

I.

SHORT CISTS IN ROXBURGH AND SUTHERLAND, AND ROCK SCULPTURINGS IN A CAVE AT WEMYSS, FIFE. BY ARTHUR J. H. EDWARDS, F.S.A.Scot., ASSISTANT KEEPER OF THE NATIONAL MUSEUM OF ANTIQUITIES OF SCOTLAND. WITH A REPORT ON THE HUMAN REMAINS CONTAINED IN THE CISTS BY PROFESSOR ALEX. LOW, M.A., M.D., F.S.A.Scot.

CIST AT HEITON MILL.

While ploughing at Heiton Mill farm, near Kelso, in April of last year, Mr Alexander Martin exposed the cover-stone of a cist through his plough coming in contact with it.

Placed near the top of rising ground about a quarter of a mile from the farmhouse and about 100 yards from the south bank of the Tweed, the cist lay 70° east of north magnetic or nearly north-east and south-west, and was formed by four slabs set on edge, the two at the ends being placed between the two which formed the sides. At three of the corners small stones had been wedged in between the slabs so as to make up for a little deficiency in the length and for irregularity of construction. The internal dimensions were 3 feet 6 inches in length on the north and south sides, 2 feet 2 inches in width at the east end, 1 foot 11 inches at the centre, 1 foot 9 inches at the west end, and 1 foot 6 inches in depth. The flags were of sandstone and measured from 1½ inch to

4 inches in thickness. The cover-stone, also of sandstone, was 5 inches in thickness, but as it had been badly broken owing to the perishing of the stone, the exact dimensions could not be ascertained.

The cist when opened was found to be partially filled with soil and contained the remains of an unburnt burial. In the north-east corner was a skull in a fragmentary condition and portions of a food-vessel urn of clay. Near the west end of the cist were portions of the leg bones.

The food-vessel (fig. 1), which is of a brownish colour, was reconstructed in the Museum, but about half of the upper portion of one side

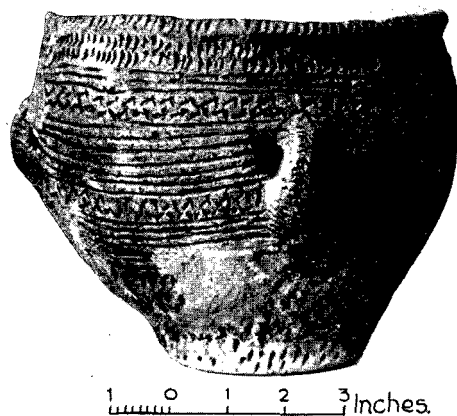


Fig. 1. Food-vessel from Heiton Mill, Roxburghshire.

is missing. It is badly shaped, one side bulging more than the other. The vessel measures from 6 inches to $6\frac{3}{4}$ inches in height, 7 inches in external diameter across the mouth, $7\frac{1}{2}$ inches at the widest part, and $3\frac{1}{2}$ inches across the base. There have been four perforated lugs on opposite sides. Two of these are complete, and a small portion of a third can just be defined, but the fourth is wanting. The lugs, which appear to have been pinched up out of the clay, are roughly quadrangular in section, and are decorated with rows of transverse curved lines possibly made by the finger-nail, one of these rows being on the face of the lug and one on either side. The top of the lip, which is bevelled downwards and inwards, is ornamented, with three rows of impressions made by a pointed tool of triangular section. The outer edge also is completely encircled by a similar pattern. Under the brim is a slight concavity below which there is a double row of impressions. Between these and

the top of the lugs are three incised lines and a row of lozenges. Between the lugs are seven incised lines and at their base another row of lozenges. Below the lugs are seven more incised lines and between those and the base six rows of impressions. All the ornamentation seems to have been made with the same tool, but the designs at the base are much bolder than anywhere else on the vessel.

This urn departs from the usual type inasmuch as there is no shoulder groove or grooves, and the lugs stand clear from the wall. They appear to have been formed somewhat carelessly as they are not exactly vertical. Their size also is unusually large, the length being $1\frac{1}{2}$ inch and the perforations from $\frac{3}{8}$ inch to $\frac{1}{2}$ inch in diameter.

It is generally found that when stops or perforated lugs are present they are placed in a shoulder groove. I know of only one other food-vessel urn in Great Britain which has lugs without a groove. That urn, however, is symmetrical in shape and differently decorated. It was found in a mound with other burials at Acklam Wolds¹ in Yorkshire.

Thanks are due to Mr Robert Hogarth of Heiton Mill, who very kindly conserved the cist and its contents, and to Sir George Douglas, Bart., who has kindly presented the urn to the Museum.

Professor Alex. Low, M.D., F.S.A.Scot., who has examined the remains, states that the bones are fragmentary, but are such as would have belonged to a well-developed adult male. The skull is represented by a piece of the left frontal bone with well-marked superciliary ridges; a small piece of base of skull; imperfect upper and lower jaws with teeth in very good condition. The only parts of the limb bones are a piece of shaft and lower end of right thigh-bone and about the upper two-thirds of the right tibia—these show well-developed muscular markings.

CIST AT STRATHNAVER.

During the month of August 1932 a short cist was exposed in a gravel bank near the middle of the township of Strathnaver, Sutherland, and close to the holding of Mr Roderick MacLeod (No. 9).

The cist consisted of four slabs of whinstone, those at the ends being inserted between those forming the sides. The main axis lay 95° west of magnetic north, or nearly north-east and south-west, and the internal dimensions were 3 feet 10 inches in length on the north-west side, 3 feet $7\frac{1}{2}$ inches on the south-east side, 1 foot $11\frac{1}{2}$ inches at the north-east end, 1 foot 9 inches across at the centre, 1 foot $8\frac{1}{2}$ inches at the south-west end, and from 1 foot 7 inches to 1 foot 10 inches in depth. Closing

¹ J. R. Mortimer, *Forty Years' Researches in British and Saxon Mounds of East Yorkshire*, pl. xxv., fig. 201, Barrow No. 205.

the mouth was a cover-stone, which was cracked across the centre from side to side. It measured 4 feet 8 inches in length by 2 feet 6 inches in breadth and 6 inches in thickness. Laid so as to cover the crack on the lower stone was a smaller one which measured 1 foot 10 inches by 3 feet. Above all and extending from some little distance outside and around the grave was a mass of rounded boulders, large and small, 3 feet 6 inches in depth, which was surmounted by 3 feet of red earth and surface soil. In the grave was an unburnt burial of the Bronze Age. The skeleton lay on its right side, the head being at the south-west end of the cist, the knees were drawn up and the arms bent so that the hands were near the chin. The cist was unpaved and no relics were found.

I have to thank Mr Roderick MacLeod and his neighbours for their kind assistance in helping me to uncover the cist and also those who reported the discovery to the Museum.

REPORT ON THE SKELETAL REMAINS.

By Professor ALEX. LOW.

The bones of the skeleton are in a fair state of preservation, and are those of a robust man about thirty years of age, and approximately 5 feet 9 inches in stature.

Skull.—The skull has crumbled away at the right temporal region, but otherwise is intact so as to permit of the measurements detailed in Table I.

The cranial capacity is large, being approximately 1610 c.c., distinctly greater than the mean capacity of modern Scottish male skulls. The sutures of the vault are open, except that there is an indication of commencing ossification in the sagittal and in the lower ends of the frontal suture.

In profile view (fig. 2) the skull is seen to be relatively short and high, with full frontal region and somewhat flattened occipital pole. Seen from above the form of the skull is broad, with a length-breadth index of 89.1, thus being hyperbrachycephalic. The face (fig. 3) is of medium length, with rather projecting cheek-bones and prominent chin; the orbits are rectangular and of medium height; the nasal aperture is somewhat broad. The palate is broad and very well formed, and while the lower jaw has rather a short body it is a powerful-looking bone. The two central teeth of the upper jaw have dropped out after death and been lost; apart from this, the teeth of both upper and lower jaws are in a very good state of preservation; the bite is edge to edge and the crowns are much worn, but there is no trace of disease. In the lower jaw the last molar or "wisdom" tooth on

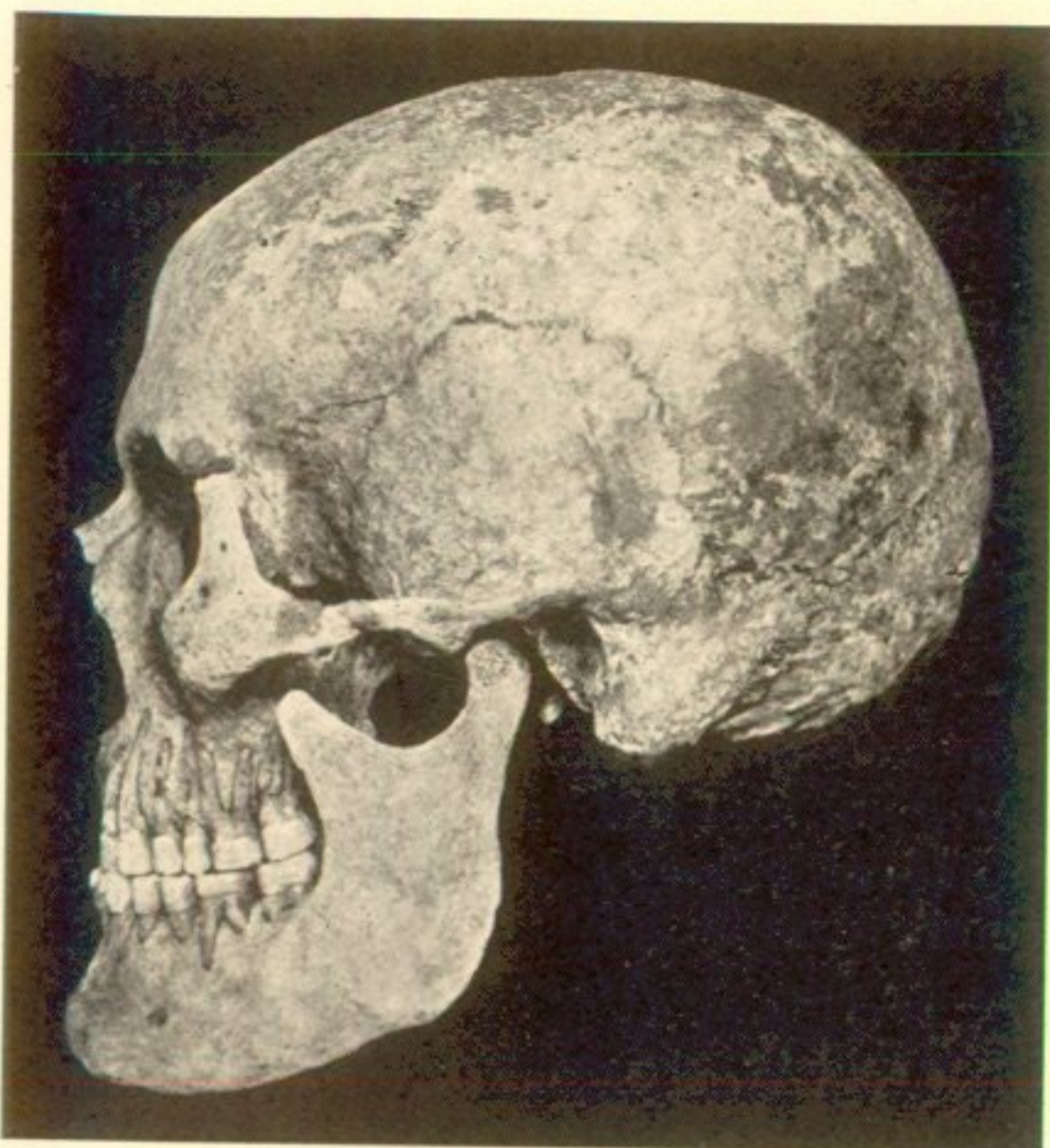


Fig. 2. Profile view of Skull from Cist at Strathnaver.

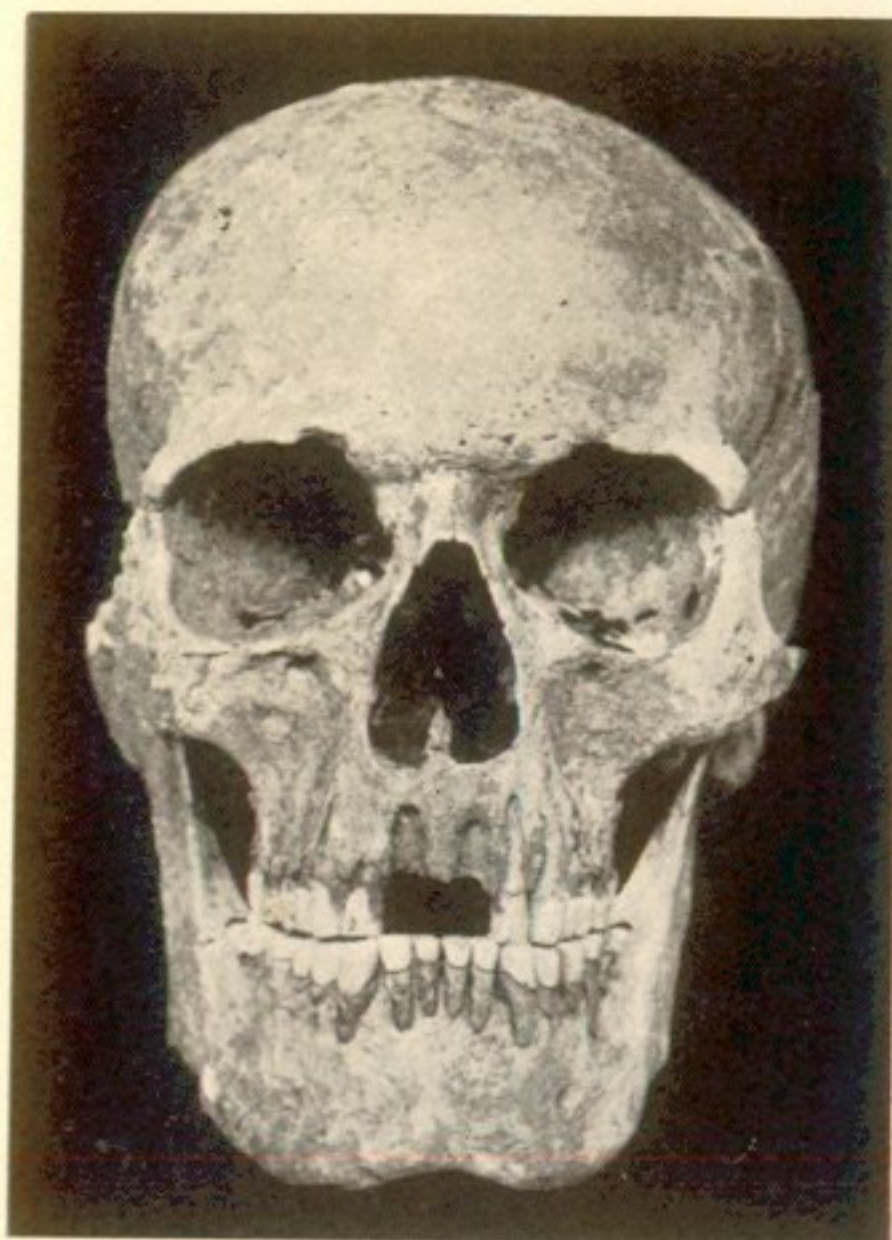


Fig. 3. Face view of Skull from Strathnaver.

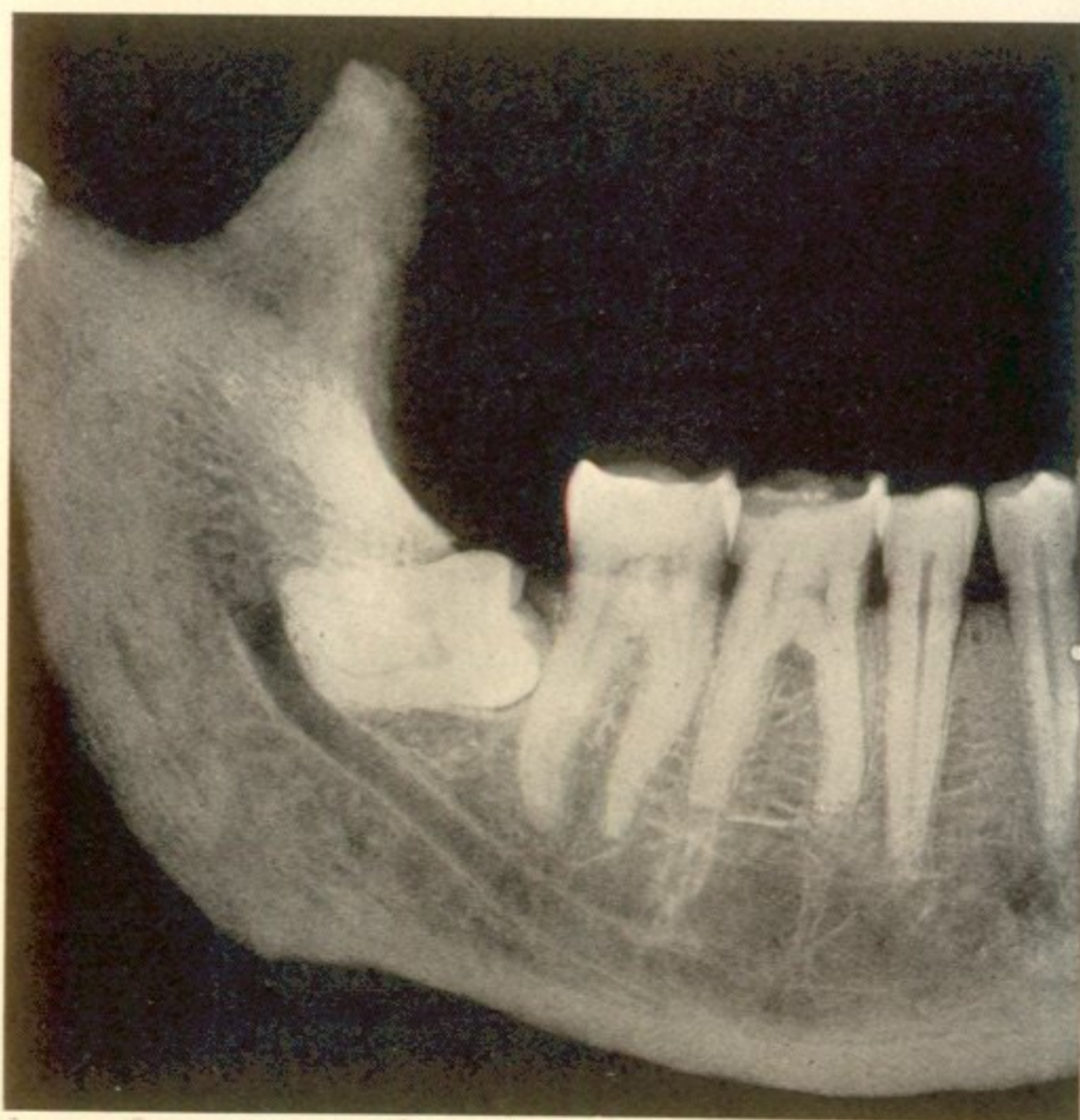


Fig. 4. X-ray photograph of left half of Lower Jaw from Strathnaver, showing 'impacted' wisdom tooth.

either side has not erupted;¹ X-ray examination of the jaw shows this to be due to "impaction" of the wisdom tooth (fig. 4)—a condition not uncommon in modern times, but it is the first example I have observed in a Bronze Age skull.

Bones of Trunk and Limbs.—In prehistoric interments it is rare to find the spinal column well preserved, but in the present instance it is represented by all the cervical, thoracic, and lumbar vertebræ; unfortunately the lower half of the sacrum is deficient. The measurements of the lengths of the different vertebral regions give the usual averages, but the spinal column is of interest in that there is present in the lumbar region an extra vertebra—that is, there are six lumbar vertebræ instead of the usual five—a condition rather unusual but which does occur in modern man. Further, the lumbar spine is of interest in that the vertical depth of the lumbar vertebræ taken together is greater when measured behind than in front; this is an anatomical feature generally considered to be primitive and to be found only in bones which belong to prehistoric times, or among the more primitive races, but does not exist in the European races of the present day. The vertebræ show evidences of osteo-arthritis, a condition extremely common in skeletons of early times and is often well marked in short-cist skeletons.

There are seven left ribs fairly complete and several fragmentary right ribs. The two clavicles are comparatively straight and slender, and while the right clavicle is two-fifths of an inch shorter than the left it is distinctly the stouter bone. The left humerus and left ulna and radius are intact, and again are relatively long and somewhat slender bones (Table II.). The two hip-bones are imperfect, but show very distinct male characteristics. Unfortunately the lower ends of both the femora have decayed, so that it is possible to obtain only an approximate length for the left femur; these bones are stout and show torsion and well-marked muscular impressions. The two tibiæ and a left fibula are present, but the upper ends are much decayed. The only bone of the foot intact is the right os calcis; a bone with all the evidences of having belonged to a muscular young man.

While the skeleton of this young man presents features undoubtedly characteristic of Beaker Man, he is perhaps less Alpine in his characters than the Beaker Man found in the short cists in Aberdeenshire. He exhibits the same brachycephaly, but his face is longer, cheek-bones more marked, orbits more square, nose narrower, and he is taller—perhaps suggesting some Nordic admixture.

¹ I am indebted to Dr A. C. Fowler, Radiologist in the Anatomy Department, for this X-ray photograph.

TABLE I.

Measurements in mm. of Skull from Short Cist at Strathnaver, Sutherlandshire.

Sex	Male	Length foramen magnum	35
Cubic capacity	1610 c.c. ap.	Transverse arc	312 ap.
Glabello-occipital length	175	Circumference	530 ap.
Ophryo-occipital length	172		
Nasio-inional length	170		
Minimum frontal breadth	93		
Maximum frontal breadth	106		
Parietal breadth	156 ap.		
Basibregmatic height	134		
Auricular height	106		
Biauricular breadth	124 ap.		
Basinasal length	104		
Basialveolar length	96		
Nasialveolar height	70		
Nasimental height	118		
Maxillary breadth	90		
Bizygomatic breadth	132 ap.		
Nasal height	51		
Nasal breadth	24		
Orbital height, R.	34		
" " L.	34		
Orbital breadth, R.	39		
" " L.	38		
Alveolar length	52		
Alveolar breadth	64		
Sagittal arc, 1	120		
" " 2	122		
" " 3	110		
	352		
		<i>Indices.</i>	
		Length-breadth	89.1 ap.
		Length-height	76.6
		Gnathic	92.3
		Total facial	89.4 ap.
		Upper facial	53.0
		Nasal	47.1
		Orbital, R.	87.2
		Alveolar	123.0
		<i>Mandible.</i>	
		Condyllo-symph. length	112
		Height at symphysis	30
		Height at second molar	33
		Height: coronoid	67
		Height: condyle	65
		Bicondylar width	110
		Bigonial width	92

TABLE II.

Measurements in mm. of Bones of Extremities from Short Cist at Strathnaver, Sutherlandshire.

	R.	L.		R.	L.
Clavicle	161	170	Femur:		
Humerus:			Maximum length	—	485 ap.
Maximum length	—	361	Upper third of shaft—		
Radius	—	263	Ant. post. diam.	28	30
Ulna	286	286	Trans. diam.	35	35
			Platymeric index	80.0	85.7
			Angle of neck	120°	120°
			Tibia:		
			Maximum length	395 ap.	—

ROCK SCULPTURES ON THE WALL OF A CAVE AT THE
MICHAEL COLLIERY, WEMYSS, FIFE.

The Society is again indebted to its Fellow, Mr G. B. Deas, for bringing to its notice a new record of petroglyphs recently discovered on the wall of a cave at Wemyss in Fife. The location and circumstances of the discovery are described by Mr Deas as follows: "Some forty years ago, at a short distance to the east of the well-known 'Glass cave,' between the village of East Wemyss and Wemyss Castle, there was a very small cavern situated about 25 feet above high-water mark, inconvenient of access and seldom entered, the site of which ultimately became about the centre of the extensive ramifications of the great Michael colliery—one of the boilers being actually set over the cave. In the summer of 1929 a set of new boilers was being installed, and in the course of preparing a better bed than that of the old boiler, the roof of the cave was exposed and the debris within cleared away. The excavation showed that the cave must originally have been a large one, but that it had gradually been silted up until a small area remained, which only a few elderly people can remember. When the cave walls were laid bare attention was drawn to a number of curious markings on the east wall. Mr Kirby, who was then manager of the colliery, very kindly informed me of the discovery."

On the invitation of Mr Deas, Mr James S. Richardson, Inspector of Ancient Monuments for Scotland, and I visited the site on 10th September 1929. One of the sculpturings (fig. 5) was easily identifiable as a cup- and ring-marking of the Bronze Age. This consisted of two cups, one circular, about $2\frac{1}{4}$ inches in diameter; and the other oval, $2\frac{1}{2}$ inches by $1\frac{7}{8}$ inch in cross-diameters, and 1 inch in depth respectively, and two concentric rings. The inner ring had a central diameter of $5\frac{1}{4}$ inches, the outer one of $6\frac{1}{2}$ inches. One of the cups is centrally placed and the other lies on the periphery of the outer ring. Both cups and rings had been pecked out and were in an excellent state of preservation.

The other sculpturing, which covered an area of about 3 feet 9 inches by 3 feet, was situated about 3 feet to the right of the cup- and ring-marks, its lower margin being a little higher than they and the upper reaching very nearly to the roof. This carving was not so easily deciphered, as, in addition to a number of definitely pecked lines, there were numerous isolated pittings on the rock-surface difficult to identify as being either natural or artificial. There was no time to make any meticulous examination, and as the workmen were impatiently

waiting to fill in the cave with concrete, we decided after taking a rubbing to chalk in as many of what we thought might be artificial markings before photographing them. In ordinary circumstances the chalking of rock-markings is to be deprecated, but in this case we were perhaps justified, as the whole cave was to be obliterated in the course of a few hours. More than a year elapsed, and as the photo-



Fig. 5. Cup- and Ring-marks in Cave at Wemyss, Fife.

graph was being filed in our album for future reference Mr William Darroch, our Museum Preparer, informed me that he thought he could distinguish the head of a beast. This proved to be so, and in the upper part of the photograph (fig. 6) one can see certain definitely pecked lines and hollows which represent the head, horns, and fore part of the body of a large animal. Immediately below the head is another carving, which although it at first appeared to be part of the upper picture, it is now recognised as a separate entity, the exact significance of which is not yet understood, although a suggestion as to its identity has been made.

Figs. 6 and 7 are from the same photograph, but in the latter the



Fig. 6. Sculpturings in Cave at Wemyss, Fife.



Fig. 7. Sculpturing (retouched) in Cave at Wemyss, Fife.

lines and punctuation have been blacked in so as to show the design more clearly.

Photographs of the carvings were submitted to both the Abbé Breuil, Paris, and Professor James Ritchie of Aberdeen University, and their assistance invoked as to the reading of the riddle.

The Abbé Breuil in his reply said he thought two animals might be represented, the upper being a large-horned beast and the lower uncertain. The double conjoined, curved sign near the bottom of the picture and the single arched form beside it might represent either an ox head or water. He was also of the opinion that the technique was similar to that of many rock-carvings in Lough Crewe in Ireland.

Professor Ritchie wrote: "I make the very tentative suggestion that the cave sculpture may represent a hunting scene, portraying an elk being attacked by a man; but its simple punctuated lines are very rude and therefore difficult to interpret, and I am at a disadvantage in that I did not see the actual specimen and have to depend upon the photograph.

"The form of a large-horned animal is, I think, pretty definite, and I interpret this as an elk (the European form of the American moose) for two reasons. First, the antler, especially the left antler of the beast, is indicated as broad and palmate with a few projections on the outer margin; the antler on the beast's right side is less easily traceable. Secondly, the throat of the creature is marked by a strong prominence which recalls the 'bell' of a male moose—these two characters are absolutely characteristic of the elk, and if my interpretation of the details of the engraving is accurate, the creature must be an elk.

"The other figure is more difficult, and I would be safer to leave it without a hint of identification. But I suggest the following: Note, first, that there is no connection between the muzzle of the deer and a well-marked area lying off the muzzle—a natural ledge in the rock catching the light in the photograph is misleading here. This well-marked area becomes the 'head' of a man, unlike a head because it bears a mask, either to avoid the need of portraying human features or as a hunting device. There are many analogies of masked human heads in the old cave pictures. Another definite part of the design is a straight rod with a distinct tip, pointing at the deer—the suggestion is that this may be an arrow, lying across a bow, and being manipulated by the arm of the figure, which is in a crouching position. Of course these are the merest suggestions. I shall be glad to give way to any suggestion which fits better with the markings."

Like Professor Ritchie, I am in doubt as to the interpretation of the lower figure, but publication may bring us in time other views or

suggestions. With his suggestion of the elk I agree, for the reasons he has put forward. It is true that the right antler is not so clearly defined, but the early artist always did have difficulty in the reproduction of antlers,¹ and in the very few paintings or carvings of early date of the elk which are known one horn only is depicted.²

Some explanation must also be sought as to the meaning of the pecked circle with a punctulation in the centre, just about the position where the animal's heart might lie. Does it represent the vital spot at which the arrow should be aimed? Note also the four small circles which cross the body in a nearly vertical line—perhaps conveying some meaning in the language of signs.

Taken as a whole one is given the general impression that the drawing has some deeper meaning than mere decoration, but that meaning only the early artist of the cave and his contemporaries fully understood. If the suggestion of elk is correct, and the picture is contemporary with the Bronze Age cup- and ring-markings, the technique of which is similar, the record is a unique one for Britain. It is to be regretted that time did not permit of either a cast or squeeze of this unique carving being made. We are indebted, however, to Mr Deas for a cast of the cup- and ring-marks which he kindly presented to the Museum.

In the clearing out of the floor two distinct layers were noted, each about 2 inches thick, with a depth of about 1 foot of other material between them. The layers contained limpets, whelks, and a quantity of bones, fragments of mediæval pottery, a stone whorl and three stone pounders. The earliest floor-level was not reached during the clearing operations, neither was it possible to examine the whole extent of the cave walls.

REPORT ON THE ANIMAL BONES FROM THE CAVE AT WEMYSS, FIFE. By Professor JAMES RITCHIE.

The bones submitted are fragmentary and are all those of domestic animals which had been used as food. The majority are bones of cattle, mainly the bones of the limbs, broken across or split lengthwise for the extraction of marrow, a few fragments of ribs, and four fragments of lower jaw, all broken across, and two containing milk dentition, showing that young animals had been slaughtered. Of other domesticated species represented, there were four sheep bones which showed that both adult and young sheep had been used, three bones of pig,

¹ Baldwin Brown, *The Art of the Cave-Dweller*, p. 161.

² M. C. Burkitt, *Prehistory*, p. 240.

all broken, and a single molar tooth of a horse. Many of the bones were blackened by fire and partly calcined.

The discovery of skeletal remains of the elk is, however, no uncommon occurrence in Scotland. Professor Ritchie in *Animal Life in Scotland* shows from the various records of finds of antlers, that the distribution of this animal was wide, and that it existed here from very early times until a comparatively late period. The last record from the Lowlands was from the Roman fort at Newstead, near Melrose.