IV.

ON TWO BRONZE AGE CISTS AT SPROUSTON, ROXBURGHSHIRE. By J. HEWAT CRAW, Secretary.

On 11th May 1932, during cultivation on the farm of Whitmuirhaugh, Sprouston, two short cists containing bones were found.

Being informed of the fact by the Rev. D. Denholm Fraser, I went to Sprouston next day, and with his help riddled the soil contained in the cists, and took the necessary measurements. Only a fragment of chert and some charcoal, however, were found.

The site was on a plateau 90 yards north of the level-crossing close to the east of Sprouston railway station. It was about 150 feet above sea-level, and 700 yards south-east from the river Tweed.

Cist No. 1 had been carefully and symmetrically made, with the axis pointing $13^{\circ}$ east of magnetic north. It had no cover, and was formed of four sandstone slabs, the tops of which were 6 inches beneath the surface of the ground; the end slabs were placed between the ends of the side slabs. The cist measured 3 feet 7 inches by 2 feet 5 inches and was 2 feet deep; the bottom was paved with thin slabs. Within the cist was a fairly complete skeleton, the bones had been removed when the cist was opened, but the position in which the skull and thigh bones were found showed that the body had been placed on its right side, facing east, with the head near the south-east corner.

Cist No. 2 lay 11 feet to the north-west, and measured 3 feet 9 inches by 2 feet 2 inches; it was 1 foot 11 inches deep. The axis pointed $10^{\circ}$ east of magnetic north. The cover measured 4 feet 7 inches by 3 feet and was 6 inches thick; it lay 6 inches beneath the surface. The slabs were placed as in the first cist, save that, the north slab being too short, a narrow upright slab had been placed across the north-west corner. The floor of this cist also had been paved. The skeleton here was not so complete, and had probably been previously disturbed, as the skull lay in the centre of the cist.

On the discovery being reported to Mr J. Cospatrick Scott, Chamberlain to His Grace the Duke of Roxburghe, permission was kindly given to send the bones to Professor Low, Aberdeen, whose report is as follows:-

REPORT ON THE SKELETAL REMAINS. By Professor Alex. Low, M.D., F.S.A.Scot.

Cist No. 1.
The skeleton from this cist is fairly complete and is that of an adult male of good muscular development, thirty-five to forty years of age, and 5 feet $5 \frac{3}{8}$ inches in stature.

The Skull.-The skull (fig. 1) is well preserved except that only onehalf of the lower jaw is intact. The cranium is large with walls of medium thickness and a cubic capacity of 1575 c.c. The sutural lines of the vault are open, except for commencing ossification at the lower parts of the coronal suture; the crowns of the teeth are much worn. The skull has distinctly male characters, the superciliary ridges are prominent, the upper orbital margins thickened, and the mastoid processes stout. The outline of the vault as viewed from above (fig. 2) is a broad ovoid and relatively short, the skull being brachycephalic with a length-breadth index of $80 \cdot 9$.

The profile view shows a skull moderately high, with root of nose depressed, superciliary ridges projecting, forehead receding, vault flattened, occipital pole slightly projecting. The face is short and relatively broad; orbits large, low, and rectangular; the nasal aperture somewhat narrow; on the whole, features characteristic of a skull belonging to the Bronze Age.

Bones of Trunk and Limbs.-Measurements and indices of the intact limb bones are given in Table II. Left shoulder-blade is practically complete and is well developed with a convex vertebral border. The left humerus is of average length, but is stout with a fair degree of torsion; the forearm bones are relatively long and slender. The incomplete left pelvic bone shows male characteristics.

The long bones of the lower limbs are muscular, and differ from modern bones in that they are more curved and show greater torsion -increasing their strength and allowing of walking with knees somewhat bent.

Cist No. 2.
The bones from Short Cist No. 2 are for the most part fragmentary, but are such as could belong to a woman of about forty years of age and of medium height. The skull-cap is thin-walled, with sharp supra-orbital margins and slight superciliary ridges; it is relatively broad and shows the characteristic flattening of the parieto-occipital region seen in skulls of the Bronze Age. The limb bones are imperfect; the incomplete shafts of the thigh bones are rather slender; the right tibia gives an


Fig. 1. Face view of Skull from Cist No. 1 at Sprouston.


Fig. 2. View from above of Skull from Cist No. 1 at Sprouston.
approximate length of 360 mm . which gives a calculated stature of 5 feet 4 inches.

The cist also contained the right humerus and right radius of a young pig.

Table I.
Measurements in mm. of Skull from Short Cist No. 1 at Sprouston, Roxburghshire.

| Sex | Male | Alveolar length | 54 |
| :---: | :---: | :---: | :---: |
| Cubic capacity | 1575 c.c. | Alveolar breadth | 61 ap . |
| Glabello-occipital length | 188 | Sagittal are, 1 | 126 |
| Ophryo-occipital length | 183 | ,, , | 141 |
| Nasio-inional length . | 180 | " | 117 |
| Minimum frontal breadth | 105 |  | 384 |
| Maximum frontal breadth | h 118 ap . | Length foramen magnum. | 37 |
| Parietal breadth. | 152 | Transverse arc | 332 |
| Basibregmatic height | 144 | Circumference | 545 |
| Auricular height | 120 |  |  |
| Biauricular breadth | 127 |  |  |
| Basinasal length. | 105 |  |  |
| Basialveolar length | 97 | Indices. |  |
| Nasialveolar height | 69 |  |  |
| Nasimental height |  | Length-breadth | $80 \cdot 9$ |
| Maxillary breadth | 88 | Length-height | $76 \cdot 6$ |
| Bizygomatic breadth. |  | Gnathic . | 92.4 |
| Nasal height | 52 | Nasal | 46.0 |
| Nasal breadth | 24 | Orbital, R. | $78 \cdot 0$ |
| Orbital height, R. | 32 | Alveolar | $113 \cdot 0$ |
| Orbital breadth, R . | 33 41 |  |  |
| ,, , L. | . - |  |  |

## Table II.

Measurements in mm. of Bones of Extremities from Short Cist No. 1 at Sprouston, Roxburghshire.

| Clavicle . | $\begin{gathered} \mathbf{R} . \\ 147 \end{gathered}$ | L. | Tibia: | R. | L. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Humerus: |  |  | Maximum length | 365 | 366 |
| Maximum length | - | 323 | Ant. post. diam. | 36 | 34 |
| Radius . . . | - | 250 | Trans. diam. | 24 | 23 |
| Ulna | 273 | - | Platycnemic index | 66.6 | $67 \cdot 6$ |
| Femur : |  |  | Angle of torsion | $38^{\circ}$ | $40^{\circ}$ |
| Maximum length | 450 | 450 | Fibula . . | - | 354 |
| Oblique length | 446 | 449 |  |  |  |
| Upper third of shaft |  |  |  |  |  |
| Ant. post. diam. | - | 26 | Stature as calculated from femur |  |  |
| Trans. diam. . | - | 33 |  |  |  |
| Platymeric index . | - | $78 \cdot 8$ | 5 feet $5 \frac{3}{8}$ inches |  |  |
| Angle of neck | - | $120^{\circ}$ |  |  |  |
| Angle of torsion . | - | $23^{\circ}$ |  |  |  |

