

## II.

TWO SHORT CISTS AT KILSPINDIE GOLF-COURSE, ABERLADY,  
EAST LOTHIAN. BY J. GRAHAM CALLANDER, F.S.A.Scot.,  
DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES. WITH A REPORT  
ON THE SKELETAL REMAINS BY PROFESSOR ALEX. LOW.

On the 12th December last I received a message by telephone from Police Constable Lamb, Aberlady, saying that a grave had been discovered on the Kilspindie golf-course (East Lothian, 6-inch O.S. Map, Sheet IV., N.E.), and it was arranged that I should go there next forenoon to see it opened. Accordingly I went with the constable to the site of the discovery, where we met Mr Robert Marr, the head greenkeeper, who with his men had unearthed the graves.

In excavating a new bunker between the second and fifteenth greens a short cist was encountered on the northern edge of the hollow. There was no cover-stone on the grave, this probably having been removed at some previous time when the ground was under cultivation. As the excavation of the bunker was carried towards the south a large

<sup>1</sup> *Proc. Roy. Soc. Edin.* (1929-30), vol. 1. pp. 56 ff.

quadrangular slab, measuring 3 feet 8 inches and 3 feet 6 inches along the north and south sides, 2 feet 9 inches across the ends, and from 4 inches to 5 inches thick, was laid bare. On lifting this stone a second grave was revealed with a human skeleton lying in it. Mr Marr telephoned to the constable, who advised that nothing should be interfered with, and that the cover should be replaced. This was done, and I had the opportunity of examining this undisturbed burial next day. All concerned with the discovery are to be congratulated on the admirable restraint they displayed in refraining from disturbing the contents of the tomb until someone with experience of examining such deposits could be present.

The land is flat and lies under the 25-foot contour line. Covered by a few inches of light soil is a layer of sand, containing a large admixture of comminuted shells, and resting on a deposit of clay which formed the floors of the cists.

The first discovered grave was a short cist formed of four thin slabs set on edge, the two end stones being inserted within the ends of the sides. The mouth was about 11 inches under the surface, and its main axis lay  $70^\circ$  west of north and  $70^\circ$  east of south magnetic, nearly north-west and south-east. Oblong in shape, the cist measured internally 3 feet 2 inches and 3 feet 4 inches along the south-west and north-east sides, 1 foot 3 inches and 1 foot 6 inches across the north and south ends, and 1 foot 6 inches in depth. There was no causewaying or paving of any kind in the bottom. The cist was full of sand, the cover, as we have seen, having been taken away. Amongst this sand, fragments of a small clay urn were found, but no traces of bones or any other relics were observed.

At a distance of 10 feet south of the southern corner of this grave lay the second one. As I saw it on arriving at the site, nothing was visible but the stone cover. This was raised, exposing another well-made short cist very similar in character to the first. As the lid was much larger than the grave, and projected well beyond its sides and ends, no sand had percolated into it; and the remains of the skeleton, lying in a flexed position, were seen partly embedded in the floor, which was very sodden, owing to the copious rains that had fallen during the preceding weeks. As in the first, the end slabs were inserted between the ends of the sides. The cist measured internally 3 feet 6 inches and 3 feet 5 inches along the north and south sides, 1 foot 6 inches and 1 foot 5 inches across the east and west ends, and 1 foot 6 inches deep, the main axis being  $80^\circ$  east of north and  $80^\circ$  west of south magnetic, nearly east-north-east and west-south-west. About 8 inches of soil lay above the cover-stone.

All the slabs used in the construction of the two graves were of the yellow sandstone which is found on the shore in the neighbourhood. With the exception of the cover-stone of the second grave, which we have seen was from 4 inches to 5 inches thick, the other slabs varied from  $2\frac{1}{2}$  inches to 4 inches in thickness.

The skeleton lay on its right side facing the south, the back of the skull near the north-west corner of the cist, the vertebræ close to the north side, and the pelvis against it. The knees were drawn well up in front of the body with the shin bones sloping back close to the thighs, and the arm bones lay in front of the chest. The right side of the skull and lower jaw had completely decayed, as had many of the smaller bones. The skeleton was probably that of a woman, from forty to forty-five years of age and 5 feet 2 inches in height. As we usually expect to find in our Scottish Bronze Age short cists, the skull was brachycephalic—that is, round-headed. An unusual feature was noted in the left forearm. It had been broken near the elbow, and, not having been properly set, the end of the radius had become attached to the ulna during the process of healing.

When I brought away the remains of the urn the shards were broken into a series of transverse fragments of fairly equal width, and it looked as if less than half of the vessel had been recovered. But, on building it up in the Museum it was seen that less than a fifth of the wall was missing. The vessel is a very interesting example of the food-vessel type of urn, as, in addition to other peculiarities which will be discussed later, it is of unusually small size (fig. 1). Indeed, there is only one specimen which is smaller in the National Museum.<sup>1</sup> The urn, which is made of greyish clay, is bowl-shaped, with a short, concave, upright rim, a small moulding at the shoulder, and a wall which falls away towards the base in a slight convex curve. The top of the rim is bevelled downwards towards the interior. The vessel measures  $3\frac{1}{4}$  inches in height,  $3\frac{7}{8}$  inches in external diameter at the mouth, 4 inches at the shoulder, and  $1\frac{5}{8}$  inch across the base, the lip being  $\frac{3}{8}$  inch thick. On the top of the rim are two rows of small punctulations, and encircling the wall are four similar double rows, all made with a pointed instrument.

From the peculiar form of the fractures in the wall when it was recovered, it would seem that the urn had been built in an unusual fashion. Instead of breaking into pieces of irregular shape with the break going straight through the wall, as usually happens with our Bronze Age pottery, the wall of this vessel had broken into narrow,

<sup>1</sup> There are over one hundred complete or nearly complete food-vessels in the National Collection.

transverse bands of nearly similar width, showing a long oblique fracture with a very acute angle on the top and bottom edges, the upper fracture being on the inside and the lower on the outside. During the last ten years more than twenty examples of the four types of our Bronze Age urns have been received into the Museum in a more or less broken condition, but not one of them showed the consistent, oblique, acute-angled fracture of the Kilspindie specimen. It would thus appear that this unusual break is the result of the peculiar method of building up the vessel. The basal part having been modelled, the



Fig. 1. Food-vessel from Kilspindie Golf-course.

wall had been built up by the addition of three separate strips of clay which had been luted together with a relatively long, acute-angled overlap (fig. 2, No. 1). Generally speaking, in our Bronze Age ware and even in our Neolithic pottery the wall seems homogeneous, of a similar character from top to bottom, and there is no indication of its having been built by joining together a series of sections. Still, I have seen other three prehistoric Scottish pottery vessels the wall of which had been built up in separate parts. The first of these was a cinerary urn with a heavy overhanging rim, of the Bronze Age, which was found in a broken condition in a cairn near the east end of the golf-course at Longniddry, about  $2\frac{1}{2}$  miles south-south-west of the site

under review. The basal part had been built up to a height of  $1\frac{3}{4}$  inch, and the top edge rounded, before the upper part of the wall was added (fig. 2, No. 2). Three separate strips of clay, of an average width of  $1\frac{1}{2}$  inch, were required to bring the wall up to the centre of the neck. A somewhat similar peculiarity is to be noted in fragments of a vessel found in the earth-house at Skara Brae, in Orkney, in the 1928 excavations, only in this case the joint appears 1 inch below the rim. As only a small part of the vessel has survived, it is impossible to say how many sections had been required to complete the wall, but the two upper strips can be seen clearly, their combined width being  $3\frac{3}{8}$  inches. The joint in this case combines the long oblique overlap of the Kilspindie vessel with the rounded edge inserted in a groove as in the Longniddry urn (fig. 2, No. 3). In the third example a vessel found in the crannog in the Bishop's Loch, a few miles east of Glasgow, about twenty-five years ago, showed that the wall had been built up by winding bands of tough clay spirally towards the mouth. This vessel belonged to our Early Iron Age, a socketed iron axe having been found in the crannog.



Fig. 2. Sections of Walls of Urns, showing methods of manufacture. ( $\frac{1}{2}$  ca.)

Regarding the period of the cist containing the skeleton; even though the skeleton had not shown the characteristics of one of the Bronze Age, there could be little doubt as to its age. The two graves are peculiar in their dimensions. While their length is quite normal, they are relatively narrower and shallower than the generality of Scottish Bronze Age short cists. They resemble each other so much in size, shape, and method of construction that one is tempted to suggest that they had been constructed about the same time. As the first contained a food-vessel of the Bronze Age, the obvious inference is that the second must belong to the same period.

The thanks of the Society are due to the Earl of Wemyss for so kindly presenting the urn to the National Museum, and to Constable Lamb, Mr James Marr and his assistants for their action after the second grave was discovered.

REPORT ON THE SKELETAL REMAINS.

By Professor ALEX. LOW.

The bones of the skeleton are rather imperfect, due to portions having decayed away, but the remains indicate an adult, probably a woman, forty to forty-five years of age, and 5 feet 2 inches in stature.

*The Skull.*—The skull has crumbled away at the right parietal and frontal regions and the right half of the face, but fortunately is sufficiently intact to permit of the more important measurements being recorded (fig. 3). The measurements of the skull are given in Table I.

TABLE I.

Measurements in mm. of Skull from Short Cist at Kilspondie Golf-course.

Sex . . . . .	Female	Length foramen magnum . . . . .	33
Cubic capacity . . . . .	1660 c.c. ap.	Transverse arc . . . . .	322 ap.
Glabello-occipital length . . . . .	191	Circumference . . . . .	550 ap.
Ophryo-occipital length . . . . .	190		
Nasio-inional length . . . . .	170		
Minimum frontal breadth . . . . .	98 ap.		
Maximum frontal breadth . . . . .	126 ap.	<i>Indices</i>	
Parietal breadth . . . . .	154 ap.	Length-breadth . . . . .	80.6
Basibregmatic height . . . . .	121	Length-height . . . . .	63.4
Auricular height . . . . .	106	Gnathic . . . . .	99.0
Biauricular breadth . . . . .	114 ap.	Total facial . . . . .	85.5
Basinasal length . . . . .	96	Upper facial . . . . .	50.8
Basialveolar length . . . . .	95	Nasal . . . . .	47.7
Nasialveolar height . . . . .	60	Orbital, L. . . . .	78.4
Nasimental height . . . . .	101	Alveolar . . . . .	109.1
Bizygomatic breadth . . . . .	118 ap.	Dental . . . . .	39.6
Nasal height . . . . .	44		
„ breadth . . . . .	21 ap.		
Orbital height, L. . . . .	29	<i>Mandible</i>	
„ breadth, L. . . . .	37	Condyl-symph. length . . . . .	110
Alveolar length . . . . .	55	Height at symphysis . . . . .	28
„ breadth . . . . .	60 ap.	Height at second molar . . . . .	23
Dental length . . . . .	38	Height: ramus . . . . .	52
Sagittal arc, 1 . . . . .	142	Breadth: ramus . . . . .	43
„ „ 2 . . . . .	132	Bicondylar width . . . . .	102 ap.
„ „ 3 . . . . .	124	Bigonial width . . . . .	78 ap.
	398		

The transverse diameters are approximate, being arrived at by doubling the measurements taken from the mesial plane. It is difficult to

assign with certainty the skull to one or other sex, and unfortunately the bones of the pelvis are not sufficiently intact to be of help. The skull has feminine characters, with its surface smooth, orbital margins fine, and frontal bone rising vertically; on the other hand the mastoid processes are well developed, and the cranium is very large with a cubic capacity of approximately 1660 c.c. The sutures of the vault are open, except the sagittal which is ossified. The profile view shows



Fig. 3. Skull from Short Cist at Kilspindie Golf-course.

the skull to be moderately high, flattened at the bregma, with a full frontal region and with slight projection of the occipital pole. As seen from above, the form of the skull is broad with a length-breadth index of 80.6 and thus just being in the brachycephalic category—the corresponding average index for modern Scottish Skulls as given by Turner is 77.2. The height of the skull as compared with its length is relatively low. The face is short and relatively broad, with no projection of the jaws; the orbits are low and rectangular; the nasal aperture is somewhat broad. The crowns of the teeth are considerably worn, but are in a very good state of preservation. In the upper jaw the last molar tooth is small, and in the lower jaw there has been no third

molar tooth—the dental index is 39.6, so that the teeth are relatively small.

*Bones of Trunk and Limbs.*—These are mostly too imperfect for detailed measurement, but measurements and indices of the intact bones are given in Table II. The thoracic and lumbar vertebræ are intact,

TABLE II.

Measurements in mm. of Bones of Extremities from Short Cist at Kilspindie Golf-course.

Humerus:	R.	L.	Tibia:	R.	L.
Maximum length	—	314	Maximum length	—	355 ap.
Femur:			Ant. post. diam.	32	33
Maximum length	435	—	Trans. diam.	22	22
Oblique length	430	—	<i>Platynemic index</i>	68.7	66.6
			Angle of torsion	—	34°
<i>Upper third of shaft—</i>					
Ant. post. diam.	23	22			
Trans. diam.	35	36			
<i>Platymetric index</i>	65.7	61.1			
Angle of neck	128°	—	Stature as calculated from femur,		
Angle of torsion	—	24°	5 feet 2 inches.		

but show rather markedly the effects of rheumatism. A number of ribs on the left side are complete and are delicate rounded bones. The clavicles, scapulæ, and hip-bones are fragmentary. The long bones of the limbs are relatively short but well developed. The thigh bones show a good deal of torsion associated with increased curvature, and marked flattening of the shafts below the lesser trochanters (*platymeria*).

The long bones of the left arm are well preserved, and are of especial interest in that the upper ends of the forearm bones are firmly ossified together (fig. 4), the head of radius being displaced backwards so that at the elbow-joint only the ulna articulates with the humerus. There is no evidence of disease, and it looks as if the proximal end of the radius had been fractured or dislocated in early life and then the upper end of the bone become fused on to the side and front of the ulna so that the hand would have been permanently in a position of pronation. The shaft of the radius is stout and rather curved, while the ulna is very slender. The diameters of the middle of the shaft being 9 mm. by 6 mm.; the



corresponding measurements of the shaft of the right ulna are 15 mm. by 10 mm.



Fig. 4. Left Forearm Bones from Short Cist at Kilspindie Golf-course, showing Fission of Radius and Ulna at Elbow-joint.

On the whole, this skeleton is of the Alpine type with relatively broad skull, short face, narrow orbits and low stature—characters common to skeletons found in short cists in Scotland.