

# TWO BRONZE AGE CIST BURIALS

## (i) LOCHLANDS FARM, RATTRAY

by W. G. AITKEN, D.A., F.S.A.SCOT.

DURING deep ploughing operations in May 1962 on the farm of Lochlands, about two miles to the east of Rattray, Perthshire, the tractor broke and dragged out of position

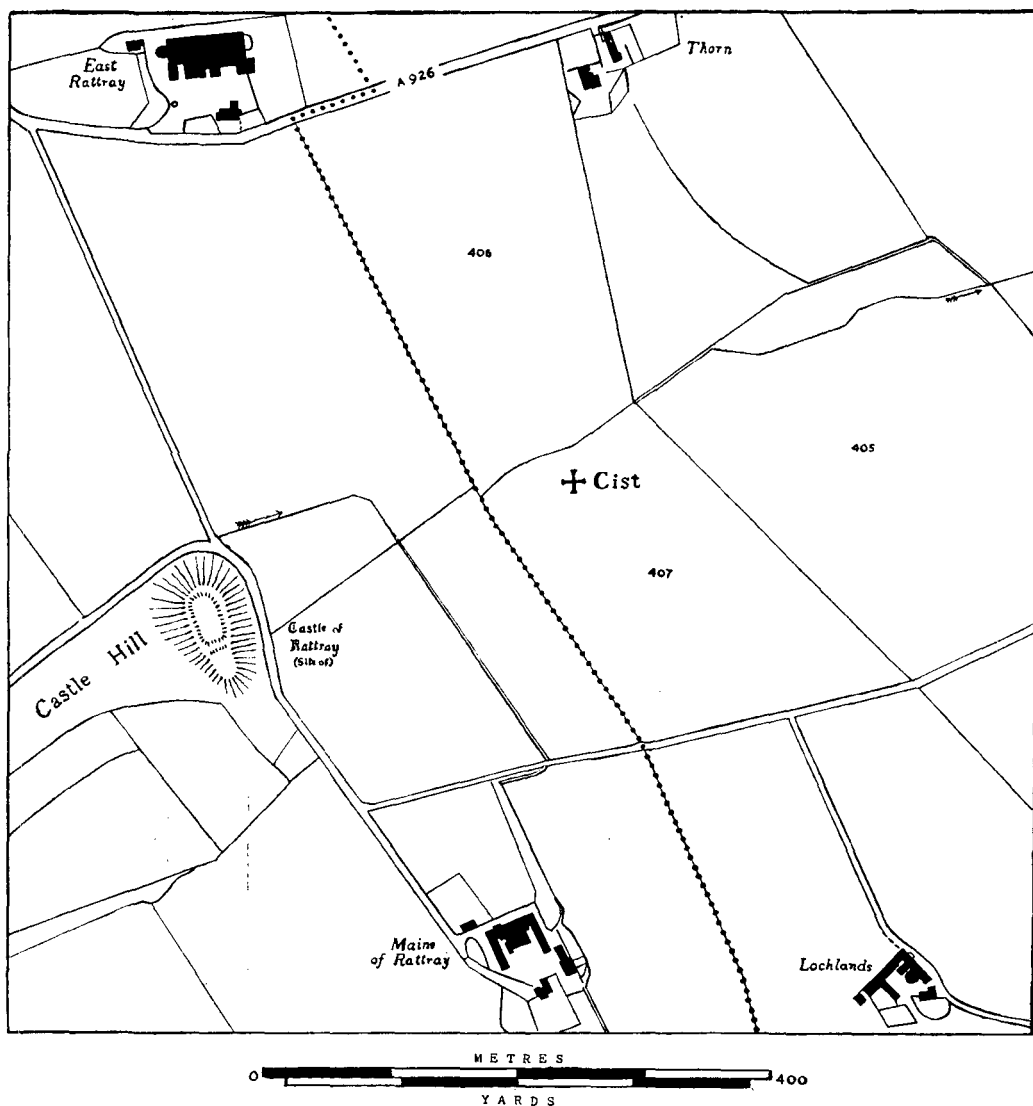


FIG. 1. Location of the Lochlands Farm cist (based on the Ordnance Survey map with the permission of the Controller of H.M. Stationery Office)

part of the covering of a hollow construction formed of four large slabs placed on end. Within the cavity thus disclosed the tractorman observed a skull. The farmer, Mr Robert Strachan, informed the writer, who examined the site and commenced excavation.

The site lies in a field to the north-west of the farm, some 300 yards east of the site of Rattray Castle and about 400 yds. south of the Blairgowrie to Alyth road (A 926), near the top of a slight eminence formed of fine sand and about 170 ft. above sea-level (N.G.R. NO 212455 - fig. 1). The coverstone had been broken at an earlier date and had been pushed a little to the northward; the latest break had moved two portions for a few feet, also to the north.

#### THE CIST (figs. 2 and 3 and Pl. I)

The coverstones, as found in position, were made up of a large slab of fine-grained sandstone, approximately 34 in. long, 5 in. thick and from  $17\frac{1}{2}$  to  $19\frac{1}{2}$  in. wide, lying along the north edge, and a roughly diamond-shaped stone of the same material, 28 in. by 19 in. and 2 in. thick, which was at the east end. The displaced stones, two in number, were also 2 in. thick. The long north stone split on being lifted. The south side still had the eke stones in position but the appropriate portion of the coverstone proper was missing. At the south-west corner the coverstone just failed to close the grave and the space had been carefully filled by means of small flat stones, covered in turn by larger flat stones laid partly on the infill. This careful levelling where it was necessary resulted in the coverstones being almost truly horizontal. The average depth from the surface was 16 in.

The space enclosed by the four upright stones measured 35 in. long by 22 in. minimum and 24 in. maximum in breadth and the slabs themselves varied in thickness from  $2\frac{1}{2}$  to 5 in. The south-east corner was supported on the outside by a large boulder of coarse red sandstone. The space between the outside faces of the uprights and the wall of the excavation made to receive the cist had been packed with various water-rolled stones of moderate size. The void had been filled with a mixture of sand, earth and pebbles. This packing, so different in char-

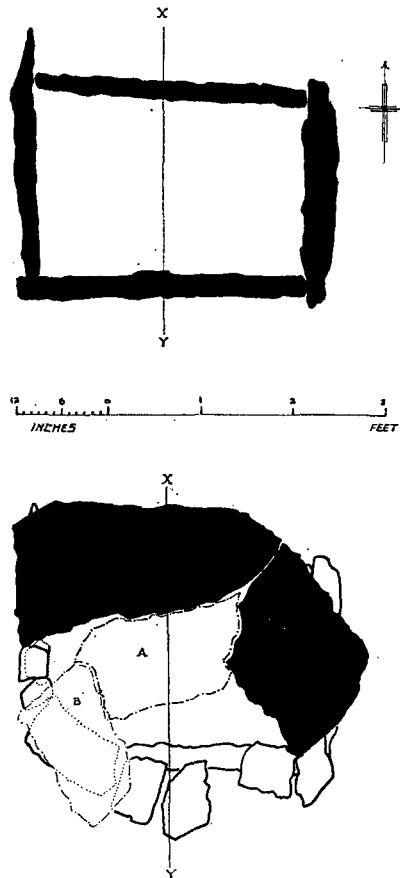


FIG. 2. Lochlands Farm cist: plan of cist and arrangement of Coverstones (A and B, presumed position of displaced stones)

acter from the clean sandy subsoil, made it very easy to establish the dimensions of the original excavation. This was slightly oval in shape, 6 ft. from east to west and 6½ ft. from north to south.

The long axis of the cist lay almost east and west. The floor of the chamber was composed of the natural sand subsoil. From the accumulation of fine drifted sand, about 4 in. deep, an almost complete skeleton was recovered, lying in the usual contracted position on its right side with the head at the west end and facing south. There were no grave goods of any description, and no urn.

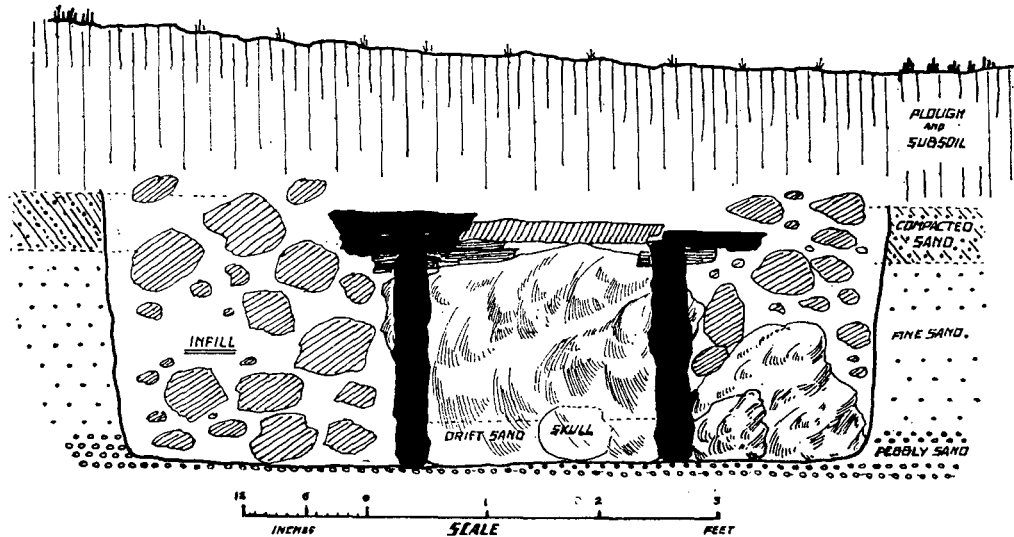


FIG. 3. Section of Lochlands Farm cist

### THE SKELETON

Preliminary examination of the skeleton seemed to indicate that the bones were those of an adult female, small in stature and of delicate build. This was confirmed by the detailed examination undertaken by Dr J. W. Smith, whose findings are given in the Appendix. The right arm was bent, with the right hand up beside the face; the left upper arm lay straight down the left side, with the forearm and hand across the body.

Although the teeth of the right upper and right lower jaws were present in complete sequence, no trace could be found of the teeth of the left upper and lower jaws, nor of any of the associated bones. The failure to find these teeth, despite careful riddling with a medium and fine mesh, coupled with the fact that the facial bones in that area had apparently been cut cleanly away, would seem to indicate a desperate injury inflicted before death, of which it may well have been the cause.

The absence of grave goods and the fact that at least two portions of the cover-stones were not recovered might point to a rifling of the grave at an earlier period but this, of course, is not conclusive.

The cist and the skeleton were removed to Perth Museum for re-erection there.

## ACKNOWLEDGMENTS

The writer wishes to thank the following for their assistance: Mr J. C. L. Lyddieth, Assistant Curator, Perth Museum, who assisted throughout the excavation and later took charge of the skeletal remains; Mr William Davidson, Curator of the Perth Museum, for arranging to take over and re-erect the cist; Mr Robert Strachan, Lochlands Farm, who proffered help in various ways; Mr Wilson, contractor, for his kind assistance in transporting the large stones; Miss Margaret Davie, Blairgowrie, who assisted in the excavation and measured drawings; Mr Murray Stewart, who assisted in the excavation; and especially Dr J. W. Smith for the immense amount of care and attention he gave to the examination of the skeleton.

REPORT ON SKELETON *by* J. W. SMITH

*Department of Anatomy, St Salvator's College, St Andrews*

*Measurements of Limb Bones*

<i>Left humerus:</i>	Length = 31.0 cm.	
	Angle of distal end to shaft = 168° open laterally.	
	Angle of torsion = 150° open forwards.	
<i>Left radius:</i>	Length = 22.1 cm.	
<i>Left Ulna:</i>	Length = 24.8 cm.	
<i>Left Humero-radial index</i>	$= \frac{22.1}{31.0} \times 100 = 71.3$	
<i>Right femur:</i>	Length = 42.7 cm.	
	Anteroposterior diameter upper shaft = 2.5 cm.	
	Transverse diameter upper shaft = 3.1 cm.	
	Platycnemic index = $\frac{2.5}{3.1} \times 100 = 80.6$	
	Angle of shaft to condyles = 79° open laterally	
	Angle of neck to shaft = 119° open medially	
	Angle of torsion neck to condyles = 23° open medially	
<i>Left femur:</i>	Length = 42.6 cm.	
	Anteroposterior diameter upper shaft = 2.4 cm.	
	Transverse diameter upper shaft = 3.1 cm.	
	Platycnemic index = $\frac{2.4}{3.1} \times 100 = 77.4$	
<i>Right tibia:</i>	Length = 34.3 cm.	
	Transverse diameter mid shaft = 2.05 cm.	
	Anteroposterior diameter mid shaft = 2.75 cm.	
	Platycnemic index = 74.5	
<i>Left tibia:</i>	Length = 34.5 cm.	
	Transverse diameter mid shaft = 2.02 cm.	
	Anteroposterior diameter mid shaft = 2.85 cm.	
	Platycnemic index = 70.8	
<i>Skull:</i>	Maximum head length = 18.61 cm.	
	Maximum head breadth (estimated from sagittal suture) = 14.0 cm.	
<i>Cephalic Index</i>	$= \frac{14.0}{18.61} \times 100 = 75.2$	

Minimal frontal breadth (estimated from nasal septum)	= 11.0 cm.
Maximum bizygomatic breadth (estimated from nasal septum)	= 11.6 cm.
Nasi-alveolar height	= 6.5 cm.
<i>Upper facial index</i>	= $\frac{6.5}{11.6} \times 100 = 56.0$
Nasi-mental height	= 10.5 cm.
<i>Total facial index</i>	= $\frac{10.5}{11.6} \times 100 = 90.5$
Basi-bregmatic diameter	= 13.25 cm.
Basi-nasion diameter	= 9.95 cm.
Basi-alveolar diameter	= 9.8 cm.
<i>Gnathic index</i>	= $\frac{9.8}{9.95} \times 100 = 97.5$
GN	
Nasal height (estimated)	= 3.9 cm.
Nasal breadth (estimated)	= 2.0 cm.
Interorbital breadth (estimated)	= 2.6 cm.
<i>Nasal index</i>	= $\frac{2.0}{3.9} \times 100 = 51.3$
Orbital breadth (at level of dacryon)	= 3.5 cm.
Orbital height	= 2.75 cm.
<i>Orbital index</i>	= $\frac{2.75}{3.5} \times 100 = 78.6$

#### *General Features of Skull*

In the skull the whole of the left side of the facial skeleton is missing and the bone round the margins of the deficiency is stained a dark brown. I understand that despite the full dentition on the right side of both the maxilla and the mandible, no teeth of the left side were discovered in the cist. It is possible, therefore, that the absence of the left side of the facial skeleton may be due to one of two causes:

- (a) that this side of the skull lay in contact with the ground and gradually crumbled under its own weight;
- (b) that some gross injury had been suffered before death which might account for the absence of teeth which one would, of course, expect to persist if present at the time of burial.

The brown staining mentioned above has been analysed and shown to contain some iron. Similar staining is visible on the vertebral column and on parts of the pelvis and it is suggested that this is most probably due to absorption of minerals from the earth.

#### *Observations on the Vertebral Column*

The lumbar and lower thoracic parts of the lower vertebral column are fairly intact and fragments of the atlas and the axis and one other cervical vertebra are present. These have been labelled in India ink on their upper surfaces. It is notable that between the first and second and second and third lumbar vertebrae there has been an intravertebral protrusion of the nucleus pulposus of the intervertebral disc. This is indicated by the pronounced pits present on these surfaces. I feel this abnormality probably explains the early osteo-arthritic changes present on the anterior borders of the lumbar vertebrae.

#### *Observations on the Pelvis*

The pelvis has been reconstructed from a number of separate fragments and it is now apparent that it is typically female. The pubic angle is wide and the outline of the pelvic brim is round and the

grooves on the pubic crests which are often associated with the spermatic cord are entirely absent. On the basis of this form of the pelvis and on the general light bony markings, I feel that this skeleton is almost certainly female.

#### *Age of Skeleton*

The estimate of the age of this skeleton can be based on two factors. The suture lines in the vault of the skull are beginning to close on both the outer and inner aspects, particularly in the region of the coronal suture and the pterion. Secondly, the existing fragment of the sternum shows complete bony fusion between the body of the sternum and the xiphisternum. Both these features suggest that the age of the subject was in the neighbourhood of forty years.

#### *Estimated Height of Subject*

The height of the subject was calculated from Pearson's equation for female bodies. This states that the stature:

$$\begin{aligned} S &= 72.844 \times 1.945 \times \text{length of the femur} \\ &= 155.8 \text{ cm.} \\ &= 5 \text{ ft. } 1\frac{1}{2} \text{ in.} \end{aligned}$$

#### *Nitrogen Content of Bone*

The nitrogen content of one fragment was estimated by Dr G. R. Tristram of the Biochemistry Department. He found a value of 1.4%.

## (ii) BALLIMENACH, NEAR CAMPBELTOWN, ARGYLL

by A. MACLAREN, M.A., F.S.A.SCOT., and I. G. SCOTT, D.A., F.S.A.SCOT.

ON 18th April 1961, during ploughing operations on the farm of Ballimenach, 3 miles SE. of Campbeltown, a short cist was uncovered containing a quantity of cremated human bone, a flint knife and one Food Vessel sherd.<sup>1</sup> Mr M. J. Hickman, the owner of the property, reported the find to Mr Duncan Colville, F.S.A.SCOT., of Machrihanish, and kindly arranged for the cist to be kept open until a full investigation could be made. Mr Colville at once made a preliminary examination and some days later, at his invitation, the writers of this note assisted him in the final excavation.

The cist (fig. 4) is situated 150 yds. SE. of Ballimenach farm buildings,<sup>2</sup> in a low-lying field which is bounded on its E. side by the present-day beach-line and on its W. side by a steep grassy bluff which in Early Post-Glacial times formed the western limit of the so-called 25-ft. raised beach. It lies 12 yds. from the western edge of the field and 100 yds. from its NW. corner.

At the time of its initial discovery by the ploughman, the coverstone, which was found to be split horizontally into two pieces, was removed, the upper portion being dragged away to the SE. corner of the field, and the lower portion pulled clear of the cist and left nearby. The maximum dimensions of the slab in its original state would have been 4 ft. 8 in. by 3 ft. 9 in. by about 6 in. in thickness. After the removal of the coverstone the ploughman shovelled out some of the earth which nearly filled the cist, leaving, however, about an 8-in. layer untouched on the bottom.

<sup>1</sup> An account of the discovery was published in *The Campbeltown Courier*, 11th May 1961.

<sup>2</sup> N.G.R. NR 755182.

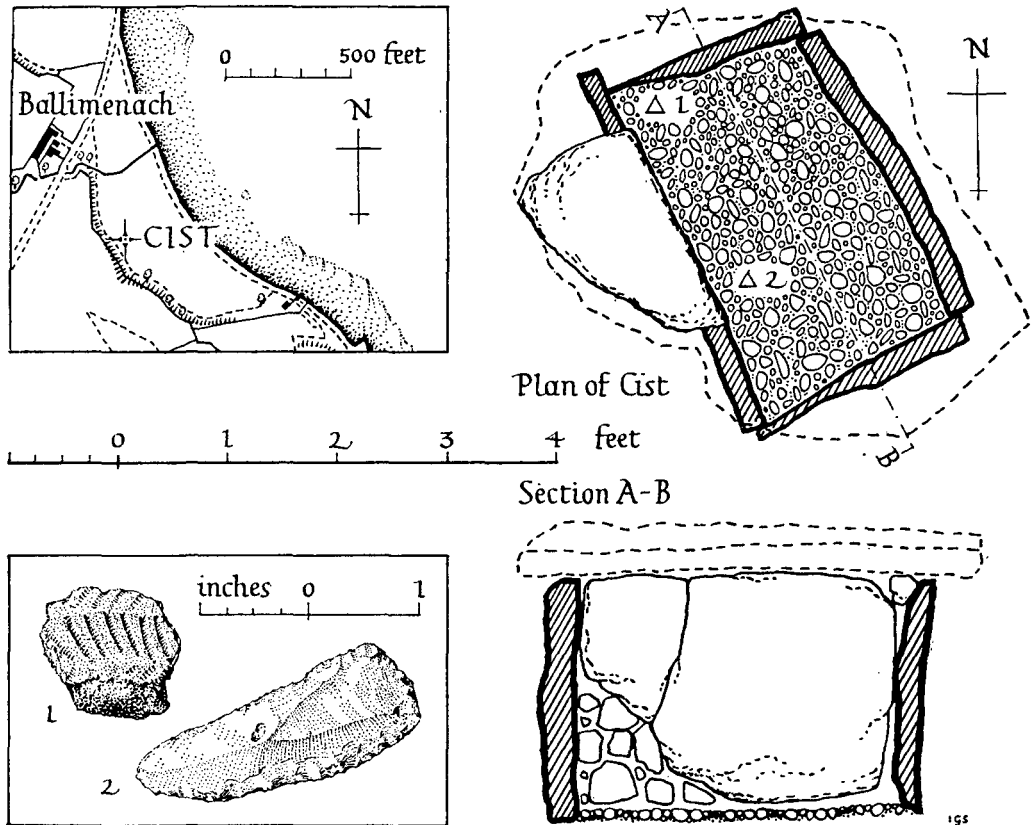


FIG. 4. Ballimenach cist

When the cist was fully excavated the internal measurements were found to be 3 ft. in length by 2 ft. in breadth and 2 ft. 2 in. in depth. The sides and ends were formed of thin slabs, ranging in thickness from  $1\frac{1}{2}$  to 4 in., and set into the natural sand and gravel so that their tops lay at an average depth of one foot below the present surface of the field. To compensate for a slight irregularity in the level of the top of the south-west side slab a small flat horizontal slab had been used. The long axis of the cist was aligned NW. and SE. and the floor consisted of a thin layer of fine gravel spread over the coarse natural shingle to form a compact level surface. The filling consisted of earth indistinguishable from the ploughsoil except that the bottom six inches were darker and greasier. The cremated bone together with a few tiny fragments of carbonised wood was scattered through the lowest level of the filling and the flint knife and the Food Vessel sherd were found lying on the floor. When the excavation was completed, the cist was refilled with soil and the lower portion of the coverslab replaced.

The Food Vessel sherd, which is 0.4 in. thick, is light reddish-brown on the outside, with the core and the inside black. It is a body sherd bearing whipped cord

decoration arranged in a herringbone pattern. Such ornamentation is typical of the Yorkshire Vase Food Vessel, and it is likely that this sherd belongs to a small group of Food Vessels found in Argyllshire and West Scotland and representing penetration of the area by the makers of the Yorkshire Vases. This Yorkshire element in the west is best represented by finds from the Crinan district and Bute.

The flint knife is of grey flint, measuring 2.6 in. in length by one inch in breadth by 0.4 in. in maximum thickness, and showing signs of secondary flaking along both edges and at either end. The main flake surface is smooth and unworked while the back is distinguished by a sharp longitudinal ridge and primary flaking scars. It is a typical example of a class of knife whose ancestry may lie in the Secondary Neolithic.<sup>1</sup> The only other specimen found in Scotland in association with a Food Vessel is from Redden Farm, Sprouston, Roxburghshire.<sup>2</sup>

The cremated bone has been submitted for identification to the Anatomy Museum, Edinburgh University, and the pottery and flint have been presented by Mr Hickman to the Campbeltown Museum.

The writers are greatly indebted to Mr D. D. A. Simpson, M.A., F.S.A.SCOT., for his help in identifying the finds.

<sup>1</sup> Atkinson, Piggot and Sandars, *Excavations at Dorchester, Oxon*, First Report (1951), 72.

<sup>2</sup> Calder and Feachem, *P.S.A.S.*, LXXXIII (1948-9), 222, fig. 3.





1. Lochlands Farm, interior of cist from the east



2. Lochlands Farm. General view; the trowel indicates the perimeter of the original excavation made to receive the cist

TWO BRONZE AGE CIST BURIALS.