have taken large stones for building purposes, I infer that they cannot have been acquainted with the use of lime mortar.

The doorway, or chief entrance, to the broch faces S.S.E., and is 5 feet 2 inches high, 3 feet 5 inches wide at the bottom, and 3 feet 1 inch wide at top, and leads through a paved passage 9 feet 9 inches in length to an inner doorway, which is only 2 feet 11 inches wide and 4 feet 6 inches high. This passage is roofed with heavy stone lintels, which also forms the floor to the small chamber or watch-place above. The lintel over the main door is a kind of freestone. It is 20 inches high and 15 inches thick, and the length is 4 feet 5 inches. Next to the lintel over the inner doorway is a long narrow stone or covering to the passage that can be taken out and put in at pleasure.

From the inner doorway the passage is a foot or so wider, and runs for the distance of 8 feet 6 inches to the entrance of the interior court, but has no roof.

The chamber on the right hand of the inner entrance passage has a doorway 2 feet wide and 3 feet 5 inches high, and above the lintel there

is a hole or outlook of about a foot square. It is open for about 4 feet inwards; beyond this the roof has fallen in. I am inclined to think that the chamber originally would be at least 12 feet long, as the sward for 8 feet immediately above the fallen-in part is much sunk. So far as seen, the roof is not flagged, but has been rudely arched.

On the left-hand side of the inner passage wall, and opposite the chamber, there is a very rudely-built wall, 20 inches wide, which seems to have been for getting access to the watch-place above the passage. This evidently is an after piece of work.

With much labour the interior of the tower was cleared of the stones of its walls that had fallen in. When this was removed unctuous matter came (very difficult to get to leave the spade), composed of ashes, bones, and shells, mixed with clay, for 2 feet or more deep; then under this small flat stones are laid, and this continues for 2 or 3 feet down, and then the original floor is reached. There are a number of large flags standing on edge, just cropping above the level of the first strata of refuse, and resting on the first floor, which is about level with the outside foundation of the broch. It is evident that the whole of the original court has been filled up with stones for about 3 feet, and the present inner circular walls have been erected thereon by a much inferior class of workpeople than the first designers and builders of the broch, as the mason work is exceedingly rude.

The tower likely was in ruins, and the interior filled up with fallen stones, when another race, or more possibly a lower class of the people, took in hand to turn it again into a place to dwell in for safety. In doing so they have used the *building stones* for the interior new circular and cross walls to make convenient small chambers, as well as for the purpose of strengthening the inner old walls of the broch, as they all round, but more particularly on the east side, have been subjected to great heat. It resembles the inside of a lime-kiln, and the stones are crumbling to pieces.

The diameter of the first court would be about 24 feet 8 inches one way and 24 feet the other. The secondary structure has a court of about 16 feet in diameter.

The interior circular wall is about 6 feet high on the west side, and the widest part is 7 feet from the main inside wall of the tower. It is filled up with small stones, and earth between, to the height of 3 or 4 feet above the foundation of the inner circular wall. Level with this a wall crosses between the two walls forming an oblong chamber, with an entrance at the east end. A similar chamber adjoining it is 12 feet long and 5 feet wide at the centre, and the partition wall is between 3 and 4 feet high. There were no large stones or flags among the fallen mass to show that these chambers had been roofed. The sole-stone of the entrance is about $1\frac{1}{2}$ feet above the level of the refuse in the court, and likely 4 feet from the original floor. A few steps lead up to it. The entrance is 2 feet wide, and on the left there is a doorway of the same width leading to the first-mentioned chamber.

The walls in this part of the tower are so broken down that it is impossible to say whether the doorway led into a chamber within the main wall, or a passage to get out to the small piece of land beyond.

Against the east inside main wall is built a rude kind of stairway 4 feet wide at the bottom, gradually ascending and narrowing, until it becomes about 2 feet wide. At this point it is $4\frac{1}{2}$ feet from its foundation, and like the other inside secondary structure is not of the depth of the main wall, but founded on the strata of small stones referred to above.

The landward side of the broch is excavated to the foundation, and exposes fully to view the fine heavy masonry of its walls. The stones are laid for the most part in concentric layers, unhewn, and some of great size. The first layer forms a scarsement. A few feet from the main wall there is another wall of between 3 and 4 feet high; likely the walls of out-houses, forming a passage the whole way round of about 4 feet wide, taking the average, and which, for the most part, is rudely paved.

Between the wall and cliff there was a pathway $2\frac{1}{2}$ feet wide, protected by a low parapet wall on the sea-side. It was filled up with black earth, small shore stones, burnt bones, ashes, limpet shells, and numerous animal bones. This wall, which probably was a continuation of the

passage between the out-works, has fallen over, along with a slip of the rotten clay.

On the outside and west of the main entrance is built against the wall a chamber 5 feet 2 inches wide and about 4 feet 3 inches high, the walls whereof are between 16 and 18 inches thick. The entrance to it is 2 feet 3 inches wide. This chamber was filled with clay and earth mixed with small stones.

The sole-stone of the main door to the broch is 2 feet 4 inches above the level of the surrounding pavement; and it appears to me that there have been steps going up to the wall immediately opposite, and distant from the main door 9 feet. From the size of the stones and the building of this front wall, I consider it to be coeval with the broch, as it is not so rude in structure as the passage wall joined on to each side of it.

At the east side of the main door is a small wall built for $4\frac{1}{2}$ feet along the main wall of the broch; it is $2\frac{1}{2}$ feet thick, and about 3 feet high. This forms the one side of an entrance 2 feet wide. Built into this and the opposite wall is a flag on edge, and below it was a lintel carefully fitted in, unfortunately broken, and had to be taken out. The doorway was built up with great care, and hardly could be noticed. It was founded upon two large flags, forming, as it were, merely a part of the paved way. These, however, on being removed, exposed to view the entrance to an underground passage between 2 and 3 feet wide, 3 feet deep, which slopes sharply downwards in an easterly direction for at least 10 feet. The sides were built with every now and then flags set on edge instead of building. It is heavily linteled, and above it is flagged, then again flat stones of smaller size, and again, as if to protect the passage still more, and with the object of making it perfectly dry, it has a foot or more of packed clay. It is cut out of friable clay-rock, and the bottom is not paved. This passage I have traced to the outside wall a distance of 50 feet or more. It is lost under the rampart wall, the rubble work of which appears to have fallen in on it. In the passage nothing was found but a few animal bones, and a lot of sea-worn round stones. Eight feet from the rampart wall there were two large round boulders that blocked the way.

I may mention that in the operation of trenching around walls of the different buildings, sea-worn round stones were constantly turning up. I infer from their size that they had been specially picked for the purpose of throwing either by hand or sling; and further, I consider that they have been thrown at the inhabitants, struck the wall, and fallen; thus accounting for the great number lying scattered about.

The rampart is founded in the moat, and apparently extends the whole way across the neck of land, 160 feet. It is between 3 and 4 feet wide at the top, and about 6 feet thick at the found, and is 9 feet high. It is built on the same principle as the main wall of the broch, *i.e.*, the walls faced on the outer and inner sides with fine stones, well put together, and the interior filled up with small stones or rubble work.

Judging from the great depth and width of black earth, nearly free of stones, that is, on the outside of the wall, it leads me to suppose that it has been faced up with earth and feal. It appears to me, also, that this wall and earth rampart is the substantial work of the architects and builders of the broch, and not the structure of an after race of occupants, as it has nothing about it showing the frail, unskilled work of the secondary structures erected by the after occupants of the place.

The most of the bones found were just outside the broch, and particularly in the passage near the edge of the west cliff.

Within the broch bones were also numerous, and they were more or less charred. Some lay on and through the refuse on the floor, and many were sticking in open parts of the walls.

The bones found during the excavation, as far as I could determine, were those of the horse, ox, boar, deer, sheep, whale, fish, and birds; no human. The horse of the broch period seems to have been a larger animal than the supposed indigenous horse of the islands, *viz.*, "The Orkney Garron" (now almost extinct), for the teeth I have found in this broch and at Skara are of very large size. Most of the pieces of deer horns found have been chopped with a sharp instrument. One piece looks like a part of a reindeer antler, or a fallow deer's, as it is broad and palmated, whereas all the others I have found, or seen got in Orkney,

are in every part round; the latter, I presume, to be the antlers of the stag or red deer.

The only shells found, or that I have observed, are those of the limpet, whelk, periwinkle, and spout or razor shell. The limpet and periwinkle were found in heaps both inside and outside of the broch, particularly the limpet shell.

In the entrance passage of the broch was found one of the vertebræ of a whale, in which a small cup is hollowed out; a small polished bone pin, with head; a piece of wood 3 or 4 inches long, shaped like a prong, and in the sides two holes; a small bit of round iron rod; a polished bone skewer, and some charcoal. Besides the above, I got in the broch and outside the following:—

1. Two long-handled bone combs, fish-tail shaped, one of which is shown in the annexed woodcut.

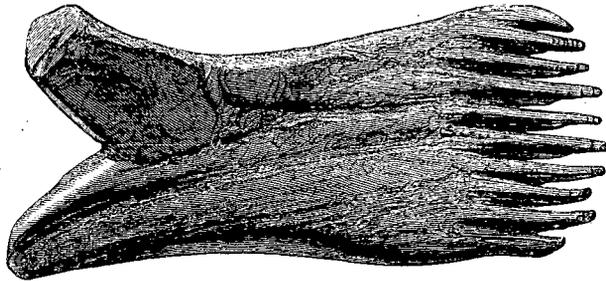


Fig. 1. Long-handled Comb of Deer-horn from Broch of Burwick.
($4\frac{1}{2}$ inches in length.)

2. Single edged round-backed comb (fig. 2), ornamented with small round holes, and having a slip of bone lengthways, iron riveted.

3. A part of a double-edged bone comb.

4. Polished bone whorl.

5. A stone whorl.

6. Small stone cup or mortar, and close by it a circular stone plate, which may have been its cover.

7. Several pieces of bone sheaths that have been bone-riveted.
 8. Polished bone handle, in which, at the end, an instrument has been inverted.

9. Several bone skewers and pins, one of peculiar shape, with an ornamented head (see fig. 3).

10. A few stone knives, like the ones found at Skara.

11. Red pigment.

12. Numerous fragments of rude fire-baked pottery, none in any way ornamented, but one bit glazed.

13. A number of thin round stone discs.

14. Many long-shaped smooth sea-worn stones or pestles.

15. A large assortment of mullers, different sizes.

16. Two small round polished stones, probably charms.

17. A few broken mortars.

18. Parts of querns.

19. A bone hammer.

20. A stone 10" x 8", with mould cut in it 6½" long and ½" deep, possibly for lamps.

21. Several bits of bitumen. This has probably been got out of the lime-stone bed.

22. Charcoal found on the floor of the original court of broch.

23. A small stone-chopper 5" in length.

Broch at Taft Greeny.—Mr. David Stephen, who has partially excavated a broch at Taft Greeny, in the parish of Birsay, furnishes me with the following particulars relative to the structure, which seems in some respects peculiar.

The mound formed by the ruins of this broch was a beautiful green knoll, about 10 feet high in the centre, with stones cropping here

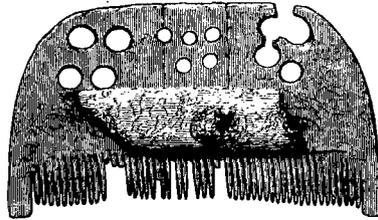


Fig. 2. Single-edged round-backed Comb, from Broch of Burwick. (2¼ inches in length.)



Fig. 3. Bone Pin from Broch of Burwick. (Actual size.)

and there through the turf. Around its base there is a considerable accumulation of earth and stones, among which there were occasionally found a number of small stone cists, from 15 to 20 inches square, most rudely made, and without bottoms.

In excavating the knoll a part of the wall of the broch was come upon at a depth of about $2\frac{1}{2}$ feet under the surface. About 3 feet of loose stones having thus been removed a lintelled passage was discovered, 2 feet 9 inches wide and 3 feet 2 inches high. This passage follows the course of the wall, and was cleared for about 30 feet, when all further progress was stopped by a fall of loose stones from above, at a part where one of the covering stones had given way or had been removed. Further examination of the structure of the passage was prevented by the removal of all the lintels and other stones suitable for building purposes. It is probable that the greater part of the stones used in the construction of all the other houses in the township of Greeny were taken from this broch, as the remains of the old steadings are of the same quality and character of stone. Supposing that eight farm-steadings were all built from this one broch, the wonder is that any vestiges of its structure should yet remain, and from this I conclude that it must have been a structure of the first magnitude.

Among the débris of the part opened there were found some small portions of rude unglazed pottery, two small fragments of red "Samian ware," a small clay crucible, a few lumps of red "keel" or hæmatite, portions of querns, and a piece of blue glass, with white strips twisted in its substance, somewhat resembling Venetian glass.