

III.

AN ACCOUNT OF THE EXCAVATION OF A DWELLING OF THE VIKING PERIOD AT "JARLSHOF," SUMBURGH, SHETLAND, CARRIED OUT ON BEHALF OF H.M. OFFICE OF WORKS. BY ALEX. O. CURLE, C.V.O., F.S.A.Scot., F.S.A.

After completing the excavation of the prehistoric Dwelling No. v, previously reported, and on failing to find evidence of any other kindred construction adjacent, attention was directed to certain remains of structure which had been exposed in two places in exploratory trenches in 1933. The nearest, a short stretch of straight wall, lay only some 116 feet to the north of the remains of Dwelling No. v, while the other was some 170 feet distant in a north-westerly direction.

As prehistoric construction was being sought, the more northerly building appeared to offer the best prospects, and accordingly attention was particularly directed to this in the first place.

The upper surface of the wall lay beneath a bed of peat-ash, some 3 to 4 feet deep, sloping towards the north. In fact, peat-ash lay deposited to a considerable depth over the whole of the enclosed area on the north side of the promontory, indicating a very long occupation of the whole site.

On the upper surface of the wall, when exposed, there was found a heavy stone club which appeared to connect the remains, in point of time, with the group of dwellings previously excavated.

As the exposure of the wall proceeded, a bed of fish midden-refuse was encountered overlying for the most part the northern slope of the peat-ash deposit, but, to a small extent, occasionally occurring in layers within it. From this bed came a number of pins and needles of bone, and other relics, and, of particular importance, two fine combs of bone with teeth on one side, and decorated with panels filled with interlaced ribbon ornament, all to be dealt with hereafter in treating of the relics. Suffice it to say here that these combs were of a well-known type of Viking ornament, dating from the ninth century, and so supplying an approximate date for the deposit of the fish refuse.

The wall, formed of such massive stones as to suggest the work of the broch-builders, proceeded for a distance of 14 feet in a south-westerly direction, and, with an offset to the eastward for a distance of 12 feet, thereafter continued in a north-easterly direction to its termination 10 feet

farther on. It formed on plan a U-shaped figure with one arm slightly shorter than the other and trending outwards. This proved to be entirely a foundation resting on the natural soil, and with no signs of a floor-level to either side of it. Its greatest depth below the surface was 5 feet, and its breadth 4 feet 6 inches where both edges remained intact. In respect that fish midden-refuse was actually found on the wall at one point, it seems probable that the superstructure had been removed during the early Norse period as fish middens were found only in that connection. Any further exploration of this foundation towards the south-west in the direction of the group of broch buildings, was precluded by the presence of a walled enclosure containing a modern grave. The proximity of the end wall of the Norse house, subsequently exposed, to the trench in which was revealed the more easterly section of the foundation, made it necessary that the latter should be filled in, and the foundation covered, as soon as it was realised that no further progress was in the meantime possible.

Attention was then directed to the more southerly length of walling exposed in 1933, which trended in a direction from south-east to north-west. As the soil in front of it was removed, a wall parallel, and some 4 feet 6 inches distant, was exposed towards the south-west. Both walls stood to a height of about 2 feet 9 inches. Between them, at the spot where the excavation was being carried on, which was ultimately found to be in front of a doorway in the inner or south-west wall, lay a kitchen-midden containing fish and animal remains (the former greatly preponderating), many fragments of vessels of steatite, pins of bone, a conical whorl of lead, a typical Norse conical playing-piece of bone, and iron bolts with lozenge-shaped heads, such as were used in the construction of Viking ships. Eventually it was ascertained that the refuse had been thrown into a space which formed an alley between two buildings facing one another (fig. 1).

As the structure to the south-west lay entirely within the fenced enclosure it was decided to explore it in the first instance. When cleared of sand, soil, and peat-ash which lay deep within, it was found to be a building lying with its main axis north-west and south-east, and extending for a distance of 103 feet 8 inches (see Plan, facing p. 272). The character of the relics found in the adjacent middens had clearly indicated that a dwelling of the period of the Norse immigration had existed in the immediate neighbourhood, and those found in clearing out the building itself showed that here was a house of that time. It was evident, however, on studying the remains that this building for its full length did not represent the original dwelling. While the greater part of the side walls

and the south¹ end were probably primary, the end wall towards the north was obviously secondary. The latter was constructed in a different manner, being built with only two stones in breadth and without any intermediate filling of earth, or layer of turf between the stones on the outer face. Its breadth was only 1 foot 8 inches. Eventually the foundation course of the original end wall was exposed at a distance of



Fig. 1. The Alley-way between two Buildings.

some 7 feet back from the inner face of the existing wall. Presuming, then, that the south end was as originally planned, the primary dwelling had measured 95 feet in length over all, and 90 feet along the interior (fig. 2). The wall on the west had been straight in direction, while that towards the east made an outward bulge in the centre of its length, so that while the breadth of the interior at either end had been some 12 feet, at the centre it had extended to 18 feet.

The east wall in the centre portion of its length was fairly well preserved,

¹ Throughout, for the sake of simplification, the approximate cardinal points of the compass are used in the description.



Fig. 2. The Interior from the South End after excavation.



Fig. 3. Inner face of Wall showing Method of Construction.

and measured some 3 feet 9 inches, practically a metre, in height where highest, and was of similar breadth. The top of it lay only a few inches beneath the turf of the meadow. It was constructed without mortar in regular courses on either face of undressed stones, selected probably from the adjacent beach, with a core of compacted earth in the centre. While the inner face showed contiguous courses one above the other, the exterior



Fig. 4. The Interior from the North End.

bore evidence of having been constructed with alternate courses of stone and turf (fig. 3). This method of construction is that revealed in houses of the Viking times examined in Iceland, and there well shown in the ruins at *Áslákstunga hin innri*.¹

Along the foot of this wall on the exterior there was laid a row of flag-stones about $1\frac{1}{2}$ foot in breadth, a feature apparently known as the *stett*² and visible in front of the wall on the left in fig. 1.

The wall on the west appeared to have been built, for the most part,

¹ Thorsteinn Erlingsson, *Ruins of the Saga Time*, London, 1899, p. 38, also pl. va, p. 41.

² Erlingsson, *op. cit.*, p. 63.

against a bank. In the northern half it had been broken down in two places, and the existing wall in that section was in large measure a reconstruction (fig. 4). The lower course, however, of the original wall protruded from below the foot of the existing wall, as shown on the plan (see Plan), and formed a junction with the foundation of the primary end wall at a distance, on its inner face, of 11 feet from the inner face of the surviving



Fig. 5. The East Entrance from the Interior.

wall. The original wall had been constructed in the same manner as the side wall on the east with a core of earth, and had measured practically one metre in breadth, being slightly broader in the centre of its length. Paving was also found in front of it.

There were two entrances into the original dwelling, one through the centre of the south wall, and the other through the east wall at a distance of some 15 feet from the inner face of the original end wall, and 26 feet from the existing wall (fig. 5). The latter had apparently been the principal entrance, and opened directly into the interior, passing straight through the wall with a width of 3 feet 9 inches. At the inner end, on

the right on entering, there was a bar-hole in the wall. The position of the doorway corresponded with that of the doorways in the Icelandic houses of the type.¹ The entrance at the south end, measuring 2 feet 6 inches in width, was approached by a passage (fig. 6) terminating indefinitely at its outer end, but still walled on either side for a length of 20 feet 9 inches with a breadth of 4 feet at its outer end, gradually diminish-



Fig. 6. Paved Passage on the Exterior at Southern End.

ing to the doorway. It curved slightly from the south and was paved throughout its length. Within the dwelling the line of the east wall of the passage was carried forward by a line of boulders for a distance of 14 feet, while the paving had probably been continued somewhat farther, but was confused in a mass of tumbled stones.

At this end of the building, on either side of the passage, were large quantities of burnt broken stones which on the right appeared to have been within a compartment (see fig. 7), while on such material the end wall was actually founded.

¹ Erlingsson, *op. cit.*, *passim*.

Before proceeding to describe the features that were exposed in the interior a digression seems justified to explain the type of house to which this belongs, as no other example appears to have been excavated thus far in the British Isles, and particulars in the English language are difficult to obtain.¹

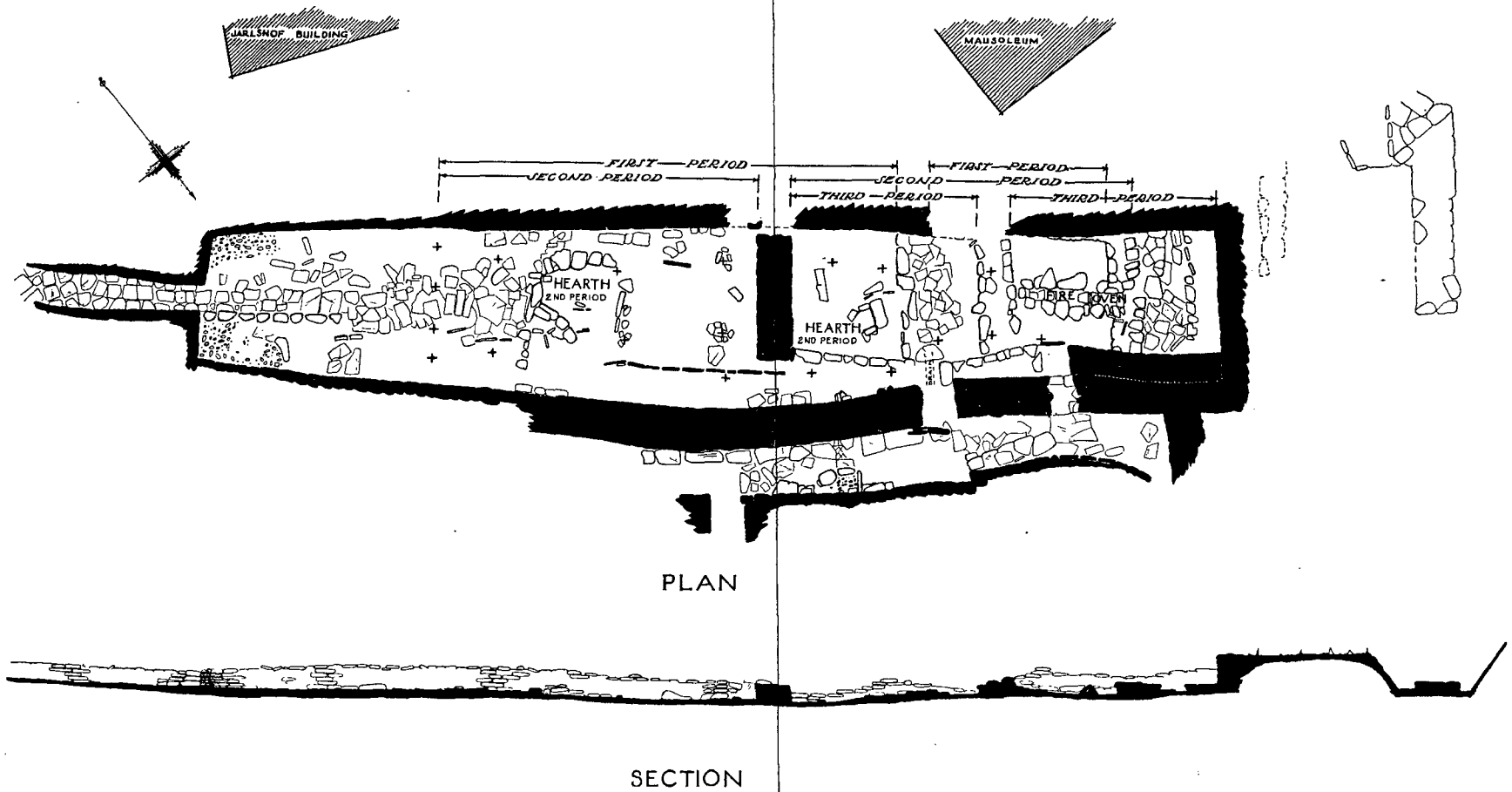
Houses such as that at Jarlshof were the dwellings of the early Norse



Fig. 7. Southern Entrance and Paved Passage in Interior.

immigrants, and were in reality farm-houses, having associated with them other buildings connected with the requirements of the farm. The term "Viking," as applied to their ownership, is apt to induce a wrong conception, the picturesque, but less reputable aspect of the lives of those immigrants, having quite eclipsed, in the mind of the public, their normal mode of existence. The earliest type of house, as illustrated in Iceland, was usually oblong on plan, with the rooms which it contained placed in

¹ The details of a Norse establishment are taken from the Introduction to Erlingsson's work above quoted, by F. T. Norris and Jón Stefánsson, in the main founded on Dr Valtýr Guðmundsson's *Privatboligen på Island i Sagatiden*, København, 1889. See also *The Story of Burnt Njal*, by Dasent, p. xcviii.

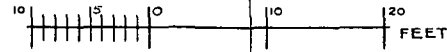


PLAN

SECTION

JARLSHOF, SHETLAND.
NORSE HOUSE.

ALEX. O. CURLE.



H. M. OFFICE OF WORKS
EDINBURGH. 1934.

[To face p. 272.

alignment. The walls were from one to one and a half metres thick, the same in height, and constructed as previously explained. The ordinary rooms were three or four in number, and consisted of the dining- or living-room, known as the *stofa*; the sleeping room, the *skáli*; the kitchen, the *eldhús*; and the larder, the *búr*. In addition to the dwelling-house there were often outbuildings, the whole forming a group resembling a Scottish steading. The *stofa* was the principal room of the farm, and was used for sitting in, and for meals. Occasionally, to accommodate an overflow of guests, it was utilised as a sleeping chamber as well, and as the sagas contain accounts of the entertainment of numerous guests this was no doubt of frequent occurrence. It was often richly furnished with tapestry and other woven work of wool or silk, or skins, according to the wealth of the owner, and its wainscot and ceiling carved or panelled. The fireplace was formed with a number of flat stones set on edge, on a rectangular plan. There were several fires placed along the middle of the floor, and on that account called *lang-eldar*—i.e. the long fires.

A raised wooden floor, the *pallr*, ran along the two side walls, and sometimes along one end of the *stofa*, upon which benches were placed. The main floor was usually covered with a layer of ashes from the fires, known as the *gólf-skan*. The principal seat, the *öndvegi*, was placed on the *pallr* between the two central uprights supporting the roof, and was sufficiently large to seat more than one person. Small tables were placed along the *pallr*, in front of the benches, for meals.

In the earliest period the term *skáli*, surviving in the place-name Skail in Orkney, was used to designate the whole house, which would be of one compartment, but in later times the *skáli* was combined with the *eldhús*, and subsequent to A.D. 1000 the *skáli* meant only the sleeping apartment. Along the side walls of the *skáli* ran a raised earthen or wooden flooring, the *set*,¹ occasionally fenced off in front by carved wooden pillars, the *set stokkar*, and which was divided into sleeping places. At one end of the *skáli* were one or more box-beds, *lok-hvíla*, usually reserved for the master or mistress, or for important guests.

The *eldhús* was the kitchen. In early times it also served as a sleeping apartment, but by about the year A.D. 1000 it had ceased to be used for that purpose. The fireplace, *eldsto*, was in the middle of the floor.

Other rooms to be found sometimes under the same roof, but which do not seem to have been represented in the Jarlshof dwelling, were the *dyngja*, or women's room, found only on large farms; the *badstofa* or bathroom, used either for steam or tub baths, and similarly confined to large

¹ Norland and Stenberger, *Brattahlíð*, p. 64, Copenhagen, 1934.

farms; the *búr*, or larder; the *skemma*, or room for winter stores, such as meat, dried fish, etc.; and the *smidja*, or smithy.

Other buildings, always built of turf and stone, were the *fjós* or cow-house, the *fjárhús* or sheep-house, the *hlada* or barn for the storage of hay, and the *hesthús* or stable.

The ship-shed, or boat-house, was a structure of turf and stone with a wooden roof, which served both as a hithe for the ships in winter, and as a shipyard where boats were built or repaired.

There was also a *kviar*, or sheep-fold, usually a rectangular structure built of earth and stones, without a roof, and only employed for milking the ewes in during summer.

Originally the Jarlshof dwelling was probably a two-roomed house, of which the living room, or *stofa*, occupied the greater part, and the kitchen, or *eldhús*, a minor portion to the right of the doorway at the north end. At the south end were probably one or more outhouses.

While the history of the northern end is fairly clear from the plan, that of the southern extremity is more difficult to determine.

The side wall on the south-west at the latter end, which alone remains, tapers towards its junction with the end wall, which appears too narrow to have supported a gable, being only 15 inches thick. The paving of the passage, as already mentioned, is carried forward into the interior and is bordered on the right by a line of boulders, as may be seen in fig. 7.

There was no indication in the side walls of the southern section of any reconstruction, both walls being of one and the same period as far as could be seen. At 23 feet inwards, however, there were found, in alignment across the interior, a row of what were believed to be four postholes, and at a distance of 6 feet farther in, other two similar holes (see crosses on Plan).

In the immediate neighbourhood of these holes lay many displaced stones, presenting the appearance of an overthrown wall, but it is right to add that no actual foundation-course of such a wall was discovered. It is suggested that along the line of the post-holes there was a wall of stone with a gable superstructure of turf, having a doorway through it, probably in the centre, where, between the adjacent post-holes, there is a space of about 3 feet in width. There was no definite indication of occupancy of the area to the south of the line of post-holes, and no post-holes were found within it.

In ruins of dwellings of an earlier period which have recently been excavated in Norway, there occurs occasionally at one end a paved area, which is believed to have been used for cattle, and some such purpose may have been fulfilled here.¹

¹ Jan Petersen, *Gamle Gardsanlegg i Rogaland*, p. 88, Oslo, 1933.

It may be assumed that the portion of the structure actually occupied as a dwelling extended from the line of post-holes to the outer face of the primary wall at the north end, a distance of some 70 feet (21 metres).

Crossing the interior, almost in a line with the south wall of the side entrance, there is an incomplete row of stones, shown in the centre of fig. 11, at the edge of an irregular bed of flat stones which form the covers of a drain to be described hereafter. This probably indicates the position of a partition wall, destroyed when the drain was constructed, and which separated the *stofa* from the *eldhús*. Further evidence in support of this conjecture may be seen in the section A-A on the Plan by the change of floor-level at this point, that of the northern end being higher than the rest. A similar difference in floor-levels was observed at *Áslákstunga*¹ and presumed to indicate separate chambers. Such an arrangement as is suggested would have made the living room some 39 feet in length, and the kitchen approximately 16 feet.

Along the east wall of the *stofa*, at a distance of 3 feet 9 inches in front, runs a line of thin slabs set on edge, and protruding about one foot above floor-level, which is evidently the remains of the kerb of the *pallr* (fig. 8). It is preserved for a length of 18 feet. On the opposite side of the building a single slab on edge at a similar distance from the wall, may indicate the former existence of a platform along that wall also.

While the whole floor of the *stofa* was covered with a bed of peat-ash, along the front of the supposed remains of the *pallr* on the east side the ash was of a brick-red colour indicating the position of a long fire. If the fire had originally been outlined with stones these had disappeared, probably when the still extant hearths were made during a second occupation.

As the roofs of such dwellings were supported on a double row of posts placed along the floor, it was obvious that the holes in which these posts were placed must have existed.² Unfortunately the material which formed the floor was in great measure peat-ash, and beneath it discoloured soil, so that little evidence of a post-hole was likely to be forthcoming except from the remains of wedging stones. Only in three instances did such stones remain, and, as in two instances these lay on the line of the primary hearth within the *stofa*, they were evidently secondary. An examination, however, revealed in the centre of each, at a depth of some six to eight inches below the surface, a flat stone laid horizontally.

A chance discovery of such a stone similarly placed at 3 feet 9 inches from the wall, towards the north end, furnished an indication, and

¹ Erlingsson, *op. cit.*, p. 33.

² For suggested reconstructions of roofs see Sigurd Grieg, *Jernaldershus på Lista*, Oslo, 1934.

following this clue a series of sunk stones were discovered along both sides of the building, which are shown on the Plan by crosses, and are believed to have been the bases of the holes in which the posts rested. On two of these stones, in what had presumably been the post-hole, fragments of carbonised wood were discovered, which on examination was found to be the remains of pine. A bed of wood-ash over one of the sites



Fig. 8. Interior with Kerb of *Pallr* in centre.

suggested that a post had here been consumed by fire. The sites of the posts indicated on the Plan obviously belong to two periods, as previously stated, the two surrounded by stones on the floor of the *stofa* on the east side being secondary. A consideration of the others shows that while in the *stofa* the posts on the east side had been placed on, and at the edge of the *pallr*, those within the *eldhús* had occupied a more central position, the dwelling being narrower at that end. Within the *eldhús*, in the centre of the floor, was the fireplace, and beyond it the oven, partly inserted into the end wall as if to be surmounted by a chimney, or an aperture in the roof. The fireplace (fig. 9), which appeared to have been

constructed for the special purpose of heating stones to be used in the oven, was a small rectangular enclosure some 18 inches square, formed on either side with slabs of stone laid on the surface, and furnished with an opening in front for a flue, some 9 inches broad and 10 inches deep, paved on the bottom, and extending back for a distance of 4 feet 6 inches. The paving was in two layers, probably representing two periods of use. The



Fig. 9. Fireplace and Oven beyond.

back of the fireplace was formed with a slab rising to a height of 1 foot above the sole of the hearth, and set sloping backwards at an angle of some 50° from the perpendicular. Peat-ash was found upon this fireplace, but no food refuse.

The oven was an oblong box, in line with the fireplace, measuring 2 feet 7 inches in length, 1 foot 9 inches in breadth, and 1 foot 3 inches in depth. It had been formed in two horizontal sections, the lower consisting of single stones on each face, and the upper of smaller material. The stone which formed the front of the oven towards the fireplace, in the upper section was laid obliquely so as to meet the sloping back of the latter at its

apex, and at a similar angle. The floor of the oven was paved, and the walls were reddened and fractured by the action of heat. Within it were numerous burnt broken stones, of a size to be easily held in the hand, and a large quantity of fish-bones.

The combined arrangement suggested that the small fireplace, with its flue to increase the draught, had been formed for the purpose of heating



Fig. 10. The Oven.

stones to a red heat, and that the tilted slabs were so placed as to facilitate transference of the stones with the aid of a shovel from fireplace to oven.

The bones found consisted of remains of the Ling (*Molva vulgaris*) (occasional bones indicating specimens of enormous size), the Saithe (*Gadus vivens*), and the Cod (*Gadus morrhua*). The Lythe, or Pollace (*Gadus pollachius*) was also represented but to a much less extent than the other fishes.

The method of cooking, or baking, after the heated stones had been transferred to the oven, was as follows. Above the stones was laid a layer of fresh, green vegetable material (in Shetland probably grass), and upon

this was placed the food—bread, flesh, or fish as the case might be. This in its turn was covered with another vegetable layer, over which a second layer of heated stones was spread, while in order to prevent escape of steam, a covering of earth, or possibly of turf, or peat, was placed on the top. This method, as still employed among primitive tribes, was probably



Fig. 11. Secondary Cross Wall in foreground.

in general use among the Norsemen.¹ Such ovens, or fireboxes, have been discovered in the early Norse houses in Norway,² Iceland,³ and Greenland.⁴

Two stones which project at a height of about 1 foot from the inner face of the east wall, at a distance of 2 feet to the left of the doorway on entering, are also a feature of the primary occupation, and may have been employed for the support of a seat.

The principal change in the history of the house during its second period was the construction of a wall across the interior a little to the

¹ Sigurd Grieg, *op. cit.*, p. 92.

² Sigurd Grieg, *op. cit.*

³ Daniel Bruun, *Fortidsminder og Nutidshjem paa Island*, Copenhagen, 1928, p. 180.

⁴ Norland and Stenberger, *op. cit.*, pp. 53-63.

north of the centre (fig. 11), and the removal of the wall which previously formed the south end of the *eldhús*. The result of this was to reduce the length of the *stofa*, and increase that of the *eldhús* by some 9 feet 9 inches, approximately 3 metres, which thereafter probably became also the *skáli*, or sleeping room. The north end wall was at the same time moved back some 3 feet.



Fig. 12. Secondary Hearth in the *Stofa*.

With this change, which did away with the long fire on the floor of the *stofa*, two new hearths were formed, one at the south end of that chamber, and the other in the centre of the *skáli* some 8 feet distant from the partition, and facing towards it. The former (fig. 12) was a large hearth, measuring some 3 feet across the back, with the sides expanding outwards for a distance of 4 feet till they reached a width of 6 feet 6 inches, practically 2 metres, between their extremities. On the east side, close to the end of the "cheek," some thin slabs, placed parallel 2 feet apart, protruded from the floor, and may have been used to support a bench or table at the fire-side. At a distance of some 7 feet 9 inches out from the fire-

back there was a row of stones, firmly set in the floor, which might indicate the position of a seat, while just against the outer end on the east two slabs set on edge at right angles might have formed a small associated fireplace.

The hearth in the *skáli* (fig. 13) was much smaller and measured only 1 foot 9 inches across, and, approximately, as the outer stones had been



Fig. 13. Secondary Hearth in the *Skáli*.

displaced, 2 feet in depth. It had been set obliquely in the floor, but practically parallel with the main wall on the east, which curved inwards at this point, and so it was also in all probability parallel to the front of the *pallr*.

The last period showed the abandonment of the south portion of the dwelling beyond the partition wall, and the conversion of the remainder into a two-roomed house, using what had been the central partition wall for the end gable. The building was extended towards the north, and an end gable erected in a different style of construction, the supporting wall being only two stones breadth in thickness and without the central core of

earth. A side wall (fig. 14) towards the east was built partially upon the *pallr*, extending from the end of the partition wall, and a new cross wall was constructed somewhat to the south of the centre of this new dwelling. The original entrance on the east side was still in use, but a fresh opening was broken out some 9 feet to the north of the former. A quartz pebble



Fig. 14. Side Wall constructed upon the *Pallr* in the latest Period.

measuring 5 inches by $4\frac{1}{2}$ by $2\frac{1}{2}$ inches which had been used as a pivot stone, having a polished hollow $\frac{7}{16}$ inch in diameter in the centre, made by a metal pivot, was found just to the north of this opening at a level which must have approximated to that of the latest occupation, 1 foot above original floor-level.

The three periods are clearly indicated in the construction of the wall along the west side at the original termination of each. Moreover, the floor-levels at the north end tell the same tale. The base of the late end wall lies at a level of 25 feet 9 inches above ordnance datum, the foundation of the wall of the second period at 24 feet 9 inches, and that of the

original end wall at 23 feet 6 inches. Fig. 15 shows the north end of the dwelling with flooring stones of each period, *in situ*, marked respectively 1, 2, and 3.

Previous to the third period a drain, measuring some 8 to 9 inches in breadth and 1 foot in depth, was formed across the interior, brought from some building on the west. It was carried across the floor



Fig. 15. The North End showing *in situ* Flooring Stones of each Period.

of the *skáli* in the direction of the entrance, thence through the latter, and thereafter led off in a northerly direction, passing under the floor of the alley adjacent to the front of the building opposite. It was a rubble drain, and its floor, which was unpaved, at the point where it entered the *skáli*, was covered to a depth of 6 inches with a deposit of peat-ash burned to a brick-red colour, a condition entirely absent on the opposite side of the chamber. This circumstance indicated that the source of the drain was in some area where great heat had been generated. It was clear that the drain belonged to the second period, or to a date between it and the last, as a stone bonded into the latest period wall lay across one of the drain

covers. Also the stratification of the peat-ash deposit overlying it was homogeneous, and undisturbed, while a kitchen-midden, obviously referable to a later occupation, lay above it in the alley.

An indication of the existence of the building from which in all probability the drain emerged was furnished by the exposure of a corner of a structure projecting into the west wall of the *skáli*, and situated immediately in front of the modern mausoleum. The presence of such a drain, and the condition of the ash deposited within it, suggest the possibility of the remains of a bath-house existing nearby.

Partly covering the side entrance on the outside, and partly leaning against the face of the wall on the east, stood two large upright slabs, visible beyond the spade in fig. 5. They rested on a thin layer of soil covering the paving of the alley, which had been torn up in front of them. It was obvious that they had been erected in the position in which they were found to retain in place the refuse, consisting of fish-bones, peat-ash, broken steatite urns, etc., which composed the kitchen-midden filling the alley at this spot, and so prevent it falling back into the doorway.

The finding of quantities of comparatively small broken stones, which had evidently been split by heat, both in the area at the end of the house, and in two ovens, one of which has been described above, and the other, which, as it relates to the building to the eastward, will be described in next season's report, throws some light on the employment of such stones, and incidentally suggests a possible explanation of the numerous heaps of burnt broken stone to be found throughout the Shetland Islands, and to a less extent elsewhere.

Though the use of such stones for cooking was practised in Norway from the migration period in the fourth to fifth centuries of our era, such heaps of burnt stones are unknown in that country.

In primitive times there were two methods employed of cooking food with the aid of stones that had been brought to a glow-heat. In the earlier and prehistoric period the cooking was effected by dropping a pebble, or pebbles, into a vessel containing liquid to be heated, or food to be cooked, and covering it over with a stone lid. As pottery from domestic sites of prehistoric times is invariably encrusted with carbon only on the upper portion of the exterior, it is evident that the pots were plunged to at least one-half their depth in the embers—peat-ash, or whatever formed the base of the fire. This plunging afforded some support to the wall of the vessel, and prevented to some extent the fracturing of the pot when the stones were dropped in, as well as helping to maintain the heat. Such heated pebbles when dropped into cold liquid, or during the process of being heated, would frequently disintegrate. The stones so used are

known as pot-boilers. In such domestic sites as I have explored broken pot-boilers have been rather conspicuous by their absence, probably for the reason that having become useless they were thrown away.

The method of cooking practised by the Norsemen, and described above, was a totally different process. Small stones were required, and such as would heat readily, and it was desirable to have a stock always at hand. Such stone occurs in great quantities at Jarlshof on the east of the Norse occupation. Accordingly the following suggestion is here put forward merely for consideration. The stones to be used were gathered into heaps, and in order to bring them to the requisite condition of heat they were placed upon a fire of heather, or brushwood. This may account for the stratum of carbonised matter in which were numerous twigs of heather, which lay below the mass of burnt broken stones found above the pre-historic Dwelling No. v, described in my previous paper this session.

When the stones on the fire had been raised to a sufficient heat they would be fractured by throwing cold water upon them and thus causing a sudden contraction of the outer surface. The stones so broken up would be thereafter piled in heaps near where they would be afterwards drawn on as required. Possibly the mass of broken stone at the end of the Norse dwelling was the supply for the kitchen of the house, placed as coal might be in a dwelling at the present day. Such a theory gives an explanation of the reason why the heaps of burnt stones are so frequently found adjacent to water, viz. the need for a supply of water to throw on the heated stones in the first instance—though, possibly the vicinity of fresh water is merely an indication of the pre-existence of the dwelling-place in which the stones were used. It also explains the bays, or concavities frequently observed in the outline of such mounds, these being due merely to the abstraction of material. Finally, it is much more likely that these heaps represent stores of material for use than discarded refuse.

Among the relics recovered from the south end of the building were some two or three fragments of clay which had been transformed to a brick-like consistency by the action of fire (fig. 16). On one side these fragments bore deep parallel grooves, evidently produced by the action of human fingers pressed into and drawn along the material when it was soft. The smooth and slightly pitted appearance of the opposite face might well have been produced by the pressure of the clay against a built stone surface, and accordingly it seems probable that these pieces of burnt clay represented a lining which had been plastered on the interior surface of the walls to close the interstices between the stones, preserved in these

few instances by having been burnt. Remains of clay lining (*lerklining*) have been found in the ruins of similar early dwellings in Norway.¹

After the south portion of the dwelling had ceased to be occupied and become roofless, it was used for the deposit of peat-ash, and for some

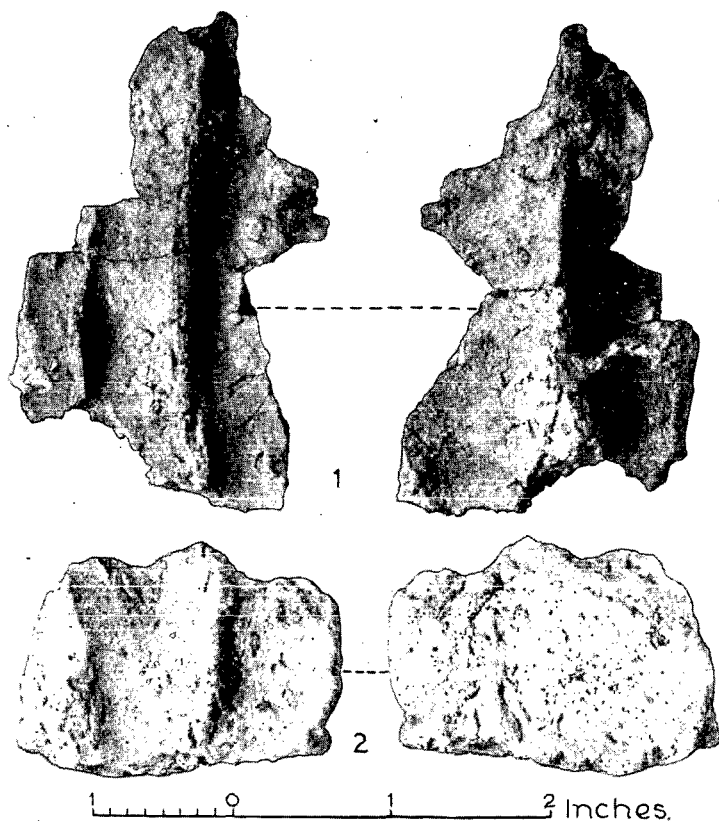


Fig. 16. Burnt Clay showing Impressions.

distance along the western side it was occupied by a midden, almost entirely consisting of shells of the common winkle (*Littorina littorea*).

The type of house represented by this building at Jarlshof, an oblong structure, with slightly rounded ends, and low walls, makes its appearance in Scandinavia just before the Christian era, and during the following centuries was in widespread use. It is chiefly represented in the south-

¹ See Sigurd Grieg, *op. cit.*, p. 86, and Jan Petersen, *op. cit.*, p. 79.

west part of Norway and in the islands of Öland and Gotland in the Baltic.¹ Numerous ruins have been excavated in Norway in recent years by Dr Jan Petersen² and by Dr Sigurd Grieg.³ The plan also suggests some possible relation with certain oblong galleried structures, or "wags," in Caithness,⁴ at one end of the scale in this country and at the other with the still extant Black Houses of Skye and the Hebrides, but which formerly existed likewise in Caithness and Sutherland.

In conclusion, it may not be amiss to state briefly the most recent view of the circumstances connected with the Norse immigration into Shetland and Orkney.

Norway was a poor country, rocky and mountainous, with little land that could be profitably turned to the uses of agriculture. It possessed, however, two potential sources of wealth in the forests that clothed so much of its surface, and in the iron that was to be won from its peat-bogs. On these foundations the Norwegian peasant raised a civilisation which, if it lacked the refinement of that of classical lands, had a virility and a richness of its own. From the iron he fashioned a type of axe which was serviceable either as a tool for the woodman, or as a weapon for the warrior, and with this he hewed down the oaks and pines in the forests, splitting them into planks, and so brought about the first construction of the clinker-built boat.

This achievement increased the trading facilities of a maritime race, and sent its seamen in the early Middle Ages to traffic over far distant waters.

For some reason which is obscure, but possibly not unconnected with the development of their carrying trade, and iron industry, the Norwegian peasants prospered, and their numbers increased. Forests were cleared, and the area under crops was greatly extended. Whether because the population became too large for the land to support, or for some other less obvious reason, the period of prosperity culminated in a great wave of peasant migration to the nearest accessible lands across the North Sea, to Orkney and Shetland, and to the Hebrides. This movement took place between the years A.D. 780 and 850, and was presumably thereafter followed by another to the Faroes and Iceland during the reign of Harald the Fairhaired between the years A.D. 870 and 930.

Moreover, one result of the struggle in Norway between King Harald and his nobles, culminating in the defeat of the latter at the battle of Hafrsfjord, about the year A.D. 900, was a great exodus to the Orkneys

¹ Norland and Stenberger, *op. cit.*, p. 57.

² *Op. cit.*

³ *Op. cit.*

⁴ *Third Report of The Royal Commission on Ancient, etc. Monuments, etc. of Scotland (County of Caithness, s.v. "Galleried Dwellings")*.

and Shetlands, when many powerful men sailed as Vikings to the west. During the winter months they made their abode in the islands, but in summer they indulged in raiding. With the actual colonisation of the islands this last invasion had no connection, and the Viking raiders were probably as troublesome to the settlers as they were to the inhabitants of Norway and elsewhere.¹ And so in due course Orkney and Shetland became part of the realm of Norway, and subsequently of the United Scandinavian kingdom under the crown of Denmark. When, however, James III. of Scotland married Margaret of Denmark they were transferred to Scotland, as pledge for part of the bride's dowry, and failing fulfilment of the obligation, in 1472 they were formally annexed by the Scottish Crown.

THE RELICS.

The relics recovered were numerous and present a fair representation of associated objects in everyday use in a Norse dwelling, which will supplement the collections of personal belongings produced from graves, of which there is a considerable collection in the National Museum of Antiquities.

They were, with the exception of a few from approximately high levels, derived from three principal sources. These were, first, the kitchen-midden beyond the north-west end of the dwelling, which, in all probability, was referable to the earliest occupation; secondly, the midden situated in the alley-way, and partially blocking the side entrance, which obviously belonged to a later period of occupation; and lastly, the interior of the house itself, and the wall-heads, from which relics of all periods might be included.

The greater part of the finds from the north-east midden came from a depth of from 3 to 4 feet below the surface, and so were obviously of one period. No midden has been identified as particularly referable to the second period, though possibly that in the alley-way belonged to it. The relics from each group are treated separately in the following notes.

RELICS FROM THE NORTH-EAST MIDDEN.

Bone Implements.—Two blunt-pointed awl-like objects (fig. 17, Nos. 2 and 5), both of which have been socketed, measuring respectively $3\frac{2}{8}$ inches and $4\frac{1}{8}$ inches in length.

¹ See A. W. Brøgger, *Ancient Emigrants: A History of the Norse Settlement of Scotland*, Oxford, 1929, pp. 5-8, from which the foregoing facts are taken; also T. D. Kendrick, *A History of the Vikings*, London, 1930.

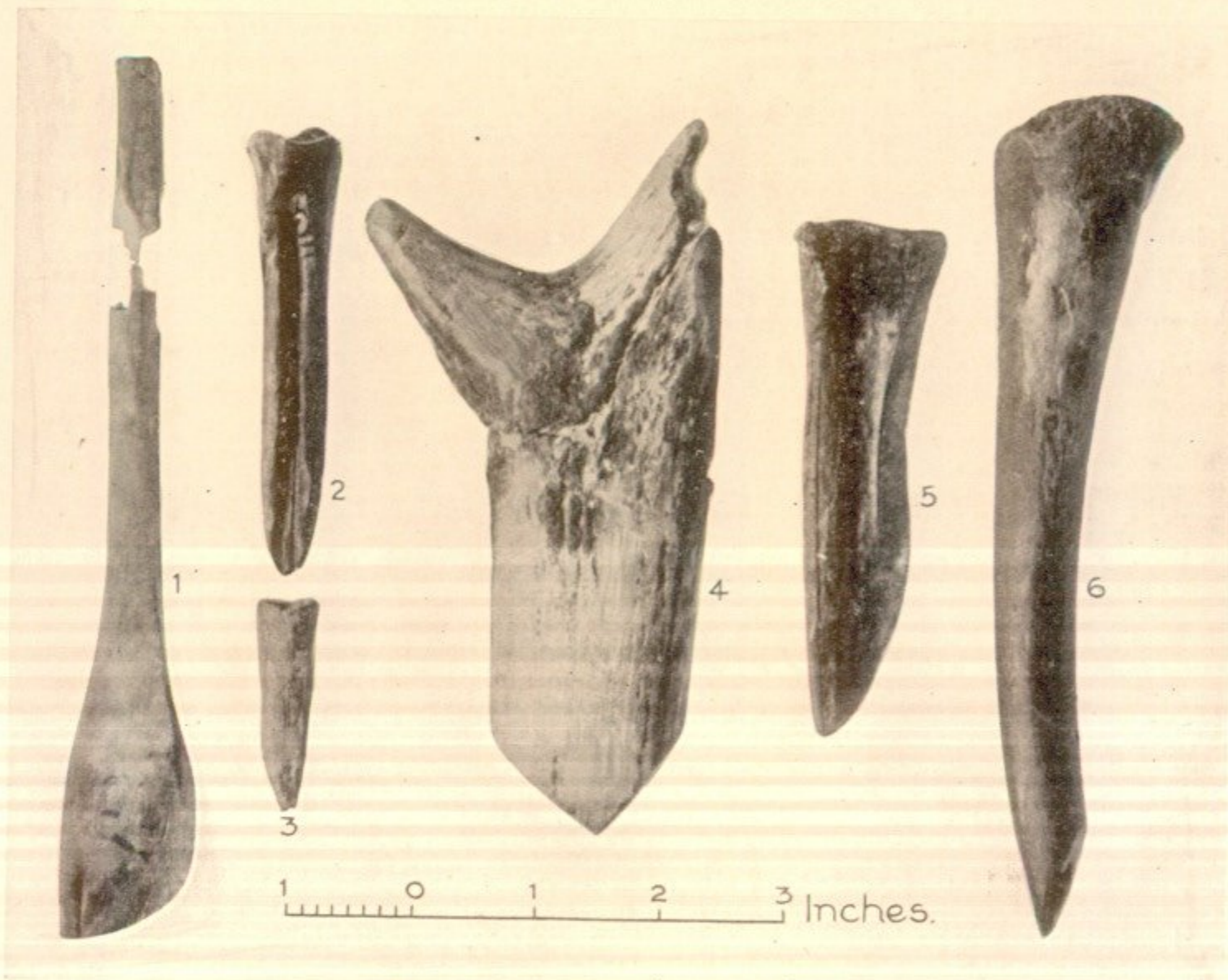


Fig. 17. Implements of Bone from the North-east Midden.

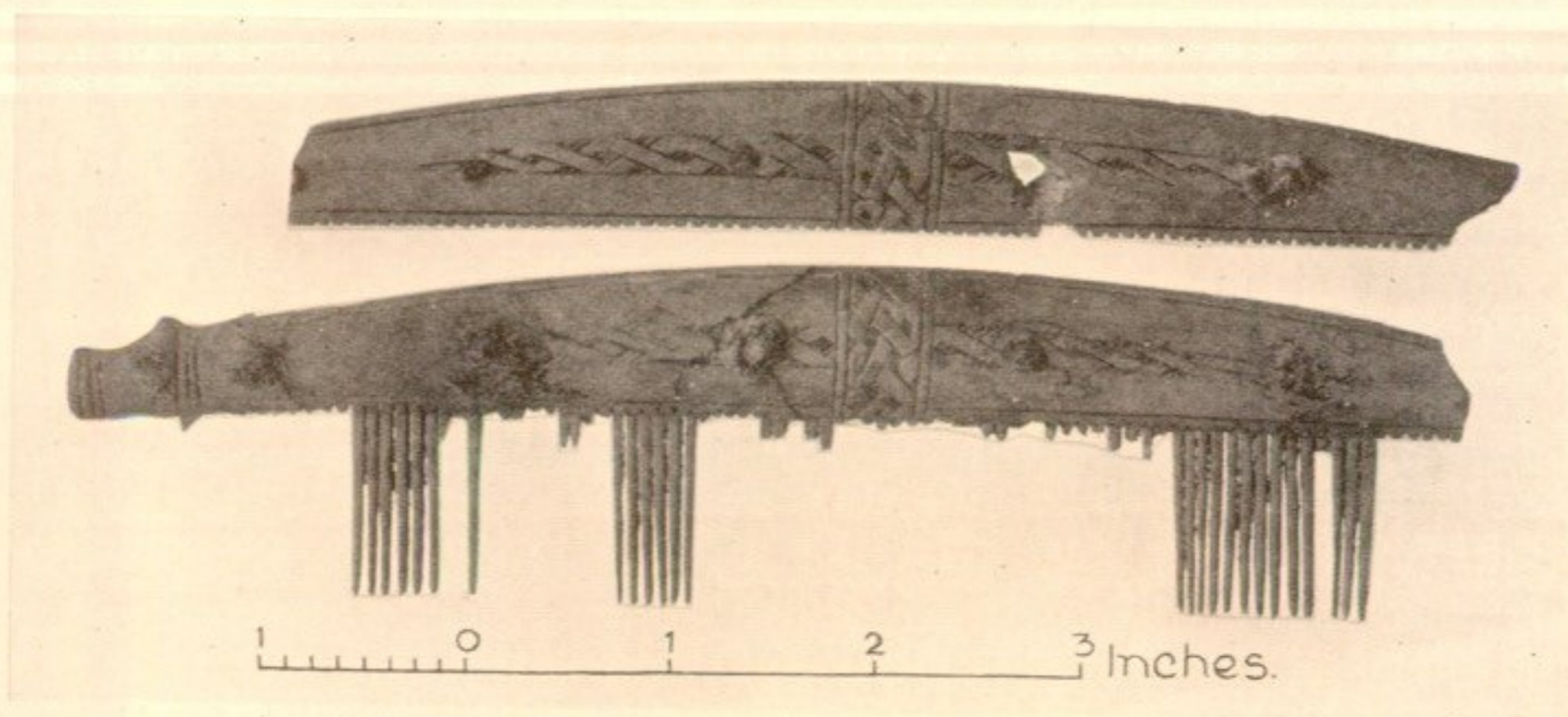


Fig. 18. Two Sides of one of a pair of long Combs.

Bone (fig. 17, No. 6) which has been rubbed down to a point from one side. It measures $6\frac{1}{8}$ inches in length.

Small ferule or socketed point (fig. 17, No. 3), measuring $1\frac{3}{4}$ inch in length.

A portion of the antler of a red deer (*Cervus elaphus*) (fig. 17, No. 4), which appears to have been fashioned to be inserted in some other material or in the ground, one end being sharply pointed, as if to serve the purpose of a support. It measures $5\frac{1}{2}$ inches in length.

Bronze.—Two fragments of thin sheet bronze were found on this part

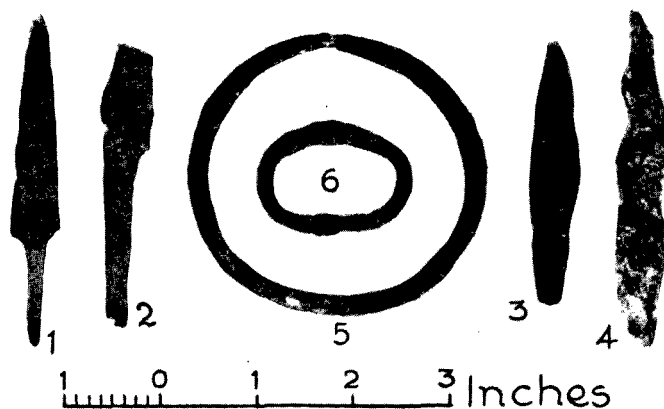


Fig. 19. Iron objects: Knife-blades, Rings, etc.

of the site, but as this material was met with all over the ground it will be treated of generally hereafter.

Combs.—The remains of a pair of long hog-backed combs of bone with the teeth on one side only, and ornamented with a panel across the centre of the bow filled with interlaced ribbon work, from which extend along the mesial line to either end diminishing panels similarly filled (fig. 18). The combs finish at each end with a zoomorphic terminal. When complete they have measured 6 inches in length.

The type is well known and specimens have been found connecting them with the pagan period of Viking culture in the ninth century. A pair of such combs was among the relics recovered from the Oseberg ship burial,¹ preserved in the University Museum at Oslo. Another pair was found associated with brooches in one of the graves discovered at Pierowall, in the island of Westray, Orkney.² A portion of another found in

¹ Brøgger and Schetelig, *Oseberg Fundet*, vol. ii. No. 156, fig. 137.

² Joseph Anderson, *The Orkneyinga Saga*, p. cxxii.

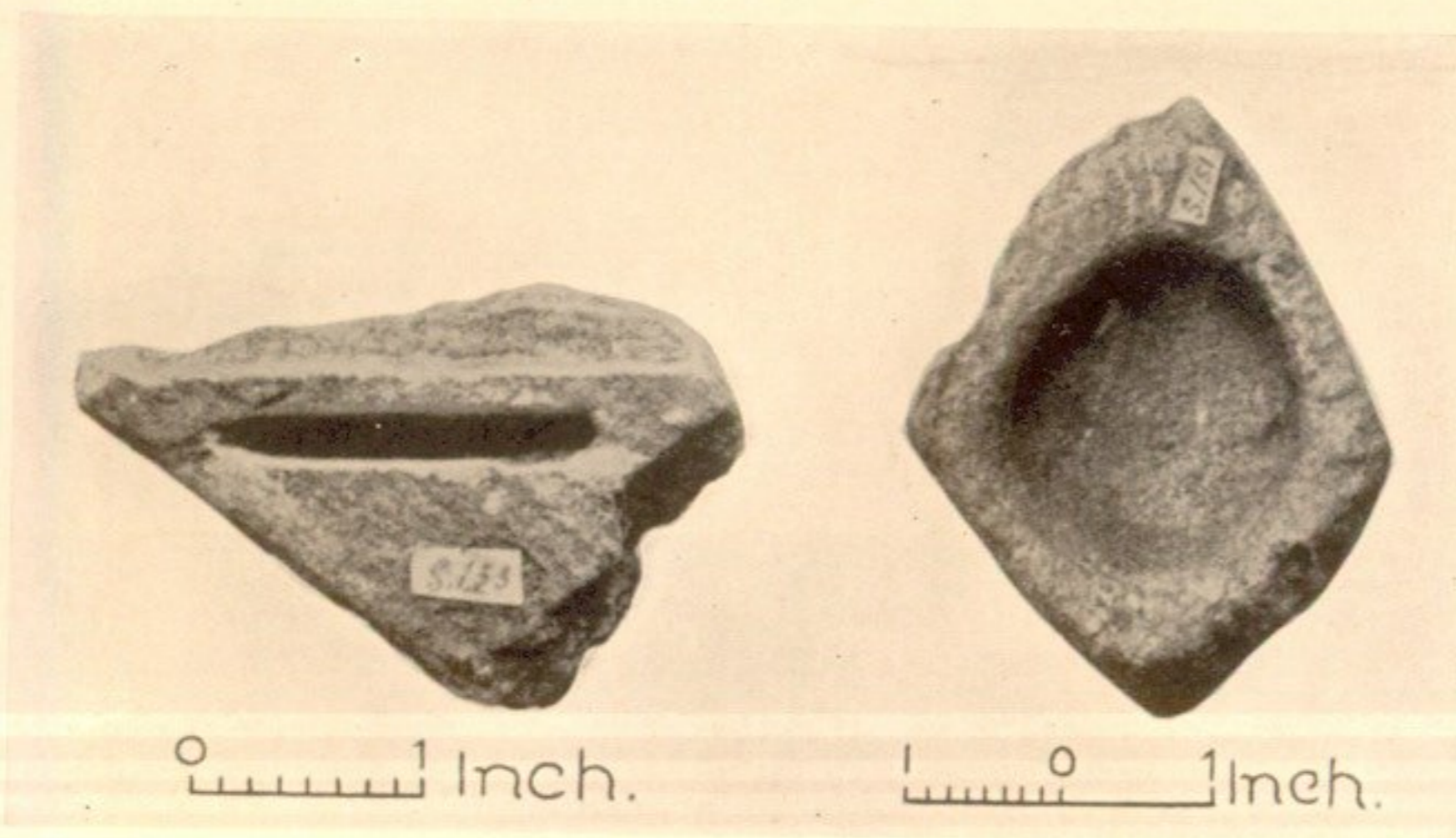


Fig. 20. Mould. Lamp.

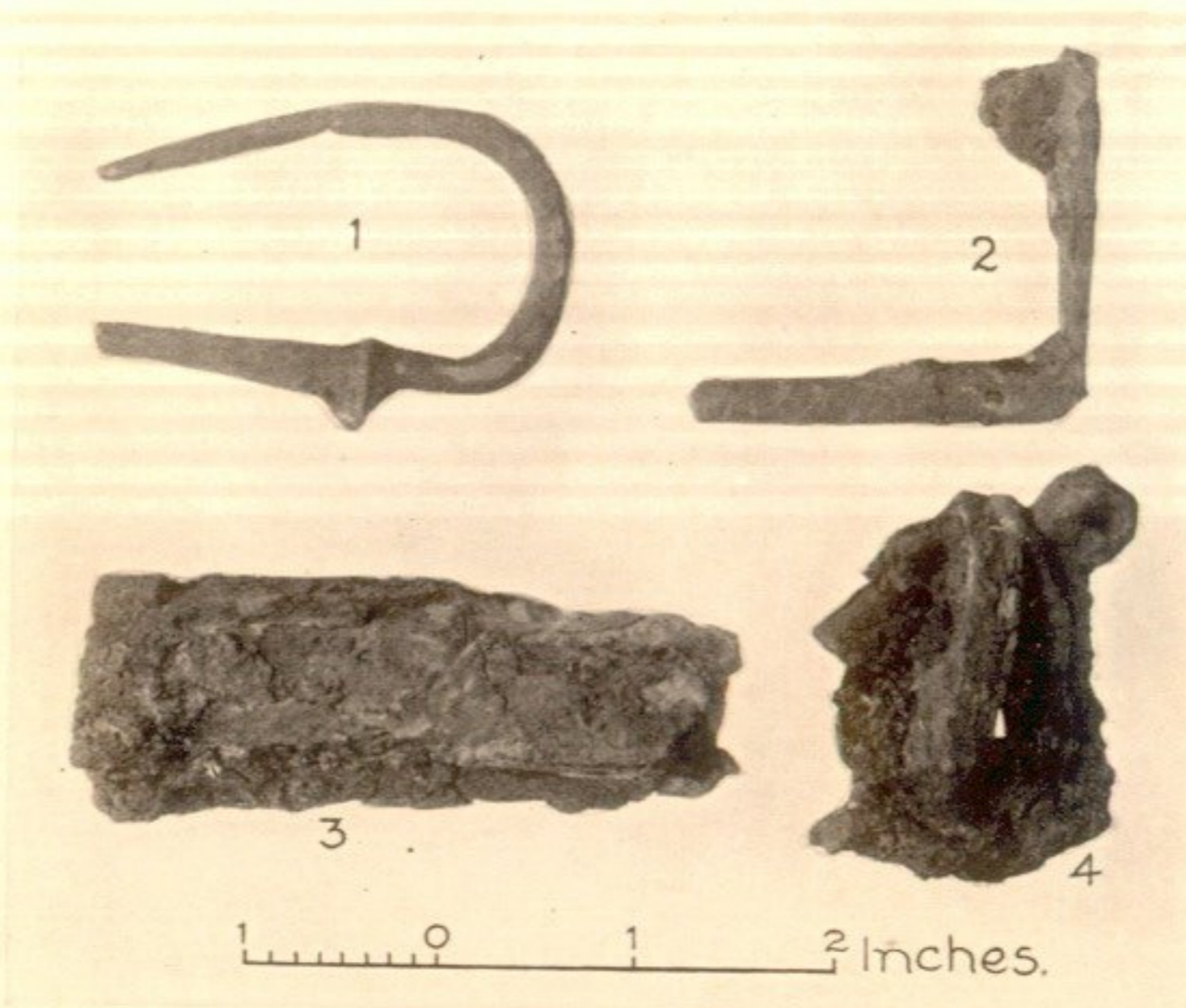


Fig. 21. Parts of Padlocks.

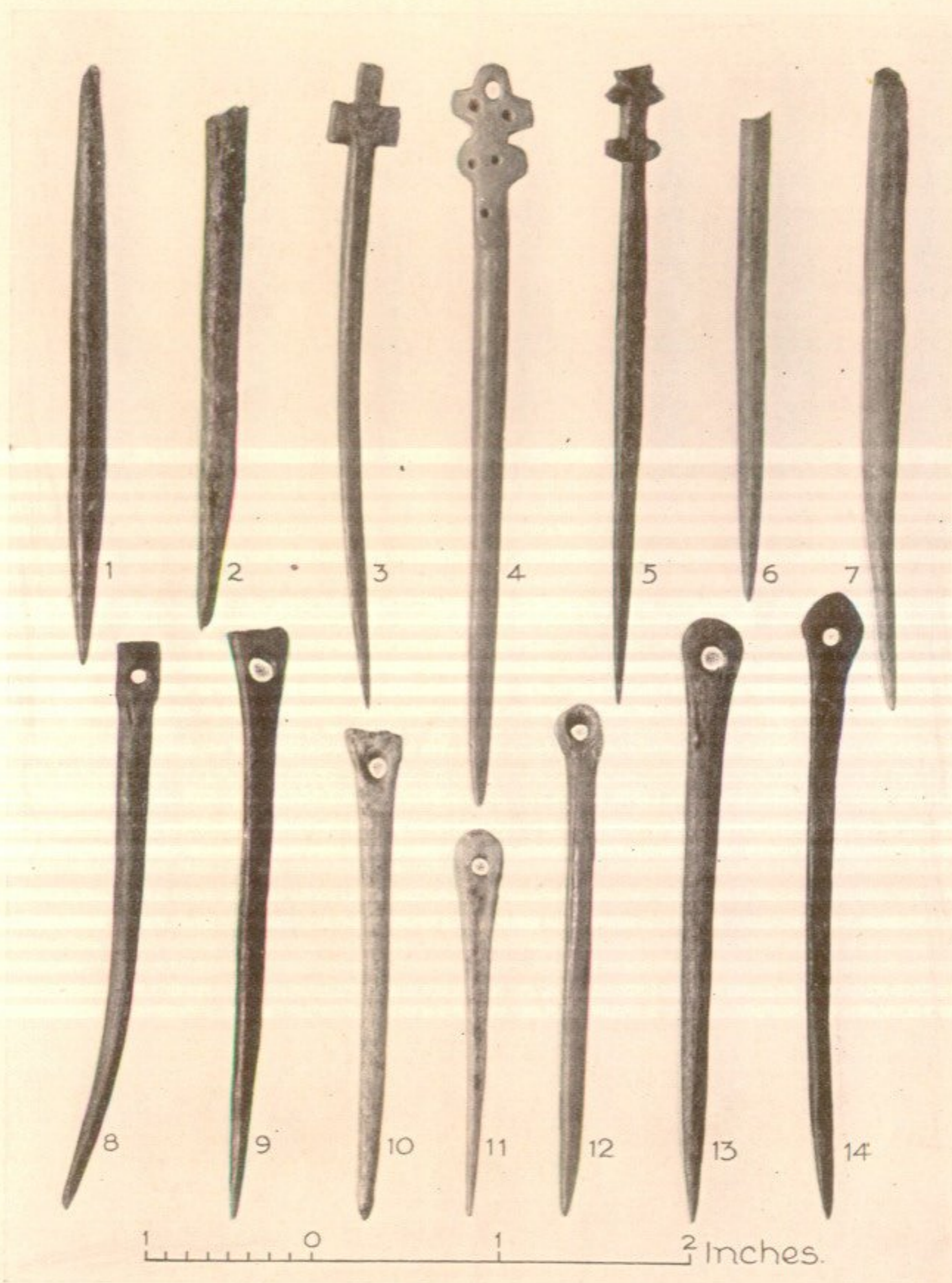


Fig. 22. Collection of Bone Pins and Bodkins.

a tumulus at Lyking, Orkney, with an iron buckle and spear, is preserved in the National Museum of Antiquities.

Knife-Blade.—The blade of a small iron knife with a tang, a sharp point, and, apparently, a hollow on the back was found in a much corroded state (fig. 19, No. 4). It measures $3\frac{1}{2}$ inches in length.

Lamp.—A small lozenge-shaped lamp fashioned from a piece of steatite (fig. 20), measuring $3\frac{3}{4}$ inches in length.

Mould.—A mould of steatite for casting a small ingot $1\frac{5}{8}$ inch in length (fig. 20), also a fragment (not illustrated) of a mould of clay for casting a pin.

Padlock.—A cylindrical padlock of iron with longitudinal ribs of bronze or brass, much corroded (fig. 21, No. 3).

Pins.—The midden yielded a remarkable collection of bone pins, or bodkins (fig. 22, Nos. 1–14). The majority of these have simple straight or rounded heads, but three have cruciform terminations (Nos. 3, 4, and 5). No. 8, with a square head, is closely paralleled by a bodkin found at Brattahlid.¹ They vary in length from $2\frac{1}{8}$ inches to $4\frac{1}{8}$ inches. No. 4, the largest and most ornamental, is highly polished.

Spoon of Bone.—Fig. 17, No. 1, shows a spoon of bone, imperfect, a portion of the bowl being broken off. The bowl is very flat. As existing, the spoon measures $7\frac{1}{8}$ inches in length. In the National Museum in Oslo there is a unique spoon made of iron with an oval bowl found in a Viking grave in Gubransdal, and dating from the ninth century. In the Scottish National Museum of Antiquities there are two small spoons of bone from the Borness Cave, where the presence of Samian ware indicated a date of occupation early in the Christian era.

Stone Discs.—Several fashioned discs of stone were recovered varying from $1\frac{1}{8}$ inch to 2 inches in diameter, and about $\frac{3}{4}$ inch in thickness, the purpose of which is not apparent.

Turn-Buckles or Snecks.—One complete turn-buckle of bone (fig. 23), measuring $4\frac{5}{8}$ inches in length, and one half of a smaller one, were found. The larger sneck has a slight concavity $2\frac{3}{16}$ inches in diameter on the under side as if it had been used to turn on to top of some discoid object with a convex section.

Whorl.—One half of a large flat whorl.

RELICS FROM THE MIDDEN IN THE ALLEY-WAY.

Bowl of Steatite.—An oblong bowl of steatite (fig. 24), measuring 11 inches by 8 inches, imperfect at one end; found among fish remains.

¹ *Op. cit.*, p. 136, fig. 102.

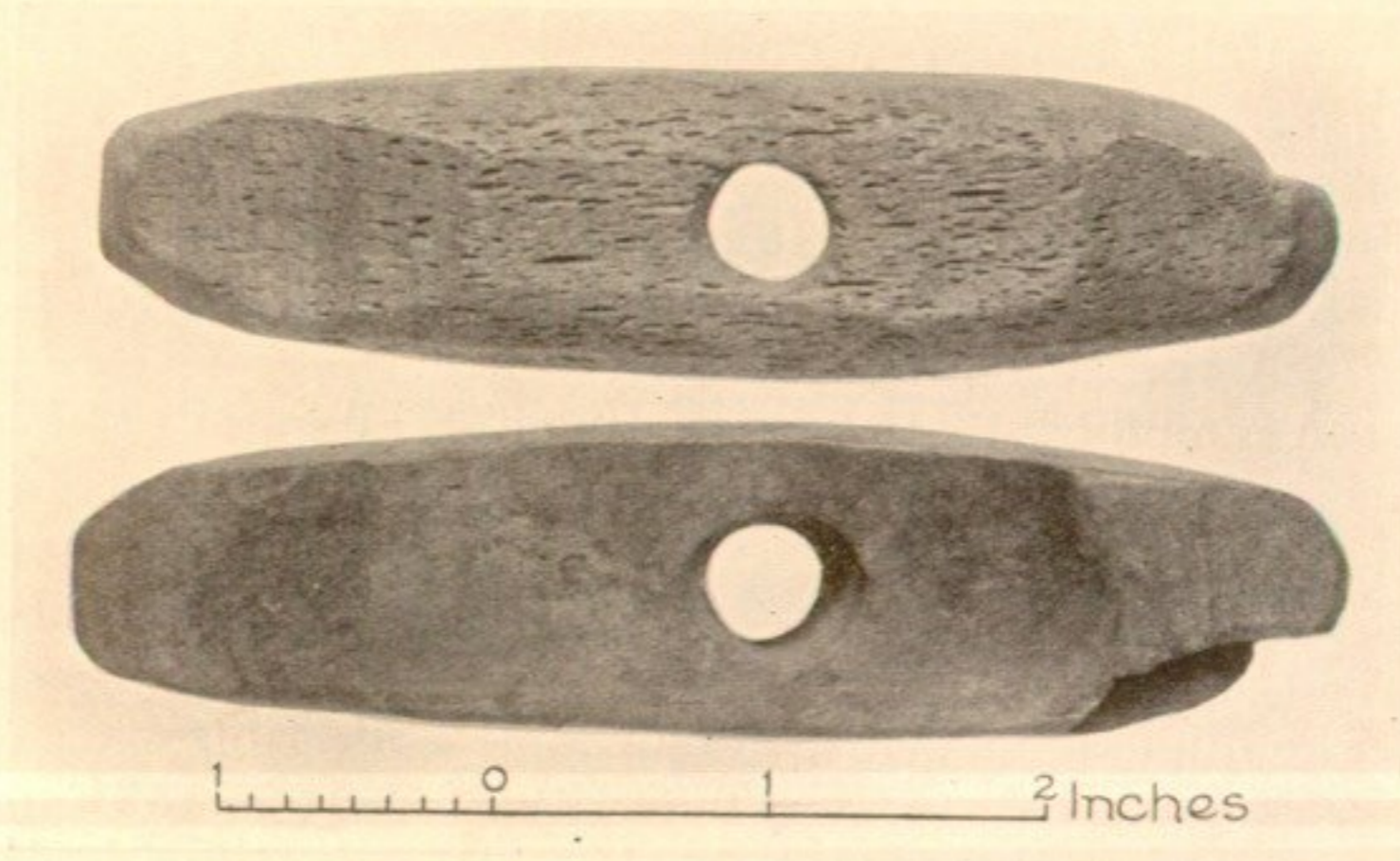


Fig. 23. One of two Turn-Buckles or Snecks of Bone.



Fig. 24. Bowl of Steatite.

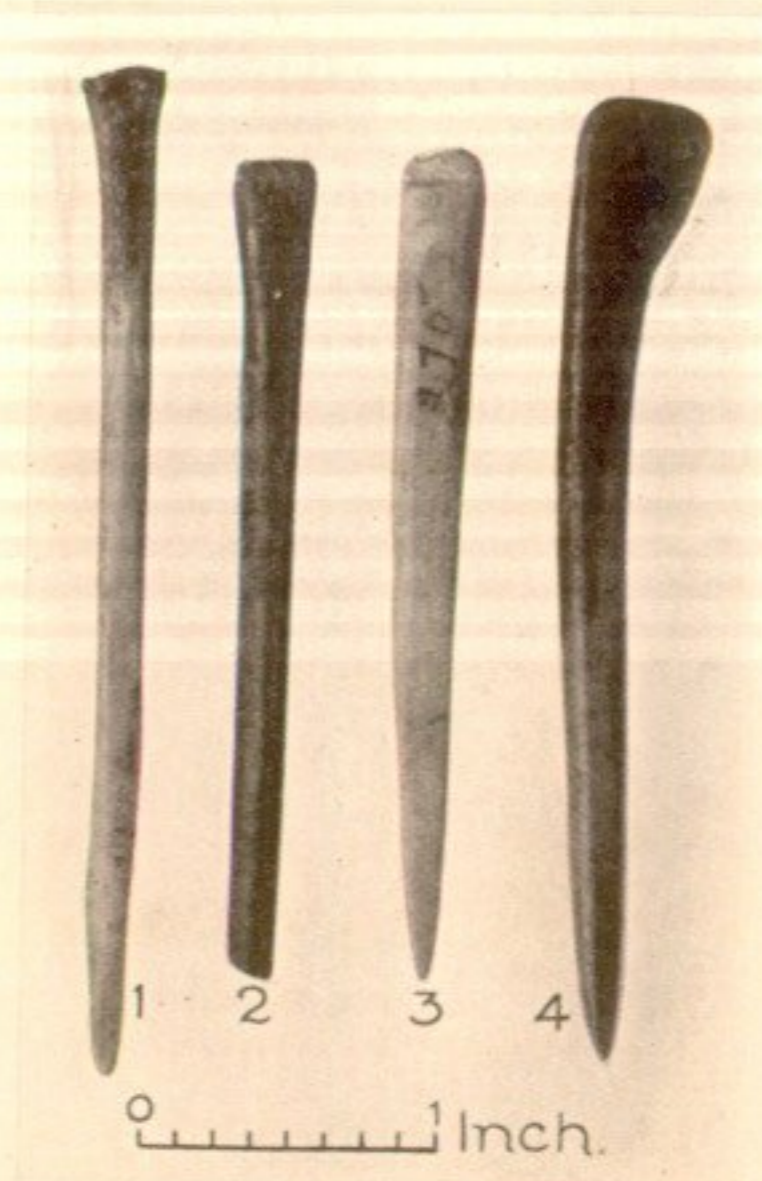


Fig. 26. Pins of Bone.

In the University Antiquarian Museum at Oslo is a similar bowl found with a Viking sword and dating from the last part of the tenth century, to which period this type appears to belong.

Bronze.—A fragment of thin bronze sheet, with a rivet hole through it.

Iron Bolt-head, lozenge-shaped, of the form employed in the construction of Viking ships, examples of which are shown in fig. 36.

Padlock Bolt of Iron (fig. 21, No. 1), $2\frac{1}{2}$ inches long.

Pins.—Three pins of bone (fig. 26, Nos. 1, 2, and 4). They are quite simple, except No. 4, in which the head is flat and expanded to one side.

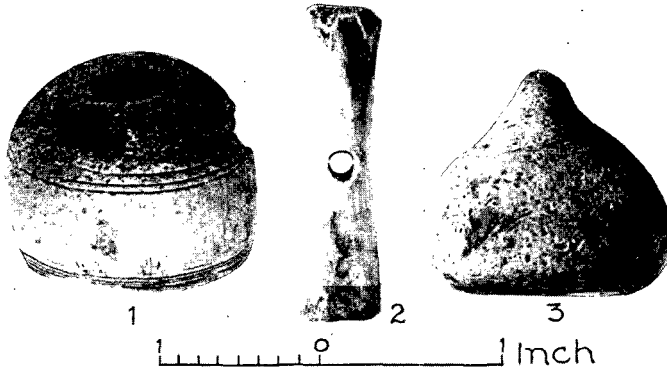


Fig. 27. Terminal, Dress Fastener, and Playing-piece of Bone.

Playing-piece.—A conical playing-piece of bone (fig. 27, No. 3), measuring $1\frac{3}{16}$ inch in height and $1\frac{7}{16}$ inch in greatest diameter.

A similar playing-piece found in a grave of the pagan period in Iceland is illustrated by Daniel Brunn.¹

Punch of Iron (fig. 19, No. 3), measuring $2\frac{3}{4}$ inches in length.

Whorl of Lead.—A small whorl of lead, in form a truncated cone, measuring about $\frac{3}{4}$ inch diameter at base (not illustrated). This type of whorl dates from Viking times.

RELICS FROM THE INTERIOR OF THE HOUSE AND THE ADJACENT WALL-HEADS.

Armlets of Jet.—Two small segments of armlets of jet, or cannel coal, are shown in fig. 28, Nos. 12 and 13. No. 13 is perforated as if for wear

¹ *Op. cit.*, p. 76.

as a pendant. Another fragment similar to No. 12 was also recovered. These three segments were all found at or near floor-level in the southern section of the house, and so presumably belonged to one of the earlier periods of occupation.

Such armlets are occasionally found in graves of the pagan period.

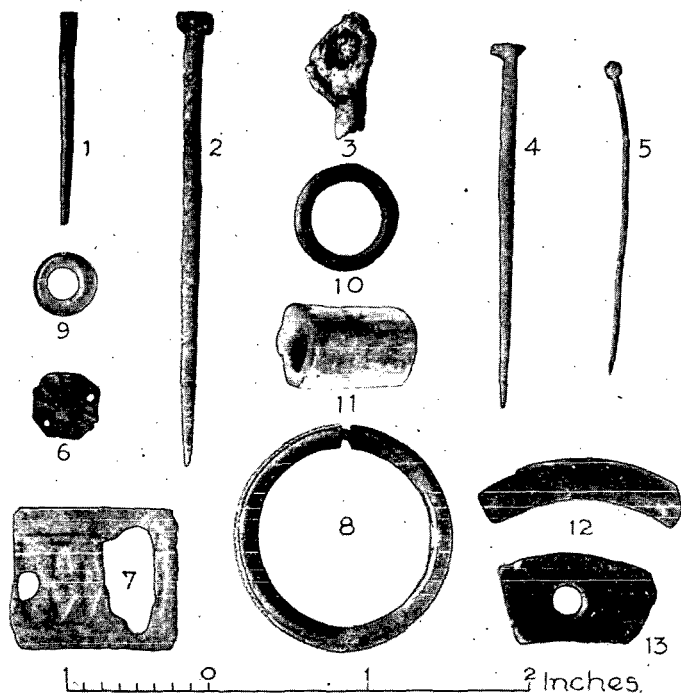


Fig. 28. Miscellaneous Relics from the Interior of the Dwelling and the Wall-heads.

One was recovered with the pair of fine bronze *tortoise-brooches* from Castletown of Wick, near Thurso, while another was found with a pair of brooches of similar type and a blue glass bead near the broch of Laminess, Island of Sanday, Orkney. Both are preserved in the National Museum of Antiquities.

Beads.—Five beads were discovered in the course of the excavation. Only one of these was of glass (fig. 28, No. 9). It is of dark blue colour, similar to the bead referred to above from the Island of Sanday. It was found at floor-level near the centre of the dwelling. Of the other beads, all with one exception are of stone, and are discoid, except one, not illustrated,

which is flat on either surface and polygonal. Only one (fig. 56, No. 10) was found within the dwelling and that near the centre at floor-level. The others, including one made from a section of a bird bone (fig. 28, No. 11), were found searching for the wall-heads.

Bone Implements.—The three bone implements found are illustrated in fig. 29. No. 1, which is made from the metatarsal of a small pony,



Fig. 29. Bone Implements from Interior of House.

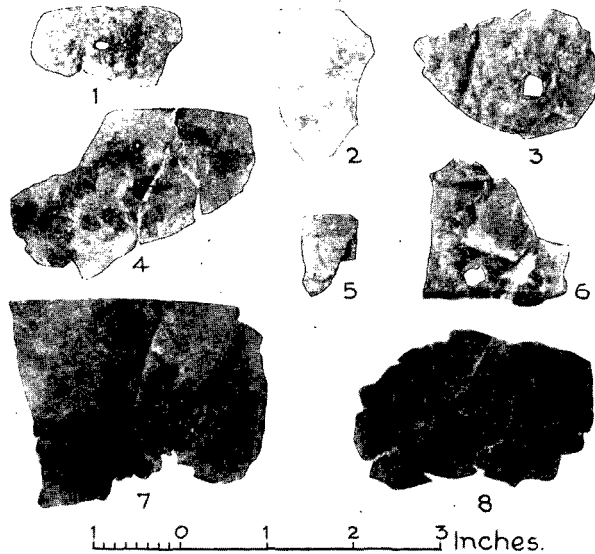


Fig. 30. Fragments of Sheet Bronze.

probably of the Shetland type, is worked to a blunt rounded end. It was found not far below the surface. The other two specimens appear both to have been employed as awls, and were found at floor-level.

Bronze.—Throughout the excavation seventeen pieces of thin sheet bronze were discovered, and, while single specimens were found in both of the middens, no less than fifteen were recovered from the interior of the dwelling and the wall heads (fig. 30). The fragments were sometimes very small and much decayed; frequently they were pierced by a rivet hole, and in one example, No. 7, a small paper-fastener rivet may be seen, while

No. 5 shows a similar rivet detached. The largest specimen measured some 5 inches by 4 inches superficially. Though the find spots were generally confined to floor-level, and the situations referable to the earlier occupation, the largest piece was found when deturfing, and one or two other specimens were found above the floor. Nor did any example from its form give any indication of the purpose it had served other than its use as a plating for some indefinite object.

Brooch.—A penannular brooch of brass, plano-convex in section, with a

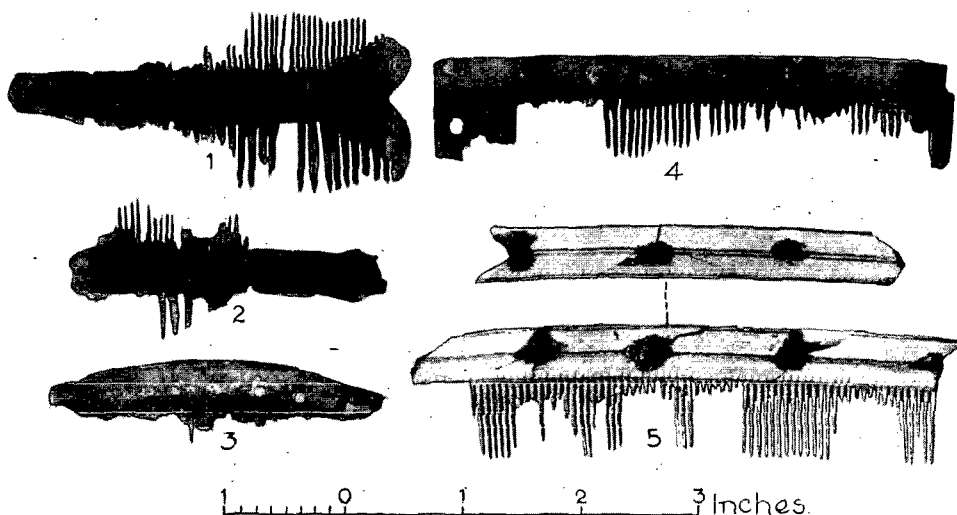


Fig. 31. Combs of Bone.

narrow band of arrow-point ornament around the outer edge (fig. 28, No. 8), was found on the top of tumbled stones in the south-east section. It is probably of comparatively late date.

Combs.—Four combs of bone were found within the dwelling, and are illustrated in fig. 31, Nos. 1-4.

No. 1 is doubly toothed, with larger teeth on one side than on the other. It has terminated at either end in a plate of bone fashioned like a butterfly with expanded wings, and is decorated with dot and circle ornament. The plate, which keeps the sections of bone from which the teeth are cut in position, is freely studded with bronze pins. It was found in the central section actually below floor-level. When complete it has measured $3\frac{3}{8}$ inches. Combs of similar type were found, respectively, in the brooch of Carn Liath, Sutherland, on the sands of Bracon,

North Yell, Shetland, and at Freswick, Caithness, and are preserved in the National Museum of Antiquities.

No. 2, which is very imperfect, has also been a double comb and may have been similar to No. 1. It was found while clearing off soil from 8 inches to a foot above floor-level.

No. 3, a comb with an arched bow and teeth on one side, very imperfect, was found in the central section above floor-level.

No. 4, which is a straight-backed comb with teeth confined to one side, and prominent bronze studs along the bow, measures $4\frac{3}{8}$ inches in length, and was found lying on the top of a stone at floor-level in the south-east section of the dwelling, so probably belonged to the earlier periods of occupation.

Crucible.—Fig. 32 shows a portion of a small crucible, in form cup-shaped, with a pointed base, found at the south end at floor-level.

Cruisie, Lid of.—An object fashioned in stone, of pointed pear-shape, and measuring $3\frac{1}{8}$ inches in length and breadth, worked to a smooth surface on one face and left rough on the other; judging from its shape may have been the lid of a cruisie when the latter was out of use (not illustrated).



Fig. 32. Fragment of a Crucible.

Discs of Stone.—Several small discs of stone, measuring each about $1\frac{1}{2}$ inch in diameter and up to $\frac{7}{8}$ inch in thickness, were found on the floor-level. They may have been employed in some game.

Flint Core.—A small conical core of yellow flint from which flakes had been struck, measuring 1 inch \times $\frac{13}{16}$ inch, was found at 1 foot 6 inches above floor-level, an obvious intrusion from an earlier age.

Hones.—The most numerous class of relics found were the hones or sharpening-stones. Of these, whole and imperfect, a score were recovered in the dwelling. Those that call for any comment can be divided clearly into two classes: (1) Hones of a dark slatey stone, quadrangular in section, tapering sometimes markedly to one end, and always perforated, obviously for suspension. This type is well illustrated by fig. 33, No. 1. It is not infrequently found associated with other relics of the Norse pagan period in Viking graves. One was discovered in a Viking grave at Reay, Caithness in 1926.¹ (2) Hones of larger size, illustrated in fig. 34, which have a haunch-like expansion at one end as if to provide a grip. This type, which does not appear to have been found in Viking graves in this country,

¹ *Proceedings*, vol. lxi. p. 206.

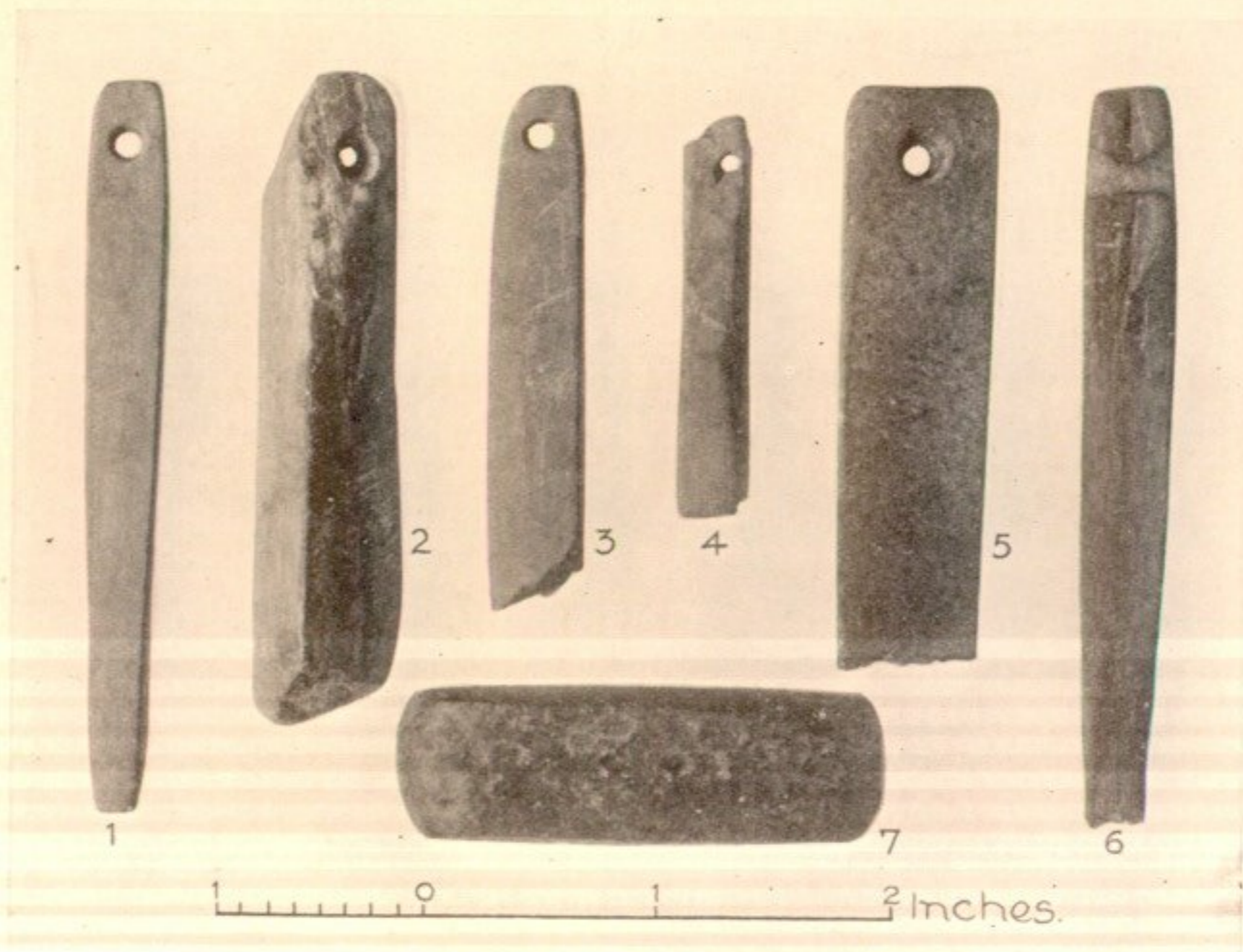


Fig. 33. Hones perforated for Suspension, and a Polisher (No. 7).

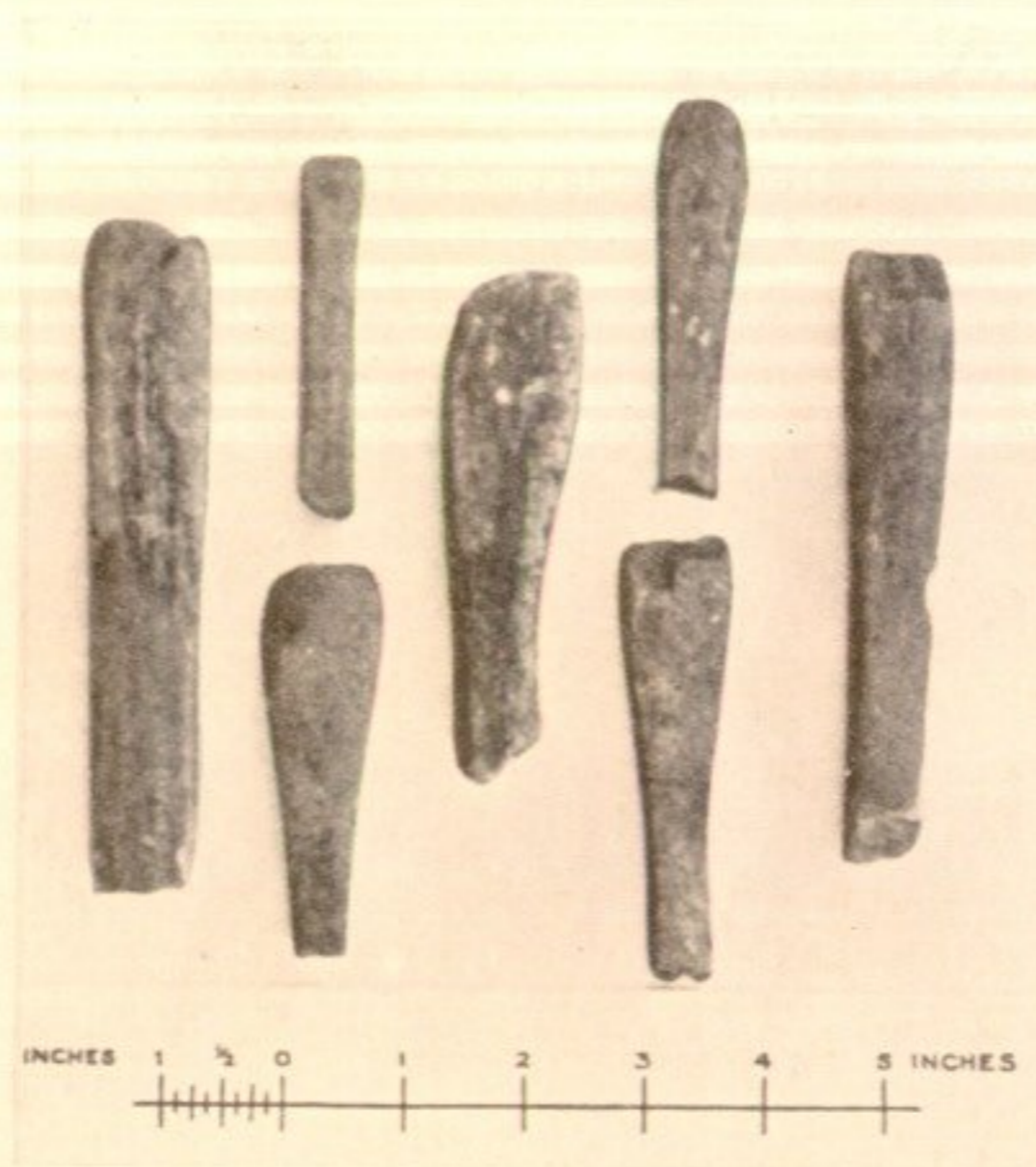


Fig. 34. Haunched Hones.

is represented from such sources in the Museum at Stavanger in Norway, where, in fact, its occurrence is more frequent than that of the small black pierced hones.

Iron Fish-Hook.—A fish-hook (fig. 35), with an eye pierced through the shank, and measuring $2\frac{1}{16}$ inches in length, was found in the opening made through the east wall towards the north end, and so obviously belonged to the last period of occupation, or later.¹

Iron Rivets.—Such objects with lozenge-shaped heads, were of fairly frequent occurrence (fig. 36, Nos. 1-5). The presence of these within the house was probably due to the use of discarded boat-timbers in which they were fixed, for consuming on the fires, and not for structural use in the building, as tree-nails only were so employed, iron never being used by the Norwegian craftsmen in timber construction when wood would serve his purpose.²

Iron Tooth of a Hackle for Combing Flax.—One such object (fig. 37) was found. It measures $4\frac{7}{8}$ inches in length and is much corroded.

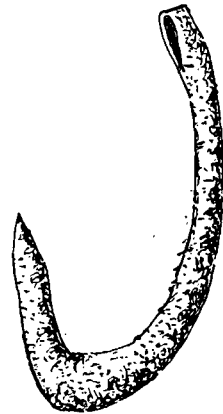


Fig. 35. Fish-hook of Iron. (1.)

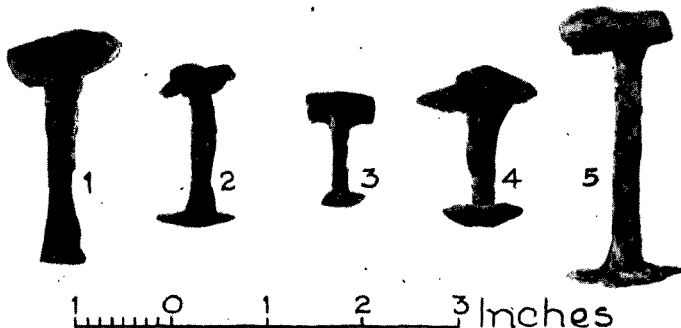


Fig. 36. Iron Ship-bolts with Lozenge-shaped Heads.

In the Norwegian Museums at Oslo, Bergen, and Stavanger there are numerous spikes from such hackles.

Loom-weights ; Line-sinkers.—Chiefly within the dwelling, but to a lesser extent also in the middens, there was found a large number of oval pebbles perforated at one end. Such pebbles found within a dwelling are

¹ This illustration is from a sketch made at the time of discovery as the object disintegrated somewhat under treatment.

² I am indebted to Dr Schetelig for this information.

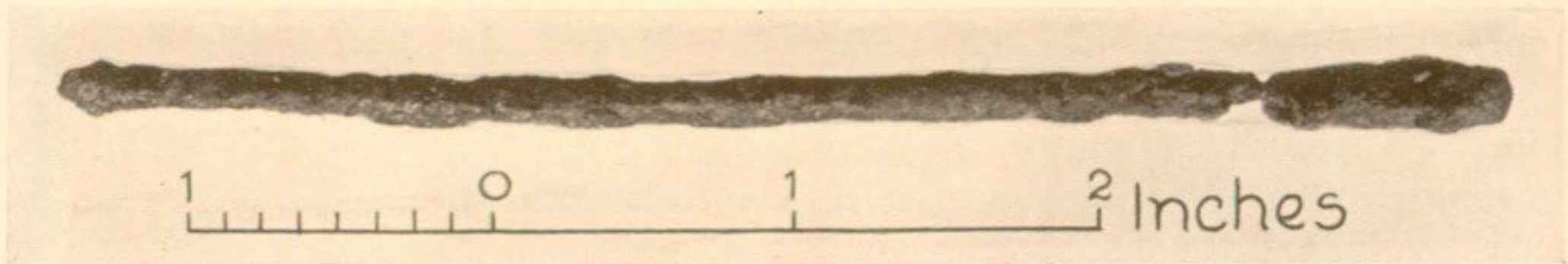


Fig. 37. Tooth of Hackle.



Fig. 38. Loom-weights.

regarded in Norway as loom-weights rather than net-sinkers, and in evidence of this view there is a collection found in a woman's grave preserved in the Museum at Bergen. From Jarlshof came over 150 examples, of which 136 were ordinary pebbles, 10 were shaped to some extent, and

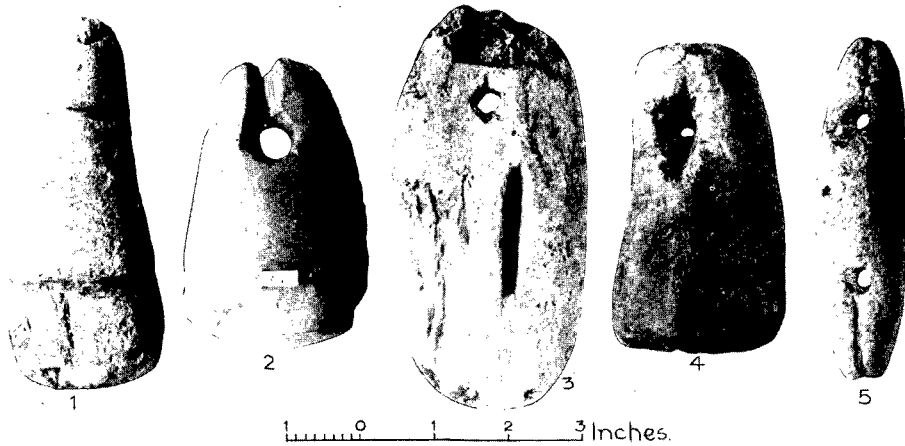


Fig. 39. Loom-weights.

4 were grooved for a cord. Some examples are shown in figs. 38 and 39. In the former are plain pebbles, in the latter examples showing distinct features. Fig. 39, No. 1, is imperforated, but has two encircling grooves

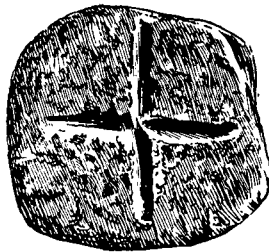


Fig. 40. Base of Weight. (†.)

for a cord to rest in. No. 2 has been shaped at the sides. In the centre of No. 3 has been cut a small matrix for casting an ingot, possibly of silver. On the butt end of No. 4 is cut a cross (fig. 40), which suggests its use as a weight to a bismar. No. 5 is probably a line-sinker, having a resemblance to the leaden object used at the present day. Fig. 41 shows

an example on which there appears on two faces some rude attempt at ornament done in graffito. On the face shown on the left of the illustration there may be seen towards the top of the stone a device resembling a bent human arm, or possibly merely a dog-tooth design. The scratchings near the centre of the right illustration are even more difficult to determine.

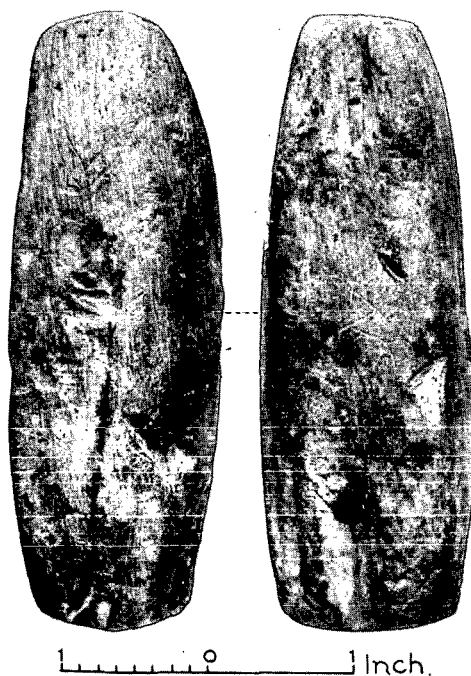


Fig. 41. Loom-weight with Graffito on Two Surfaces.

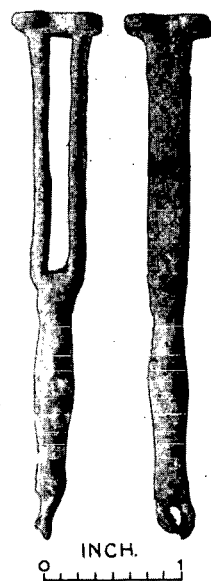


Fig. 42. Bronze Padlock Key.

Padlock and Key.—The iron bolt of a padlock (fig. 21, No. 2), much corroded, was found in the south-east section, and not far distant in the same section and at floor-level was discovered a bronze key, 4 inches long (fig. 42) for a well-known type of mediæval padlock. An example found at Vangnes, Balestrand, in a tumulus with a polisher and a piece of a sword, etc., is illustrated by Rygh.¹

Playing-men.—In the central section of the house at floor-level, and just to the north of the position of the drain, there were found lying

¹ Norske Oldsaker, 2nd Iron Age, No. 456.

close together fifteen small, flat, round, white pebbles of quartz which presumably had been used as playing-men (fig. 43).

Another collection of seven similar pebbles was found, also at floor-level, in the south-east section.

Pins of Bone.—Only one bone pin (fig. 26, No. 3) was found within the house. It came from near floor-level in the south section.

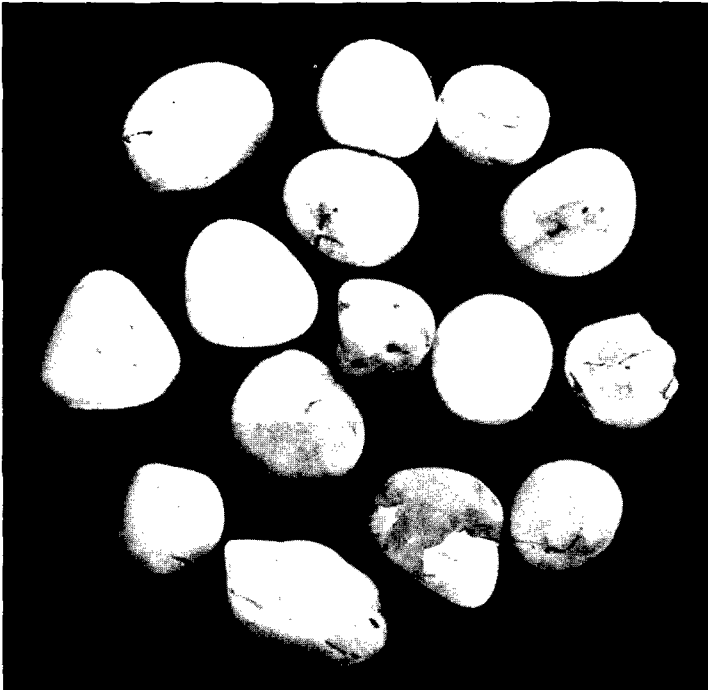


Fig. 43. Quartz Pebbles probably used in a Game. (†.)

Pins of Bronze.—Two complete pins of bronze, and remains of three others were found, and are illustrated in fig. 28, Nos. 1-4 and 10. Of the former, one (fig. 28, No. 2) is hammer-headed, and the head is enriched with dot and circle ornament on the sides and on the ends. It measures 3 inches in length. A similar pin with the same ornamentation, but on the sides of the head only, was found in an earth-house at Galson, Borge, Lewis, and is preserved in the National Museum of Antiquities. Another, unornamented, likewise in the Museum, came from a shell mound at Knap, also in the Island of Lewis.

The other complete pin (No. 4) measures $2\frac{1}{4}$ inches in length and appears to be unique. In lieu of the oblong block, or hammer, which

surmounts the pins above mentioned, there is here a zoomorphic terminal which seems to represent the head of a dog. It is shown enlarged in diagrammatic section in fig. 45, No. 1. If this object is referable to Viking times the dog's head may have reference to Vigi, the faithful hound of Olaf Trygvason, but as it was found not far below surface-level its association is not assured. In its general form, however, the pin bears a close resemblance to No. 2.

No. 3 is the much corroded head of a pin with a movable ring-head of characteristic Viking form. Two small detached portions of the actual pin were also recovered. They were found at floor-level in the south section of the dwelling. No. 1 is the end of a pin found in filling in. No. 10 is a ring, $\frac{3}{4}$ inch in diameter, presumably the head of a pin with movable ring. It was found above floor-level at the north end of the house.

The pin, with rolled head (fig. 28, No. 5), was found near floor-level at the south end, but may be comparatively modern.

Polisher.—A faceted stone of some hard material highly polished and measuring $2\frac{1}{8}$ inches in length by $\frac{13}{16}$ inch in breadth, evidently used as a polisher (fig. 33, No. 7), was found at floor-level in the central section.

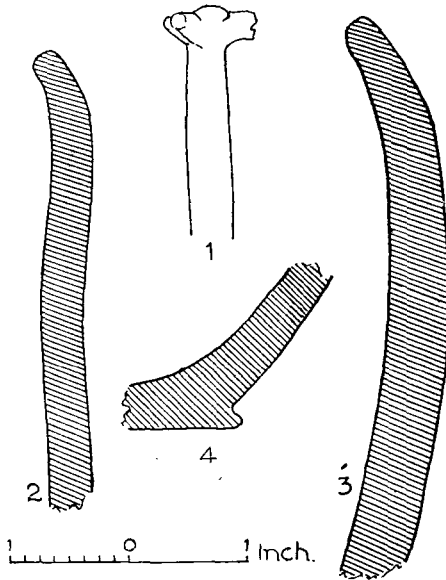


Fig. 45: Sections of Potsherds and diagrammatic Drawing of Pin-head.

Rosette of bronze (fig. 28, No. 6) is a small rosette pierced with two pin holes, and measuring $\frac{1}{2}$ inch in diameter, which came from the central section at 10 inches above floor-level.

Pommel, or Terminal of Bone.—A hemispherical object of bone (fig. 27, No. 1), measuring $1\frac{1}{4}$ inch diameter at base and $1\frac{1}{16}$ inch in height, and perforated, the purpose of which is not apparent, was found 1 foot below the surface at the north end, and consequently must be of later date than the dwelling.

Pottery.—Numerous sherds of pottery were found chiefly within the house. Wherever found they appeared to be of uniform character, sherds of rude hand-made vessels, built up in zones after the manner of prehistoric pots as shown in fig. 44, No. 1. No vessel was sufficiently

represented to admit of reconstruction, or to permit of a complete section being made. Fig. 45, Nos. 2 and 3, shows two rims in section, indicating the usual forms, and No. 4 in the same fig. indicates the flat character of the base. The body of the ware is very distinctive, and differs from

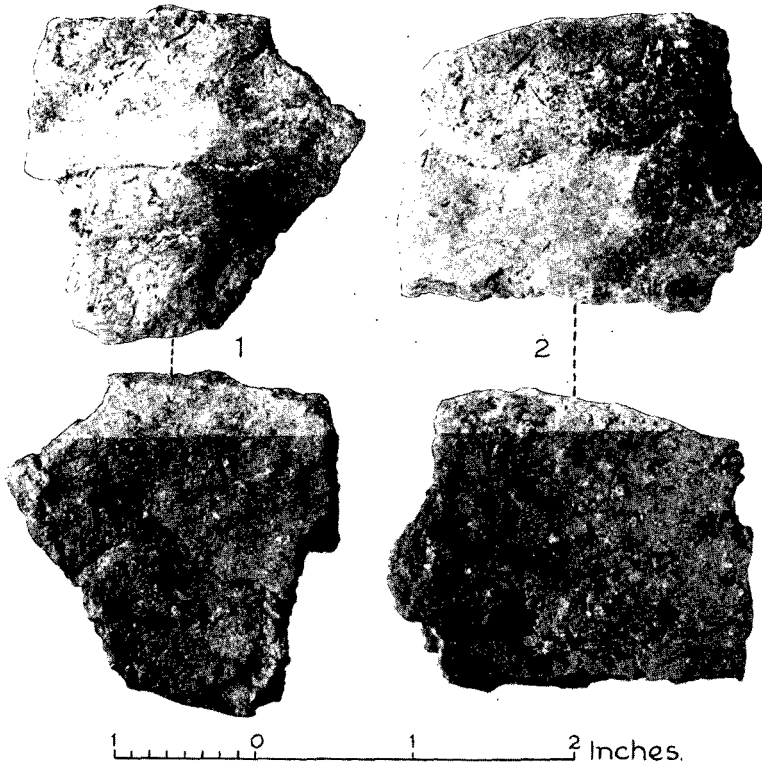


Fig. 44. Typical Potsherds.

the hand-made pottery of earlier times in the amount of vegetable matter which has been employed in its construction, and which is still represented by the forms of grass and seeds to be seen within it (fig. 44, No. 2). Pottery of this period is not of common occurrence in Norway. An example in the University Antiquarian Museum at Oslo (c. 23865 of that collection) from a Viking grave at Hollen is a bowl with rounded base.

Some sherds of pottery in the National Museum of Antiquities from Freswick, Caithness, appears to be of similar consistency.

Quern.—Only one small fragment of a quern for grinding grain, and that of the rotary type, was found. It was of garnetiferous quartz.

Slate and Stone Tablets worked in Graffito.—Scattered over the dwelling, chiefly at floor-level, but in one or two instances above it and even on one of the wall-heads, there was found a number of fragments of thin tablets of slate or stone on which designs, rude attempts at ornament, or mere casual scorings, had been produced in graffito by means of a stilus, or some other pointed implement. Most of the tablets had been broken in pieces, and in no single instance were all the fragments recovered to make possible a complete restoration. This is not surprising, as the slates were thin; often broken into small pieces; and lying for the most part in a milieu of soil mixed with peat-ash, and blackened with soot and refuse. The wet weather, moreover, which prevailed for most of the period of the excavation, also interfered with the use of the riddle. In all some fifty inscribed stones were recovered. Of these many of them bore just a few apparently meaningless scratches, but all on which the graffiti are of consequence have been reproduced in illustration by means of photographs and drawings in figs. 46 to 54.

The most notable example (figs. 46 and 47) is a tablet measuring 7 inches in length by 2 inches in breadth, on which is clearly depicted, in diagrammatic style, a Viking ship with high curving prow and stern, mast and rigging, and broad steering oar to starboard at stern. The hull is represented by a single line, and rising from it ten pairs of vertical strokes indicate the oarsmen, two to each thwart. Three oblique strokes abaft the rudder appear to indicate three men leaning on the tiller, while a single line between the oarsmen and the steersmen evidently shows the skipper in control. A criss-cross device produced on the reverse is also shown in figs. 46 and 47. This relic was found at floor-level in the central section of the dwelling.

The type of ship represented is that found at Kvalsund, in Møre, Norway, the remains of which are preserved in the Bergen Museum.¹ This boat, besides being similar in form, had an equivalent equipment of rowers, and thus probably corresponded fairly closely in dimensions to the ship represented on the Jarlshof tablet. It measured 18 metres (59 feet 7 inches) in length, 3·20 metres (10½ feet) in greatest breadth, and 0·885 metre (3 feet) in depth from the underside of the

¹ An illustration of a model may be seen in Professor Schetelig's *Oldtidens Fartøier*, fig. 6, *Særtryk av Nordisk Kultur*, *avi*.

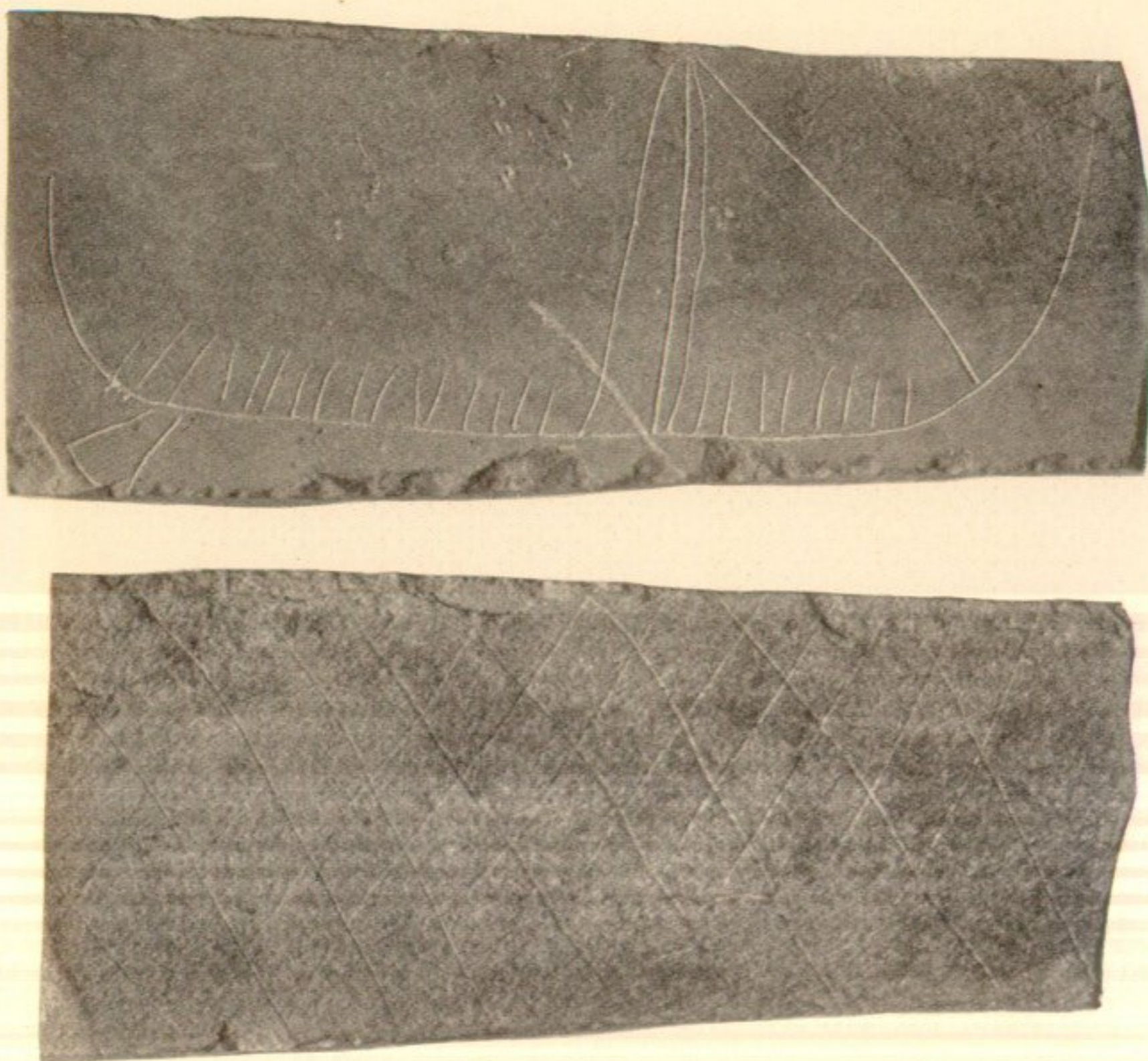


Fig. 46. Tablet with Drawing of Viking Ship on Obverse and Criss-cross Ornament on Reverse. ($\frac{1}{4}$.)

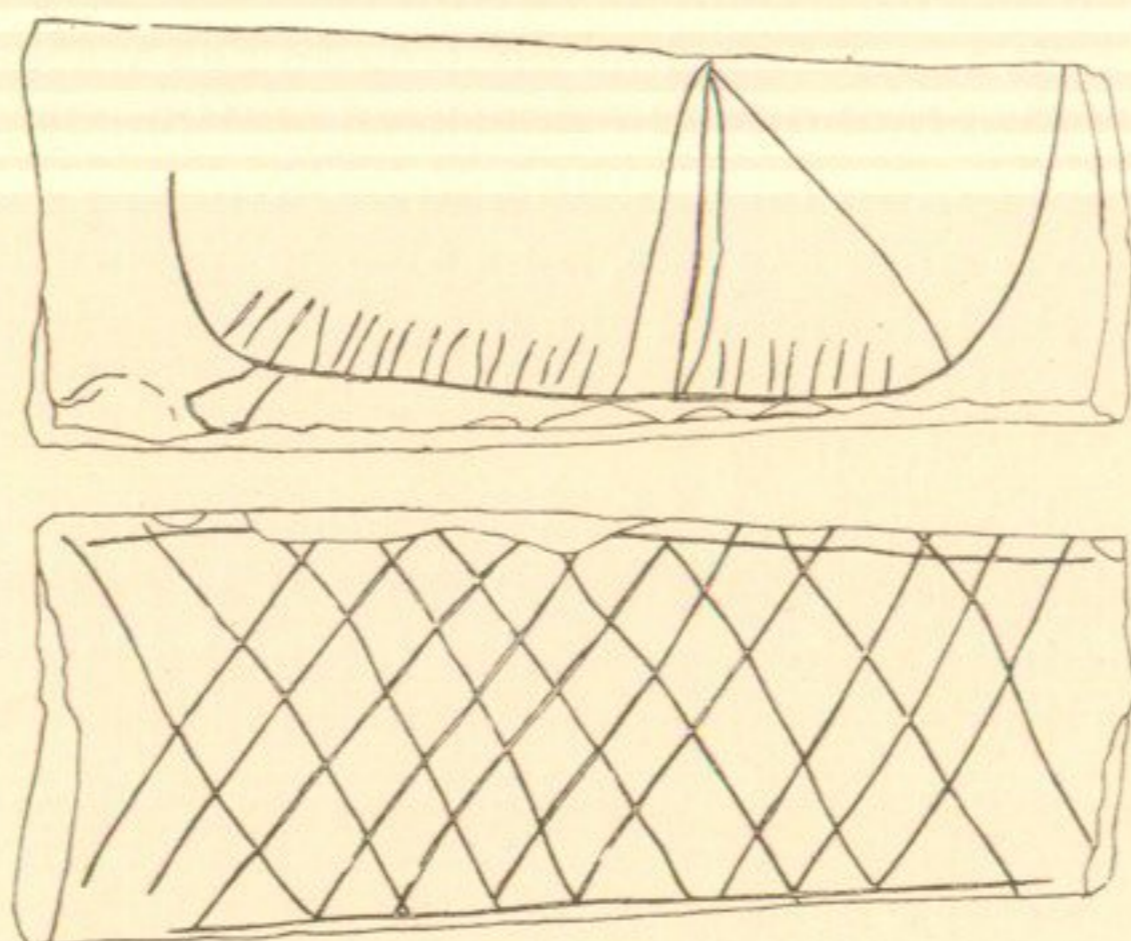


Fig. 47. Drawing of Graffiti, as shown on fig. 46. ($\frac{3}{8}$.)

keel.¹ It is believed to have belonged to an earlier period than the Viking age.²

The representation of boats was, from an early period, a common practice in Scandinavia, and so no particular significance need be attributed to this tablet beyond its interest as an illustration of such a ship as may have been in use in Shetland in the ninth century. In the view of Professor Schetelig it probably represents a war vessel.

One other tablet (figs. 48 and 49, No. 6) presents an unambiguous reproduction of two objects of everyday use of the time—a bow and arrow. This representation may be seen on the slate toward the upper left-hand corner. It will be noticed that the arrow is placed in reverse position with the point across the string and the head projecting beyond the bow. The significance attaching to this arrangement is not apparent. Equally cryptic are the two circular figures scratched behind the bow and arrow. Bows and arrows were in regular use by the Norsemen. There are few references to them in the Sagas, and it is inferred that their use was largely confined to the rich man's hunting.³ This example was found at floor-level in the southern section of the dwelling.

Less certain of interpretation is the design scratched on a small pentagonal fragment, figs. 49 and 50, No. 5. This bears a resemblance to another boat with a dragon-headed prow, and, more problematically, a representation of the tent, or awning (*tjald*), erected in the centre of the ship when at rest. Towards the bow in the drawing there appears to be a mast, while in the centre is seemingly another mast carrying a sail as if a second drawing had been imposed on an earlier one. The boat, if such it be, is represented as floating in the water.

This piece was also found in the southern section.

The curved lines drawn on figs. 48 and 49, No. 2, viewed as placed on the plate, or sideways from the left, may also be intended to represent the bows of ships, but the intention of the draughtsman is less clear than even the previously described specimen. This slate was found at floor-level near the centre of the dwelling.

Another example represented by two detached fragments made up of several broken pieces (figs. 49 and 50, No. 3) is evidently intended to represent some definite object, or design.⁴ In the larger portion it will be observed that the representation is in duplicate. In general character the graffito bears some resemblance to a pine tree, on one side,

¹ Schetelig, *op. cit.*, p. 96.

² *Ibid.*

³ T. D. Kendrick, *A History of the Vikings*, p. 35.

⁴ The detached portion in making the figs. has got slightly moved out of position to the right. The right edge of the lower portion should be in alignment with the stem in the upper.

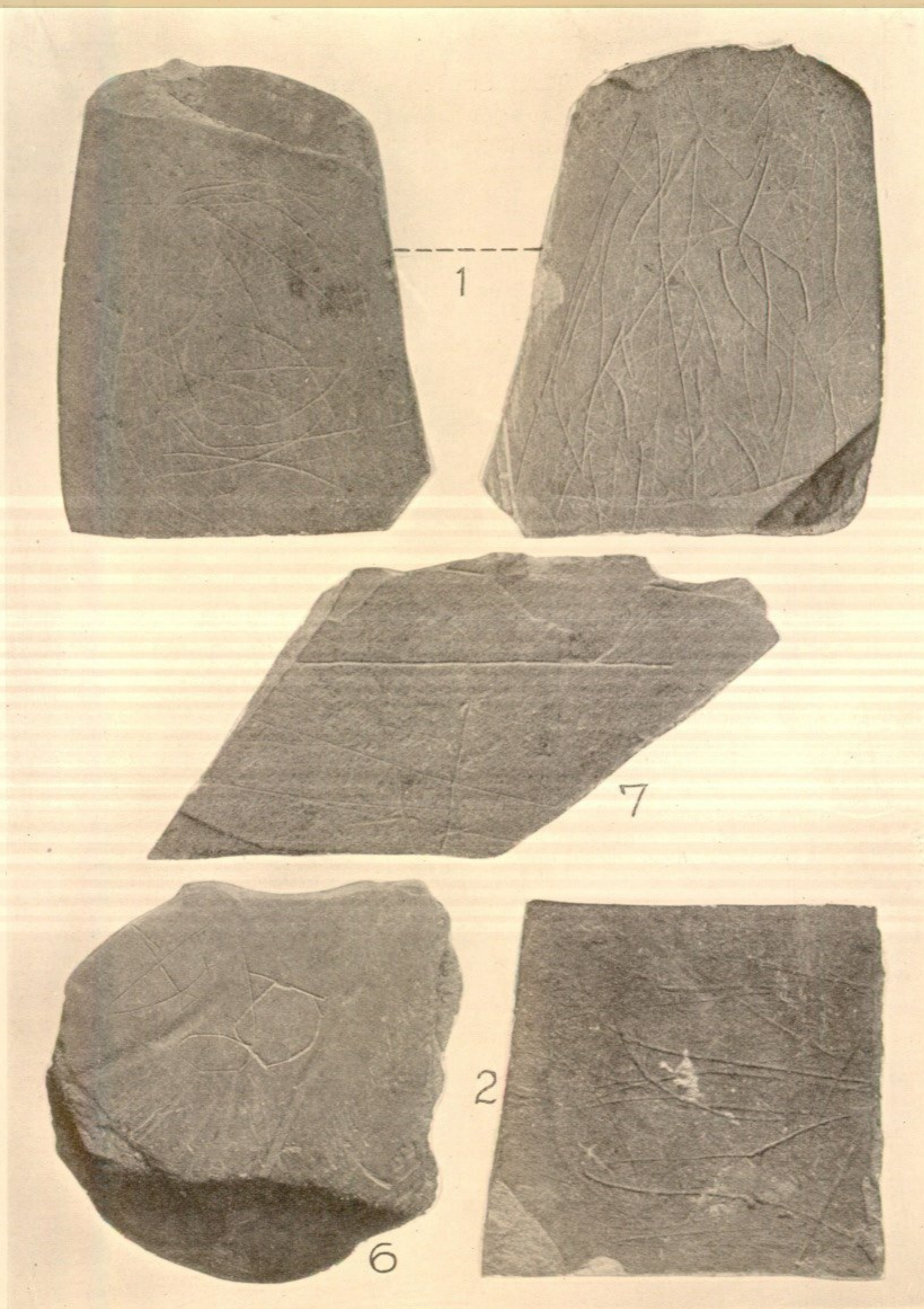


Fig. 48. Tablets of Slate with Graffiti Markings. (1.)

with branches radiating from a central stem and diminishing in length upwards. On the opposite side of the stem, however, the branches give place



Fig. 49. Drawings of Tablets with Graffiti Markings.

to a series of loops, also diminishing in length towards the upper end of the stem. It has been suggested that the slender lines represent the branches of a spruce tree in summer, and the loops the branches covered with snow

in winter. There are, of course, no pines of any sort, and practically no trees in Shetland, but the pine is the common timber of Norway.

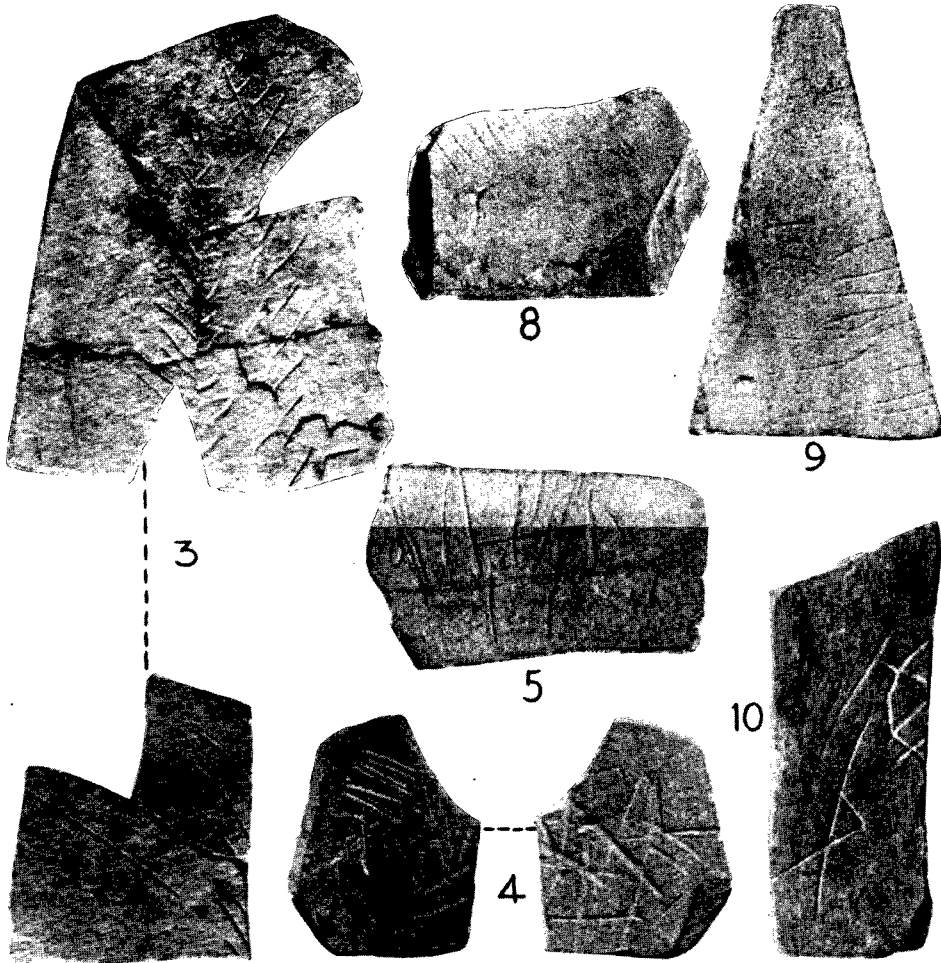


Fig. 50. Tablets of Slate and Stone with Graffiti Markings. (†)

These fragments were found at floor-level on the top of the *pallr*, just to the north of the cross wall.

Figs. 49 and 50, No. 9, show an example with scratchings along one

edge, suggesting some form of runic writing. This slate was also found on floor-level in the south section. The pieces illustrated by Nos. 4 and 10 in figs. 49 and 50 show a different technique than the others, the lines being

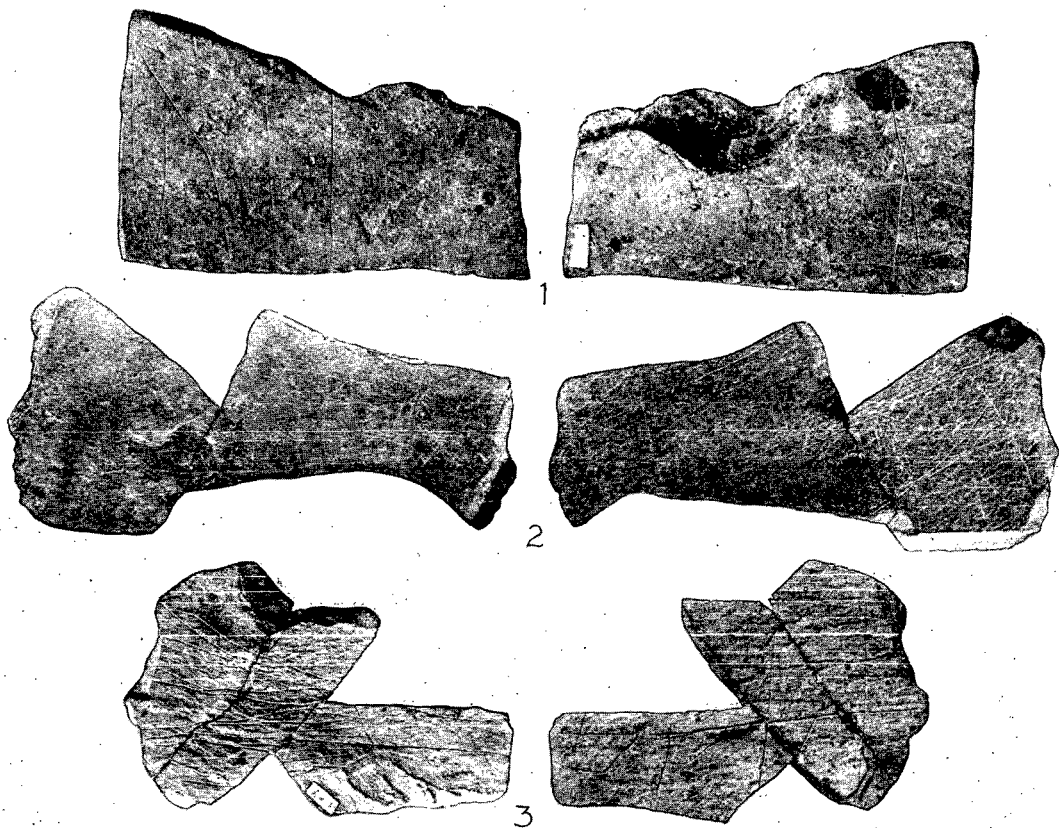


Fig. 51. Tablets with Graffiti Markings.

cut much deeper. Both were found at the north-west corner, and so probably belonged to a later period.

On a number of the tablets were drawn schemes of intersecting lines, more or less at right angles, as if some attempt had been made to form a squared basis for the execution of curvilinear design. Figs. 48 and 49, No. 7, and figs. 51 and 52, Nos. 1 and 2, both sides of which are shown, illustrated this treatment.

No. 3 of figs. 51 and 52, of which both surfaces are also shown, has a curious striated treatment on one surface, suggesting an attempt to represent the sea. Unfortunately the fragment which might have furnished an explanation of this graffiti is amissing. On the reverse is a rectilinear scheme.

Figs. 53 and 54 illustrate a slate on which the scratchings in curvilinear design appear to suggest an attempt to produce a recurring spiral

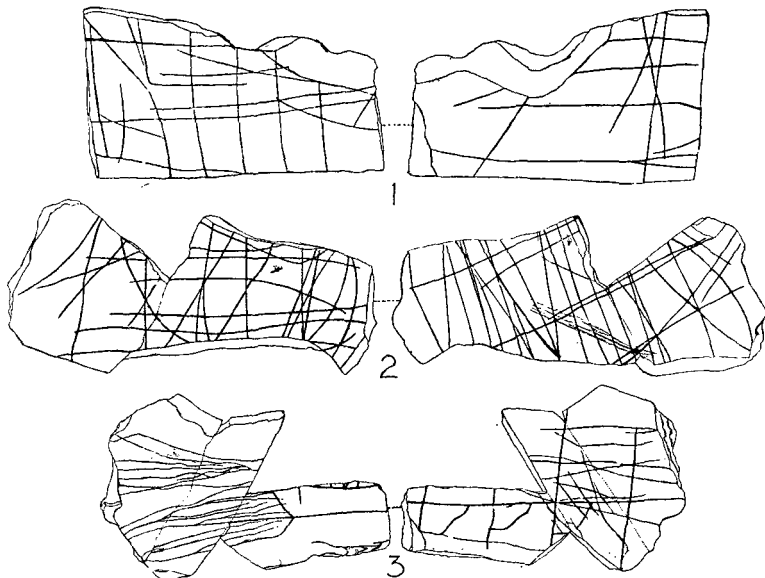


Fig. 52. Drawing of Tablets with Graffiti Markings. ($\frac{1}{2}$.)

after the manner of Celtic design. If such was the intention the result has not been very successful.

Figs. 48 and 49, No. 1, show the two sides of a tablet with lines producing both rectangular and curvilinear forms, but not clear in their implications.

While by far the greater number of marked tablets were found on the floor-level of what must have been the earlier occupations, several were recovered from the wall-heads towards the north end when these were being cleared. That does not, however, preclude their belonging to an early period, as the inner part of the wall-head would not necessarily be covered in as in a modern house.

There does not appear to be any analogy to this find of scored stone tablets in connection with any building of the Viking period in Norway.

When, however, the remains of the monastery of St Mochaoi of Nendrum, in County Down, in Northern Ireland, were excavated¹

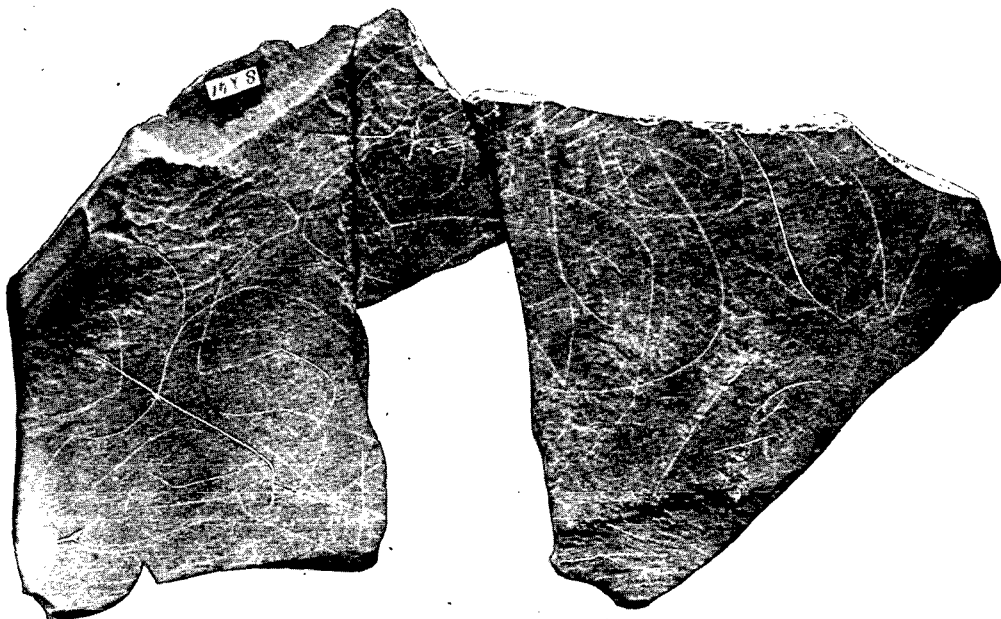


Fig. 53. Tablet with Curvilinear Graffiti.

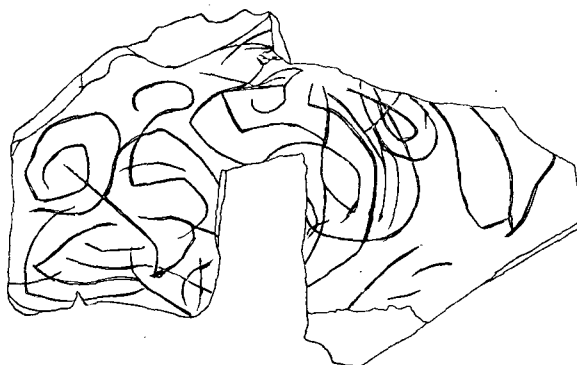


Fig. 54. Drawing of Tablet with Curvilinear Graffiti. (3.)

there were found on the site of a rectangular building, believed to be that of a school, some thirty tablets of slate, or stone, bearing inscribed designs. The drawings on the Nendrum tablets are, however, more

¹ H. C. Lawlor, *The Monastery of Saint Mochaoi of Nendrum*, Belfast, 1925.

sophisticated, and their purport, whether that was the production of design of interlacing of animal forms, or letters, is as a rule unambiguous. As the destruction of the school and adjacent huts by the Norsemen is believed to have taken place about the year A.D. 947, they give an indication of the character of Celtic art in Ireland probably a century later than the rude attempts at drawing found at Jarlshof.

It is not possible to arrive at any definite conclusion as to the meaning and purpose of the Jarlshof scribings. The representation of the ship, reduced to essentials, and drawn with a sensitive line, is the work of a draughtsman. Many of the other tablets show the most rudimentary attempts at drawing, and might well be the efforts of pupils studying the elements of design. Failing that, they are the meaningless scribbles of an idler produced with the point of his knife on a smooth surface. The fact that their distribution was not confined to one part of the site makes it probable that additional pieces may be found, and these may throw some further light on the meaning of the scratchings.

Steatite, Vessels of, etc.—Numerous fragments of vessels of steatite were found in the dwelling. Several contiguous pieces of a large pot, four-sided and tapering to the base, were recovered from the north end. Such straight-sided vessels are characteristic of the Middle Ages.¹ These fragments found in the north section of the house probably belonged to the latest occupation.

The handle, $4\frac{1}{2}$ inches in length, of a skillet, or ladle-like vessel, was found in the south section, and as such vessels date from Viking times this probably belonged to one of the earlier occupations.²

Fig. 55 illustrates a portion of a plate of steatite rudely scored on both surfaces. A piece showing marks of fire was found in the vicinity of the oven, and several pieces were recovered from a trial trench in 1933. They are probably portions of flat dishes used in baking or frying.

Toggle of Bone.—The object illustrated in fig. 27, No. 2, with a perforation in the centre, appears to be a dress-fastener or toggle. It was found at floor-level in front of the small hearth in the central section. A similar object was found in a woman's grave of the Viking period at Carn Nan Bharrich, Isle of Oransay, associated with a pair of iron shears, a bronze pin with a movable ring-head, and a pair of single scaled oval brooches of bronze. These relics are preserved in the National Museum of Antiquities.³

Whorls.—Nine whorls were found in the course of the excavation

¹ Sigurd Grieg, *Middlealderske Byfund Fra Bergen og Oslo*, Oslo, 1933, p. 204.

² Sigurd Grieg, *op. cit.*

³ *Proceedings*, vol. xlviii, 1913-14, p. 292.

of the dwelling; shown in fig. 56. Of these seven were of stone, one of lead, and one of cetacean bone. The lead whorl, No. 4, was sub-conical, the others were either flat or plano-convex in section. All came from the floor-level in the centre or southern sections, except the lead specimen, which came from about 4 inches above floor-level.

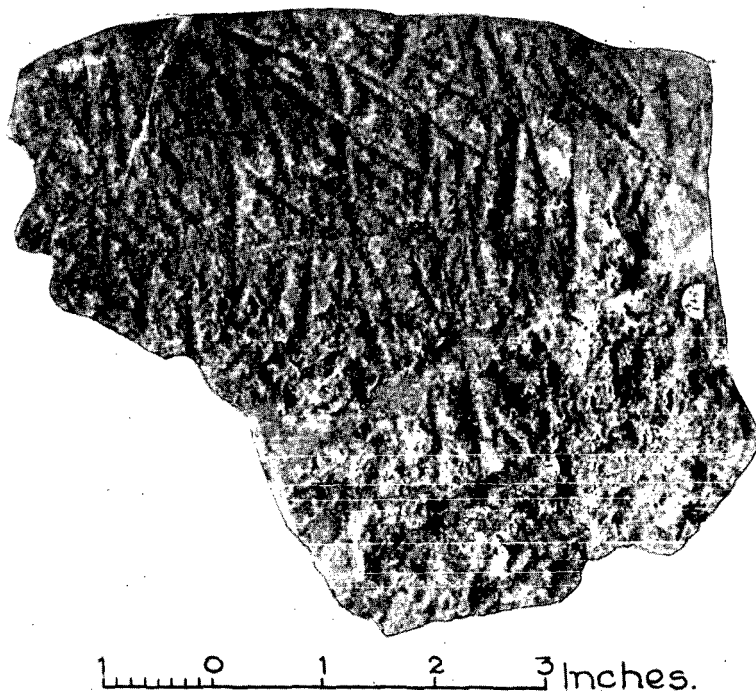


Fig. 55. Portion of a Plate of Steatite.

Among the objects which came from a high level, and therefore presumably of late date, was a model of the upper stone of a Shetland horizontal water mill (fig. 57). In the underside, shown on the right of the illustration, is the check cut to receive the sile—the small iron bar fixed across the opening. The object, made of stone, measures $2\frac{3}{4}$ inches across, and was found above the midden at the north end at 1 foot 6 inches below the surface.¹

The comb shown in fig. 31, No. 5, with a straight bow and teeth in one side only, was found on the floor-level of a late building overlying

¹ For a description of these primitive mills see *Proceedings*, vol. xx. p. 257.

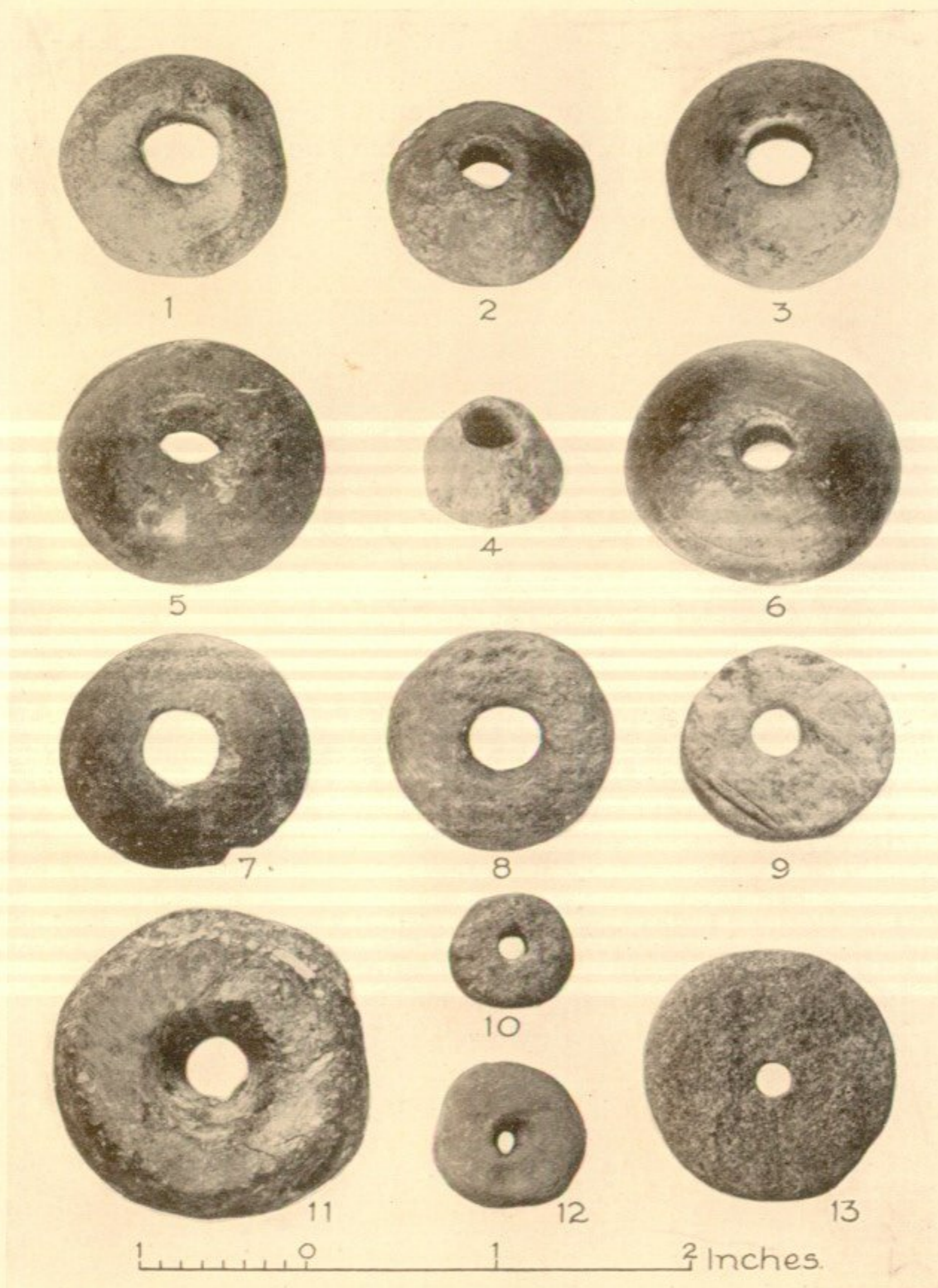


Fig. 56. Whorls and Beads.

the midden to the north of the dwelling. It probably dates from late mediæval times.

Several pieces of glazed mediæval pottery were recovered—one small piece of a base, thin ware, covered with a brownish mottled glaze, was found at floor-level in the south section. It can, however, hardly be associated in date with the other relics from the interior of the house.

Fig. 29, No. 7, shows a portion of a book-clasp on which appears the letter H. It was found near the surface and is probably of comparatively late date.

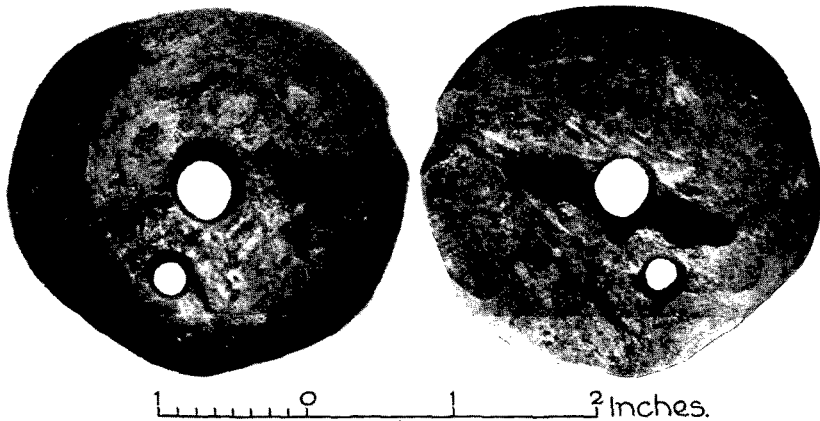


Fig. 57. Model of upper Stone of a Shetland Mill.

The two knife-blades, imperfect, in fig. 19, Nos. 1 and 2, were practically surface finds, also the iron rings in the same fig.

The general inference to be drawn from these relics is that the dwelling was in occupation during the tenth century. Those from the middens, as shown by finds elsewhere, likewise point to occupations during the Viking period. It has been suggested that the midden in the alley-way, as it partially blocked the entrance to the house, must have belonged to the third period; but, though such an inference may be drawn from its position, the character of the structure of the latest dwelling, so far as it is recognisable, suggests a later date than is indicated by the relics found in that midden. It may be that this midden actually belonged to the second house, and that the third building was not occupied as a dwelling, and its existence one of brief duration.

RELIC FROM THE BROCH OF JARLSHOF.

The opportunity is taken of illustrating in this communication an oblong tablet of stone, marked in graffito, which was discovered some three years ago in a recess about four feet above ground-level, in the outer face of the massive wall which encircles the neighbouring broch of Jarlshof. The markings have been made on a soft stone with a sharp-pointed implement, and, except that at either end there is



Fig. 58. Stone with Scribings found in Broch. (1.)

an example of the double intersecting triangle known as Solomon's Seal, they seem to produce no intelligible design. Conceivably they belong to approximately the same period as those on the slates from the Viking dwelling, for it is quite possible that the recess in which the object was found was still exposed in Viking times.

I cannot close this paper without expressing my thanks to the many friends who have given me assistance in its production, and to those who helped me in the field. To friends in Norway who, on a visit of inquiry, aided me from their stores of knowledge, and afforded me every facility to study the collections under their respective charges, Professor Schetelig and Dr Boe in Bergen, Dr Pedersen in Stavanger, and last, but not least, Professor Anton Brögger and Dr Sigurd Grieg, I owe especial thanks. To Miss Cecil Mowbray, F.S.A.Scot., who not only helped in the field, but made the remarkably accurate drawings of the graffiti, I am deeply indebted. I must also thank Capt. E. M. M. Alexander, who likewise assisted at Jarlshof, and laboured hard to reconstruct whole vessels from innumerable broken pieces of steatite pots. Dr Graham Callander and Mr Edwards, of the National Museum of Antiquities, have both rendered me much service, for which I am indebted; while, as in previous years, Miss Margery Platt, M.Sc., of the Royal Scottish Museum, has taken infinite pains to determine the nature of the bones, and Mr M. J. Orr, of the Royal Botanic Garden, has been correspondingly helpful with vegetable remains; and, as previously, I desire to record my appreciation of the work of the staff, members of the Office of Works, and local labourers who assisted at Jarlshof.