I.

EXCAVATION OF GRAVES AT ACKERGILL AND OF AN EARTH-HOUSE AT FRESWICK LINKS, CAITHNESS, AND A DESCRIPTION OF THE DISCOVERY OF A VIKING GRAVE AT REAY, CAITHNESS. BY ARTHUR J. H. EDWARDS, F.S.A.SCOT., ASSISTANT KEEPER OF THE MUSEUM. WITH A PRELIMINARY NOTE ON THE SKELETAL REMAINS FROM THE VARIOUS GRAVES, BY PROFESSOR THOMAS H. BRYCE, M.D., F.R.S., F.S.A.SCOT.

GRAVES AT ACKERGILL.

It will be remembered that in the summer before last, under the Gunning Fellowship for 1925, I was enabled to excavate a series of graves at Ackergill, near Wick, in Caithness, which were described last year.¹

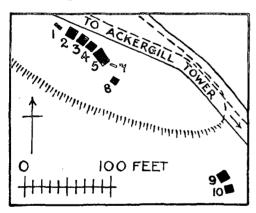


Fig. 1. Key Plan of Graves at Ackergill, Caithness.

The Fellowship for 1926 having again been conferred on me for the purpose of continuing my investigations, I decided on the further examination of the mound in which, in 1925, cists were found in rectangular enclosures, bounded by kerbs varying from 12 feet to 20 feet in length. It may be recalled that there were five of these grave enclosures; a key plan of the site is shown in fig. 1, the graves being numbered 1 to 5, reading from north-west to south-As there was no surface indication that any more graves

existed, an exploratory trench, with numerous offsets, was dug the complete length of the part of the mound still unexamined, in the hope of striking the kerb of other graves, or the usual setting of stones with which these graves are enclosed. The result was that two burial deposits were found, making, with the five discovered previously, seven in all in the mound.

The first burial consisted of an isolated cist (fig. 2, No. 7), the headstone of which was only 1 foot distant from the eastern side of grave No. 5. The cist, which lay west-north-west and east-south-east, measured

1 Proceedings, vol. lx. p. 162.

6 feet 8 inches in length, 1 foot 6 inches in width, and 1 foot 4 inches in depth. It contained the remains of a skeleton. The head and foot of the grave were formed of single stones set upright. It was paved on the bottom, but the sides, which had also been upright stones, had partially collapsed. The cover-stones having rotted away, moisture had obtained

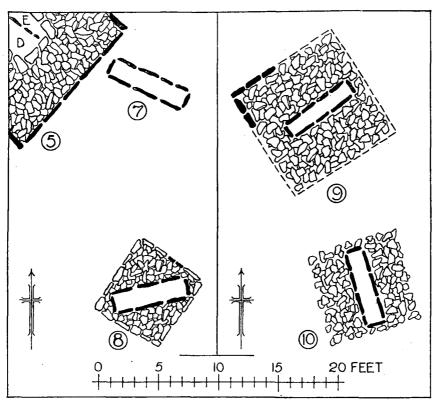


Fig. 2. Plans of Graves at Ackergill, excavated in 1926. Nos. 5, 7, and 8 in relative positions as also Nos. 9 and 10.

access to the cist, with the result that the bones of the skeleton lying within were in a state of disintegration. The skeleton, that of a woman, was lying face downwards fully extended, with the head at the northwest end of the cist.

At a distance of about 13 feet south-east of grave No. 5 another enclosed within a kerbed, four-sided enclosure (fig. 2, No. 8) was found. The western side of this enclosure measured about 7 feet in length, and the other sides just a little over 6 feet each. The kerb or enclosing

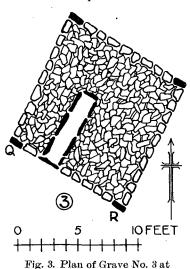
structure was in part built and in part made of stones set on edge, and measured from 1 foot to 1 foot 4 inches in height (fig. 4). In the centre of the northern kerb two stones were set upright, each of which measured 1 foot 6 inches in height, and from 7 to 10 inches in breadth and 2 inches in thickness. The interior of the enclosure was filled with small boulders and waterworn stones to a little above the level of the kerb, the top of which was only 1 foot below the turf. In excavating, the kerb was left intact and the stones and boulders removed until, on a level with the bottom of the kerb, pure sand was reached. It did not at first appear as if there were any cist present, but on persevering with the digging the cover-stones of a cist were struck at a depth of 5 feet 3 inches from the surface. The cist, which measured 6 feet in length, 1 foot 6 inches in breadth, and 7 inches in depth, had five cover-stones but was unpaved. Placed diagonally within the enclosure, it lay nearly east-north-east and west-south-west, or 95° east of north magnetic, and contained the skeleton of a man, which was found lying on its back fully extended, with the head at the west end of the cist.

The peculiar circumstance of the discovery of this burial in pure sand at such a depth below the upper construction, led me to think that I

might have been wrong in reporting that grave No. 3, which was excavated in 1925, had contained no burial. I therefore decided to reopen it at once.

The stones and boulders which I had replaced were again removed until the sand level was reached. On digging down into what seemed to be undisturbed sand, a cist was found at a depth of 4 feet from the bottom of the kerb. The head end of the cist (fig. 3) was 3 feet distant from the corner stone Q and in a line with the bottom of the kerb. It lay north-north-east and south-south-west, or 47° east of north magnetic, and measured 6 feet in length, from 1 foot 4 inches to 1 foot 8 inches in width, and 1 foot 3 inches in depth. The sides and ends were formed of stones set upright. There were four cover-stones, and the cist had been

were four cover-stones, and the cist had been carefully made, smaller stones having been placed above the interstices between the covers. The cist contained the skeleton of a woman, which lay on its back fully extended, the head being at the south end of the cist. As no more graves were found in this mound it was decided to try



Ackergill.

another and smaller mound, situated a little further to the south-east of the large mound, and divided from it by a field drain which runs from the Decoy pond to the wall facing the sea, below which it has its exit.

At a distance of about 40 feet from the sea wall and 20 feet from the field drain, grave No. 9 (fig. 1, No. 9) was found. This had been surrounded by a kerb, and contained a cist covered by 2 feet of sand, and a layer of rough stones and boulders 9 inches deep, about 1 foot under the turf (fig. 2, No. 9). The area occupied by the construction measured roughly about 10 feet square, but as part only of the kerb remained and the overlying covering of boulders was somewhat scattered, this measure-



Fig. 4. View of Kerb of Grave No. 8 at Ackergill from the south-east.

ment is only approximate. The cist lay nearly north-east and south-west, or 70° east of north magnetic, and measured 6 feet 2 inches in length, 1 foot 6 inches in width, and 1 foot 2 inches in depth. It was roofed with eight cover-stones placed in two layers, the upper layer being so arranged as to cover the open joints of the lower. The sides and ends were of stones placed upright. The bottom of the cist was unpaved and a skeleton, that of a woman, lay on its back fully extended, with the head at the south-west end of the cist.

Grave No. 10 (fig. 2, No. 10), which was found about 6 feet south-east of grave No. 9, and about 1 foot under the turf, had no kerb or enclosing structure, but consisted only of an upper or covering layer of boulders, which measured roughly about 8 feet square and 1 foot 2 inches in depth. Two cists were discovered beneath the boulders, one superimposed on the other, the floor of the uppermost cist acting as the cover for the

lower (fig. 5). The upper cist, which measured about 6 feet in length, 1 foot 2 inches in width, and 9 inches in depth, was filled with sand only. No fragments of bones or of any other object were found among the sand

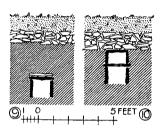


Fig. 5. Sections of Cists No. 9 and 10 at Ackergill.

which was carefully searched. The lower cist, which measured 6 feet 2 inches in length, 1 foot 2 inches in width, and 1 foot 1 inch in depth, contained the skeleton of a man, which lay on its back fully extended, with the head at the south end of the cist. The bottom of the cist was unpaved, but among the cover-stones, of which there were four in number, one was remarkable for its size, its measurement being 3 feet 8 inches in length, 2 feet in breadth, and 5 inches in thickness. The orientation of both

cists was nearly north-north-west and south-south-east, or exactly north and south magnetic.

One of the chief features of the graves discovered in 1925 was their covering of white quartzite pebbles, but no such pebbles were discovered on any of the graves excavated last year; still, as Nos. 9 and 10 showed signs of having been disturbed near the surface, these may have had a similar covering which had been removed at an earlier period. The position of the cist in grave No. 8 was peculiar, inasmuch as it was buried in sand at a depth of 3 feet below the construction apparently built to cover it, but in reality completely isolated from it by clean sand. It was this peculiarity which caused me to report that there was no cist in grave No. 3, an error which I am now pleased to be able to rectify. Further, grave No. 8 was placed diagonally within its kerbed enclosure, while the others were laid with their longer axes parallel to two sides.

In each of the graves a small amount of sand had filtered in after the burial had been made.

The construction of grave No. 10 with the one cist superimposed over the other was similar to that of the cist discovered at Crantit near Kirkwall, and in both cases the upper cist contained no human remains. No relics were found in any of the graves opened in 1926, the bronze chain found round the neck of the skeleton in grave No. 6 in the course of the previous year's excavations being the only relic discovered in the whole series of interments.

EARTH-HOUSE AT FRESWICK LINKS.

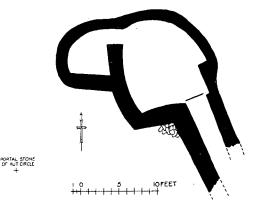
About 16 feet to the north-east of the hut-circle excavated by me in 1924,² and in the same sand gully, part of the wall of an underground

¹ Proceedings, vol. xliv. p. 215.

construction was uncovered at the time, but owing to the quantity of sand which it would have been necessary to remove, it was found

impossible then to undertake its excavation. Last year, however, I excavated the whole of the structure, that of an earth-house, some 8 feet of sand having to be removed before the top of the northeast wall was reached.

The shape of the building is rather difficult to describe satisfactorily, and it is therefore better that one should refer to the plan of HUTCHROLE (fig. 6). From this it can be seen that it consisted of two curvilinear chambers with a passage Fig. 6. Earth-house at Freswick Links, Caithness. of entrance. The mouth of the passage faced seawards, and at one time, judging from the quantity of



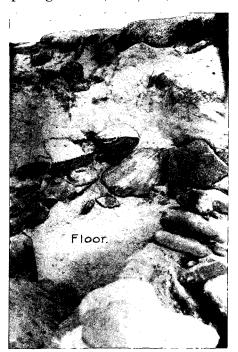


Fig. 7. Inner Chamber of Earth-house at Freswick Links.

stones now lying prone and in direct line with what remained of the upstanding walls, it had extended outwards to the face of the sand-bank. At present it measures about 11 feet in length and 2 feet 9 inches in width, the walls at their highest part being The two chambers 3 feet in height. were divided from one another by an extension of one of the walls of the outer chamber for a distance of 4 feet. Between the end of this intruding wall and the north-eastern wall a space of 2 feet was left, which afforded a means of passing from one chamber to the other. The larger and outer chamber measured 12 feet by 12 feet 6 inches, and the smaller about 6 feet by 7 feet (fig. 7). The walls, which were 3 feet in height and averaged 1 foot 6 inches in thickness, were dry built, but in parts they had been formed of single slabs set upright with a filling of stones between. At places there was evidence on the interior wall-face of a plastering of clay, while on the outer side of the wall all corners were reinforced with a mixture of clay and stones. At the north end of the passage on its eastern side at the entrance to the large chamber the wall was checked as if for a door. No relies were found inside the chambers, the floors of which were partly paved and partly made of clay. No roofing stones were found, and indeed the dimensions of the large chamber would hardly admit of the use of stones for this purpose without supporting pillars, so that one must conclude that the roofing material has presumably been of wood.

On the western side of the dwelling and close to the wall was a kitchen-midden, the debris of which was mostly composed of fish bones. A few fragments of the usual hand-made, plain, hard-baked pottery were recovered. Several pieces, a base and a few wall fragments, from the position in which they were found, appeared to have been part of the pot in which a cod fish had been boiled whole, as the stomach contents of the fish were still seen in situ, among the bones, as a grevishwhite mass. This was preserved and has been examined by Mr A. C. Stephen of the Natural History Department of the Royal Scottish Museum, whom I have to thank for the following report. "The contents of the fish stomach are all in a much comminuted state, and while this may be due partly to digestion in the stomach after the meal had been taken, the appearance of the fragments suggests that the fish was feeding upon very small and fragile creatures. By far the largest proportion of the stomach content consists of vertebræ of a very small and unidentified fish. All the rest of the material is composed of fragments of Sea-Urchins, of which there are hundreds of microscopically small spines and tiny sections of test, and other debris. The remains are evidently those of very young individuals."

Few fragments of the vessel were recovered owing to its very rotten condition, but sufficient of the rim was found to be able to say that the diameter had been approximately 13 inches at the mouth.

VIKING GRAVE AT REAY.

In the third week of August of last year, while engaged on the excavations just described, information regarding the discovery of a Viking grave at Reay, also in the County of Caithness, reached the Museum, and I received a telegram from the Director, instructing me to proceed there for the purpose of making a record of the find. This I immediately did, and on arriving at Reay I learnt that a few days before the grave had been discovered by two lads, Robert Mackay and John

Carmichael, who had seen portions of the leg bones of a skeleton protruding from the sand. The grave was situated not far distant from the north side of the Drill Hall at Reay, on the sloping ground, covered with sand dunes, which rises inland from Sandside Bay. It had been partly exposed by the action of the wind, which had blown away the loose sand, and, in the cleared spaces between the dunes, I saw numerous traces

of what must be either graves or other regularly constructed works in stone. The grave now to be described was about 6 feet below the level of the turf in the immediate vicinity. It had already been opened, and the relics found had been carefully preserved by the Rev. Mr Carmichael, minister of the parish, who afterwards handed them over to Mr Alan D. Pilkington, F.S.A.Scot., of Sandside, Reay, the proprietor of the ground, who very kindly presented them, with the exception of two items, to the National Museum of Antiquities.

The skeleton, which was that of a man, was found lying fully extended on a paved surface (fig. 8). The head, which had rested on a flat stone raised slightly above the level of the others, had been turned a little to one side, and the right forearm crossed over the chest. Except for the tibia and fibula of each leg, which were awanting, all the other large bones and most of the small bones were accounted for. At the bottom of the grave there was a stratum of dark-coloured sand mixed with pieces of slag and burnt iron. Large stones and sand had surrounded and covered the whole burial, the orientation of which was north-west and south-east or 35° west of north magnetic.

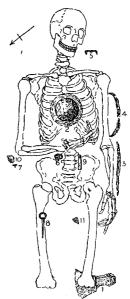


Fig. 8. Skeleton from Viking Grave at Reay, showing position of relics.

The relics consisted of the blade of an iron axe (fig. 8, No. 1) found lying under the left knee, the iron boss of a shield (fig. 8, No. 2) near the middle of the breast, an iron knife (fig. 8, No. 3) near the left forearm, a sickle of iron (fig. 8, No. 4) near the left upper arm, and a cleat-shaped object of iron (fig. 8, No. 5) above the left shoulder. On the right side near the pelvic bone was an iron buckle (fig. 8, No. 6), and near the elbow on the same side a portion of a round-headed nail or iron rivet (fig. 8, No. 7). A ring-headed pin of bronze (fig. 8, No. 8) was found lying against the right femur, the portion of the bone where contact had occurred having been stained green with copper salts.

Objects other than metal were a whetstone (fig. 8, No. 9) found near the pelvis on the left side, and two fragments of flint, the larger (fig. 8, No. 10) near the elbow on the right side, and the smaller (fig. 8, No. 11) between the legs, a few inches from the left femur.

No sword was found in the grave, and I understand from Mr Sigurd Grieg of the University Museum of Antiquities in Oslo, Norway, who

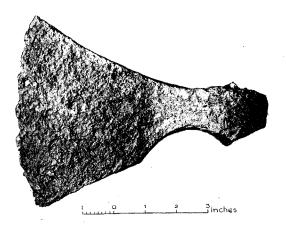


Fig. 9. Iron Axe from Viking Grave at Reay.

kindly answered some inquiries about the find, that this is not unusual. The axe (fig. 9) is of a well-known type 1 and measures $7\frac{7}{8}$ inches in length and 6 inches across the cutting edge. The only other axe we

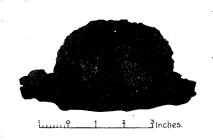


Fig. 10. Iron Shield Boss, from Viking Grave at Reay.

have in the Museum of a similar type is the one found in the Viking grave discovered at Kiloran Bay, Colonsay, in June 1882.² The shield boss (fig. 10), which is of hemispherical form, measures $5\frac{7}{8}$ inches in diameter, of which $\frac{7}{8}$ inch on either side consists of the rim, and $2\frac{3}{16}$ inches in height. It has been attached to the wooden portion of the shield by four iron rivets, and pieces of these still remain in the rim. About half of a shield boss of similar

type found in a Viking grave at Pierowall,³ Orkney, and a portion of another, also from Orkney but with the exact locality unnoted, are in

¹ Jan Petersen, Die Norske Vikingesverde en Typologisk-Kronologisk studie over Vikingetidens Vaaben, type E, p. 41, fig. 35. See also Rygh, Norske Oldsager, No. 561, and Sigurd Grieg, Hadelands Eldste Bosetnings Historie, p. 129, fig. 88.

² Proceedings, vol. xli. p. 443.

³ *Ibid.*, vol. xiv. p. 87.

our Museum. These all resemble the late type of shield boss figured by Rygh, in Norske Oldsager, No. 562 or 563, but perhaps more analogous to No. 562. The knife (fig. 11, No. 1), which has a slightly curved blade, measures $10\frac{1}{2}$ inches in length and $\frac{3}{4}$ inch across the blade at its broadest part. The back is fairly thick, the edge being on the concave side. The sickle of iron (fig. 11, No. 2) measures $8\frac{1}{2}$ inches across the chord drawn from the point to the extremity of the tang. The end of the tang, as is usual in this kind of implement, is turned to one side. From the graves at Colonsay and Pierowall portions of sickles were also recovered, but these are now so fragmentary that it is not possible to make any comparison. These were

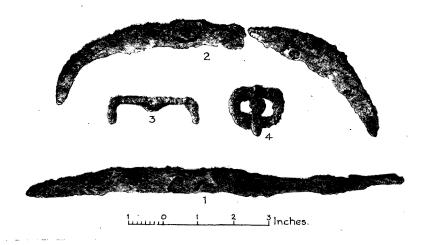


Fig. 11. Objects of Iron from Viking Grave at Reay.

not recorded as sickles in the original reports, having only been recognised recently as such. The cleat-like object (fig. 11, No. 3) measures $2\frac{1}{2}$ inches in breadth, and the iron buckle (fig. 11, No. 4) $1\frac{1}{2}$ inch by $1\frac{1}{8}$ inch, the tang being $1\frac{3}{8}$ inch in length. The only object of bronze found was a free ring-headed pin (fig. 12, No. 1), the shank of which measures $3\frac{1}{2}$ inches in length and the head $1\frac{3}{32}$ inch by $1\frac{1}{16}$ inch in diameter. A ring-headed pin of similar type was obtained from another Viking grave found at Reay,⁴ and one also from a Viking grave at Colonsay.⁵ The whetstone (fig. 12, No. 2) is of a type very often found in women's graves in Norway

¹ See Grieg's Hadelands Eldste Bosetnings Historie, p. 129, fig. 88, where a similar sickle is figured in the same find as the axe already mentioned in previous reference.

² Proceedings, vol. xli. p. 443.

³ *Ibid.*, vol. ii. p. 158.

⁴ *Ibid.*, vol. xlviii. p. 295.

⁵ *Ibid.* vol. xli. p. 442.

and is supposed to have been used for sharpening needles.¹ It is of irregular quadrangular section and measures 2\square\square\text{s} inches in length. At its narrow end is a perforation for suspension, and it has been worn thin

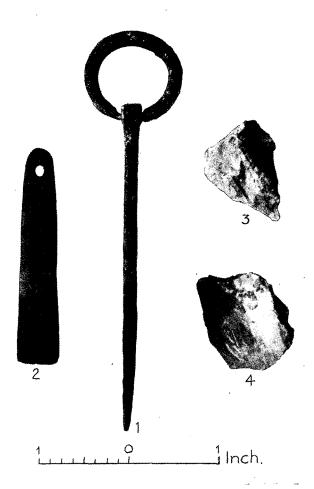


Fig. 12. Bronze Pin, Whetstone, and pieces of Flint from Viking Grave at Reay.

by much use. A similar whetstone was obtained from a Viking grave at Skaill, Orkney, and another, but somewhat larger, from a mound near the chapel of St Donnan,² Island of Eigg. One of the fragments of flint (fig. 12, Nos. 3 and 4) has particles of iron adhering to it and may

¹ Rygh, Norske Oldsager, No. 425.

² Proceedings, vol. xii. p. 591.

have been used as a strike-a-light, but as no "steel" was found, and the iron may have come from some of the fragments in the grave, one cannot definitely state that this was so.

From the relics found the date of the grave can be stated as from 950 to 1000 A.D.

This is the second Viking burial with grave goods to be recorded from the sands at Reay, the other having been discovered in 1913 and described by Dr James Curle. Mr Callander, the Director of the Museum, who visited Reay in September, picked up from the site of this grave a bone afterwards identified by the Abbé Breuil as the astragalus of a small horse. As a horse's bit was among the relics obtained from this grave, there is no doubt that a horse was also buried at the same time. Mr Callander observed quite a number of other bones lying about, but the one which he selected served admirably for purposes of identification.

I am indebted to Robert Mackay and John Carmichael for information regarding the discovery, and to Hugh Carmichael for the sketch of the skeleton showing the disposition of the relics.

PRELIMINARY NOTE ON THE SKELETAL REMAINS.1

By Professor Thomas H. BRYCE, F.S.A.Scot.

The Ackergill Skeletons.—The second consignment of bones from the graves at Ackergill, Caithness, sent to me for examination by Mr Edwards, represent the skeletons of five individuals. All the bones from each grave were sent in separate packages, and as skill and care had been exercised in moving them, the skeletons were rather more complete than is usual. The bones were, generally speaking, well preserved, and although many were broken and some were missing, a good deal of information could be gleaned regarding the characters of the people who buried their dead in this graveyard. Graves Nos. 3, 7, and 9 were the graves of women; Nos. 8 and 10, graves of men.

Grave No. 3 contained the body of a woman of moderate muscular development, 5 feet 3 inches in stature. The skull is long and narrow (dolichocephalic) and low or flattened. The sutures are in a fairly advanced state of obliteration; the teeth, though there is no sign of caries, show a good deal of wearing down of the crowns, so that the woman must have been well advanced in middle life.

Grave No. 7 yielded the skeleton of a young woman of rather slender proportions, twenty-three or twenty-four years of age, and 5 feet

¹ For complete report, see p. 301.

2½ inches in height. The skull is not so long as that from No. 3, and is markedly low in the crown. The obliteration of satures is just begun, and the teeth, of which there is a complete set, show no wearing of the crowns.

Grave No. 9 contained the skeleton of a still younger woman of very slender and ill-developed proportions. The facts that the ossification of the sacrum is not quite complete, that the sutures of the skull are all open, and that the wisdom teeth had not erupted, indicate that she could not have been much more than twenty when she died. In stature she was minute, between 4 feet 10 inches and 4 feet 11 inches. The skull is a small one, and has a rather different form from any other skull in the series. It is shorter and rounder, has well-filled side walls, and a slight ridging of the middle line of the vault.

Grave No. 8 was that of a man in the early thirties, 5 feet 5\frac{3}{4} inches in stature. He was not a specially muscular individual. The shin bone presents a marked degree of that lateral compression in the upper part of its shaft (platyenemia) which is commonly observed in the tibiæ of prehistoric peoples. The skull is light, thin-walled, small in size, and dolichocephalic in form. The processes and muscular markings are not prominent. The glabella is flat, but the supraciliary ridges are moderately salient.

Grave No. 10 contained a very imperfect skeleton. The thigh bones are longer than in any of the other Ackergill skeletons. They yield, with Karl Pearson's formula for the calculation of the body height from the femur, the method used throughout this note, a stature of 5 feet 7 inches.

The upper parts of the thigh bones and the shin bones show in almost all the skeletons an exaggeration of the so-called "angles of torsion." This feature and its probable significance will be dealt with in another paper.

The ten adult skeletons recovered this year and last by Mr Edwards form an interesting group. The presence of an infant and two children's skeletons in last year's collection was formerly remarked upon. Of the five women, one was elderly, another middle-aged, and three were girls under twenty-five. Two out of these three were very short, ill-developed persons under 5 feet in height, with slender bones, small pelves and skulls. Of the six males, one was advanced in life, the other five died in their prime. The average stature of the men was about 5 feet $5\frac{1}{2}$ inches, that of the women 5 feet. The tallest man was 5 feet 7 inches, all the others stood only slightly over 5 feet 5 inches; 5 feet 3 inches was the tallest stature among the women. The average cranial index of the whole group is 74.9, the indices ranging from 71.2 to 79.7.

Skeleton from the Viking Grave at Reay.—The skeleton is fairly

complete, but unfortunately the legs below the knees seem to have become decayed and the bones are absent. The pelvis is much broken and the skull reduced to dozens of fragments. Most of the vertebræ are present and entire, but show no feature worthy of remark. The os sacrum is specially broad, and when the fragments of the hip bones were united with it, the pelvis seemed broader and more capacious than a normal male pelvis. Moreover, the presence of a groove (pre-auricular sulcus), generally considered distinctive of female bones, raised a doubt as to the sex. Unfortunately the pubic parts of the girdle are absent, but the great sciatic foramen has the features of that in a male pelvis.

The long bones are stout, with well-marked muscular ridges, and present all the characters of those of a man. The arm bones (humeri) are specially long, and the thigh bones, with a maximum length of 470 mm., indicate a probable stature of 5 feet 63 inches. The bones present a striking contrast in strength and dimensions to those of the slender, ill-developed people of the Ackergill graves. The curvature and torsion are quite normal. The right thigh bone shows, on the inner side of its upper portion, a long blue-green mark where a pin of bronze lay The skull when reconstructed proved to be a large and capacious one with full, smooth, rounded contours. The glabella is flat, the supraciliary ridges only slightly projecting, and the forehead is broad, rounded, and fairly vertical. The antero-posterior diameter is moderate, 182 mm., but the breadth is considerable (149 mm.), giving a cranial index of 818. It was unfortunately impossible to build up the facial portion of the skull, but the jaws are preserved, and show a complete set of strong teeth with crowns well worn down. The lower jaw has a strong, deep body and a deep, projecting chin. The skull is probably that of a man, for although the sex characters of the brain box are not pronounced. the jaw is masculine.

The index of this skull brings it into the broad (brachycephalic) class, so that neither in its index nor in the characters of the frontal bone does it conform to the ordinary Nordic type, which is long and narrow, with high narrow face and projecting brow ridges.