A VIKING SETTLEMENT AT FRESWICK, CAITHNESS. REPORT ON EXCAVATIONS CARRIED OUT IN 1937 AND 1938. BY A. O. CURLE, C.V.O., LL.D., F.S.A.SCOT., F.S.A.

Anyone interested in the science of place-names who studies the map of Caithness from that point of view will observe that the names are divisible into two groups, on a philological as well as on a geographical basis. If the county is divided into two sections by a line drawn from Cross Kirk Bay, some 6 miles to the west of Thurso on the north, to the town of Lybster on the south-east coast, thus separating the hill country from the lowland, it will be found on examination that whereas the placenames in the former are with few exceptions Celtic and Gaelic, those in the latter have their roots in Scandinavian speech.

Such a distribution points to a very considerable displacement of the native population during the period of the Norse settlement; for it can hardly be supposed that the Celtic people willingly relinquished the coasts and fertile tracts of land for the barren moors and mountains that form the western portion of the county.

Notwithstanding this abundant evidence of Norse occupation, no trace of any building referable to that period was observed when the survey of the Antiquities of Caithness was made for the Royal Commission on Ancient Monuments in 1911.

The earliest Viking settlements would probably be situated by the estuaries of the Wick and Thurso Rivers, on the sites of the present towns, where long since all traces of their existence must have been removed, or buried beneath the streets and houses. Attractive landing-places elsewhere on the coast, which is for the most part rocky and precipitous, are few and far between, but the bay of Freswick, some 6 miles south of Duncansby Head, with its shelving beach, is a marked exception to the rule.

From as early as the time of Earl Sigurd, towards the close of the eleventh century, the name of Freswick, in the form of Thraswick, flits across the pages of the Sagas. In the Saga of Burnt Njal¹ we read how Sigurd, having learnt that his brother-in-law "Havard in Thraswick" had been slain by the Scots Earls, Hundi and Melsnati, gathered together a mighty host from all the isles and fought a battle at Duncansness, in which the earls were defeated. Then at a later date when Kari Solmundson, who had escaped from Njal's burning hall, struck off the

¹ The Story of Burnt Njal, translated from the Icelandic Saga of Burnt Njal by Sir George Dasent, chap. lxxxiv.

head of Gunnar Lambi's son at Earl Sigurd's board, he and his fellows fared in his ship to Freswick, where he took up his abode in the house of a "worthy man, whose name was Skeggi," and with whom they stayed "a very long time."¹ Eventually, after Kari had made a pilgrimage, and obtained absolution, he returned to Freswick to the house of "Master" Skeggi, who gave him "a ship of burden," and with eighteen men on board he sailed back to Iceland.

At a still later date, in the Orkneyinga Saga, we find Freswick again coming into notice in connection with Sweyn Asleif's son, whose father Olaf had an estate at "Dungalsbae" (Duncansby), where the former frequently resided. Sweyn, who was a very notable Viking, looked after the estate of Freswick for his stepsons, and had himself a fortress in the neighbourhood, called Lambaborg, for which identification has been suggested both for Bucholie to the south of the bay and the Broch of Ness to the north. Incidentally, from this Saga we also learn that there were thickets in which men hid themselves at that date (1153) not far from the "hall of Freswick," and that at no great distance from the hall there was a farmstead.

In the centre of the wide bay the sandy beach is backed with irregular banks of sand, which rise sharply to a height of 20 or 30 feet before attaining the general land level, and as yearly these banks are eroded and driven farther back by the tempestuous winds which prevail on that coast, their contours now probably differ considerably from those presented at the time of the Viking settlement.

Back from the beach, where a few generations ago there was meadowland, there is now, owing to the combined action of burrowing rabbits and tearing winds, an area several acres in extent, reduced to an arid desert of deep hollows of sand and occasional resistant ridges.

From this area sherds of coarse, unglazed pottery, which was not analogous to any recognised ware found elsewhere in Scotland, had from time to time been sent to the Museum. The finding of pottery of similar character at Jarlshof in Shetland, associated with a Viking settlement, furnished the means of its identification, and a visit to the sandy area led to the discovery of the top of a wall emerging from the sand in one of the hollows on the southern limit. The characteristic feature of this pottery, it may be explained here, is the numerous impressions on the surface, of the husks and straw of oats, which have been employed to mix with, or temper, the clay, in order to bring it to a proper consistency for potting.

Over most of the sandy area there were exposed evidences of occupation in the shape of traces of building, midden refuse, hearths, and burnt broken stones such as were used in Norse cooking and for producing steam for baths.

¹ Ibid., chap. cliv.

The exploration was commenced in June 1937, and the work carried on for a further period of six weeks during the summer of 1938. The outcropping wall above referred to made a suitable starting-point. It lay approximately east and west along the edge of the hollow, and was formed with large boulders from the beach. Eventually it proved to be the north face of a typical Viking wall, measuring a metre in width with a core of compacted earth in the centre.

The remains of buildings which were revealed following this discovery have been grouped under three heads, A, B, and C, according to their apparent age, commencing with the latest.

GROUP A.

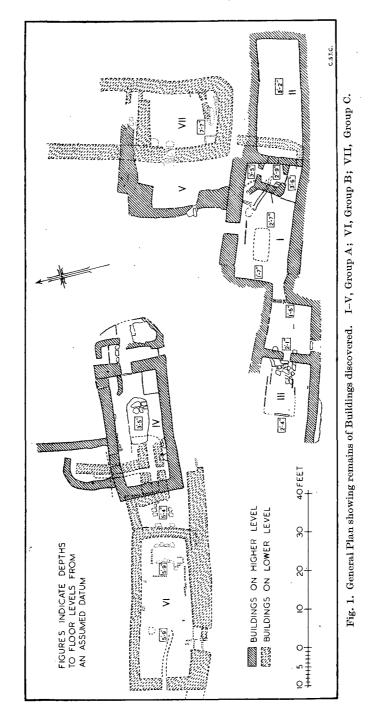
The building of which the wall mentioned above formed the south front (No. 1 on plans, figs. 1 and 2), was oblong, and measured interiorly 30 by 14 feet. It had been subjected to some reconstruction, for the walls at the east and west ends were of different character. Where best preserved, the building had an elevation of from 2 to 3 feet.

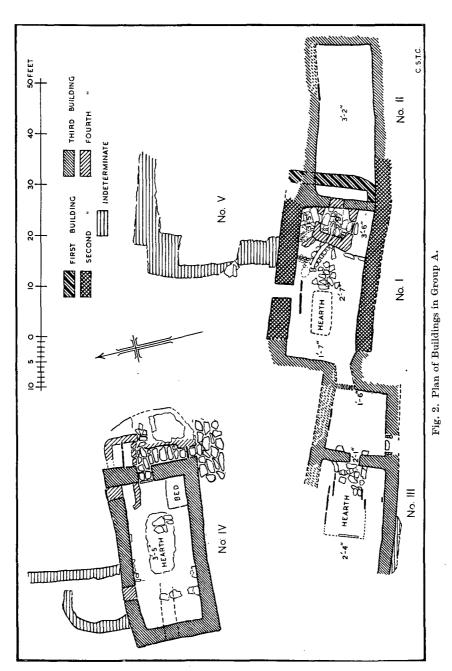
The area contained within the walls was covered deep in kitchen-midden refuse, and there was no definite floor recognisable over the greater part of it.

The doorway, 3 feet in width, was placed in the north wall at a point 11 feet distant from the west end, and no kerb or sill remained between its jambs. At about 1 foot 6 inches inwards from the doorway, two large upright slabs set on edge and protruding above the floor-level to a height of a few inches extended for a length of 6 feet 6 inches—evidently the base of some arrangement employed to screen the fire behind them from a rush of wind. In the centre axis of the house, towards the west end, and covered partially by the projecting flagstones, lay the hearth, measuring some 11 feet in length by 3 feet 9 inches in breadth. There were no remains of a surrounding kerb nor of paving beneath.

At the east end a small rectangular construction with built sides occupied the centre of the wall. It measured 2 feet in height, and its upper surface was so level as to suggest that the levelling had been purposely effected. As may be seen from the plan (fig. 2), the structure had not been laid on a square foundation, the north side being 3 feet shorter than the south, so that the spaces on either side were not symmetrical.

On the floor of the dwelling, between the hearth and the front wall of this interior structure, heavy flagstones had been laid in two distinct rows from an area of scattered paving at the west end (Pl. XXXVIII, 1). As will be subsequently explained, the northmost row covered a drain, but no purpose was discernible for the other, which, however, led in the direction of the intake of the vent to be afterwards mentioned. On examination it





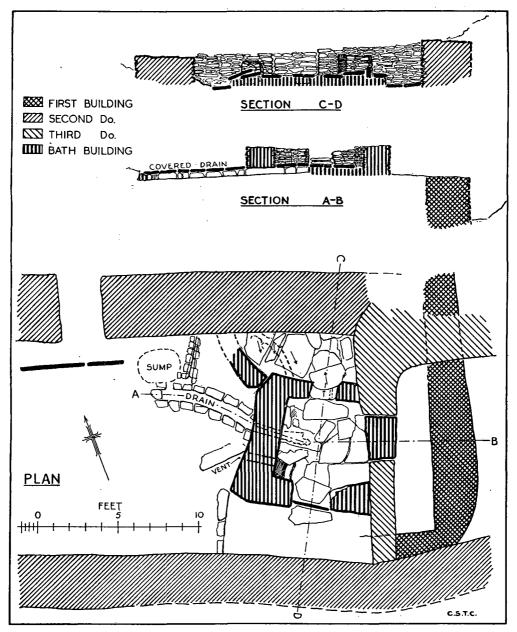


Fig. 3. West end of I, showing Bath Chamber, Drain, and Vent, with sections, also Wall of earlier Building beyond.

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became apparent that the construction at the west end was in reality a chamber of which the walls had been reduced all round to an even level, and the interior carefully filled up with stones and turf, so as to ensure a level surface.

When the filling material had all been removed, a chamber was exposed measuring 4 feet 10 inches along the back and front walls, 4 feet 5 inches along the north, and 5 feet 10 inches on the south (fig. 3 and Pl. XXXVIII, 2). The entrance was from the latter direction by way of the space left between the main wall of the house and the south wall of the chamber, which was crossed by a line of stones forming a kerb at its commencement. The entrance, approached by a step and over a projecting sill, was placed somewhat to the west of the centre of the wall, and measured some 2 feet 4 inches in width. Directly opposite, through the north wall, was another opening, 1 foot 8 inches wide, not furnished with a kerb, and in lieu of a step, with two thin slabs of stone sloping downwards into an enclosed space, or closet, between the north wall of the chamber and the outer wall of the main building, the detailed description of which will be furnished later.

The walls of the chamber on the inside remained to a height of about The floor was carefully paved all over, except for a small 14 inches. area measuring about 12 inches by 6 in the south-west corner, where there had been a fireplace. A heap of levigated clay, amounting to about a barrow-load, was piled up in the north-west corner. Beneath the surface the fireplace was filled for a depth of 16 inches with burnt broken stones, and, as none of these fragments corresponded, it was evident that they had been broken before being employed, as afterwards explained, in the fire. Among the stones a small quantity of peat-ash was observed. When the clay had been removed, a stone, such as could be comfortably held in the hand, was noticed projecting from the paving. On being lifted, it was found to have been used as a plug, filling a neatly formed hole, 3 inches in diameter, and surrounded by large pebbles. Further, on removing one of the paving stones near the centre of the floor a well-fashioned drain was exposed, which found its exit through an opening 5 inches wide in the west wall of the chamber, thence continued beneath the covers, previously mentioned on the floor of the house, to discharge by way of an offshoot into a sump, dug in the floor towards the north wall.

On examining the fireplace after removal of the stones with which it had been filled, a vent was discovered passing through the adjacent west wall. On the inner face of the wall the sinking of a lintel had blocked this opening. On the outer face, however, the intake was still clear, flanked on either side by stones sunk in the floor, one level with the vent, and the other rising above it, as if to direct the air into it.

There was no doubt, from the facts above related, that this was a wellpreserved example of a Viking bath, but before dealing further with it, a

description must be furnished of the small closet which opened out of it on the north side.

The angle formed by the junction of the north and west walls of the chamber had been constructed on a bevel, and from the base of it there ran the foundations of a lightly constructed wall, which had the appearance of being secondary, and which crossed the floor obliquely to the north wall of The space, or closet, behind it measured in greatest length and the house. breadth 7 feet by 3. At the west end, lying tilted against the north wall, were two large flagstones, with a smaller one between (Pl. XXXIX, 1), which, however, were not of sufficient length to have reached the opposite wall and to have formed a shelf, as might have been suggested by the angle at which they lay. The floor beneath them was covered with a deposit of midden refuse similar to that which was spread generally over the floor of the house. Below this there was found the remains of what appeared to be a small, open gutter, formed with thin stones set on edge obliquely on either side, which, passing beneath the westmost flag, led under The back of the closet at the east end was paved. the bath-chamber.

From early times, down in fact to the present day, for the practice still exists in remote districts of Scandinavia and Finland, the method of bathing indulged in by the peasantry, was that of the steam, or vapour, bath. So much in common had it with the bathing practices of Slavonic, Turkish, and Persian countries, that it is a reasonable supposition that the baths of these various regions had all a common origin, and that doubtless the northern peoples imported the fashion with them when they came to their present territories from the Near East during the migration period in the third and fourth centuries of our era. Nor do they, in the course of centuries, seem to have introduced any radical alterations into the system.

Various travellers who have indulged in such baths, or merely witnessed the process of bathing, have furnished accounts of it, and among the former, Paul Du Chaillu has described the bath-chamber as he found it, and his experience as a bather, in a passage which is worth quoting in part.¹ "One of the most characteristic institutions of the country (Finland) is the *Sauma* (bath-house). . . . It is a small log house, built very tight, with no windows, having a single aperture above to let the smoke out; in the centre is an oven-like structure built of loose stones, under which a fire is kept burning till they are very hot: then the fire is extinguished, and the women clean the place thoroughly of ashes and soot, the smoke hole having been in the meantime closed. A large vessel filled with water is placed within; and a number of slender twigs, generally of birch trees, are put into it, to be used as switches." After describing the assembling of the bathers, male and female, who, with a thermometer

¹ The Land of the Midnight Sun, vol. ii. p. 201.

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standing below zero, appeared in costumes that reminded him of Africa minus the colour, and his own embarrassment on finding himself among them in the same condition, he goes on to describe the process of bathing. "I hastily pushed the door open and was welcomed by the voices of all the company as I closed it behind me. The heat was so intense that I could hardly breathe, and I begged them not to raise any more steam for a while. . . . At first I seated myself on one of the lower benches built More water was poured around, after a while getting on the other above. on the hot stones, and such a volume of steam arose that I could not endure it, so I jumped down again and reclined in a half-sitting posture in order to breathe more freely. In a short time I was in a most profuse perspiration; again and again steam was raised by pouring water on the stones, till at last the hot air and steam became extremely oppressive. Now and then we poured water on each other . . . then with boughs everyone's back and loins were switched till they smarted severely. . . . In about half an hour the people began to depart, at first submitting to a final flagellation, after which cold water was poured upon the body: then all went home as naked as they came. . . . I rolled myself in the snow as did some others."

The details of the Freswick bath-chamber point to a procedure having been followed there very similar to that related by Du Chaillu. Burnt broken stones would be built up into a heap mingled with peat in the corner above the vent, and the fire lighted from beneath. When the heat of the stones had been raised to a glow heat, and the bath-chamber prepared as described, the bather, or bathers, for the space was too restricted to hold many, would take their places on a bench along the back wall, and water would be thrown on the stones to produce the necessarv steam. The stones were of such a size as would have retained their heat for a considerable time, so the process of throwing water on to them would be repeated for as long as was necessary, or as their heat remained sufficient. The flagellation with twigs, no doubt, would follow, as that, from all accounts, appears to have been a regular part of the procedure, and finally a douche of cold water would be administered. It is possible that this last act of ablution took place in the closet on the north side, in front of the inclined flags, which would direct the water to the drain, passing out from beneath them. This last suggestion is put forward tentatively, for the drain was not placed in the position most convenient for such a purpose, nor would the direction of the water into the base of the bath-chamber building be a sound arrangement when it might with little trouble have been led direct to the main drain outside. In a bath-house excavated by Dr Aage Roussell, at Sandness in Greenland,¹ a small lateral chamber was likewise found, but in that case it

¹ Sandness and the Neighbouring Farms : Researches into Norse Culture in Greenland, p. 76.

actually contained the stove. In the Freswick closet there were no indications of a fire ever having been laid, and, as has been shown, the steam was generated within the bath-chamber itself.

It is highly improbable that the heap of clay deposited in the northwest corner of the chamber had any connection with the bathing arrangements. As it had been levigated, it is likely that it was intended to be used in the manufacture of pottery.

The secondary character of the bath building was evident from the filling up of a doorway in the back wall, which had originally given access to the building adjoining on the east.

One other feature of interest was discovered in the main building. From the face of the north wall, at a point 5 feet 6 inches to the east of the entrance, there ran a gutter formed with stones set on edge in a shallow trench, and converging at base, which discharged itself into the sump, and had evidently served as a latrine.

Very few relics were recovered from the house or the bath. Such as there were consisted of two perforated femur-heads, which had been used as whorls; a discoid perforated object of bone which may have been similarly used; an oblong object of bone, polished and rounded at one extremity; a turnbuckle or snib of bone for a door (Pl. XLIX, 2); several fragments of mediæval pottery, glazed and unglazed, as well as various sherds of Viking cooking pots.

Lying in alignment with No. I, immediately to the east and separated by the mutual wall which forms the back of the bath-chamber, was another building (No. II on plan), measuring 30 feet in length by 11 to 12 feet in breadth, the walls of which on both sides, and at the east end, were much dilapidated.

The mutual wall at the west end had originally, as already stated, been pierced by a doorway somewhat to the north of the centre, and at its south end there was a recess measuring 20 inches across, 9 inches in height from the original floor-level, and 19 inches deep, the back of which was formed with a large upright slab set in the west face of the wall. The wall in the immediate vicinity of this recess, which appears to have been reconstructed, is built with thin flat stones, after the nature of an interior wall. The floor of this house was covered deep in midden refuse, and no feature of interest came to light in the course of its clearance. There were indications of fires having been lit on it here and there, but there were no signs of a definite central hearth, and it is doubtful if the building had been used as a dwelling.

At 2 feet 6 inches eastward of the mutual wall, and beneath the floor-level, there was exposed the top of the wall of an earlier building, lying almost parallel with the former, and returning westward at its south end (see plan, fig. 3). It was of superior masonry to the wall of the buildings on the

surface, and stood erect for a height of 2 feet 6 inches. Unfortunately, the exploration of the house of which it formed a part would have entailed the destruction of the bath, and this was not considered justifiable.

No. II only yielded a fragment of the upper stone of a rotary quern of garnetiferous schist, a large ovoid pebble chipped in the centre of each side, and an anvil stone.

Making contact with the house No. I at its south-west corner, as shown on the plan, was a range of building in a very dilapidated condition (No. III), which had also suffered much at the hands of the spoiler. It consisted of two rooms connected by a doorway in the centre of a mutual wall, and had evidently formed a smithy, with probably a workshop (Pl. XXXIX, 2). The eastmost chamber, the walls of which had been very poorly constructed, measured some 12 feet 6 inches in length, by 10 feet at its east end and 11 feet 3 inches at the west. At one time a doorway had been broken through the west wall of No. I, but subsequently closed, and a door, probably later, opened at the west end of the south wall.

The floor was covered with five layers of flat stones rising to a convex profile, with the highest point in the centre. The lowest layer consisted of flat, heavy beach-stones, lying on sand; while above them were layers of Caithness stone, neatly fitted to one another, with occasional pockets of midden refuse between. The depth of this paving was 9 inches. Below the upper layer there were remains of a hearth evidently secondary. The purpose which this flooring was intended to serve was not obvious, but it would have provided a thoroughly stable foundation for an anvil, or bench set upon it.

In the south-west corner, adjacent to the doorway and 1 foot 7 inches from both walls, there was a pit 2 feet 2 inches in diameter and 1 foot deep filled with soil, having countersunk in the centre of it a post-hole surrounded with packing stones, 1 foot 10 inches deep from the surface and 9 inches in diameter. No corresponding post-hole was found on the opposite side of the doorway, nor in the opposite corner of the chamber, where there was a bed of clay.

The only relics found in this chamber were three perforated femur-heads, which had been used as whorls, all of which came from the north-east corner.

The partition wall had been constructed with thin flat stones, and still remained to a height of 1 foot 3 inches. Placed against it at some 2 feet north of the doorway was a block of stone, some 8 inches square in section, rising a few inches above floor-level, and firmly set in the sand. Stones, either built into the wall or placed as this one, are usually associated with the position of a seat. The section of the wall to the south of the doorway was founded more deeply than that opposite, and as the latter rested on a midden it had evidently subsided to some extent, as may be seen in the illustration (Pl. XXXIX, 2). The doorway was 2 feet wide, and opened on

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to a paved area at the east end of the second chamber. Of this chamber (Pl. XL, 1) the whole of the west wall, and almost the entire length of the south wall, had been removed, and accordingly the exact dimensions were not procurable. But where the walling had survived at the east end, it had measured 13 feet in width, and, judging from the size of the hearth and the extent of the south wall, it had probably measured about 21 feet in length. The south wall still showed four to five courses of stone rising to a height of 1 foot 9 inches, and towards its west end, as shown on plan (fig. 2), it had been buttressed, with a row of heavy boulders lying against its outer face.

Occupying the interior of the chamber was a large hearth, measuring some 10 feet in length, by 8 feet in breadth at its western end, and 6 feet at the east where there were intakes on both sides, covered with a bed of compacted peat-ash to a depth of 13 inches. It had been enclosed on three sides with a kerb of long, narrow stones set on edge, a number of which still remained in situ. The hearth had been distant 4 feet from the east and south walls, and only 2 feet 6 inches from that on the north. The paving in front of the doorway in the division wall extended up to the edge of the hearth, and no kerb intervened at this end. At the east end, and on the south side, the end kerb stone, 2 feet 6 inches in length, was placed 9 inches inwards from the general alignment, and in rear of this was a paved recess in the hearth, which was free from peat-ash, and measured some 2 feet square in extent. Opposite this, firmly set at the base of the south wall, was a flat-topped stone about 1 foot in breadth and projecting a few inches above floor-level, which may have been connected with the anvil. On the north side of the hearth, and at the east end, a flue had been formed, rather over 1 foot in width, with two flat stones set on edge parallel to the kerb. When discovered, this had been used as a fireplace, and was filled with At its inner end it had been blocked with a number kitchen-midden refuse. of thin flat stones standing on edge, which, when the true nature of the construction was realised, were found to be the original covers of the flue, and were replaced (Pl. XL, 2). The flue terminated in a slope of hard compacted peat-ash. While no food refuse lay upon the hearth, such material covered the area at the east end of the chamber.

Irrespective of the space occupied by the fire, the character of the relics found in this part of the building left no doubt that it had been the smithy of the settlement. Heavy lumps of slag, the residue of bog iron ore from which the iron had been inefficiently extracted, were numerous, but there was no trace of a bloomery, nor did any of the slag lie among the peat-ash. We found six hones, all but one of the type which have been designated "haunched," from the haunch-like expansions at one end; three objects of iron; and a flat ovoid pebble, faceted on both sides as if by polishing. In addition to these were several objects

not necessarily to be found in such associations, viz. a hammer-headed pin of bronze (Pl. L, 7) found with a small-toothed, single-sided comb (Pl. XLVII, 2); and a finger ring of thin, flat bronze plate, penannular, and tapered to the extremities (Pl. L, 10). As these three last-mentioned relics all came from the extreme west end, two of them may have been from the site of the wall which could not be identified, while the lastmentioned was from the upcast; they may all thus have belonged to an earlier period. There were also found a bone pin, a sandstone pebble, longitudinally grooved and plano-convex in cross-section, which had probably been used as a plummet. Near it was found a quartz object, which seemed to have served the same purpose. From the vent there came a whorl fashioned from a perforated femur-head.

To the northward of the last building, and lying directly east and west, at a distance of some 23 feet from its eastern end, are the remains of a dwelling (No. IV on plan), the walls of which have been reduced practically to foundation level (Pl. XLI, 1). Though this building is not in parallel alignment with those previously described, the relative levels indicate that it probably was in contemporary occupation in its final stage. Two doorways in the north wall were blocked, which suggests that the house at one time had formed part of another construction, or of a range of buildings extending to the north.

It measured interiorly 29 feet in length by 12 feet 6 inches in width, with a slight reduction in the latter dimension towards the western end. The walls, which appeared all to belong to one period, measured 2 feet 6 inches in breadth, except the east wall, which measured 3 feet 3 inches. The entrance, 3 feet wide, was through the east wall, a little to the north of the centre of the gable, while in the north wall were two filled-up door-As was not unusual in houses of the Viking period, there had been ways. an outbuilding in front of the door, now merely represented by foundations —no doubt to afford protection from the violent winds that frequently blow in from the sea on the north-east coast. Between this and the gable a passage had been formed, leading to the main door, which was entered through a doorway, 2 feet wide, just outside the south-east angle of the dwelling. In front of this was an area of paving 12 feet by 6 feet in extent. At a point 1 foot 9 inches in from the doorway the passage was crossed by a massive kerb, which projected to a height of 10 inches (Pl. XLI, 2). At a distance of 3 feet 6 inches from the outer doorway the passage expanded from 2 to 3 feet, and continued at that width to the entrance to the house. Owing to the erection of the gable at its north end on a kitchen-midden, there had been a considerable subsidence at that point, which had resulted in a steep slope in the passage. On this had been laid several layers of paving slabs to reduce the gradient.

To the north of the doorway of the house, and covering the northmost

portion of the gable, was a box-like enclosure (Pl. XLII, 1), measuring 5 feet by 4 feet, and divided lengthwise into two equal compartments by two large upright slabs, now incomplete, but which must originally have risen to a height of 2 feet above the floor of the box. This enclosure had been formed with a surrounding wall through which there appears to have been a gap, some 18 inches wide, on to one or both divisions, at the gable side. The inner or south compartment alone was paved. There was nothing to indicate the purpose served by these twin compartments, but they may have been used to contain young animals, or stores. At the inner end of the entrance there was a kerb, a thin slab set on edge and rising to a height of some 6 inches above the floor-level.

Within the house, lying in the central axis, and somewhat to the east of the centre, was the site of the "long fire," measuring 12 feet by 6 feet, which had been laid on the deep deposit of food refuse that formed the If it had been originally protected by a kerb, all the stones had floor. been removed. From the face of the north wall, and alongside the hearth, several stones projected, which may have formed brackets for the support of a bench. Occupying the south-east corner, to the left of the doorway on entering, was an oblong area, measuring 5 feet 6 inches by 4 feet, slightly raised, and outlined on the outer side by a setting of flat stones (Pl. XLII, 2). This was evidently the site of the bed, and was analogous in position to the platforms met with in the chambers of the Viking building at Jarlshof, Shetland.¹

Such bed-platforms indicate that the simple fashion of sleeping on bedding spread out on a platform in place of upon a constructed wooden bedstead still prevailed. The old Norse word *seng* originally meant such bedding rather than the bed itself.²

On the opposite side of the doorway a thin wall extended inwards for a length of 4 feet 6 inches, leaving between it and the north wall a space 2 feet 3 inches wide. There appeared to have been an enclosure of some sort in the south-west corner, measuring some 6 feet 6 inches by 5 feet, but the remains were very indefinite, and there were also indications of a partition wall having been erected on the top of the wall of an earlier occupation beneath, which had collapsed when the house fell into ruin. Two short lengths of wall, 1 foot 6 inches apart, projected from the south wall towards its west end, suggesting the remains of a cupboard, and an object of cetacean bone, $5\frac{3}{8}$ inches in length, found in the immediate vicinity, had evidently been half of a turn buckle or snib with which to keep a door closed.

The other relics recovered from this house were neither numerous nor important. There were three whorls, two of bone made from femur-heads, and one of stone with some simple, nondescript ornamentation around the

¹ Proceedings, vol. lxx. p. 261.

² Aage Roussell, op. cit., p. 70.

perforation on one face; a tapered penannular ring of very thin bronze, of which one-third was amissing; part of a haunched hone; a piece of thin sheet bronze with two rivets in it, probably part of a cauldron; two oblong pebbles both fractured at one end; an iron rivet with a lozenge-shaped head; an iron knife, and a hook of the same metal; a stone with a narrow longitudinal groove on one face, possibly a sharpening stone; and a piece of the upper stone of a rotary quern, formed of garnetiferous schist, and found in the wall when opening out the eastmost of the two closed doorways on the north, also a piercer of bone. A third whorl made from a femur-head was discovered in the northmost division of the enclosure outside the door. A certain amount of iron slag was also found in this house. On the level of the existing wall-head at the west end there was found a piece of a mediæval cooking pot, referable in date to the second half of the thirteenth century.

Based on the north wall of the house at its western end was a small enclosure in the form of a quadrant of a circle, measuring some 10 feet along the north base by 9 feet on the east. The entrance, 2 feet wide, was from the north interrupting the contact of the two sides, and beyond it the east wall extended for a distance of 8 feet. On the surface of this enclosure, at the level of the remaining wall-head of No. IV, a paving extended over one-half of the area, evidently of later date. Beneath this the soil was black and closely compacted, with little or no food refuse intermingled. Towards the west, the east wall was constructed without facing stones, and had probably been backed with turf on that side. The features of this enclosure, and the condition of the floor, suggested that it had been a small fold such as was used to hold the ewes when they were driven in to be milked. In which case the extension of the east wall at the entrance was made to facilitate the herding of the sheep. No relics were found within it.

At the east end of the sand hollow, facing directly on to the top of the sandy bank that rose up from the beach, were the foundations of a large enclosure (plan 2, No. V), which can only have been the "naust" or boat-shed into which the boats were drawn in autumn by means of rollers and ropes over a slipway up from the shore, to be sheltered from the storms during the winter, and tarred and reconditioned for the following year's voyages. The "naust," as will be seen from the plan, had been an irregular U-shaped construction open towards the sea, with the north walls of houses Nos. I and II forming the south leg of the letter, and the other lying 26 feet Forming the centre part of the back wall was a straight to the north. length of foundation, 12 feet in length and 2 feet 6 inches in breadth. Elsewhere the foundations were irregular and massive, formed with large heavy While the seaward portion of the north limb of the U, owing to boulders. the more or less level character of its surface and the heavy boulders with which its outline was formed, suggested a slip on which a boat might have been constructed, there was no positive evidence for this forthcoming. In

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the north side of the open space in front was the site of a hearth on a bed of clay, burnt to a brick red, and from this was recovered an iron ship rivet, much corroded, while remains of several others were picked up in the immediate neighbourhood. At the upper edge of the bank near the centre there was a setting of large stones extending across the area for some 4 or 5 feet, with a single stone on end sunk deeply in rear of them. From the position of these stones it seemed probable that they formed the site of a windlass for drawing up the boats. On the slope in front, and towards its upper end, lay three or four large flat stones in a line, which were possibly the remains of a gangway.

At the seaward end of the "naust," adjacent to the site of the hearth, there was found by Mr Simon Bremner, set upright in the sand with its upper edge just protruding, the cooking pot (Pl. LI, 4), and the pieces of the small cup (Pl. LI, 3), now reconstructed, were subsequently also recovered from this spot. On this area there was also found a large quartz pebble, 4 inches in length (similar to others found on the site to be discussed later on), flat on one side, with a partial perforation at one end, and probably intended for use as a plummet.

As previously mentioned, the historical evidence in the Sagas shows that a Viking settlement had existed at Freswick from a period at least as early as the eleventh century, and to judge from the standing of those whose names figure in connection with it, it was the residence of people of importance. While nothing has emerged in the course of the excavation that would afford a clue to the terminus a quo, we are able from certain relics to assume a fairly sure date for the terminus ad quem, the latest occupation of the group of buildings which have been discussed on the foregoing pages.

Associated with these buildings have been found sundry sherds of mediæval pottery which can be attributed to the second half of the thirteenth century. Among them is one sherd in particular, found on the wall-head of No. IV, which presents a close parallel to a sherd found at Rayleigh Castle, Essex, the occupation of which ceased some time before the year 1277. The other piece of evidence is a silver penny of the reign of Henry III. of England, Moneyer "Willem on Lund," Mint, London, dating from about 1258–1272,¹ which was picked up on the surface of the blown-out hollow. This is slender evidence for dating, but it is strengthened by the negative evidence, supplied by the fact that no relic, which could be assigned to a later date, was found.

If, for the end of the occupation, some date between 1250 and 1270 may be accepted, then it is possible to suggest a cause for the abandonment of Freswick by the Norsemen. In the year 1264, the year subsequent to the

 $^{\rm I}$ I am indebted to Mr Robert Kerr of the Royal Scottish Museum for the identification of this coin.

battle of Largs, Alexander III. sent an army into Caithness to exact a fine from the people because they had submitted to King Haakon of Norway in the previous year.¹ The army stayed in Caithness until the autumn and departed by sea, taking with them the treasure they had collected, much of which, however, was lost during the course of their voyage, to Dugald, King in the South Isles. It seems a fair assumption that at the hands of Alexander's expedition the Vikings were driven from Freswick, for as seafarers they were probably in a better position than most of the inhabitants of the county to render assistance to the Norwegian king.

As stated above, the buildings explored have been divided into three groups according to their periods, estimated by their relative depths from Group A, the constituents of which have been described in the surface. detail above, consisted of (1) two oblong buildings which may at one time have been dwellings, but which in their latest stage had in the one case been used to contain a bath-house, and in the other possibly allowed to become derelict, or been used as a store; (2) the smithy, and an intercommunicated chamber; (3) an isolated dwelling, not in parallel alignment. and possibly of slightly earlier construction: and (4) the "naust" or boat-shed. The group appears to have been part of a settlement on a courtvard plan, not a complex. as in the case of the Greenland farms, and such as also appears to have been the case in Shetland. We have here the bath and the smiddy, situated on the south wing and somewhat isolated, as being both potential sources of conflagration. The boat-shed has occupied the east side, and the dwelling has been erected on the north-west.

The farm buildings, consisting of the stables, byre, dairy, and other outhouses, are not represented, except, perhaps, in the case of the annex to the dwelling, and it may be presumed that they occupied the north side, and so as far as any part remains they probably lie beneath a bank of sand, which rises to a height of 6 feet and more above the level of the floor of the hollow.

The dwelling-house in its details does not conform exactly to the typical house of the Viking period, as revealed at Jarlshof, Shetland, in 1934,² or to that exposed in Group B, to be shortly described. There was no indication along either side of the platform, or dais, on which the benches were placed, and where the inmates sat and took their meals, nor was there found any oven sunk in the floor, nor any of the burnt broken stones that accompany such cooking arrangements, both features found in the houses above referred to. Nor was there any remains of a high seat, either at the side or at the end of the hearth, as in the earlier house in Group B, nor any indication of the hearth having been originally contained within a kerb. The amount of kitchen refuse covering the floor pointed to rather filthy conditions of occupancy during this last phase, and suggested that slum conditions may

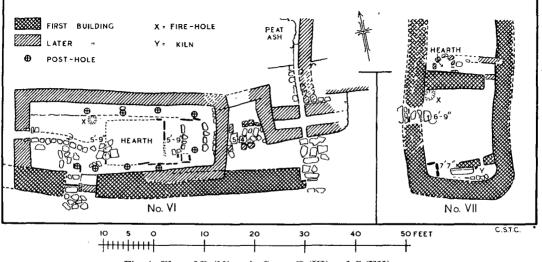
¹ J. Ferguson, Alexander III., p. 120.

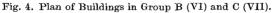
² Proceedings, vol. lxix, p. 265.

have arisen at Freswick before the settlement finally closed its existence. The paucity of relics produced from the careful examination of much kitchenmidden refuse pointed to the further conclusion that the residents at "Thraswick" had not formed a wealthy community.

GROUP B.

Group B, situated at the west end of the hollow, was covered by a much greater depth of sand than were the buildings of Group A, and part of it actually lay beneath the foundations of No. IV of the latter group.





It consisted, as shown on the plan (fig. 4), of a dwelling-house (No. VI), a small chamber constructed against its east wall, and represented by fragmentary remains of some pieces of walling and of a flue. To a greater extent even than in the case of the previous group there was evidence of reconstruction, and of earlier buildings having existed in the immediate vicinity.

The three members of the group lay approximately east and west, with the dwelling-house at the end, a little out of alignment with the others. The house was, however, itself a secondary construction on the site, for, as will be observed by reference to the plan, it had been erected against, and with its south wall partially embedded in, the wall of an earlier structure, much more massive in character, and which had belonged to a building of greater length. This wall, which starts at the western jamb of a doorway on the east, is exposed for a distance of 56 feet, with a width of some 5 feet,

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to the west end of No. VI, and as it was obvious, at the latter point, that it had been broken through and faced up, exploration was carried on into a high bank of sand in the same alignment to westward, and what appeared to be the same wall was located, by sinkings at intervals, for a farther distance of 25 feet, making a total length of 81 feet. From the details remaining of the doorway at the east end of the wall, a door check on the west side and a projecting kerb opposite the rebate, it is evident that the building, of which this wall formed a part, must have been situated to the northward. A second doorway, also primary, some 3 feet 6 inches wide, had been constructed some 13 feet 6 inches from the west end as exposed, but had been subsequently blocked, as after stated. On no part of the area cleared in the vicinity were any further remains found of this early building. nor were there any traces revealed by trenching. Any suggestion that it was part of an enclosing wall to the settlement may, I think, be ruled out by the fact that no trace of it was met with in the excavation of Group C at the eastern end of the hollow, as well as by the domestic character of the doorways themselves.

It was very apparent throughout the course of the excavation that when a fresh building was to be erected, stones from any abandoned structure were fully utilised. As the material was invariably boulders from the adjacent shore, laid in dry-stone fashion, it suffered no deterioration by use.

The dwelling-house (Pl. XLIII, 1), except as above stated on the south, was surrounded by walls of an average thickness of 3 feet, and a similar height on the south where highest, but greatly reduced elsewhere. It measured interiorly some 36 feet 6 inches in length, and 13 feet in width at the west end but 12 feet at the east where the pre-existing wall had been supplemented by an interior facing. The entrance had been by a doorway immediately to the west of the blocked doorway, 3 feet wide, crossed by a projecting sill 7 inches high, and backed to the outside by a large rounded boulder (Pl. XLIII, 2). On the inside it gave by a step Before the doorway on the outside was an area of to the floor-level. The interior of the house, when the blown sand had been paving. removed, was found to be covered, especially at the east end, with a deep deposit of kitchen-midden refuse, in which limpet-shells predominated—a barren deposit as far as relics were concerned, for it yielded practically nothing except a few small fragments of cooking pots. Immediately above floor-level was a stratum, 5 inches deep, of brown humus with a thin layer of sand in the middle of it, representing probably a period when vegetation had spread over the floor of the abandoned dwelling. In the middle of the floor, 10 feet distant from the east end and 15 feet from the west, lay the hearth, 12 feet in length by some 8 feet 6 inches in breadth, with some of the stones of an upstanding kerb still remaining

on the south and east, and one making a return to the north, at the southwest corner. Peat-ash lay upon it to a depth of 1 foot, representing two periods of occupation, distinguishable by an intercalated layer of dis-Along the north wall there was still traceable, for a coloured sand. breadth of some 3 feet, the site of the *pallr*, or dais. This was readily recognisable by the purity of the sand which lay almost at the surface, having been protected during the period of occupation by a flooring, or covering of some carpeting material, possibly of rushes or heather. This condition of the sand was in marked contrast to that on the floor of the dwelling, which was uniformly discoloured to a depth of several inches. Towards the west end two long flat stones, set on edge, were probably the remains of a kerb that had extended all along the edge similar to the remains found at Jarlshof.¹ On the south side, and to the east of the centre, there extended for a distance of 6 feet a line of similar stones, which though only some 20 inches distant from the existing wall-face were the same distance out from the face of the original wall as were those from the north wall, and accordingly may be regarded as having formed edge-stones of a dais which had existed along that side in the original house.

At the east end, between the kerb of the hearth and the end wall, was a low platform some 5 feet 9 inches long and slightly less in breadth, with a row of boulders along the front, and a narrower platform rising at the back of it, 2 feet 9 inches broad. On the foremost of these platforms, for the back one seems too narrow, stood the high seat reserved On the south side of the high seat platform, for the master of the house. covered by the upper stone of a rotary quern (Pl. XLVI, 1), was a posthole, some 18 inches in depth and 9 inches in diameter. There were wedge stones at the mouth of the hole, and on one side a packing of clay, while a fragment of carbonised willow was recovered from the bottom. The old Norse name for the high seat was ondvegi, derived from the name of the two thick pillars between which it was placed. These pillars, in Viking pagan times, adorned with carved representations of the gods, were regarded as holy, and when the Norwegian colonists emigrated to Iceland they took their high-seat pillars with them.² The position of the above-mentioned post-hole suggests that it may have contained such a pillar, while another post-hole on the north side, 17 inches deep and 7 inches in diameter, may have held its corresponding fellow. On the other hand, it should be noted that on the north side four post-holes were discovered more or less at equal distances from one another, in which series occurred that adjacent to the site of the high seat. On the south side, although the post-holes are not similarly in alignment,

¹ Proceedings, vol. lxix. p. 273.

² Falk and Gordon, Scandinavian Archaeology, p. 324.

there is a series also equidistant, and accordingly the pillars they contained in both series may have been merely used in support of the roof.

In all, along the north side four post-holes were recovered 6 to 7 feet apart, and along the south side five. The three in the centre were more or less equidistant, at 6 to 7 feet, while the post-hole already referred to beside the site of the high seat was some 8 feet distant from its neighbour, and quite out of alignment. The fifth was only 4 feet west from the fourth. The post-holes on the south side, with the exceptions of the first and third, were placed nearer the wall than on the opposite side, while the fourth and fifth were situated one on each side of the blocked doorway, as if they had had some connection with it.

In a number of instances the holes had been purposely preserved, in one case, as already mentioned, by covering the mouth with a quern stone, and in others by the insertion of pointed boulders, thus indicating that when this house was abandoned there still was an idea in the minds of its owners that it might again be roofed and occupied. The existence of such an intention may have saved it from the demolition that overtook other buildings in its neighbourhood.

On the north side, some 12 feet distant from the west wall, and just in front of where the edge of the dais had been, was a cooking oven. \mathbf{It} was much dilapidated, and only a few of the stones that had formed the sides remained, while the sole at the bottom had evidently been removed. However, to dispel any doubt there might have been as to the purpose of the hole, several burnt broken stones remained within it. Its dimensions had been apparently 2 feet by 1 foot 5 inches, and its depth 7 to As in the similar oven found at Jarlshof,¹ the slab forming 8 inches. the back was sloped backwards. The method of cooking was that still practised by some primitive tribes. The broken stones, heated in the fire nearby, were deposited in the bottom of the hole. They were then covered with a layer of grass, or other vegetable matter, such as leaves, on the top of which was placed the food to be cooked. Further layers of grass and heated stones were superimposed, and on the top, to keep in the heat, was placed a covering of turf.

On the south side of the house, at 5 feet distant from the east wall, and little more than 1 foot out from the face of the south wall, was another stone-lined pit, on which the slabs remained on three sides. It measured 2 feet square, and had a depth of 1 foot 4 inches. It was not floored, nor did it contain peat-ash, nor any burnt broken stones to indicate that it also had been used as a cooking oven, but a number of pieces of broken pot were found within it. In its vicinity, along the margin of the central hearth, where a kerb had been removed, there was substituted an elongated

¹ Proceedings, vol. lxix. p. 277.

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heap of burnt broken stones, which had probably come from a cooking hole nearby (Pl. XLIV, 1).

In the south-west corner there was a suggestion, from the placing of the few flat stones remaining, that there may have been a bed-platform some 5 feet square on this spot. For a distance of 7 feet 7 inches from the west wall, on the north side only, there was a hard compacted floor of peat-ash and clay, the characteristic flooring of the Viking dwellings, and the absence of this flooring from the south-west angle gives strength to the supposition that that area had been occupied by a bed-platform.

In the centre of the west wall there was an opening, flanked on either side with one upright boulder, forming the mouth of a vent, paved, and extending to the west edge of the hearth (Pl. XLIV, 2). The side stones of the vent remained for almost its full distance on the south, but except for one or two stones at the opening they had been entirely removed from the north side. Judging from the complete portion, the breadth must have been about 1 foot and the depth some 5 to 6 inches. Some arrangement must have been provided for closing the intake, for the opening, as remaining at present, is quite unnecessarily large.

At some 20 feet distant from the west end the foundations of a secondary wall, 2 feet 6 inches wide, not bonded into either side wall, crossed the interior (Pl. XLV, 1), and at a distance of 2 feet from its junction with the north wall a narrow doorway had been made through it to the interior. It ran from a point on the south just where the reduction in the height of the wall occurred. In the interior in connection with this later wall, the length of the hearth had been somewhat reduced by a square of paving laid upon it.

In the inner face of the south wall, towards the interior, two distinct styles of masonry are apparent (Pl. XLIV, 1), that to the west, formed with roughly shaped blocks, being the earlier and the face of the original wall; that to the east, consisting mostly of boulders, being the construction of the later house and built against the former. In the original wall at 19 feet from the west end, and 1 foot 5 inches above floor-level, there was a neatly fashioned recess, measuring across the front 7 inches by 5, and extending inwards with gradually diminishing breadth to a depth of 6 inches.

The examination of the mass of kitchen-midden refuse that filled the eastern half of this house, and even extended over the wall to the north, yielded almost no relics, except some fragments of cooking pots of the usual character and a belt-chape of bronze (Pl. L, 5). The relics found on the floor-level, and immediately above it, consisted of part of a comb (Pl. XLVII, 3); three broken pieces of hones of the haunched variety; two bone whorls made from the heads of femurs; two short metacarpal bones of pig, perforated near the centre (Pl. XLVIII, 12 and 14); an

awl of bone; an iron knife-blade and two or three unimportant objects of iron; three pieces of thin bronze, two of them with rivet holes in them, parts of a cauldron; a small cubical block of quartz, grooved across each face for a cord, probably to be used as a plummet, or weight; three stone pot-lids of different sizes; and the upper stone of a rotary quern of unusual form, being approximately pear-shaped, with the perforation for the handle in the narrow end, found as stated, covering a post-hole. At the base of the early wall on the south there was found a piece of a large steatite urn, and the polished tine of a red deer antler.

The further remains of buildings in this group are fragmentary, and difficult to determine. Immediately to the east of the dwelling-house was an area enclosed on three sides only, measuring some 8 feet from north to south, and expanding from a width of 5 feet 9 inches at the back or north The west wall, which had been reconstructed end to 8 feet at the front. in part, to the extent of the reconstructed portion, formed its west flank. The north wall was an earlier building than the last, and the east side was formed by the west wall of the third construction in the group. There was no indication of any wall, or doorway, having closed the south end, nor was there any access to the area from either of the adjacent buildings. It may possibly have been intended for an open shed. On the floor. however, towards the south end, there were indications of an interior construction of some kind. The remains of two lines of large flat boulders. some 3 feet apart, may be seen on plan (fig. 4) projecting from the east and west walls, enclosing a space some 7 feet 6 inches by 3 feet, which Beneath the paving was a bed of rounded water-worn had been paved. stones for drainage, and the silted material between them showed that the arrangement had been effective. Possibly this has been the site of a store closet.

Still more perplexing than the last were the remains adjoining on the east. Here again there had been walls on three sides of an enclosed area, now represented by a fairly good wall 1 foot 10 inches high on the west, a much reduced wall on the south, and a mere foundation on the east. It will be observed on reference to the plan (fig. 4) that the south-east corner had been rounded, which is unusual.

This area is crossed at 1 foot 6 inches back from the front, or south wall, by a wall of heavier construction, 3 feet wide, which joins the west wall with a butt-joint. An air-vent, 1 foot wide and traceable for a distance of 14 feet to the northward, is carried through this wall in alignment with a corresponding opening in the south wall. The space between the two walls is paved, but there is no indication that a constructed duct led across it, nor that it was open at the east end, as it certainly was not at the west.

The vent is formed with flat boulders on either side, and is still carrying its covers for a few feet at the north end. Adjacent to its termination

there was a bed of peat-ash, but not of sufficient extent to induce the belief that it had been associated with the flue, but the similarity between this duct and that proceeding from the west end of the adjacent dwelling, which is believed to have been a flue, indicate that they had served a similar purpose. There has been so much reconstruction, however, of the buildings on this site that it seems impossible to determine the original purpose of any remaining fragment.

Only one relic was found, and that among midden refuse to the north of the westmost section of cross-wall. This was the portion of a penannular brooch of bronze with a zoomorphic terminal 1 (Pl. XLVII, 6).

Unconnected with the constructions forming Group B were other fragmentary remains in the immediate neighbourhood.

From the front of the doorway at the eastern extremity of the early wall against which house No. VI had been erected, there was uncovered a short length of walling running in a south-easterly direction, but absolutely in isolation owing to the removal, as far as ascertainable, of all other portions of the structure to which it had belonged. To the west of this lay a large kitchen-midden which, on examination, produced the greater part of a bone case for a long comb (Pl. XLVII, 1).

GROUP C.

This group, lying at a lower depth than Group B and so probably of earlier date, was situated at the extreme east end of the hollow, and lay in a north to south direction. It consisted of the southern portion of what appeared to have been a range of buildings (fig. 3), much dilapidated, and passing away to the northward beneath the high bank of sand which forms the boundary of the hollow in that direction.

It will be observed from the plan that the walls had been thicker than in the later buildings, measuring 4 feet across, the same width as the early wall utilised in part to form the south side of house No. VI. They had been constructed in characteristic Viking fashion with a core of compacted earth between two facings of stone. At a point in the west wall the skull of a small whale had been inserted.

Underneath the building lay the remains of an earlier structure which had been formed with walls of wattle and daub erected on a bed of clay 5 inches thick. The carbonised wattles and baked clay, which lay to a depth of 9 inches between the later wall and the primary clay foundation, showed that the house had been destroyed by fire. An examination of the carbonised wattles revealed that they had been of willow, a fact which supplies a clue to the nature of the thicket mentioned above, as having existed in the neighbourhood in Saga times.

The southmost building of the range consisted of a chamber measuring

¹ See p. 100.

18 feet by 14, which had probably been a barn. A doorway, which appeared to have been some 3 feet wide, had given access to the interior from the west by a paved passage through the wall. The north side was formed by a broad partition wall, through which there had been a narrow doorway leading to an adjacent chamber, and subsequently closed. The floor consisted of clay and peat-ash beaten to a hard consistency, and on it there were no remains of a central hearth, nor of any of the characteristic features of a dwelling.

In the south-east corner a kiln had been constructed, obviously for drying grain or fodder, and the rounding of the corner in which it had been placed, both externally and internally, indicated that it was a part of the original building. Over the remains of the kiln and of the adjacent walls, as well as over the greater part of the interior, lay a mass of clay, which seemed to have been used as a core to the walls, or for some other indefinite purpose in the structure.

The kiln measured some 9 feet from the intake of the vent to the back of the chamber, and had expanded from 14 inches or thereby at the former position to 3 feet 3 inches at the widest point at the inner end, where the width appeared to have been reduced by a lining of stones on one side, as shown in the illustration (Pl. XLV, 2), possibly for the purpose of carrying a floor. The floor of the flue was covered to a depth of several inches with peat-ash.

In the south-west corner of the "barn," directly opposite the mouth of the flue, a small rectangular basin had been formed by excavation, with large stones placed against the two walls. It was paved on the floor, and the sides were luted with clay so that it could contain water. In the opposite, or north-west corner, there was a small basin-shaped hollow, sunk some 6 inches below floor-level, and, with a diameter of about 2 feet, lined all round with clay and floored with flat stones (Pl. XLVI, 2). The interior was filled with peat-ash and kitchen-midden refuse, but there was no sign of the action of heat on the clay.

Beyond the partition wall on the north the building was much dilapidated. The west wall was 'traceable, for a further distance of 36 feet from the cross-wall, by a line of tumbled boulders, and the east wall for a shorter distance. From the latter, at a distance of some 2 feet 6 inches from the built-up doorway, a very narrow wall projected for a short distance into the interior, and at its termination appeared to have abutted on the circumference of a round hearth, or the remains of a second kiln, constructed against the north face of the partition wall. All that remained of this construction was an outline of flat stones set on the circumference and not contiguous. In the course of the exploration of this last-mentioned building, the early wall which passed across No. II to the east of the bath was uncovered and was found to be part of an earlier building than No. VII.

Very few relics came from this group. Such as there were consisted of a number of sherds of the usual hand-made pottery, a strip of thin bronze, obviously a patch for a cauldron, and which had been affixed with paperfastener rivets, three of which still remained attached; and a long pin of bone, in pieces, and only partially fashioned.

THE RELICS FOUND THROUGHOUT THE EXCAVATIONS.

The relics found were not numerous, and on the whole were characteristic of the later Viking period in Scotland.

Bone.

The objects fashioned from bone form the largest category.

Combs (Small).—There are three combs (Pl. XLVII, 2–4), all incomplete. Two of them (Nos. 2 and 4) have the teeth on one side only, but the third (No. 3) has had on the top of the bow a short subsidiary comb, furnished with finer teeth, and which appears to have extended for only a short distance along the centre. The beak-like ends of this last-mentioned comb, both above and below, are ornamented with a single double concentric circle and a dot.

Of the other two, one (No. 2) is ornamented with two incised parallel lines extending the length of the bow, enclosing between them the row of rivets that hold both sides together, and the teeth, in place between them. The other comb is not decorated in any way.

No. 2 came from the smithy; No. 4 was found on the top of the wall of house No. II; and No. 3 came from the hearth in No. VI.

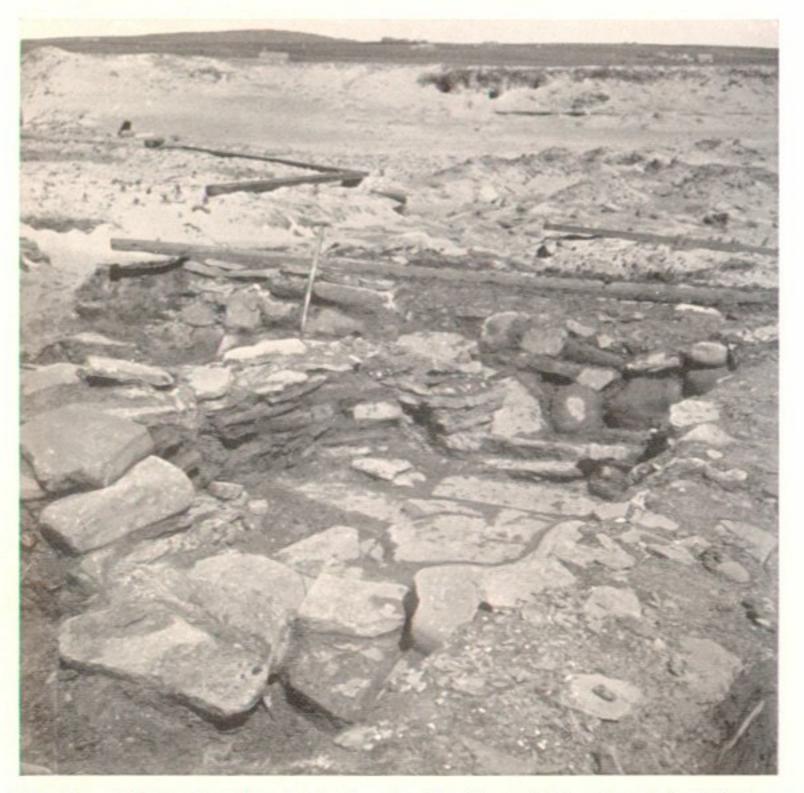
The type of complete double comb which is not represented here is probably referable to the thirteenth century. As, however, No. 3 was found on a site of an earlier period, and does not conform to the double-toothed comb type, it is probably referable to an earlier date. Its bowed or beaked ends, with double circle and dot decoration engraved upon them, in form resemble those features on a large single comb found in Bergen,¹ and dating from the commencement of the thirteenth century. Both single and complete double combs from the Viking and post-Viking periods are of frequent occurrence owing to the fashion then in vogue for the men to wear their hair long, but a comb of this form appears to be unusual. As in the Oslo comb, the larger teeth are rounded, not rectangular in section as is usually the case in the later combs.

Comb-case.—This object (Pl. XLVII, 1), which is in pieces, and incomplete, has consisted of four tapered strips of bone each $5\frac{1}{2}$ inches in length, of which two broader pieces, $\frac{11}{32}$ of an inch in breadth at the centre, formed the upper part of the case, and the other two strips, $\frac{5}{16}$ of an inch in breadth

¹ Sigurd Grieg, Middelalderske Byfund fra Oslo og Bergen, p. 232.



1. Interior of I, showing Flagstones on Floor.



2. Interior of Bath Chamber in I, showing Position of Fireplace left of Entrance.

A. O. CURLE.

PLATE XXXVIII.

[To face page 96.



1. View into Closet to north of Bath Chamber showing displaced Flagstones.



2. Remains of Smithy with Workshop beyond.

A. O. CURLE.

PLATE XXXIX.



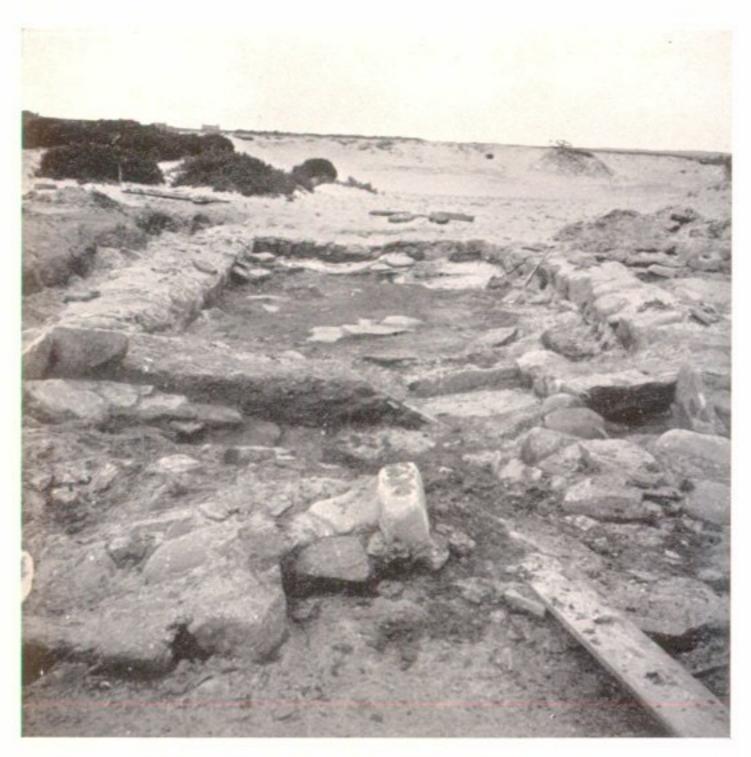
1. Remains of Smithy with Hearth in centre,



2. East end of Smithy showing Flue on left of Hearth.

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PLATE XL.



1. Foundations of Dwelling IV.



2. Kerb at outer end of Passage leading to Doorway of IV.

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PLATE XLI.



1. Box-like construction at Entrance to IV.



2. Site of Bed in Dwelling IV.

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PLATE XLII.



1. Dwelling VI from east showing site of High Seat at west end with Kerb-stones of Dais on left.



2. Remains of Doorway into Dwelling VI.

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PLATE XLIII.

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1. Section of Peat-ash on Hearth, burned broken stones in Kerb, and different styles of masonry in the south wall of Dwelling VI.



2. Vent at west end of Dwelling VI.

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PLATE XLIV.



1. Dwelling VI, showing Foundations of secondary Cross-wall.

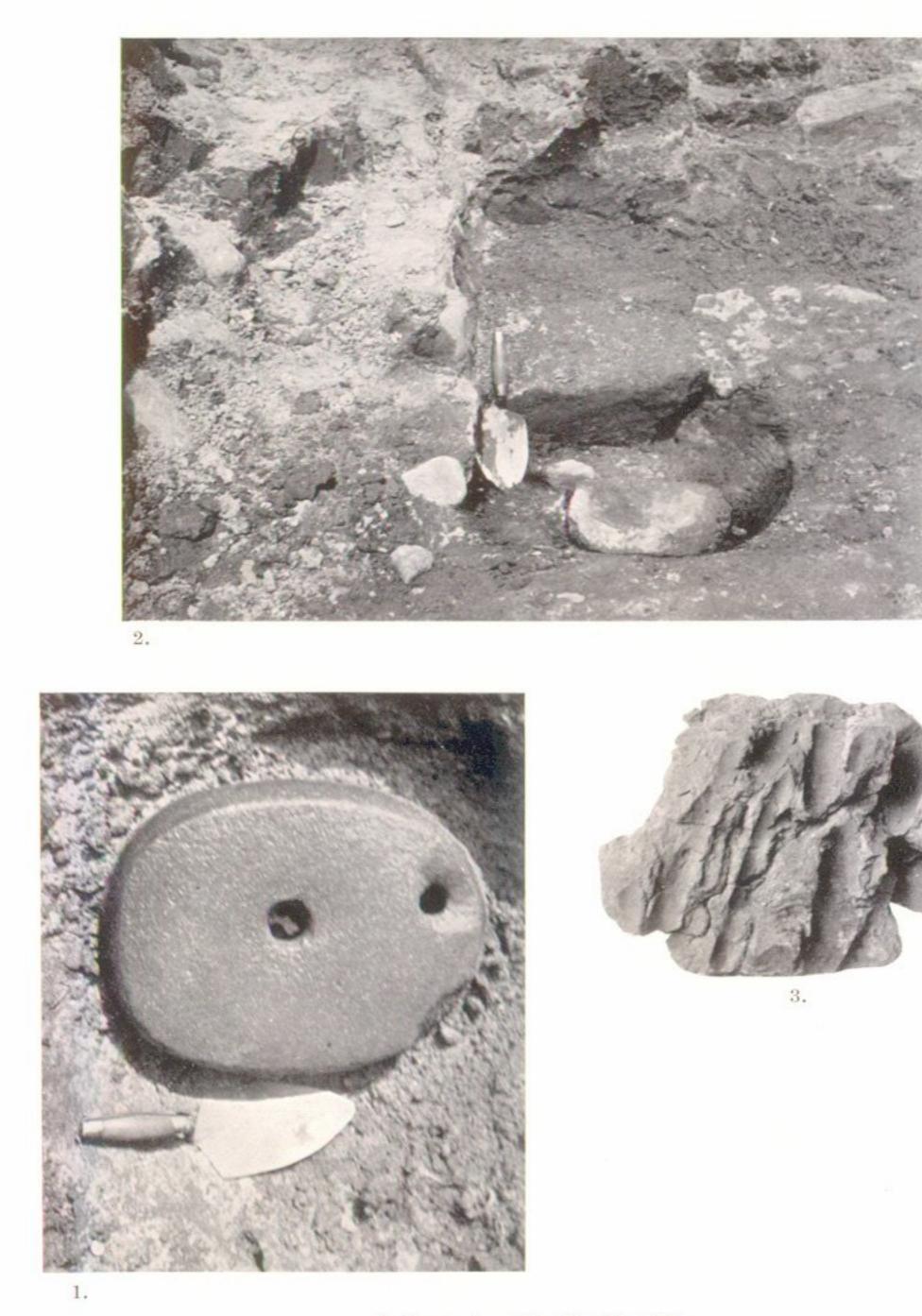


2. Remains of Kiln in corner of supposed Barn, VII.

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PLATE XLV.

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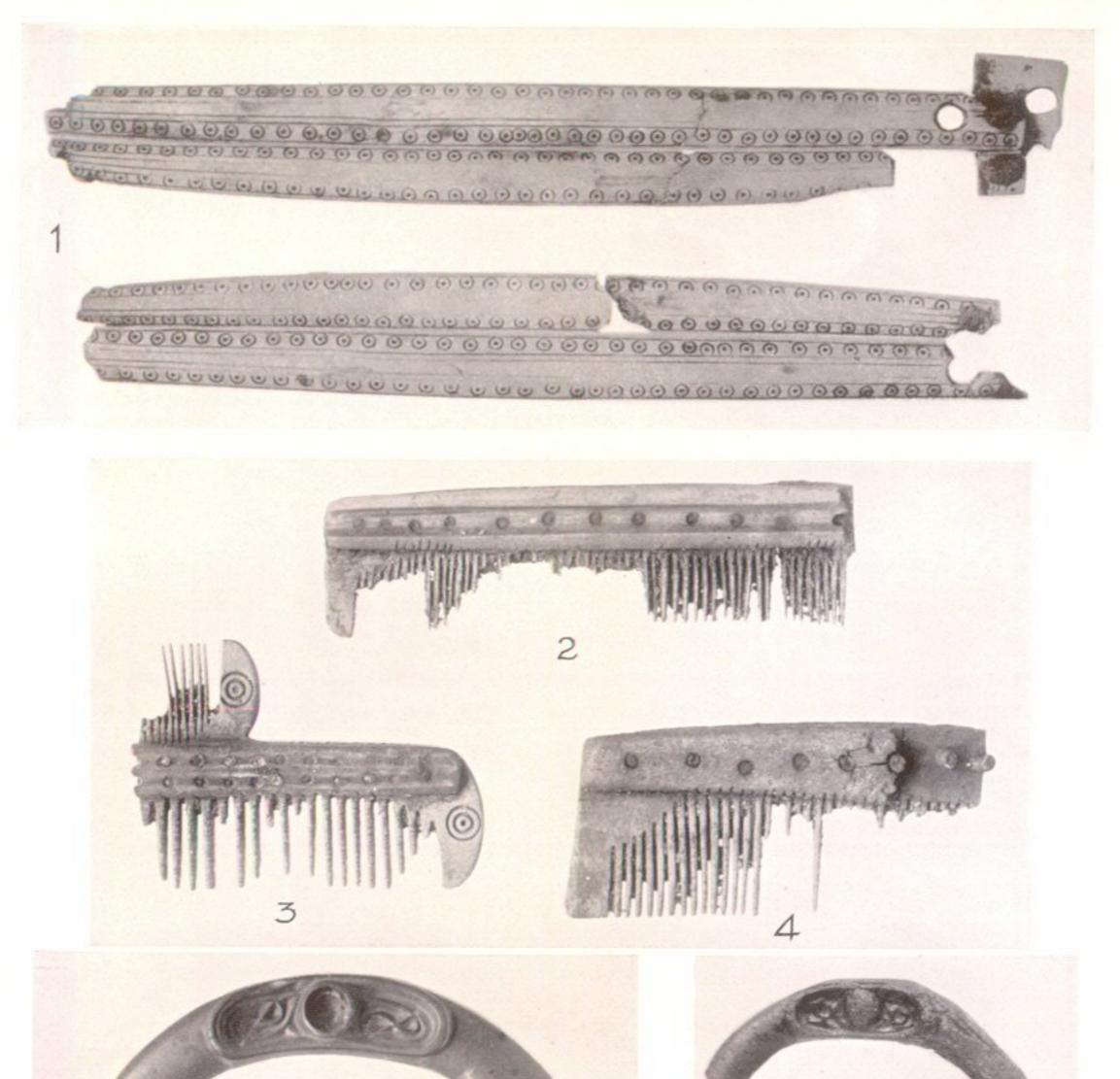
Quern found in Dwelling VI.
 Basin-shaped Hollow on Floor of Barn.
 Specimen of Daub showing Impressions of Wattles, from VII.

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PLATE XLVI.

Proc. Soc. Ant. Scot.]

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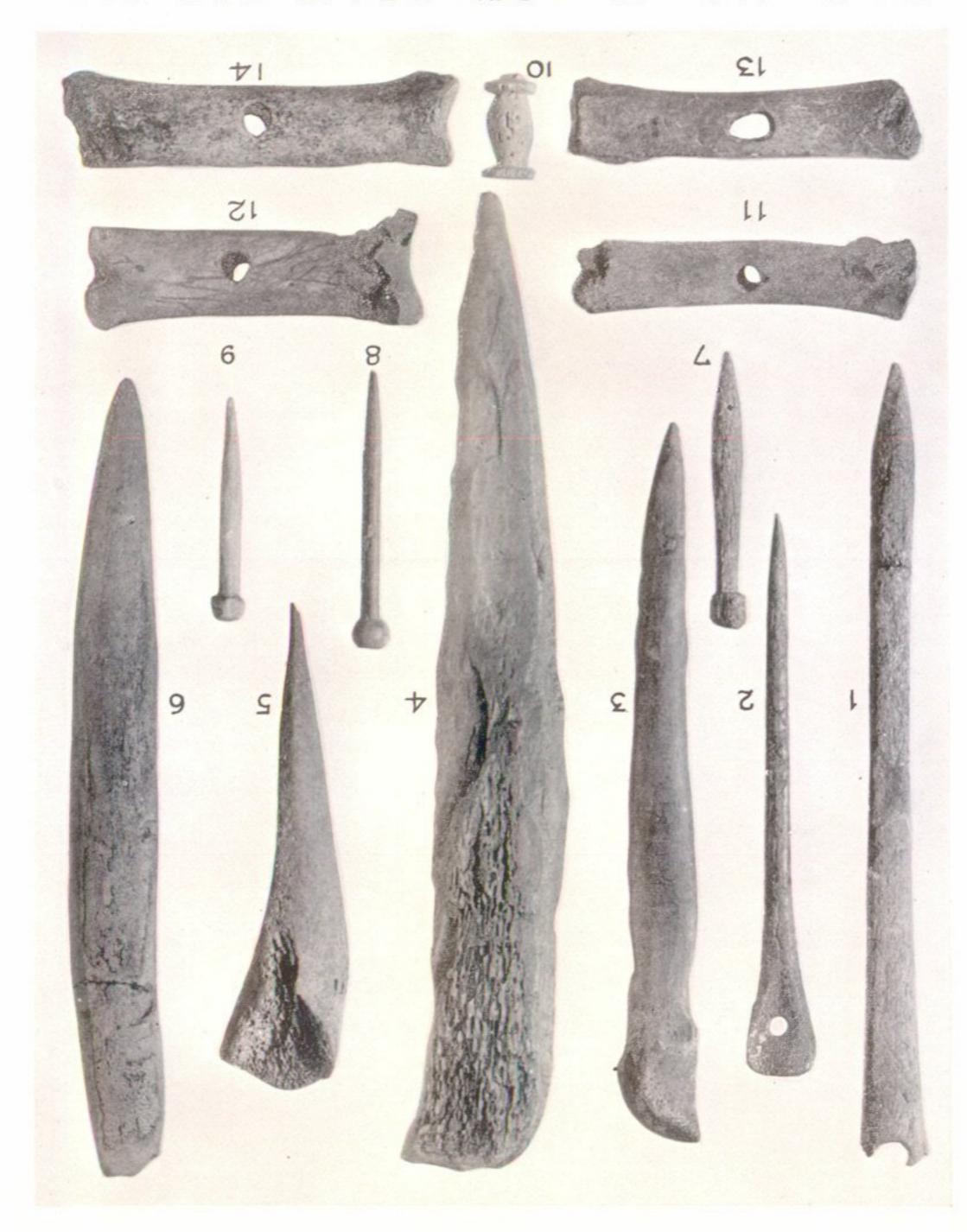




1-4. Comb-case and small-toothed Combs.
5. Irish Brooch found at Croy, Inverness-shire.
6. Brooch found at Freswick.

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PLATE XLVII.



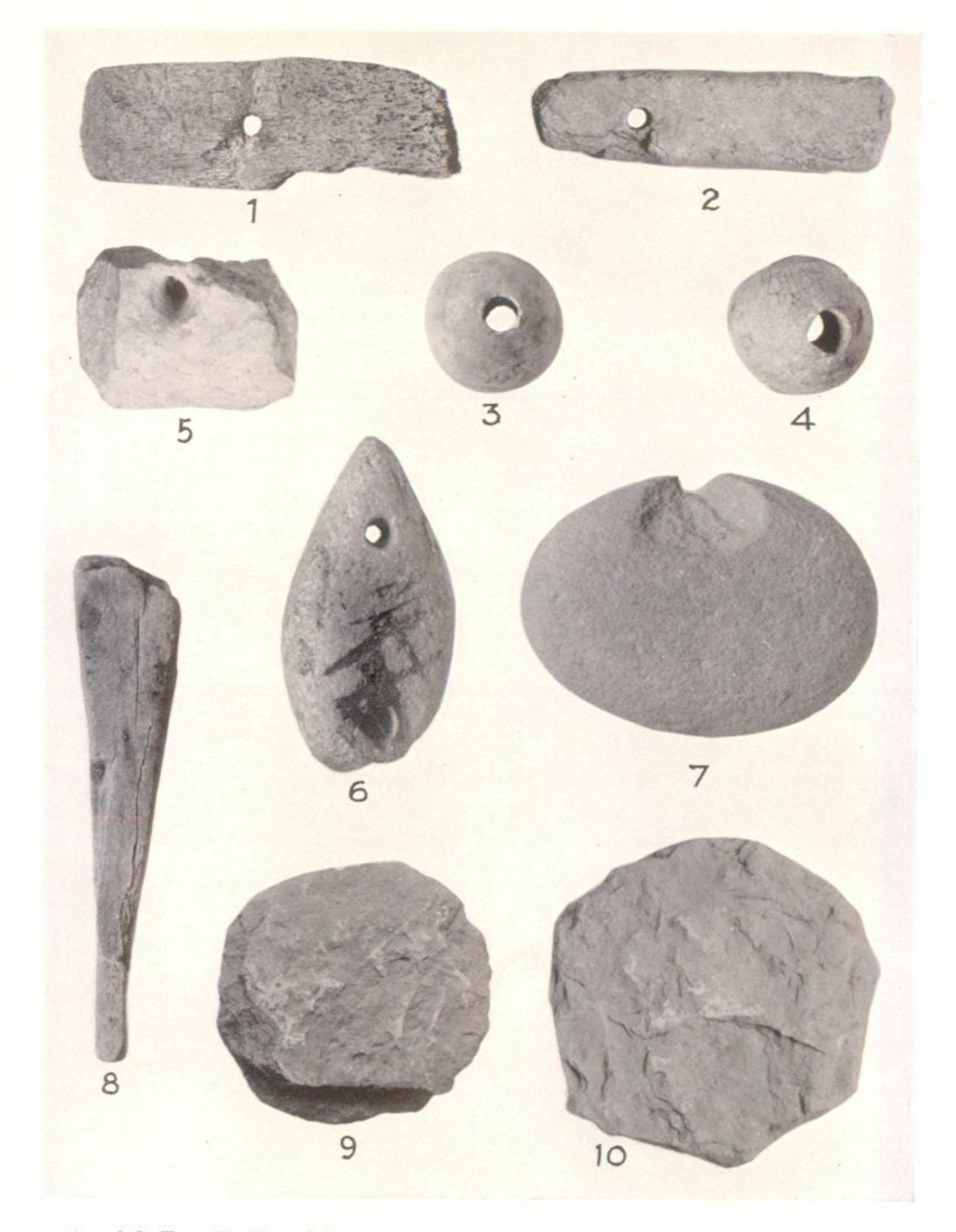
Objects of Bone: 1-9. Pins, and Piercers or Bodkins. 10. Head of Pin. 11-14. Dress Fasteners.

PLATE XLVIII.

А. О. СURLE.

[Vol. LXXIII.

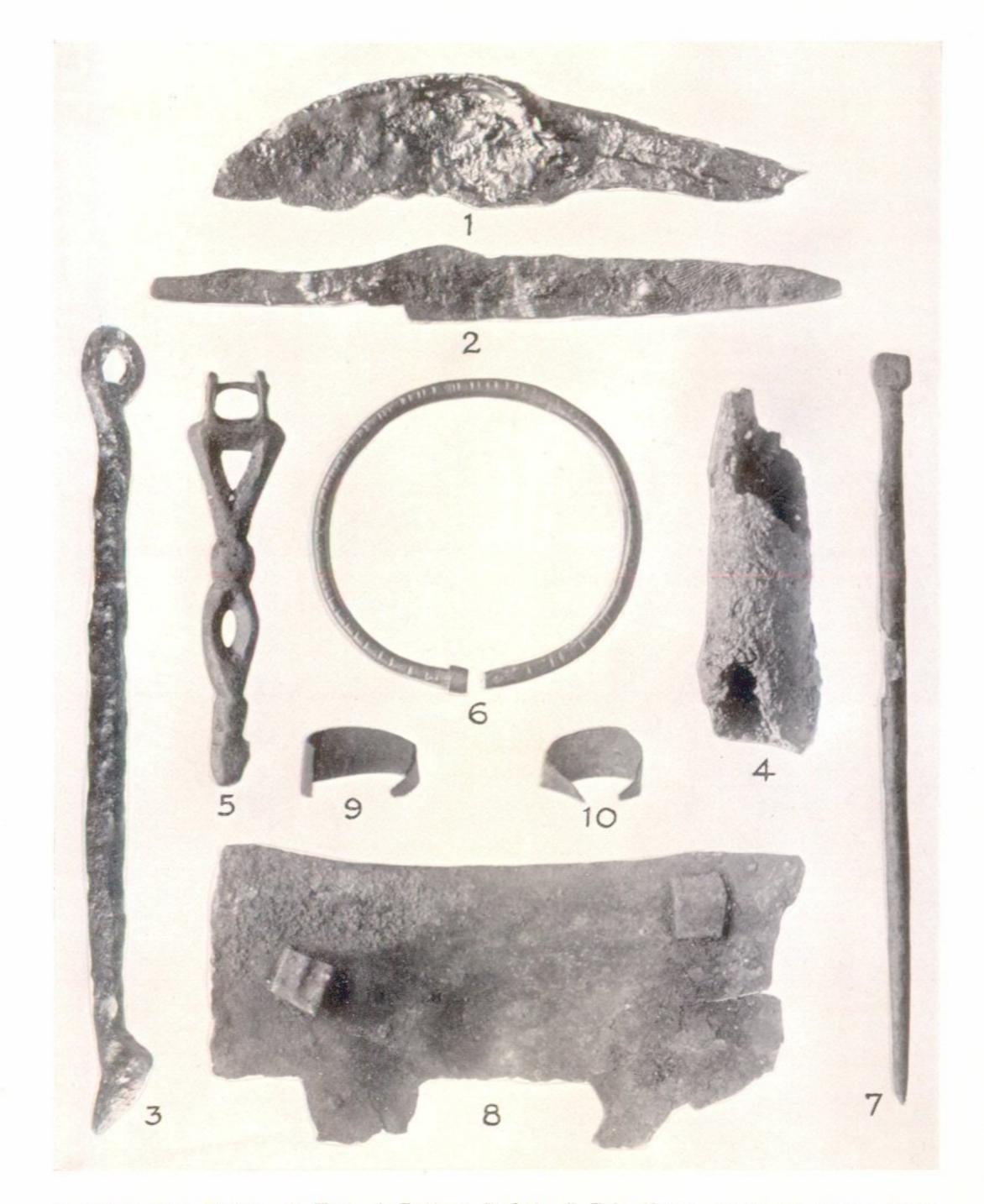
Proc. Soc. Ant. Scot.]



1 and 2. Turn Buckles of Cetacean Bone. 3 and 4. Whorls made from Femur Heads. 5 and 7. Plummets. 6. Sinker of steatite. 8. Hone. 9 and 10. Pot-lids.

A. O. CURLE.

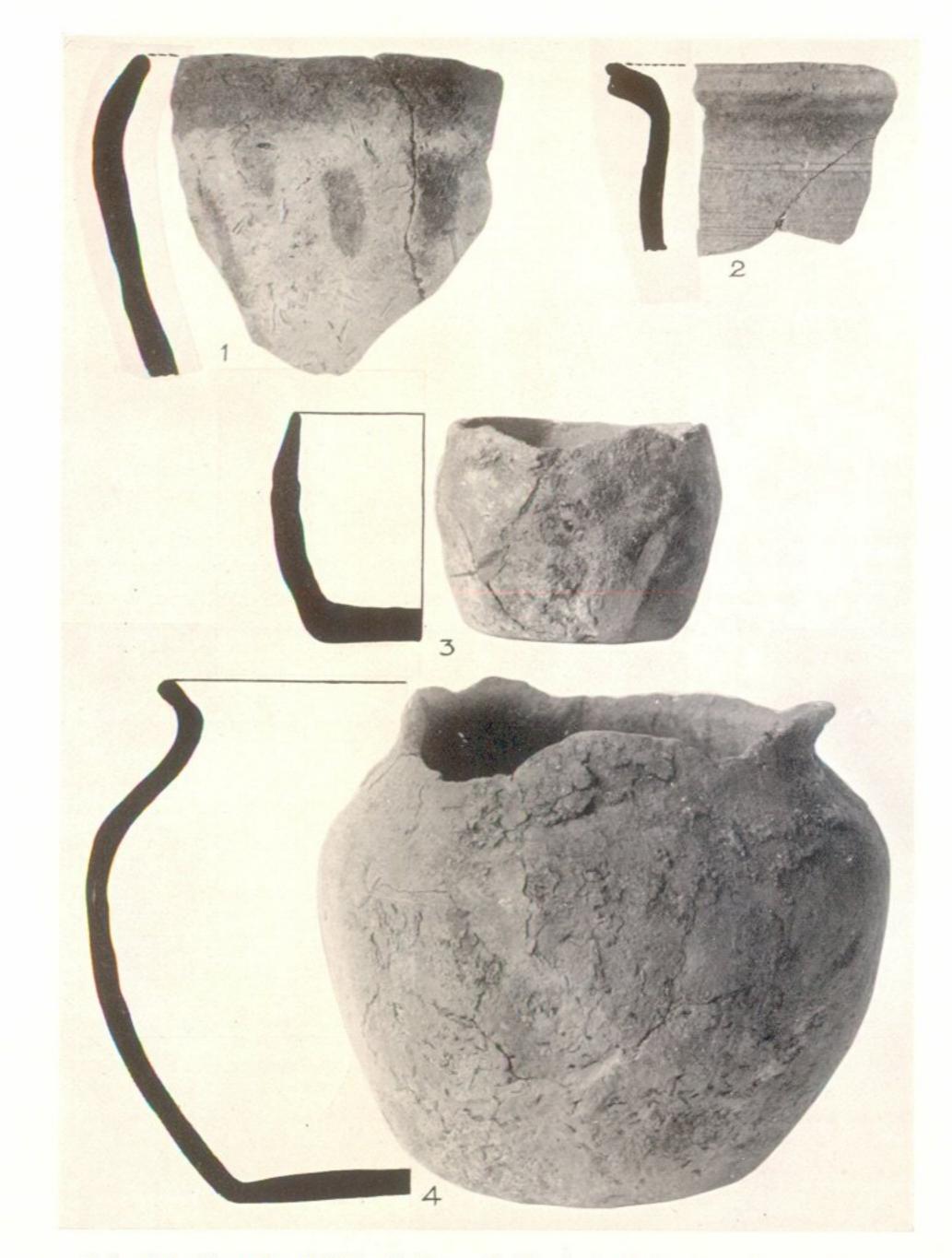
PLATE XLIX.



and 2. Iron Knives.
 Key.
 Butt or Socket.
 Belt Chape.
 and 10. Finger Rings.
 Bracelet.
 Hammer-headed Pin.
 Bronze Patch for a Cauldron.

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PLATE L.



1, 3 and 4. Examples of Viking Pottery. 2. Sherd of a 13th-century Cooking Pot.

A. O. CURLE.

PLATE LI.

at centre and tapering more than the larger pieces to either end, formed the lower parts. The strips forming each pair were placed opposite to one another with the larger strips uppermost, and fastened at one end by single iron rivets to a plate of bone about $\frac{1}{2}$ inch square, inserted between the ends so as to leave space for the comb, and projecting to the extent of one-half its length beyond. One plate, imperfect, remains, and has measured about 1 inch by $\frac{1}{2}$ inch. The other part of this plate has been pierced by two oval holes, one of which is still complete, and shows considerable evidence of wear at its outer edge. Through these holes a cord was passed to enable the owner to carry his comb in a case suspended from his neck.

All four strips are plano-convex in section and decorated with a series of lightly incised parallel lines, between the outer pairs of which, in each case, occurs a row of dot and circle ornament. At a point some $\frac{3}{8}$ of an inch back from the end of the upper strip where the remaining plate occurs, both strips have been perforated with circular holes, the one measuring $\frac{7}{32}$ of an inch in diameter, and the other $\frac{5}{32}$ of an inch. To prevent the comb falling out of the case when it was worn, some temporary fastening was necessary, and this was probably supplied by a tapered pin of bone or wood, which was passed through these holes. The size of the rivet hole still remaining at the opposite end of one strip makes it quite clear that the purpose of these larger perforations was not to hold rivets, and no other use than that suggested appears to meet the case.

The complete length of the comb within the case has been $4\frac{7}{8}$ inches.

Among the combs found at Jarlshof¹ there is one with straight ends measuring $4\frac{3}{8}$ inches in length and pierced at one end obviously for such a pin, while perforations at one end of other combs of the period are not uncommon.² A case for a small comb, found in Oslo, shows also two perforations for a cord in the bone-plate at one end.³ In the long comb found on the Links of Skaill, Orkney, and preserved in the Museum, there are perforations through the plates at either end, and one perforation only at one end of the comb-case. Such an arrangement would obviously save trouble in making it immaterial as to which way the comb was replaced in its case.

As mentioned above, the remains of this comb-case were found in a kitchen-midden of early date, which in respect that it appeared to be situated within the limits of an earlier house was probably not referable to the earliest occupation of the site. It was, however, obviously earlier in date than dwelling No. VI, in which the comb No. 3 was found.

Dress Fasteners.—Four objects (Pl. XLVIII, 11–14), thus generally designated, made from metacarpals of pig, and perforated in the centre of their length, were found. Three of the four came from the earlier

³ Ibid., p. 226, fig. 187.

¹ Proceedings, vol. lxix. p. 298, figs. 31-34.

² Sigurd Grieg, *op. cit.*, p. 185, figs. 182, etc. VOL. LXXIII.

buildings—two from dwelling No. VI and one from the floor of No. VII —while the fourth was a surface find. Though such objects are usually termed "dress fasteners," there is a difficulty in accepting this explanation of their use, in this case at any rate, from the absence of any signs of wear around the edges of the perforations such as might be expected from the friction of a cord.

Similar objects made either from tubular fragments of bone, or from complete bones as in this case, have been found on sites ranging over a long period of time from the Glastonbury Lake Village ¹ to Viking times. One was recovered from the Viking house at Jarlshof, Shetland,² and another, found in a woman's grave of Viking period at Carn nan Bharrick, Isle of Oransay, is preserved in the National Museum of Antiquities. This last was found associated with a pair of iron shears, and, typical details of a woman's attire, a pair of oval brooches of bronze and a pin with a movable ring head.

If they had really been dress fasteners, it is singular that they do not occur on Viking sites more frequently, and are only represented by isolated examples.

Pins, Piercers or Bodkins. Pins.—There are among the relics three small pins (Pl. XLVIII, 7-9), with rounded heads, varying in length from $1\frac{5}{16}$ inch to $1\frac{21}{32}$ inch. Two of them taper directly to the point, while the third shows a definite swelling towards the point, indicating its probable use in some textile fabric. A short baluster-shaped object (Pl. XLVIII, 10), $\frac{5}{8}$ of an inch in length, has apparently been the head of another pin. All these objects were surface finds.

Piercers or Awls.—Of these there are eight, six of which are illustrated in Pl. XLVIII. Of the others, one is represented merely by the upper end, and the other by a partially shaped object in process of manufacture. The largest example (No. 4), made from the cannon bone of an ox, or deer, measures $5\frac{19}{32}$ inches in length. It has been much smoothed by use at the pointed end, and was found while opening out one of the closed doorways on the north wall of No. IV. Another, with a certain amount of artistry in its production (No. 3), has been likewise fashioned from a cannon bone of an ox, or deer. It was found at a high level in clearing out No. VII. No. 5, measuring $2\frac{7}{8}$ inches in length, made from the cannon bone of a sheep, was found on the floor-level of No. VI. No. 6, measuring $4\frac{1}{2}$ inches in length, was found in a kitchen-midden in front of the entrance to No. IV.

Included with the bone piercers is one of polished deer-horn, not illustrated, made from the brow tine of a red deer's antler. It is of coarser form, with a larger point than any of the others, and was found clearing off sand outside on the north-east of No. VI.

Eyed Piercers.—There are two eyed bodkins, or needles (Pl. XLVIII,

¹ Bulleid and Gray, Glastonbury Lake Village, vol. ii. p. 406. ² Proceedings, vol. lxix, p. 317.

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1 and 2). The larger, No 1, is imperfect, and measures $4\frac{5}{8}$ inches in length. No. 2 is of a form frequently found on Viking sites, and measures $3\frac{1}{4}$ inches in length. Both were surface finds.

Turn Buckles or Door-snecks.—Three of these objects, made of cetacean bone, two complete (Pl. XLIX, 1 and 2) and one represented by a half only, were found. The complete examples measure respectively in length $4\frac{3}{8}$ inches and $4\frac{1}{8}$ inches. No. 1 is pierced with a circular perforation, for the pin on which it revolved, near its centre, while No. 2 has a similar perforation at $1\frac{1}{16}$ inch from one end. Both perforations are about $\frac{1}{4}$ of an inch diameter. The imperfect example has been broken across the pin hole, which has probably been towards one end, as in the case of No. 2.

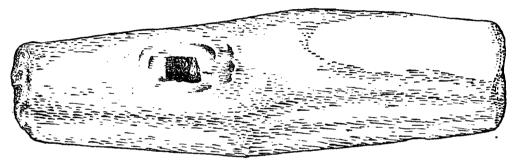


Fig. 5. Object of Cetacean Bone. (1.)

These objects resemble the wooden snecks formerly used on the doors of cupboards, and they possibly served a similar purpose.

Two similar objects, one complete and one represented by one-half only, were recovered from a kitchen-midden in the immediate vicinity of the Viking dwelling of Jarlshof, Shetland.¹

Object of Indeterminate Use.-An object made from cetacean bone (fig. 5), which in general appearance resembles a turn buckle, on closer examination appears to have served some other purpose. It measures $5\frac{1}{4}$ inches in length, $1\frac{1}{8}$ inch in breadth at one end, and $1\frac{1}{4}$ at the other. \mathbf{At} $1\frac{1}{2}$ inch from the narrower end the block has been pierced by a hole for a bolt, $\frac{3}{8}$ of an inch square in section, and the upper surface has been slightly lowered at this point to receive a circular iron washer beneath the bolt head, the rust of the iron being visible on the surface. It is thus obvious that it was not intended to revolve. The underside of the object has been cut back on a level from a point just in advance of the hole to the end, so that if the block was bolted to a flat surface there would be a space of $\frac{1}{2}$ an inch between it and the latter at the extremity. It is clear from the size of the perforation and the evidence of the washer that it was intended to be firmly fixed. Possibly it was a cleat.

¹ Proceedings, vol. lxix, p. 293.

Whorls.—Hemispherical whorls made from the heads of ox femurs (Pl. XLIX, 3 and 4) were found throughout the area excavated, and totalled 15 in number. As a rule they have been rudely fashioned with little effort to give them any elegance of form. Spindle whorls from femurheads are of frequent occurrence in prehistoric and later excavations, and are by no means confined to Viking sites. They were found by Pitt Rivers in Romano-British excavations at Woodcuts Common, also by Sir Henry Dryden at Hunsbury or Danes Camp, near Northampton. They were among the relics from the Keiss broch in Caithness, and the broch of Burrian in North Ronaldshay. Though now probably too light to effect their original purpose, they would be sufficiently heavy before the osseous matter, which they contained, perished.

Bronze.

Belt-chape.—A belt-chape (Pl. L, 5), $2\frac{1}{2}$ inches in length, with a rivet round which the end of the strap has been passed across the open end, was found about 1 foot above the floor-level on the north side of No. VI.

Brooch.—About $\frac{3}{4}$ of a penannular brooch of Irish-Celtic design (Pl. XLVII, 6), and which had originally been coated with silver, was found among kitchen-midden refuse covering the floor of what appeared to have been a small chamber to the north of the inner cross-wall, and to the west of the vent which traverses the indeterminate foundations lying to the eastwards of No. VI. The only indication of date which this find-spot confers is derived from the fact that the west wall of dwelling No. IV, presumably of thirteenth-century date, actually lay on the top of it; moreover, the period of the building in which the object was found appears to have been coeval with that of No. VI adjacent, which in its turn was secondary to the massive wall which in part contains it on the south. The date of deposit of the brooch might thus be as late as the twelfth century.

The brooch has measured when complete some 2 inches across in either As will be seen from the illustration, the terminal is more direction. realistic in conception of a dragon than that of any other example of the style so far recorded. The head is outlined by a rounded moulding, which swells to a collar at the junction of the bow. The eye is well defined as a pointed oval, and enclosed with a narrow moulding to represent the The surface is ornamented with two rows of herring-bone, or evelid. feather ornament, extending respectively to the ends of the jaws. The outer ends of both jaws terminate in volutes, and from the top of the upper jaw a spur-like projection, also hatched with herring-bone ornament, suggests a horn, or an ear. In the centre of the bow there is a sunk oblong panel within a raised moulding, $\frac{3}{4}$ of an inch in length, containing in the centre a rounded boss, while the surface of the panel is enriched with threads of interlacing ornament indifferently conceived and executed.

The bow is plano-convex in section, measuring $\frac{1}{4}$ of an inch in breadth by $\frac{1}{8}$ of an inch in depth.

Though a possible twelfth-century date has been suggested for the deposit of this brooch, that date has, of course, little bearing on the date of the object itself, other than to supply a limit beyond which it cannot have The possibility is that the brooch belongs to a considerably been made. The evolution of the Irish brooch has been treated of by earlier date. various authors, and it is agreed that the source from which it sprung was a penannular fibula with zoomorphic terminals of a stylised form, which made its appearance in Romano-British times, and examples of which have been found at numerous sites in Britain. It is not intended here to follow the various steps in the evolution of this brooch through phases which show a farther and farther departure from the zoomorphic character, till it is almost lost in the splendid achievements of such brooches as those from Tara, Ardagh, Hunterston, etc. The history of the development over the five centuries from A.D. 500 to 1000 has been demonstrated by Mr Reginald A. Smith, F.S.A.,¹ and other authorities have likewise treated of the subject. At a certain point in this evolution, somewhere about the ninth century, there appears to have been some more definite return to zoomorphism in the treatment of the terminals, and we are fortunate in having an approximately dated example, the Croy brooch (Pl. XLVII, 5), found at Croy in Inverness-shire, as illustrating this process, and supplying us with a type from which the Freswick brooch may have descended. The Croy brooch, which was found associated with a coin of Cœnwulf, King of Mercia, who ruled from 796 to 822, has been dated by Mr Smith to about the year 820. It will be noted that the terminals consist of two motives, a triangular figure which occurs at the end of the bow, with a spherical motif in front of it. If we eliminate the latter we are left with a figure which might well have suggested, or itself have been suggested by, the gaping head of a monster, and which has several features in common with the Freswick head. Here, we have indicated, the profile head with open jaws, the ridge or collar that cuts off the bow, and the moulding carried along the edge of the jaws, and turned up at each respective end so as to form a slight volute. There is also an eye, a triangular figure which, though quite suggestive, lacks the developed realism of the other, while the surface is hatched, though not exactly in the same manner as on the To compare the brooches farther: in the Croy brooch, Freswick relic. in the centre of the bow there is a panel containing a central boss, surrounded by interlacing threads, executed in competent style, and in that respect differing from the degenerate rendering on the Freswick example. This tendency to evolve a head with gaping jaws has been suggested by Mr Reginald Smith, and in the Freswick brooch we may well have

¹ "Irish Brooches of Five Centuries," Archaeologica, vol. lxv. p. 223.

an example of the complete evolution occurring at a late date in the series.

Finger-rings.—Two penannular finger-rings with tapered ends were found (Pl. L, 9 and 10). They are both made from thin strips of bronze. One is imperfect, but the other measures $\frac{5}{8}$ of an inch in diameter. The imperfect example was found to the right of the doorway outside No. IV, and the other came from the upcast at the west end of No. III.

Bracelet.—A bracelet, evidently for a child's wrist (Pl. L, 6), formed from a piece of bronze wire, $\frac{1}{8}$ of an inch in thickness, was found among the upcast soil when the deep wall crossing No. II at the back of the bath, was being exposed. When recovered it was slightly out of shape, but has now been restored to its original form, showing an interior diameter of $1\frac{11}{16}$ inch. It is slightly penannular, and has remaining at one terminal a collar of bronze, the corresponding collar being amissing. One surface is decorated with a series of short transverse notches.

Plates and Patches.—As in the Viking house at Jarlshof there were found a number of fragments of plates of bronze, most of which had been used as patches on large bronze vessels, of which the largest still retained in them the rivets of paper-fastener type by which they had been attached (Pl. L, 8). Two small pieces are each perforated with two circular holes of small diameter, evidently for pin rivets. The distribution was general. One piece with paper-fastener rivets was recovered from beside the bedplatform in No. IV, and another from the midden filling in No. VII.

Pin.—A hammer-headed pin of well-known Viking type (Pl. L, 7) was found at the west end of the smithy No. III, from what was probably the site of the west wall of the building which had been torn out. The pin is complete, except for the actual point which is wanting, and measures $4\frac{7}{16}$ inches in length.

Glass.

A small barrel-shaped bead of green glass, measuring $\frac{3}{16}$ inch in longest diameter and weathered on the surface, was found on the surface of the hollow.

Coin.

A single specimen of coinage, a silver penny of Henry III. of England, inscribed "Willem on Lund," from the Mint of London and dating from 1258–1272, was picked up from the surface at the seaward end of the area.

Iron Objects.

Knives.—Four knives were found. Two were of the pronounced hogback form shown by Pl. L, No. 1. One (Pl. L, 2) is a narrow-pointed blade, triangular in section, with a comparatively broad back. One blade was too much decayed for determination of form. Both the former are types of blades characteristic of the early mediæval period, and similar blades appear among the relics from Dunadd,¹ Argyllshire, preserved in the National Museum. Identical examples were found recently in the stone Fort of Cahercommain in County Clare by Dr H. O'Neill Hencken.²

Pl. L, No. 3, appears to be the remains of a key, and No. 4 of the same plate the remains of a butt, or a socket. There was also found the remains of a pair of shears consisting of the spring and upper portion of one leg.

Pottery.

The sherds of pot recovered were numerous and of two distinct classes: first, a limited quantity of wheel-made mediæval ware, unglazed, or only so treated to a small extent; and second, a considerable quantity of potsherds of the quality which, from finds in Shetland and elsewhere, may now be regarded as characteristic of the Viking period.

Mediæval Ware.—The mediæval ware was, with the exception of one small piece which was found above floor-level in No. VI, all referable to It consisted of sherds of some three or four vessels, the later occupation. unglazed, or only partially so, on the shoulder and neck. With one exception it is of a reddish-brown colour, and the two bases that occur among the remains are sagging, one markedly so, and the other There is no indication of thumbing around the bases. slightly. The remains of a large bag-shaped pitcher with an interior diameter at base of $7\frac{1}{2}$ inches were found for the most part on the floor of No. I, and in the passage leading to the bath-chamber on the north of that structure, and what was evidently a small sherd of the same vessel, was recovered from the floor of the bath, beneath the heap of clay in the north-west corner. A portion of what is evidently the handle was found on the floor of No. I. It has a single groove down the centre lengthwise, and deep finger impressions on either side at the point of juncture with the neck. This vessel has evidently been for holding water, and may well have been used in the bath-chamber.

The base of a cooking pot, sagging, and much encrusted with soot, was found in a kitchen-midden in front of No. IV. The interior diameter of the base is $4\frac{1}{4}$ inches.

A portion of a handle, circular in section, but with a ridge along the top, was found while clearing to floor-level in No. IV.

The only piece of mediæval ware with any distinctive character was the sherd (Pl. LI, 2), previously referred to (p. 86), comprising part of the rim, of light red ware, soot-encrusted on the outside and so evidently part of a cooking pot, with a diameter at mouth of some $9\frac{1}{2}$ inches. The rim is everted with an approximately rectangular section, and is

² Royal Society of Antiquaries of Ireland. Extra volume for 1938.

¹ Proceedings, vol. lxiv. p. 118, fig. 5.

ornamented on the upper surface with three wavy, narrow, parallel, continuous ridges. The outer surface, as far as revealed by the fragment, is decorated with zones of parallel lines in relief. This sherd was found on the level of the wall-head of No. IV when the wall was being removed to explore the structure beneath. It must therefore obviously refer to the latest occupation. A very close parallel is to be found, as previously stated, in a sherd from Rayleigh Castle, the occupation of which ceased in the latter half of the thirteenth century, and which is preserved in the Prittlewell Priory Museum, Southend-on-Sea.¹ A late thirteenth-century date may fairly be claimed for these few mediæval sherds.

Viking Pottery.—Plate LI, 4, illustrates a cooking pot, complete except for some slight damage at the rim, which was found by Mr Simon Bremner, when the excavations were not in progress, set upright in the sand, in front of the "naust," No. V, and forwarded by him to the Museum. It is of typical Viking hand-made ware as found in Scotland, with numerous impressions of vegetable matter in the body, and it is heavily encrusted with carbon on the outside. In form it is globular, with a flat base and an everted rim. In height it measures 6 inches, and in breadth at the bulge $6\frac{1}{2}$ inches. From an adjacent spot there were recovered sufficient fragments of a much smaller pot (Pl. LI, 3) to enable its reconstruction to be effected. It has been fashioned with a very uneven surface, and from the encrustation of soot on the surface, appears also to have been used as a cooking pot. It has measured $2\frac{1}{2}$ inches in height, by $3\frac{1}{2}$ inches in diameter at the bulge. Both the above vessels are flat-bottomed.

The general character of the ware, all of which is hand-made, is, besides the use of grass in the paste, a coarseness of technique which is displayed in the very uneven surface of the exterior. The body is hard and wellfired, varying in colour from buff to grey, and black. The pots are in general encrusted with soot only on the upper portion of the exterior surface, indicating that they had been sunk in the embers up to the shoulder. There is invariably an encrustation of carbon also in the interior. While the general character of the ware is uniform, there is a considerable variety in the treatment of the rims, as shown in the sections illustrated (figs. 6). Finger impression has been applied as a decoration on the rims of one or two vessels (fig. 6, No. 4), while a single rim, part of a pot of large size, apparently of 9 to 10 inches in diameter at the mouth, has been ornamented with a series of small, irregularly placed notches cut across it (fig. 6, No. 18). Some oblique cuts placed one inch or so below the rim of another sherd may have been part of a decorated scheme of the complete vessel (fig. 6, No. 20). Another sherd, not illustrated, is decorated with a series of deep vertical grooves, probably finger impressions, extended around the

¹ For this information I am indebted to Mr Gerald C. Dunning of the Royal Commission of Ancient Monuments, Wales, etc.

rim. A sherd of a pot with an indicated diameter of some 6 inches (Pl. LI, 1) has been decorated with a series of broad streaks, in some dark



Fig. 6. Sections and decorated surfaces of Rims of Viking Pottery found at Freswick.

brown colouring matter. Several pieces show perforations evidently made to effect repair. The bases appear to have been flat-bottomed. The cooking pots, as far as measurable from the sherds, show indicated diameters at the mouth of from 10 to 11 inches.

While the more sophisticated forms and decorated rims found at

Freswick were entirely absent from the pottery found in the Viking house excavated at Jarlshof in 1934, yet in both respects they recall ceramic styles of an earlier period found in a prehistoric site there.¹ Pottery with characteristics very similar was recovered by Professor V. Gordon Childe in the excavation of a promontory fort at Larriban, or Larry Ban Head, on the coast of Antrim, in 1935,² in regard to which he remarks on its being a "very characteristic North Irish fabric." The typical cooking pot found at Jarlshof, a barrel-shaped vessel, is represented most closely by No. 10 of fig. 6.

It was not found possible to restrict any form to either of the periods represented by the three groups of buildings. On the whole, the sophisticated rims appeared to belong to the late rather than to the earlier periods. A number were found in the material with which house No. VII had been filled up.

Stone.

Hones.—Twelve sharpening stones or hones, of quartzose schist from the Moine schists, were found on various sites, five of them coming, as might be expected, from the smithy. They are all, with one exception, of the haunched type, the exception being a straight-sided hone of black phyllite or clayey schist, a different material from that of any other. Except the last mentioned, all are much worn and incomplete. A typical example is shown in Pl. XLIX, 8.

A sharpening stone, probably of Caithness flagstone, to be used for some narrow, round-pointed metal instrument, has a deep groove the length of each of the two opposite faces, and is considerably abraded at one end.

Plummets of Quartz, etc.—A number of small blocks of quartz, varying in weight from $\frac{1}{2}$ lb. to 1 lb. 2 oz., were found on the site of the "naust" and elsewhere. Each block presents one flat surface, and towards one edge there has been an attempted perforation for a cord, in one case only completed. A specimen is illustrated (Pl. XLIX, 5). The process of perforating a block of quartz must have been difficult, for several of these blocks have been broken in the attempt. Quartz would be selected for use as plummets owing to its high specific gravity.

In one instance an ovoid sandstone pebble, similarly with one flat side, shows an incomplete perforation on one edge, owing to a fracture (Pl. XLIX, 7); and another, with a fractured groove on the flat side, has a groove continued across the opposite face. A small block of quartz, also flat on one face, has been grooved round the centre of the other sides, evidently to hold a cord.

² Professor V. Gordon Childe, "A Promontory Fort on the Antrim Coast," The Antiquaries Journal, vol. xvi. p. 188.

¹ Proceedings, vol. Ixviii. p. 287, fig. 54.

Polishers.—There are two polishers, an ovoid pebble of porphyry, flattened by use on each side, which was found in the smithy, and a larger water-worn ovoid pebble of quartzite. The latter at one end has been reduced to an angular section by rubbing, and at the opposite end has been slightly abraded.

Pot-lids.—Three pot-lids of stone, from $2\frac{7}{8}$ to $3\frac{3}{4}$ inches in diameter, were found, all in No. VI, two of which are illustrated (Pl. XLIX, 9 and 10).

Querns.—Several pieces of the grinding stones of rotary querns were found fashioned from garnetiferous mica schist. This material, which was also used for querns by the Vikings in Shetland, where it is plentiful, likewise occurs in the west and south parts of Caithness. One of the pieces, which amounts to somewhat less than one-half of an upper stone, has had a countersunk circular area about 2 inches wide around the central opening, and though much weathered still shows the base of the socket to hold the vertical wooden handle with which to turn the stone.

The upper stone of a rotary quern, complete but for a chip off one end, was found, as above related, covering a post-hole at the east end of No. VI. It is ovoid in outline, with a hole for a handle at one end, and measures $16\frac{1}{2}$ by 13 inches.

Steatite.—A piece of the rim, slightly curved, and 14 inches long, of a very large steatite vessel was found to the north of No. VI, and another fragment on the floor-level of the house.

Weights.—A number of larger ovoid pebbles, with grooves cut in opposite faces, and across the end, to hold a cord or rope, were also found. Such stones are still used at the present day for weighting lobster creels.

Sinker.—A pointed oval pebble of steatite, with a perforation at either end for a cord, was found in No. III, and, on the analogy of the lead object used at the present day, was probably a "line sinker" (Pl. XLIX, 6).

In addition to the foregoing there were found a number of flat-sided oval pebbles, some 6 to 8 inches in length, much chipped and indented at the ends and on the edges of the sides. For the purpose for which these were used, the ingenious theory was advanced by Mr Simon Bremner, a corresponding member of the Society, and the foreman at the excavation, that they had been employed in boat-building to "hold on" against the point of the rivet when it was being driven in.

The Viking house discovered at Jarlshof in Shetland in 1934 was probably a long house, as being of earlier construction than the well-preserved example, No. VI, found at Freswick, but in respect that the former no doubt continued in occupation until a date contemporary with the Caithness example, it is of interest to contrast the cultural evidence found on both sites. The Freswick settlement discloses by its relics a class of occupants in poorer circumstances, as the finds were fewer in proportion

to the area uncovered, and as a rule, also, they were ruder in character. There was a complete absence of the scribed slates which were such a remarkable feature of the Jarlshof finds, nor were there found at Freswick any bone pins to compare with the finer examples found in Shetland. While hones were proportionately numerous among the relics from Freswick, they were all of the haunched form, and there was entirely absent from among them any example of the small black hones, quadrangular in section and perforated at one end for suspension, which occurred in considerable numbers at Jarlshof—a type which is not infrequently found associated with Viking relics. At Jarlshof loom weights were found in great numbers, at Freswick they were conspicuously absent. Whereas at Freswick the most common relics were whorls made from the femur-heads of ox-bones, not a single example of such a whorl was recovered at Jarlshof. In both places remains of querns made of garnetiferous schist were found, and while at Jarlshof remains of vessels of steatite were common, at Freswick they were very rare.

The most remarkable contrast in the finds from the two sites is to be found in the pot-rims. The ware from both places is identical, and distinct from other wares so far discovered in Scotland, by the evidence it bears so fully of the numerous impressions of the husks and straw of oats on the body, but the forms of the rims differ materially. The Shetland rims of the Viking period are very simple, being as a rule either slightly everted or curving inwards in the manner of a barrel,¹ while the Caithness examples supply, as already mentioned, a variety of forms. Whether such early forms were extant among the native population of the county at the date of the Viking invasions can only be learned by excavations on native sites. There is a probability, however, that they had been imported from Ireland.

In both settlements numerous fragments and patches of sheet bronze were found, showing that large bronze cauldrons were still in use. The objects for which a use as plummets is suggested were peculiar to Freswick, as also the pebbles supposed to have been used by boat riveters. The characteristic combs of the period are common to both.

The interior arrangements of the principal house (No. VI) at Freswick are in every way characteristic of Viking culture, and the general impression derived from the excavation is that the Norwegian settlers in Caithness brought with them a distinctive culture of their own, which through the period of two or three hundred years in which they flourished in the county, remained entirely unaffected by the indigenous culture of the region. The conclusion to be adduced from these circumstances is that the immigrants either lived in complete isolation among the native inhabitants, or, as seems more likely, that they ousted them from the plains and

¹ Proceedings, vol. lxix. p. 306.

fertile regions to seek out a scanty subsistence among the moors and mountains that form the western and southern confines of the county, and where the place-names and the people are still for the most part Celtic.

REPORT ON THE ANIMAL REMAINS. By Miss MARGERY I. PLATT, of the Natural History Department of the Royal Scottish Museum.

The majority of the bones are of a small but mature Ox of shorthorn variety.

The remainder of the species present are given in order of their numerical importance:

Pony, very small variety like the Shetland race.
Dogs, remains of three, one very small and fox-like.
Sheep, extremely heavy-horned variety.
Red Deer, Cervus elaphus scoticus Lonnberg.
Grey Seal, Halichœrus grypus (Fabricius).
Pig.
Gannet, Sula bassana (L).
Cod, Gadus callarias L.

In conclusion it gives me pleasure to acknowledge my indebtedness to Admiral Sir Edwyn Alexander Sinclair, G.C.B., etc., the proprietor of Freswick, for having so readily acceded to my request for permission to excavate, and also to the Messrs Gullick, the farmers, for according their permission, and helping wherever possible.

Also to Mr Edwards, the Director of the National Museum of Antiquities, for having directed my attention to Freswick, and for much assistance in the production of this paper.

My thanks are due to Miss Margery I. Platt, M.Sc., of the Royal Scottish Museum, for her report on the animal remains; as well as to Mr David Balsillie, B.Sc., of the same Museum, for determining the character of mineral specimens, and Mr M. Y. Orr, of the Royal Botanic Garden, for having identified the vegetable remains.

Dr Sigurd Grieg, of the University Museum of Oslo, helped me to date the combs, while Mr Gerald C. Dunning, of the Royal Commission on Ancient Monuments in Wales, etc., gave me valuable assistance in dating the sherds of mediæval pottery.

I am grateful to Mr R. B. K. Stevenson, Keeper in the National Museum of Antiquities, for the valuable assistance he gave me over a period of two weeks on the spot. My excellent team of local workmen, under Mr Simon Bremner, tackled their job with such zeal and interest beyond the mere terms of their employment as to deserve special recognition.

I owe thanks to Mr F. W. Robertson, Ph.D., of the County Library at Wick, for having lent me a tent and furniture, and other acts of kindness.

While, lastly, to the Council of the Society for having allotted to me the generous contributions from the excavation funds that made the excavation possible, I am under a deep debt of gratitude.

The relics have been kindly presented to the National Museum of Antiquities of Scotland by the proprietor.