

## II.

NOTICE OF THE EXCAVATION AND CONTENTS OF ANCIENT GRAVES  
AT DALMORE, ALNESS, ROSS-SHIRE. BY WILLIAM JOLLY, Esq.,  
F.S.A., Scot. WITH NOTES ON THE CRANIA. BY THOMAS AITKEN,  
M.D., F.S.A., Scot.

Alness is a small village situated about halfway between the northern and southern extremities of the western shore of the Cromarty Firth. It stands at the mouth of a stream called the Alness, and is built upon a terrace of gravel, which skirts the coast of the Firth, at a height of from 65 to 70 feet above sea-level.

Last year, a branch line of rail was made from Alness Station to Dalmore Distillery, which stands close by the sea-shore. During the progress of the works, two sites of ancient graves were discovered—the first on the 29th of May 1878, immediately above the distillery; the second on the 2d of July, about 200 yards nearer the station. Mr Andrew Mackenzie, proprietor of the distillery and projector of the branch line, had the graves carefully dug and preserved in both cases, until their systematic examination by officials of the Inverness Field Club and the Ross-shire Philo-sophical Association, and others interested, whom he invited to Dalmore for the purpose. These investigations took place shortly after the discoveries in each instance, the first on the 29th of May, and the second on the 5th of July. From notes taken on these occasions, the following account is drawn up: while I am greatly indebted to Mr Mackenzie for

additional assistance and information ; to Mr Roderick Maclean, Ardross, for the accompanying map of the Moray Firth, and the plan of the graves ; to Mr Alexander Ross, architect, Inverness, for the careful drawings of the finds ; to Mr Sutherland, artist, Dingwall, for sepia drawings of the urns, and a sketch of the general scene ; and to Dr Aitken of the Inverness District Asylum, for a report on the crania obtained.

There were dug up and examined eighteen graves in all,—ten at the first site, eight at the second. They all consisted of short cists formed of flat stones, of different sizes, set in the ground and covered on the top with one or more stones. The cists enclosed bones either entire or burnt and broken ; some of them also enclosed urns, and other objects of human workmanship.

#### I. THE GRAVES DISCOVERED AT THE FIRST SITE ABOVE DALMORE DISTILLERY.

The ten graves found here formed a close group, the disposition of which is shown in the accompanying ground-plan (fig. 1). These seem to

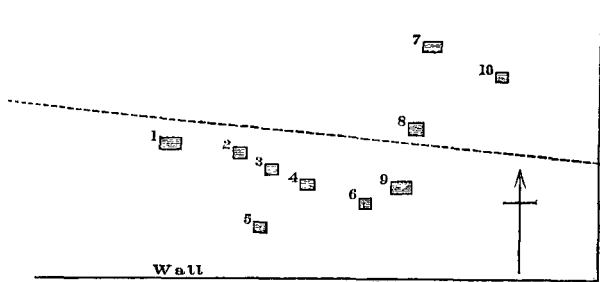


Fig. 1. Ground-plan of Graves at Dalmore, first site.

have been included within a stone wall, the base of which could be traced along three sides, enclosing a space, 108 feet by 66 feet, the shorter walls, which were parallel, running north and south. The following is a description of the different graves and their contents, the numbers indicating their position on the plan.

*Grave No. 1.*—This was the most westerly of the group. It was found

8 feet from the surface, and lay east and west, magnetic.<sup>1</sup> It consisted of a rough cist, measuring 2 feet 6 inches  $\times$  1 foot 8 inches  $\times$  1 foot deep, in the inside. The sides were formed of several flat stones standing on end, and it was covered in by a single large slab, with a few stones on the top of it. Its contents were,—

1. A human skeleton, evidently buried entire, with the knees drawn up to the chin, in the usual way. The bones were much decayed, but there remained pretty entire the coronal region of the skull, found at the west end of the grave, 29 out of the 32 teeth, in excellent preservation, only two of them being decayed, and fragments of the femora and other larger bones of the trunk—all in one heap in the centre of the cist, and covering an area of some 12 inches square.<sup>2</sup>

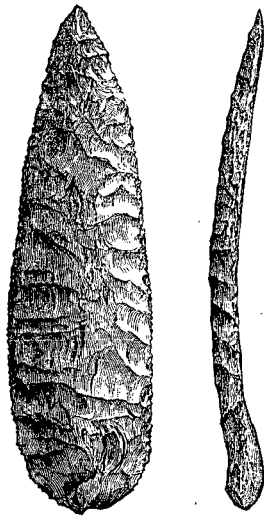


Fig. 2. Flint Knife (4 inches in length).

2. A fine flint leaf-shaped knife (fig. 2), found at the east end of the grave, 4 inches  $\times$  1 inch, and varying in thickness from  $\frac{1}{4}$  to  $\frac{1}{8}$  of an inch; of the common light brown colour, the natural surface being left on the hollow side, and the other being very well chipped, and possessing a finely-serrated edge and a sharp point preserved entire.

3. Fifty beads lying underneath the bones, formed of a close black shaly substance, which seems to be the jet-like *Albertite*, which is found *in situ* at Craig near Dingwall, and at Nigg in Easter Ross, and portions of which were discovered near the graves, 4 feet below the surface. The beads are perfectly circular, well formed, evidently polished on the outside of the ring, and smooth on the flat sides, as shown in fig. 3. They vary

<sup>1</sup> The compass directions throughout the paper are *magnetic*.

<sup>2</sup> The top of the skull was sent for inspection.

from  $\frac{1}{4}$  to  $\frac{3}{16}$  of an inch in diameter, and are in general  $\frac{1}{16}$  of an inch in thickness, perforated in the centre with a well-drilled circular hole of  $\frac{1}{16}$  of an inch. No binding string was found, though many of them were re-strung on the rootlets of some plant, which had curiously run through the central holes; showing that the beads must have remained close together in their position as parts of a necklace, when deposited in the grave, after the original string had decayed.

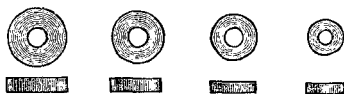


Fig. 3. Beads of a jet-like substance (actual size).

4. An oblong concave ornament of stone (fig. 4), light-coloured and fine-grained,  $1\frac{1}{8}$  inch long  $\times$   $1\frac{3}{8}$  broad at one end, and  $\frac{1}{8}$  at the other,  $\times$   $\frac{3}{16}$

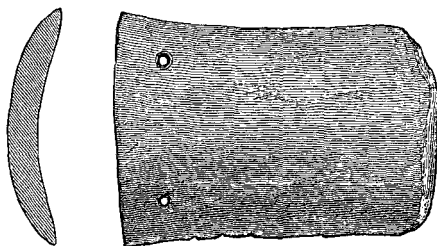


Fig. 4. Stone Bracer (actual size).

inch thick; with two holes at the wider end, countersunk on one side. It was found along with the beads beneath the bones; which would seem to suggest that it might have been hung as a pendant from the middle of the necklace. It probably belongs, however, to the class of objects now usually regarded as "bracers," to be fastened on the left wrist as a protection against the recoil of the bowstring.

*Grave No. 2.*—This was found 8 feet east of No. 1, 20 inches underground, lying north and south; being 18 inches  $\times$  9 inches  $\times$  12 inches deep, neatly constructed, with a single slab on each of the sides and ends, one forming the bottom and another the top or lid. It contained—

1. A large number of small bones, in a layer 2 inches thick, burnt and

broken, lying on some leaves (?) which had been strewed on the bottom of the cist.

2. An implement of bronze, now shaped like a flat spoon (fig. 5). It is evidently the wasted butt end of one of the small tanged bronze blades

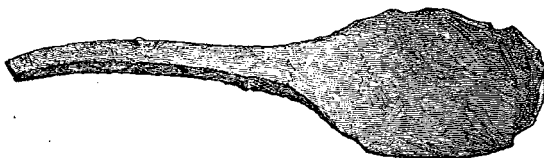


Fig. 5. Bronze tanged Blade (actual size).

that are occasionally found in connection with interments. This was the only piece of metal found in any of the graves, except a bit of bronze in No. 7. There were, however, traces of bronze colouring on the bones in several of the graves.

*Graves Nos. 3, 4, 5, 6, and 7*, consisted of rough cists, formed of flat stones on the sides and top, resting on the soil and enclosing bones, chiefly human, but, in some cases, those of other animals not yet determined, burnt and broken into small pieces, which formed a layer 2 inches deep. They contained nothing else except a little stem of bronze in No 7, very brittle and much decayed, which has since been destroyed. One of the graves consisted of some broken bones, lying on the earth, with no protecting slabs, and only two or three loose stones above them.

*Grave No. 8* was of a different construction from the others. It was formed of a circle of stones built like a dike and covered in on the top with a flat stone, 2 feet 3 inches below the ground. This structure enclosed an urn inverted on a rounded flat stone of mica schist, the stone being 18 inches  $\times$  14 inches in diameter and  $2\frac{1}{2}$  inches thick. The urn had unfortunately been broken by some of the stones of the wall having fallen on it. It was 21 inches across at the rim, 5 inches across at the bottom, and 13 inches high. The rim was surrounded by a fine ornamental border, of unusually neat workmanship, showing a raised pattern which had been

fastened on and not worked up from the surface of the urn. It had two or more holes perforating the border just under the rim. What had been their use?

It contained a few calcined bones, very much broken, which Dr Sutherland of Invergordon pronounced, after some hesitation, to be human; and a hollow, cylindrical ornament or object of bone  $\frac{7}{8}$  of an inch long and  $\frac{6}{8}$  in diameter, white in colour, with three equal, curved grooves running round it at equal distances parallel to the flat ends, polished outside and planed inside, with two circular perforated holes in the middle groove. It would be interesting to ascertain what *kind* of bone it is, and what was its use? It is now in fragments, having been subsequently broken, on account of its brittleness.

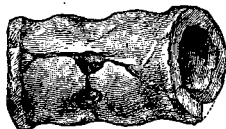


Fig. 6. Hollow cylinder of Bone (actual size).

*Grave No. 9* was carefully opened in presence of the officials from the societies named. It lay east and west, and enclosed a space 2 feet 4 inches  $\times$  1 foot 6 inches, and was 1 foot 8 inches deep. The sides were of flat flags set on end, their height being added to by other stones built dike-wise on the top; covered in with one large stone, 22 inches  $\times$  20 inches, and seven others. It contained burnt bones in a heap in the centre, broken into small pieces, much disintegrated and decayed, no pieces being larger than 2 inches, and a little charcoal mingled with them.

*Grave No. 10*, discovered on May 30th, the day after the first examination, was formed of rough stones, enclosing two urns, large and small. The smaller, which was rather well formed, contained nothing but gravel, which seemed to have fallen into it, as it stood on its base without any covering. The larger, which was inverted in the usual way, contained nothing but burnt bones, similar to those in the other graves.

The stones of the graves in the first site consisted variously of mica schist, yellow flaggy sandstone, and quartzite, all evidently utilised as they were found, and not worked upon in any way, most of them being more or less rounded by natural causes, and some mere boulders from the terrace in which the graves had been formed.

## II. THE GRAVES DISCOVERED AT THE SECOND SITE.

*Grave No. 1* was about 5 feet below the surface. It enclosed a space 3 feet 6 inches  $\times$  1 foot 8 inches  $\times$  1 foot 6 inches deep; was formed on three sides by single slabs of Old Red Sandstone, the same as is worked on the west side of the Alness near the shore; and on the fourth side, by two slabs overlapping each other a little, with some stones at the ends to make up the requisite height; and was covered in by one large slab of the same rock 4 feet 4 inches  $\times$  2 feet  $\times$  4½ inches thick. This cist was very carefully and neatly put together, but was less perfect than No. 2. It lay east and west.

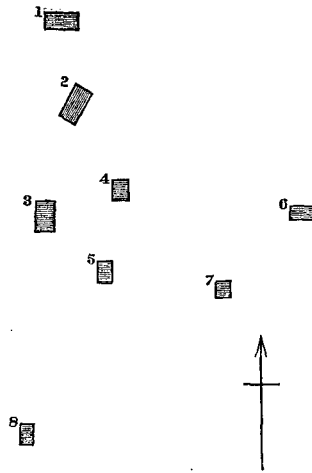


Fig. 7. Ground plan of Graves at Dalmore, second site.

1. It contained an entire skeleton, pronounced by Dr Bruce of Dingwall and Dr Sutherland of Invergordon (both of whom carefully examined the remains found in the graves), to be that of a middle-aged female. The bones were much decayed, being covered with a white mould of carbonate of lime, and the lower half of

the skull was gone, destroyed evidently by the moisture in the ground. It lay on its side, looking towards the east, with the knees drawn up towards the chin.

2. In front of the skull stood an urn, inverted, entire at first but afterwards broken, but firm and hard in material, ornamented with scratched lines. No weapons or other articles were found in the grave. The skeleton lay in fine, clean, well-smoothed gravel, evidently laid into the grave when formed, as it differed from the rougher and closer-knit gravel of the terrace in which it had been dug.

*Grave No. 2* lay 7 feet 9 inches below the surface. It was the finest

cist found at either site, being exceedingly well constructed, the whole being carefully laid down, the sides of equal height, the angles squared with great exactness and covered with smaller stones to prevent earth getting in, and the bottom level and neatly smoothed by fine sand laid on it. It lay north-east and south-west. It consisted of four large well-squared Old Red Sandstone slabs, of the same kind as No. 1, enclosing an oblong space, 4 feet 2 inches  $\times$  2 feet 4 inches, and 1 foot 9 inches deep; covered in by one large flat mass of grey gneiss,  $5\frac{1}{2}$  feet  $\times$   $3\frac{1}{2}$  feet  $\times$  6 inches thick. On the dry, smooth, sandy bottom lay a human skeleton, entire, in perfect preservation, with the knees drawn up and the face looking to the east. It was ascertained by the medical men to be that of a male, apparently between thirty and forty years of age, the bones being firm, unbroken, and well-formed. The thigh bone measured 1 foot 6 inches, and the tibia and fibula about the same, so that the man would have stood from 5 feet 8 inches to 6 feet in height. The skull was entire, and the teeth were complete and in very good condition.

Behind the head stood an inverted urn, entire when first seen but afterwards broken, similar to the others already described, only slightly ornamented, and containing nothing but charcoal and other softer matters. No ornaments or weapons were found in this cist.

These two cists were the largest and best of those then discovered, and showed the most careful sepulture; and, from their being so similar in build and so close to each other, they were probably those of near relatives.

*Grave No. 3* was found some 3 feet below ground, measured 3 feet 4 inches  $\times$  1 foot 6 inches, and was 1 foot 8 inches deep. The sides consisted of two stones each, of gneiss and mica schist, and the top was one piece of gneiss unsquared and wanting in two of the corners, 4 feet 10 inches  $\times$  2 feet 8 inches, and 7 inches thick. One of the stones of the sides was peculiar. It consisted of an imperfect square, hollowed out into a circular concave surface  $2\frac{1}{4}$  inches deep, and 1 foot 3 inches in diameter, the hollow being broken on one side. It may have been used as one of the common grinding stones, and had likely been utilised in forming the cist,



on account of its coming by an accident which rendered it useless for grinding. The grave contained the top and some other pieces of the skull, and a few fragments of other bones much decayed.

*Grave No. 4*, two feet below ground, was the first discovered at this site. Its sides and top were formed of small stones enclosing a space 1 foot 8 inches  $\times$  1 foot. It contained broken burnt bones, with a little charcoal, and some stones which had been subjected to fire, as shown by the well-known igneous discoloration; a rough urn was also found broken on opening the grave.

*Grave No. 5* lay 5 feet beneath the surface, and consisted of burnt bones laid on a bed of sand, without any protecting stones.

*Graves Nos. 6, 7, and 8*, were small rude cists, formed of stones, but destitute of human or other remains.

It is remarkable that in none of the cists of this second site was found a single trace of human workmanship except the urns.

One very interesting fact in the discoveries made at both sites was the existence of *two* forms of burial—sepulture and cineration; and, what was very important, as leading to a determination of the relative ages of the two forms, was this, that some feet right above the two largest cists Nos. 1 and 2, at the second site, a second, and of course subsequent, burial had been made, of calcined broken bones. This would seem to indicate that the unburnt burial was older than the incinerated one; but whether the first sepultures were known to exist before the second were made, or whether the second were made at the same time as the whole burials below, as might have been the case, from their being *right over* the first, it is impossible to say. One thing was clear, that the cinerary graves were much ruder, less artistic, and less carefully built than the other.

The manner of digging the graves at the second site was also very clearly shown. The terrace, which extends round Alness as a flat plateau, consists of alternate stratified sand and gravel, compact and hard, and sometimes closely agglomerated by ferruginous and calcareous infiltrations. In this hard, gravelly, and stony terrace, circular pits had been excavated in which the cists had been built, the bodies deposited and enclosed at

the bottom, the whole of the pits being finally filled up again with *fine sand*—indeed, it was the discovery of these circular patches of sand beneath the black cultivated surface soil that suggested the fact that they enclosed graves and led to their discovery.

The valley of the Alness, with its good water-supply and well-clothed surface of heath and grass on its gently sloping sides, would seem to have been a favourite dwelling-place of the prehistoric tribes. Other evidences of their residence in the district are abundant. The whole of the graves at the Second Site have not yet been excavated, as shown by the circular sandy patches already described. On the same terrace, about 300 yards west of this site, a grave was dug up about two years ago. It consisted of a stone cist  $2\frac{1}{2}$  feet  $\times$  2 feet, covered in with a single slab, all the stones being of the same sandstone as those of the Second Site. It contained nothing but gravel, the contents having entirely decayed before opening.

Some fifty years ago, a large cairn existed in a field about  $\frac{1}{4}$  of a mile to the east of the village, about 30 feet in diameter and 20 feet in height, containing bones and an urn. It was removed by Mr Rose of Calrossie to supply materials for a neighbouring dike. The cist, however, still remains, along with its original large upper stone ; but the contents have disappeared and cannot be traced.

A fine urn was found in a grave near Ardross Castle, up the Alness, some years ago. It is happily almost entire, and is well ornamented on its sides. It is preserved in the Castle, to which also the manufactured contents of the graves at the sites now described have also been sent by Mr Mackenzie ; it is desirable, however, to have them placed in the National Museum.

A large standing stone in a field on Rosskeen Farm is visible from Dalmore, where the graves were found about a mile to the north-east. It is called *Clach Mharlich*, or the *Thief's Stone*, and is evidently one of the monuments so abundant in the north, which afterwards received its curious name from some more modern circumstances connected with the place.

NOTES ON THE CRANIA FOUND IN THE CISTS. By T. AITKEN, M.D.,  
F.S.A. Scot.

*First Site.*

*Grave No. 1* contained fragments of a cranium.

The fragments consist of a considerable portion of what is supposed to be the vault of a male skull, of the type of the more perfect one to be presently described, and are made up of parts of the frontal bone and parietal and occipital bones. The sutures connecting these are ankylosed, and the outer surface roughened from decay. Besides these there are portions of the two temporal bones remaining, the only feature requiring to be referred to being the distinct marking of the digastric groove; and there are also two fragments of the lower jaw and one part of the upper, all containing teeth. With these are associated eleven teeth, the crowns of which are considerably ground, though from indications in one or two it would not appear that their possessor had arrived at a period of life above the middle age.

*Second Site.*

Of this find the crania of only Nos. 1, 2, and 3 cists have been forwarded.

In *Grave No. 1* was found the fragment of a skull and skeleton complete. The conclusion that this belonged to a female, formed doubtless on the pelvic bones, not forwarded, is possibly correct. The portions remaining, however, consist of the left half of the parietal bone, with the exception of a part broken off immediately below the posterior superior angle, a portion of the occipital bone, exhibiting the left condyloid process, the temporal bone, the styloid process being broken off, the left upper molar bone complete, a small portion of the superior maxillary bone, and part of the left wing of the sphenoid containing the foramina. The sutures in this instance are also ankylosed, and the external surface of the lower roughened from decay.

*No. 2 Cist* contained a male skull and skeleton complete. The pelvic bones in this case have also not been forwarded, and it is possible the sex of the individual has been determined correctly, though the bones of the

face scarcely look massive enough for those of a male. The cranium itself is of the Brachycephalic type: looked at from above, it exhibits a somewhat rounded oval, the parietal eminences being well marked, and a distinct difference is observed between the parietal and frontal breadths. Looked at sideways, the glabella and orbital ridges are well but not distinctly marked, and the forehead rises perpendicularly to a level with the frontal eminences, when it bends easily round and rises gently until about an inch anterior to the coronal suture. This contour then passes almost horizontally until in a line with the parietal eminences, when it turns with some degree of boldness, and slopes downwards towards the superior border of the occipital bone. From this point to the superior curved line the contour is first boss-like, then slopes towards the inferior curved line, and lastly turns round towards the foramen magnum. Looked at from behind, the contour is globular, the left side of the outline being the more rounded, though neither lateral outlines are at all intruded upon by the prominence of the mastoids. Seen in front there is nothing to remark except what has already been stated, that the facial bones are neither massive nor strongly marked. The foramen magnum is of the usual form, but the right condyle is of a more quadrilateral form than the left, which is somewhat rudely triangular. In the supra maxillary bone the canine fossa is well marked, and in the palatal surface can be distinctly seen the pre-maxillary suture. The teeth have all been developed, but the two inner and upper incisors are wanting, and also the right external incisor and first bicuspid. All are in good preservation, and offer no peculiarity. The lower jaw is perfect, containing the whole series of teeth, and from these as well as those in the upper maxillary bones being very slightly worn, and from the angle of the lower jaw, the parts undoubtedly belonged to a person in the vigour of life. The bone presents no peculiarity, and none of the prominences or muscular attachments are at all exaggerated. The base of the skull also presents nothing worthy of remark, and the mastoids are certainly below their normal development. The sutures are in their normal condition, and the frontal is unobliterated. The ossa triquetra in the right lambdoidal suture requires to be noted. Those of the left side have not been ascer-

tained, as it was thought better not to disturb the calcareous matter by which this portion of the cranium is covered, so that it might be seen in exactly the condition in which it was found; but possibly this may be of the larger size of those to which attention has already been drawn. The external surface of the skull is less roughened by decay than the other fragments found, but in the left half of the frontal bones, the bone is seen exfoliating.

No. 3 *Cist* contained only the fragment of a cranium composed of the greater part of the frontal bone, though a considerable part of the left half is wanting, the right nasal bone, part of the orbital and nasal, parts of the right superior maxillary bone, and a fragment of ethmoid with the crista galli attached. The inner frontal crest is very prominent. From the thinness of the bones, it may possibly be part of the skull of a young person.

*Measurements of Cranium in Cist No. 2, Second Site.*

Circumference, . . . . .	20 $\frac{1}{2}$ inches.
Antero-posterior diameter, . . . . .	7 $\frac{1}{8}$ "
Breadth at forehead, . . . . .	4 $\frac{1}{4}$ "
Breadth at parietal eminences, . . . . .	5 $\frac{1}{4}$ "
Height from centre of meatus auditorius externus, . . . . .	4 $\frac{1}{8}$ "
Occipito mental, . . . . .	8 $\frac{7}{8}$ "
Fronto mental, . . . . .	5 $\frac{7}{8}$ "
Breadth of face, . . . . .	4 $\frac{1}{2}$ "