

ART. XVIII.—*A Birkrigg Burial.* By J. S. ERSKINE
and J. WOOD, M.A.

BIRKRIGG, $54^{\circ} 9' 30''$ W.; $3^{\circ} 5' 30''$ N., is a limestone hill above the Ulverston Sands, a branch of Morecambe Bay. The strata are tilted upwards to the north-west, with the result that the hill is formed of slopes of weathered limestone facing south-east and of small steep escarpments, facing north-west, where the strata are broken across, and of narrow valleys between escarpment and slope. The widest of the three main valleys is about fifty yards across. The limestone of the slopes is fissured many yards deep and a few thorn-trees and ivy-plants grow in the cracks up to the point where the sheep can browse them. The natural surface of the rock has in places been disturbed by quarrying, but the soil is generally too thin for modern cultivation. For this reason the prehistoric remains which cover the hill have never been effaced.

On the western slope of the northern end of the central valley is a small camp, irregularly oval, 40 yards across and surrounded by a low bank of earth and stone. This bank, containing roughly 150 cubic yards of material, would represent the work of one man with modern tools for a fortnight, and the ground within, although it shows no definite remains, can have held only one large house or a group of smaller ones. Two hundred and fifty yards south-south-east up the slope a group of circles, slightly sunken, suggests an unfortified village,* and a valley near

* Investigated further Easter, 1936. Each circle is approximately 7 yards in diameter and consists of a symmetrical rubble wall. Thorough examination within the circle in two cases showed no sign of hearth or occupation level. No objects of any kind were found.

J.S.E.
J.W.



Looking North.



View of the site before excavation—showing disturbance of surface (looking north).

it is divided by transverse banks, like broad terracing, perhaps the lynchetting of hoe-cultivated gardens. Near the camp and in the bottom of the largest valley there is what seems to be the base of the wall of an enclosure, not certainly cultivated, and some deeply worn pack-trails, with no obvious relation to modern settlements, pass near the camp. The general impression of these relics of former life is of a small village of largely pastoral people. Their choice of a site on the barrenest hill in Low Furness suggests an early stage in the settlement of the district, when forest was the principle obstacle. Here, too, they were near to the bay with its shellfish, the lowland woods for hunting, and a little farther away the high fells would provide unlimited summer-grazing.

The burials on Birkrigg are numerous and have mostly been excavated or pillaged. The principle site, described in *Transactions*, N.S. xii, 262; xxii, 364 is the stone circle the south-east corner of the hill, and the next most important the disc barrow at the south-west corner. Both these yielded scanty remains when excavated, sun-dried urns, human bones and ashes, bronze tattooing needles, giving the picture of a poor people of the Late Celtic period, perhaps even of Roman times. Cremation was normal, but there seems to have been one (unrecorded) subsequent burial in a cremation tumulus. There are no remains of individual tombs to suggest caste inequality.

On July 25th 1935 John Erskine, when walking on Birkrigg, noticed that some digging had been done on the slope above the principal valley, $54^{\circ} 9' 35''$; $3^{\circ} 5' 30''$ W., seemingly by men digging out a ferret. A broken spade, such as may often be found near the old quarries, was lying nearby. Around the hole were fragments of old bones, some of them recognizably human and some animal. (Nos. 2 and 3).

On November 6th, therefore, he and John Wood went to Birkrigg, intending to re-open the hole and to save any

other bones before frost and rain destroyed them. The removal of surface stones disclosed a lanceolate cavity six feet long by three wide with longest axis approximately N. and S., where a natural fissure in the rock had been widened. The stones at the lower end were loose, but the upper end had not been disturbed, and there were many fragments of bones, animal and human, mixed with the surface soil. The human bones Mr. Davies has identified as belonging to a single individual, and they showed no sign of burning. If this was a formal burial, however, it must have been disturbed, for fragments of skull were found in different parts of the hole. Brown surface soil, seemingly undisturbed, continued for five feet. Bones became steadily less common although always present in small fragments. A big stone had pinned a sheep's tibia to the wall at about four feet down, and at nearly five feet down a piece of human mandible with six well-worn teeth was found. (No. 1). All the soil was mixed with the crumbled shells of snails. At five feet down bits of bracken and patches of grey-black earth showed more commonly, finally forming a complete thin black layer. Below this were more large stones and some earth and then six inches of grey-black earth with many pieces of charcoal. Beneath this was barren yellow clay, quite undisturbed.

The bones were sent to Manchester University for examination and, thanks to the kindness of Mr. Elwyn Davies and Dr. Wilfrid Jackson, the following results have been reported.

Our conclusion with regard to the pit was that it had originally been a crematorium, as only repeated fires or one of great magnitude could have made several inches at the bottom as black as a charcoal hearth. Perhaps after one cremation the bones were left uncollected and the hole was partially filled. On top of this a further cremation was done in the hole, but it was finally used for a

burial. No pottery, ornaments or weapons were found to date the remains, and the only indication, the change from cremation to burial, must wait until it is known at what exact period this change took place in this neighbourhood. The nearest local parallel is Bonfire Cave on Scales Haggs, reported in N.S. xxvii, 100-110, and this was not dated more exactly'

REPORT BY MR. ELWYN DAVIES AND
DR. J. WILFRID JACKSON UPON THE
BONES FOUND AT BIRKRIGG.

I.

Alveolar process of right hand side of maxilla, holding 6 teeth, viz.: the lateral incisor, canine, both bicuspid and 1st and 2nd molars. Parts of the sockets for the medial incisors and the 3rd molar are preserved at the extremities. Although only a small portion of the socket for the 3rd molar is preserved, yet its condition and the presence of a slight "facet" on the surface of contact of the 2nd molar, indicate that the 3rd molar had erupted.

The teeth show considerable attrition and in all, except the 2nd molar, the enamel has been worn away, exposing the dentine, and this normally, would suggest that the subject was well advanced in years. The way in which the teeth have been worn down suggest that the individual may have possessed an edge-to-edge bite. The teeth appear to have been quite healthy and there are no traces of caries. The division of the root of the 1st premolar is marked, while the division is only slight in the 2nd premolar.

- (I) Middle portion of human tibia (right leg).
- (II) Middle portion of human humerus (right arm).
- (III) Lower portion of human tibia (left leg).
- (IV) Middle portion of human radius (right arm).

- (V) Upper portion of human femur (left leg).
 (VI) Middle portion of human humerus (left arm).
 (VII) Distal end of human humerus (right arm).
 (X) Right hand side and medial portion of left-hand side of body of human mandible. The mandible is robust with well-marked mental prominence and would, normally, suggest that it belonged to a person of male sex. The sockets of the teeth on the right hand side show that all the teeth had erupted and that all were present in the jaw at death. So far as it is possible to judge, in the absence of the teeth in the mandible, the dental arches of both mandible and maxilla appear to correspond and suggest that they belonged to the same individual.
 (XI) Portion of the temporal bone from the right-hand side of a human skull, including the mastoid process, the external auditory meatus, and the base of the zygomatic process. The mastoid process is robust and suggests that it belonged to a person of male sex.
 (XII) Mastoid border of parietal bone of left-hand side of human skull.
 (XIII) Portion of human occipital bone carrying the posterior border of the foramen magnum.
 (XIV) Portion of human os innominatâ (pelvic bone).
 (XVI) Talus of human right foot.
 (XXII) Calcaneus of human right foot.

III.

Canine, premolar and 3 human molars. These do not appear to belong to any of the surviving portions of either the maxilla or mandible. The two teeth marked X are probably 3rd molars (wisdom teeth).

IV.

- (I) Distal (lower) portion of human humerus (left arm).

- (III) Portion of human femur (left leg). Goes with 2 (V).
- (IV) Portion of human os innominata (pelvic bone).
- (V) Portion of human os innominata (pelvic bone).
- (VII) Portion of human os innominata.
- (VIII) Portion of human os innominata.
- (IX) Portion of human os innominata.
- (X) Human patella (right knee-cap).
- (XI and XV) Petrous portions of right and left temporal bones.
- (XII) Piece of occipital bone carrying the cruciate eminence.
- (XIII) Portion of right temporal bone carrying base of zygomatic process.
- (XIV) Part of mastoid portion of temporal (left side).
- (XXII) Piece of human rib.
- (XXIII) Piece of human occipital bone.
- (XXV) Piece of human femur.
- (XXVIII) Piece of human rib.
- (XXXI) Portion of ascending ramus of human mandible carrying the mandibular foraemn.
- (XXXIII) Piece of human tibia. (Goes with 2 (I).
- (XXXIV) Piece of middle of human humerus (left arm).
- (XXXV) Middle portions of human tibia (left leg). Goes with 2 (VI).
- (XXXVI) Piece of human tibia. Goes with 2 (III) and IV (XXXVI).
- (XXXVII) Piece of human radius.
- (XXXVIII) Piece of human ulna.
- (XXXIX) Portion of human metacarpal bone.
- (XL) Piece of skull.
- (XLI) Piece of skull—probably of parietal bone.

(XLII) Piece of metacarpal bone.

Remainder are bits of pelvic girdle, ribs, scapulae and odd bits of bone which I should not like to try to identify precisely.

V.

All too eroded or too fragmentary to be identified with confidence.

VI.

Part of tibia of sheep.

ANIMAL BONES.

Determined by Dr. J. Wilfrid Jackson, The Manchester Museum.

2 (ix) Metatarsal bone of a sheep—suggestive of Romano-British finds.

2 (xv, xix, xx, xxi, xxiii) Vertebrae of an ox.

2 (xxiv) Part of scapula of an ox.

All the teeth are those of sheep.

4 (ii) Os calcis of an ox.

(vi, xvi) Fragments of an ox bone.

(xvii) Humerus of sheep.

(xxix) Tibia of sheep.

(xxx) Radius of sheep.

(xxxii) Scapula of sheep.

The remainder are indeterminate.

The human bones, so far as can be judged, belong to one skeleton, for no part of any bone is duplicated, many fragments fit together, and where articulations can be tested they are true. There is nothing to prevent the maxilla and mandible from being parts of the same skeleton for the curves of the dental arches show correspondence. The body bones are rather massive, with well-marked muscular attachments and this, together with the strong development of the mastoid processes and the

robust build of the mandible indicate that the individual was of male sex. Owing to the absence of the skull and sutures, an indication of age is difficult but the evidence suggests that the third molar teeth had erupted, and this indicates adult age and the degree of dental attrition makes it probable that the individual was not young. It is however not safe to imply old age for the degree of dental attrition depends on the nature of diet and dental hygiene.

I do not think that one can say that the bones bear any marked signs of burning. The femur fragment bears some traces, which might be interpreted as signs of fire but they are extremely slight and could be due to other causes.

The soil samples show that those from the upper and lower layers are both darker than the soil from the intermediate layer. The darker soils are usually the occupation-layers.