

## II.

### NOTES ON SOME ANTIQUITIES FROM SUTHERLAND.

By J. M. DAVIDSON, O.B.E., F.S.A.Scot.

#### TWO BRONZE AGE CISTS AT ACHINCHANTER, DORNOCH.

In December 1938 Mr Robert Gunn was deep ploughing on the farm of Achinchanter (Gaelic, *Auchen-chanter*, Field of the Precentor), Dornoch, when the plough-share struck and dislodged a large stone. On moving this from the track of the plough, he observed that it overlay a large block of sandstone, beneath one end of which he noticed a cavity. He continued his ploughing and it was not until the last week of the year that he was able to return to investigate, when, with the aid of a crowbar, he was able to move the large flagstone to one side. He then observed a rectangular stone cist, and, protruding through the infallen soil, certain bones. So he left the contents intact and reported the discovery to Mr H. M. Ross of the Sutherland Arms Hotel, the tenant of the farm, who in turn advised Mr John Campbell, Station House, who at once communicated by telephone with me.

I took an early opportunity to visit the site, and, with the cordial permission of Mr Ross and of Mr Thomas Adam, Factor to the Duke of Sutherland, the proprietor, I was enabled to investigate the discovery.

The site is on the north end of a crescentic-shaped moraine about 120 yards to the west of Dornoch Railway, as it emerges from the station some 350 yards to the south. The morainic deposit, of rough gravel, is known in Gaelic as *Cnoc-na-caorach* (Hill of the Sheep), and although its elevation is only about 60 feet above the level of the sea, it overlooks a wide stretch of sea and country from Tarbat Ness to Struie and Bonar on the south to Beinn a' Bhragie, with its monument to the Duke of Sutherland, on the north.

The sepulchral chamber was constructed of massive stone slabs vertically set, and measured 4 feet 1 inch long by 2 feet 1 inch broad inside. The cover was an irregularly shaped sandstone-conglomerate slab measuring about 4 feet 6 inches long and 3 feet broad at its widest part. The two sides and one end of the cist each consisted of a single flat stone, while the other end had a second stone keyed in at right angles. The interstices at the corners were carefully packed with rounded stones securely built in. The depth was about 2 feet 3 inches (Pl. I, 1).

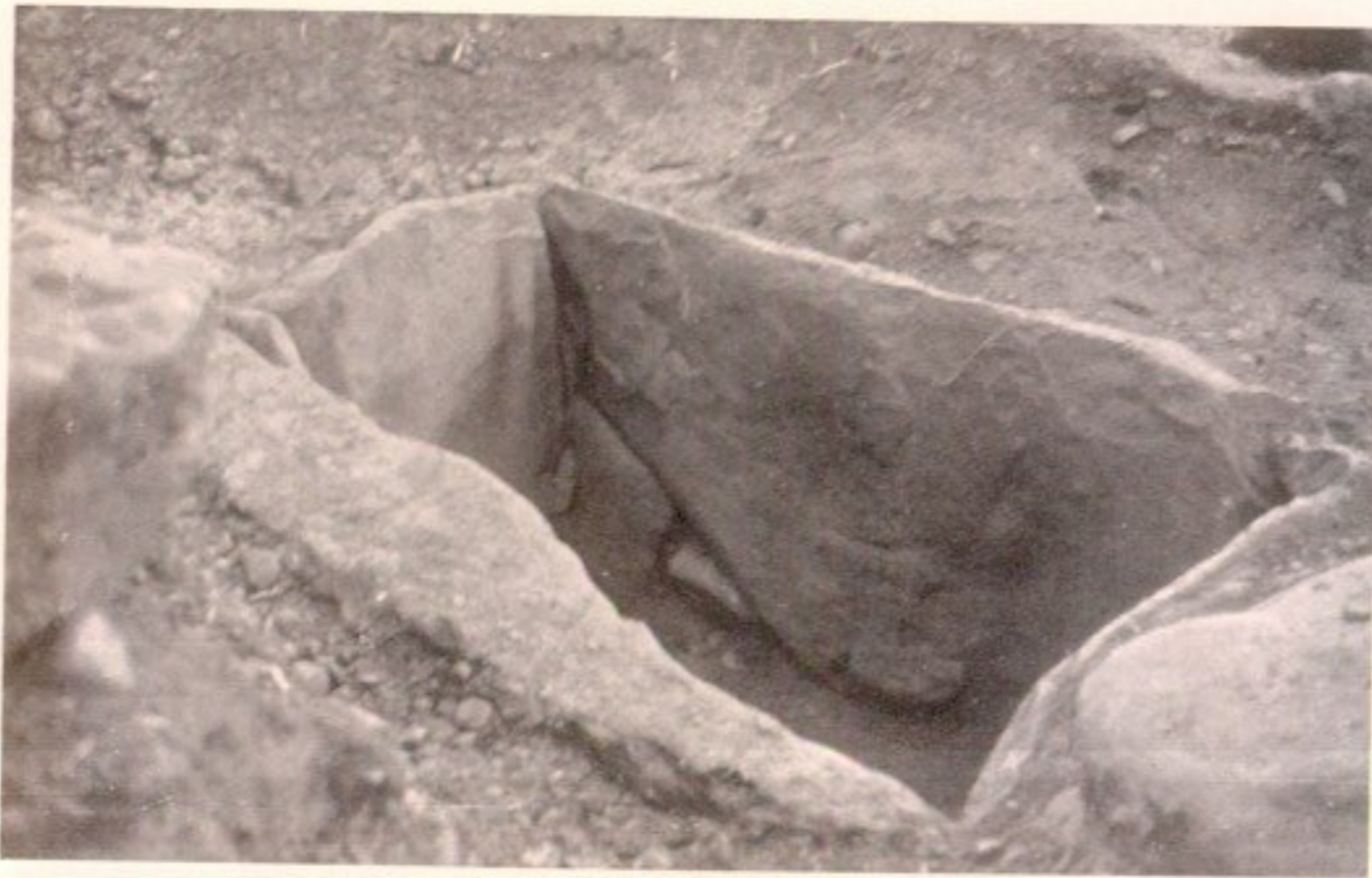
The human remains found within the cist were scanty. The skull, of which portions were recovered together with part of the jawbone containing three teeth in position and a number of loose teeth, was found at the south-western end; the thigh bone and leg members were lying athwart the cist to the north-east. It was evident that the body had been placed in the chamber on its left side in a contracted position. The bones, other than those noted, were so decomposed as to make their removal quite impossible. I am indebted to Mr G. H. Edington, T.D., D.L., M.D., D.Sc., F.R.F.P.S., F.S.A.Scot., for his careful examination of the skeletal remains, and his detailed report is appended hereto.

The body had been placed on a bed of soft sand finely sifted and entirely free of pebbles. Beneath this layer was a gravel base, with considerable numbers of large rounded stones forming the bottom of the cist.

The contents of the cist were minutely sifted, but no relics came to light.

In clearing the ground to the north-east, a rough pavement of heavy stone boulders was encountered adjacent to the end slab of the chamber, and eventually the massive cap stone of a second cist was uncovered. This measured about 5 feet long, 4 feet wide and 5 inches thick, and required the combined efforts of five men to raise one side and to pivot it over. The cist (Pl. I, 2) was constructed in the same massive manner with large slabs, but the size in this case was smaller, the length being 3 feet 6 inches, while the width tapered from 28 to 21 inches.

The two cists differed, however, in more than size. In the first the two long side stones overlapped the end flags which were wedged between, whereas in the second the end stones projected beyond the larger side members. In cist No. 1 the longitudinal axis was level, and laterally the south-east side was  $3\frac{1}{2}$  inches lower than the north-west slab. After the stones had been put in position the latter stone had been carefully trimmed to give an even top all along its edge, and both end stones were chipped to adjust the differences in level. This allowed the top stone to lie evenly with a slight slope down to the south-east. In the second cist, on the contrary, the north-west stone was concave on its top surface and the sides were carefully evened up with flat stones to give a level base for the cap-stone, no sign of chipping or trimming of the main members being



1. Cist No. 1 at Achinchanter showing trimming along edge of side slab.



2. Cist No. 2 at Achinchanter which contained food-vessel urn, etc.



1. Food vessel from Achinchanter cist.



2. Flint arrowhead from Cist at Achinchanter.

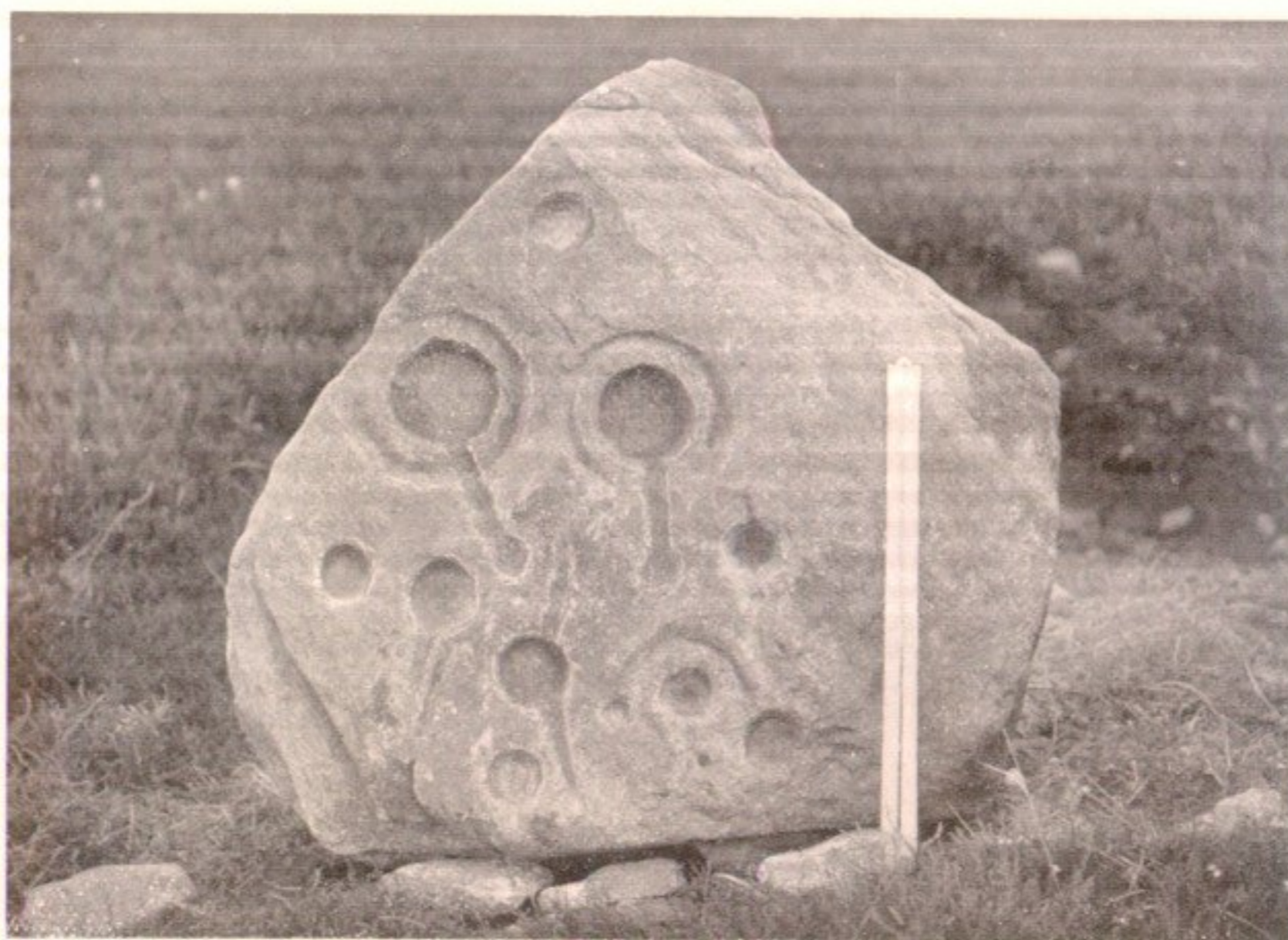


3. Food-vessel urn from cist at Ascoilemore.

J. M. DAVIDSON.



1. Two cists at Achinchanter, Dornoch.



2. Cup- and ring-marked stone at Duible, Sutherland.



Tumuli at Duible, Sutherland.



1. Site of cist at Ascoilemore, Sutherland.



2. Crescent-shaped rampart and ditches on north side of mound containing cist at Ascoilemore.

detected in this instance. The result was that No. 1 tomb was comparatively dry, while the wall stones of No. 2 were discoloured by black streaks, as though from continued percolation of damp or acids from the soil. Confirmation of this was also obtained from the condition of the human remains within the chamber.

From the different methods employed in the construction of the cists, it was apparent that they had not been built by the same hands.

Except for the shadow-like remains shown by the discoloration of the sandy base of the tomb, the only visible evidence of the presence of human relics was the arc of the jawbone. The enamel of the teeth could be discerned in a similar position to that found in the first cist and the complete jaw was observed, though only faintly. Nothing tangible, however, could be recovered, as damp and decay had destroyed everything completely. Within  $1\frac{1}{2}$  inch of the jawbone was found a barbed and tanged arrowhead of buff flint  $1\frac{1}{4}$  inch long and 1 inch at its widest part over the barbs (Pl. II, 2). The flint greatly resembles that found on the Antrim Coast. This relic is a beautiful example, perfect in all its points, and is delicately serrated all along its angled edges.

In the north-west corner was wedged a small clay urn of the food-vessel type lying on its side, with the mouth tilted inwards. The vessel was already broken when the cist was opened and, due to its crumbling condition, it proved very difficult of removal, packed, as it was, around its exterior with rounded pebbles of about the size of the human fist between it and the side and end walls of the chamber. The base with part of the wall of the urn were recovered entire, and as every fragment of the vessel was found, its reconstruction did not appear to present insuperable difficulty.

In fact this was later successfully accomplished by Dr Stuart M. K. Henderson, Curator of the Archæological Collection at Kelvingrove Art Galleries, Glasgow, to whom cordial thanks are due.

The vessel (Pl. II, 1) is of the vase type, made of a dark brownish clay mixed with coarse pebbly grit. Below a thick rim is a rounded neck groove, and beneath this a narrow U-shaped "string" groove interrupted by five unpierced stops. Below a third narrow channel the walls of the vessel swell out to the same diameter as the rim, and from this point taper down to a small flat base. The rim has a slight inward bevel and is ornamented with chevron markings, which also cover the whole exterior. The decoration is in rows round the upper half of the bowl, and about half an inch below the bottom groove on the upper tapered portion of the urn two uneven lines have been rudely scored around. Below these the chevrons are applied in vertical rows.

The chief dimensions of the vessel are: height,  $5\frac{1}{2}$  inches; maximum diameter,  $6\frac{1}{2}$  inches; depth of rim,  $\frac{1}{2}$  inch; inside diameter at lip, 5 inches;



depth of neck grooves, 1 inch,  $\frac{3}{8}$  inch, and  $\frac{3}{8}$  inch; diameter of base, 3 inches; thickness of walls,  $\frac{7}{16}$  inch.

Messrs J. F. Hyslop and A. M'Murdo of the scientific staff of Messrs John G. Stein & Co., Ltd., Castlecary, were good enough to examine small pieces of the wall of the vessel, and reported:

"X-ray examination of the outside brown layer and of the interior of a small portion of urn from Dornoch.

"The constituents are: quartz; kaolinite; pyrophyllite or talc.

"The presence of these minerals indicates that the urn was unburned, or else burned at some low temperature—say, 500° C.

"The crystals present in the specimens are large, and the mineral association indicates that the source of the raw material was probably some broken-down metamorphic rock. It is too much to assume that the pyrophyllite or talc was added to clay.

"Ceramically, the two features of the urn are:

(a) It is unfired in the ceramic sense, since the original minerals are not decomposed.

(b) the composition is specific, as is shown by the presence of the talcose mineral."

At the same end of the cist was found a small fragment of bronze  $\frac{1}{2}$  inch long and about  $\frac{1}{16}$  inch in diameter, suggestive of part of a pin. The remainder had apparently completely disintegrated.

All of the stones forming the two cists (Pl. III, 1) were of sandstone conglomerate and apparently emanated from one of two quarries on Dornoch Links, but as these are  $\frac{3}{4}$  mile distant as the crow flies, the labour involved in transporting these massive slabs must have been considerable, particularly as the moraine itself presents a fairly steep incline from any direction.

The two cists were not orientated in the same direction, there being a difference of 18° in the setting of their long central axes. The first tomb was set at 124° east of North Magnetic, and it was noted that the medial line was directed exactly to that point on the horizon where the sun set at the Winter Solstice. At another Bronze Age burial in Lanarkshire,<sup>1</sup> the cist was found to be aligned to the setting sun at midsummer. At Achinchanter it was further observed that the continuation of the central axis of the first cist to the north-east pointed to the centre of the cairn at Embo Street<sup>2</sup> almost one mile distant.

From the presence of many large rounded stones, apparently not native to the moraine, ploughed up to the surface, it seems clear that the burial-ground had at one time been covered by a cairn. Neighbouring dry-stone dykes have probably been built from this source, as well as farm buildings,

<sup>1</sup> *Trans. Glasgow Arch. Soc.*, vol. ix, part iv, "A Bronze Age Cemetery at Springhill Farm, Baillieston, near Glasgow."

<sup>2</sup> *Inventory of Monuments in Sutherland*, p. 48, No. 137.

till nothing is now left to indicate its presence other than such boulders as the plough has raised to the surface. Cultivation, followed by heavy rains, has caused the top of the mound to be much denuded, and the cap-stones of the cists are not now more than a few inches below the plough furrow.

Grateful acknowledgment is made to Mr John Campbell for his assistance as well as for the provision of tools and protective shelter on the site during trying wintry conditions.

REPORT ON BONES FROM BRONZE AGE CIST AT DORNOCH SUBMITTED BY MR J. M. DAVIDSON. BY MR G. H. EDINGTON, T.D., D.L., M.D., D.Sc., F.R.F.P.S.G., J.P., Consultant Surgeon, Western Infirmary, Glasgow.

1. Package marked "leg or thigh bones" contains one or two fragments of long bone. The largest is  $2\frac{2}{5}$  inches long and consists of two separate pieces which incompletely surround marrow cavity, so that it is plainly visible through a gap— $\frac{5}{8}$  inch across. The inner surface of the two pieces (marrow surface) is irregularly granular. The outer surface of the fragments presents appearance as if outer layers had partly desquamated; the line of junction of the fragments is linear and slightly sinuous.

2. Fragment  $1\frac{5}{8}$  inch long,  $\frac{5}{8}$  inch wide.

3. Fragment 2 inches long,  $\frac{5}{8}$  inch wide.

The outer surface of all three shows longitudinal furrowing or fluting and without the hard, smooth surface of more modern bones.

4. Fragment  $2\frac{1}{8}$  inches  $\times$   $\frac{6}{8}$  inch. Marrow cavity fully exposed from end to end of fragment. The characters of inner and outer surfaces correspond with those found in 1, 2, and 3. The large fragments 1 to 4 are suggestive of a slender tibia, or of a humerus of proportions found in a modern bone. The fragments, and to a lesser degree the smaller remains, sparkle in artificial light as from crystalline bodies: the prevailing colour is earthy brown. The fragments tend to split and break, no matter how delicately they be handled.

5. This contains dust and small flakes and particles of bone. One fragment measuring  $1\frac{1}{2}$  inch  $\times$   $\frac{5}{8}$  inch is fairly flat on one face and rough on other surface. Its other two sides both show depressions suggesting naturally formed cavities such as occur in the upper jaw.

FRAGMENTS OF SKULL.

6. Upper jaw from left side, 2 molars in sockets. Right side ill-preserved. The 2 molars are well-preserved, also the most of hard palate; front part is wanting.

7. Fragment of left side of front part of base of skull: chiefly sphenoid.

Looked at from behind: The groove for meningeal artery is seen on attached piece of temporal bone and the latter's line of junction with sphenoid is in front of that.

8. Petrous portion of right temporal bone, showing opening for auditory nerve.

9. Fragment of right side front part of base of skull (*cf.* 7 *supra*). Foramen for optic nerve seen.

10. Under part of sphenoid showing large sphenoidal cells; and on either side of back (rostrum) the roof of nasepharynx.

11. Large fragment of vault of skull attached by suture to smaller piece. Probably parietal bone. Difficult to fix accurately. Shows grooves for meningeal artery. Smaller piece (?) Occipital bone, average thickness  $\frac{1}{8}$  inch.

12. Small fragment is at junction of three bones, left parietal, sphenoid, and temporal.

17th January 1939.

#### SCULPTURED STONE FROM EMBO STREET, DORNOCH.

In January 1933, along with Mr Ludovic McL. Mann I visited the cairn at Embo Street, which is now much overgrown with whins. A cist is

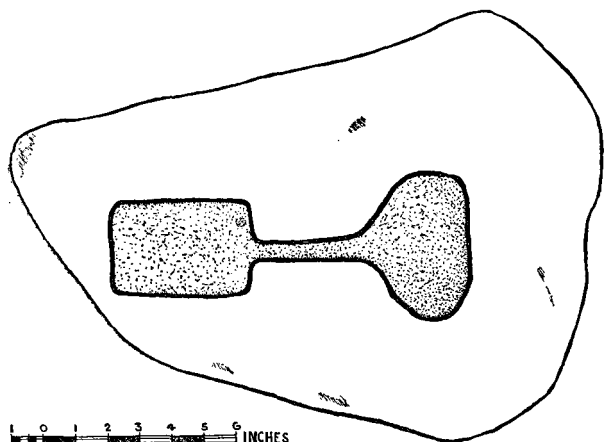


Fig. 1. Sculptured Stone from Cist at Embo Street.

exposed with the top slab lying across the east end and within I found a stone with a curious device cut thereon. I was inside the chamber scraping away moss and earth in a search for cup-marks, or other relics which might have escaped the observation of those who originally opened the cist, when I came across, among the debris at the bottom, a flat sandstone about 18 inches long and tapering from 15 inches broad to a rounded

point, with a mark cut out in it (fig. 1). The symbol suggests the form of a much-shortened spade with a greatly exaggerated handle: that is, two large unequal broad ends connected by a thin central web. It is about 11 inches long and  $4\frac{1}{2}$  inches wide and has been cut out to a depth of about  $\frac{1}{4}$  inch. In shape it much resembles one cut on the vertical rock face on the Jemez Plateau, near the Rito de los Frigoles, New Mexico, where, at the Tufa Rock Dwellings, in the Pajarito Park, a somewhat similar device appears in conjunction with cups and rings and other sculpturings.

The cist cover at Embo Street is recorded as one of the comparatively few examples known to have cups cut thereon, there being one large cup on the underside.

#### CUP-MARKED STONES AT DUBBLE, SUTHERLAND.

Thanks are due to Mr Wm. McLeod, Suisgill, Kildonan, for bringing to notice the two cup stones here recorded. The first is a large isolated erratic

of schist with wide laminations of quartz, situated on the southern ridge of Beinn Dubhain at a point east of the Duible Burn, some 350 feet above the level of the Kildonan road and about  $1\frac{1}{2}$  mile south-east of Kildonan Church. The boulder measures about 8 feet long and 4 feet wide, and it stands some 3 feet above the level of the turf. Locally it is known as the "Maiden's Rock" and it is a comparatively prominent object in the moorland plateau, as few stones there protrude above the heather.

The stone slopes down to the south, and on the highest part of it to the north-east three cups are cut out with their centres in exact alignment. The cup at the north-east end is well made, measuring  $3\frac{1}{2}$  inches in diameter and 3 inches deep. The other two, the central one at about 2 inches diameter and the other which is elliptical, are comparatively shallow. The distances apart of their centres from the central cup are  $4\frac{1}{4}$  inches and  $2\frac{1}{2}$  inches respectively.

The second set of cup markings was discovered by Mr McLeod when shooting over the moorland in 1933. He dropped a cartridge and on stooping to recover it brushed aside the heather with his foot and noticed a little ring of moss. Struck by the odd formation, he examined more closely and uncovered the sculptured surface of a flat stone, pentagonal in shape, measuring about 24 inches across. The stone is about 6 inches thick and is of a hard, close-grained, micaceous schist.

Mr McLeod had cut out the stone from its position in the clay on the hillside and had cleaned it and propped it up for my inspection. Originally it had been lying level with the ground with only its sculptured face exposed.

The site is about 50 yards west of the Duible Burn, a little mountain stream which flows into the river Helmsdale a quarter of a mile east of the confluence of that river and the Craggie Burn, one mile east of Kildonan Church. The elevation is about 500 feet above sea-level.

In the small area of about  $3\frac{1}{2}$  square feet there are fourteen cups cut in the stone, two of them being considerably larger than the others at  $3\frac{3}{4}$  inches and  $3\frac{1}{4}$  inches in diameter respectively, and each of these two cups is almost surrounded by a concentric ring 1 inch wide. Both of these cups are unusual in that they are flat bottomed at about  $1\frac{1}{4}$  inch in depth. The rings measure  $6\frac{3}{4}$  inches and 6 inches in their mean diameters and they are open to allow a straight gutter emanating from single small cups to pass through to the larger ones (Pl. III, 2).

The remaining cups vary from  $2\frac{1}{2}$  inches to  $\frac{3}{4}$  inch in diameter, some of them being quite shallow. Five of these have single gutters cut into them and one has two channels. Four—two of them  $1\frac{1}{2}$  inch in diameter and two at  $\frac{3}{4}$  inch in diameter—are simple cups.

The site on which this stone was found is interesting, because of the large number of tumuli in the immediate neighbourhood. The moorland is the property of Brigadier-General G. C. B. Paynter, C.M.G., C.V.O.,

D.S.O., Suisgill Lodge, Sutherland, who was good enough to allow me to investigate some of them.

#### TUMULI AT DUBBLE, SUTHERLAND.

The site is singularly impressive in that there are about sixty tumuli in an area of a few acres. In general they range about 20 feet in diameter and from 2 to 3 feet in height. I chose three (Pl. IV) from amongst them, two of them because of their apparent perfection of form and height and the third because of its proximity to the cup- and ring-marked stone. I excavated these, but found no evidence of them having any connection with burials. From a close and intimate survey I was driven to the reluctant conclusion that they were merely heaps of land-gathered stones, carefully collected into these little cairns and compactly built up to conserve what little land there was suitable for cultivation. The rock surface never appeared to be very far down, and the attempt to eke out an existence in a cold and mountainous countryside must have caused a frugal peasantry to endeavour to snatch a living through cultivation of this fairly level high ground. In Sutherland I frequently found these cairns on high ground and, moreover, on comparatively level ground. On the high land to the east of this site, where there was a notable absence of stones, there were to be seen cultivation rigs now long, apparently, out of use.

No cairns were noticed in the lower ground bordering the Helmsdale River. The land is alluvial and overpopulation of that more favoured soil or temporary flooding may have driven the inhabitants to the more inhospitable heights as a temporary resort, but no hut circles were observed in the immediate neighbourhood of the cairn-field.

Locally I ascertained that, while at various times some stones had been removed from the cairns in an attempt to find a central cist, nothing of that nature had ever been found in them.

#### CARVED STONE BALL FROM GOLSPIE.

In 1933 Dr James B. Simpson of Golspie reported to me the finding of a carved stone ball (fig. 2) turned up during ploughing operations on the farm of Golspie Towers.

The ball is of grey porphyrite and shows on its surface small vesicles caused by gas bubbles. It has six prominent protuberances in high relief almost identical in size at 1.7 inch diameter and hemispherical in shape. The overall size equals two knob-diameters or 3.2 inches. Round the base of each boss a slight wear is noticeable, the stone being undercut to a small degree as though through continued friction of a cord or thong. Its weight is  $17\frac{3}{4}$  oz.

The ball is in a fine state of preservation, all of the protuberances, except one which is slightly chipped, being in perfect condition. In its balance and symmetry it conveys the impression of a clever example of stone-cutting craftsmanship.

BRONZE AGE CIST AT ASCOILEMORE,  
BRORA.

On Saturday evening 15th July, 1939, I was advised by telephone of the discovery of a stone cist near Brora and was invited to investigate it. I therefore travelled north the following day, and in Inverness met Mr John Sutherland, Dornoch, factor of the Ascoile Estate, who informed me how to reach the spot and gave me the necessary permits to explore the site on behalf of Walter P. Tyser, Esq., of Gordonbush Lodge, the proprietor.

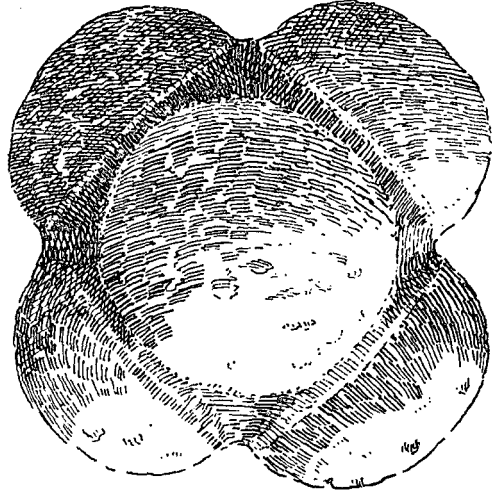


Fig. 2. Carved Stone Ball from Golspie, Sutherland.

Ascoilemore, in the Parish of Clyne, is almost exactly 8 miles by road north-west of Brora, on the north side of the river. The site of the cist was in a little morainic mound (Pl. V, 1) about 10 feet in height situated on the northern edge of the meadowland adjoining the river and some 94 yards north of the road which traverses the Strath. It lies about 1100 yards east of the junction of the Black Water and the Brora River. About 900 yards farther east a modern road bridge spans the Allt Ach'nam Bathaich Burn before its discharge into the Brora River.

The mound itself is noteworthy in that it presents the appearance of a defensive earthwork with a flat top measuring some 83 feet in diameter. It is protected on its northern side by a rampart, 22 feet wide at the bottom, with a ditch on either side (Pl. V, 2). The inner ditch is 28 feet wide at the top and measures 5 feet deep, while the outer ditch is 12 feet wide. The rampart and ditches are crescent-shaped. The elevation is approximately 110 feet above sea-level. The hillock has been cut into for road-surfacing material and consists of a mixture of coarse sand and gravel with occasional large broken boulders. A certain amount of clay material is found intermingled in its structure.

Practically the entire centre of the mound had been removed when the stone side-slab of a structure became revealed with a large flat stone resting on its upper edge. A cavity disclosed between the top stone and the side-slab proved too great a temptation to an errant workman who, unknown to

his fellow-workers, prised the side-slab out, and in doing so wrecked the cist. The urn, intact, he took away and kept it wrapped in a handkerchief in the roadworkers' travelling bothy.

The cist, therefore, was in this condition on my arrival, and I could do little but sift carefully the material from the bottom of the grave and take such particulars as its ruinous condition would permit.

The top slab, measuring 3 feet 6 inches long, 24 inches wide, and 6 inches thick, of blue whinstone was still in position, the upper surface being 2 feet below the grass level. The only other stone left intact was the south side-slab, of well-dressed white sandstone 3 feet long, 20 inches deep, and 3 inches thick. The displaced end-slabs measured about 21 inches long, 14 inches deep, and 3 inches thick. These end-slabs had been wedged from behind with smaller broken boulders, and the corners were similarly packed with small stones. The interior dimensions of the cist must have been about 3 feet long, 18 inches wide, and 18 inches deep. The long axis of the chamber was approximately  $50^{\circ}$  east of North Magnetic.

The bottom of the cist was concave and had been lined with a deposit of clay in which pebbles had been set, thus forming a hard solid floor. Within this bowl-shaped depression, which was 6 inches deep, was a deposit of fine sifted sand and gravel filling up the hollow in the cist to a level bottom. No relics were found.

On recovery, the fabric of the urn was found to be deteriorating, a serious crack having developed and a flaking of the surface being apparent. The workman agreed that it was disintegrating rapidly since he had found it, and no difficulty was experienced in persuading him to relinquish control of the vessel in order that it might be chemically treated with a preservative. This was undertaken with complete success by Dr Stuart M. K. Henderson of Glasgow.

The urn (Pl. II, 3) is a squat little vessel of fine clay, reddish brown in colour with little air vesicles showing on the outer surface. It has a flat base  $2\frac{5}{8}$  inches in diameter, and in its rather unsymmetrical form it is somewhat crudely and obviously hand-made.

Its principal dimensions are: height,  $3\frac{7}{8}$  inches; maximum diameter,  $4\frac{5}{8}$  inches outside lip; interior diameter,  $3\frac{5}{8}$  inches.

The inside of the base is slightly convex and the walls of the vessel are about  $\frac{1}{2}$  inch in thickness, narrowing at the everted lip to form a wide mouth.

The vessel was quite clean inside when received, but in reply to a query as to whether anything had been found in it I was assured there was "only dirt." It transpired that, before the cist was forced, a stick was probed about the interior through the top cavity and on withdrawal the end was found to have a black, somewhat sticky substance adhering to it which was thought to have come from the urn.

Brora Loch is dominated by the mountains Cól-bheinn and Ben Horn to the north and south respectively, both rising to over 1700 feet. The Strath between, in which are situated both loch and roadway, contains the only pastoral land in the district, and in this narrow strip settlements and burial places appear to have been not infrequent.<sup>1</sup> At Killin, at the junction of the east and middle portions of the loch and on its eastern edge, human remains were found in 1865, and in that same vicinity, within 300 yards, on the north side of the road, similar discoveries were recorded in 1810. About 170 yards due east of the road and north of the Allt nam Ban Burn at its entrance to Loch Brora, two urns were found in 1871, while at the Old-town Kennels, beside the site of St Columba's Chapel and immediately adjacent to the road, large human bones were discovered in 1815. About 900 yards north-west of the Ascoilemore site is a cairn <sup>2</sup> at a height of about 500 feet on Balmacoil Hill. Mounds of the type already mentioned abound as well as hut-circles and cairns, but, probably due to the remoteness of the sites, very few have been explored in any way.