

## II.

### CIST BURIALS IN HOLM, ORKNEY. BY HUGH MARWICK, D.LITT., F.S.A.Scot.

On the 7th of July 1927 a very curious, if not unique, type of burial cist was brought to light on the farm of Backakeldy in Holm, Orkney. The farmer, Mr Isbister, was engaged in "scuffling" a field of potatoes when his scuffler encountered a stone. In the removal of that stone, others came into view, and ultimately the top of the cist itself was exposed. With highly commendable foresight, Mr Isbister and his brother, who had been assisting him, decided to leave the contents of the cist untouched until a careful examination could be made and photographs taken of the remains. A message was sent to Kirkwall, and a day or so later Mr T. S. Peace and the writer, along with Mr Kent, photographer, went out to make a record of whatever was to be seen.

The structure consists of two cists placed side by side—a larger and a smaller—the former carefully planned and executed, the latter being rude and primitive in comparison (fig. 1). The larger is formed by

flagstones in the usual way, but the covering arrangements are such as to make it one of the most interesting so far discovered.



Fig. 1. Cists in Holm, Orkney.

The orientation is almost due north and south. The west side of the cist is 3 feet 6 inches long, the east a few inches shorter. The width is approximately 1 foot 9 inches and the depth about 2 feet 1 inch. The east side-slab projected beyond the ends—5 inches at the north end and 1 foot 5 inches at the south end. The total length of this slab was about 5 feet 2 inches. The west side of the cist was formed by two long flags, placed edge to edge one above the other, the upper being rather over a foot in depth and projecting 7 or 8 inches beyond each end of the cist. These flagstones were rather under 2 inches in average thickness. The lid-stone was 5 feet long and of breadth just sufficient to cover the cist.

So far nothing unusual has been described; the real interest of this cist is to be found in what follows (fig. 2). Above the lid-stone two long flags were placed longitudinally, to lean against each other like the

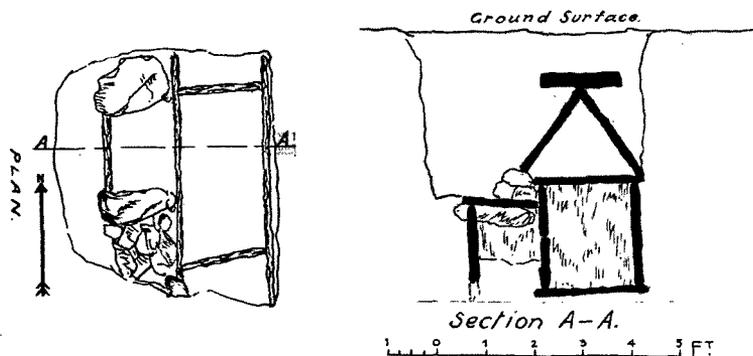


Fig. 2. Plan and Section of Cists in Holm, Orkney.

roof of a house. The east roof-stone was about 4 feet 8 inches long and almost 2 feet broad by  $2\frac{1}{4}$  inches thick; the west one was about 4 feet

6 inches long by 2 feet 1 inch broad and  $2\frac{1}{4}$  inches thick. On the side edge of the former were two rounded excisions—one, 18 inches from the north end of the stone, was practically a semicircle of about 3 inches diameter; the other, a foot farther south, was smaller. Then, finally, lying horizontally on the ridge formed by these two "roof-stones," was another slab about 3 feet 8 inches long by 1 foot 9 inches broad by  $4\frac{1}{2}$  inches thick.

These "roof-stones," unfortunately, had been removed before I reached the spot, and I was unable to discover whether the east "roof-stone" rested on the edge of the cist-lid, or on the clay outside. The west "roof-stone" certainly did not rest on the lid itself, but was propped up by boulders, so that a space of 4 or 5 inches existed between the "lid-stone" and the "eaves," so to speak, of the "roof-stone." Mr Isbister was certain about that, for he put in his hand through this gap and felt about to see if anything were lying on the lid. A couple of very rude stone implements were actually found there.

The bottom of the cist seemed to be formed of a single slab, and the edges of the cist all round and along the top also, under the lid, were cemented with fine "sea-clay," as it is called in Holm—a kind found on the beach thereabout. Actual thumb-marks were still visible to show how the clay had been packed in. Curiously, the "ridge" also, where the roof-stones met, was cemented in the same fashion.

On the west side of this larger cist was a smaller, shallower, and much ruder type of cist. Its length was only about half that of the other, the northern half of the west side-slab of the larger being the east side of the smaller cist. There was no bottom slab in the smaller at all—merely virgin clay; and its other side and ends were formed of rough water-worn blocks of stone, taken apparently from the shore near at hand. Its length from north to south was approximately 20 inches, its width 16 inches, and depth probably slightly over a foot, but, as soil had fallen in, it was difficult to find the exact depth. The top of this cist was nearly on a level with the top of the larger, and it was covered by an irregularly shaped slab of stone. The lid-stones of these two cists were roughly 3 feet below the surface of the field.

In the larger cist a skeleton was found in rather poor preservation, and in the south-west corner lay a heap of calcined bones as well. The unburnt body had been buried on its right side, with head to the north and with flexed knees, the foot bones being found in the south-east corner. The calcined bones partly covered these foot and leg bones of the skeleton. The skull was in a very bad state of decay.

In the smaller cist a skull and complete lower jaw were discovered, and a number of other bones and teeth placed together apparently in

a heap anyhow. Earth had run in also, tending still more to obscure the original disposition of the remains. The bones have been carefully packed and sent to Edinburgh for expert inspection and report, and it is pleasing to be able to state that the cists are being covered over again and left *in situ* without further demolition.

REPORT ON THE BONES. By Professor THOMAS H. BRYCE,  
M.D., F.R.S., F.S.A.Scot.

CIST No. I.

This cist contained the bones of two individuals, but in the one case they had been deposited after the body was burned, while in the other there had been no previous cremation.

The burnt bones represent only a small part of the whole skeleton. The fragments of the shafts of certain of the long bones are rather larger than is usual, and the incineration is less complete than is commonly the case. A feature which I have not personally met with before is the presence of portions of slag adhering closely to the bones. These vary in size from minute nodules to larger irregular masses, many lobulated, reaching one or two centimetres in diameter. They have all a light greenish-grey colour, and one mass which has a broken surface shows cells like those of a honeycomb, the walls of which are formed of the grey-green material and have a glassy lustre.

Professor Henderson has kindly examined this material, and informs me that the glassy incrustation is a sort of slag resulting from the action of sand or clayey matter on the bones at a high temperature.

Of the long bones, only one, the left radius, has an extremity entire. There is no indication of an epiphyseal line, so that the individual must have been over seventeen years of age. Nothing in the character of the long bones justifies a statement regarding the sex of the individual.

The skull is represented by a number of fragments which indicate that the skull walls were relatively thin. The greater part of the left side of the lower jaw is preserved in two portions. The teeth have been lost, but the tooth sockets indicate that the dentition was complete and the wisdom teeth fully erupted. The proportions of the jaw, although there is no certainty in the matter, suggest that the individual may have been a woman.

The unburned bones do not represent an entire skeleton, but some points of general interest emerge from a study of the bones preserved.

The vertebral column is represented by only two broken vertebræ; there are a few broken ribs; and the limb girdles are so imperfect

that they yield no data. Unfortunately the hip bones, from which the sex may with greatest certainty be determined, are very much broken, and there is no fragment of the parts which show sex characters. Of the long bones, the humerus, the radius, the thigh bone, and the fibula of the right side, and the left shin bone are practically intact. The rest of the bones lack at least half of the length of their shafts. The ossification of the skeleton is complete, and the individual must have been over twenty-five years of age at the time of death.

The dimensions of the entire bones are as follows:—

Right humerus—maximum length . . . . .	31.0 cm.
Right radius                   "           " . . . . .	24.8 "
Right femur                   "           " . . . . .	41.4 "
Left tibia—length less spine . . . . .	35.0 "

The platymeric index of the femur is 69.6, and the platycnemic index of the right tibia 80.3. This index could not be determined with accuracy on the left tibia owing to an injury of the shaft at the upper end.

The relative proportions of the bones are indicated by the following indices. The radio-humeral index at 80 is high, indicating a long forearm. The tibio-femoral index is also high, being 84.5. The intermembral index ( $H+R \div F+T$ ) works out at 73, and this figure indicates proportionately long arms. While there is said to be no appreciable difference between this index in the male and female, the high tibio-femoral and radio-humeral indices would support a conclusion founded on other more distinctive characters that the individual was a man. The long bones are short and not very robust, but the muscular markings are fairly prominent and may have been the bones of a short, not very muscular male. The stature of the individual on this assumption was about 5 feet 3 inches (1.600 m.).

The skull is too imperfect to permit of any measurements, being reduced to a few fragments of the vault. The bones are fairly thick. The largest part preserved includes the temporal, the parietal, and a small part of the occipital bone. The mastoid process is strong and prominent, suggesting that the person may have been a man. The ramus and part of the body of the right side of the lower jaw is preserved. The ramus, so far as one can judge from a fragment, appears to be inclined unusually obliquely, and is low and narrow below the processes. All three molars are *in situ* and show a considerable but not excessive wearing of the crowns. The jaw when entire cannot have been robust, and the determination of the sex is doubtful. It may have belonged to a person advanced in life.

## CIST No. II.

This cist contained the skeleton of a young person. All the bones of the trunk and of the upper extremities, except for a few fragments, are absent. The leg bones are better preserved. None of the epiphyses had united at the time of death, so the age cannot have exceeded sixteen years.

The skull and lower jaw are better preserved than the rest of the skeleton, but the face bones are all gone. The jaw is complete save for the processes, which are decayed away to the level of the sigmoid notch. It is a robust jaw for a young person, yet the teeth are crowded in front and the canines have not had enough room. The left canine overlaps the lateral incisor, and the right had been delayed in eruption, perhaps from this cause; the milk tooth is still in place and the permanent tooth within its alveolus. The wisdom teeth have not erupted. The teeth show no attrition of the crowns. The evidence of the dentition indicates that the child was at least thirteen years old.

The main measurements of the skull are:—

Length	.	.	.	.	175 mm.
Breadth	.	.	.	.	137 „
Height	.	.	.	.	129 „