I.

EXCAVATION OF AN EARTH-HOUSE AT FOSHIGARRY, AND A FORT, DUN THOMAIDH, IN NORTH UIST. By the late ERSKINE BEVERIDGE, LL.D., F.S.A.Scot. With Notes on the Structures and the Relics found in them, by J. GRAHAM CALLANDER, F.S.A.Scot., Director of the National Museum of Antiquities of Scotland.

In 1911 Mr Erskine Beveridge, LL.D., F.S.A.Scot., published his monumental work, *North Uist: Its Archæology and Topography.* The publication of this volume, a fine record of sustained individual effort, had been preceded eight years earlier by his book, *Coll and Tiree: Their Prehistoric Forts and Ecclesiastical Antiquities.* Although several notable books have been written on antiquities in the Western Highlands and Islands of Scotland, these were limited to the description of restricted classes of monuments, but Mr Beveridge's two books consisted of an exhaustive survey of all the archæological remains which he could trace in the parts selected by him. In addition, *North Uist* contained the accounts of a number of very important excavations which he had carried out on that island.

Following the publication of *North Uist*, the four summers preceding the outbreak of the Great War were devoted to excavations on his own estate of Vallay in the north-west part of the island, which in spite of its remoteness is particularly rich in remains of early times. The war having ended, the work of excavation was resumed in 1919, but before the end of next summer Mr Beveridge had passed away.

During these five summers the chief work carried out was the excavation of earth-houses at Foshigarry and Garry Iochdrach, the fort of Dun Thomaidh (pron. Homi), on an islet on Vallay Sound, and an earth-house at Bac mhic Connain, Vallay. Before his death Mr Beveridge had written draft reports on, and prepared plans of, his discoveries at the first three sites, and he also left a very complete working diary of his operations at the last-mentioned place.

Mrs Beveridge most generously presented the more important relics

recovered from these and other sites in North Uist to our National Museum, and handed over his notes to me so that a record of the excavations might be published.

It is proposed to describe the excavations at Foshigarry and Dun Thomaidh to the Society in the present volume, and those of the other sites later on.

FOSHIGARRY: AN UNDERGROUND VILLAGE. By ERSKINE BEVERIDGE, LL.D., F.S.A.Scot.

At some remote period—perhaps even earlier than the Norse domination—this general site has been occupied by a group of no fewer than six subterranean structures, marked A to F on the plan on Pl. II., five of them contiguous and apparently accessible to each other by internal communications, while the sixth stood at a distance of 15 yards from its neighbour, and at a lower level. Three of these, A, B, and C, were comparatively large, each with a diameter of about 30 feet and containing, at least, part of its circumference, radial walls similar to those already described by the writer at Machair Leathann, Cnoc a' Comhdhalach, and Eilean Maleit, all situated within the same district near the north-west corner of North Uist.[1] The other three chambers, D, E, and F, were of much smaller dimensions and distinctly deeper, being also somewhat oblong-oval in shape instead of circular, and approached by a subterranean passage of the earth-house type with a total length of 42 feet, although its direct access into F (the largest of these minor constructions) was placed at a point only 14 feet distant from the outer entrance to this passage at its north-west extremity.

It is manifest that all these habitations or chambers were underground in character, if only from the nature of their boundary walls, which are quite unsubstantial, being mere linings from 12 inches to 14 inches in thickness, without any intrinsic strength, and backed against the surrounding soil. There is further evidence that the whole site originally consisted of blown sand piled upon continuous rock along the shore—witness the whole interior of A, the interval between A and B, and the undisturbed sand behind the backs of the walls and underneath the floors and walls of the entire group. The natural deduction follows that these underground dwellings must necessarily have been constructed, first by a more or less thorough excavation of the space required, and then by the erection of retaining walls against the inner bank of sand, as also by the formation of the long slab-covered passage at the level of the lowest floor, and of the drains underneath the

[1] *North Uist*, pp. 121, 200, 207.

various floors. By no process of tunnelling could the purpose have been achieved, having regard to the sandy nature of the soil. The smaller chambers, D and E, as possibly also F, and the radial chambers in the outer portions of A, B, and C, were certainly roofed by overlapping slabs of stone, evidence to this effect being specially noticeable in A and D.

These six ancient structures occupy an area measuring about 50 feet by 160 feet, and are ranged in an almost continuous line along the shore —apart from two or three slight outlying and unoccupied promontories —at the edge of a bay which faces north towards the Atlantic Ocean, and bristles with hidden reefs. The locality is 500 yards west of Griminish farm-steading, and in surface appearance now shows itself only as a row of three or four grass-covered knolls, capped by little more than the foundations of a few comparatively modern dwellings which represent the former hamlet of Foshigarry. Situated near the northern base of Beinn Scolpaig, with a narrow intervening strip of arable soil, this was the home of several generations of cottars for at least a century after *c.* 1700–50. The scanty remains of six or eight houses with some adjoining stack-yards are still clearly visible. Apart from the forbidding sea-board, Foshigarry is an attractive spot, thoroughly sheltered against the south-west or most stormy quarter. Even in prehistoric times it would naturally appeal to its early colonists.

The main site, comprising B, C, and F, lies at the seaward edge of the highest knoll, Chambers D and E, which are smaller, occupying an inner position almost directly underneath the wall of a ruined cottage upon the very summit. These modern foundations stand at a height of 8 or 10 feet above the level of the ancient floors. C has been already noted as one of the three larger structures, A, B, and C, and is the westmost of its type, with a doorway leading immediately into B on the south-east. What remains of A is separated from B by an interval of about 15 yards. It is to be noted that these three chambers contain radial walls.

Chamber A, the most easterly of the group, and the earliest to be excavated in the summers of 1911–2,[1] was evidently once circular in form, with a probable diameter of about 30 feet, although at the present day showing little more than one-third of its original circumference, in a segment which contains four radial compartments—two of them, A 2 and A 3, complete as to ground plan, but the others, A 1 and A 4, with their outer-

[1] The discoverer of this site was Angus MacRuari, a farm-servant at Griminish, who in 1911 reported several prehistoric objects from A 1, kitchen-midden remains upon the scarped edge of the shore opposite C, and the apparent entrance to an underground passage at H.

most lateral walls not now traceable. The interior of the existing portion was filled with blown sand, and a layer of the same material, about 12 inches thick, extended even underneath the foundations, these resting upon a substratum of natural loam. These features were distinctly more noticeable in connection with A than with B, C, and F, which were afterwards excavated. The radial walls of A, at their northern ends, stand within 2 to 10 feet of the precipitous shore, and it seems obvious that the seaward half of this structure has long since vanished through the gradual encroachment of the sea during untold centuries.

The floor level of A stands about 6 feet above the present normal high-water mark, its circumferential wall, behind A 2 and A 3, as also part of the wall of A 1, remaining apparently intact to within 6 or 12 inches of the grassy surface, although its radial walls are now only from 2 feet 3 inches to 5 feet 2 inches in height. The two fairly complete radial chambers measure: A 2: width at back 8 feet, at front 7 feet; height of wall at back 6 feet 8 inches. A 3: width at back 6 feet 9 inches, at front 4 feet 6 inches; height of wall at back 5 feet 2 inches; the length of the radial walls in each case being 7 feet. A 1 and A 4 seem to have been about 8 feet wide at their backs, with the wall of A 1 5 feet high, while that of A 4 is in great part lost. The boundary wall at both A 1 and A 2 is coved inwards, this being especially noticeable in A 1, where the curve commences at less than 4 feet above the foundations.

Each radial compartment in A presented some individuality as to structure or contents, viz.: A 1 had two boles in the upper part of its back wall, one of these containing some shells and a cut deer-horn tine, with another in its west radial, perhaps extending through that partition into A 2. In A 1 were found a few fragments of patterned pottery; several small pieces of shaped cetacean bone; a fine, perfect seven-fingered weaving comb in the same material, with a carefully bored hole through its handle, from the floor at the north-west corner of the compartment (fig. 11, No. 1); a sandstone whorl with an unusually small hole; a shaped bone pierced by a round hole near one end; part of an antler showing marks of cutting; two or three hammer-stones, one of them of quartz; and the greater portion of an upper quern-stone.

A 2 showed segments of a wall, here and there plastered with clay, partially closing its inner end. The boundary wall, at a height of 4 feet, contained a large bole 9 inches wide by 12 inches high, and reaching inwards for almost 20 inches. Near the floor lay eleven stone slabs, evidently fallen from the roof. Here were also found small pieces of patterned pottery; half a dozen thin discs of mica-schist, averaging ¾ inch in thickness and measuring from 5 inches to 6 inches in diameter, rudely chipped to circular outline, but including a rectangular specimen

with rounded corners; two bone pins; and several shaped slabs of cetacean bone. One hammer-stone was found in a crevice of the back wall.

A 3 had three boles, one in its exterior wall and another in each radial wall. Pottery was scarce, but several hammer-stones lay close together upon the floor at the north-east corner, and two or three within the boles. In cetacean bone two items must be noted: an incomplete flat segment curved at one end and with one straight side, this latter containing two angled incisions, and another of somewhat cylindrical shape, rounded and broken at one end (fig. 13, No. 1).

A 4 contained few relics, it and A 3 perhaps having been already ransacked. Upon the floor, which, like that in A 3, was evidently paved with clay, lay a socket-stone 16 inches square and 3½ inches thick, and about 3 feet seaward from the north end of the radial wall between A 3 and A 4 were found ashes, presumably near what was once the central hearth of A. Three or four V-cut slabs of cetacean bone, and part of an antler sharply sliced off at its base, were also found here.

Taking A as a whole, in addition to those specimens which have been individually noticed, the relics comprised about twenty shaped portions of cetacean bone; a dozen hammer-stones, including several in quartz; three broken quern-stones; a few pieces of cut-marked bone; twenty-one fragments of patterned pottery in at least thirteen distinct varieties of ornament, one bearing an appliqué band indented with a row of hollows apparently produced by the insertion of a finger-tip; and the base of a vessel in baked clay, chipped to circular shape with a diameter of 2¾ inches.

Throughout this group of earth-houses at Foshigarry perhaps the most outstanding feature was the comparative abundance of artificially shaped cetacean bones, including a series of more than forty specimens (each fragment not being counted, but only the number of separate items which they represented) of flat or slightly curved slabs, usually measuring when complete about 8 or 9 inches in length by 3 inches in width by ½ inch in thickness, with the peculiar characteristic that each bears four, or occasionally six, V-shaped incisions in its sides, symmetrically arranged at both edges in precisely opposite pairs. Of this type, which is apparently hitherto unchronicled, about a dozen were found in A, including two or three complete examples and four others nearly so, one of them very flat and measuring only 5¼ inches by 3½ inches by ¼ inch. Many more were discovered in B, to which may better be relegated an attempt at their general description and classification.

On the beach, exactly at the present high-water mark, close to the steep bank of the shore and about 6 yards east of the extremity of

A 1, is the complete outline of an ancient harbour. Whether or not it may also be prehistoric is not certain.

The interior measurements of this harbour, abutting upon the coast-line at the south, and with seaward walls measuring from 2 feet to 3 feet thick, are about 31 feet in length by 12 feet in greatest width. It has two divisions, the lower 16 feet and the upper 12 feet in length, separated by a wall 3 feet thick, through which is a nearly central opening 3 feet 6 inches wide.

At their present nearest extremities B stands 43 feet west of A, but between them, 24 feet west from A and 12 feet east from B, are two portions of a slender curvilinear wall facing north, altogether about 10 feet long, 22 inches high, and only 10 inches thick. Excavation was here tried in all directions, but without any result, pure sand lying everywhere around.

Chamber B proved to be rather nondescript in shape, its enclosing wall at the west being comparatively straight over a length of 25 feet, with a thickness of 2 feet, and possibly attributable to secondary construction. Its eastern boundary is now entirely absent for a distance of 30 feet, but it shows in the south a segment of a circular wall for about 10 yards as a mere single-stone lining, 12 to 14 inches thick, and nowhere over 3 feet in present height; its eastward portion for 10 feet is only traceable as foundations. At the extreme north of B is another segment of curved wall in a length of nearly 12 feet, there showing as an independent wall 2 feet thick and 1 foot 10 inches high. The whole structure seems to have been sub-circular in form, with an original interior diameter of nearly 30 feet, situated at its nearest part about 12 feet from the margin of the steep shore on the north.

It is to be remarked that B contained five internal walls, which may be termed "radials," in its southern half, but none in its northern. Three of these, numbered 2, 3, and 4 on the plan, are characteristic radials, but not, as in A, joined to the circumferential wall, being isolated piers, 4 feet 2 inches to 4 feet 8 inches in length, 2 feet 6 inches high, with a thickness of 12 to 14 inches, and having clear intervals of 2 to 3 feet at their outer ends. Nos. 1 and 5 do not seem to have been true radials, No. 5 in particular forming the inner wall of a short passage leading to a doorway which connected B with C on the west, while No. 1 stands at an unusual angle, although with a normal opening of 5 feet between its inner end and that of No. 2. Radial No. 1, 7 feet in length, also formed the north side of a trapezoidal compartment, open, as just noted, on the west, but walled at the east and partly on the south. This latter position was occupied by a thin slab, 4 feet wide, now split in two, which was set on end and reached just up to the surface, a

distance of 2 feet 9 inches, before the excavation was made, with a gap of 17 inches between its west end and radial No. 2. Radials Nos. 3 and 4 were also nearly joined by a wall between their inner ends, but with an opening left at its eastern extremity.

The absence of radial walls on the northern half of B may be due to its having become the site of a comparatively modern cottage, just as in C, where the foundations of a building of this class had to be removed from a like position. C also showed four radials in its south half but none in its north. There is also evidence that B, like C, and even more markedly so in the case of D, had been overhauled, probably within the last two centuries, to supply building material for the groups of cottages which once stood at Foshigarry.

The enclosing wall of B remained to a height of 2½ to 3 feet on the south and 2 feet on the north, the southern portion being covered by 6 to 18 inches of soil and loose stones, and the tops of the radial walls Nos. 2 and 3 by 5 and 10 inches respectively. The depth of excavation in the northern half was little over 2 feet, and the west wall stood almost level with the surface, with an average height of 2 feet 10 inches. The floor rose slightly towards the north, and for the most part consisted of a layer of loose sand paved in some portions, notably near and under the hearth, although perhaps not throughout, with small flat stones, its elevation being about 12 to 15 feet above high-water mark.

Two entrances were traceable, one each at the south-west and north-west extremities. Allusion has been already made to the former and to the quasi-radial wall No. 5, which measures 4 feet 5 inches in length and 4 feet 8 inches in height, and is completely pierced near its centre by a rectangular hole measuring 4 inches by 7 inches, this radial, together with the southern boundary wall, here much coved, making a short passage 3 feet 4 inches wide at its inner end. It is partly paved by a single large slab, which has served as a step, 10 inches high, and rests at its north side beneath the foundations of radial No. 5. This passage narrowed westwards to 2 feet 8 inches, and thence led into C through a doorway 1 foot 10 inches wide. The northern entrance, perhaps a secondary construction, was close to the west wall, and showed a passage 4 feet 3 inches long, widening inwards from 2 feet 3 inches to 2 feet 9 inches.

About 1 foot to the west of the inner end of radial No. 1 was an oblong-oval hearth, measuring 4 feet 8 inches by 3 feet 6 inches, its axis, almost east and west, lying nearly parallel with the inner wall between radials Nos. 3 and 4. This occupied a practically central position in B, and was raised about 4 inches. It had no kerbstones, but

was covered by a 6-inch layer of ashes resting on sand. To the east of this hearth, about 1 foot below the floor, were found a stone whorl, broken pottery, and some bones. Immediately adjoining the hearth was a sink formed by stone slabs, 1 foot 7 inches deep, and with interior measurements of about 2 feet 2 inches by 3 feet at its top, tapering downwards to 1 foot 4 inches by 2 feet 9 inches at its base. This sink has to be mentioned later in connection with six long flat slabs of cetacean bone which it contained.

Three built drains were traceable beneath the floor-level, two of them about 6 feet in length, the first entering the sink from the east and the second emerging from the sink northwards. The latter joined a third drain which, passing under the wall between C and B, ran eastward within B for 15 feet, and then took an abrupt turn in a northerly direction towards the shore.

Along the south-west edge of B were the remains of an oblong chamber with a doorway in its south end, measuring about 10 feet by 6 feet, but standing 3 feet above the floor-level of B, and with its wall-top a little below the present sloping surface. This is marked G upon the accompanying plan, and had evidently been a kiln, certainly of much later date than the earth-house and probably coeval with the old cottages at Foshigarry. The kiln itself in most part still exists, and has been of somewhat inverted conical form. It is now 2 feet 9 inches in height, with a diameter of 2 feet 2 inches at its base and 2 feet 7 inches at its top, built with large water-worn pebbles, and similarly paved. Exactly at its base is a horizontal rectangular shaft leading from B, at a height of 3 feet above the floor, this flue having a length of 3 feet 7 inches, and narrowing inwards from 16 to 7 inches, with marks of soot even yet upon its walls.

The foregoing record exhausts our available data as to B, except with regard to the various articles discovered therein. Outstanding among these were about thirty flat slabs, or portions of slabs, in shaped cetacean bone with lateral incisions in the form of the letter V, arranged in opposite pairs, similar to others of the same type already found in A (fig. 1). Taken as a whole, the large circular chambers, A, B, and C, in the Foshigarry group furnished more than forty examples of this class, many of them being represented only by fragments of different specimens, but including ten quite perfect examples, and at least twelve others sufficiently complete to show their original outline. Although averaging in size from 8 inches or 9 inches in length by 3 inches in width and $\frac{1}{2}$ inch in thickness, two were found measuring the abnormal extremes of $5\frac{1}{4}$ inches by $3\frac{1}{2}$ inches by $\frac{1}{4}$ inch, and 21 inches by 3 inches by $\frac{3}{4}$ inch. Except on five specimens, each of which bore six V-cuts, the

Fig. 1. Implements of Cetacean Bone from Foshigarry.

number of these incisions was invariably four, all having a lateral extent of from ½ inch to ¾ inch. In only two cases was there any marked deviation from their arrangement in precisely opposite pairs. It is further to be noted that many of them showed cut-marks, as of a knife, upon their smoothest face, and that several were distinctly spatulate at one end. By far the finest were three, 12½ inches, 12¾ inches,

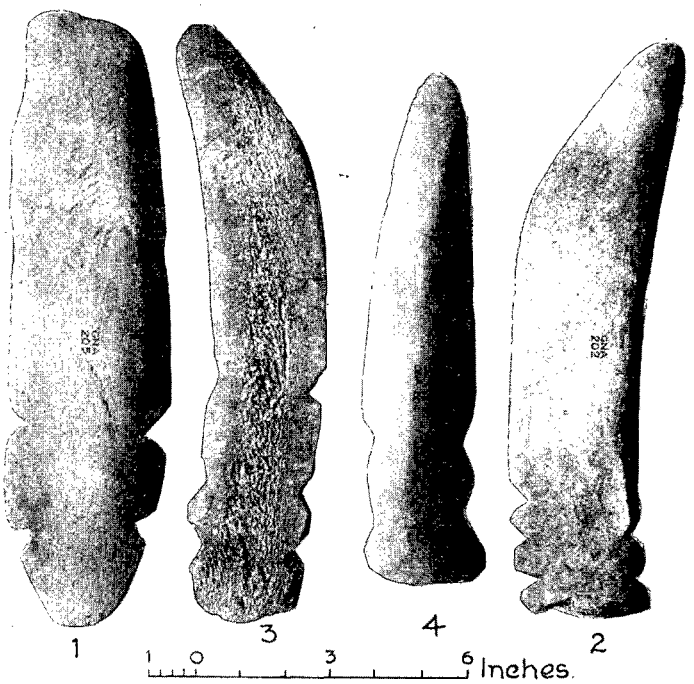


Fig. 2. Implements of Cetacean Bone from Foshigarry.

and 21 inches long (fig. 2, Nos. 1 and 2, and fig. 3, No. 2), found lying in the bottom of the sink in B, together with three even longer slabs, without any V-cuts but otherwise of the same character, and measuring 17¾ inches, 20 inches, and 23½ inches in length (fig. 3, Nos. 1 and 4). All six had been laid there, five of them carefully arranged side by side and the sixth crosswise at the west end, hidden beneath a large flat stone which at first was taken to be the actual base of the sink. This group of slabs may almost obviously be regarded as weapons or clubs, although such an explanation will hardly apply in the case of the shorter and by far more common type, unless they were hafted for use

as axes. Most of the smaller specimens in B lay above the floor in the neighbourhood of the hearth, and here were also two plain flat portions

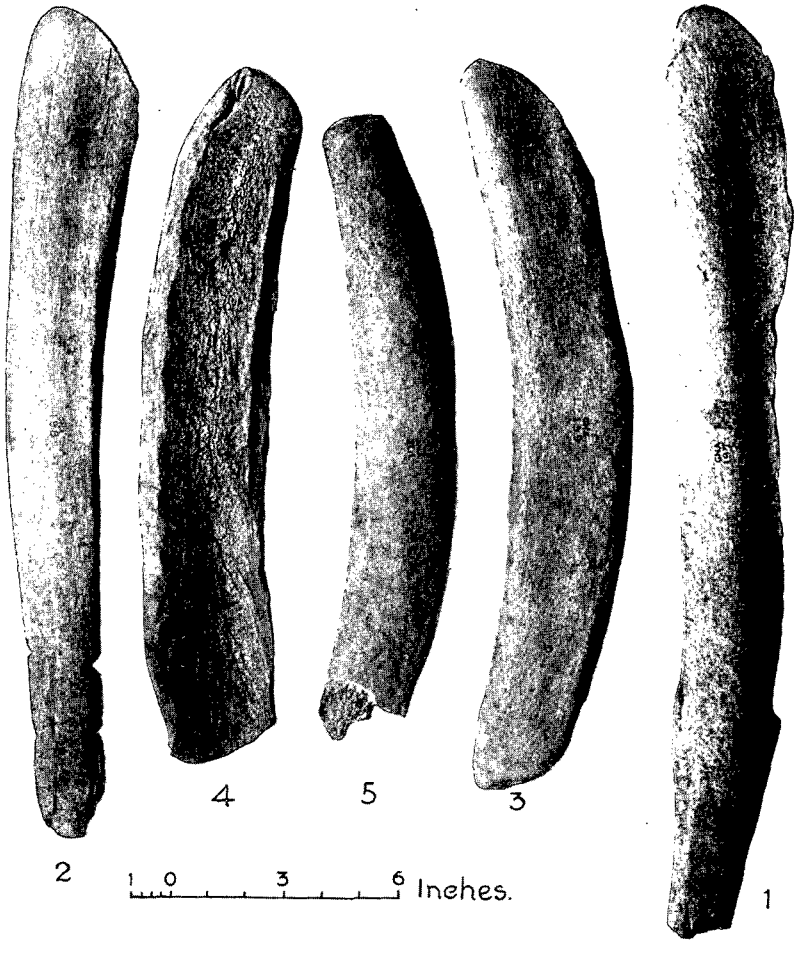


Fig. 3. Implements of Cetacean Bone from Foshigarry.

8½ inches and 10 inches long, their texture entirely changed to stone-like character, apparently through the action of fire. It is further noteworthy that one V-cut slab, part of an antler, two bones, and a quantity of limpet-shells were found inside a large clay pot which stood inverted, its mouth resting upon the floor and closed by a layer

of clay and small pebbles, in the narrow open space left between the outer end of radial No. 2 in B and the surrounding wall. This pot was practically complete before being dug out bit by bit, and measured 14½ inches in height; it was ornamented by a single band of raised zigzag pattern around its girth (fig. 4).

B also contained several other large pieces of shaped cetacean bone. One was part of a cup or bowl which had been hollowed out of a

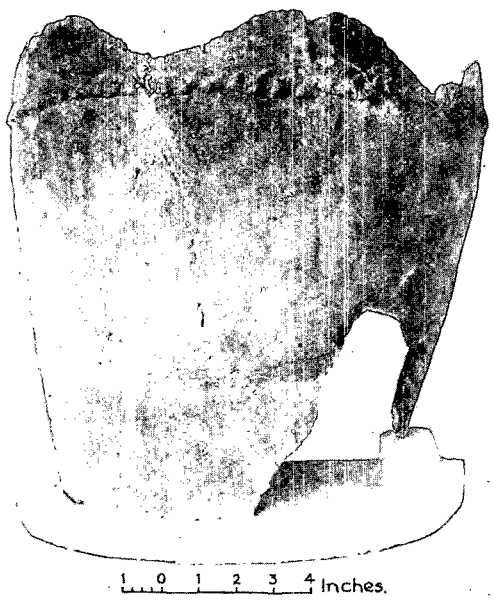


Fig. 4. Clay Pot from Foshigarry.

vertebra of a whale, and another was an irregular cylindrical piece, cupped at both ends. The latter lay near the west side of the sink, and it becomes more interesting from the fact that close to the same spot was found a small disc of stone, with a slight boss upon one face and precisely fitting into one of the cups already mentioned.

Even less easy to classify is a flat fan-shaped specimen, pierced near its apex by a carefully wrought hole, bevelled from one face.

In cetacean bone may also be noted the handle of a long comb ornamented by two bands of lozenge designs (fig. 11, No. 4), and in ordinary bone part of a small-toothed comb with dot and circle ornamentation. A split knife-haft of bone bearing a single incised dot and circle was also found.

Near the hearth in B was found part of a large antler, cut off at both ends, its base solid but with a deep notch an inch higher up, the notch entering an oval hole bored along the centre of this segment for the remainder of its length, so that one can blow through from either opening (fig. 20, No. 5). We can only conjecture that this item may have been a whistle or perhaps a musical pipe, whether or not it was ever completed.

Many smaller articles in cetacean bone, ordinary bone or horn, deer-horn, pottery, and stone were found in B, but so many of these came from the after process of riddling the excavated soil and sand that one cannot speak with certainty as to the individual chamber, and it thus seems better to treat them together as relics from the general site, B, C, D, E, and F.

Chamber C immediately adjoins B on the west, separated from it only by the somewhat straight wall already noted as 25 feet in length and about 2 feet thick. In shape and size C much resembles B, although it is even less distinct in outline, fully one-half of its original enclosing wall being now lost. On the south and south-west this still remains in the segment of a circle, but in the whole northern portion it is quite untraceable. Apart from this deficiency, and assuming its original shape to have been sub-circular, C had evidently an original diameter of 30 to 35 feet. Excavation, to a depth of 7 feet 6 inches below the present upper surface, disclosed five radial walls within its south-western half, Nos. 1, 2, and 3 measuring 4 feet 5 inches to 4 feet 10 inches long, 3 feet 10 inches to 4 feet 10 inches high, with gaps of 20 to 30 inches left between their outer ends and the surrounding wall; No. 4 now represented by merely a fragment; and No. 5, which stands almost directly opposite No. 1, being a continuous pier, 10 feet in length and without any open space behind. The gap between the inner ends of Nos. 2 and 3 was closed by thin slabs set on edge, and the floor appears to have been paved throughout the whole area.

It seems probable that C, as was perhaps the case with B, which C otherwise so closely resembles, contained radial walls also within its seaward or northern half. In regard to C their absence can be well explained by the fact that its centre had been chosen as the site of at least one mediæval or even more recent cottage, of which it became necessary to remove the walls and hearth in the course of excavation. At 10 inches beneath the level of this secondary hearth was then found the original hearth of the chamber itself, about 2 feet to the north. This was rectangular in shape, and measured 3 feet 9 inches by 3 feet 2 inches, with a depth of 16 inches from its stone edging, 4 inches

above the floor-level; it was full of ashes. Within 3 feet to the south and 5 feet to the west of the hearth were two built sinks, each of them with sides slanting to a narrow base, and also partly covered by slabs of stone at the level of the floor. That to the south measured 5 feet long, with a depth of 18 inches, and a width diminishing from 18 inches at the top to 6 inches at the bottom; it contained a few animal bones and fragments of pottery, and had a drain from its north-east end running in an easterly direction, joined also by another drain commencing at the boundary with Chamber B. The second sink, towards the west, measured 3 feet 4 inches by 18 inches, with a depth of 18 inches, narrowing in the same way as the last to its base, and here

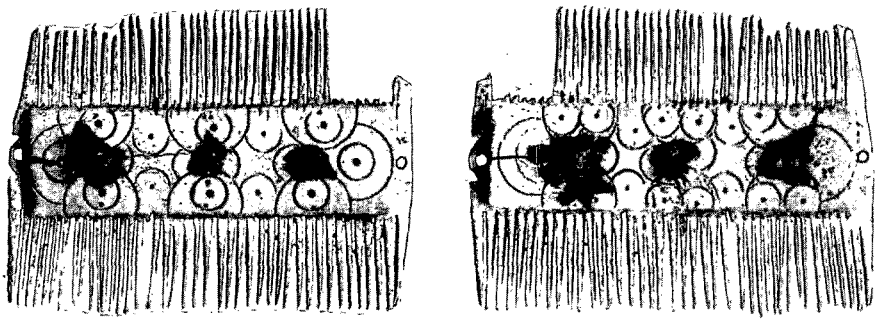


Fig. 5. Small-toothed Comb of Bone from Foshigarry. ($\frac{4}{5}$.)

were found a hammer-stone, some charred bones, and black ashes; no doubt it had also a drain, although this was not discovered.

In the circumferential wall, near the outer end of radial No. 2, was a bole 3 feet 4 inches above the paved floor, and measuring 15 inches in width by 12 inches in height. This enclosing wall had a thickness of only 12 to 14 inches and a height varying from 4 to 5 feet, practically coinciding with that of the radials Nos. 1, 2, and 3, but here covered by 1 foot 6 inches to 2 feet 3 inches of accumulated soil.

Relics of its former occupants were fairly abundant in C, comprising numerous specimens in cetacean bone (but very few V-cut slabs), ordinary bone and deer-horn, pottery and stone. Among these may be particularised a nearly complete small-toothed comb in bone ornamented upon both sides by a series of dots within circles (fig. 5). This was found on radial No. 4, of which only a fragment remains in the form of three steps, the comb lying on the middle "step" at a depth of 4 feet 6 inches below the present surface.

Upon the floor, 3 feet south from radial No. 4, was found a socket-stone measuring 20 by 17 inches, completely perforated through its centre; and underneath this, imbedded in sand, lay one of the typical cetacean slabs bearing four V-cuts.

C also yielded two other specimens marked with the dot-and-circle design, one of them in polished deer-horn cut off at both ends, and the other a short segment of hollowed bone. In bone was also found, near the bole, a small die for playing dice, pierced lengthwise by a small hole. Upon its four sides are incised the numerals 3, 5, 4, and 6, shown by dots within double concentric circles, arranged as illustrated in fig. 6. In cetacean bone was a long-handled weaving-comb, its handle ornamented across the end by three bands of herring-bone pattern and

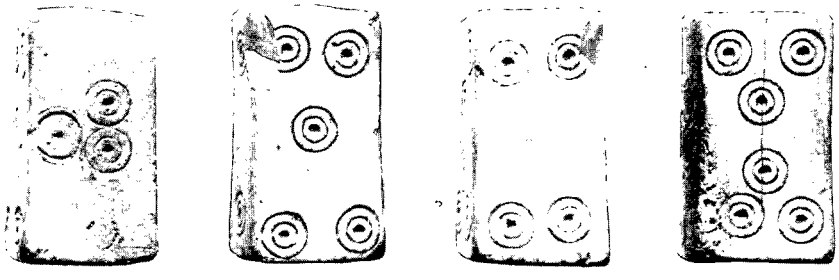


Fig. 6. Bone Die from Foshigarry. ($\frac{1}{1}$.)

next the teeth by another in lozenge-shaped design, the teeth evidently having been twelve in number although now almost entirely broken away, and another, also in cetacean bone, complete with its five stumpy fingers (fig. 11, Nos. 3 and 2). In stone are to be noted a thin piece of slate with a round depression clearly incised near one end; also part of a polished stone axe in very dense and dark material.

Closely adjoining Chamber C, to the south-west and west, are three other chambers, all of them much smaller in dimensions and perhaps with a somewhat lower floor-level. These are marked as D, E, and F, D being situated opposite radial wall No. 3 of C. It is oval in shape, and measures about 12 feet 6 inches in length and 7 feet 3 inches in greatest width.

Chamber D was paved in its north-western half, and apparently had a hearth midway against its western wall to judge from the quantity of ashes found there. The wall at that part stood 6 feet 6 inches high with 2 feet of soil above its top. Five boles were seen in this chamber. The largest placed in the south end was 17 inches high and 8 inches across

its mouth, widening to 12 inches at its curved back, which was recessed for 16 inches. This recess and one of the four smaller ones, all in the west wall, each contained a single bone which had been used or cut to shape. In addition were found, within crevices high up in the west wall, a small hammer-stone, and a tiny clay crucible—little over 1 inch in diameter and with a capacity of only 30 minims.

D, in addition to the unusual height of its wall, was remarkable for the fact that about thirty stone slabs lay in irregular positions near its floor, chiefly 18 inches to 2 feet in length, but the largest measured 4 feet by 2 feet with a thickness of 4 to 5 inches. These clearly represented fallen roof-slabs, and it was further noticeable that even underneath the paved floor, especially near a socket-stone, were found ashes, bones, hammer-stones, a meal-pounder, and fragments of pottery. The access into D was very indistinct, but there seems to have been an entrance from C, towards which chamber could be traced a narrow paved passage for a length of about 4 feet, 16 inches to 19 inches wide, and with a built drain 6 inches wide and 8 inches deep beneath its floor, this drain apparently commencing near the socket-stone.

About 8 feet north from D, but lying approximately east and west, was another chamber, E, of somewhat oval form, and measuring 12 feet 9 inches long by 5 feet 6 inches in greatest width. E, probably communicating with D, and certainly with F, was too indefinitely marked to yield a satisfactory plan, and yet possessed some interesting features. Outside its east end, in the space between E and C, was the appearance of a vertical shaft 3 feet to 3 feet 3 inches in diameter and 4 feet to 5 feet deep, with a built drain, too small to represent a passage, 15 inches to 18 inches wide and 18 inches to 24 inches high, traversing its base towards the north. This small adit was also joined, midway in its length and nearly at right angles, by a slightly curved branch of similar width and height, emerging from the east end of Chamber E immediately above its floor, and 18 inches south from a partition across E, at that point 3 feet 6 inches wide, formed by an oblong slab 2 feet 6 inches high on one side, and part of a quern stone on the other (both of these stones being set on end) with a regular gap, 17 inches wide, left between. This enclosure at the south-east corner may probably be explained as a sink, at one time shut off by a wooden door across the opening. The back or south wall of Chamber E stood to a height of 6 feet 4 inches above the floor, and was covered by soil and loose stones to a further extent of nearly 6 feet, up to the foundations of an old cottage which once stood upon the summit of the knoll. In this back wall were as many as twelve boles, the four larger ranging in size from 11 to 15 inches in length by 6 to 9 inches in height, and recessed for 10 to

13 inches; the other eight boles were much smaller. At its west end was a shelf about 18 inches wide, and evidently below this had been an access 1 foot 6 inches wide and 2 feet 4 inches high from E into the larger Chamber F, which immediately adjoins on the north. It is interesting to note that upon this shelf, grouped together in a corner, were found no fewer than forty-one small pieces of abraded pumice, afterwards increased to forty-six from the riddlings, varying in size between that of a filbert and of a large walnut, many being worn as if by use.

Chamber F is situated on the north side of E and lying parallel with it, separated by a slender wall nowhere over 5 feet and for the most part only 2 feet in present height. Oblong as to general shape but with curved walls at the west and north, F measured about 14 feet in length by 9 feet 6 inches to 12 feet in width near its east and west ends respectively. It was paved throughout, except towards the west, where an outcrop of natural rock gradually rises to 12 or 18 inches above the normal floor-level. It had a curved drain running underneath the pavement from the edge of this rock, with its exit through the outer entrance into F, at its north-east corner. The depth of excavation to the floor of F was 8 feet from the surface at the north and 6 feet at the west, the wall in the latter position reaching almost exactly to the upper soil and still showing the remains of a clay cement or plaster upon several portions of its face. The fact that this boundary wall was a mere lining with a thickness of about 12 inches set against a solid mass of sand towards the west and north sufficiently proves the underground character of the structure to have been original, just as in the case of earth-house A, while sand could also be traced even beneath the foundations.

It was further evident from the peculiar intermixture of loose stones in very dense soil, together with occasional displaced layers of kitchen-midden ashes, that the whole upper portion of F, as elsewhere at Foshigarry, notably in C and D, had been already overhauled at some later period, presumably in search of building material, finds often occurring at levels obviously far removed from their natural position.

The west wall of F had two boles, and in each were shells of the limpet and periwinkle imbedded in sand. One bole also contained a cut-marked segment of deer-horn, together with a nearly complete disc of pottery ground to a diameter of 3 inches, and the other a small piece of bone apparently shaped for some purpose.

From the comparatively greater depth of F, as also of D and E, it might be considered that these three minor chambers were of earlier date than the adjoining chambers B and C, although here it seems impossible to reach any definite conclusion.

In addition to the access between E and F there was apparently another short passage, now very indistinctly marked, leading from the north-east corner of F into C. But certainly near this latter point was the exterior and main entrance to chamber F, commencing for 14 feet through a slightly curved subterranean gallery which runs approximately east and west in a total length of 42 feet, and then turns at right angles into a north and south passage of 4½ feet. This short portion, with sand in its floor, was fully roofed and practically complete when excavated, measuring 18 to 21 inches wide but expanding to 2 feet 8 inches for 1 foot at its north end, with a height of 2 to 3 feet; it was reduced midway as to its southern half by a sill rising 12 inches.

The long underground gallery, marked H upon the accompanying plan, was clearly coeval with earth-house F, to which it supplied an outer access, although this cannot have been the sole purpose served, since the branch into F diverges at a point representing only one-third of its whole course.

The entrance into gallery H was on the west, situated about 10 feet above high-water mark at the innermost recess of a small creek on the north, and with its eastern extremity 4 or 5 feet below the foundations of a comparatively modern cottage which had been erected within the area of earth-house C. The whole gallery was roofed with slabs of stone, and although for 10 feet from the entrance only three of these, the first at a distance of 3 feet 6 inches within, retained their original positions, most of its covering-slabs still lay *in situ* throughout the remaining 30 feet, all beneath a layer of sand at a depth of 3 or 4 feet from the existing surface at the time of excavation.

With an outer opening only 16 inches wide and 22 inches high this gallery gradually expanded inwards to general dimensions of about 1 foot 8 inches to 2 feet 2 inches in width by 2 feet 10 inches to 3 feet in height; it was paved as to its first half, and indeed perhaps throughout. At 26 feet from the entrance, raised 14 inches above the floor, was an aperture on the north side measuring 15 inches wide by 20 inches high, probably for the admission of light and air; while at the inner extremity of the gallery, where five or six hammer-stones lay in a group, was another opening, but in this case from the floor-level, 1 foot 8 inches wide by 3 feet in height, covered by a single slab and leading into a northward recess, possibly once a passage, 4 feet long.

In the opposite or south wall of gallery H, 4 feet from its east end, stood a built oven or kiln measuring 2 feet in diameter and about the same in height, well above the floor, and with an outer ledge projecting 1 foot beyond its base. This oven contained a thick layer of peat ashes, and was furnished with an oblong shaft or vent measuring 16 by 10

inches and 7 feet in length, and sloping upwards in a south-westerly direction to within 1 foot of the surface, thus passing through the area of earth-house C. These facts would suggest that the oven, and perhaps also the recess or passage nearly opposite, belonged to a secondary construction. It may be of comparatively late origin, as in the case of the annexe G already described at the south-west corner of B.

Dun Thomaidh.

A general and fairly accurate description of this island fort (*Dùn Tomi* of the Ordnance Map), together with its massive causeway leading from Morornish on the north, has already been given at pp. 212–213 (Dun ·73) of the writer's *North Uist.* Situated in Vallay Sound and occupying the summit of a steep rocky islet, the base of its encircling main wall stands at almost exactly the level of the high-water mark at spring tides, while even the top of this wall is completely swept by exceptional tides, more especially in rough weather (Plate I.).

Under these circumstances Dun Thomaidh promised little reward to excavation. This task was nevertheless undertaken in the summer of 1914, and yielded a fortnight's interesting work with success as to tracing out the ground plan, although, as was anticipated, there were unearthed very few relics attributable to the former occupants.

The main fort was easily verified as measuring about 50 feet in diameter between the outer faces of its surrounding rampart. This latter nowhere remains in more than three or four courses, nor to a present height of over 2 feet 6 inches. Strangely enough, it is in the north-eastern and most sheltered quarter that the greatest dilapidation is found—a fact presumably to be explained by this having been the part chosen from which to remove building-stones for the construction of the farmhouse and steading on Vallay.

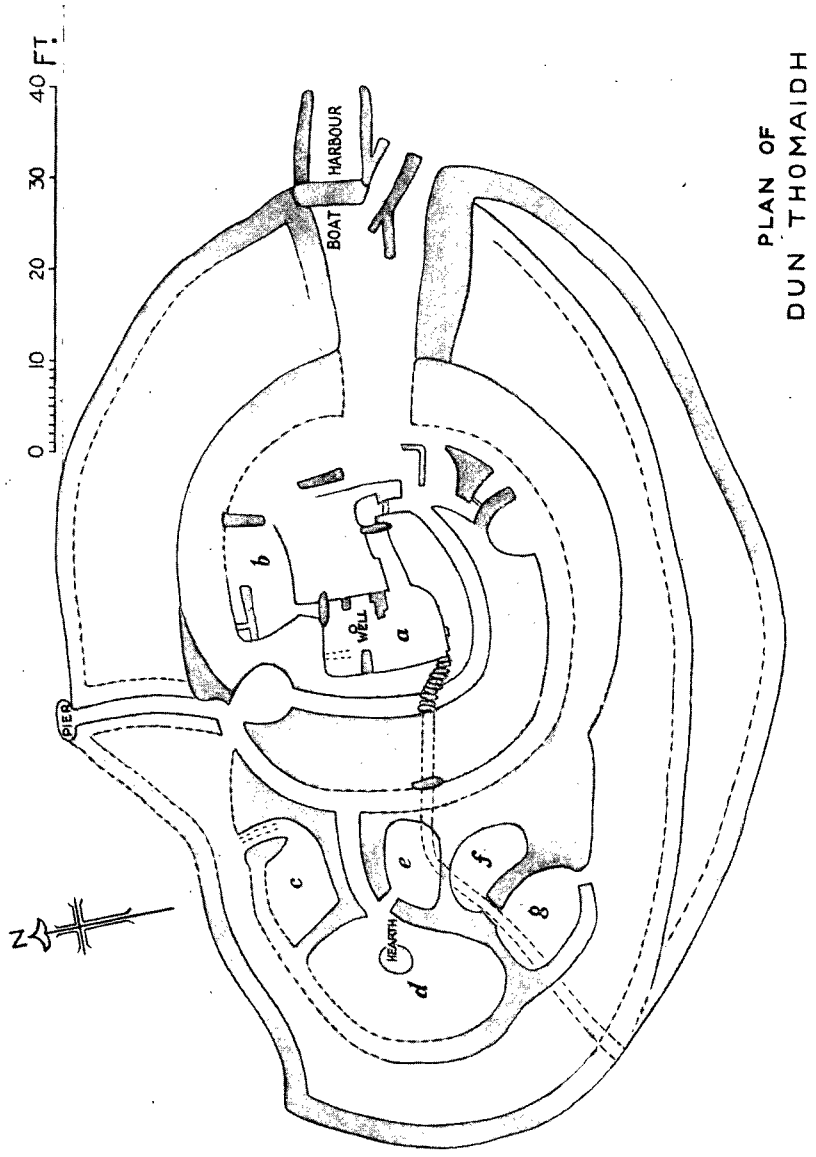
Dun Thomaidh was furnished with two quite separate outer accesses—one at the north, exactly opposite its causeway, and no doubt available by land or water according to the state of tide; and the other, by water only, through a well-defined boat-harbour situated at the centre of its eastern margin. Opportunity was taken to make a fuller examination of the causeway, which still remains in almost complete form, measuring 9½ feet across near its middle, but reduced to a width of 7½ feet at its regularly-squared south end, a gap of 13 feet there intervening between it and the islet. Facing the causeway, in the sea-wall still traceable as encircling the whole fort, is a pier or platform about 4 feet wide, built to a height of 2 feet 6 inches above the rock. Thence a slightly curved passage, 2 feet wide, leads southwards for 17 feet

to the main fort, reaching it at about 12 yards east from its western extremity.

Here the entrance divides into two branches, one of them, 2 feet to 2 feet 6 inches wide, following the exterior of the massive central structure for at least three-fourths of its whole circumference up to the south side of the boat-harbour on the mid-east. About 15 feet short of this point is a semicircular cell, measuring 7 feet by 5½ feet, recessed within the main wall, its paved floor rising slightly towards the north. The other branch enters directly into the remains of a circular cell or guard-chamber 6 feet in diameter, from which a passage or ground gallery, with a varying width of 25 inches to 21 inches, runs at first south and then curves eastward, the solid main wall of the fort (in a very uniform thickness of 7 to 8 feet) intervening between it and the outer passage already described. Evidently these three approaches —the exterior (doubtless never roofed), the interior (certainly roofed), and that from the harbour—met at the doorway leading to the innermost chambers. This latter entrance was about 15 feet east of the boat-harbour, running northwards for 3 feet in a width of only 18 inches, and then passing through a small guard-room, from which it turned at right angles westward for 7 feet into Chamber *a*. One of the cover-slabs of this passage still remained in position.

Within the centre of the fort were found two chambers (marked *a* and *b* upon the accompanying plan), while it is highly probable that a third existed, east of *a* and south of *b*, in the segment now ruined beyond recognition. Chamber *a* was clearly defined as of somewhat rectangular shape, measuring 13½ feet north and south by 9 feet east and west, with a paved floor and walls still traceable in complete outline to a height of 2 feet 3 inches to 2 feet 10 inches, the south wall containing a small bole. Its interior area was encroached upon by three short spurs of masonry (two at the east and one at the west), placed so as to form partial divisions. In the south-west corner of Chamber *a* was the exit of a roofed and well-built drain, which ran first in a westerly direction for 21 feet, thus traversing the whole wall of the main fort at the floor-level of the ground gallery, and then, in Chamber *e* of the annexe, turned rather abruptly to the south-west for other 30 feet, there emerging through the outer sea-wall. Within the north end of Chamber *a* were some evidences of a small spring or well, as also of a drain leading northwards. The floor was slightly raised in the north-east corner, at which point a passage barely 4 feet long and 20 inches wide (showing a cover-slab still in position at the height of 25 inches) formed an access into Chamber *b*. This second chamber, with its floor 9 inches higher than that of Chamber *a*, was likewise

PLATE I.



Plan of Dun Thomaidh, Vallay Sound, North Uist.

rectangular in general shape, apparently measuring about 12 feet east and west by 6 feet to 7 feet north and south, although with much less distinctly marked walls, and these of slender proportions.

The boat-harbour at the mid-east exterior of Dun Thomaidh is comparatively large, and so massively built as to retain much of its original form. With a whole length of about 36 feet this harbour consists of two divisions—the upper, which passes through the main wall of the central fort, gradually widening eastward from 8 feet 8 inches to 11 feet, for the extent of 16 feet. At this point its northern half is barred by a wall 3 feet thick, below which lies an outer harbour 10½ feet in length and 5 feet to 6 feet in width, at a level completely covered by the tide long before it reaches high-water. The southern half also continues outwards, but is there divided by an intervening wall into two separate and parallel channels, each of them 2 feet 6 inches to 3 feet wide and about 10 feet in length, presumably thus arranged for the transit of very narrow boats.

The main fort, as already stated, is almost circular, and measures about 50 feet in diameter. Immediately adjoining on the west is an annexe, which covered an area of about 26 feet by 35 feet, containing a group of five chambers or enclosures, and thus gave Dun Thomaidh total dimensions of 50 feet by 76 feet. Beyond this, again, at a distance varying from 3 feet to 12 feet on the north, 6 feet to 7 feet on the west, 10 feet to 15 feet on the south, and 13 feet to 18 feet on the east, the whole islet is encompassed by a sea-wall or breakwater 3 feet thick and now measuring about the same in height, all distinctly below high-water mark. There is also an intermediate sea-wall of similar proportions in a length of 84 feet from south-west to south-east, joining the outer breakwater opposite Chamber *g* and running thence to the south edge of the harbour.

With regard to the five chambers in the western annexe, four of these were somewhat oval in shape—the exception being that furthest north, Chamber *c*—with an outline more angular than rounded. The entrance into Chamber *c* was through a passage 6 feet long by 2 feet wide (with indications of a drain beneath its floor), leading out of the comparatively small open space left within the sea-wall on the north, at a point 12 feet west from the inner end of the causeway approach. In common with the whole annexe, the wall, here enclosing an interior of about 12 feet by 8 feet but hardly traceable at the north, remained in only one or two courses, and nowhere to a present height of more than 12 inches.

South of Chamber *c* were two others, *d* and *e*, *d* being the outermost and largest of all. This chamber measured 22 feet north and south by 13 feet east and west, while *e* measured only 9 feet by 6 feet. The

doorways into *d* and *e* were close together, at the end of a slightly curved passage, 12 feet long and 2 feet wide, which led westward into both chambers from the outer of the two concentric ground-galleries previously mentioned as encircling the main fort. Chamber *d* contained a hearth, measuring 3 feet 3 inches by 3 feet 7 inches, and may perhaps have served as a general kitchen for the entire settlement.

Still southward were the remaining Chambers *f*, measuring 10½ feet by 6 feet, and *g*, 11 feet by 9 feet. Chamber *f* was entered through *g*, and *g* from the interval left between the fort and its inner sea-wall in that direction. It may be added that the well-built drain, which emerges from Chamber *a* of the central fort, takes its south-westerly curve in Chamber *e* of the annexe, and thence traverses Chambers *f* and *g*, in each case passing underneath the floor.

No doubt all the seven chambers—*a* to *g*—recorded in Dun Thomaidh were originally roofed, but even in those of smaller dimensions (apart from Chamber *d*, measuring 22 feet by 13 feet) it seems impossible that this could be effected otherwise than by the aid of wooden beams, however difficult to obtain.

It is evident that the entire site—including the harbour, passages, and ground-galleries, the seven chambers, and even the spaces within the sea-walls—had been paved with small flat stones, although equal pains were not taken throughout, especially as to the floors of Chambers *e* and *f* in the annexe.

Comparatively few in number, the objects found during the course of excavation at Dun Thomaidh are not without interest. These comprise—in stone, twenty-two flaked flints, ten hammer-stones, a stone pounder, part of a hone, a small polishing-stone, two nodules of pumice, four socket-stones, portions of one round quern and of two saddle-querns, and a stone with some appearance of having been used as an anchor; in horn and bone, a small tine shaped and hollowed out, and two shaped segments of bone, one of them perhaps representing a chisel adapted for use at both ends, and the other the handle of a tool; also thirteen small pieces of iron (chiefly broken rivets), a bronze needle broken at its eye, three pieces of patterned pottery, and a very few plain fragments.

The finest specimen of all is a neat and well-finished polishing-stone, 1½ inch long by ⅝ inch in width, which was found immediately outside the south wall of the main fort, together with at least 5 flints, eight bits of iron, and numerous kitchen-midden remains, such as limpet and periwinkle shells, pottery, bones, and ashes, for the most part lodged in crevices of the paved floor extending between the central

fort and its sea-wall, as if that had been a chosen spot for the deposit of rubbish.

The bone handle above mentioned lay near the floor of Chamber *a*, where also was some quantity of a substance closely resembling infused tea-leaves, though no doubt simply the residuum of several decomposed peats. Within the small cell at the bend of the passage leading into Chamber *a* were a stone pounder, a flint, and some ashes.

Chamber *d* contained many ashes upon and around its hearth, and also three flints, a good hammer-stone, and a piece of pumice.

The shaped tine was found near the floor of Chamber *f*, with broken pottery and a few bones.

In Chamber *g* were five flints and a large hammer-stone.

There almost certainly had been a third interior chamber within the main fort to the east of Chamber *a*. Excavation was here made to a depth of about 3 feet through loose stones and earth, revealing a hammer-stone, a fragment of patterned pottery, and ashes; but the only structural evidence consisted of a slight wall towards the east.

Out of the fourteen forts now recorded in the north-west corner of North Uist, Dun Thomaidh alone can be suggested as belonging to the semi-broch type of structure (*Coll and Tiree*, pp. 73–4, 161)—that is, as of massive circular form, with double concentric walls and an intervening passage or ground gallery more or less continuous, but without any indication of either a stair or upper galleries, and therefore apparently never having reached beyond a single storey. It is, of course, possible that some of the other sixty forts situated elsewhere throughout North Uist may come into the same class, but this point could only be determined by thorough excavation, which is in most cases hardly practicable owing to remoteness of locality, even apart from the generally poor promise of results.

NOTES ON THE STRUCTURES AND THE RELICS FOUND IN THEM. By J. Graham Callander.

In his description of the group of earth-houses at Foshigarry Mr Beveridge has incidentally remarked on the most notable of the relics found there, and to his report on the structures at Dun Thomaidh he has appended a complete list of the objects recovered from that site. The relics from Foshigarry, presented to the National Museum, are displayed with objects from other sites under the title of The Erskine Beveridge Collection, but it does not contain the whole of the relics found, as Mr Beveridge brought to his Dunfermline residence only

the most important of his finds, leaving generally the least interesting, consisting of duplicate specimens of common types and imperfect examples of well-represented classes, at his house in Vallay, many of which afterwards were given to friends.

Nine hundred and fifty objects were found at Foshigarry, but more than half of them were small fragments of pottery, bones showing only cut marks, and rude implements of stone such as hammer-stones and pot-lids. The number of specimens given to the Museum was rather less than half found, and these I propose to describe, at the same time stating the total numbers of each class found as detailed in Mr Beveridge's list. Where stated in his notes, the chambers in which the different objects were found are mentioned in this report.

Objects of Stone.

Stone axe, imperfect at the butt end, measuring $3\frac{3}{16}$ inches in present length, $2\frac{13}{16}$ inches in breadth, and $1\frac{1}{4}$ inch in thickness, with the cutting edge reground. Found in Chamber C.

Twenty-seven hammer-stones and pounders, formed from rounded and elongated water-worn pebbles of quartzite and other kinds of stone, almost invariably abraded at both ends by use, varying from $2\frac{1}{2}$ inches to $5\frac{5}{8}$ inches in length. Only one bears picked marks in the centre of opposite sides to improve the grip, and one is smoothed along one side by having been used as a rubbing- or whet-stone. The total number found was eighty.

Hammer-stone fashioned from the core splinter of an oval pebble of white quartz, measuring $3\frac{7}{8}$ inches long.

Pebble of grey schist roughly chipped into hog-backed form, measuring $3\frac{7}{8}$ inches long, $1\frac{29}{32}$ inch broad, and $1\frac{3}{4}$ inch high.

Three whetstones, one, shaped like a rude stone axe, measuring $4\frac{1}{16}$ inches long, $1\frac{29}{32}$ inch broad, and $1\frac{1}{16}$ inch thick, with the top and bottom edges worn by rubbing; another of sub-oval form, measuring $2\frac{5}{16}$ inches long, $1\frac{7}{16}$ inch broad, and $\frac{21}{32}$ inch thick, ground on one edge and at the ends; and the third of rectangular shape, measuring $3\frac{1}{4}$ inches long, $1\frac{3}{8}$ inch broad, and $\frac{3}{8}$ inch thick. Seven of these were found.

Four polishers or smoothing-stones formed from water-worn pebbles, varying from $1\frac{9}{16}$ inch to $2\frac{19}{32}$ inches in greatest length; two show ground facets, one is worked from both faces to form an obtuse ridge or arris at one end, and the other two have parts of their surface highly polished. The one with the ridge may have been used for smoothing fabrics.

Flattened oval pebble of grey quartzite, measuring $2\frac{1}{16}$ inches in greatest diameter, polished and blackened on one face.

Oblong sharpening-stone of slate, measuring $7\frac{1}{8}$ inches long, $2\frac{1}{2}$ inches broad, and $\frac{3}{8}$ inch thick, worn slightly hollow on one face, ground along one edge, and showing a shallow, circular depression, $\frac{1}{2}$ inch in diameter, worked near one end on the opposite face. Twenty polishing- and sharpening-stones in all were recovered.

Two strike-a-lights, one formed from an oval pebble of cream-coloured quartzite, measuring $2\frac{5}{16}$ inches long, $2\frac{3}{16}$ inches broad, and 1 inch thick, with an oblique groove on each face containing streaks of brown colour (oxide of iron), and the other of similar shape, of grey quartzite, measuring $2\frac{7}{16}$ inches long, 2 inches broad, and $1\frac{1}{2}$ inch thick, the ends abraded by use as a hammer-stone. Three in all were found in Chambers B (?) and C.

Four flattened oval pebbles of quartz and quartzite, probably strike-a-lights, varying from $2\frac{3}{8}$ inches to 3 inches in greatest diameter, showing brown streaks of oxide of iron on the faces. Found in Chambers B (?) and C.

Strike-a-light (?) formed from a nearly circular, flattened pebble, measuring $2\frac{1}{8}$ inches, 2 inches in cross diameter, and $\frac{3}{4}$ inch thick, with a broad, oblique, shallow hollow on one face.

Two stone whorls, one of coarse white sandstone, measuring $1\frac{3}{4}$ inch in diameter and $\frac{25}{32}$ inch in thickness, and the other, which is slightly imperfect, $1\frac{13}{16}$ inch by $\frac{25}{32}$ inch. In both the hole is countersunk from both sides (fig. 7, Nos. 4 and 5). Three in all were found.

Flattened spheroidal stone, measuring $1\frac{5}{8}$ inch in diameter and $1\frac{1}{32}$ inch in thickness, and a thin disc, measuring $1\frac{13}{16}$ inch by $\frac{25}{32}$ inch, both unperforate and probably whorls in the making (fig. 7, Nos. 6 and 7).

Half of a large ring of stone, measuring $4\frac{13}{16}$ inches in diameter and $2\frac{1}{2}$ inches by 2 inches in section, the perforation being $1\frac{1}{4}$ inch in diameter.

Socket-stone of gneiss, measuring $7\frac{1}{8}$ inches long, $6\frac{5}{16}$ inches broad, and $2\frac{5}{8}$ inches thick. Found in Chamber D, other two being found, one in Chamber A and the other in Chamber C.

Oval, discoidal piece of schist, measuring $3\frac{1}{8}$ inches and $2\frac{13}{16}$ inches in cross diameters, and $\frac{9}{16}$ inch thick, with a broad, flattened projection on one face simulating the stopper of a vessel, but perhaps weathered into this shape. Found beside a large, irregular cylinder of cetacean bone with hollows at both ends, one of which it fitted, in Chamber B.

Forty-six pieces of pumice stone, usually rounded, and occasionally showing signs of use as rubbers, varying from $\frac{13}{16}$ inch to $1\frac{11}{16}$ inch in greatest length. Forty-one pieces were found together in a corner of a shelf in the back wall of Chamber E.

In addition the following relics were retained at Vallay House:—

Three pieces of flint. Found in Chambers B and C.

Twenty pot-lids in the form of thin, flat, rounded discs of mica-schist,

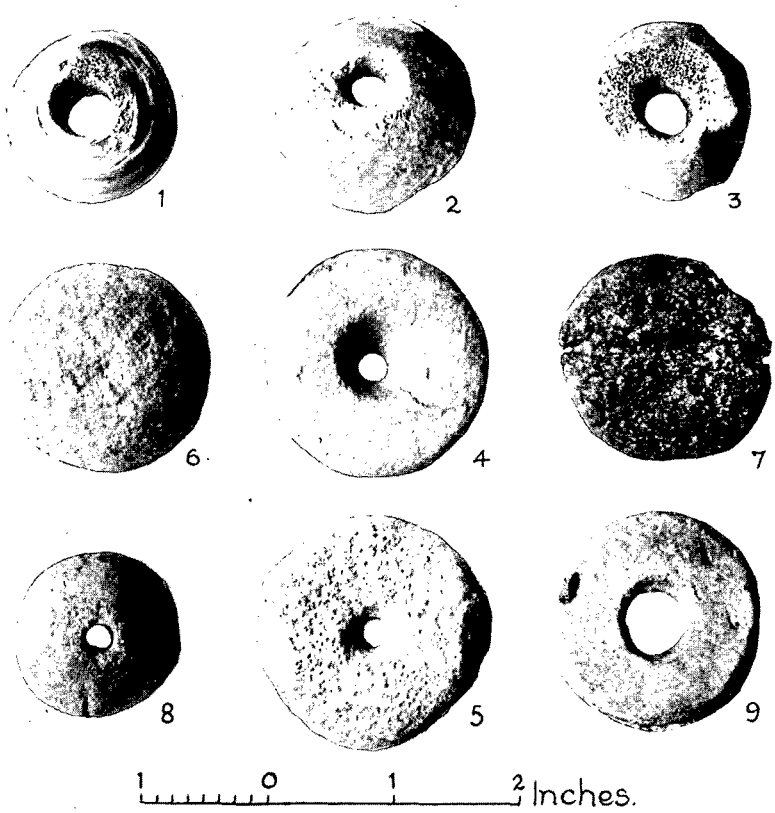


Fig. 7. Whorls of Stone, Clay, and Cetacean Bone from Foshigarry.

measuring from 4 inches to 9 inches in diameter and $\frac{3}{4}$ inch in thickness. Found in Chambers A, B, C, and D.

Two flat, squared pieces of mica-schist, measuring 5 inches by $6\frac{1}{2}$ inches, and $6\frac{1}{2}$ inches square, with a thickness of $\frac{3}{4}$ inch.

Two unornamented balls of mica-schist, measuring 2 inches and 3 inches in diameter. Found in Chamber F.

Two portions of saddle querns. Found in Chamber C.

Five portions of rotatory querns. Found in Chambers A, C, and E.

Objects of Metal.

Bronze pin with one end bent round in a circle, in the same plane as the stem, to form a ring-head, measuring $2\frac{3}{8}$ inches in length (fig. 8, No. 1).

Part of a stout bronze plate with one circular end, and a projection, with a perforation in it, at right angles at the other end, which is now

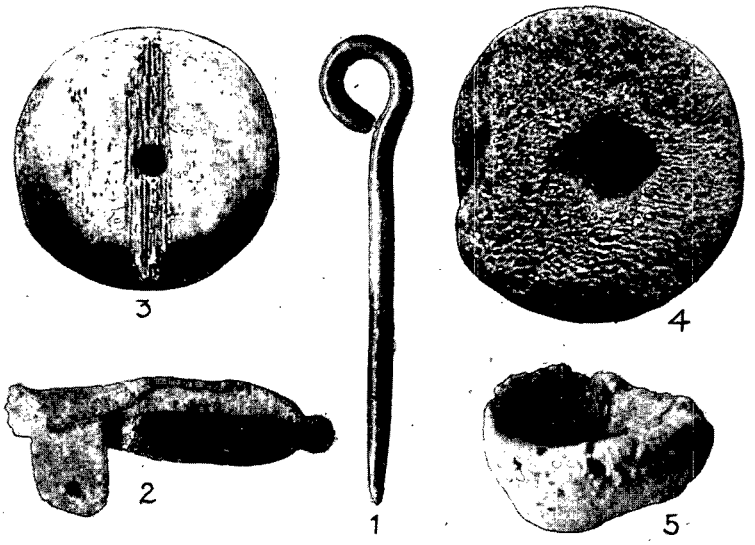


Fig. 8. Objects of Bronze, Clay, and Cetacean Bone from Foshigarry. ($\frac{1}{1}$.)

folded back across the plate; in its crushed condition it measures $1\frac{11}{16}$ inch long, $\frac{7}{16}$ inch broad, and $\frac{1}{16}$ inch thick (fig. 8, No. 2).

Three lumps of iron slag. A total of nineteen pieces were found, all in Chamber B. Rounded flat mass of iron, measuring 7 inches by 6 inches by $3\frac{3}{4}$ inches, probably from a bloomery.

Part of an iron knife, clasped between two haft-plates of bone of plano-convex section measuring $3\frac{1}{16}$ inches long and $\frac{15}{32}$ inch thick, showing three iron rivets. On one side of the haft is a single incised dot and circle (fig. 9, No. 1)—from Chamber B.

Fragment of an iron knife, retaining the two haft-plates of bone or horn measuring $1\frac{3}{8}$ inch and $1\frac{5}{8}$ inch long, and riveted with two iron rivets (fig. 9, No. 2).

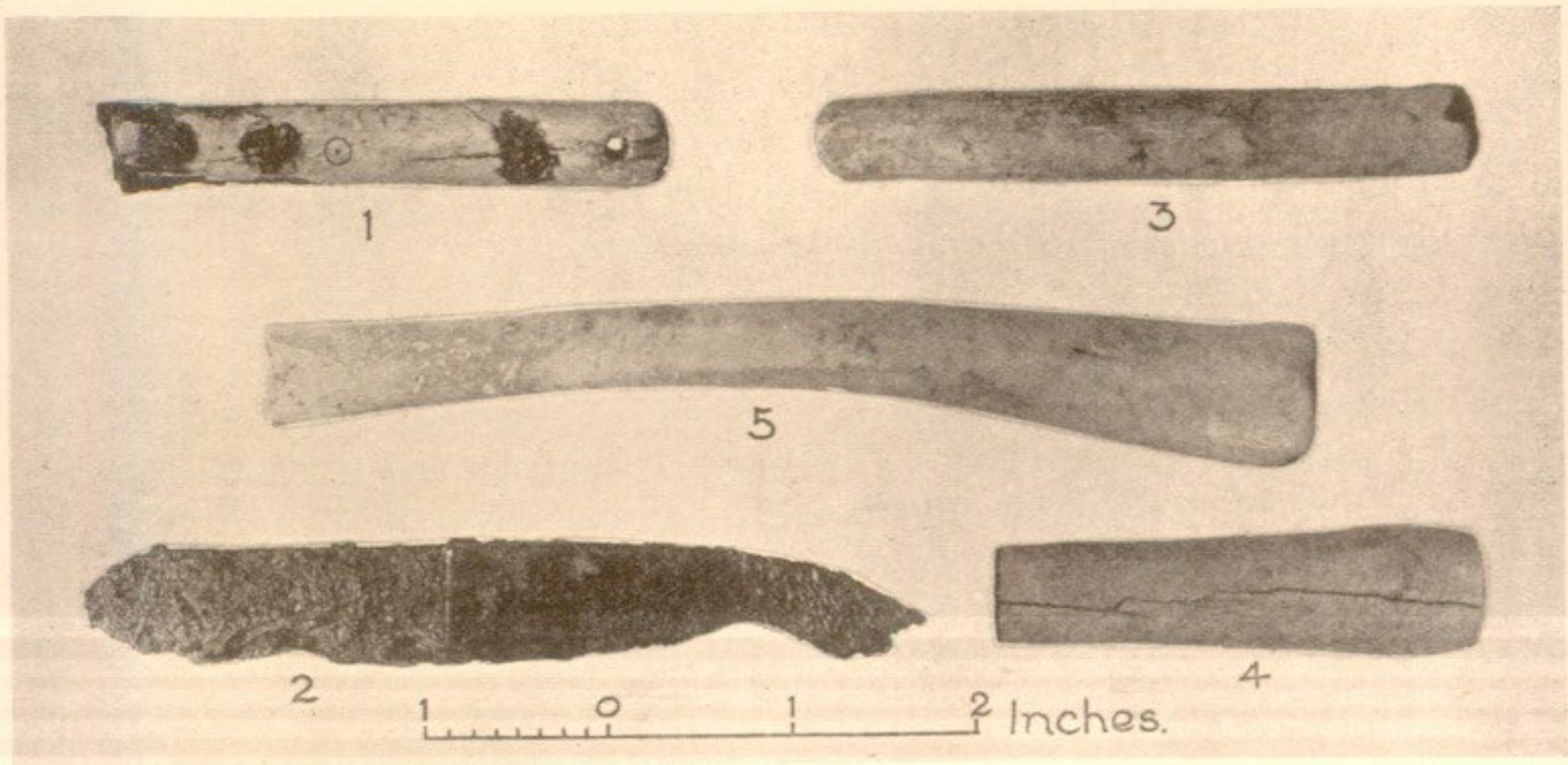


Fig. 9. Bone and Iron Objects from Foshigarry.

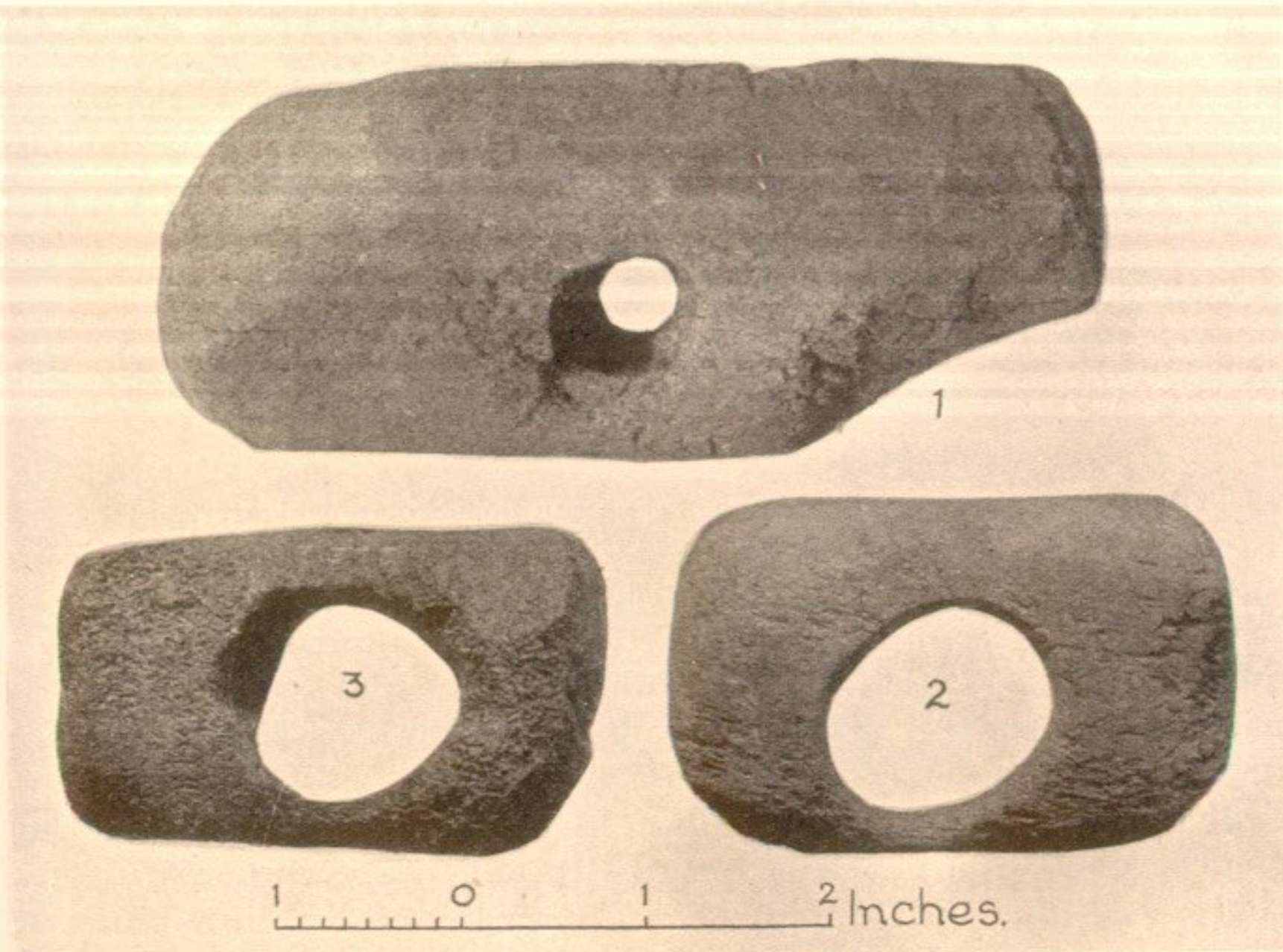


Fig. 10. Hammers of Cetacean Bone from Foshigarry.

Objects of Bone and Deer-horn.[1]

Three hammer-heads of cetacean bone (fig. 10). One is of irregular shape, measuring 5 inches long, $2\frac{1}{8}$ inches broad, and $1\frac{1}{8}$ inch thick, with the hole, tapering from one side, placed eccentrically; another of oblong shape, measuring $2\frac{15}{16}$ inches long, $1\frac{7}{8}$ inch broad, and $\frac{15}{16}$ inch

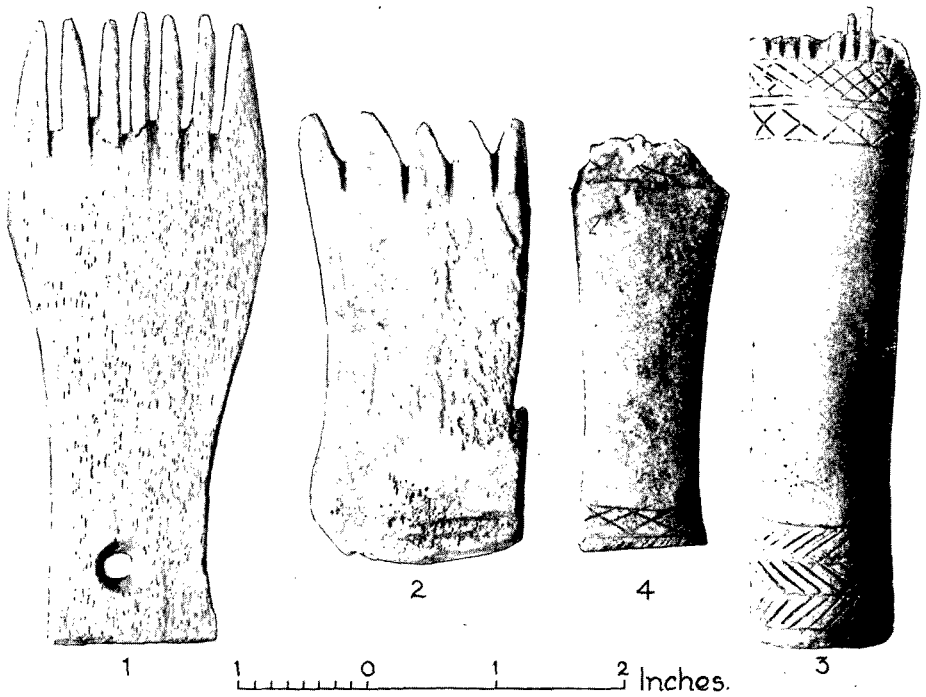


Fig. 11. Weaving Combs of Cetacean Bone from Foshigarry.

thick, the circular hole for the handle being placed eccentrically; and the third of oblong shape and slightly curved longitudinally, measuring $2\frac{15}{16}$ inches long, $1\frac{11}{16}$ inch broad, and $1\frac{1}{8}$ inch thick, with an oval perforation in the centre. Half of another which is not in the Museum was also found.

Four long-handled weaving combs of cetacean bone (fig. 11): the first in perfect condition, with seven teeth, and a small perforation near the butt end, measures $4\frac{7}{8}$ inches in length and $1\frac{15}{16}$ inch in greatest

[1] Articles made of cetacean bone are mentioned as such, those of other mammalian bone simply as made of bone.

breadth; the second, also perfect, with five short teeth, measures $3\frac{7}{16}$ inches in length and $1\frac{3}{4}$ inch in greatest breadth; the third, with eleven or twelve teeth, all broken off, now measures 5 inches in length and $1\frac{5}{16}$ inch in greatest breadth, the rounded side of the handle bear-

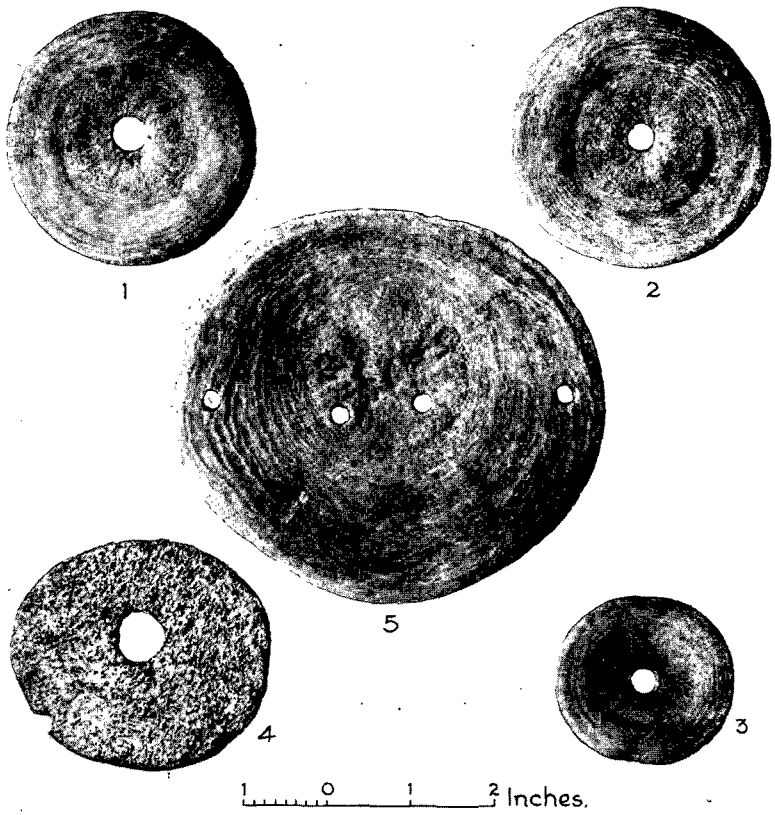


Fig. 12. Whorls and Pierced Disc of Cetacean Bone from Foshigarry.

ing two transverse bands of lattice design, of different sizes, at the base of the teeth, and three transverse bands of oblique straight lines sloping in different directions alternately at the butt end; and the fourth, with all the teeth broken off so that they cannot be counted, now measures $3\frac{1}{4}$ inches in length and $1\frac{1}{8}$ inch in greatest breadth, the rounded side of the handle being decorated with a band of lattice designs at each end. The first was found in Chamber A, the second and third in C, and the fourth in B.

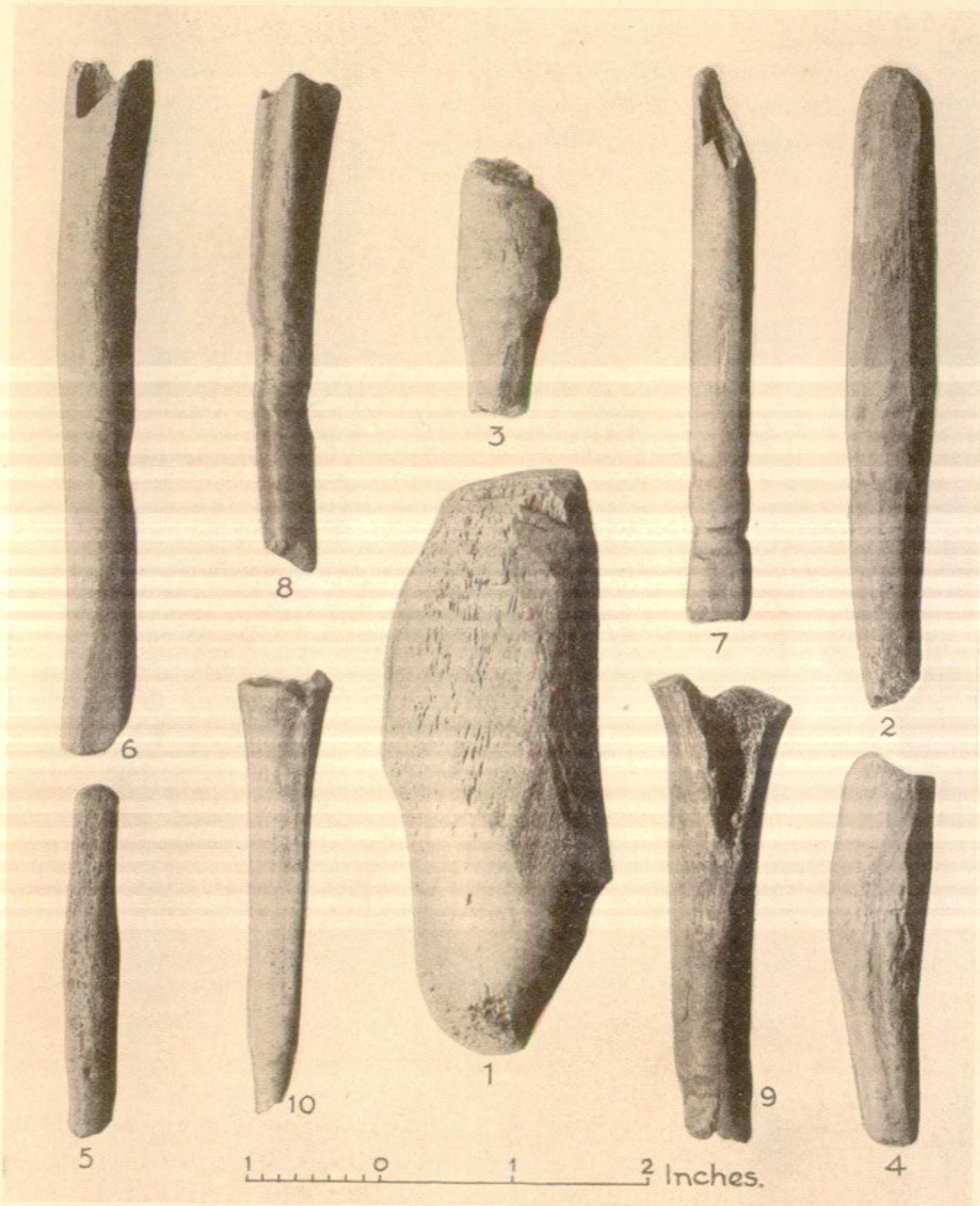


Fig. 13. Objects of Cetacean and other Bone, encircled by grooves worn by friction, from Foshigarry.

Three whorls made from intervertebral plates of cetacean bone, measuring $3\frac{1}{16}$ inches by $\frac{1}{4}$ inch, 3 inches by $\frac{1}{4}$ inch, and $2\frac{1}{8}$ inches by $\frac{3}{16}$ inch, in diameter and thickness, centrally perforated (fig. 12, Nos. 1 to 3).

Whorl of cetacean bone, measuring $3\frac{1}{16}$ inches by $2\frac{3}{4}$ inches in cross diameters, and $\frac{5}{16}$ inch in thickness (fig. 12, No. 4).

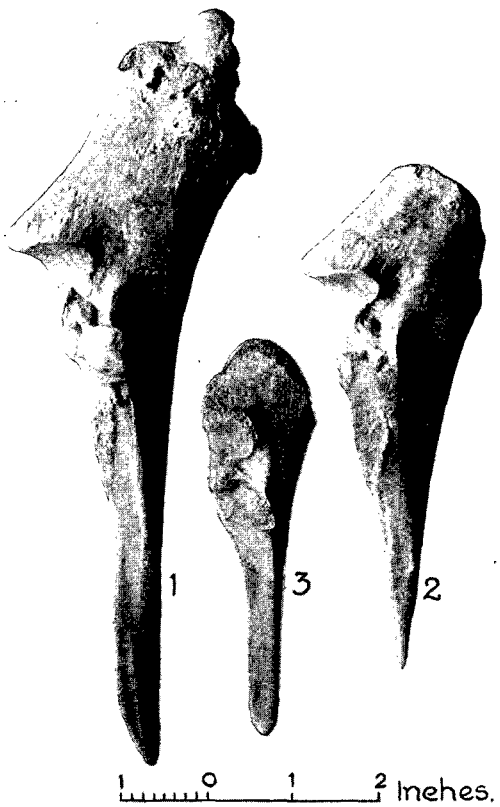


Fig. 14. Pointed Tools of Bone from Foshigarry.

Whorl of cetacean bone of flattened spheroidal form, with five deep concentric grooves round the perforation on the top, measuring $1\frac{11}{32}$ inch in diameter and $\frac{3}{4}$ inch in thickness (fig. 7, No. 1).

Whorl made from the joint of a cetacean bone, domical above and flat below, measuring $1\frac{9}{16}$ inch in diameter and $\frac{3}{4}$ inch in thickness (fig. 7, No. 2).

Whorl of cetacean bone, measuring $1\frac{3}{8}$ inch in diameter and $\frac{5}{8}$ inch in thickness (fig. 7, No. 3).

Intervertebral plate of cetacean bone, measuring $3\frac{5}{16}$ inches in diameter and $\frac{11}{16}$ inch in thickness, with a central perforation and one smaller between it and one side; there was probably another on the opposite side, but this part is broken off.

Intervertebral plate of cetacean bone, measuring $5\frac{3}{16}$ inches by

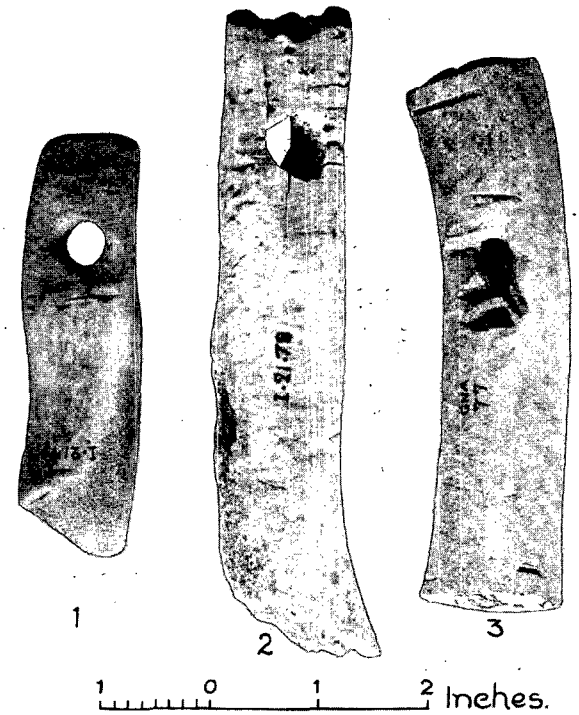


Fig. 15. Perforated Implements of Deer-horn from Foshigarry.

$4\frac{5}{8}$ inches in cross diameters and $\frac{1}{2}$ inch in thickness, with four perforations following the larger medial line of the object (fig. 12, No. 5).

Ten cylindrical objects encircled with one or more broad, oblique grooves worn by friction, imperfect examples being broken across at the hollow part (fig. 13, Nos 1 to 10), measuring $4\frac{5}{16}$ inches in length by $1\frac{11}{16}$ inch in diameter, imperfect; $4\frac{3}{4}$ inches by $\frac{11}{16}$ inch, imperfect; $1\frac{15}{16}$ inch by $\frac{13}{16}$ inch, broken across a groove at both ends; 3 inches by $\frac{11}{16}$ inch, imperfect, and $2\frac{5}{8}$ inches by $\frac{3}{8}$ inch—all of cetacean bone, the shaft more or less whittled down. The others, which consist of other mammalian bones, measure $5\frac{3}{16}$ inches long by $\frac{1}{2}$ inch in diameter at

the centre, complete; $4\frac{1}{8}$ inches by $\frac{7}{16}$ inch, complete, with two distinct grooves; $3\frac{15}{16}$ inches by $\frac{9}{16}$ inch, complete; $3\frac{1}{2}$ inches by $\frac{7}{16}$ inch, imperfect; and $3\frac{3}{8}$ inches by $\frac{9}{16}$ inch, imperfect.

Three pointed tools formed from the ulna of a sheep or deer, measuring $8\frac{5}{8}$ inches, $5\frac{3}{4}$ inches, and $4\frac{9}{16}$ inches long, the first having a rather blunt oval point, the second a broader point, and the third a straight tapering point (fig. 14).

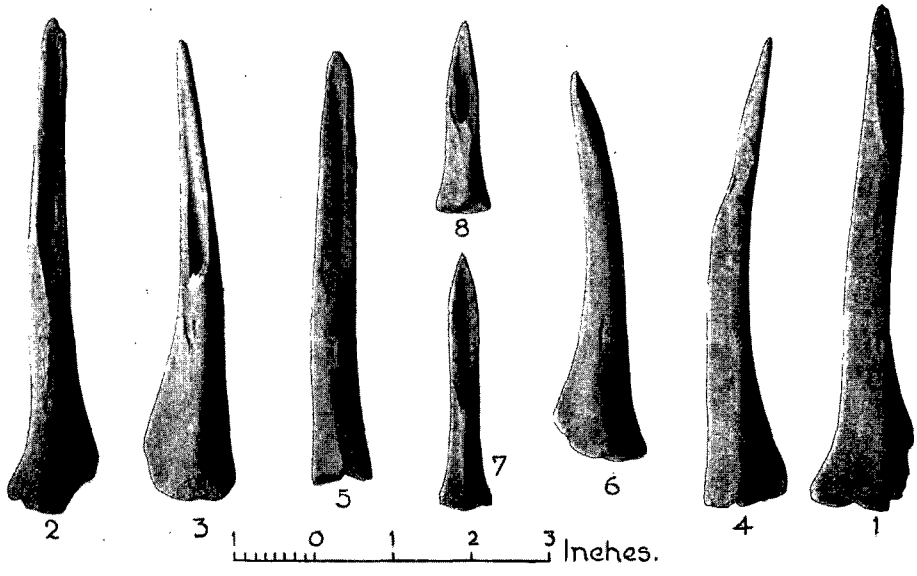


Fig. 16. Socketed Bone Spear-heads (?) from Foshigarry.

Three segments of deer-horn, measuring $3\frac{7}{8}$ inches, $5\frac{7}{8}$ inches, and $4\frac{15}{16}$ inches in length, rudely fashioned, with a perforation near one end, resembling the arrow-straighteners used by some North American Indians (fig. 15).

Eight spear-heads (?) formed from the tibia of a sheep or deer, the shafts of the bones sliced down on one side to form points of varying degrees of length and sharpness, and a longitudinal hole drilled in the joint end for a socket, measuring $6\frac{1}{2}$ inches, $6\frac{1}{4}$ inches, 6 inches, $5\frac{7}{8}$ inches, $5\frac{1}{2}$ inches, 5 inches, $3\frac{1}{4}$ inches, and $2\frac{7}{16}$ inches in length (fig. 16, Nos. 1 to 8).

Bone harpoon or fish-spear with a barbed point and a socket bored in the opposite end, nicely dressed and measuring $4\frac{1}{8}$ inches long (fig. 17), from C.

Bone borer, curved, measuring $7\frac{1}{2}$ inches long.

Four bone borers measuring $1\frac{7}{8}$ inch, $2\frac{1}{16}$ inches, $2\frac{7}{16}$ inches, and $3\frac{9}{16}$ inches long.

Fig. 17. Harpoon of Bone from Foshigarry. ($\frac{1}{4}$.)

Three awls or borers of cetacean bone, measuring $4\frac{1}{4}$ inches, $3\frac{3}{8}$ inches, and $2\frac{1}{4}$ inches long (fig. 22, Nos. 1 and 2).

Twenty-three awls made from thin splinters of bone, chiefly ribs, with long sharp points and broad irregularly cut stems, and eight formed from ends of leg bones of sheep, varying from $2\frac{1}{16}$ inches to $4\frac{7}{8}$ inches in length (fig. 18).

Seven bone pins with ornamental heads (fig. 19, Nos. 1 to 7)—one with a flat spatulate head showing three nicks on each edge and incised transverse lines connecting these notches, measuring $2\frac{17}{32}$ inches long; one with a crutch-shaped head, $1\frac{11}{16}$ inch long; one with a baluster-shaped head, $1\frac{31}{32}$ inch long; one with a globular head, $2\frac{9}{32}$ inches long; and three with the head in the form of an inverted truncated cone, one bearing a dot surrounded by two concentric circles on the top, $2\frac{25}{32}$ inches, $2\frac{21}{32}$ inches, and $2\frac{1}{4}$ inches long.

Pin, measuring $4\frac{1}{8}$ inches long, made from a slender leg bone of a bird (fig. 19, No. 8).

Pin, measuring $3\frac{1}{16}$ inches long, made of a bone with the joint remaining (fig. 19, No. 9).

Five pins made of splinters of bone whittled down, without heads, measuring $2\frac{5}{16}$ inches, $2\frac{5}{16}$ inches, $2\frac{7}{32}$ inches, $2\frac{3}{8}$ inches, and $2\frac{1}{16}$ inches in length (fig. 19, Nos. 10 and 11, and 13 to 15).

Ten needles of bone, one broken across the eye, measuring 2 inches, $2\frac{5}{16}$ inches, $3\frac{3}{16}$ inches, $3\frac{15}{32}$ inches, $3\frac{1}{2}$ inches, $3\frac{7}{16}$ inches, $3\frac{13}{16}$ inches, $3\frac{11}{16}$ inches, $2\frac{7}{8}$ inches, and $2\frac{1}{2}$ inches in length (fig. 19, Nos. 16 to 24).

Fifteen handles of deer-horn with sockets of varying sizes in one end, measuring from $2\frac{5}{8}$ inches to $12\frac{13}{16}$ inches in length, one of the smallest (No. 3) having a small rivet hole in one side near the socketed end (fig. 20, Nos. 1 to 9).

Curved handle made from the tine of a deer-horn, carefully whittled down, measuring $4\frac{3}{4}$ inches long; there is a small socket in the broad end showing a slit cut across it to a depth of $\frac{1}{4}$ inch, and it is ornamented on each side with a single dot within two concentric circles.

Handle of deer-horn of hollow cylindrical shape, the surface carefully cut down, measuring $2\frac{3}{4}$ inches long; it is ornamented with a dot

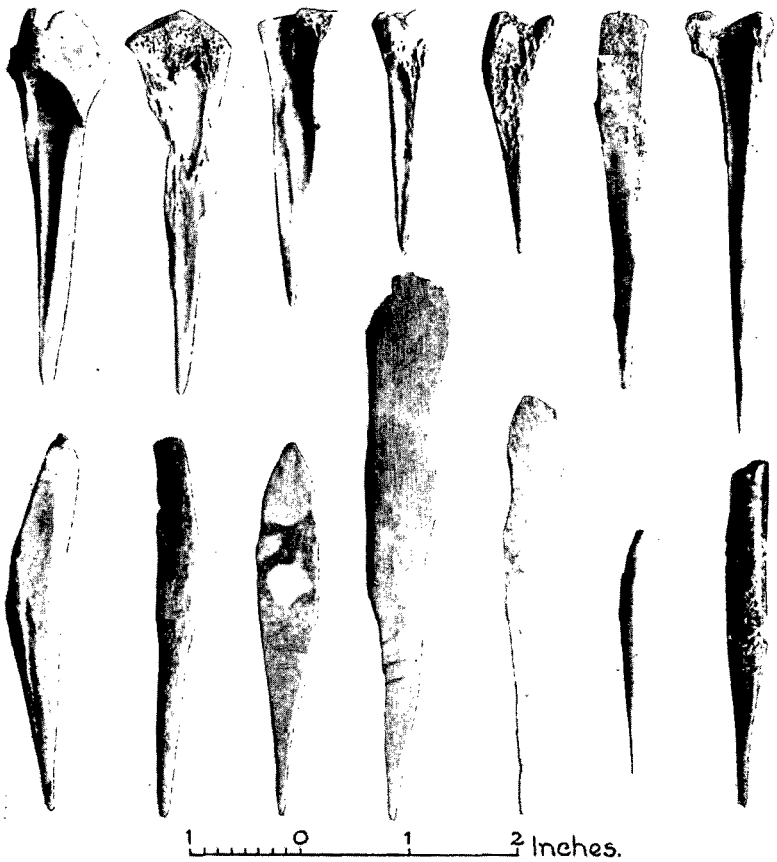


Fig. 18. Bone Awls from Foshigarry.

and double concentric circles on one side, and two similar markings on the other.

Four handles of deer-horn pierced for their whole length, and half of another split lengthwise, measuring from $1\frac{13}{16}$ inch to $3\frac{5}{32}$ inches in length; one is notched transversely on the exterior (fig. 20, No 12).

Part of a handle of cetacean bone of semicircular section, showing two rivet holes, measuring $1\frac{15}{16}$ inch long and $1\frac{1}{32}$ inch broad.

Curved handle of deer-horn of hollow cylindrical shape, measuring

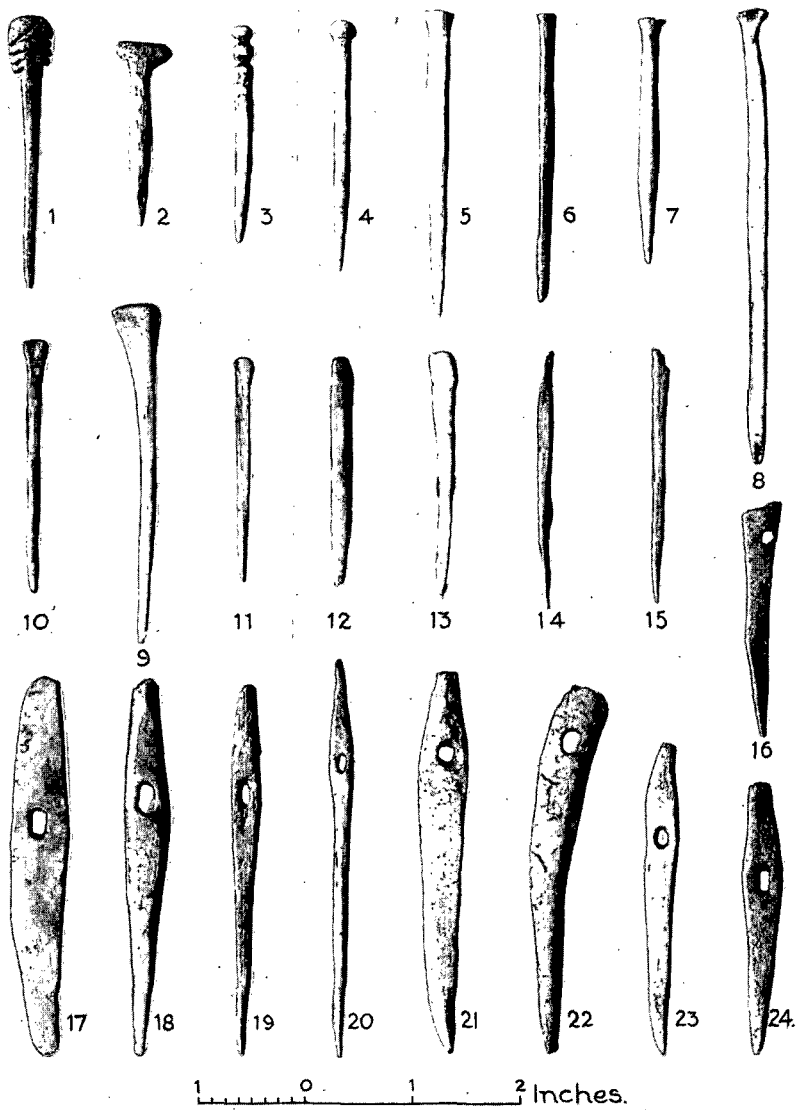


Fig. 19. Bone Pins and Needles from Foshigarry.

$6\frac{15}{16}$ inches long, sawn off square at one end and cut obliquely at the other (fig. 20, No. 10).

Handle of deer-horn of hollow cylindrical shape, the perforation tapering from one end to the other, measuring $1\frac{13}{16}$ inch long (fig. 20, No. 11).

Handle formed of a half of a metatarsal bone of a sheep, measuring $2\frac{1}{2}$ inches long.

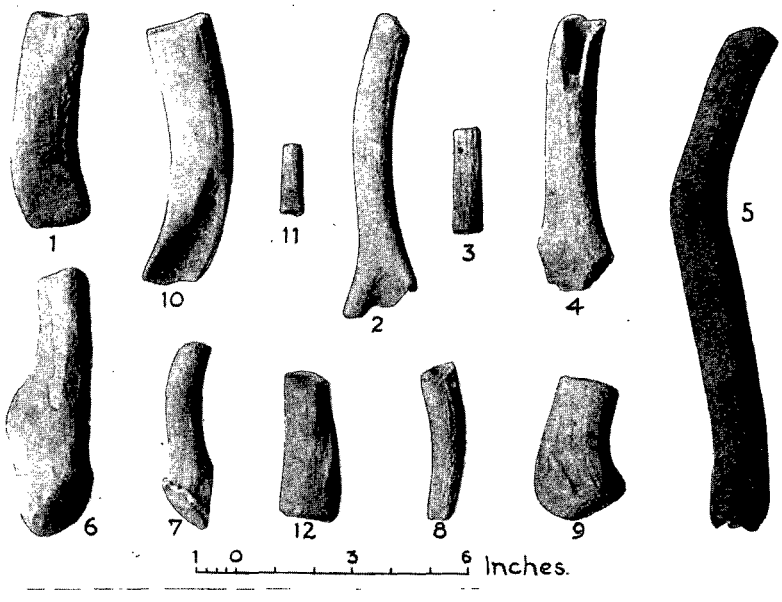


Fig. 20. Handles of Deer-horn from Foshigarry.

Half of a turned handle of deer-horn, of varying diameters, split lengthwise, measuring $2\frac{21}{32}$ inches long (fig. 9, No. 4).

Carefully made bone handle, measuring $3\frac{5}{8}$ inches in length and $\frac{1}{2}$ inch in diameter, with a large oval socket at one end, half of which is split off lengthwise (fig. 9, No. 3).

Segment of a bone of a large bird, measuring $5\frac{3}{4}$ inches in length, carefully cut across the ends (fig. 9, No. 5).

Fourteen handle-like objects of cetacean bone, usually of approximately rectangular section and narrowing towards the butt end, but every one broken across the other end, measuring from $1\frac{13}{16}$ inch to $5\frac{7}{16}$ inches in length, generally from $\frac{13}{16}$ inch to 1 inch in greatest breadth, and from $\frac{1}{4}$ inch to $\frac{7}{16}$ inch in thickness; one still shows the

shoulders of what seems to have been a spatulate blade, and two have two transverse grooves on one edge.

Three deer-horn picks made from part of the beam and brow tine of an antler, the beam part used as the haft measuring $8\frac{1}{2}$ inches, $7\frac{3}{16}$ inches, and $6\frac{1}{2}$ inches in length (fig. 21, Nos. 1 to 3).

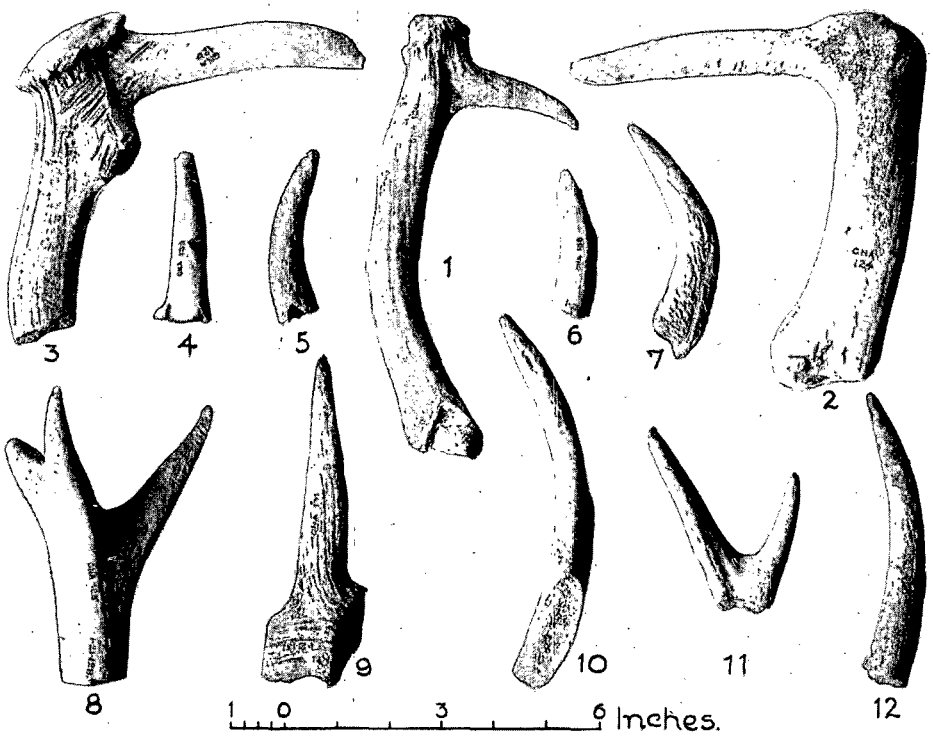


Fig. 21. Picks and other Objects of Deer-horn from Foshigarry.

Twenty-three segments of beams and tines of red-deer antlers of varying sizes, usually made by partially sawing through the horn and then breaking it off, a very few being completely sawn through; ten of the tines have been dressed to a blunt point by paring (fig. 21, Nos. 4 to 12).

Thin cylindrical object of bone of regular thickness, rounded at one end and broken across the other, very finely made, measuring $1\frac{5}{8}$ inch in length and $\frac{3}{16}$ inch in diameter.

Splinter of bone whittled on the outside at one end, measuring $4\frac{3}{8}$ inches long.

Splinter of bone rounded at one end, measuring $2\frac{21}{32}$ inches long.

Object of bone smoothed at one end, and another with a blunt rounded point, measuring $5\frac{3}{8}$ inches and $3\frac{7}{8}$ inches in length.

Bone implement made from a rough splinter with spatulate end and rounded shank, measuring $3\frac{13}{16}$ inches long (fig. 22, No. 4).

Bone implement with a curved spatulate end, measuring $4\frac{9}{16}$ inches in length (fig. 22, No. 10).

Carefully-made, narrow, thin, bone implement with chisel-shaped ends, measuring $4\frac{1}{4}$ inches long (fig. 22, No. 9).

Bone chisel, roughly made, measuring $3\frac{7}{8}$ inches long—from C (fig. 22, No. 5).

Bone implement, gouge-shaped at one end and obliquely pointed at the other, measuring $2\frac{15}{16}$ inches long (fig. 22, No. 8).

Implement made from part of a rib bone, cut across the butt, with the other end split longitudinally and pointed and worn by rubbing, measuring $5\frac{3}{8}$ inches long (fig. 22, No 3).

Bone implement, one end bifurcated and the other formed like a lance blade, measuring $3\frac{1}{16}$ inches long (fig. 22, No 6).

Roughly-shaped, narrow, thin piece of bone, with a deep slit at one end, measuring $3\frac{1}{8}$ inches long (fig. 22, No. 7).

Curved strip from the beam of an antler, cut flat on the under side and measuring $7\frac{1}{8}$ inches long and $\frac{13}{16}$ inch broad.

Strip of deer-horn, measuring $3\frac{9}{16}$ inches long, $\frac{9}{16}$ inch broad, and $\frac{1}{4}$ inch thick, with three perforations centrally placed, bevelled at one end and broken through a perforation at the other.

Strip of bone with edges on one side bevelled, measuring $6\frac{5}{16}$ inches long, $\frac{31}{32}$ inch broad, and $\frac{1}{4}$ inch thick, with a perforation in the centre, another at one end, and two at the other, broken across the end perforations.

Part of a rib bone, with cut marks and a shallow hollow worked on one edge, measuring $5\frac{1}{16}$ inches long.

Eleven pieces of ribs and other bones showing cuts.

Pin head of cetacean bone, of domical shape, and showing a square tapering socket on the flat under side, measuring $1\frac{9}{16}$ inch in diameter and $1\frac{1}{8}$ inch in height (fig. 8, No. 4).

Flattened spheroidal pin head of cetacean bone, measuring $1\frac{3}{8}$ inch in diameter and 1 inch in height, on the under side being a groove cut diametrically with a small circular perforation in the centre for the stem of the pin, and near the top a small transverse perforation (fig. 8, No. 3)—from B.

Oblong block of cetacean bone, with rounded corners above and flat below, measuring $2\frac{1}{32}$ inches long, $1\frac{1}{4}$ inch high, and $1\frac{1}{8}$ inch broad —from B.

Block of cetacean bone, of lenticular section, measuring $2\frac{5}{8}$ inches long, 2 inches high, and $1\frac{5}{8}$ inch broad.

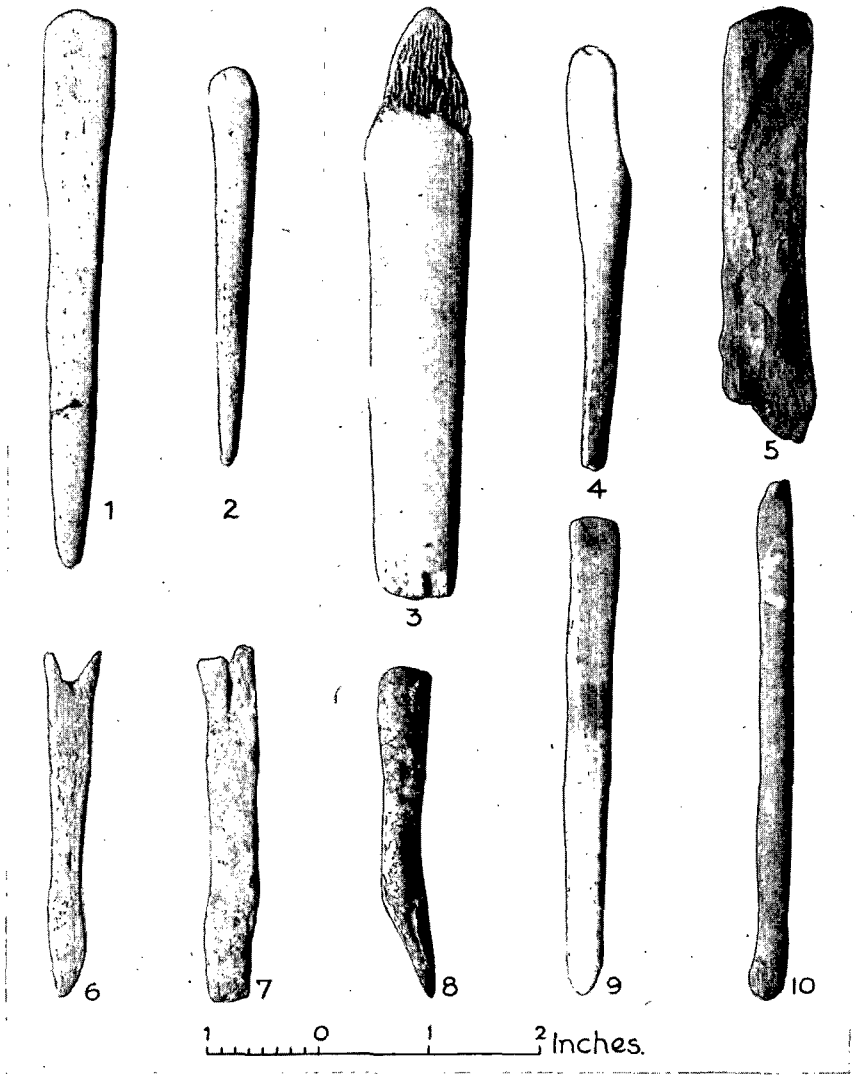


Fig. 22. Miscellaneous Bone Implements from Foshigarry.

Bone die of oblong shape with a large longitudinal perforation, the sides having each of the numbers 3, 4, 5, and 6 indicated by a dot and

double concentric circle design, measuring $1\frac{5}{16}$ inch long, $\frac{25}{32}$ inch broad, and $\frac{3}{4}$ inch thick (fig. 6)—from C.

Small-toothed comb of bone, measuring $2\frac{21}{32}$ inches long and $\frac{15}{16}$ inch broad, made from four transverse plates, clasped between two longitudinal central plates profusely decorated with dot and circle designs and riveted with three iron rivets; the outer edges of the end transverse plates extend beyond the clasping plates and show a small perforation between two notches (fig. 5). Found on stepped end of radial wall No. 4 in C.

Imperfect small-toothed comb of similar build, measuring $2\frac{1}{8}$ inches long, with only six teeth remaining on one side, ornamented with dot and circle designs and clasped with two iron rivets—from B.

Eight large implements or weapons of cetacean bone.

Seven large flat implements or weapons of cetacean bone showing the natural surface on one side and pared down on the other, the point rounded and rubbed down on the inside, consisting of a club-like weapon made from a rib split for the greater part of its length with an oblique point, measuring $23\frac{1}{2}$ inches in length, $3\frac{1}{8}$ inches in greatest breadth, and $\frac{3}{4}$ inch in thickness (fig. 3, No. 1); a similar weapon, measuring 21 inches in length, $3\frac{1}{4}$ inches in greatest breadth, and $\frac{7}{8}$ inch in thickness, only it is split for its whole length and has two deep notches on either edge of the butt end opposite each other (fig. 3, No. 2); two crescentic objects cut obliquely across the butt end, measuring $18\frac{1}{2}$ inches in length, $3\frac{1}{8}$ inches in breadth, and $\frac{13}{16}$ inch in thickness, and $17\frac{3}{4}$ inches by $3\frac{3}{8}$ inches by 1 inch; another of similar shape, but the rounded end imperfect, measuring 16 inches in length, $2\frac{5}{8}$ inches in breadth, and $\frac{15}{16}$ inch in thickness (fig. 3, Nos. 3 to 5); two flat curved implements, more acutely pointed than the previous examples, measuring $12\frac{1}{2}$ inches in length, $2\frac{13}{16}$ inches in breadth, and $\frac{7}{8}$ inch in length, and $12\frac{3}{4}$ inches long by $2\frac{7}{16}$ inches broad by 1 inch thick, both with three deep notches on both edges opposite each other near the butt end (fig. 2, Nos. 2 and 3).

Pointed implement of cetacean bone of sub-triangular section, pared down on the under side and much worn by rubbing at the point, with two large notches on either side of the butt, measuring $10\frac{3}{4}$ inches in length, $2\frac{7}{16}$ inches in breadth, and $1\frac{5}{16}$ inch in thickness (fig. 2, No. 4).

Fifteen objects formed of plates of cetacean bone, cut down on the under side, and generally showing one end of that face ground down—one with three and eleven with two deep notches on opposite edges near the other end, and three with portions of the notched part broken off—measuring from $6\frac{3}{4}$ inches to $12\frac{15}{16}$ inches in length, from $2\frac{9}{16}$ inches

to $4\frac{5}{8}$ inches in breadth, and from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch in thickness (fig. 2, No. 1, and fig. 1, Nos. 1 to 12).

Oval disc of cetacean bone, pared down on the under side and carefully dressed round the edges, with two notches on one edge and probably originally three on the other, measuring $5\frac{1}{16}$ inches and $3\frac{1}{2}$ inches in cross-diameters.

Oblong object of cetacean bone rounded at one end, measuring $7\frac{1}{2}$ inches long and $5\frac{5}{8}$ inches broad; and another with the rounded end sharpened by rubbing, measuring $10\frac{15}{16}$ inches by $3\frac{3}{4}$ inches.

Four rudely-shaped flat plates of cetacean bone, one square at one end and rounded at the other, and three of rectangular shape, measuring $5\frac{5}{8}$ inches by $5\frac{1}{2}$ inches, $6\frac{3}{4}$ inches by $5\frac{15}{16}$ inches, and $5\frac{3}{8}$ inches by $3\frac{3}{8}$ inches.

Flat pointed implement of cetacean bone, measuring $6\frac{9}{16}$ inches in length and $1\frac{7}{8}$ inch in breadth, the under side of the pointed end worn by rubbing and notched on the edges.

Part of an object made from a plate of cetacean bone of triangular shape, with two broad deep notches on its straight unbroken side, measuring $7\frac{1}{16}$ inches in length, and $1\frac{3}{4}$ inch in breadth at the widest part—from A 3.

Thin, fan-shaped, flat plate of cetacean bone with a perforation near the apex, counter-sunk from both faces, the sides measuring $8\frac{7}{16}$ inches and $7\frac{3}{16}$ inches in length and the base $6\frac{1}{4}$ inches.

Intervertebral plate of a whale, carefully dressed on the under side, measuring $9\frac{1}{8}$ inches and 8 inches in cross-diameters.

Fragments of perhaps six cups made by scooping out the cancellous part of whales' vertebræ, varying from $4\frac{1}{2}$ inches to $7\frac{1}{2}$ inches in height.

POTTERY.

Small crucible of red clay, of rough hemi-spheroidal shape, with a thick wall, measuring $1\frac{3}{16}$ inch in greatest diameter at the mouth externally, and $\frac{11}{16}$ inch in height, the cavity being $\frac{7}{8}$ inch and $\frac{3}{4}$ inch in cross-diameters and $\frac{7}{16}$ inch deep (fig. 8, No. 5). Found in a crevice high up in west wall of Chamber D.

About one-third of the wall of a large vessel of reddish-brown clay with an almost straight wall converging slightly towards the base (fig. 4). The entire rim and bottom are now wanting. When discovered it was practically complete though cracked, and measured $14\frac{1}{2}$ inches in height. Judging from the remaining part it had measured at least 14 inches in diameter at the mouth and $9\frac{1}{2}$ inches across the base, the wall being $\frac{15}{32}$ inch in thickness. At a distance of over $2\frac{1}{2}$ inches from the lip it is encircled by an applied zig-zag or wavy strip of ornamenta-

tion. This pot was found in an inverted position in the space between the outer end of radial wall B2 in Chamber B and the enclosing wall. Inside it were found one of the large cetacean bone objects with notched sides, part of a red-deer antler, two bones, and some limpet-shells.

Base and lower portion of a vessel of dark grey clay, the remaining part of the wall converging sharply to the base, which measures $4\frac{7}{8}$ inches across, the wall being $\frac{5}{16}$ inch in thickness.

Sixty-five fragments, mostly very small, probably from fifty-eight vessels of clay, chiefly of dark grey and brown colour, only a few being red (figs. 23 and 24). There are thirty-eight fragments of rims and twenty-seven of walls. All except four are ornamented with applied, incised, impressed, or finger-tip designs, and even the four plain pieces, which are rim fragments of no great depth, may have come from decorated vessels. It is quite evident that the shards handed over to the Museum have been selected for their ornamental designs, as more than four hundred other shards were found. A large number of the latter were devoid of ornamentation, and it is more than probable that many would belong to undecorated vessels.

Whorl of red clay of flattened spheroidal form, measuring $1\frac{5}{16}$ inch in diameter and 1 inch in height (fig. 7, No. 8). From Chamber C.

Three whorls, only one complete (fig. 7, No. 9), made from shards of brown and grey pottery, two measuring $1\frac{9}{16}$ inch in diameter and one $2\frac{5}{16}$ inches.

Rounded shard of dark-coloured pottery, measuring $2\frac{7}{16}$ inches in greatest diameter; probably a whorl in the making.

The ware, like the generality of Scottish prehistoric pottery, contains an admixture of crushed stone, usually of small size. This is difficult to detect in some of the finer and thinner pieces. The pottery is hard and well-fired, and some of the thinner fragments are of very good quality indeed. Coarse thick pottery containing large crushed stones is absent, as the thickest piece measures only $\frac{11}{16}$ inch in thickness. The wall in most of the vessels, as represented by the surviving shards, varies from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch in thickness, one bit being only $\frac{3}{16}$ inch thick. Even in the two largest vessels it is no more than $\frac{1}{2}$ inch and $\frac{9}{16}$ inch in thickness. As very few of the rim fragments show any length of lip, it has been possible only in a few cases to estimate approximately the diameters of the mouths of the vessels represented by them. The vessels represented by the pieces illustrated in fig. 23, Nos. 1, 18, and 20, and fig. 24, No. 25, have measured about 15 inches, $7\frac{7}{8}$ inches, 7 inches, and 4 inches across the mouth.

It is impossible to tell the heights or other dimensions of any of

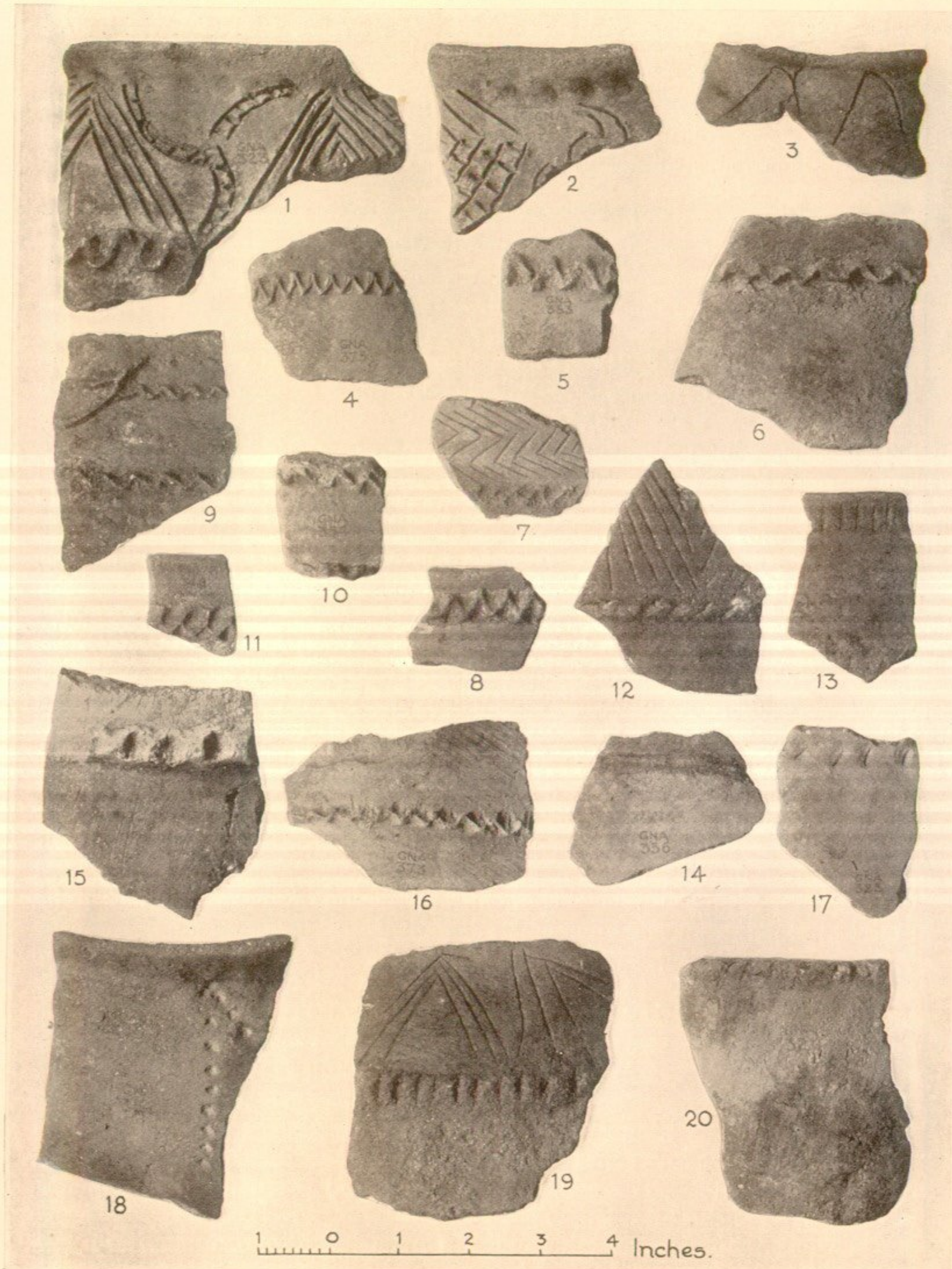


Fig. 23. Pottery from Foshigarry.

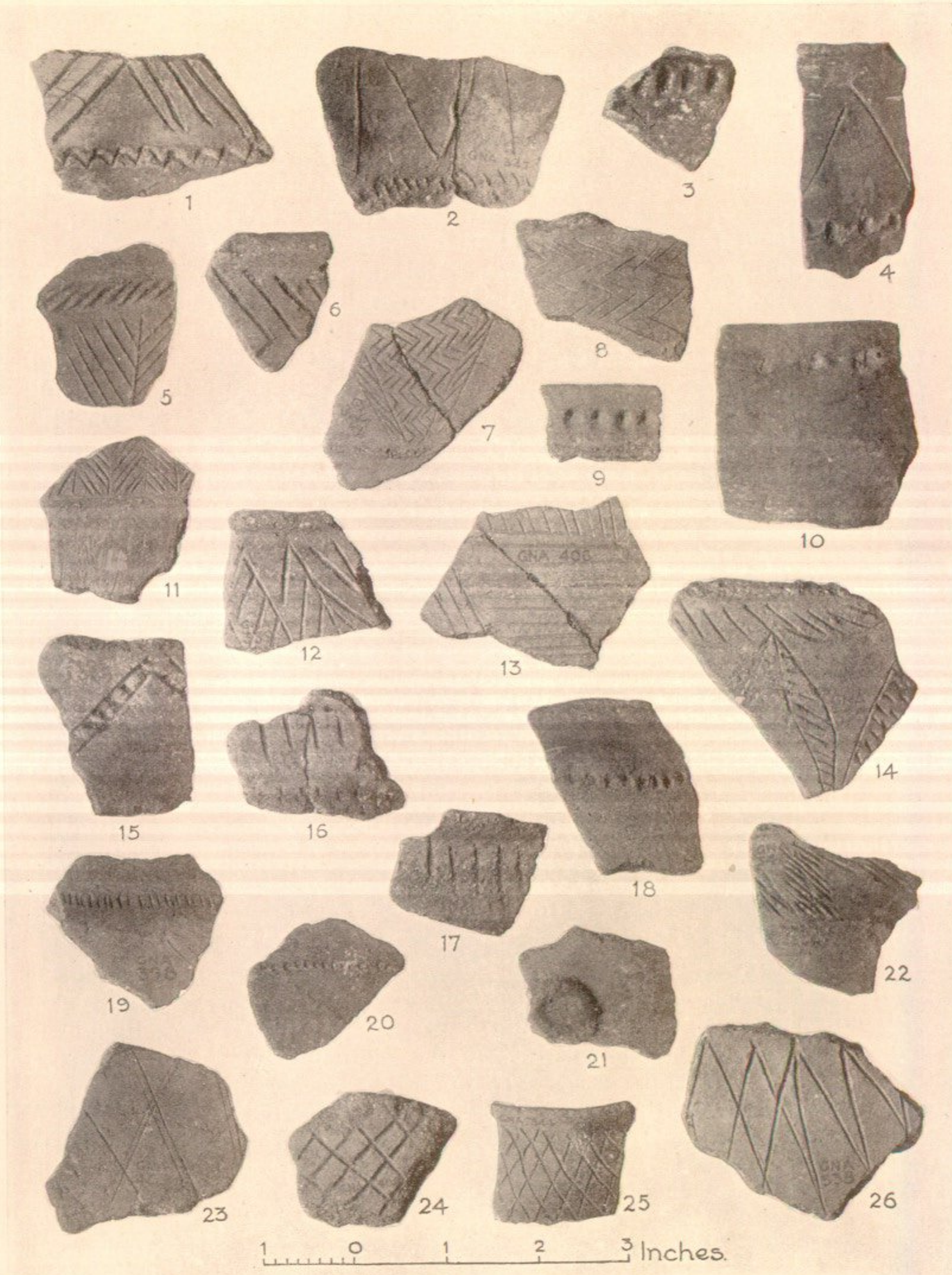


Fig. 24. Pottery from Foshigarry.

the vessels, except in one case where only the basal part is preserved, and it measures $4\frac{7}{8}$ inches across.

Many of the wall pieces show fairly sharp curves, and, if we may judge from some of the deeper rim fragments, a goodly number curved in sharply from the shoulder towards the mouth and then recurved outwards to a greater or less extent at the lip (fig. 25). It may be suggested that some resembled to a certain extent the Roman *ollae*, or cooking-pots, in shape. Also, it is quite possible that some of them may have been almost globular like the hand-made croggans,[1] which succeeded the earlier pottery, and continued to be made in the Western Isles as late as the middle of the nineteenth century. In all likelihood there would be many vessels with straight walls, like common red-clay flower-pots, as such vessels have been found by Mr Beveridge in contemporary structures in this corner of North Uist. However, only a very few of the shards which we have got suggest this form of vessel.

In form and in quality of ware the pottery from the Foshigarry earth-houses is extremely good and infinitely superior to the coarse stuff, with its occasional pitiable attempt at ornamentation, fashioned by the inhabitants of the fort on Traprain Law, who, though poor potters, were expert workers in bronze and glass.

It is difficult to explain how the largest vessel (fig. 4), measuring $14\frac{1}{2}$ inches in height and 14 inches in diameter at the mouth, with a wall only $\frac{15}{32}$ inch thick, could be used. Filled with liquid it would be liable to burst unless buried in sand; but if used in this fashion there was no necessity that it should be ornamented on the exterior. When found, however, it was in an inverted position.

Ornamentation.—Applied and incised designs occur most frequently, about thirty times each, and on eleven vessels both forms of decoration are seen. Five pieces bear impressed patterns, and four shards, probably from two vessels, have finger-tip or -nail markings.

Applied designs.—The simplest of the applied designs is a slight moulding or cordon, quite plain, encircling the vessel, which is seen with no other designs on two shards of good ware from a well-curved wall, $\frac{3}{8}$ inch thick, which may have come from one vessel. Six shards, three possibly from one vessel, are encircled by a similar cordon. In two of these the wall is plain (fig. 23, No. 14), in one the moulding is associated with incised, vertical, herring-bone patterns (fig. 24, No. 11), and in the other with what may have been chevrons, the upper angles

[1] In our *Proceedings* these are always spelt "craggans," but I have never heard the word pronounced otherwise than "croggan" in the islands, and I have visited practically every inhabited one in the Outer Hebrides, as well as Skye, Coll, and Tiree.

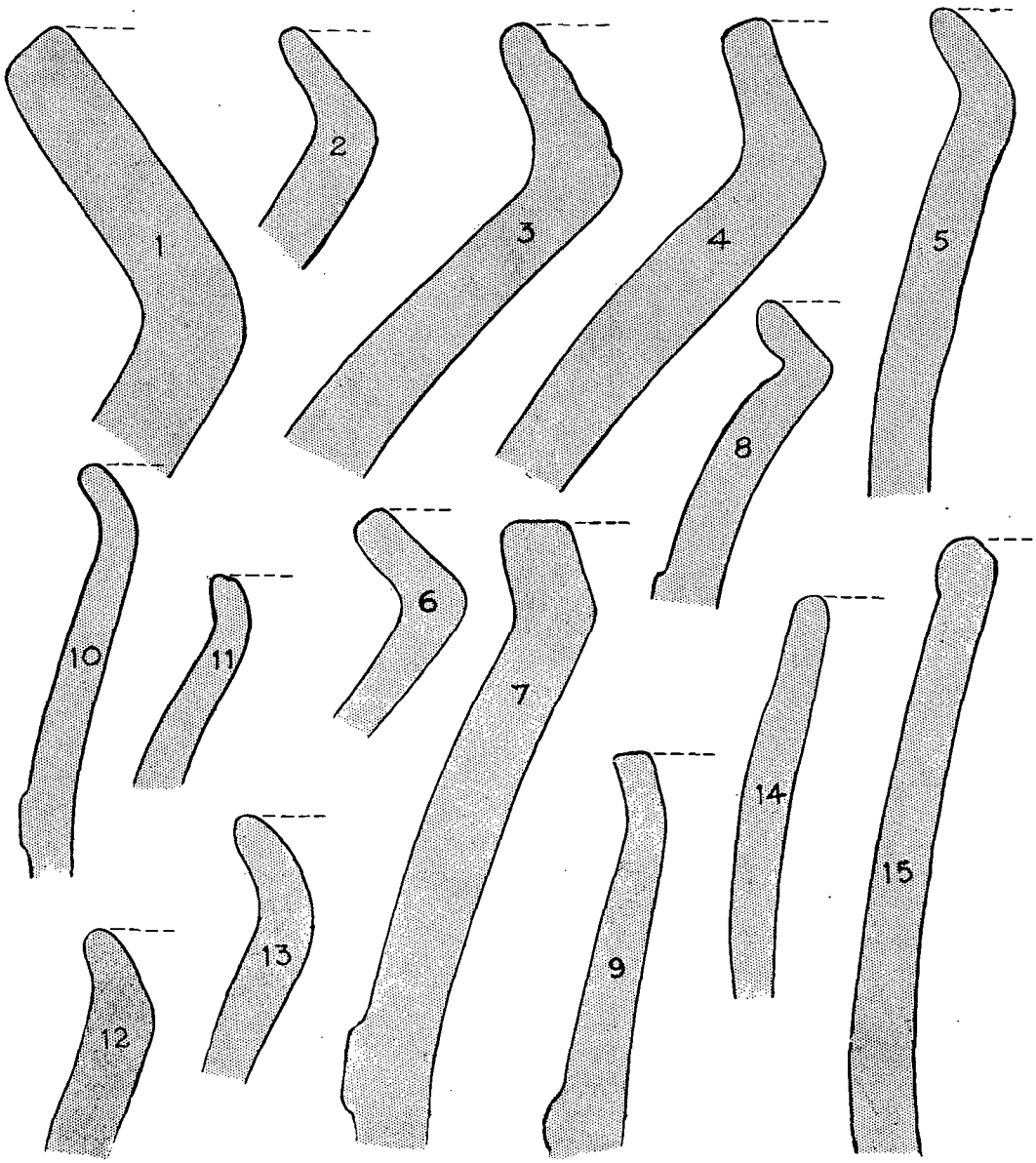


Fig. 25. Sections of Rims of Pottery Vessels from Foshigarry. (½.)

of which were filled with vertical zig-zag lines, all incised (fig. 24, No. 7). The other three pieces have triangular impressions on the moulding with chevrons of four and five lines above (fig. 24, No. 1).

Most popular of all is a wavy or compressed zig-zag narrow strip of clay, forming a band round the vessel, varying from $\frac{3}{16}$ inch to $\frac{5}{8}$ inch in width (fig. 23, Nos. 1 and 4 to 10). In one piece it is placed on the under side of the short recurved lip, on another in the hollow of the neck, but generally it seems to have encircled the shoulder. On the large straight-sided vessel it occurs several inches below the lip. It appears at least on twenty vessels—once with incised, vertical, zig-zag lines; four times with incised chevrons; once with incised chevrons and curved designs; once with a chevron of two lines with short cross-lines between, forming a ladder-like design; once with short vertical incisions just under the short recurved lip; and in the other cases alone. Two shards, possibly from one vessel, show two wavy lines crossed by twig-like streaks (fig. 23, No. 9).

These wavy or zig-zag applied bands are seen on pottery from many prehistoric sites in the Hebrides, in kitchen-middens, earth-houses, and brochs. Such decorated shards from Coll and Tiree, from a kitchen-midden in the Old Cattlefold on Vallay, from the earth-houses at Eilean Maleit and Cnoc a' Comhdhalach in North Uist, and at Galson, Lewis, and from the brochs Dun an Iardhad and Dun Beag, Struan, in Skye, are in the National Museum. It seems to be much less common in the contemporary structures of the north and north-east, but we have specimens from the Everley Broch in Caithness.

Two pieces show a cordon with oblique lines incised on it so as to suggest a cord pattern; one of these also bears incised chevrons of seven lines (fig. 23, No. 12), and the other incised herring-bone patterns with the oblique lines running into a vertical medial line (fig. 24, No. 5).

A raised moulding broken up by impressed vertical lines, suggestive of dog-tooth ornament, is seen on three shards, two of which bear incised chevrons as well (fig. 23, No. 19, fig. 24, Nos. 3 and 4). Similar mouldings occur on pottery from the earth-houses at Kilpheder and near Balelone in North Uist, and at Galson in Lewis, also from the Broch of Lingrow in Orkney.

On one shard is a flat raised moulding with oval depressions on it at intervals (fig. 23, No. 15). This form of ornamentation occurs on pottery from the earth-houses at Kilpheder and Udal, North Uist, and from the broch of Dun an Iardhard, Skye.

A small applied annulet, probably one of an encircling row, appears on one small fragment (fig. 24, No. 21). A fragment in the Museum from Port-nan-Long, North Uist, bears a similar design.

One of the most interesting pieces amongst those mentioned is the one with a wavy stripe, chevrons, and curved designs (fig. 23, No. 1). The chevrons consist of four or five lines, and the curved figure, which is placed in an angle of the chevron, is in the form of a triskele, the arms of which consist of two parallel lines with short cross incisions between, like a ladder pattern. This and another fragment, which shows what looks like another triskele and ladder designs, probably came from the same vessel, as the paste is of the same colour and thickness and there is a row of triangular impressions just under the rim (fig. 23, No. 2). Though the wall is only $\frac{7}{16}$ inch thick, the mouth of the vessel seems to have been about 15 inches in diameter.

One shard bears what looks like an incised leaf design filled with oblique lines (fig. 24, No. 14), and four others, all from different vessels, incised lattice patterns (fig. 24, Nos. 23 to 26). A zig-zag pattern occurs on one small shard, herring-bone designs on another, and vertical and oblique panels formed by short incised lines on a third. One vessel seems to have been decorated with triangles alternately hatched with horizontal and oblique incised lines (fig. 24, No. 13). Five have narrow transverse bands of short vertical incisions (fig. 24, Nos. 16 to 20), one of these bearing chevrons also. A rim fragment is notched round the outside of the lip (fig. 23, No. 20).

Two rim fragments of one vessel have small round indentations under the lip (fig. 24, No. 9), and another shows a vertical and an oblique row of similar marks meeting at the upper ends (fig. 23, No. 18).

Four fragments, three from one vessel, exhibiting finger-tip and -nail markings immediately under the rim (fig. 23, No. 17, and fig. 24, No. 10), complete the tale of the various styles of ornamentation seen on the pottery.

The clumsy little semi-globular crucible of red clay found at Foshigarry is very much smaller and ruder in shape than the fine thin-walled crucibles of grey fire-clay, with triangular mouths, which were found in considerable numbers on Traprain Law, and which also have been discovered elsewhere in Scotland. But this Foshigarry type has had a wide distribution, as one was found in each of the earth-houses at Garry Iochdrach and at Cnoc a' Comhdhalach, North Uist; one in the dun at Buaile Risary, North Uist; three, one incomplete, in the broch of Dun Beag, Struan, Skye; one in the Broch of Clumlie, Shetland; and one and part of another in the Broch of Nybster, Caithness. Four similar crucibles and three of larger size though of the same form were found in the vitrified fort of Dun-a-goil in Bute.[1]

The collection of relics found in the earth-houses at Foshigarry is not

[1] *Trans. Buteshire Nat. Hist. Soc.*, 1925, p. 59, Pls. 38 and 39.

only large, but it is remarkable for the great number of implements and other objects fashioned of bone and deer-horn compared with those made of stone and metal.

The stone objects consist of pot-lids, hammer-stones and pounders, whet-stones or burnishers, oval pebbles used as strike-a-lights, whorls, socket-stones, pieces of pumice, part of a heavy ring, and an axe. All these types of relics, except perhaps the last three, have not infrequently been met with in contemporary structures such as brochs. The only objects which call for special comment are some of the strike-a-lights and the pieces of pumice. Four of the former, which are made of the usual flattened oval pebble, do not bear the regular oblique grooves worn by the iron striker on the faces, but show streaks of iron rust only. The cache of forty-one pieces of pumice is unique. Its presence, however, is easily explained by the occurrence on the site of so many articles made of bone. Nothing was more suitable for rubbing down into shape pins, needles, and other finely finished relics, and the material was to be found on many of the sandy beaches, washed in by the sea. Pieces of pumice which have been used as rubbers have been found on other sites belonging to the same period. A considerable number came from the earth-house at Garry Iochdrach, North Uist; at least eleven from the earth-house at Bac Mhic Connain, Vallay, North Uist; eight from the Broch of Burrian, Orkney; two from the earth-house at Howmae, Orkney; and one each from the earth-house at Cnoc a' Comhdhalach, North Uist; the broch of Dun Beag, Struan, Skye; an inhabited site on the Ghegan Rock, in the Firth of Forth; and from a wood-carver's wooden tool-box which was found near Howe, Evie, Orkney.

Although the small crucible suggests that objects of bronze were fashioned here, only two relics made of this metal were recovered—one a pin, and the other a small mounting of indeterminate character.

Relics made of iron were nearly as scarce, consisting as they did of a large mass of the metal, some pieces of slag, a few large rivets, fragments of two knives, and the small rivets by which the plates of the small-toothed combs were maintained in position. From the considerable number of deer-horn and bone handles which were found, and from the occurrence of a large lump of the metal, it may be inferred that this metal was utilised to a greater extent than the number of objects found would indicate. Still it has to be noted that none of the sockets of the handles contained traces of rust. The comparative absence of iron, however, is probably explained by the decay of the metal, which, lying in very porous soil, was continually drenched by sea-water.

When we consider the objects made of bone and deer-horn, it will be found that generally cetacean bone was chosen for making the larger

implements, antlers of the red-deer for those of medium size, and other mammalian bones for the smaller objects. Only three articles were made of bones of birds, one being a pin, another a pin or awl, and the third a tubular object made from a bone of a large bird.

That bones of whales should have been so much used is not surprising, because there must always have been a plentiful supply of them in the Hebrides, as in Orkney and Shetland. Dead whales would occasionally be washed ashore by the waves, and at times live ones would be left stranded in shallow waters. It is less than four years ago that a school of the very rare false killer whale (*pseudorca crassidens*) was left high and dry by the tide in Dornoch Firth.

The most striking of all the relics found at Foshigarry is the group of large implements made of long flat slates of cetacean bone, showing the natural surface on one side and a whittling down on the other (figs. 1 to 3). These implements may be divided into three classes. In the first are two long club-like instruments which would have made quite efficient weapons if used as swords or clubs; one of these has notches at the narrow end, apparently to improve the grip (fig. 3, No. 1). The second class consists of five crescentic objects, which are rather shorter and broader than those in the first, and of fairly regular width for nearly their whole length (fig. 3, Nos. 3 to 5). The third class is the most numerous, consisting as it does of at least fifty examples (figs. 1 and 2). These are not so long as those in the other two groups, but every one of them seems to have been notched at one end.

All these implements are worn down on the under side of the top end, as if by vigorous rubbing. One or two have been worn almost square across the end, others are regularly curved, and a few have the abrasion towards one side, so that the end while rounded is obliquely pointed. As there are no facets on the worn parts, only regular curves, it is evident that their present shape was not caused by filing or grinding, but seems rather to have been the result of their having been used for rubbing some yielding material. As the cancellous tissue on the inside of the bone is hard and honeycombed these implements would have made efficient rasps for preparing skins for clothing.

The deep notches towards the narrow end would seem, at the first glance, to have been intended to improve the grip. But the nicks are roughly made, and are uncomfortable when grasped in the hand; also, some of the objects are rather broad to be gripped with ease. It is quite possible that the notches were meant for the attachment of a wooden handle, which by increased leverage would improve the efficiency of these implements.

Large flat blades of cetacean bone with one end rubbed down in

a similar fashion to those just described have been found in the Broch of Burrian, and in the earth-houses at Saverock, near Kirkwall,[1] and Howmae, North Ronaldshay, all in Orkney; but although one from the second of these sites is practically of the same general form as that illustrated in fig. 2, No. 4, not a single one of them has the deep V-shaped notches of those from Foshigarry. On the other hand, some of the implements from Burrian and Howmae have large oblong perforations near the middle of the blade.

Another peculiar utensil found on the site is the cylindrical object encircled by one or more grooves worn obliquely as if by the friction of a running cord (fig. 13). Eleven of these were recovered, and of the ten in the Museum one is of cetacean bone (No. 1), four of deer-horn (Nos. 2 to 5), and five of bone (Nos. 6 to 10). Three seem complete (Nos. 6 to 8), and one of these shows two grooves (No. 7). All the others are broken across the thinnest part of the groove. One (No. 3), after having broken across one groove, seems to have been used again until it gave way at a second groove.

Objects of this class have been found elsewhere, but chiefly, so far as I know, in the Outer Hebrides. In earth-houses, four were found at Bac Mhic Connain; one at Udal, North Uist; one at Bruthach a Tuath, Benbecula; and two at Galson, Lewis. Three were discovered at Bragar, Lewis, on what I believe was the site of an earth-house; three in a wind-swept sandy gully at Bealach Ban, near Loch Hosta, North Uist; two in the Broch of Burrian; and one in the Keiss Broch, Caithness.[2] In addition, I picked up one on a wind-swept sandy hollow on the west side of South Uist, and another in a kitchen-midden near Tain, Rossshire,[3] the latter having been made of the burr end of a roe-deer's antler.

It is not evident what these objects were used for. Although some of them are hollow they were not fitted on spindles or axles, because most of them are solid. That they had been submitted to a considerable strain on the worn part is clear as it would require a good deal of force to break such a stout object as that illustrated in fig. 13, No. 1.

The weaving combs, whorls, small-toothed combs, pins both ornamental and plain, needles, awls, and borers of bone are all well-known types of broch and earth-house relics. But one of the Foshigarry weaving combs has unusually short, dumpy teeth (fig. 11, No. 2), and the awls generally are thinner and less carefully made than usual.

Hammer-heads of cetacean bone (fig. 10) are very rare types of relics, although several others have been reported. Half of one very

[1] This site should not be confused with the underground structure at Saverough, near Birsay, Orkney.

[2] *Proc. Soc. Ant. Scot.*, vol. xxxv. p. 112.

[3] *Ibid.*, vol. lxiv. p. 10.

similar to one of the Foshigarry hammers was found at Bac Mhic Connain. Three more of cetacean bone are in the Museum; one measuring $9\frac{7}{8}$ inches in length, came from Keiss Broch, Caithness; and the other two, which are small and resemble some of our Bronze Age stone hammers, were discovered in Orkney, one from the Broch of Cairston and the other from an unknown locality.[1]

The deer-horn objects with a hole near one end (fig. 15), which resemble some North American instruments for straightening the shafts of arrows, are the only Scottish examples which I have seen.

Small, thin, square plates of bone with a perforation at each corner, known as weaving tablets, were used on the Continent for weaving.[2] One of these was discovered in the kitchen-midden near Tain already referred to, and another in the Skirza Head Broch, Caithness. Two small circular examples with two and four perforations respectively, which were found in the Broch of Jarlshof, Shetland, and one with two perforations in the Broch of Burrian may have been used for the same purpose. The two circular specimens from Foshigarry with three and four perforations, although they are much larger than the others (fig. 12, No. 4), may also have been used in the same way. Large intervertebral plates of cetacean bone pared down in parts like the one from Foshigarry have been found at the earth-house at Bragar and in the Old Cattlefold, Vallay, one from each site. The first of these, however, had a perforation on each side, opposite each other. Cups made by scooping out the vertebræ of whales have been reported from other earth-houses and from brochs.

Although many pointed implements made from the long bones of small animals like sheep have been recovered from brochs and earth-houses, very few of them have the broad end drilled to form a socket, and so they generally have been classed as boring instruments. The whole lot found at Foshigarry have such a socket and would appear to have been used as spear-heads (fig. 16). Similar objects have been found in the Howmae earth-house and in the Borness Cave, Stewartry of Kirkcudbright, which yielded many relics of Romano-British times. In addition to these spear-heads there is another which must be considered a harpoon, as the point is nicely barbed (fig. 17). One other harpoon of somewhat similar type, however, is recorded, and it was found in the Bac Mhic Connain earth-house, which lies barely two miles to the eastward. This example is not so well finished, as the head has only a notch at either side and not the fully developed undercut barbs.

Borers formed from the ulnæ of small animals, like those seen on fig. 14, have been found on a few Scottish sites only: one in the

[1] *Supra*, p. 96, fig. 18.

[2] *Flechten und Weben.*

earth-house at Skara Brae, Orkney; one in the Broch of Nybster, Caithness; two in the Broch of Lingrow, Orkney; three in Keiss Broch; and the same number in the Road Broch, Keiss and at Howmae.

An interesting relic of a form occasionally found in brochs is the die for playing dice (fig. 6). Three others were discovered in the Broch of Burrian, two in the Hillhead Broch, Caithness, on the supposed site of a broch at Slackwick Bay, Sanday, Orkney, and one at Bac Mhic Connain. These are all perforated lengthwise.

In fig. 22 is illustrated a miscellaneous group of relics made for special purposes. Some have obviously been used for rubbing, but others are of unusual form, especially the two with a forked end (Nos. 6 and 7).

The relics found in Dun Thomaidh were few, and call for no special comment, only it may be said that if they had been found in any of the earth-houses or brochs which have been mentioned they would have been considered quite characteristic of the period of these structures.

Little is now to be seen of the earth-houses at Foshigarry. When I first went to North Uist in 1914 and visited the site with Mr Beveridge, the whole of the buildings had been covered up with blown sand, over which a carpet of grass was already growing. The only parts of the structure visible were the ends of some of the walls in the sand-bank above the beach, which were being undermined by the action of the sea. As I have suggested elsewhere, this encroachment is, to a certain extent, due to a sinking of the land, which is still in progress both on the west and east coasts of Scotland.[1]

If Mr Beveridge's surmise that Chambers A and B had curved walls on their northern sectors as in their southern halves, and I think he was quite right, then the isolated Chamber A falls into line with the other wheel-shaped earth-houses with radial partition walls in North Uist and South Uist. In Chamber A these radials are continued right into the main encircling wall of the building, but in B and C there is a vacant space between them and the outer wall. In the wheel-shaped earth-houses at Cnoc a' Comhdhalach (pron. Croc a Cohaulach),[2] at Garry Iochdrach, at Eilean Maleit,[3] and at Machair Leathann (fig. 26),[4] in North Uist and at Usinish in South Uist,[5] also in the curvilinear chamber in the earth-house at Howmae, Orkney,[6] and in the outbuildings at the Broch of Yarhouse, Caithness,[7] are truncated radials similar to those in Chambers B and C. And the continuous walls of Chamber A are

[1] *Proc. Soc. Ant. Scot.*, vol. lxiii. p. 319.
[2] *North Uist*, p. 200.
[3] *Ibid.*, p. 207.
[4] *Ibid.*, p. 121.
[5] *Proc. Soc. Ant. Scot.*, vol. vii. p. 165.
[6] *Ibid.*, vol. xix. p. 23.
[7] *Archæologia Scotica*, vol. v. p. 134.

represented in the wheel-shaped earth-house at Bac Mhic Connain and in a similar chamber in the outworks at the Broch of Jarlshof in Shetland.[1] It is thus seen that this structural feature has a wide range, though, so far, most of them have been discovered in the Outer Hebrides. Evidence that the inner ends of these small voussoir-shaped compartments had been closed or partially so by slabs or buildings is to be found in several of the earth-houses. In Chamber C, as at Garry

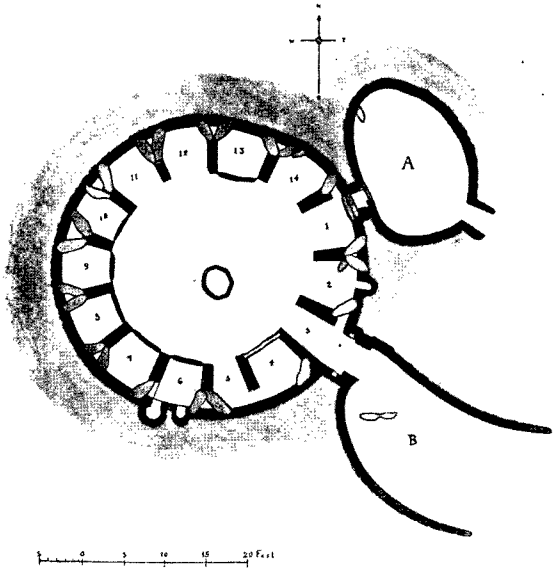


Fig. 26. Earth-house at Machair Leathann, North Uist.

Iochdrach, Cnoc a' Comhdhalach, Eilean Maleit, and Machair Leathann it is seen that the inner ends of the cubicles have been blocked up, entrance to the various rooms having been obtained through the narrow space between the radial and the main wall. In Chamber A at Foshigarry and at Bac Mhic Connain where the radial went into the main wall, the inner end was only partially built up, leaving a space for access into the cells.

It is believed that the radial walls in most of the North Uist earth-houses were meant to support lintels forming the roof, although some of the outer walls at Foshigarry and Bac Mhic Connain converged as they rose, and at Jarlshof there seems to have been regular beehive-shaped roofs.

[1] *Proc. Soc. Ant. Scot.*, vol. xli. p. 11.

Hearths near the centre of the floor were found in Chambers B and C, a feature encountered in nearly all the other North Uist earth-houses and in brochs. The central space above the hearths must have been left unroofed, otherwise the people living in these buildings would have been smoked out.

Boxes formed of slabs set in the floor, and termed sinks by Mr Beveridge, occurred in Chambers B and C, but this is not an uncommon feature in other earth-houses and at brochs. In the Skara Brae earth-houses there were seven hearths and many boxes formed in this fashion.

Mr Beveridge considered that Dun Thomaidh bore some resemblance to the four semi-brochs which he discovered in Tiree.[1] It seems better, however, to class it with the galleried duns which occur in Skye and the Outer Hebrides, and which have certain structural details common to both the semi-brochs and brochs. But Dun Thomaidh differs from the galleried duns in its series of outbuildings at the western part of the site. Similar outbuildings are present in some of the North Uist earth-houses and in brochs in Caithness, Orkney, and Shetland.

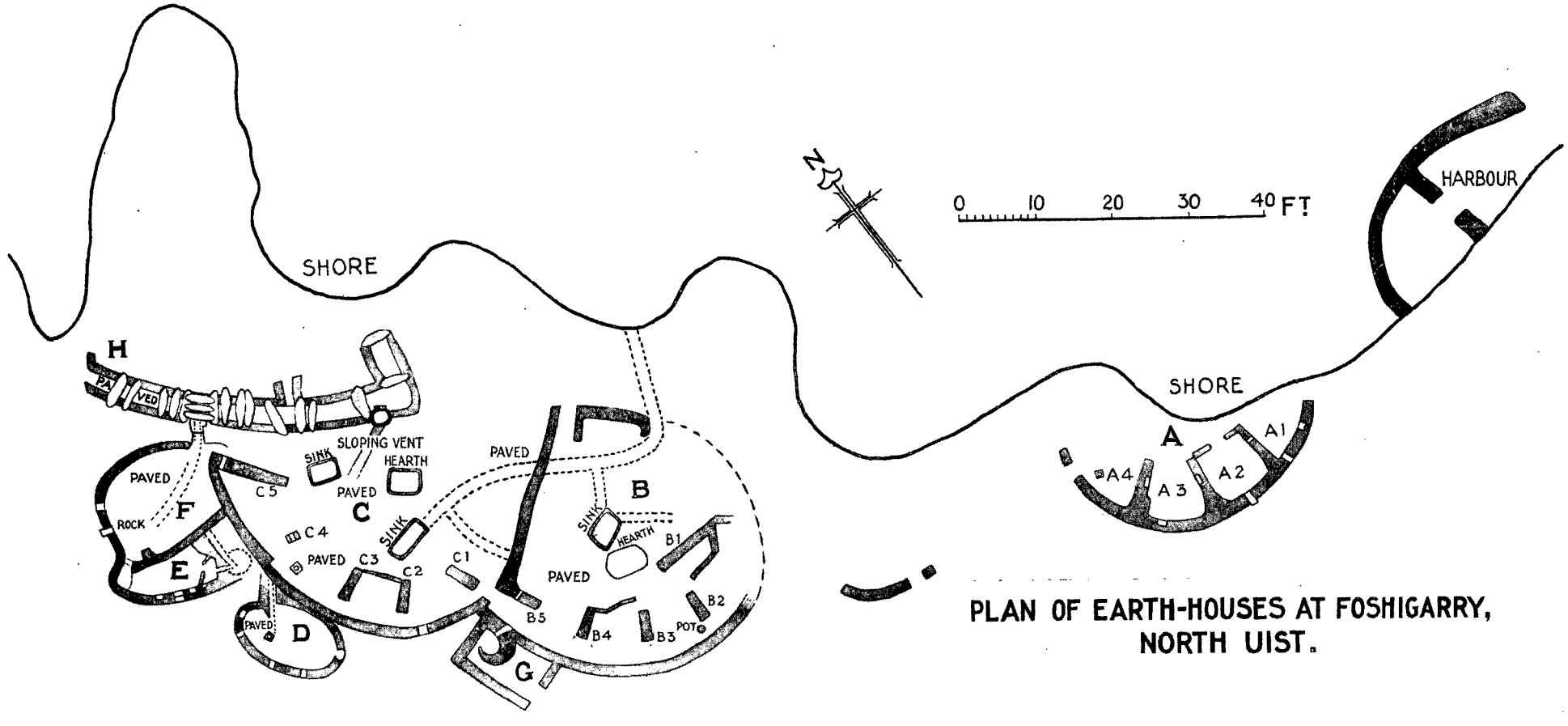
The boat harbour at Dun Thomaidh is not an isolated example, as they are to be seen in Dun Aonais and Dun an t-Siamin, and in the earth-house at Garry Iochdrach, all in North Uist.

The sinking of the land referred to in connection with Foshigarry is much more evident at Dun Thomaidh, as it could not be inhabited to-day.

From such comparisons of the structures and the relics found at Foshigarry and Dun Thomaidh with various earth-houses, brochs, and duns in the Hebrides and the extreme north-east and north of Scotland, it is perfectly plain that these various types of buildings must have been built by a people who, from the Outer Hebrides to Caithness and distant Shetland, were in close communication in the first centuries of the Christian era. There were local differences in structures and in the relics contained in them, but they show a wonderful family resemblance, and they all belong to the same culture, that of the latter part of the Scottish Early Iron Age.

At what time, and why, were these Hebridean earth-houses deserted are interesting problems. A small piece of Roman Samian ware was discovered in the earth-house at Bac Mhic Connain, and I found two small fragments which fitted in a kitchen-midden beside the site of a building which I was told had been an earth-house in Lewis. Unfortunately the sherds were only such small rim pieces that their date could not be determined. However, they must have been inhabited when the Romans were in Britain. No Viking relics were found, and

[1] *Coll and Tiree*, pp. 73–83, and 161, 162.



Plan of Earth-houses at Foshigarry, North Uist.

[*To face page* 356.

we may take it that the buildings had fallen into disuse before that people arrived. From the discovery of the six slabs of whales' bone in the box-like structure at Foshigarry, and the hoard of fragments of pumice there, it would appear that the evacuation took place suddenly. Whether the cause was a cycle of storms overwhelming the site with sand, a migration of people, or an influx of alien tribes is not known. It is interesting to recall that the occupation of the fort on Traprain Law does not seem to have extended much beyond the early part of the fifth century A.D.