

III.

NOTICE OF THE DISCOVERY OF A BURIAL-PLACE OF THE BRONZE AGE ON THE HILL OF WEST MAINS OF AUCHTERHOUSE, THE PROPERTY OF D. S. COWANS, ESQ. BY ALEXANDER HUTCHESON, F.S.A. SCOT., BROUGHTY-FERRY.

The Hill of West Mains of Auchterhouse¹ is situated in the Parish of that name, and at a distance, in a straight line, of seven miles due north-west from Dundee. The hill is a spur of the Sidlaw range, rising steeply to a height of close upon one thousand feet on the west side of the valley through which the railway line between Dundee and Newtyle passes, just before it enters the Glack of Newtyle.

The hill has been rendered more conspicuous of late years from having been crowned by a tall conical pillar of built stones, the work of Mr William Mackison, C.E., and F.S.A. Scot., Dundee, who, having his summer residence in the neighbourhood, and finding on this favourite vantage-ground for an extensive view an abundance of loose stones, by the consent of the proprietor, Mr D. S. Cowans, in 1887, raised this conical pillar to serve as a land-mark, and in commemoration of the Queen's Jubilee of that year.

No one at first seemed to think that this great collection of stones on the hill-top indicated anything in particular, and few would have supposed that a burial-place would be met with in such a lofty elevation, but latterly Mr Cowans, a gentleman of antiquarian tastes,

¹ The etymology of the name of the Parish, like all Gaelic derivatives, has been the subject of more or less fruitless discussions. If I venture to propose an origin for the name, so far as I have seen not mentioned before, it is out of deference to the able authority, to whose courtesy I owe it, the Rev. John M'Lean, Grantully, a corresponding member of this Society, who suggests *Uachter-shuas*, pronounced 'ooachter-oos,' the *o* sounded as in wool, literally the 'West Top,' a suggestion which has the merit of giving to the Hill of West Mains—the pre-eminent west top of the Parish—the honour of originating the name of the Parish, and at the same time implying that in early times when place-names took root, there was, whether owing to the presence of the Burial Cairn or not, a special significance attaching to this hill.

thought there might be more in the cairn than met the eye, and resolved to have an investigation made of its interior.

The cairn, of which fig. 1 shows the plan and section, crowns the very summit of the hill, and is nearly circular. It measures 21 yards in diameter from north to south, and 20 yards from east to west, with a height in the centre of about 5 feet 6 inches. But as the materials of the tall massive pillar erected by Mr Mackison were taken from the higher part of the cairn, it was doubtless at first not less than 7 feet in height.

Mr Cowans fortunately selected the centre of the cairn for his operations. A commencement was made on the morning of Thursday 2nd September last, and, after removing the superincumbent stones, at a depth of 3 feet 6 inches from the then summit of the cairn, the workmen came on a series of large slabs of stone, closely laid together, and covered on the top by a layer, 3 inches in thickness, of a tough clay-like deposit. On this being broken through, the slabs of stone referred to were disclosed. Mr Cowans, who was present, caused one of the slabs nearest the western edge of the excavation to be raised, disclosing the interior of a stone cist, containing a quantity of bones; and among them and close to the end of the cist lay a specimen of the bronze implement usually termed by Archæologists a dagger. Mr Cowans, recognising the importance of his discovery, and desiring to have the presence of others interested in such researches, with commendable prudence and consideration, caused the stone which had been lifted to be carefully replaced, first, however, removing the dagger for safe-keeping. Mr Cowans lost no time in inviting several local gentlemen likely to be interested, including myself, and on Saturday, 4th September, operations were resumed. The party present included Mr D. S. Cowans and Miss Cowans, Principal Rhys, Oxford, who had been staying at St Andrews, Mr Wm. Mackison, F.S.A. Scot., Mr Jas. Cowan, Broughty-Ferry, and the writer.

A commencement was made by removing the covering slabs. These were found to be three in number,¹ the largest one measuring about 3

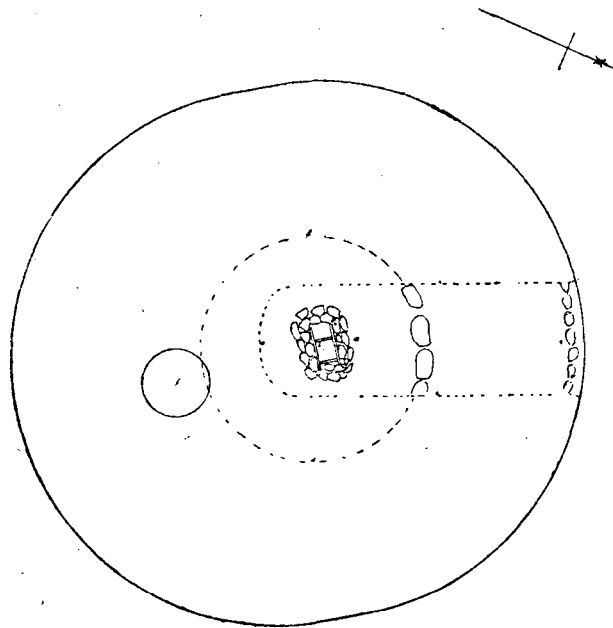
¹ Other three slabs of much smaller dimensions were subsequently discovered to be covering over an, at that stage, unsuspected prolongation of the cist to the westward, and which will be described later on.

feet by 2 feet, and averaging 4 to 5 inches in thickness. They were found to be closely jointed with the same tough clayey material already mentioned as covering the whole of the slabs. This method of jointing with clay has been previously noticed as a not unusual practice in Bronze Age cist burials.¹ The cist with its contents was now clearly revealed. It was found to be not quite accurately rectangular, but slightly rhomboidal in plan. The sides were practically parallel, and measured just 2 feet apart. The ends were 2 feet 1 inch apart at the north-western side, and 2 feet 2 inches apart at the opposite side. The sides and ends were formed each of a single slab of pavement 3 to 4 inches in thickness, slightly sunk into the ground beyond the depth required for the cist, which measured internally 2 feet deep. The slabs forming the sides in each case projected beyond the end slabs, as will be described further on. The cist in its internal dimensions was therefore almost an exact cube. Its central longer axis lay at an angle of 38 degrees east of north, or nearly N.E. and S.W.²

The centre of the cist was found to be about 30 feet distant from the E., W., and S. sides of the cairn, and 33 feet from the N. side. It was therefore probably intended to occupy the centre of the cairn.

¹ The same practice may have been extended to urns when standing alone in the ground and not enclosed in a cist. See an interesting instance recorded by Dr Cramond, where an inverted urn was found to be closely jointed round the lips with clay, doubtless for the better protection of the enclosed remains. *Proc.*, vol. xxxi. p. 221.

² Cists have been found placed in all directions, nor does there seem to have been any rule followed. See plan of cist cemetery at Pitreavie, *Proc.*, vol. xx. p. 240. On the other hand, Mr A. F. Hutchison, Stirling, in a notice of a stone cist and skeleton found at Coneypark Nurseries, 6th January 1879, points out that the cist lay nearly S.W. and N.E., which is in the same direction as that at Auchterhouse; and while allowing that cists have been found in all directions, he claims that a sort of series has been discovered lying S.W. and N.E. (*Trans. Stirling Field Club*, 1878 79, p. 16). In support of this claim, it may be pointed out that in the Barnhill cist-cemetery described by me, with a plan (see *Proc.*, vol. xxi. p. 318), not less than five out of seven cists conform to this angle. At same time it is proper to state that while the directions shown for Nos. 6 and 7 in that plan were laid down from personal observation, the directions of the others were derived from interviews with persons who had seen them opened, and may therefore not be strictly accurate in angle. At that time I was not aware of Mr Hutchison's theory.



Plan

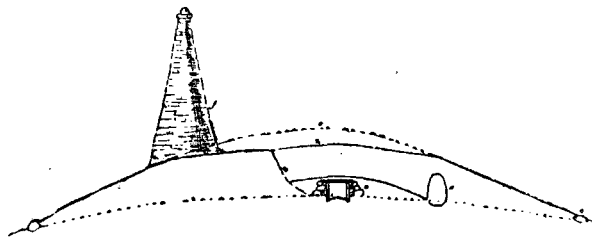
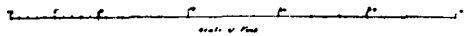


Fig. 1. Plan and Section of Cairn on the Hill of West Mains of Auchterhouse.

The floor of the cist was very irregular, no attempt having been made to smooth down or level the surface of the hill upon which the cist had been simply set down, a trench 2 or 3 inches deep having been formed to receive the lower edges of the upright slabs forming the sides and ends. This was probably done to avoid any subsequent sinking of the slabs into the vegetable soil when the heavy top slabs were put on and the cairn stones piled above, which might have proved disastrous to the integrity and tightness of the cist by causing the joints to open.

If this was indeed the object of sinking the edges of the slabs through the thin vegetable soil, it answered the purpose admirably, since the clay jointing the cist was unbroken, as I shall have occasion to notice further on. I have referred to the irregularity and unevenness of the floor. This was intensified in a very remarkable degree by the presence of a stone, which, sunk in the surface soil, projected an angle through it, and stood up in a little protuberance several inches high somewhat away from the centre of the cist. Upon this floor were found what may be described as two heaps of bones: one of the heaps lay close towards the south-western end, the bones much broken up, yet some of them exhibiting evidences of only partial charring; the other heap rather beyond the centre, and towards the other end of the cist, apparently much more calcined and almost wholly comminuted, so much so as to resemble in character, though not in colour, the ordinary small cinders—one might almost say—ashes of a coal fire. It was in connection with this last-named heap of bones or ashes that the extreme irregularity of level of the bottom of the cist was exemplified, since the ashes had been poured out or placed precisely on the apex of the protruding stone before referred to as rising out of the floor of the cist.

This stone, as I afterwards satisfied myself, was of manageable dimensions, measuring only about 18 inches by 14 inches by 10 inches in thickness, so that it could have been easily removed. Had the protuberance belonged to a point of rock or to a very large boulder difficult of removal, one could have better understood its being allowed to remain in such a situation where a certain evenness and level might have been looked for; but even then it would have been possible by changing a very little the position of the cist to have avoided the pro-

tubérance. To do so, however, apparently did not enter into the calculations of the workers, or they considered the unevenness of the floor of no moment. Considering that the floors of such cists are frequently laid with shingle or pebbles, it does seem a remarkable feature in this burial that no provision whatever had been made for a floor, where otherwise so much had been done, but that the incinerated remains were simply deposited on the unprepared turf and heather of the hill.

To return to the first-mentioned heap of bones, it was among them and close to the southern angle of the cist that the bronze dagger was found. Its presence here was abundantly shown by many of the fragments of the bones in this heap, as they lay as yet undisturbed, being tinged with the vivid green tint, which is the accompaniment and characteristic of the presence of bronze in such burials.

In removing for examination this little heap of bones, there were discovered three bronze rivets, subsequently found to have belonged to the dagger handle, as also two plates of what was apparently horn, which had also formed part of the handle, and a small rivet or pin of white ivory. These will be further referred to and described in dealing with the dagger which now calls for description.

The dagger (fig. 2) possesses features of peculiar interest in connection both with blade and handle. It has a thin triangular two-edged blade, measuring $6\frac{1}{2}$ inches in length, $2\frac{9}{16}$ inches in width at the wide end, whence it is angled abruptly off on either edge towards the haft, and is at the thickest part only a little over $\frac{1}{16}$ of an inch in thickness. Down the centre of the blade on both sides runs a mid-rib, composed of three narrow ridges, which gradually converge, narrowing and thinning off towards the point, which is slightly broken. At a distance of $\frac{5}{16}$ of an inch forward from the haft are six rivets still in position, in two groups of three rivets in each, set very close together on either side of the mid-rib. Each of these rivets measures $\frac{3}{16}$ of an inch in diameter, and projects from the blade about $\frac{3}{16}$ of an inch on each side, so that the thickness of the shaft or handle of which they formed the means of attachment is thereby determined. When found, portions of this handle—which is apparently horn—still

adhered to each side of the blade in contact with the rivets. It has shrunk considerably since first found, but then measured $3\frac{1}{8}$ inches long, $1\frac{1}{8}$ inch broad, where it joined the blade a little above the three hollows into which fitted accurately the three bronze rivets found loose in the cist; from this it gradually tapered—fiddlewise—to a breadth of $\frac{3}{4}$ of an inch in the middle of the waist, then widening out again to the extreme end, where it measured 1 inch broad, having a slightly convex termination. Dr Joseph Anderson has favoured me with the following observations on the dagger:—

“Like all others known, this dagger had the lunation in the handle where it meets the blade, and the structure of the handle was also evidently the same as other known handles—a solid piece of horn which had been riveted on to the blade by nine rivets. The under half of the handle, as it lay, was quite decayed and gone. The upper half, when taken up, broke away from the blade at the line of the upper three rivets, and in drying split longitudinally into two parts. The function of the tiny peg of bone or ivory is not clear, but I am inclined to think it may have belonged to the scabbard, as there seem to me to be indications of there having been a scabbard.”

The form and mode of the attachment of the blade to the handle will be best understood by the accompanying drawing, which I made when I first saw the dagger, two days after Mr Cowans had removed it from the cist.

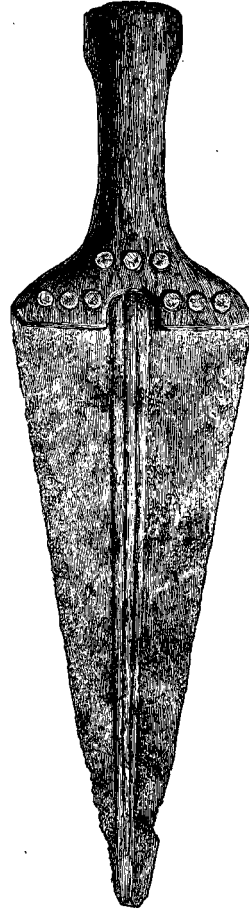


Fig. 2. Bronze Dagger found in the Cist in the Cairn at Mains of Auchterhouse.

The small rivet or pin of white ivory, before mentioned, which measures $\frac{1}{16}$ of an inch in diameter and $\frac{3}{16}$ of an inch in length, is so

small that others may have existed and been overlooked. Kemble¹ mentions a dagger found in Wiltshire, which had a portion of the handle preserved, and in which there was a decoration of small gold pins, closely studded in a chevron pattern.

Daggers of the type of the Auchterhouse example are by no means common in Scotland, nor, so far as I am aware, has any other specimen of this type been found in a cist.

The dagger under consideration belongs to a type quite distinct from the smaller thin bronze blades found in the graves.² Several dagger-blades with rivet attachments and mid-rib features, corresponding in some degree to the Auchterhouse example, are figured by Dr Anderson in his work, *Scotland in Pagan Times*, pp. 176-7;³ but none of these closely correspond with it, nor have I been able to trace any recorded instance of a dagger of this type having been secured by so many rivets to the handle. Dr Anderson supposes that some of the so-called daggers of this class may have been set at right-angles axe-wise, to a longish handle, and cites an example described as having been found in Portmoak Moss in 1826;⁴ but it is evident from the dimensions of the horn-plates, extending as these do 3 inches beyond the base of the blade, that the Auchterhouse specimen could not have been mounted in axe-fashion, but must have been provided, if anything else existed here, with a handle running back in the plane of the blade. It is possible that in a bronze dagger found also during last year in Ireland, and described with an illustration in *The Reliquary*,⁵ edited by Mr J. Romilly Allen, F.S.A. Scot., we find a near approach to the type of the Auchterhouse dagger. It was found in July, in the townland of Beenatirane, near Castle-Island, Co. Kerry, by a man digging turf, and it lay at a depth of about nine or ten feet from the surface. Strange to say, as the circumstance is very rare, it also had the handle attached to it. This is described as being of horn, about 4 inches in length, one inch of which overlapped the bronze blade, which

¹ *Horæ Ferales*, p. 156.

² *Scotland in Pagan Times: The Bronze Age*, p. 175.

³ See also Evans' *Bronze Implements of Great Britain*, pp. 233-45.

⁴ *Scotland in Pagan Times*, p. 179.

⁵ Vol. iii. p. 239.

in its total length measured $7\frac{1}{2}$ inches, making the whole length of the Irish example $10\frac{1}{2}$ inches. In the Auchterhouse example, the total length of the horn of the handle is about $3\frac{3}{4}$ inches, $\frac{7}{8}$ of an inch of which overlapped the bronze, making the whole length over the handle $9\frac{1}{2}$ inches. In these dimensions it will be seen the two specimens nearly correspond. The blade of the Irish dagger, however, is narrower and slightly curved on the edges. It possesses some sort of a mid-rib, but has been secured to the handle by only two rivets, and the thickness of the blade is not given.

To return to the examination of the cist, when the contained bones had been lifted out, it was discovered that the two slabs forming the sides were prolonged south-westward to a distance of 1 foot 6 inches beyond the cross slab, which had hitherto been supposed to terminate the cist in that direction; but now a remarkable discovery was made. It was found that another compartment existed. When the three small slabs, hitherto concealed by the coating of clay which covered in this part of the cist, were removed, an enclosed space was revealed, in which another deposit of calcined bones had been made. But in this compartment it was found that from some imperfection in the covering of clay a percolation of water from the surface had taken place, carrying in with it a quantity of fine earth, which now almost completely filled this cavity. Upon this earth being cleared out, a large quantity (and therefore a third collection) of calcined bones was discovered. These, unlike those in the main compartment, were largely mixed with pieces and ashes of burned wood, while the bones—mostly of a snowy whiteness—showed they had been more thoroughly subjected to the action of fire than those contained in the principal compartment. No implement or article of any kind was found here, nor any trace of bronze.

Notwithstanding the two practically separate collections of bones in the main compartment of the cist, it may be impossible to determine whether there was really more than one interment. The bones had been so thoroughly calcined and broken up, that identification of any particular fragment was all but impossible, except in the case of a part of the left side of a lower jaw, one or two teeth minus the crowns, and some small parts of ribs and bones of the limbs. Nevertheless, the separation of the

remains into two collections seems to point to more than one interment in the main compartment. It has been shown that these two collections exhibited distinct differences in respect of incineration. That they had not been disturbed was evidenced by the vivid green coating which the upper surfaces of many of the fragments in the western heap had received from the presence of the bronze dagger. Apart from the supposition that two interments had taken place in the main compartment, there seemed no reason for separating its contents into two collections. The like argument applies with even greater force to the third collection in the western and smaller compartment. There was ample space in the main compartment for all the remains, even if multiplied ten times over.

The conclusion seems irresistible that there was here a distinct difference; that, however it might be in regard to the main compartment, whether one or two interments had been there made, a separate interment was made in the smaller compartment. At the same time it seems reasonable to assume that such had been foreseen and provided for when the main cist was formed, the prolongation of the side slabs being then arranged to include and provide for the smaller division. At the other end, the side slabs only projected some 4 or 5 inches, so that it seems the smaller compartment was an integral part of the original formation of the cist.¹

The stones forming the sides of the cist were very much split up and "bairded" into thin laminae, but whether from natural decay of the pavement rock of which they were composed, or from cremation having taken place within them, may be a question. The absence of wood ashes from the main compartment, as well as the fact of the covering slabs to some degree showing this splitting-up condition, militate against the conclusion that cremation may have taken place within the cist.

¹ A cist of two compartments, but divided longitudinally, was found in the Barnhill burial mound. It measured 3 feet 4 inches long, 3 feet wide, and 2 feet high. The sides and ends were formed of rough slabs, a slab of the same sort being placed in the centre by way of division. One of the compartments was empty, the other contained an urn, a human skull, and other bones. If, as would seem from Mr Warden's description, the end slabs were each in one stone, their unusual length proves that, like the Auchterhouse example, the two compartments had formed an integral part of the initial construction of the Barnhill cist (*Proc.*, vol. xi. p. 310).

The result of these discoveries was to stimulate a desire for further examination of the cairn; and after consultation, and having regard to the safety of the tall conical pillar erected just south of the centre of the cairn, Mr Cowans determined on cutting a passage through the side of the cairn, beginning at the point furthest from the pillar, namely, at the north-western side, working inwards until the site of the cist was reached. It was then, however, too late in the afternoon to do anything further that day, and the further prosecution of the work was deferred until the following Thursday, 9th Sept., being the earliest date that would suit Mr Cowans and myself.

I was early on the ground on the appointed morning, but found Mr Cowans there before me. A commencement was made by laying out the lines of a cutting, 12 feet in width, taking away the superincumbent stones of the cairn, and working downwards until the subsoil of the hill was reached. In this way it was hoped that no feature of the formation of the cairn would escape notice, particular care being taken to look for any indication of disturbance of the subsoil, a feature which has in previous instances been found to lead to the discovery of interments beneath or in the subsoil, the progress of the cutting and the removal of materials being carefully watched by myself as well as by the very intelligent workman, Mr David M'Nicoll, Auchterhouse, who carried out the work. Mr Cowans was also present at intervals, and took an active interest in the work by giving all necessary instructions for the effective conduct of the investigations.

It is unnecessary to detail the operations step by step until the site of the cist and the centre of the cairn was reached. It will be sufficient to give the interesting results, which, although devoid of any further discoveries in the shape of burials or implements (with exception of some further traces of bronze to be referred to further on), yet presented some features of much interest and value in the initial construction of the cairn.

A careful examination of the features revealed showed, in relation to the cist, that the slabs forming the sides had been set up on edge and sunk into the surface soil of the hill, which was here only some 4 or 5 inches in thickness. The cross end slabs, similarly sunk, kept the

heavy sides from falling inwards, while to keep them from falling outwards, a backing of stones, like a rude dyke, was heaped, rather than built, behind them, the stones employed for this purpose being the ordinary weathered surface stones of the hill, measuring, on an average, 12 to 18 inches in diameter. Nowhere, either in cist or cairn, did any sign of a dressed stone appear.

After the cist was properly formed and inclosed by its rude wall of rough stones, and had its contained incinerated remains deposited within it, the covering slabs put in position and all the joints carefully closed up with clay, a mound of fine black earth was raised around it, so as to completely inclose it and ultimately to cover it over. This mound, which rose to the height of the clayey covering already described, say 3 or 4 inches above the stone covers of the cist, spread out (so far as disclosed by the excavation) in a fairly equal convex curve, sloping downwards to and reaching the surface of the hill at a distance of about 10 feet from the centre of the cist. This black earth was remarkable. It was so fine and so uniformly equal all through as to suggest that all stones had been purposely removed from it. There was not found in it a single stone as large as a hen's egg; only a few small stones and bits of gravel, about an inch in diameter, so few as to suggest that they were there by accident; but a considerable number of small bits of broken white quartz, running from an inch up to two inches. This earth, moreover, could not have been got from the surface of the hill, which is of chaddy earth of a reddish hue. The earth of the mound must have been brought from the cultivated or peaty ground of the valley some hundreds of feet lower down. The black colour was, however, doubtless largely due to the presence and admixture of wood ashes, which were everywhere visible through it, and at intervals large quantities of these were met with, and particularly just before the cist was reached. If we had here the remains of the cremating fires, particular care must have been exercised in collecting the bones, as not a single bit of bone which could be truly said to be encased in the black earth was met with. In the near neighbourhood of the cist, some fragments of bone were picked up, but not without suspicion that they may have been dropped amongst the surrounding stones of the cairn when the cist was first opened.

A careful observation of this black soil, moreover, seemed to reveal evidence that the successive layers as they were deposited had been kneaded or trampled down before the next quantity or layer was put on. This seemed deducible from the fact that when removing the black soil carefully in the search for relics it was found to come away in clumps or clods, so to speak, exactly as if it had been put down in quantities of about a shovelful, then trodden or beaten down, or as Mr M'Nicoll phrased it, "as if they had padded it down wi' their nakit feet." No mere shovelling and beating down as with a modern shovel would have effected this appearance and susceptibility of separation into layers. It was rather as if it had been trampled to a "puddle," to use a workmen's phrase, referring to working up clay with water to stop the exit of water, "puddle" either with hands or feet, or both. Whether this supposed puddling of the successive layers was due to intention or delays in the course of the work, in which each layer got so far consolidated before the next was super-imposed, combined, perhaps, with the incidence of wet weather, it seems impossible to determine without observation of other examples; but that this same "puddling" process was well known and practised in the Bronze Age is evinced by the repeated instances recorded of the care and effectiveness with which stone cists of this age have all their joints and interstices closed up with clay, so effectively, indeed, in some cases, as to have prevented, during the many centuries which intervene between that age and ours, the entry of water into the cist. The Auchterhouse cist is itself a case in point. The jointing of clay above and around the main compartment was so effective that no water, and consequently no earth, had got entry to its interior, while, on the other hand, the jointing on the smaller compartment had proved ineffectual, and consequently it was filled with fine mould, carried in by the slow percolation of water from the surface. The cause of this difference in results I take to be that the three small stones which formed the covering of the smaller compartment had yielded slightly, and so caused the joints to open when the heavy stones of the cairn were super-imposed, whereas the weighty stone covers of the main compartment, resting as they did, fairly and solidly on the sides and ends, would sustain almost any weight without moving.

I have referred to the rough dyke or buttressing—for this was really its purpose—which inclosed and supported the sides of the cist before the mound of earth was begun to be formed, and it was on the top of this rough dyke that evidences were found of the existence of other two objects of bronze. Unhappily, only the evidences survived. They lay, one at the north-west, the other at the north-east angle of the cist; that is, both on the same side, but at opposite ends. That at the former angle had been about 4 inches in length by about half an inch or less in breadth. The other was more leaf-shaped, and about 3 inches in length. Both were so much decayed as to exist merely as a vivid green powder, with here and there a sort of scale of metal which crumbled into dust between the finger and thumb when an attempt was made to lift it. These objects or implements had in each case been deposited between two flattish stones, and, also, in each case at about the same level, the top of the cist, but, unfortunately, were not discovered until the covering stones had been dislodged, otherwise the forms of the objects might have been more accurately determined. The existence of such objects in such a position will suggest careful observations of subsequent similar explorations. The exposed position of these objects doubtless accounts for their complete disintegration.

To return to the construction of the cairn, we have seen how the cist was formed, and inclosed by its covering mound of black soil. It will be remembered that only one side of the cairn was cut into, but the cutting was 12 feet in width, and if it may be assumed that the formation thus revealed was uniform for the whole cairn, it follows that the heap of stones which formed the covering and upper part of the burial mound was begun by, or at all events involved, the inclosing of the area to be covered by a line of stones of fairly uniform dimensions, set in a circle of about 60 feet in diameter, the centre of which practically was occupied or to be occupied by the cist already described. Within this circle, and at a distance of some 10 feet from the centre of the cist, and precisely at the base of the mound of black earth surrounding the cist, another circle of much larger stones was set up. These were much the largest of the stones found in the cutting. No other stone was found larger than a man could lift. Four of these stones, on

the other hand, measuring on an average about 3 feet high by 2 feet 6 inches and 18 inches thick, were found crossing the 12 feet cutting; and as they were arranged in a distinctly curved line and with the longer axis of their width in the line of the circle which they formed, there seem good grounds for recognising this as an inner circle of about 20 feet in diameter. From the inner base, as I have said, of these large stones set upright, rose the slope of the central mound of earth.¹ Over and around all this lower stone and earth-works, the stones forming the surface work of the cairn were then laboriously piled to form a low pyramid. Then all was covered over with an earthy covering, on which grass and heather grew and formed a network of roots and soil, to a depth of some few inches, through which here and there the underlying stones of the cairn projected their angular edges or rounded outlines. Careful observation was made of the subsoil, but so far as the excavations went, no evidence of any disturbance was met with.

So far as I am aware, this is the first time that the inclosing rough dyke around the cist and the peculiar features of the mound of earth² and its encircling standing stones have been observed and adverted to, and the discovery is of much interest and value, showing, as it does, the necessity in all such investigations for careful and systematic research. Too often the whole object of such searches is the discovery of cists or urns or implements. To my thinking, while I do not undervalue the teaching to be derived from a consideration of these features of ancient art, I consider it at least equally important to arrive at a knowledge of the minor arts of these early times—the excavating, the building—if there does survive anything from that time that can be called building—the engineering, the lifting and

¹ The mound of earth may have been an indispensable adjunct of certain forms or degrees of burial. Herodotus records that the Scythians laboured earnestly to raise as high a mound of earth for their dead kings as possible.

² Mounds of earth have been before recorded in connection with chambered burials, but details are sadly wanting. Sir John Lubbock suggests that the earthen mound is an adaptation to burial customs of the practice still common to some northern nations, who have to contend with an Arctic climate, of piling earth over their subterranean houses for the sake of warmth.

setting up of stones—if in anywise we can attain to the thoughts of the men who did these works, “that which they laboured for, the praise of the achievement or the expression of the religious feeling or whatsoever else it might be which they intended to be permanent.” These are to me of infinitely more value than the mere discovery of any number of urns or cists, where such discovery is unaccompanied by all corresponding particulars attainable, and it is on this account that I consider the public spirit shown by Mr Cowans in not only permitting these investigations to be made in the interests of this Society and Archæology at large, but in defraying, as he did, the whole expenses of the work, cannot be too highly praised, all too rare as such conduct is; and while the results of these three last days’ work may be by some regarded as negative of discoveries, it must be gratifying to Mr Cowans to know that in the estimation of Archæologists they were not so, but full of interest and value in the light the operations cast on the methods of burial of such a remote age.