

II.

NOTICES OF NINE BROCHS ALONG THE CAITHNESS COAST FROM KEISS BAY TO SKIRZA HEAD, EXCAVATED BY SIR FRANCIS TRESS BARRY, BART., M.P., OF KEISS CASTLE, CAITHNESS. BY JOSEPH ANDERSON, LL.D., ASSISTANT-SECRETARY AND KEEPER OF THE MUSEUM.

During the past ten years Sir Francis Tress Barry, Bart., M.P., F.S.A. and Hon. F.S.A. Scot., has been engaged during his summer residence at Keiss Castle in the investigation of the antiquities on his own estate of Keiss and its immediate neighbourhood, and has given me frequent opportunities of seeing the progress and noting the results of his extensive excavations. The district is very rich in remains of prehistoric times, and Sir Francis Barry has already excavated nine brochs and several other rude stone structures, some of which appear to be sepulchral.

The object of this paper is to place on record as briefly as possible the principal results of Sir Francis Barry's excavations so far as the brochs are concerned. Previous to his operations there had been but few brochs systematically excavated in Caithness. The late Mr Alexander Henry Rhind of Sibster (the founder of the Rhind Lectureship and donor of the Rhind Excavation Fund), who was a native of the county, had excavated the Broch of Kettleburn, near Wick, in 1852.¹ The Brochs of Yarhouse and Brounaben had been excavated in 1866-67 by the late Mr R. I. Shearer and myself for this Society with funds granted from the Rhind bequest.² The late Mr W. S. Thomson Sinclair of Dunbeath excavated a broch at the junction of the Burn of Houstry with the Water of Dunbeath, also in 1866. A broch at the junction of the Borgue and Ousdale Burns and about 400 yards from the sea at

¹ Described by Mr Rhind in the *Archaeological Journal*, vol. x. p. 212, and *Proceedings Soc. Ant. Scot.*, vol. i. p. 264.

² Described in *Archæologia Scotica*, vol. v. p. 131.

Ousdale, was excavated in 1891 by the late Mr James Mackay, F.S.A. Scot.¹

The late Mr Samuel Laing had made some partial diggings in several mounds near Keiss in 1864, and in different parts of the county there had been occasional excavations and removals of brochs for purposes connected with agricultural improvements, but there had been only these five excavated completely and systematically for the purpose of scientific record previous to Sir Francis Barry's investigations, which have added nine to the five. To those who know what the excavation of a broch implies, the number will convey an idea of the magnitude of the work accomplished, and to others the comparison will be sufficient to show that Sir Francis Barry has done more to elucidate the structure and contents of the brochs than has ever been done in Caithness before by all the investigators together.

While it is true that for the most part the brochs of Caithness (and of the North of Scotland generally) have little more than a few feet of the height of their basements remaining, they nevertheless present sufficient evidence of the unity of type which is such a remarkable feature of the broch construction, whether it exists as the mere dilapidated stump of the original structure, or whether it still retains the greater part of its original height. The main features of its constructive design are still shown by a few of the better preserved examples, such as Mousa and Clickemin in Shetland, Dun Carloway in Lewis, Dun Telve and Dun Troddan in Glenelg, and Dun Dornadilla in Sutherland. Mousa still shows itself as a prominent feature in the landscape (fig. 1), much as it did a thousand years ago, when it first appears on record as the refuge for a whole winter of Bjorn Brynjulfson and his following when he was shipwrecked there in the course of his flight from Norway with Thora Roald's daughter, and celebrated his marriage feast in Moseyjarborg.² Mousa is still 45 feet high and shows six successive

¹ Described by Mr Mackay in the *Proceedings*, vol. xxvi. p. 351.

² "Moseyjarborg, which is mentioned in Egil's Saga (cap. 32, 33) at about the year A.D. 900, still rises high in the air. The reason for speaking of Moseyjarborg in the Saga was that Bjorn Hauld of Aurland in Sogn, who had fled from the fiords

galleries (fig. 4) above the chambers on the ground floor.¹ Dun Carloway was 40 feet high in the end of last century and still shows five galleries ;

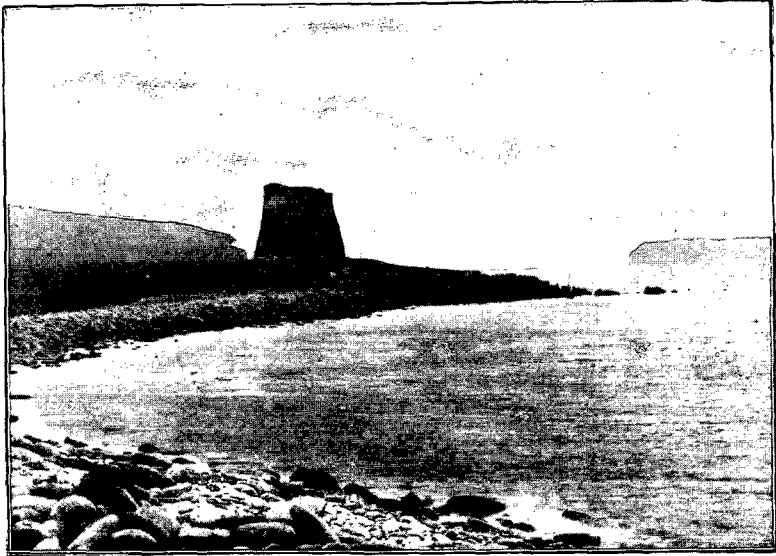


Fig. 1. Distant view of the Broch of Mousa, Shetland. (From a photograph by Mr D. Brigham, 1899.)

Dun Telve in Glenelg (fig. 2) is still 30 feet high and shows five galleries ; Dun Troddan, also in Glenelg, is still 25 feet high and shows with Thora Hladhond, the sister of Thorer Herse, was shipwrecked in its neighbourhood and spent some time there until his vessel was repaired and he could continue his voyage to Iceland. In later times two other lovers sought refuge in this place: Erlend Jungi, a distinguished chief, probably from Hjaltland, who in 1154 fled with Margaret, the widow of Madadh, Earl of Athol, and mother of Harold, Earl of Orkney, and shut himself up with her in the borg. He defended himself for some time against Harold, who besieged the borg, but as it was well provisioned and could not be taken, peace was made and the pair married."—Munch, "Scottish and Irish Local Names in the Sagas," in *Mémoires de la Société des Antiquaires du Nord*, 1850-60, p. 127.

¹ Low, in his sectional drawing made in 1774, shows the remains of a seventh gallery.—*Low's Tour*, p. 183.

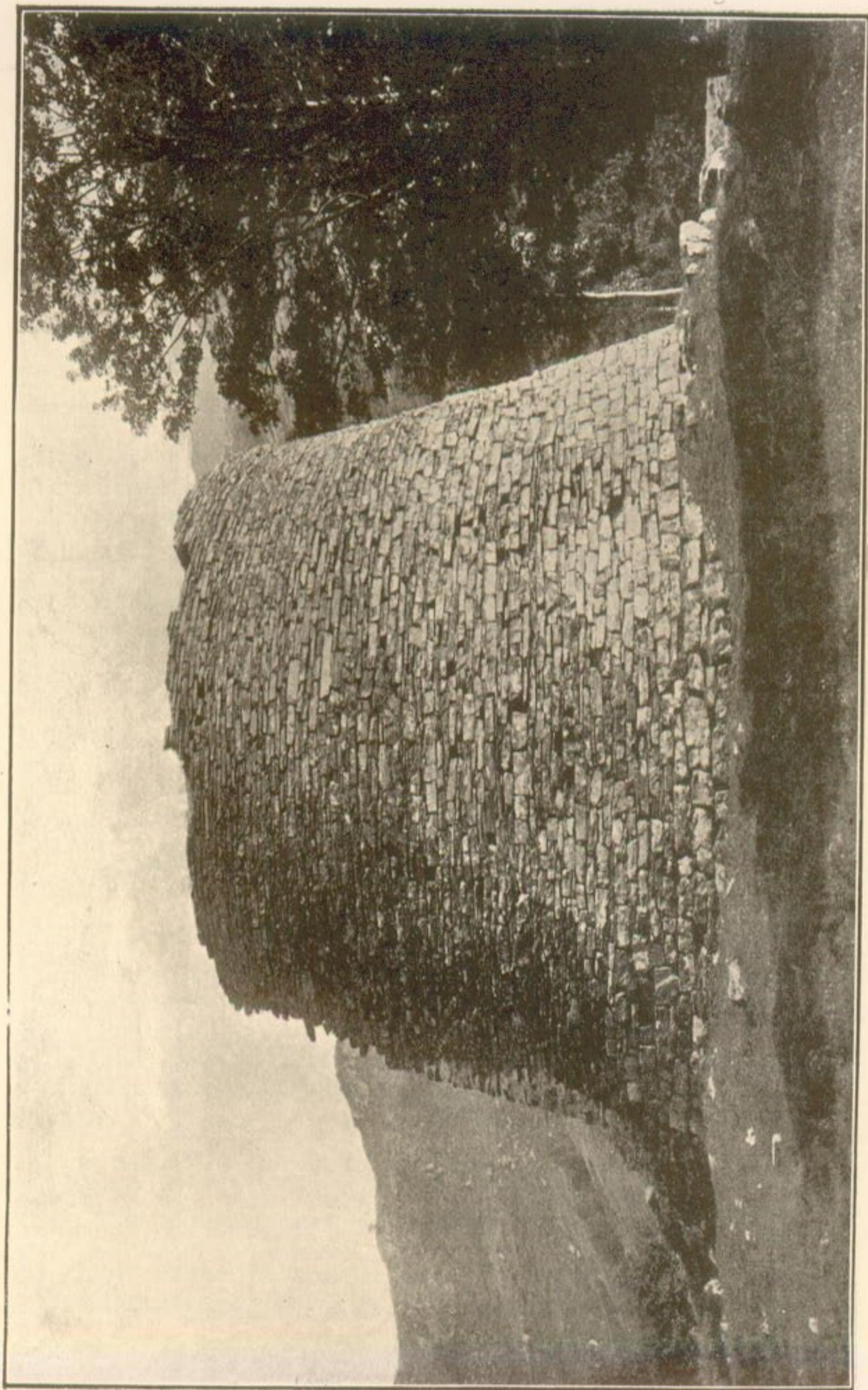


Fig. 2. View of the Broch called Dun Telve, Gleneelg, from the north. (From a photograph by Mr Erskine Beveridge, F.S.A. Scot.)

four galleries (fig. 5); Dun Dornadilla in 1766 was still 25 feet high, and showed three galleries.

From the general identity in the main features of their design and construction it is evident that this class of ancient stronghold was a typical structure of great importance and significance in the archæology of Scotland, forming a more outstanding feature in the aspect of the country and of the civilisation of the time than even the mediæval castles which came long after them, and which, in the northern districts at least, they far outnumbered, while each on an average was quite as large as a mediæval keep, and many were very much larger.

The special object and intention of the formation of these peculiar structures seems to have been to provide a sufficient number of secure refuges for the people and their cattle and other possessions from temporary danger threatened by incursions of predatory bands, and no type of structure more admirably suited for passive defence was ever devised. The typical broch was a huge dry-built circular tower rising on a base of about 60 feet in diameter to a height of about 50 feet. In its elevation the tower was a hollow cylinder having a thickness of wall of from 12 to 15 feet surrounding an interior court of about 30 feet in diameter open to the sky. As all the windows looked into the interior court, there was no opening to the outside of the tower except the tunnel-like doorway about five yards in length which traversed the thickness of the wall of the cylinder and thus gave access to the court (fig. 3). Some distance within the external aperture of this doorway was the door, a slab of stone set up against the door-checks and securely fixed in place against them by a drawbar resting in holes made for it in the thickness of the wall. The doorway was further protected by a guard-chamber behind the door, and sometimes also (as shown in fig. 3) by a chamber over the lintels of the passage, between which spaces were left through which weapons could be used against assailants forcing an entrance. But suppose the main entrance forced, it only gave access to the interior court, and in it the enemy found themselves, as it were, at the bottom of a well 30 feet in diameter, with walls 50 feet high and pierced on all sides by ranges of

windows commanding every foot of the space below. From this court the chambers on the floor level are reached by separate doors, and the upper galleries by the stairway, which has a separate door of access, usually protected by a guard-chamber at the foot of the stair. The whole height of the tower above the lower story is occupied by a series of galleries running completely round in the thickness of the wall, con-

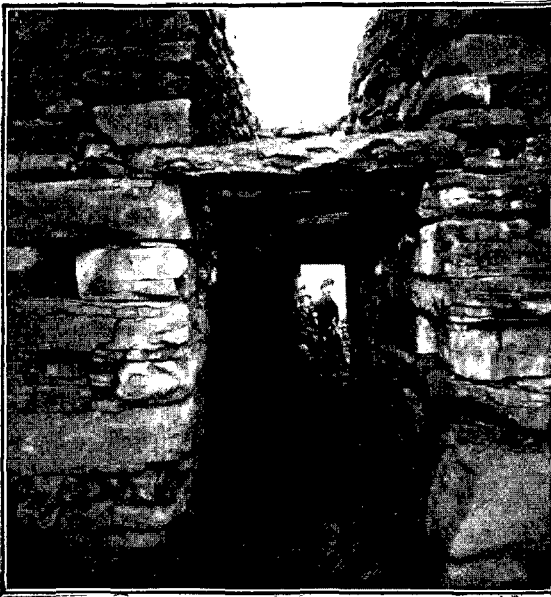


Fig. 3. Doorway of the Broch of Cairnliath, Dunrobin Park. (From a Photograph.)

structed immediately over each other so that the slabs forming the roof of the one below form also the floor of the one next above it, and lighted by vertical ranges of windows opening into the court. The sectional elevations of Mousa and Dun Troddan (figs. 4 and 5) show the arrangement of the stairs, galleries, and windows.

But though thus admirably suited for the special purpose of their

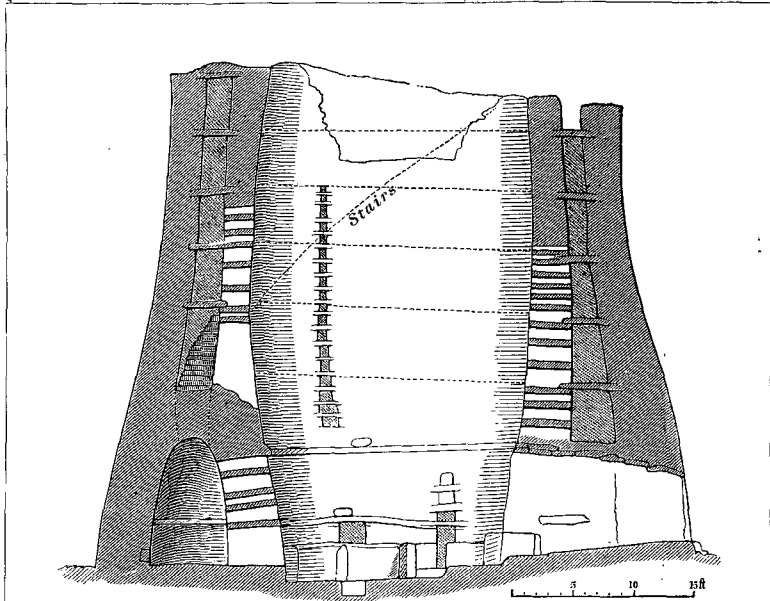


Fig. 4. Sectional Elevation of the Broch of Mousa, Shetland.

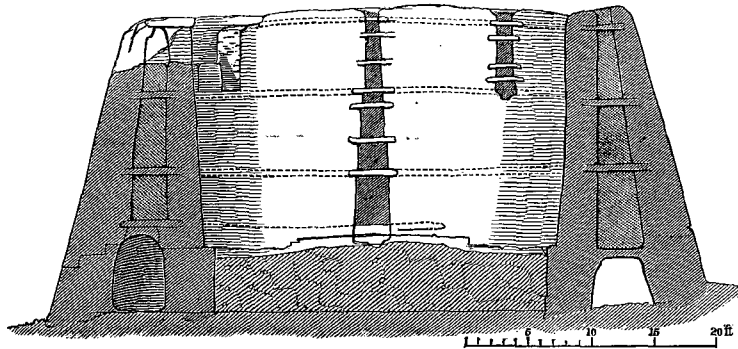


Fig. 5. Sectional Elevation of the Broch of Dun Troddan, Glenelg.

immediate intention, their dry-built construction was peculiarly unfavourable to their preservation when the changed conditions of society rendered their special function no longer necessary to the existing phase of civilisation, and consequently they were soon reduced to the condition of dilapidated ruin in which we find them. But their number and their geographical distribution still testify to their former importance, the rounded grass-covered mounds which now conceal their remains being thickly scattered over the best arable land and for long distances up the river valleys. They are surprisingly numerous in the northern counties, upwards of 80 having been enumerated in Caithness, 60 in Sutherland, 70 in Orkney, and 75 in Shetland. Though fewer in the southern counties,¹ they range from Shetland to Berwickshire, and thus form a feature in the prehistoric aspect of the country, all the more remarkable that the type is peculiar to Scotland, not a single example having ever been found elsewhere.

The brochs now to be described are all situated on a strip of the eastern coast-line of Caithness extending from the mouth of the Water of Wester to Skirza Head, a distance of about seven miles. I am indebted to Sir Francis Barry for the ground-plans and photographs which follow, and to the Royal Society of Antiquaries of Ireland for the use of the blocks of figs. 8, 10, and 16.

The Wester Broch.—The Wester Broch is situated on the links at the mouth of the Water of Wester where it debouches into the Bay of Keiss, and about two miles south of Keiss Castle. On the landward edge of the fringe of sandy dunes which here extends along the shore there are two sand-hills further inland and more conspicuous than the rest, which are locally known as the Birkle Hills. Of these the largest was of a conically rounded form, about 30 feet high, and spreading out to a base of upwards of 200 feet in diameter. Its excavation has shown its upper part to have

¹ The enumeration for the southern counties, so far as known, is as follows: Two in Forfarshire, one in Perthshire, one in Stirlingshire, two in Selkirkshire, and one in Berwickshire.

been formed of blown sand accumulated around and over the ruins of a broch which had been originally built on a lower eminence also formed of pure sand.

The circular wall of the broch (fig. 6) is 13 feet thick, enclosing an area of 27 feet in diameter. The entrance passage opened towards the

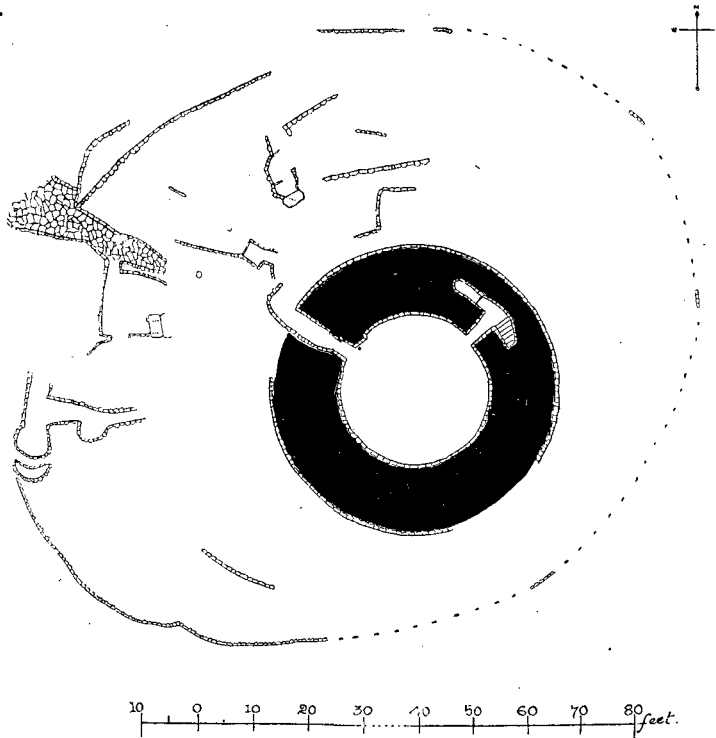


Fig. 6. Ground Plan of the Broch of Wester and its outbuildings.

landward side, facing nearly west-north-west. It is $3\frac{1}{2}$ feet in width at the exterior entrance, and narrows somewhat at a distance of 9 feet inwards, where there are checks for a door, the width at the opening into the area being 2 feet 7 inches. At a distance of 22 feet round the

interior to the left and at a height of 3 feet above the level of the area is the entrance to the stair, $2\frac{1}{2}$ feet wide, giving access both to the stair and to an oblong chamber opposite the stair-foot. The stair, of which five steps remain, goes up to the right; the bottom steps are 3 feet wide, the upper ones narrowing gradually to little more than 2 feet in width. The chamber opposite the stair-foot is about 3 feet in width and $9\frac{1}{2}$ feet in length, and coved at the end.

At a distance of 30 to 40 feet from the exterior of the broch on the west side are the remains of a wall of circumvallation, which was traced continuously for a considerable distance on the N.W. and S.W. sides, and met with occasionally on the opposite side, so that it seems to have been continued quite round the lower part of the sand-hill on which the broch was placed. Between this enclosing wall and the broch on the landward side are the foundations of eight or nine small cells or outbuildings.

The objects found in this broch included a number of thin flat circular discs of slaty stone of various sizes,¹ several whetstones, an upper stone of a quern and several saddle querns, a large long-handled comb, measuring $5\frac{1}{2}$ inches by $2\frac{1}{2}$ inches, having five prongs on the toothed end, several handles of bone and deer horn, and fragments of very coarse pottery. The most remarkable things found here, however, were three quartzite pebbles of ovoid shape, which have their surfaces painted with spots in a blackish or blackish-brown pigment (see fig. 22).

In the sand over the top of the wall of the broch were found four

¹ These discs of thin slaty stone, varying from 3 or 4 inches to 12 or 14 inches in diameter, are found in almost all the northern brochs. It has been suggested that some of them may have been covers for jars of clay, and instances of the use of precisely similar discs equally roughly chipped to a round form in modern cottages to cover the water-pitchers, or as pot-lids, have been referred to. Another use, now altogether extinct, has also been suggested. Within the memory of persons still living it was customary in Orkney to use thin slate stones roughly chipped to a circular or square form for parching corn over the fire to make 'burstan.' The stone was surrounded on the upper side with a border of soft clay to prevent the corn from falling off into the fire when it was stirred. The corn thus parched and roughly ground on a quern was eaten with milk or cream. "They'll hae burstan and butter-milk every day" was a proverb expressive of luxurious living.

cists with skeletons at full length. One of these was extended partially over the passage into the broch. These burials must have been made long after the broch had become a dilapidated ruin covered with blown sand. In one of the outbuildings the bones of a child were also found.

Keiss Broch.—This broch is situated immediately behind and to the north of the seaward end of the village of Keiss.¹ It is only a few

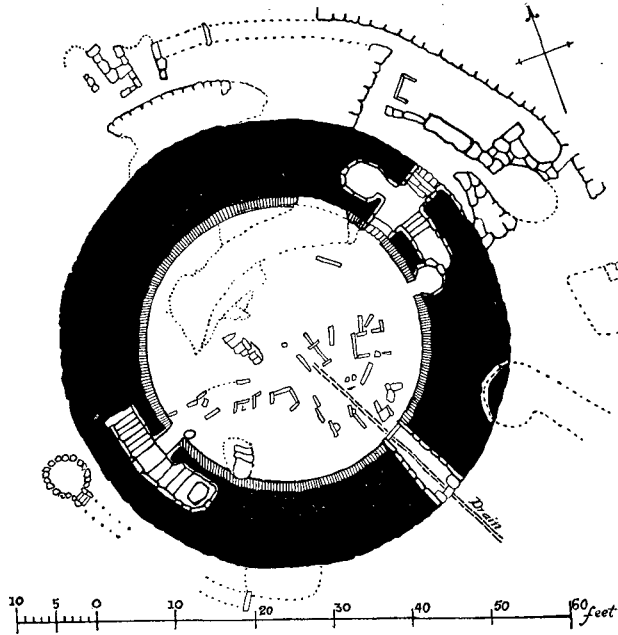


Fig. 7. Ground Plan of Keiss Broch and its outbuildings.

yards distant from the beach, and separated from it by a level strip of greensward.

¹ This broch is "The Harbour Mound," partially dug into by the late Mr Samuel Laing in 1864, and described in his *Prehistoric Remains of Caithness*, 1866, p. 22. His excavations, however, were merely sufficient to enable him to conjecture that the building must be classed among the brochs, and the whole of the details have since been worked out by Sir Francis Tress Barry.

The broch (fig. 7) consists of a circular wall about 12 feet thick, enclosing an interior area of 38 feet in diameter. Against the lower part of the interior face of the broch wall there is added an inner wall



Fig. 8. Keiss Broch. Interior, showing entrance to stairway (partly reconstructed) and secondary building on debris.

or scarcement 15 inches thick, and still rising to a height of from about 4 to about 6 feet on the northern side of the area. This reduces the diameter of the interior to 35 feet 6 inches at the floor level. Above

the scarcement the thickness of the broch wall is from 11 feet 6 inches to 12 feet, and the height remaining at the highest part is about 8 feet for a considerable portion of its circumference on the landward side, the part facing the sea having been much broken down and the stones carried off. On the sea face there has been an entrance passage through the main wall of the broch, over a sill 3 feet wide, but though the wall on both sides is gone, there are remains of the floor of the guard-chamber. A well-made drain passes under the flags of the entrance,



Fig. 9. Keiss Broch. Closed entrance on east side, with part of slab door *in situ*, and triangular stone at base of outside wall.

and the socket-stone of the pivot of a (secondary) door remains *in situ* on the left-hand side. Twenty-four feet round the interior circumference to the left is the entrance to a stair in the thickness of the wall (fig. 8), at a height of 3 feet 6 inches above the general level of the floor of the internal area. This entrance to the stairway is 2 feet 4 inches wide; the stair itself is 3 feet wide, and still shows nine steps going up, and five steps down below the level of the entrance to a water-hole, the supply apparently communicating also with a well in the interior area. This well is irregularly circular, about $4\frac{1}{2}$ feet in

diameter and 6 feet deep. On one side there were four steps down, and the top was covered by slabs laid level with the floor of the area.

On the opposite side of the area facing to the north-east there had been another stairway with a chamber at the foot of the stair. Of the stair, which was 3 feet 4 inches in width, two or three steps are left, and the chamber still shows part of the overlapping roof. The most interesting feature here, however, is that the entrance to the stairway has been at one time part of a main entrance through the exterior part of the wall, which had been built up and the scarcement built in front of it, though the bar-holes still remain behind on either side and a slab stood upright against the checks of the doorway (fig. 9), with two holdfasts of stone in the bar-holes behind it to keep it in place. Enough of the lower part of the sides of the passage remained to show that they had been very solidly built, the width of the entrance at the outside being $2\frac{1}{2}$ feet, widening behind the checks to 3 feet 3 inches. On the outside, at one side of the entrance, was a very large triangular stone, which might have been originally the lintel stone over the doorway.¹ The main wall has been well built of rather massive masonry on this side (fig. 10), but there is more of the height left further round where the wall remains entire to a height of about 5 to 6 feet.

On a level with the top of the stone door shown in fig. 9, and about $2\frac{1}{2}$ feet above the floor of the passage, there was a secondary floor paved with slabs laid on the debris, and on it a fireplace with ashes. Other secondary floors and wall-foundations occurred at various heights within the interior area of the broch.

The objects found in this broch were two small pieces of the lustrous red pottery of the period of the Roman occupation, commonly called Samian ware, a few pieces of coarse unglazed pottery with an impressed chevronry pattern, and some pieces of exceedingly coarse pottery unornamented, a small crucible $\frac{7}{8}$ inch in depth with a portion of melted bronze

¹ A good many brochs have this form of lintel over the outer entrance, such as Dun Dornadilla, Cullswick, etc.

adhering to the bottom of the interior, a long-handled comb of bone $5\frac{1}{2}$ inches in length with eight prongs on the toothed end, several bone pins and pointed implements and cylindrical handles of bone and deer-horn, a small cylinder of bone perforated longitudinally and with a round hole in the side reaching through to the longitudinal perforation,



Fig. 10. Keiss Broch. Exterior of the Broch wall, showing character of masonry.

an oval oblong water-worn pebble of quartzite with a straight shallow depression, passing obliquely across each of its two flatter faces,¹ a stone

¹ These ovoid water-worn pebbles of quartzite, with an indentation running obliquely to the longer axis on one or both of the flat faces, have also been found in the brochs of Lingrow, Orkney, and Kintradwell, Sutherlandshire. They have occurred occasion-

having incised on the upper side a narrow cavity with straight sides, $5\frac{1}{2}$ inches in length and widening to a head at one end, probably a mould, a lamp of sandstone $5\frac{1}{4}$ by $4\frac{1}{4}$ inches, and a rudely shaped cup of sandstone, measuring $4\frac{1}{2}$ inches in length by $4\frac{1}{2}$ inches in breadth and 2 inches in depth, portions of several larger vessels of sandstone with oblong oval cavities rudely hollowed in them, several grain-rubbers or saddle querns, three upper stones of circular rotatory querns, and a large stone mortar with broken bottom similar to those used for husking barley.

Among the food refuse were bones of the common domestic animals, the ox, sheep or goat and swine, bones of birds (including the Great Auk), antlers of red deer of great size,¹ and quantities of the shells of the common edible molluscs of the adjacent littoral, chiefly limpets and periwinkles.

A little to the south of this broch are the foundations of a large rectangular building.

Broch at the White Gate.—On the same beach terrace at the distance of less than a quarter of a mile to the northward, and separated from the beach only by the same narrow strip of level greensward, is the broch at the White Gate.² So little remained of the mound that must once have covered this broch that the field dyke had been carried straight across it, and the part within the field levelled for cultivation.

The broch (fig. 11) consists of a circular wall about 13 feet thick enclosing an area of about 26 feet in diameter. Only about 5 feet of the height of the wall remains, and there is no sign of a scarcement. The entrance faces the sea, the passage going straight through the wall

ally in Crannogs, and one was found in the cave at Borness, Kirkcudbrightshire, associated with combs of the long-handled type. They are not unfrequently found in Ireland, but Sir John Evans states that he has never met with them in England.

¹ A portion of the beam of an antler of the reindeer with the brow antler attached was found in this broch by Mr Laing. Another antler of larger size from the same broch was considered by Professor Owen to be a variety of the reindeer. Fragments of reindeer horns were also found in the broch of Yarhouse, Caithness. *Proceedings*, vol. viii. p. 193.

² This is merely an entrance gate to a field, but it gives a convenient means of distinguishing the broch close by it from the others.

from an exterior opening 2 feet 10 inches in width, widening to 3 feet 6 inches at the interior opening. At a distance of 3 feet 8 inches inward from the exterior opening there are checks for a door, formed of slabs set upright edgeways in the wall and projecting 6 inches into the passage on either side, the width of the door-sill between them being 2 feet 7 inches. At a distance of 5 feet 6 inches further in another pair of similar checks project 8 inches on either side. At a distance of 12 feet round the inner circumference of the area from the inner end of the

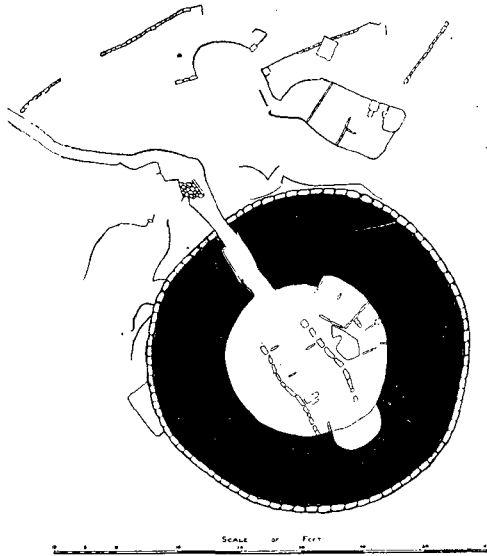


Fig. 11. Ground Plan of Broch at the White Gate, and its outbuildings.

entrance passage to the left is a break in the inner side of the main wall which might have been the entrance to a stair in the thickness of the wall, but it is here much broken down, and a secondary chamber about 7 feet in diameter has been formed partly upon the wall 2 feet above the original floor. Two secondary partitions, one formed of large slabs set on end and some distance apart, and the other of slabs on edge in the

floor (fig. 12), also crossed the area of the broch from the entrance to the back. They are 8 feet apart, and midway between them and nearly in the centre of the area is a construction formed of four slabs set on edge in the floor, making a cist-like cavity nearly $2\frac{1}{2}$ feet square.¹ At short distances on one side are erect slabs set edgewise to the main wall. In the north-east side of the interior face of the main wall there is a recess or aumbry 2 feet square at a height of about $3\frac{1}{2}$ feet from the floor.



Fig. 12. Broch at the White Gate. Interior, showing entrance and slabs set up in area. To the right is the slab enclosure in which the large vessel of rude pottery was found.

In the circular enclosure of upright slabs at one side of the area shown in fig. 12 were found the fragments of a very large jar of coarse unglazed pottery (fig. 13), which when reconstructed measured 17 inches in height by $17\frac{1}{2}$ inches in diameter at the mouth, tapering to 7 inches in diameter at the bottom. It is by far the largest pottery vessel hitherto

¹ Such cist-like constructions are often found in the areas of brochs. They seem in many cases to have been fireplaces, like those formerly used in St Kilda, of which some have survived till recent times. See Kearton's *With Nature and a Camera* (1897), p. 34. "In an ancient straw-thatched hut . . . in front of the box-like bedstead on which the old woman was lying were four thick flags driven into the ground so as to form a rough kind of square, in the centre of which smouldered a fire of turf. Directly over this and suspended from the roof-tree was a long smoke-blackened chain used for hanging kettles and cooking-pots on."

found in any broch.¹ The only other objects found were a few grain-rubbers and portions of rotatory querns.

The entrance passage towards the sea is prolonged outwards through a series of secondary buildings containing four irregularly shaped chambers, one of which showed part of the roofing of overlapping slabs.



Fig. 13. Large Jar of rude Pottery from White Gate Broch. (3.)

Within a few yards of this broch are the remains of the foundations of an oblong rectangular building of dry-built masonry measuring 45 feet in length by 24 feet in breadth, the walls being about 4 feet thick.

¹ Presented to the Museum in 1893 by Sir F. T. Barry. See the *Proceedings*, vol. xxii. p. 43.

The Road Broch.—This broch lies close to the public road from Keiss to John o' Groats on the left-hand side of the road going northwards, and is less than a quarter of a mile distant from the two seaside brochs. The place where the ruins of the broch were discovered by Sir Francis Barry is locally known as the Kirk Tafts, and is a waste piece of ground lying to the south of the modern graveyard. It is supposed that somewhere either on the site of the present cemetery or on the uncultivated ground to the south of it there had been an early church, and there are the foundations of an oblong rectangular building between the burial-ground and the broch, but it presents no distinctively ecclesiastical features, and may be analogous to the oblong rectangular buildings found close to the sites of the seaside brochs. Between this rectangular building and the road there was an extensive shell-heap which had been cut through by the roadside ditch. In the section thus exposed I had found rude bone pins and pottery in 1863, and it was further dug into by Mr Samuel Laing in 1864.¹ But Mr Laing's excavations were chiefly confined to the kitchen midden, and the existence of the broch in the unexposed portion of the waste ground was unsuspected till it was unearthed by Sir Francis Barry. It is the largest and most interesting of the Keiss brochs, and presents several features of peculiar interest in connection with its construction and outbuilding.

The circular wall of the broch (fig. 14) has a total thickness varying from 13 feet 9 inches to 15 feet 9 inches, but the original wall seems to have been only about 12 feet thick, and a casing wall, varying about 2 feet to 3 feet 9 inches in thickness, has been added on to the outside of the exterior face of the broch wall. The enclosed area or interior court is 34 feet in diameter. There is no scarcement. The entrance faces the N.E. and is 2 feet 6 inches wide at the outside, going straight through the wall for a distance of 15 feet 9 inches and increasing in width from the inner side of the checks to 3 feet 2 inches at the opening into the internal area.

¹ Described as "The Churchyard Mound" in Laing's *Prehistoric Remains of Caithness* (1866), p. 19.

No part of the roof of the passage remains. At a distance of 7 feet from the exterior opening, and 8 feet 9 inches from the opening into the court, or about the middle of the passage, there are checks for a door formed of slabs 4 feet 7 inches in height set edgewise in the passage

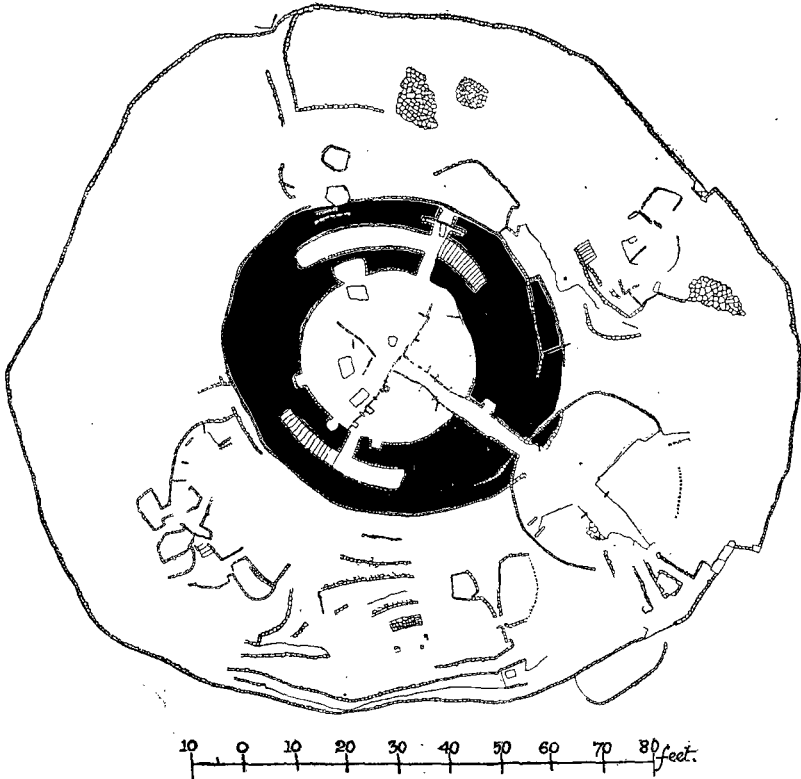


Fig. 14. Ground Plan of the Road Broch and its outbuildings, with the encircling wall.

walls and projecting from them so as to leave an opening between them of 2 feet 9 inches wide at the top and 3 feet at the bottom. On the right side of the passage and $2\frac{1}{2}$ feet within the door-checks is the entrance to a guard-chamber 2 feet wide and 3 feet high. The chamber



Fig. 15. Road Broch, showing slab-partitions in interior, entrance to stairway, with chamber in wall and recess on either side,

was found to extend for at least 8 feet in length, but as the roof has fallen in and the sides were very insecure it was impossible to clear it without endangering the stability of this part of the broch wall.

Twenty feet round the interior circumference from the main entrance to the left is the entrance to the stair (fig. 15) opening from the interior court. It is 2 feet 4 inches wide and has 5 feet of its height remaining, but the lintel is gone. A chamber at the foot of the stair to the left, entered by the stair entrance, is 12 feet long by 5 feet wide, and terminates in a rounded end. The stair ascends to the right of the entrance 4 feet within the thickness of the wall, and the well of the stairway is 4 feet wide. The steps, of which twelve still remain, are somewhat irregular in height as well as in width of tread, but are easily traversable, and more regular than might have been expected from their being made of undressed stones. Nearly opposite the main entrance on the further side of the court is a chamber in the wall (fig. 16), entered through a rectangular hole cut in a big slab, which forms the front of the chamber. Internally its walls are built in the thickness of the broch wall, and the roof is formed by their convergence upwards till the space is spanned by flat stones. The size of this chamber is 4 feet 6 inches long, 3 feet 9 inches wide, and 4 feet 7 inches high. Of two similar recesses, but smaller, on the same side of the court, one has directly in front of its opening a cist-like construction in the floor 3 feet 6 inches long by 2 feet 3 inches wide and 22 inches in depth.

At a distance of 24 feet from the main entrance round the interior of the court to the right is the entrance from the court to another stair, also shown in fig. 16. This entrance is 3 feet 9 inches wide, and a part only of its original height remains. The stair goes to the right, eleven steps remaining, and the well of the stairway is 3 feet 6 inches wide. A chamber at the foot of the stair going to the left from the stair entrance is the largest known in any broch. It extends for 30 feet along the middle of the thickness of the broch wall, and is 4 feet 6 inches wide on the floor. Its walls are much decayed, but they are still 6 feet in height, though none of the roofing lintels remain, and the rounded

end of the chamber is covered by overlapping stones. As in the case of the Keiss Broch there has been at one time an entrance passage from the exterior at the foot of this stair, 3 feet 9 inches in width, and placed directly opposite the entrance to the stair from the interior, which is also 3 feet 9 inches in width. As seen from inside, it is blocked by a slab



Fig. 16. Road Broch. Interior, showing entrance to chamber in thickness of the wall, cut out of a slab, and entrance to stairway.

door with a big stone against it, and has bar-holes on both sides, but on the outside it is blocked by the wall of a secondary construction built up against the broch wall.

In the centre of the area is an underground chamber with steps down

to it and covered over with slabs. It is 5 feet long by 3 feet wide and 5 feet 6 inches deep, and partly cut out of the rock at one side. There are two tank-like constructions in the area, formed of slabs set on edge in the floor, one of which is 3 feet long by 2 feet 4



Fig. 17. Road Broch. Corner of exterior encircling wall, showing character of masonry.

inches wide by 1 foot 6 inches deep ; the other, 3 feet 2 inches long by 2 feet 9 inches wide by 1 foot 6 inches deep, both of which still hold

water. There is also a squarish stone vessel standing in the floor with a cavity 1 foot square by 9 inches deep. The interior court is subdivided into four sections by secondary partitions of slabs on edge (as shown in figs. 15 and 16), and there are several small cist-like constructions of four slabs inserted edgewise in the floor, most probably as fireplaces.

A unique feature of this broch is the presence of a circular court about 33 feet in diameter which has been added in front of the main entrance, and the wall of which is partially founded on the lower courses of the addition to the thickness of the exterior wall of the broch to the right of the entrance, and partially on an accumulation of debris $2\frac{1}{2}$ feet in height. The wall of this court is of inferior masonry and much broken down, but is still standing to a height of about 3 feet. Its form is shown on the ground plan, fig. 14.

A number of outbuildings are contained in the space between the broch and a massive wall of circumvallation which encloses the whole within an area of 144 feet in diameter, and is still standing to a height of 7 feet 3 inches at its highest part.

In this broch were found some pieces of coarse, badly fired, and unornamented pottery, a portion of an armlet of shale, a finely made bone pin with an ornamented head, a bone needle, a portion of the cylindrical shaft of a wing bone of a large bird, with a hole bored through from one side, a long-handled comb of bone with five prongs at the toothed end, a small bronze ring, a flattish circular disc of sandstone resembling an imperforate whorl, $1\frac{1}{2}$ inches in diameter and $\frac{5}{8}$ of an inch in thickness (fig. 18), having slightly incised markings rudely suggestive of an attempted inscription on both of its flat sides, and on one side the figure of a bird,¹ several stone whorls and whetstones, a lamp of stone, a stone cup with side-handle,² waterworn stones grooved like sinkers, a small rudely hollowed stone vessel, several rounded stones with roughly made hollows on both sides, two oval stone

¹ This interesting, but enigmatic stone was presented to the Museum in 1895 by Sir F. T. Barry. See the *Proceedings*, vol. xxix. p. 274.

² Similar stone cups with side handles have been found in the brochs of Kintradwell, Sutherland, and Kettleburn, Caithness.

vessels and several fragments of similar vessels of various sizes, a number of flat circular discs of slaty stone of different sizes, twelve upper

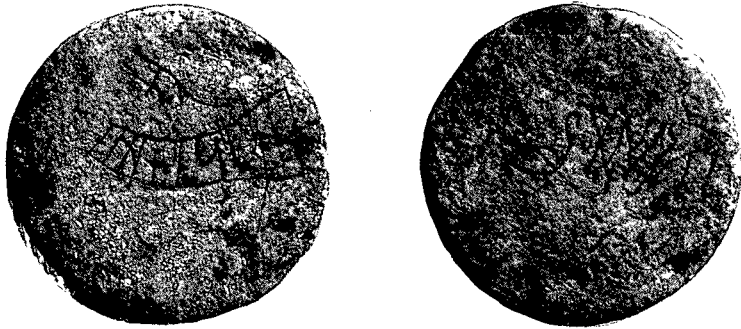


Fig. 18. Obverse and reverse of Sandstone Disc from Road Broch, Keiss.
Slightly enlarged.

and lower stones of rotatory querns, two large under stones of saddle querns (fig. 19) and several fragments of others, a piece of a quern with a mould for ingots of square section 4 inches long, hollowed

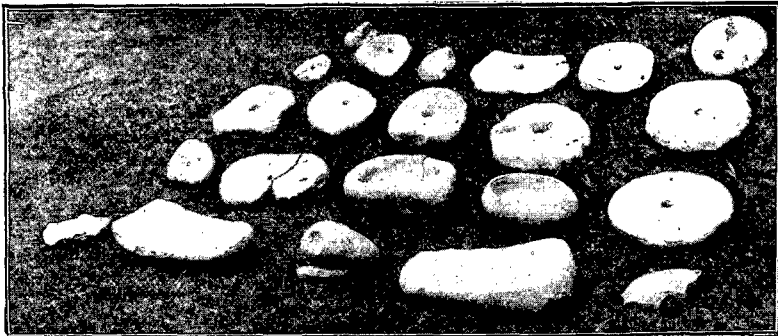


Fig. 19. Rubbing Stones, Querns, Stone Vessels, Pivot Stone, etc.,
from the Road Broch, Keiss.

in its flat side, another mould for ingots, narrower and 5 inches in length, and two socket stones for the pivots of doors. Among the

food refuse, as in the case of the other brochs, were bones of the domestic animals, the ox, sheep or goat, and swine, with portions of horns of red deer and shells of edible molluscs. A small quantity of charred grain,¹ which seems to be bere, was also met with. A single canine tooth of a bear (*Ursus arctos*) occurred among the remains from this broch, but no other trace of the animal was discovered.

As before mentioned, there are the remains of an oblong rectangular building at a higher level between the wall of circumvallation and the road. It appears, however, to be of much later date than any of the buildings within the circumvallation, judging from the fact that a wall proceeding from the outbuildings of the broch seems to pass about 4 feet under its foundations.

Nybster Broch.—The Nybster Broch is situated on the top of a high cliff-promontory projecting into the sea, which is about 60 yards in length and 40 yards wide at the landward end, narrowing to less than half that width at the seaward end. It has been cut off from the land by a ditch² nearly 20 feet wide drawn in a segment of a circle from the ravine at one side to that at the other. Immediately within the ditch, a well-built wall about 10 feet thick, increasing to about 15 feet in thickness in the middle, also crosses the landward end of the promontory in a segment of a circle with the convex side towards the land (fig. 20). Near the middle of the convexity (where the wall is thickest) is the entrance passage, 15 feet in length, through the thickness of the wall, 3 feet 6 inches in width at the outer opening, widening to 4 feet at a distance of $4\frac{1}{2}$ feet inwards, where there are checks for a door, and widening again slightly at 12 feet from the entrance, where there are checks for a second door. On the inner side of the forework to the south of the entrance, part of the thickening of its wall ends in a stairway of which five steps remain from the level of the interior area to the present level of

¹ Charred grain, apparently bere or barley, was found in the Brochs of Burray and Dunbeath.

² There has been some recent quarrying in the depression, which, however, I cannot help regarding as originally a ditch of fortification.

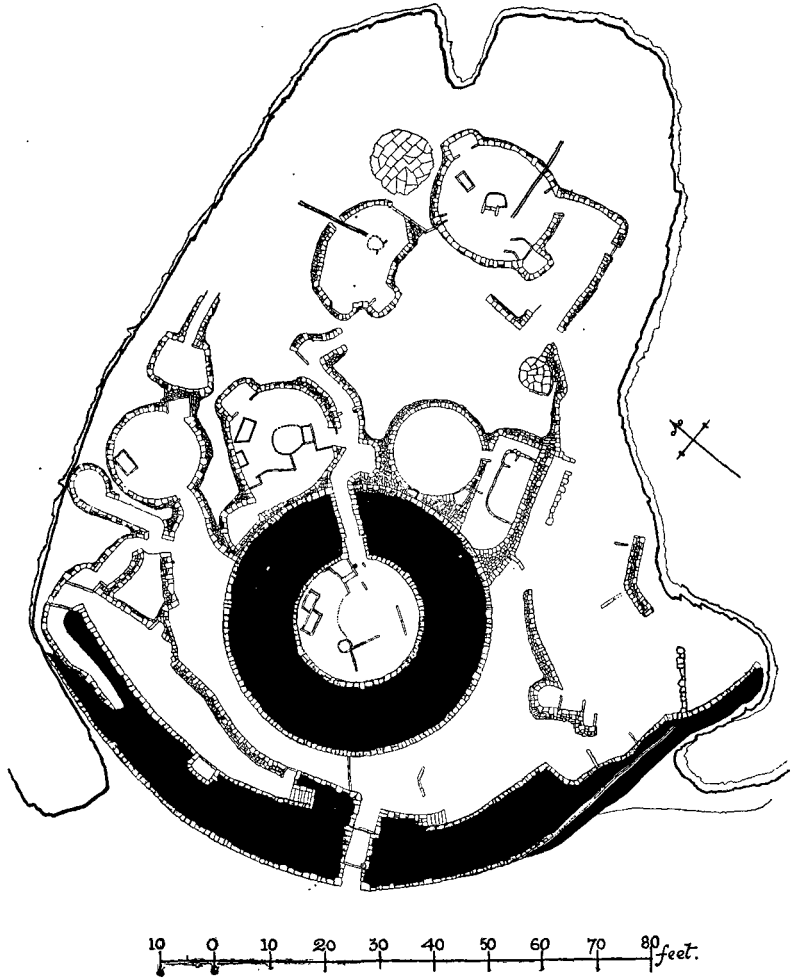


Fig. 20. Ground Plan of Nybster Broch, with its forework and outbuildings.

the top of the wall. A similar arrangement of steps to the north of the entrance give access to the level of the present height of the wall from the floor of the long chamber immediately behind the northern half of the wall. Whatever may have been the original height of the wall, these steps may have been designed to give the defenders easy access to the top of this forework from both sides for the purpose of defending the outer entrance.

Entering by this passage-way through the exterior defensive wall or



Fig. 21. Ornamented Quern from Nybster Broch.

forework, the broch stands immediately before you, but its entrance is placed on the opposite side from the entrance through the forework, and that side of the main building is surrounded by a congeries of out-buildings, oblong, circular and irregular in form, scattered over nearly the whole area of the promontory.

The broch consists of a circular wall 14 feet thick surrounding a central area of 23 feet in diameter. There is no scarcement. The entrance, which faces seaward, is scarcely more than 3 feet wide for a

distance of 10 feet, where there are checks for a door, and the passage widens a few inches on either side for the remainder of its length. There is no guard-chamber, and no stair; in fact, no opening of any kind from the interior area, but as there is only about 4 feet of the height of the wall remaining, the entrance to the stairway may have been at a higher level. In the floor of the area towards the north side there are two of the cist-like constructions of four slabs which have been supposed to be fireplaces, though their large size makes them look more like tanks, one measuring 4 feet by 2 feet and 2 feet 5 inches deep; the other, 3 feet 3 inches by 2 feet 8 inches and 1 foot 4 inches deep.

The outbuildings around this broch occupy nearly the whole of the available surface of the promontory. Several of them are circular, and they are mostly all very well built. In the large circular outbuilding to the left of the entrance of the broch there is a tank-like construction or fireplace of four slabs in the floor 3 feet 9 inches in length by 2 feet 4 inches in breadth and 2 feet deep; and another near the wall, 2 feet long by 14 inches wide and 9 inches deep.

The articles found in this broch include a long-handled bone comb, several portions of quern stones and saddle querns, and an upper stone of a rotatory quern (fig. 21) ornamented with radial grooves or flutings, but without a central perforation.

Everly Broch.—This broch is on the croft of this name and only a short distance to the east of the road. It consists of a circular wall 14 feet 6 inches in thickness enclosing an area 29 feet in diameter. There is no scarcement. The entrance faces the north-west. It has an exterior opening of 3 feet in width, narrowing to 2 feet 8 inches at a distance of 8 feet in, where there are checks for a door formed of slabs set on end projecting into the passage-way and narrowing the opening to 1 foot 6 inches. Immediately behind the checks, the passage again widens to 3 feet 9 inches, and to 4 feet at the opening into the interior area of the broch. The wall of the broch is much broken down, and there is no sign of a stair, or of any chambers in the thickness of the wall. There is secondary flooring in the entrance passage and traces of a secondary paving of the area. The

height remaining of the broch wall does not exceed $3\frac{1}{2}$ feet, so that there may have been a stair entrance above that level.

In this broch were found a stone cup with a handle at the side similar to that found in the road broch, three or four quern stones, two grain rubbers, two rudely formed discs of slaty stone, several broken stone vessels, and a few hammer-stones or naturally shaped oblong pebbles wasted at the ends by use.

Ness Broch.—The situation of this broch is, like that of Nybster, on the neck of a promontory of the cliff about 25 yards wide, which runs out into the sea for a length of about 80 yards. Across the neck there is a strong wall about 6 feet high with a depression in front of it, in which there is a well 9 feet 6 inches in depth with twelve steps leading down to it, and roofed in by slabs. The broch wall is so far gone that its exterior edge has not been definitely traced, and therefore its thickness is uncertain. Of the interior edge not more than the foundations remain, showing the interior area to have been 22 feet in diameter. There are remains of outbuildings on both sides, but those to the landward side are the more extensive and better preserved, and seem at one time to have been continuous with the remains of chambers across the ravine on the north side of the promontory. One of these has a tank-like construction of slabs in the floor, measuring 4 feet 3 inches in length by 2 feet 2 inches in width and 2 feet in depth. Off this chamber there is a recess or smaller room 9 feet in length by 6 feet in width, the walls of which are still 4 feet high, and built over slabs set on edge in the lower part of the wall face.

The objects found in this broch were three quern stones, several stone vessels circular and oval in shape, a mould in sandstone for an ingot 6 inches in length, a small slender ingot of bronze and another about 4 inches in length, a bronze pin, and two links of a slender chain of bronze.

Freswick Sands Broch.—This broch is situated among the sand hills on the margin of Freswick Bay a little to the north of Freswick House. Like the Wester Broch, its foundations rest upon pure sand. The broch wall, which is 11 feet 6 inches thick, and has a scarcement from 12 to 18 inches thick inside, incloses an interior area of 32 feet 8 inches in

diameter. The wall remains for the greater part of its extent about 7 feet high, but is partly broken down on the side toward the land, where the original entrance probably was. Facing to N.E. is an entrance passage by the foot of the stair, 2 feet 9 inches in width. There are remains of a chamber at the foot of the stair, of which fourteen steps still remain. It goes up to the left from the middle of the entrance passage, the lowest step being 3 feet 10 inches in width, and the steps gradually narrowing as they ascend till the uppermost is only 2 feet 6 inches in width. At a distance of 17 feet round the interior wall to the left of the inner opening of the entrance passage is the opening to a chamber in the thickness of the wall on the floor level of the area. This entrance is 2 feet 3 inches in width and 4 feet high, and leads into an oblong chamber 12 feet in length, 4 feet in width, and nearly 7 feet in height, and coved at the further end. Two curved walls of secondary construction roughly divide the interior area of the broch into segments.

The objects found in this broch were a boulder of sandstone with nine cup-marks on its surface, an oval vessel of sandstone with a rudely hollowed cavity 6 inches by 4 inches, several broken stone vessels of similar character, and one or two quern stones.

Skirza Head Broch.—The broch at Skirza Head, like those at Nybster and Ness, is situated on the neck of a promontory of the cliff jutting out into the sea, and cut off from the land by a ditch nearly 30 feet wide.

The broch has a circular wall 14 feet thick, enclosing an area 22 feet 6 inches in diameter. There is a scarcement about a foot thick, above which the interior diameter would be about 25 feet. The entrance passage lies S.E. by S., and is thus on the side which looks out to sea. It is 14 feet in length, 3 feet wide at the exterior entrance, and has checks for a door at a distance of 8 feet from the exterior; beyond these it widens about 6 inches on each side, but the sides are not quite straight and the interior aperture is narrowed to about 3 feet. The height of the wall remaining is scarcely more than 4 feet all round. At a distance of 16 feet round the interior wall to the left of the main entrance is the entrance to the stair in the thickness of the wall with a small chamber

in the usual position opposite the stair-foot. This entrance is 2 feet 7 inches in width. The stair is gone, but the remains of two steps are still traceable. The length of the chamber in front of the stair-foot is uncertain, only part of the side-walls remaining at the entrance. Between it and the exterior of the main wall there is a large oblong tank-like construction of four slabs set in the floor of what would otherwise have been a passage outwards. Inside the area in front of the main entrance doorway is a fireplace composed of four slabs set on edge in the floor like a tank, but filled with ashes. At the opposite side of the area are two similar constructions in the floor, about 4 feet long, 3 feet wide, and 18 inches deep.

The broch is placed so near the margin of the northern side of the promontory that a portion of its exterior wall on that side has fallen over the cliff, with part of the outbuildings on the same side. On the other side the outbuildings include an irregularly-shaped chamber or well about ten feet in depth, which still retains water.

In one of the outbuildings, partly built on the remains of the wall, on the north side of this broch, was found a palmated horn of the true Elk (*Alces malchis*). The other objects found were of the usual character, including several socket-stones for the pivots of doors, two oblong and two round stone vessels made of unshaped boulders with cavities roughly hewn in their upper sides, two quern stones, several flat circular discs of slaty stone of various sizes, and a number of hammer-stones or oblong pebbles wasted at the ends by use.

The evidence derived from a comparison of the results of Sir Francis Barry's excavations with those of previous investigations goes rather to confirm than to extend in any great measure our knowledge of the structure and contents of the brochs. Yet in certain directions new items have been added to the sum of that knowledge. To the list of the locally extinct fauna of the Caithness brochs, which previously included the Reindeer and the Great Auk, Sir Francis Barry has added the Elk and possibly the Brown Bear. The curious discovery in three of the Keiss brochs

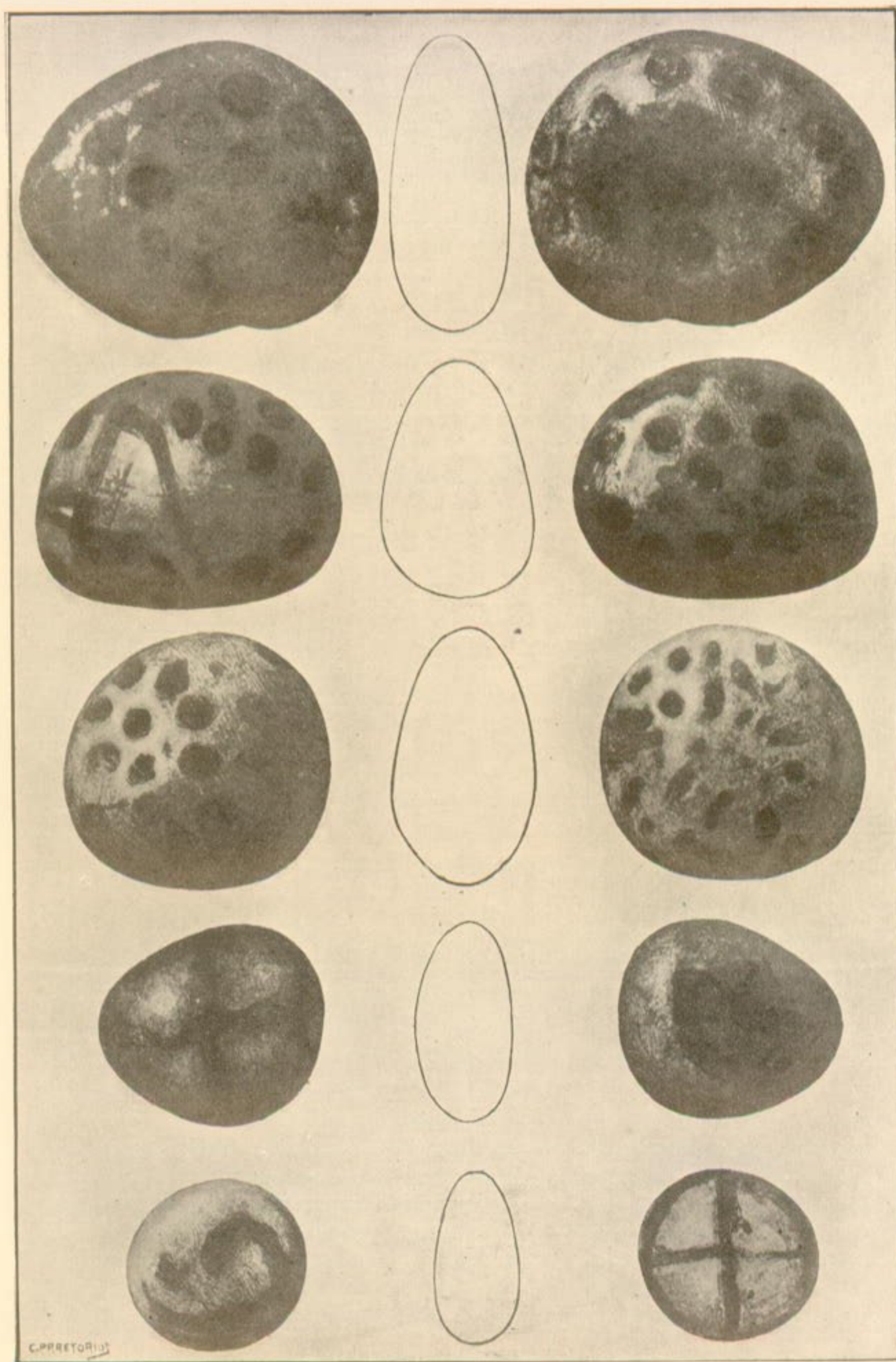


Fig. 22. Painted Pebbles from the Keiss Broch. (3.)

of shore-rolled quartz pebbles (fig. 22) painted with spots and lines in a brownish-black pigment, adds a new feature to the interest of the broch relics, and suggests comparison with the still more curious series of similar pebbles painted with a red pigment which have been disinterred by M. Piette in the cavern of Mas d'Azil and elsewhere. Some features of situation, construction, and association not previously recorded in connection with the brochs of Caithness have also been disclosed. The situation on the necks of cliff promontories fortified by a ditch, as at Ness and Skirza Head, or further strengthened by a fore-work inside the ditch as at Nybster, is a peculiar feature, while the situation on sand-hills like those at Wester and Freswick Sands is no less peculiar. The features of construction, such as the casing of the outer wall, the circular fore-court, the square-cut openings in the slabs forming the openings to the chambers in the interior wall, and the massive encircling wall of circumvallation of the Road Broch, give it a character of its own, shared only, so far as the encircling wall is concerned, but on a very much less massive scale, by the Wester Broch. The occurrence in close association with the brochs at Wester, Keiss, White Gate, and Road Broch of rectangular buildings, apparently of later date, but constructed without mortar, raises the interesting question of what kind of buildings were the direct successors of the brochs.

It does not lie within the scope of the purpose of this paper to discuss conjectural theories of the age or origin of the brochs apart from the scientific evidence afforded by the structures and their contents. The structure by itself, considered with reference to its function and purpose, with its interior arrangement round the court of its chambers, stairs, galleries, and windows, is obviously by far the most advanced of all the forms of dry-built structure known to us, superior both in design and construction to any other type of stone fortalice of prehistoric times. Naturally, therefore, if its characteristics are to have any influence in the determination of its place in the series, it must be assigned to an advanced and not to a primitive stage of the development of constructions in stone built without mortar. So far as the archæological period of the brochs is

indicated by the relics recovered from them, their testimony is direct and conclusive. Rude as many of them are, mere rudeness is no criterion of antiquity and no indication of the period to which they may belong. The types of implements which are truly characteristic of the Stone and Bronze Ages, do not occur among the relics which have been obtained from brochs. On the other hand, a large proportion of these relics are clearly assignable to the Late Celtic period, such as the bronze tweezers from the broch of Kettleburn, the bronze tankard handle from Okstrow, the bronze knobs from the broch of Harray, and the enamelled bronze objects and harness mounting from the broch of Torwoodlee; or to the Roman period, as the Roman coins from the broch of Lingrow, the Samian ware from the brochs of Burray, Okstrow, and Keiss, and the Roman pottery and glass from the broch of Torwoodlee. The most characteristic of all the broch relics is the long-handled comb which has been found in nearly every broch opened. These long-handled combs have also been found in Late Celtic associations in the entrenchment at Hunsbury, and in the lake-village at Glastonbury, and quite recently two of them were found in the Roman station at Camelon, Stirlingshire. From the converging evidence of these Late Celtic and Roman objects, it is clear that the occupation of the brochs dates back at least to the Late Celtic and Roman periods, and as the Late Celtic period commenced in the South of England some considerable time before the Roman invasion, and in Scotland was contemporary with the Roman occupation, it seems most likely that the unique type of the broch structure may have had its origin in the civilisation of the Late Celtic period.