

I.

A SHORT CIST AT CULDUTHEL, INVERNESS. BY PROFESSOR ALEX. LOW, M.A., M.D., F.S.A. SCOT.

On 9th August 1928, while workmen were engaged excavating a sand-pit on the farm of Culduthel, near Inverness, they came across a large stone slab. On raising the slab they found that it covered a cist containing a skeleton.

Soon after its discovery I had an opportunity of making a careful examination of the cist, which, except for having had the cover-stone raised and replaced, had been left untouched. Thanks are due to Mr Hugh G. Johnstone, the tenant-proprietor of the farm, for taking steps to have the cist and its contents kept undisturbed and for affording facilities for the examination of the cist.

The farm of Culduthel is situated about three miles to the south of Inverness and about a mile from the right bank of the River Ness. The district is interesting archæologically. At the entrance of the Great Glen we have many evidences of contacts of prehistoric peoples—here, naturally, west-coast peoples travelling along the Glen would meet with the drift from the north-east. On the farm of Culduthel, some 230 yards south-west from the site of the cist, there are the remains of a stone circle; $1\frac{1}{4}$ miles to the east, at Druidtemple Farm, there is a good example of another stone circle; while away to the north-east, in the Culloden Moor direction, are the Clava Chambered Cairns and Stone Circles.

The site of the cist is in a pebbly gravel knoll near the farm-steading, in a field which had been under cultivation for many years. There was no external mark indicating the position of the cist, over the cover-stone of which there was a depth of 18 inches of soil. The cover of the cist is a large micaceous flagstone of irregular shape,

3 feet 8 inches in its greatest length, 3 feet 4 inches at the greatest breadth, and about 4 inches in thickness.

On removal of the cover-stone the position of the contents of the cist was carefully noted. The cist was nearly rectangular, with the longer axis south-west and north-east. The skeleton lay on its back in the contracted position, with the skull at the south-west end of the

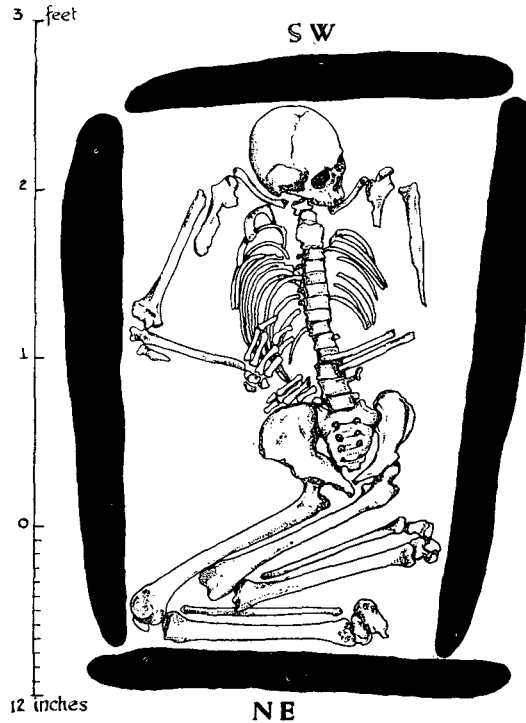


Fig. 1. Plan of Cist and Reconstruction of the Skeleton in Short Cist at Culduthel, Inverness.

cist (fig. 1). The lower extremities had been much flexed, both thigh bones lying over to the right, and the leg bones bent back to the left so as to lie almost parallel to the foot of the cist. The position of the bones of the upper extremities shows that the forearms and hands had been placed over the lower abdomen—the finger bones lying close beside the right hip bone.

Several jet beads were observed in front of the bones of the pelvis, and on removing the bones more beads were found beside the bones of the left hand, and more especially behind the top of the two hip

bones, on either side of the lumbar vertebræ, and also behind these vertebræ and the sacrum.

The contents of the cist were now carefully removed, all soil being passed through a fine riddle, and a small fragment of a bronze awl was recovered from the south-west corner of the cist; and, in addition, a small flake of obsidian and several small pieces of charcoal were found.

The cist was carefully made, being nearly rectangular. The inside measurements were: length along the north-west side was 3 feet 4 inches, and along the south-east side 3 feet 2 inches; breadth at the south-west end 2 feet 3 inches, and at the north-east end 1 foot 10 inches; depth was 1 foot 10 inches.

The sides and ends of the cist were formed of four micaceous flag-stones about 4 inches thick, set on edge; to level up the walls of the two ends and the south-east side additional flat stones of the same thickness were used. The floor was formed by pebbly gravel.

The skeleton is fairly complete, though many of the bones are imperfect, due to portions having decayed away. The bones indicate a young woman of good muscular development, twenty-one or twenty-two years of age, and 5 feet 0·7 inch in stature. A survey of the epiphyses of the limb bones reveals the fact that all of these are united and that the individual may therefore be considered as at least twenty years of age. As the epiphyses of both the crest of the hip bone and the head of the ribs have not united, and there is no trace of closure of any of the cranial sutures, it can be inferred that the individual had not reached the age of twenty-two years.

The Skull.—The skull is well preserved, but has crumbled away in the left occipital region, and, further, the lower jaw has decayed so that only a small part of the left ramus is intact.

The skull is light, thin-walled, small in size—cubic capacity 1315 c.c.—feebly marked with orbital margins fine and mastoid processes small; it is evidently that of a female.

There is no trace of closure of any of the cranial sutures, and the variation is noted of the squamous part of the temporal bone extending forwards to articulate with the frontal bone.

The profile view (fig. 2) shows a rather short, relatively high skull with slight superciliary ridges, the frontal ascending with a uniform high curve, the bregma well forward, the parietal arc long, the post-parietal passing down rather abruptly, and with little projection of the occipital pole.

Seen from above the outline of the skull is relatively rather broad, being included in the mesaticephalic category with a length-breadth index

of 78·7. The maximum breadth is at the level of the parietal eminences, which are well marked and high up.



Fig. 2. Profile view of Skull from Short Cist at Culduthel, Inverness.

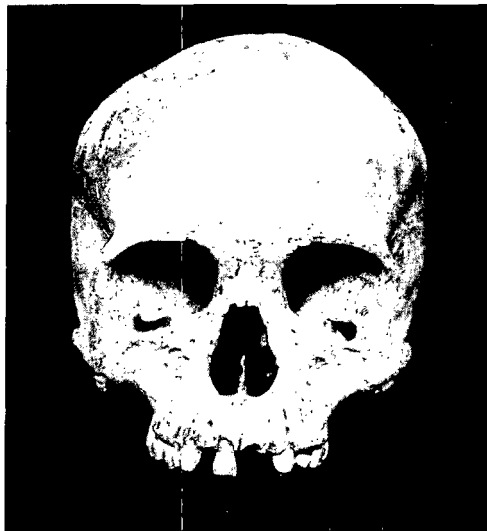


Fig. 3. Frontal view of Skull from Short Cist at Culduthel, Inverness.

As regards the characters of the face (fig. 3), it is short and relatively broad, and while, as a whole, it is orthognathous, there is a certain degree

that the head and neck of each bone is directed forwards to a greater degree than usual, so that the angle of torsion is large; associated with this there is increase in the curvature of the shaft and antero-posterior flattening below the trochanters (*platymeria*).

TABLE II.

Measurements in mm. of Bones of Lower Extremities from Short Cist at Culduthel, Inverness.

Femur:		R.	L.	Tibia:		R.	L.
Maximum length	.	418	415 ap.	Maximum length	.	343	343 ap.
Oblique length	.	414	413 ap.	Ant. post. diam.	.	30	30
<i>Upper third of shaft—</i>				Trans. diam.	.	20	20
Ant. post. diam.	.	20	21	<i>Platycnemic index</i>	.	66.6	66.6
Trans. diam.	.	32	33	Angle of torsion	.	48°	48°
<i>PlatymERIC index</i>	.	62.5	63.6	Stature as calculated from femur, 5 feet 0.7 inch.			
Angle of neck	.	125°	127°				
Angle of torsion	.	44°	44°				

In the tibiae the angle of torsion is also well marked and at the same time the head is somewhat retroverted, and there is an accessory "squatting" facet on the lower end for the neck of the astragalus.

In its characters the skeleton resembles skeletons found in short cists in Aberdeenshire; this is especially brought out by the high, rather broad skull, the short, broad face, the relatively wide nasal aperture, the narrow orbits, and the low stature.

OTHER CONTENTS OF CIST.

Jet or Lignite Beads.—A total of 538 jet or lignite beads were found in the cist, and, in addition, there were fragments of a further number of broken beads.

Some 513 of the beads are in the form of small, perforated, circular discs of jet (fig. 4, a), fairly uniform in diameter but varying somewhat in thickness—on an average each measures $\frac{5}{32}$ inch in diameter, $\frac{3}{32}$ inch in thickness, and with a perforation $\frac{2}{32}$ inch in diameter.

There are six larger, perforated, circular, disc-shaped beads (fig. 4, b), also fairly uniform in diameter but varying somewhat in thickness—on an average each measures $\frac{11}{32}$ inch in diameter and $\frac{3}{32}$ inch in thickness.

There are eighteen long barrel beads, varying in size; the largest measures $\frac{24}{32}$ inch in length, $\frac{11}{32}$ inch in its greatest diameter, and tapers off to $\frac{6}{32}$ inch at either end; the smallest measures $\frac{13}{32}$ inch in length (fig. 4, c).

In addition there is a large V-perforated boat-shaped jet— $1\frac{1}{4}$ inches in length, $\frac{7}{16}$ inch in breadth, and $\frac{5}{16}$ inch in thickness (fig. 5). The flat under-surface of the jet (fig. 5, *d*) is pierced in either side of the centre with two holes running obliquely into one another, forming a V-shaped passage. This jet is probably a V-perforated button, possibly of the nature of a "toggle" that could be passed through a loop and act as a fastener. Buttons with a V-perforation belong to the early Bronze Age.

From the position in which the beads were found it is difficult to say whether they may have formed a necklace or a girdle. Several of the larger beads lay in front, in the hollow of either hip bone, while

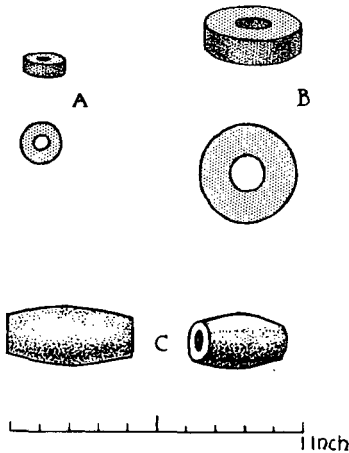


Fig. 4. Jet or Lignite Beads from Short Cist at Culduthel, Inverness.

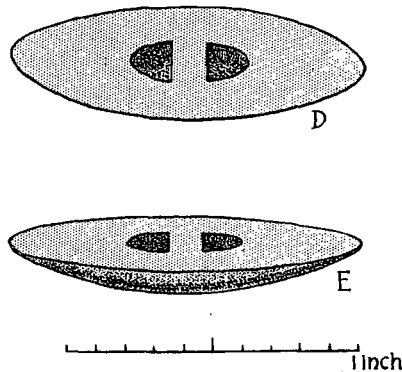


Fig. 5. V-perforated Jet Button or "Toggle" from Short Cist at Culduthel, Inverness.

most of the beads, especially the smaller ones, were found behind the upper part of either hip bone and behind the lower part of the vertebral column. If the beads had formed a necklace, the necklace must have been placed across the lower abdomen, and in the process of time the beads may have gradually gravitated in amongst the gravel under the bones. If we assume that the beads formed a girdle, then the position of so many of the beads lying deep to the bones would be explained.

The beads have been carefully preserved and restrung so as to form a necklace, as shown in the illustration (fig. 6).

Piece of Bronze Aul.—This fragment of bronze measures about 1 inch in length. Both ends are much corroded and measure about $\frac{1}{3\frac{1}{2}}$ inch in diameter; in the middle it is thickened and somewhat rectangular on section with a diameter of $\frac{3}{3\frac{1}{2}}$ inch.

Flake of Obsidian.—This is a small flake of obsidian, showing con-

choidal fracture and greenish tinge on being viewed by transmitted light; it is half an inch in length and quarter of an inch in thickness. It is flat on what was the under side of the flake, triangularly ridged on the upper side and tapering to a sharp point, which is the natural result of the formation of the flake, and does not show retouching. Obsidian is not found in the district, but the flake may have been imported from the west coast of Scotland.

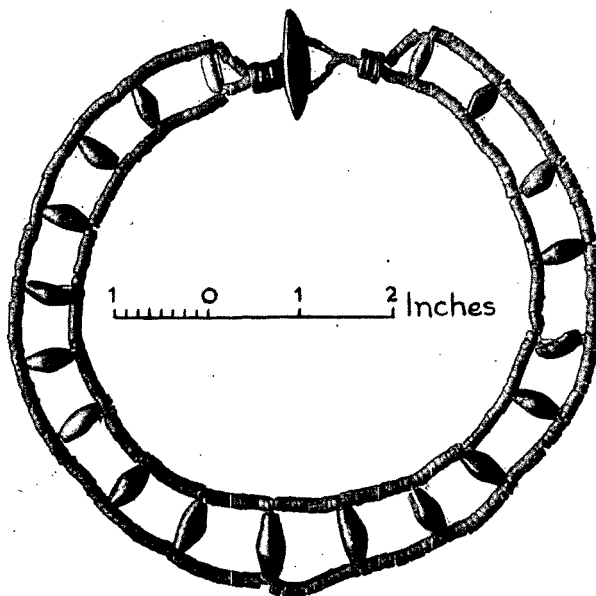


Fig. 6. Jet Beads from Short Cist at Culduthel, Inverness, restrung so as to form a Necklace.

Charcoal.—A number of pieces of charcoal were recovered from the floor of the cist.

This short cist belongs to the Bronze Age period and contained:

1. The skeleton of a female twenty-one or twenty-two years of age and just five feet in stature.

2. A necklace or girdle of jet.

3. A fragment of a bronze awl.

4. A small flake of obsidian.

5. Pieces of charcoal.

The jet necklace or girdle and piece of bronze awl are displayed in the National Museum of Antiquities of Scotland, while the skeleton is preserved in the Anatomical Museum of the University of Aberdeen.