

III.

EXCAVATIONS IN TWO IRON AGE FORTS AT EARN'S HEUGH, NEAR
COLDINGHAM. BY PROFESSOR V. GORDON CHILDE, F.S.A.Scot.,
and PROFESSOR C. DARYLL FORDE.

The twin summits of Tun Law, one of the loftiest cliffs on the Berwickshire coast just west of St Abb's Head, are occupied by prehistoric forts which have been described by Craw,¹ Christison,² and the Royal Commission on Ancient and Historical Monuments.³ The two peaks are at present defended on the seaward side by the precipitous cliff, known as Earn's Heugh, that falls away sheer to the sea; their gentler slopes landwards are guarded by triple ramparts. As the cliff is being rapidly eroded, it is quite possible that these ramparts, now stopping short at its brink, once extended round the respective forts on the seaward side too. Such an extension of the inner bank of East Fort along the present cliff edge is in fact still traceable for some distance. A narrow depression, apparently natural, that separates the two peaks, also forms a line of demarcation between the two forts, but the middle rampart of East Fort joins on to the outer rampart of West Fort on the western side of this depression. The relatively flat summit of the western peak seems well adapted for habitation, and 10 hut-circles are clearly visible upon it. The inner rampart runs round the edge of this level space. The eastern peak, though higher, is not so conveniently defensible. It slopes away quite steeply from the cliff edge, leaving little space for buildings. Perhaps for this reason the ramparts have been placed relatively low down where the ground begins to become more level (Pl. I).

Differences in construction between the two forts in respect of the relative positions of the ditches, and of the arrangement of the gates, have already been noted in the field surveys cited above. They suggest a difference in age. The hope of determining the relative dates of two types of fortification, the presence of exposed building noted by Craw, and the promising appearance of the hut-circles, prompted the Edinburgh League of Prehistorians, acting on a hint from Mr A. O. Curle, to undertake an examination of the site. Permission to excavate was courteously granted by Mr Burn Murdoch of Westloch House, with the kind concurrence of Mr Bell, tenant of Northfield Farm. Work was accordingly started on July 13, with Mr P. Laing as foreman, assisted

¹ *Ber. Nat. Club*, 1894-5, p. 176. ² *Ancient Fortifications*, p. 129. ³ *Berwick*, p. 46.

by Messrs Baird, Gibson, and Scott, to whose enthusiastic co-operation the success of our short campaign was largely due. The League was represented by M. Arbuckle, I. Henderson, P. Kennedy, M. E. Crichton Mitchell, and V. G. Childe, while Professor and Mrs Forde of Aberystwyth and C. Fairhurst of Glasgow yielded welcome help. Professor Forde took charge of work on the interior of West Fort, while Professor Childe supervised the trenches across the ramparts.

THE DEFENCES OF WEST FORT.

The brim and slopes of the lower or western crest are defended on the landward side by three banks. The Outer and Middle Banks are separated by an obvious ditch, while a level space intervenes between

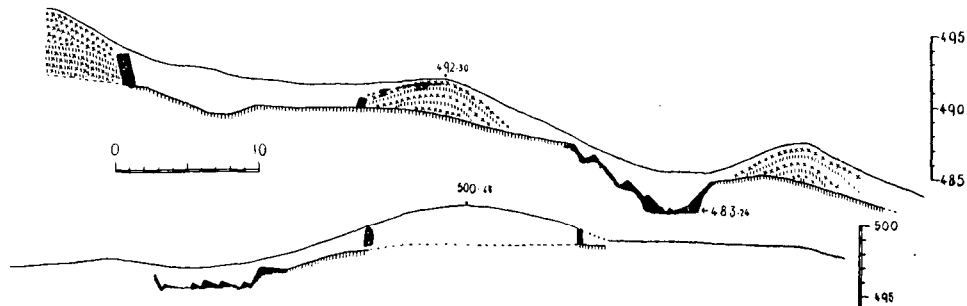


Fig. 1. Sections I and III. (Scale in feet; uppermost line denotes turf surface.)

Middle and Inner Banks. On the east, where the peak is overlooked by the higher eastern crest, a fourth rampart, Middle Bank 2, is interpolated between the ditch and the regular continuation of Middle Bank. But this supplementary defence only extends for a distance of 90 feet inwards from the cliff.

The nature of these defences was tested by three sections: No. I, south-west through the fifth hut-circle from the entrance (fig. 1, top); No. II, due west along the middle of the entrance; and No. IV (fig. 10), over the eastern defences along a line 33° south of east from a point 36 feet inwards from the eastern postern. All three sections gave concordant results as to the nature of Inner and Outer Banks and the ditch. The character of Middle Bank on the south-east differs, owing partly to its duplication from that disclosed in sections I and II. Its peculiarities were further studied in section III (fig. 1, bottom).

Inner Bank is composed of rubble mixed with earth over a core of clay and rubble. It still rises from $4\frac{1}{4}$ to $5\frac{1}{2}$ feet above the till which everywhere forms the sub-soil. In cross-sections (Nos. I and II only)

no structure was detected in the rubble body of the bank, but in all three sections, and at a point east of section I (as also near the eastern postern), a built outer face was exposed (fig. 2) at its base. This consisted of a course of massive, roughly squared blocks, attaining a length of 3 feet 3 inches, a height of 1 foot 6 inches, and a thickness of 1 foot set edgewise in the original ground surface, though seldom actually bedded in the underlying till. In places (*e.g.* in section IV) these blocks supported a course of smaller slabs, raising the total height of the wall

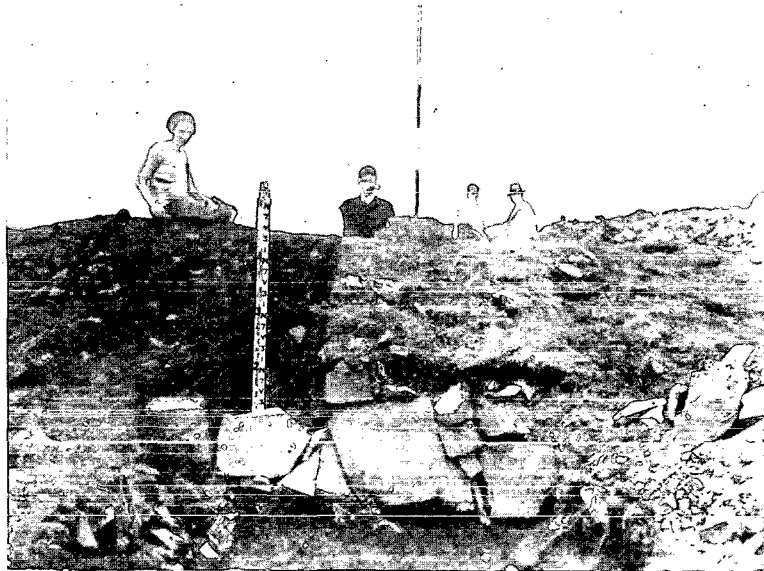


Fig. 2. West Fort : Revetment of Inner Bank in Section I.

to 2 or $2\frac{1}{2}$ feet. The wall formed a revetment supporting the clay core of the bank. There was no corresponding revetment on the inner side of the bank (at least in sections I and II, where alone it was sought).

Middle Bank has to-day in many parts a scarcely perceptible elevation above the level of the turf inside it, and seems superficially less stony than Inner Bank. It proved in fact to rise only $2\frac{1}{2}$ to 4 feet above the underlying till and to be composed of a much larger percentage of clay than Inner Bank. Stony and earthy layers alternate, a coating of rubble coming on the outside. In sections I, IIIa, and IV a line of blocks, 10 inches to 12 inches high, like a kerb, served to support the core of the rampart on the inside (fig. 3). No corresponding outer revetment was disclosed by sections I, II, or III, but such was exposed in the south-eastern segment as described below.

Outer Bank seems to be composed mainly of earth with an admixture and facing of rubble. It nowhere rises more than 3 feet above the underlying till. No structure was detected in sections I or II, but in section IV large slabs came to light at the base of the bank on both sides. From their position these may well have belonged to retaining walls that had slipped downwards towards the ditches inside and outside the bank.

Between Inner and Outer Banks comes a comparatively level space,



Fig. 3. West Fort: Kerb at base of Middle Bank in Section I.

16 to 18 feet broad on the west and south-west, but widening to 36 feet on the east. In sections I and II the till was found to be sloping gently down across this area, whereas in section IV the slope was interrupted by a ridge of rock upon which Middle Bank I rests, but here the whole space between the ramparts was not excavated. In section I a shallow excavation in the till was observed, beginning about 1 foot from the revetment of Inner Bank and extending for a distance of 7 feet. It reached a maximum depth of just over 1 foot below the point the natural surface of the till would have occupied had its slope been continuous across the space in question (fig. 1, top left). The excavation must have served rather to provide material for Inner Bank than as a defence.

The ditch was well defined between Middle and Outer Banks in sections I, II, IIIB, and IV. In section I (and probably also in IIIB) the

fosse had been cut in living rock to a depth of 3 to 4½ feet below the assumed original surface of the sub-soil, the excavation having a width of 9½ feet. The bottom of the ditch was very irregular, the rock standing up in jagged ridges with pockets between, in which water collected. In section IV (as also in II) the fosse had been dug through the till to a depth of not more than 2½ feet. It was V-shaped and 6½ feet wide. The ditch was everywhere filled with earth and rubble that had slipped in from the adjacent ramparts, but yielded no relics nor even animal bones.

WEST FORT: ENTRANCES. THE MAIN GATE.

The only conspicuous gap in Inner Bank lies on the west. To it correspond gaps in Middle and Outer Banks and an interruption in the

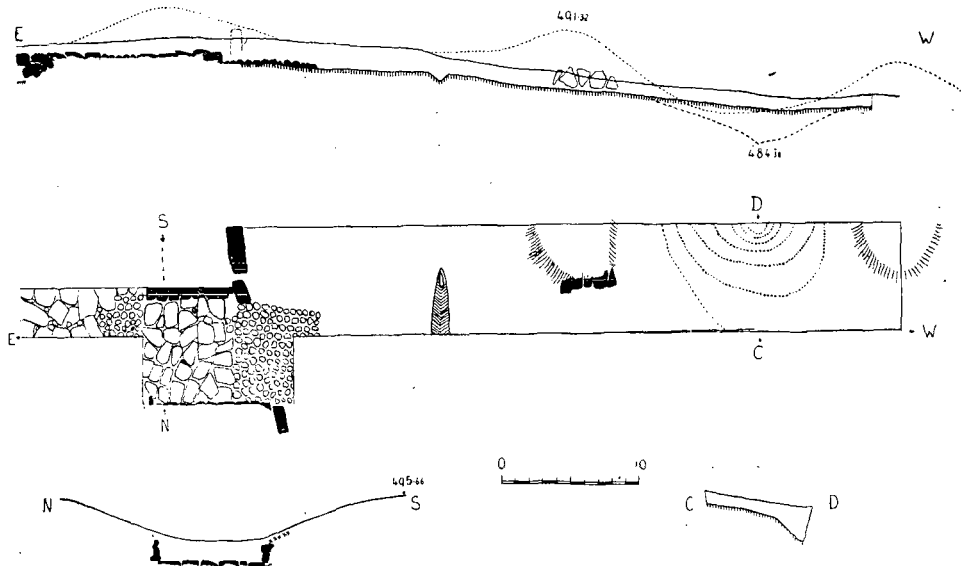


Fig. 4. Plan and Sections of Main Gate, West Fort. (Scale in feet; uppermost line denotes turf surface.)

ditch. It evidently denotes the principal gate with its axis running east and west. Unfortunately, the banks and causeway were here overgrown with stout whin-bushes, especially on the north. Nevertheless a trench, 8 feet wide, was dug westward from the centre of the gap in Inner Bank along the line of the causeway so as to expose the southern half of the entrance. Between the segments of Inner Bank the trench was widened northwards by 5 feet (fig. 4).

The blocks forming the outer revetment of Inner Bank having thus

been exposed on either side of the line of section, a gap, 7 feet wide, was discovered between them representing the actual width of the entry. On the south of the section the revetment terminated in an approximately square block, presumably constituting a jamb (visible in front of staff in fig. 5). The space between the ends of the revetment, save for a small gap immediately in front of the "jamb," was cobbled with small stones tightly packed in the till. The same cobbling extended westward along the line of section for 5 feet beyond the gap in the



Fig. 5. West Fort: Main Gate through Inner Bank.

revetment, but did not exist in front of the latter. Inside the line of the revetment the cobbling gave place to a pavement of large flat slabs (fig. 5, centre, fig. 6, in background). This pavement was only 7 feet wide, and was taken to denote the width of the gate through Inner Bank. But no really built face marked the ends of the latter on either side. The whole of the depression between the northern and southern segments of the bank that had superficially marked the entrance was found, on removing the turf, to be cumbered to a depth of nearly 18 inches with stones and earth that had presumably slid in from the ends of the bank. The only indication of the actual limits of this was an earth-fast stone projecting edgewise on the southern side of the excavation. The pavement seemed, however, to extend

inwards towards the interior of the fort, perhaps as a street. A sounding made at the eastern end of our section disclosed several layers of stout paving-slabs above the original till.

As remarked already, a cobbled pavement extended for 5 feet west of the line of the revetment of Inner Bank. Thereafter the naked till continued to slope gently downwards till after 8 feet it was interrupted by a V-shaped trench, 9 inches deep and some 18 inches wide (marked by staff in fig. 6) which extended for 5 feet south of the line of section,

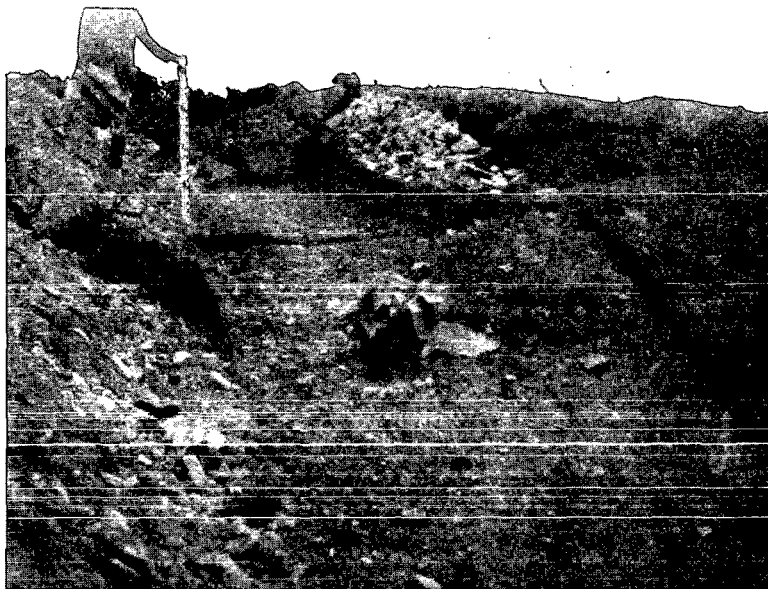


Fig. 6. West Fort: Main Gate through Middle Bank.

and for an unknown distance north thereof, where no excavation was made. It may have been designed to take some movable obstacle.

No pavement was found between the segments of Middle Bank, nor was the usual line of kerbstones noted on its inner side. On the other hand, a regular line of five stones on end, 12 inches to 15 inches high, marked the line of the gate through Middle Bank on the south (fig. 6).

The causeway across outer ditch was clearly revealed. On the line of section the gentle slope of the till continued without interruption, but farther south the boulder-clay had been dug away so that 7 feet 6 inches south of the base-line its surface lay 2 feet 6 inches lower than on the crown of the causeway.

The gap in Outer Bank was entirely overgrown by a tangle of stout

whins. A section through the bank disclosed no facing to its end or other structure, and owing to the disturbance of the soil the excavation was arrested at this point.

WEST FORT: EASTERN POSTERN.

Craw's plan (Pl. V.) shows a small gap in the eastern segment of Inner Bank near the cliff edge. Excavation here disclosed a break in the revetment wall, about 2 feet 9 inches wide, that presumably denoted a postern gate. At its south corner is a large slab lying prostrate, perhaps a facing stone fallen from the revetment. Behind this, at right angles to the revetment, a rough face extending for 3 feet 3 inches, though only built three courses high and not rising more than 1 foot above the till, marks the edge of the postern thoroughfare. The north-eastern outer jamb of the gate was a large block, 1 foot 10½ inches by 10 inches by 12 inches, lying parallel to the face just described. Behind its inner extremity no built face could be detected, but 3 feet behind the inner corner stands a large block on end, 9 inches by 10 inches and rising 2 feet 3 inches above the soil. This stone might mark an inner jamb (fig. 7). The postern thus defined was not paved in any way, its floor being merely the natural till, stripped of old humus.

The postern through Inner Bank opens on to a level space 42 feet wide. There may have been an exit through Middle Bank opposite it, for that bank does not appear to-day to run right up to the cliff edge. This may, however, be merely an incident of erosion. It seems more likely that the true exit lay on the south.

Middle Bank runs continuously at a distance of from 25 to 30 feet from the crest of Inner Bank south and east of the west gate till it appears to end in a little hump of rock opposite the south-east corner of Inner Bank. To reach this hump Middle Bank has to curve north-east in sympathy with the curvature of Inner Bank. A new segment begins on the old line south of the rock hump and itself curves round parallel to Inner Bank, but now ten feet farther away therefrom and standing on a platform of bed-rock. A trench, section III (fig. 7), was dug along a line 33° south of west to determine whether the two segments of Middle Bank were connected. No sort of bank joining the two was, however, revealed. Where the connecting wall should have run, there was indeed a natural ledge of rock, but without any superstructure. The recurring end of the western segment is, on the other hand, a genuine bank, and the rock-outcrop on which it terminates may very likely have been cut away to simplify access to the enclosed area. South-east of the outcrop, as section IIIA shows, the rock-surface rose from 494.96 feet above O.D.

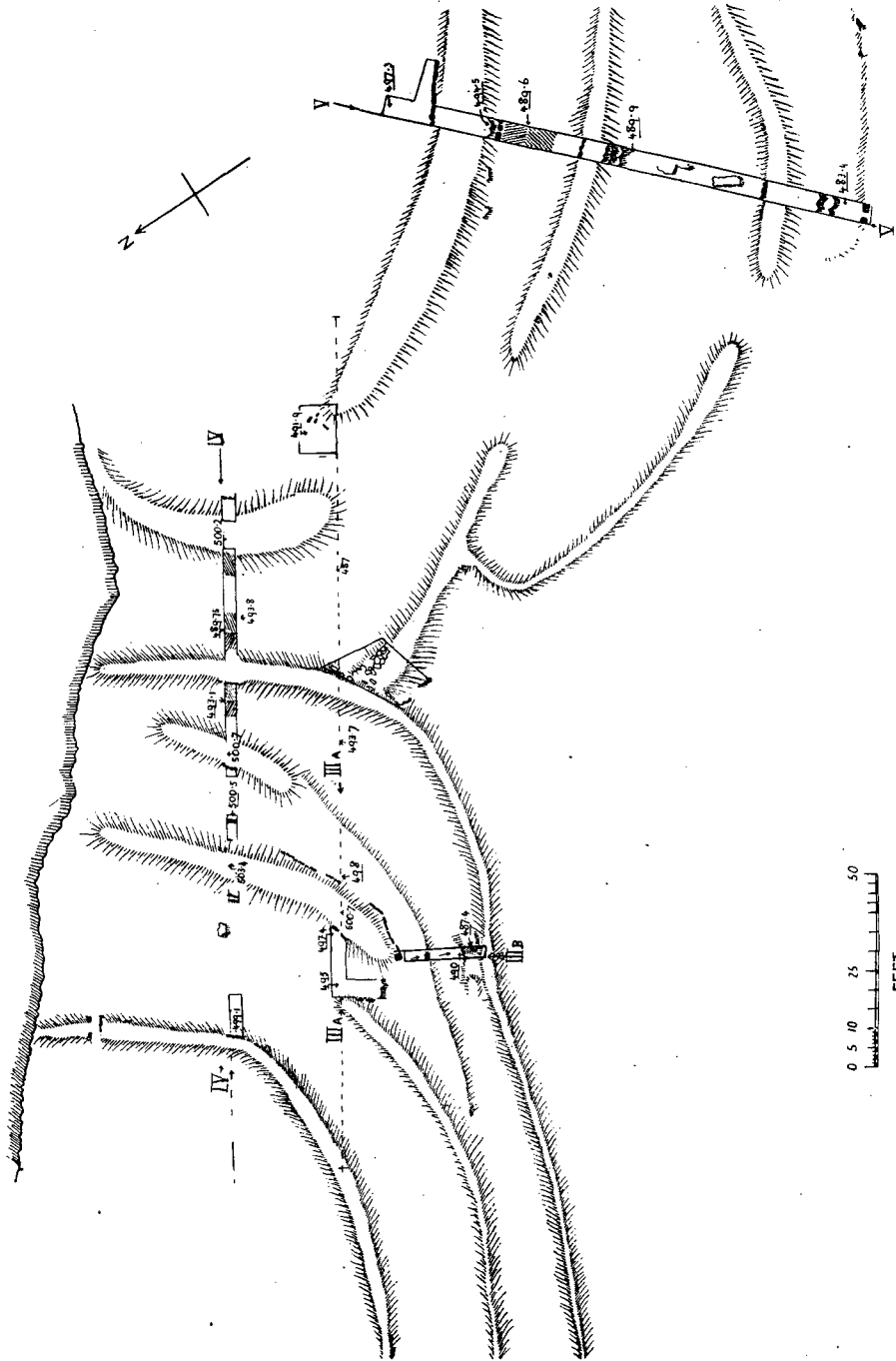


Fig. 7. Area of Sections III-V. Resurveyed by the Excavators.

at the foot of the outcrop to 497.40 feet at the crest of the ridge on which the eastern segment of Middle Bank stands (fig. 1, bottom).

Both in section IIIA and in section IV a low kerb was exposed on the concave inner side of the latter bank. Externally, Middle Bank is supported here by a well-defined revetment of large slabs on edge (the largest is 2 feet 3 inches high and 2 feet long) like the outer face of Inner Bank. This revetment, already noted by Craw, was traced on both sides of section IIIA for a distance of about 40 feet, save for two



Fig. 8. West Fort: Revetment of Middle Bank in Section IIIA.

gaps respectively 3 feet 9 inches and 7 feet 8 inches wide (fig. 8). It terminates on the south in a massive square block which seems to mark also the end of the eastern segment of Middle Bank.

South-west of this point Craw's plan shows an interruption in the ditch which would denote an entrance causeway if the gap in Middle Bank just described be regarded as a postern. The area in question was overgrown with whins and bracken. These were removed and section IIIB was dug along the crest of the supposed causeway. It was found that the rock-surface, covered in patches by thin layers of till, descended in ledges from 494.32 feet above O.D. at the base of terminal stone in east segment of Middle Bank to 489.14 feet on the neck of the causeway, 19 feet away. The causeway was a spur of the rock left intact across the line of inner ditch and there covered with a thin layer of undisturbed

till. Beyond the neck the rock itself rose again and the turf on the crest of Outer Bank stood 490.36 feet above O.D., so that the bank clearly ran across the end of the causeway. On the other hand, undisturbed till was found on the surface of the causeway; 2 feet east of its neck the layer of till is missing and the solid rock has been cut through to a depth of $1\frac{1}{4}$ foot or more to form the ditch. We must then admit that there was originally a spur of living rock projecting from the hill at this point, but that this spur was deliberately left intact and utilised as a causeway across the ditch to correspond to the gap in Middle Bank, interpreted as a postern. It will be noticed from fig. 7 that Outer Bank curves in slightly on either side to the head of the causeway although no gap in the bank is visible.

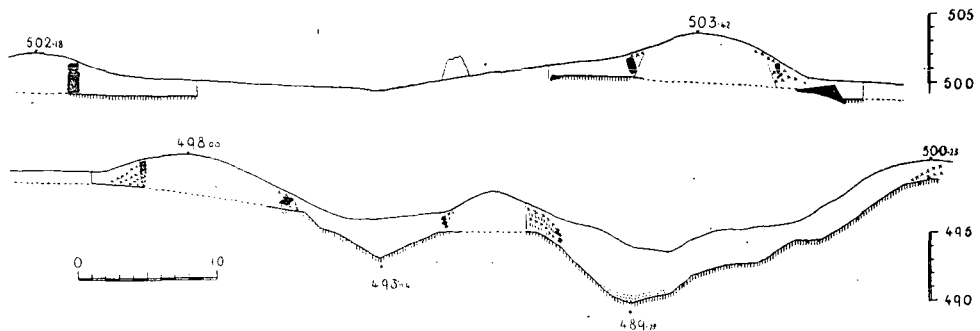


Fig. 9. Section IV. (Scale in feet; uppermost line denotes turf surface.)

Even west of the causeway the ditch had been continuing in an easterly direction when the western segment of Middle Bank had already turned to the north-east, as remarked on p. 159. The resumed eastern segment of the same bank stands even at its western end 5 or 6 feet back from the brink of the ditch, and this distance is soon increased to 15 feet by the rapid north-easterly trend of Middle Bank I. Sections III and III B had demonstrated that only a rocky ledge but no second bank bordered the ditch on its inner side. Even on the line of section III B no real bank is observable on the inner margin of the ditch, the turf sloping continuously down from the base of the revetment of Middle Bank I. So far, therefore, there was merely a platform between the bank and the ditch. North-east of section III A, however, the inner brim of the ditch is crowned by the quite formidable work known as Middle Bank II. This seems to have been cast up to protect the fort on the east, where the natural slope of the ground had been reduced preparatory to the reascent to the eastern peak of Tun Law. Middle Bank II stands upon a ridge of rock

and is composed largely of rather small size rubble, like a scree. In section IV a sort of inner breastwork of stones, each about 8 inches high, was exposed above over 1 foot of such rubble some 3 feet inside the apparent crest of the rampart (fig. 9). Externally there were traces of a retaining wall supporting the rubble on the edge of the ditch.

N.B.—The section in fig. 9 has been divided for convenience in reproduction, though it represents a single continuous line.

HUT-CIRCLES IN WEST FORT.

Ten hut-circles are observable within the ramparts of West Fort, none were found in East Fort, where the dimples near the cliff edge on the north-west were later proved to conceal only apparently natural irregularities in the bed-rock.

The circles lie for the most part close under the Inner Bank, the most sheltered position in the fort. Of these, seven lay east of the western entrance and have been numbered in order from the entrance (see fig. 1).

The following objects were found in this fort:—

No.	Object.	Place of Finding.
1	Sherds	Cell off Hut 5.
3	Round stone	" " " "
4	Bit of bronze wire	Hut 5, floor. "
5	Pottery goblet	" "
8	Stone bowl or socket	" "
9	Miniature goblet	" "
11	Fragment of rotary quern	" "
6	Enamelled bronze brooch	" "
13	Sherds	" "
15	" (black)	" "
16	" (rim)	" "
17	Stone whorl	" "
38	Hone	" "
20	Sherds	" under pavement.
23	"	" behind cell.
19	"	Outside door of Hut 2.
25, 26	"	" "
28	"	Under " wall of " Hut 2.

HUT-CIRCLE No. 5.

(Nos. in square brackets refer to Finds List.)

The well-marked hut-circle (No. 5 on the general plan), which lay immediately within the inner rampart on the line chosen for sectioning the earthworks (section I), was first selected for investigation. Its interior dimensions were 16 feet by 20 feet. Before deturfing it had

the appearance of a shallow saucer with little sign of down slope on its outer side. Circles 4 and 6 flanked it closely to either side, while

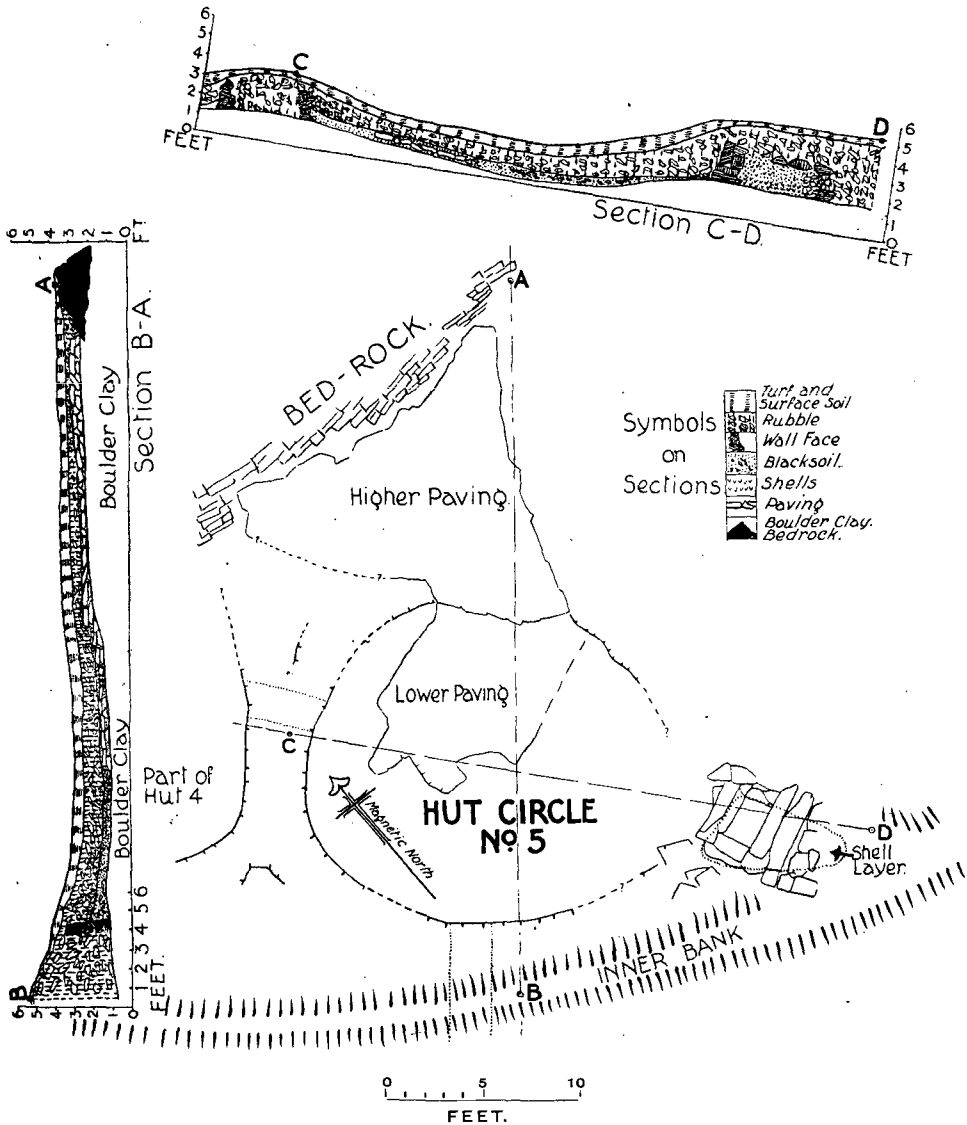


Fig. 10. Plan and Sections of Hut-Circles.

a hummock of bed-rock outcropped about 15 feet to the north. Beneath the turf and surface soil the entire floor was covered with broken

rock-fragments of fairly small size (averaging 12 inches by 9 inches by 6 inches) mixed with loose dark soil penetrated by root fibres. This loose material was removed to a depth of about 2 feet within the circle, so that traces of the inner retaining wall were exposed. A number of sherds of black ware and an ox tooth were found in this rubble, and loose soil at various parts in the circle [10, 13, 18]. The wall was clear for only short distances of a yard or two at disconnected parts of the circumference (see fig. 10).



Fig. 11. Cell at south-east end of Circle 5.

In working outwards to find traces of the hut wall adjacent to the rampart and in the section tangential to it on the east a number of large rock slabs were uncovered and found to be roughly built up and arranged to form a cell (fig. 11). The lower forward blocks lay on compacted dark clayey soil suggestive of a prepared floor or occupation level similar to that which was found over the greater part of the hut floor—this was later found to lie only an inch or two above the boulder-clay which sloped up from the hut floor at this point. The cell was later traced back into what had superficially appeared as the junctions of the walls of Inner Bank and of Hut-Circles 5 and 6. The over-all dimensions of the cell-like structure were: external width 3 feet 6 inches to 5 feet, internal width 2 feet, length 6 feet, height 2 feet 6 inches. Three narrow transverse slabs covered the central part of the top of

the cell, but the top at the western, *i.e.* hutward, end was found uncovered, leaving a rectangular opening filled almost to the brim with black and greasy earth. A number of bone fragments, shells, some charcoal, and two small sherds of a black ware [1, 2] were found in the first few inches. Below that a dense layer of shells [22] was uncovered. This layer of shells varied from 6 inches to 9 inches in thickness and was later found to penetrate far back along the line of the cell, and a few shells, forming a thin layer, even underlay some of the foundation stones of the cell itself. This cell, on complete excavation, gave the appearance of having been developed from a cavity dug out of the earthen bank forming the hut wall. The irregular distribution of the shells suggests that a shell dump preceded the erection of the walling stones which were necessitated by the accumulation of material during occupation. Half of a small bronze ring, 0.7 inch in diameter and of semicircular cross-section 0.07 inch in diameter, with a sherd of a brown ware [23], were found at the back of the large, outer corner stone at the south-west end of the cell.

A layer of dark finely-compacted greasy soil was found, on removal of the rubble, covering the surface of the south quadrant of the circle. Stones of rather smaller size than in the rubble were abundant at this level. They were interbedded with and projected through the black soil. In places they were sufficiently closely packed to suggest a former cobbling; at the northern end a rim or lug sherd of black ware was found in black soil *underneath* this apparent cobbling [20].

To the north-east of the cell clear traces of hut-walling were recovered, and against this the black soil layer deepened to form an area extending over about 2 feet 6 inches and running out about 2 feet from the wall. At its thickest it was approximately 9 inches deep, but thinned out rapidly in all directions. Beneath it undisturbed boulder-clay was uncovered. A few firmly bedded stones and a doubtful trace of burnt clay were found, but no clear evidence of a hearth was observed here.

From this pocket of black soil a round piece of stone (?), a piece of curved bronze wire, 1.9 inch long, and of rectangular cross-section less than 0.1 inch square [4], and a considerable fragment of a pedestalled goblet, 2.6 inches high, together with a number of other sherds, were found [5]. Fragments of the same or a similar goblet were also found by riddling in the superficial earth and rubble in the western half of the circle. A miniature goblet of the same form, less than 1 inch high [9], was later found about 2 feet to the south-west of this patch.

A somewhat similar but smaller pocket of deep-black soil was found adjacent to the circle wall on the south-west, *i.e.* immediately within

Inner Bank (X on fig. 12). Here close against the walling were found a cupped-stone slab (? dish, mortar or post socket) [8], and about a foot away, in two pieces, a harp-shaped bronze fibula with enamel inlay [6]. A number of charcoal fragments were found in this patch in close juxtaposition to the fibula and elsewhere. Sherds of black ware and charcoal fragments were found at several points at the very base of this black soil, that is, on the surface of the boulder-clay which



Fig. 12. View of south corner of Circle 5, showing Inner Wall of Hut-Circle built against Inner Bank.

was exposed beneath it. This boulder-clay surface was evidently produced by excavation on the part of the builders of the hut, for no old humus layer covered it, and section levelling indicated that it had a definitely saucer-shaped profile.

In extending the removal of the black soil over the north-eastern part of the hut-circle a rough paving was uncovered. It was formed of irregularly shaped slabs approaching on an average one square foot in size; gaps were filled with a packing of smaller stones which appear to have been placed there intentionally. The surface was in general very even and sloped up towards the north-east. This paving extended over the area indicated in the plan and ended irregularly towards the centre as shown; no stray slabs which might have completed

a more regular edge were traceable (see fig. 13). The greasy black soil extended over this paving and in the interstices between the slabs. It was later found that there was underneath the greater part of this paving a thin but definite layer of the black soil, an inch or so in depth, which yielded a few sherds and charcoal fragments. Beneath this the boulder-clay was encountered. The paving was exposed north-eastwards until, along a line approximating to a shallow chord on the circumference



Fig. 13. View of north-east Quadrant of Circle 5, showing probable entrance and junction of lower and higher paving.

of the circle, the edge of a second paving was found. This lay 6 to 8 inches higher than the first. No signs of a walling were found in this section and the higher paving ran on northwards for about 15 feet, where it abutted on an outcrop of bed-rock which was covered only by a thin layer of turf. The line of outcrop ran westwards, and the triangular area thus enclosed (see fig. 10) was found to be covered with this higher paving. The black-soil layer was considerably thinner and more patchy on this higher paving, but a segment of a quern [11] was found about a foot in from its south-west margin. When later a portion of this paving was removed (producing the trench in which the staff stands in fig. 13), a thin black-soil layer was found between it and the boulder-clay and bed-rock. In the south-west half, two sherds fitting together, two white pebbles, and numerous charcoal fragments [24] were found

close together in this layer. Several sherds and a stone whorl were later obtained by riddling from the black soil covering the boulder-clay and paving of the hut floor [15, 16, 17].

The walls of the hut-circle when the floor had been excavated to the level of the paving or the boulder-clay stood at an average height of 2 feet rising occasionally to 2 feet 6 inches, the core consisted of loose brownish earth and stones. The great accumulation of loose stones all over the floor of the circle indicates that the walls originally



Fig. 14. View from Inner Bank of Walling separating Circles 4 and 5.

stood considerably higher. The inner face, consisting of rather loosely packed large slab-like stones set horizontally, had a slight batter; it was, however, well preserved for only short distances, being indicated elsewhere by an accumulation of large stones which overlay the black soil and had therefore fallen in with the decay of the structure. No definite entrance could be observed, but the absence of large stones or an accumulation of rubble at the south-west edge of the higher paving appeared to indicate that, as would be expected, it lay there. Traces of outer walling were only found on the north-western side. There was no sign of it on the rampart side, and the homogeneity of the rubble core which ran uninterruptedly from the inner hut face right through Inner Bank indicated that the hut was built very shortly after the rampart. Since the rampart was no wider at this point it is

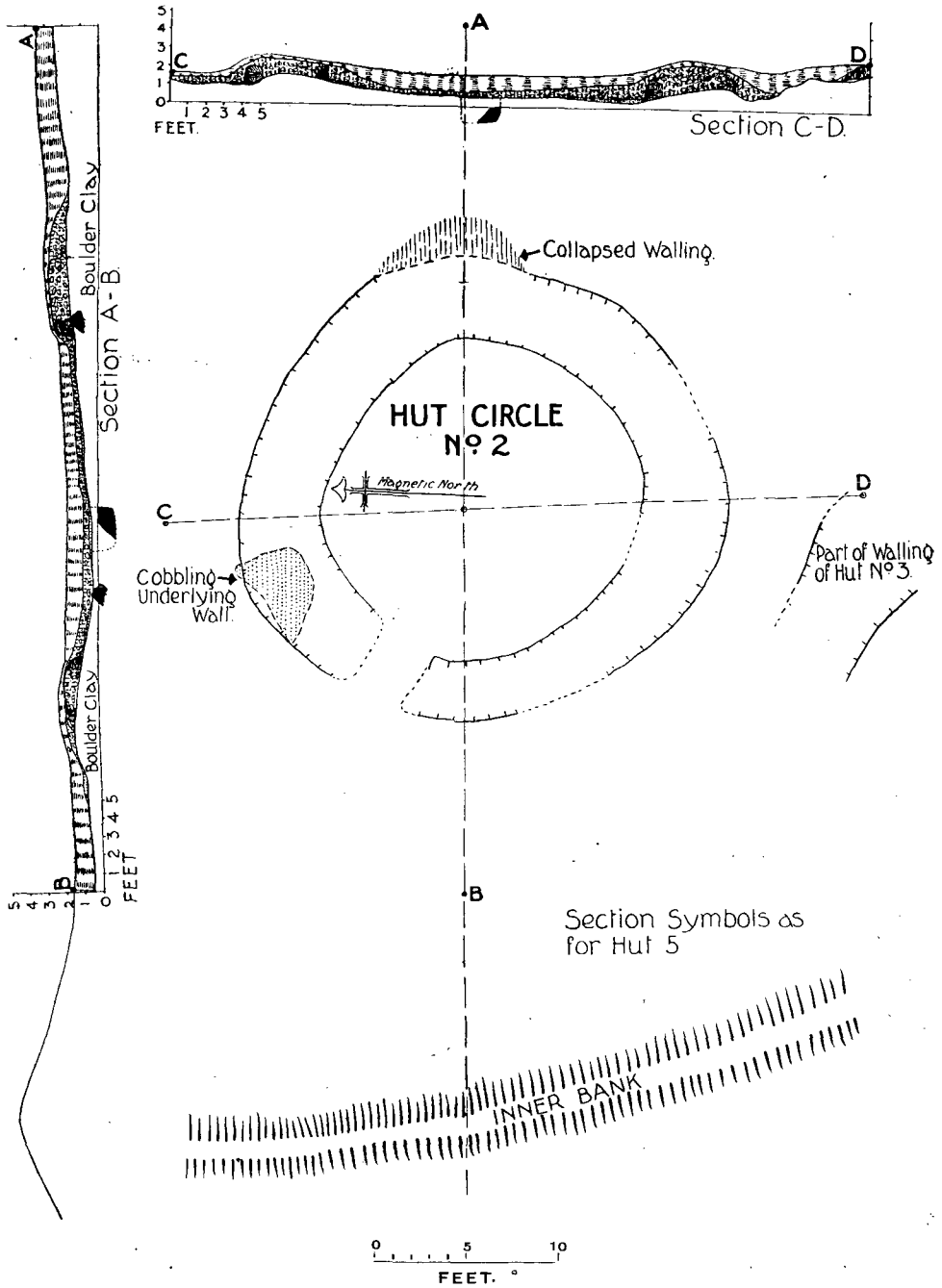


Fig. 15. Plan and Sections of Hut-Circle 2.

probable that the Inner Bank face served as hut wall in the section where the two ran parallel (fig. 12). The form of the hut was only roughly circular; it was, as it were, compressed against the rampart, so that its N.W.-S.E. axis was noticeably the longer.

Hut-circles 4 and 6 had been built closely adjacent to 5 (fig. 14). The inner wall of No. 4 was tangential to that of No. 5 on the latter's north-west side. Here a single walling faced on either side sufficed for the two huts. A fragment of charred wood [14] was uncovered at the



Fig. 16. Hut-Circle 2 after deturfing Western Half.

foot of the inner face of the wall of Hut 4 at this point. The inner faces of the two huts diverged in both directions, and the outer walls of both circles could be traced for short distances (see figs. 10 and 14). No clear evidence of post-holes, daub or a built hearth were found in this circle.

HUT-CIRCLE No. 2.

This hut lay farther in from Inner Bank; at the closest its outer wall was 20 feet from the inner side. It was in consequence unaffected by the decay of the rampart which may have reduced part of the walling and contributed to the interior rubble fill of Hut No. 5.

The plan was a fairly regular circle with an interior diameter of 17 to 18 feet surrounded by a walling about 4 feet thick (see fig. 17).

In the first instance the west half of the hut was alone deturfed and excavated in layers in order to obtain a clear section along its N.-S. axis. The lower courses of the inner face of the wall were found fairly well preserved throughout, except for a space of about 3 feet 6 inches on the south, where the absence of face or dense rubble suggested the position of the original entrance. A depression in the walling had been noticeable at this point before deturfing. On the southern inner side of the entrance was found a large squarish block which may have framed the doorway, but elsewhere its margins were vague. An outer face to the hut-walling was also clearly traced over the greater part of the circumference. This was, however, less well preserved and had collapsed badly for some distance in the east, where the distinction between rubble core and fallen walling was vague and uncertain (along section A, B). The walling had been built up on the surface of the boulder-clay. There was clear evidence of shallow excavation of the boulder-clay both within the wall, *i.e.* to form the hut floor and also on the outer face, forming a shallow ditch which may have served to prevent water-logging of the hut (see sections, fig. 15). The standing wall faces were formed with horizontally packed slabs whose size tended to increase downwards. Very little batter was found on the faces where they were well preserved. Where best preserved, the wall faces rose about 1 foot 6 inches above the boulder-clay. They were lower and less massive than those of Circle 5. Thin patches of dense black soil were found beneath the rubble within the circle. A number of closely packed small stones were found embedded in this soil at various points, but they formed no continuous cover and no traces of paving were found. Near the centre of the circle the boulder-clay was hard, dry, and reddish, giving the appearance of having been burnt. Since, however, there was no considerable accumulation of black soil or charcoal above it and, as shown by a pit dug here, the reddish colour continued down nearly 2 feet, to bed-rock, it is doubtful whether it had any connection with a hearth. During the uncovering of the floor and walls the following were found: a number of small black-ware sherds about 6 inches outside the middle of the probable entrance [19]; a sherd of black ware and a piece of animal bone 6 inches below the turf in the rubble on the outer part of the walling in the south on line of section CD [25]; two black-ware sherds in similar position just outside the wall on the opposite side of the circle [26]; a similar sherd wedged among the fallen stones on the outer side of the wall about 1 foot 6 inches from the above.

Traces of a thick layer of dark black soil mixed with small stones were found just outside the wall to the north. This appeared to underlie

the wall, a section of which was therefore removed. A quadrilateral area of apparent cobbling about 5 feet long and 3 feet wide and 4 inches to 9 inches deep was thus exposed (see fig. 15). It lay almost entirely below the hut wall. From it a large number of sherds and some charcoal fragments were obtained [28, i-ix]. The ware was similar to the black pottery previously obtained, but the level itself must certainly have been formed before the construction of the hut.

This hut, although well preserved and affording in consequence

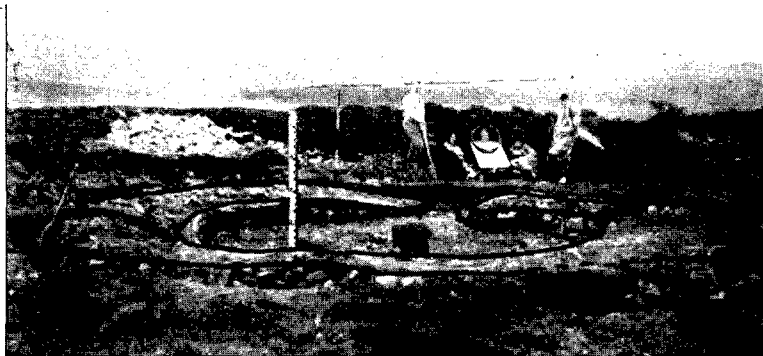


Fig. 17. Hut-Circle 2 from the east.

valuable indications of constructional methods, yielded far less evidence of occupation than No. 5. The layer of black soil on the floor was considerably thinner (see sections in figs. 10 and 15), and it will be noted that all the finds were recovered outside or underlying the hut walls. The hut in part overlapped an earlier floor to which the sub-mural cobbling belonged.

EAST FORT: THE DEFENCES.

As already explained, the defences of the East Fort are placed some way below the eastern summit of Tun Law where the ground is relatively more level and so less defensible than the slopes of the western peak. An Inner Bank encircles the whole fort, even curving round along the present edge of the cliff on the north-west. The

principal ditch is placed immediately at the foot of Inner Bank. Outside it comes a Middle Bank which joins on to Outer Bank of West Fort on the north-west. Finally the gentle slope towards Coldingham Loch on the south is protected by an Outer Bank. This runs from the cliff edge, south-east of the summit, right across the hollow separating the two peaks, and then curves back to join Middle Bank, 40 feet before that joins Outer Bank of West Fort. East of the gap in Outer Bank that seems to mark the gate there are indications of a ditch cut in the rock outside the bank. The nature of these defences could only be tested by a single trench, 8 feet wide (section V), at right angles to Middle Bank, running south-west from a point 276½ feet from

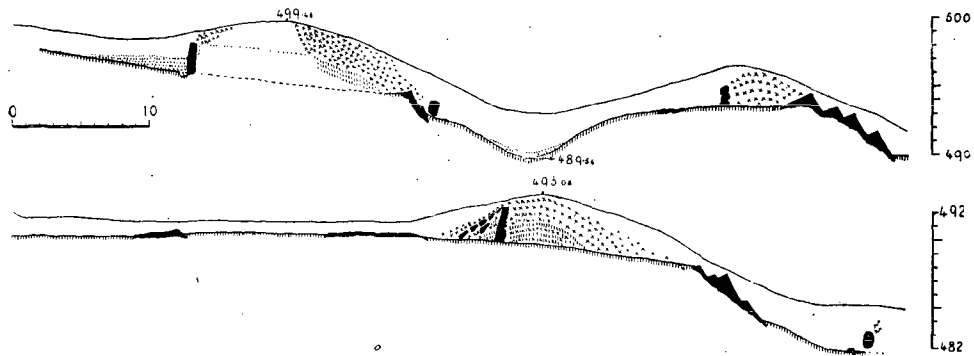


Fig. 18. Section V. (Scale in feet.)

Inner Bank, West Fort, on the line of section IIIA and cutting Inner Bank of East Fort at a point 80 feet from the gate through it. Inner Bank and the ditch outside it were, of course, also cut by section IV which started in West Fort. *N.B.*—Section V in fig. 18 has been divided for convenience in reproduction, but really represents one continuous line.

Inner Bank seems to have been piled up on the edge of a rocky ledge, outcrops of which still project above the turf at two points between the line of section and the gate. On the line of section V the crest of the rampart seems to rise less than 2 feet above the level of the turf immediately inside it. That is, however, due to a considerable accumulation of silt, washed down from the slopes above, at its base on the inside. Actually Inner Bank here rises even to-day nearly 5 feet above the underlying till. It consists of rubble, still 2 feet thick at the crest, over a core of tightly packed clay which looks suspiciously like undisturbed till. Internally the rampart is supported by a very carefully built revetment wall, consisting of big slabs on

edge supporting two or three courses of smaller ones. At the best-preserved point exposed, the wall still stands 3 feet 3 inches high and is formed of four courses of blocks with a filling of smaller stones between the second and third. Most of the blocks have been roughly squared and the joints between them have been plugged with clay, corners being packed with smaller stones. A layer of black fatty soil covered the original turf surface immediately inside this revetment. At the base of the wall the black deposit was 10 to 12 inches thick,



Fig. 19. East Fort: Inner Bank, Inner Wall.

but farther in it rapidly thinned out. Many broken animal bones and several pots sherds were recovered from this deposit. In the hope of increasing our stock of relics and to expose more of the wall, section V was extended 12 feet to the south-east along the base of the revetment (fig. 19).

Traces of an outer kerb were uncovered on the edge of the ditch 17 feet from the internal revetment. The range of large blocks here exposed (fig. 20) had, however, probably slipped outwards down the precipitous rocky scarp of the ditch; in any case, ledges of native rock were found behind and above the blocks. It is uncertain to what extent this rock scarp was a natural feature or the result of quarrying. The highest ridge under Inner Bank lay 494.25 feet above O.D.; on the

opposite side of the ditch, 17 feet away, living rock was again exposed at a level of 493 feet. On the other hand, the walls of the intervening ditch consisted of apparently intact till on which a black archaeological deposit rested directly. It would, therefore, seem likely that there had been two parallel ridges here in preglacial times, the space between



Fig. 20. East Fort : Inner Bank (outer face).

having been subsequently filled with boulder clay. On this assumption the ditch would have been nearly 3 feet deep and 11 feet wide. In fig. 20 the range pole is fixed in the bottom of the ditch. It was filled with rubble from the banks, under which came a very thin deposit of black soil containing animal bones but no artifacts. A similar deposit was found at the bottom of this ditch in section IV.

What must here be called Middle Bank stands upon the outer of the parallel ridges of rock just mentioned. It consists of earth and rubble, but is strengthened on its inner side by a core or kerb of big stones rather carelessly thrown together. Beyond the bank there is a steep

scarp of rock, the level of the rock-surface falling in stages from 494.25 feet above O.D. to less than 490 feet.

Below this rock-face, the till, interrupted by low rock outcrops, runs almost dead level, 490 feet above O.D., for 33 feet. It was covered by less than 1 foot of sterile soil. This plain is interrupted by Outer Bank,

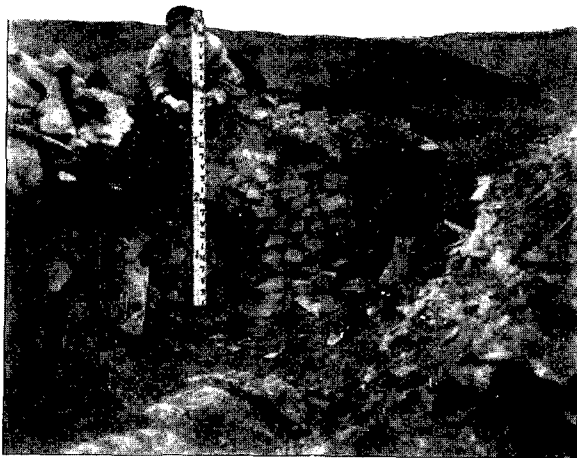


Fig. 21. Outer Wall of East Fort (inner face).

which has an apparent elevation of nearly 2 feet. It consists mainly of rubble, but is stiffened near its centre by a built wall standing 2 feet 6 inches high from the till. The wall is only one course thick and is faced on the inside only. It leans against a packing of rubble, piled 2 feet deep over a core of rammed clay and stones. A similar packing was noted against the foot of the wall on its inner side. Over this was a layer of large slabs, tilted as if they had fallen from the crest of the wall, but more probably so placed to support it (fig. 21).

The level surface of till runs under the wall of Outer Bank with a scarcely perceptible dip for a further 15 feet. Thereafter rock outcrops

and falls away in 5 feet from 487.94 feet to 483.50 feet above O.D. This scarp was probably natural, as from its foot the till continues to slope away very gently. On the line of section this slope was interrupted by a row of large boulders supporting an Outermost Bank of rubble, not superficially visible. Ten to thirty feet east from the line of section V, however, the kerb of Outermost Bank is replaced by a counterscarp quarried in living rock. Here, in fact, there exists an obvious rock-cut outer ditch outside and at the foot of Outer Bank. This is indicated on Craw's plan (Pl. V.). Outermost Bank is presumably a substitute for Outer Ditch at a point where the ground surface did not permit of a suitable excavation.

The entrance to East Fort evidently lay in the hollow between the two peaks of Tun Law. Judging from surface indications, the gates through the three banks are not in line as they are in West Fort. Only at the gap through Inner Bank could the entrances be excavated. A strip eastward from the apparent centre of the gap was uncovered here. No paving or unambiguous internal structure was exposed. The earth-fast stones shown in fig. 7 may, however, represent respectively the inner cheek and the west end of the internal revetment of Inner Bank.

As noted by Professor Forde, the apparent hut-circles near the cliff in East Fort proved on deturfing to be merely natural hollows in the rock. The only relic-bed in the fort was accordingly that at the base of Inner Bank.

THE RELATIVE AGES OF THE TWO FORTS.

The relics recovered from East Fort being insufficient to determine its exact age, an attempt was made to settle its age relative to West Fort by excavation at the point where the ramparts of the two forts join. The junction occurs on the crest of the rocky ridge on which Middle Bank 2 of West Fort also stands. It is overgrown with whins and undermined by rabbit-burrows, so that the site was not promising. On removing whins, turf, and surface soil, an irregular line of loose stones of large size was exposed. These stones, following closely the apparent line of Outer Bank, West Fort, seem to belong to a coping crowning its crest. South-east of them were other large stones which might have slid down from the same bank. Nearly at right angles to these lines, we exposed another consisting of an irregular mass of tilted slabs. These seemed to follow the apparent crest of East Fort's Middle Bank, and to denote its core or crown. This ridge lay definitely at a lower level than the stones attributed to West Fort's Outer Bank. Yet in no case did fast stones of the latter overlie the core of East

Fort's wall, but there was an apparent gap in the higher line where East Fort's core abutted upon it.

On the south-west, *i.e.*, outside the line of either wall, the land slopes away quite fast, and rabbits have been particularly busy. Where the kerb of East Fort's wall might have been expected, a couple of large slabs, orientated in the appropriate direction, were actually uncovered. These stones, however, were not earth-fast, but might have slipped. Stones certainly derived from West Fort's Outer Bank actually overlay these, but outside the line they were supposed to have marked, other stones, undoubtedly derived from West Fort's bank, were found at a lower level. Still farther south, a rocky ridge that may have been quarried continues the line attributed to East Fort's Middle Bank.

These facts are regrettably ambiguous. The circumstances that stones attributable to West Fort form a line at a higher level than the core of East Fort's bank, and that slipped stones from West Fort overlie stones supposed to have slipped down from East Fort's bank, would seem to favour the priority of the latter. But in the one case we have a core, in the other a crown. The former cannot be discovered running under the latter, but rather stops short on its line. That is compatible with the view that East Fort's bank, which is here climbing up along a rocky ridge, was continued just up to the line of West Fort's bank and no further. In that case stones from the latter might easily have slipped down over the core of East Fort's bank, when both structures were disintegrating. In other words, the bank of East Fort would have been joined on to a pre-existing bank of West Fort. This seems, perhaps, the most reasonable deduction and, of course, implies the priority of West Fort. The builders of East Fort would have taken the outworks of the older structure for their second line of rampart continuing their own inner ditch at its base right down to the cliff edge as section IV showed.

RELICS.

The forts, though undoubtedly inhabited, yielded regrettably few remains. In West Fort, relics were discovered only in the black soil on the floor of Hut-circle 5 and in the adjoining cell and under or just outside the walls of Hut-circle 2. There was no archæological deposit in the ditch, and that in the ditch of East Fort yielded only animal bones. The only relics from East Fort were collected from the deposit of black soil against the inner side of Inner Ditch.

The Pottery from both forts was all coarse, hand-made, and undecorated. Most of the fragments were small and lacked any features indicative of age. The ware was generally dirty black to buff-red

externally, the core being always dark in West Fort. Only the cup, shown in fig. 22, *a*, from East Fort is burnt throughout to a reddish buff, but the bowl, [28*a*] from West Fort, is dark brown throughout.

The rims did not as a rule show signs of special treatment and none were definitely everted. Still the rim [19], found outside the door of Hut-circle 2, is over half an inch broad and carefully flattened down.

Two groups of forms are recognisable: open bowl-like dishes which may in some cases have had round bottoms are represented by three fragments from West Fort, two from beneath the wall of Circle 2,

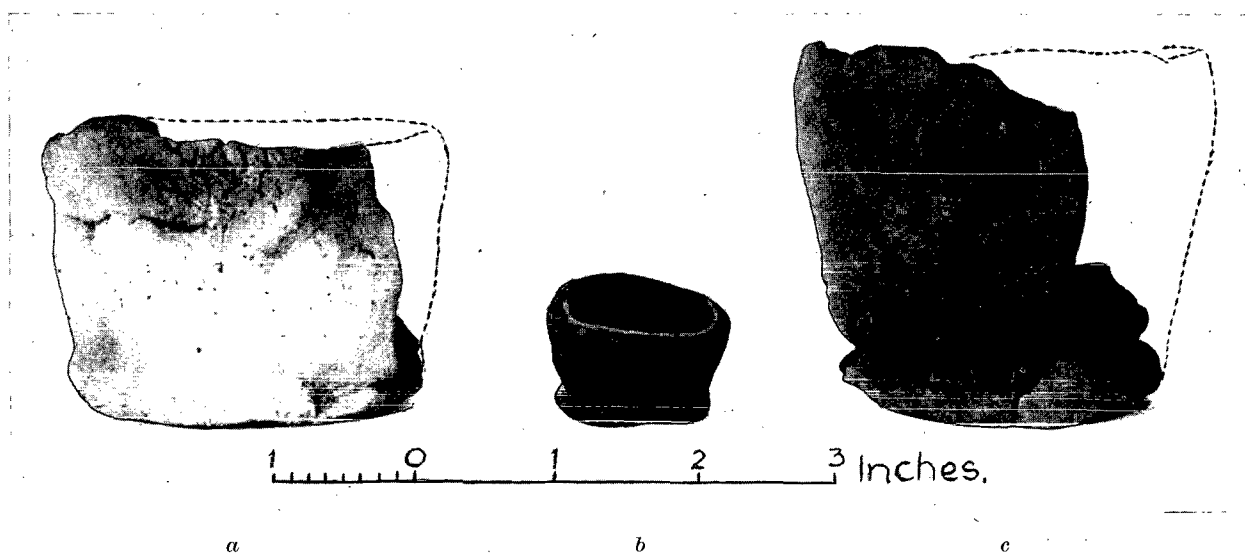


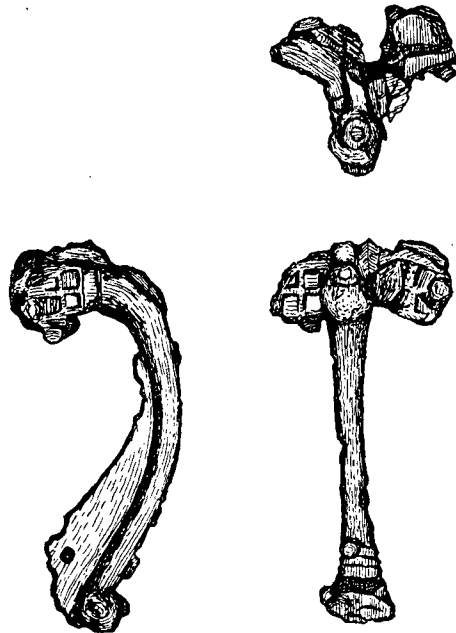
Fig. 22. Pottery.

and one from the black earth in Circle 5. The latter belonged to a coarse black-ware vessel, with a rim diameter of about 6.10 inches. One sherd from Circle 2 had formed part of a dish, 7.30 inches wide and about 3.75 inches deep, of very coarse dark-brown ware. This type of dish does not seem common and its occurrence, both on the floor of Circle 5 and under the walls of Circle 2, suggests that the erection of the latter, obviously after the formation of the sub-mural deposit, did not long precede the abandonment of the site.

The second group is characterised by flat splayed bases. Some must have belonged to vessels of considerable size; one fragment found beneath the wall of Hut-circle 2 has a wall half an inch thick. The only shape that can be restored is, however, the small goblet. The most perfect is the dark-faced vessel from Circle 5, West Fort (fig. 22, *c*). It stands 2.60

inches high and measures about 2.60 inches across the rim and 2.20 to 2.40 inches across the base. The complete miniature goblet (fig. 22, *b*) found on the opposite side of the same circle, though less than 1 inch in height, obviously belongs to precisely the same class. Close parallels are offered by a goblet from the top level at Traprain Law,¹ and another in the Society's Museum from Ghegan Rock, Seacliff, East Lothian.² The red-ware cup from East Fort must be assigned to the same family on account of its splayed base, though it is relatively wider than the foregoing; its diameter is 2.70 inches at the mouth and 2.55 inches at the base, while it stands only 2.10 inches high (fig. 22, *a*).

Metal was surprisingly rare. The most important object was the bronze fibula (fig. 23) found in Hut-circle 5 as described by Professor Forde. It was, unfortunately, much corroded, distorted by heat, and broken when found, so that an exact reconstruction is no longer possible. It is harp-shaped with a T-head, belonging apparently to the "head-stud" type (group Q of Collingwood's classification). The foot is imperfect and the massive bow much corroded, so that it cannot be asserted with absolute confidence that the back was not decorated, though on the available evidence that seems very unlikely. The catch-plate is continued as a decreasing flange projecting from the underside of the bow to the latter's highest point; it is traversed near the foot by a small rivet. The T-shaped head had been badly bent and was broken at the base of the bow, apparently along the line of the notch in which the pin once worked. It has been possible to re-attach the broken portion which is, however, both incomplete and deformed. Still the edges of the notch are visible on both sections. On both sections there remain traces of a tube or groove, 2 mm. in diameter, that once ran the whole length of the T. Though the underside of the head has been broken off along the line of this tube, enough remains to show that the tube was only the socket for a single



H.E.K.J.

Fig. 23. Bronze Brooch. (Nat. Size.)

¹ *Proceedings*, vol. lvii. p. 196.² *Ibid.*, vol. viii. p. 375.

strand of wire, presumably a pivot, and not the bed of a spring-coil. The brooch, therefore, may most plausibly be assigned to the hinged group.

Along the head of the bow, immediately above the notch, projects a narrow crest (incomplete), evidently the usual reminiscence of the hook which held in place the cord of the earlier spring brooches. Above the crest is an eye of blue enamel in a circular frame below overhanging scale mouldings. This is the "stud" that gives its name to the type of fibula. On the upper surface of the T-piece may be seen, on the better preserved side, a square divided into four lattices, filled alternately with red and blue enamel panes. The whole frame seems to be of silver let into the bronze or else to be silvered over.

The brooch seems later than those from the Lamberton Moor hoard,¹ but closely resembles two from Traprain found respectively in the bottom and top levels.² Messrs Edwards, Fox, and Hawkes agree that the later half of the second century A.D. is the upper limit for our specimen.

A short strip of bronze wire, flat at one end and square at the other, was found in the black earth at the east side of Hut-circle 5 and a segment of a bronze ring of semicircular section with beading on the convex exterior in the adjacent cell.

Miscellaneous relics.—From West Fort:

Stone spindle whorl (diameter 1·80 inch)—Hut-circle 5.

Hone—Hut-circle 5.

Segment of upper stone of rotary quern, 6·50 inches in diameter and 1·80 inch thick—Hut-circle 5.

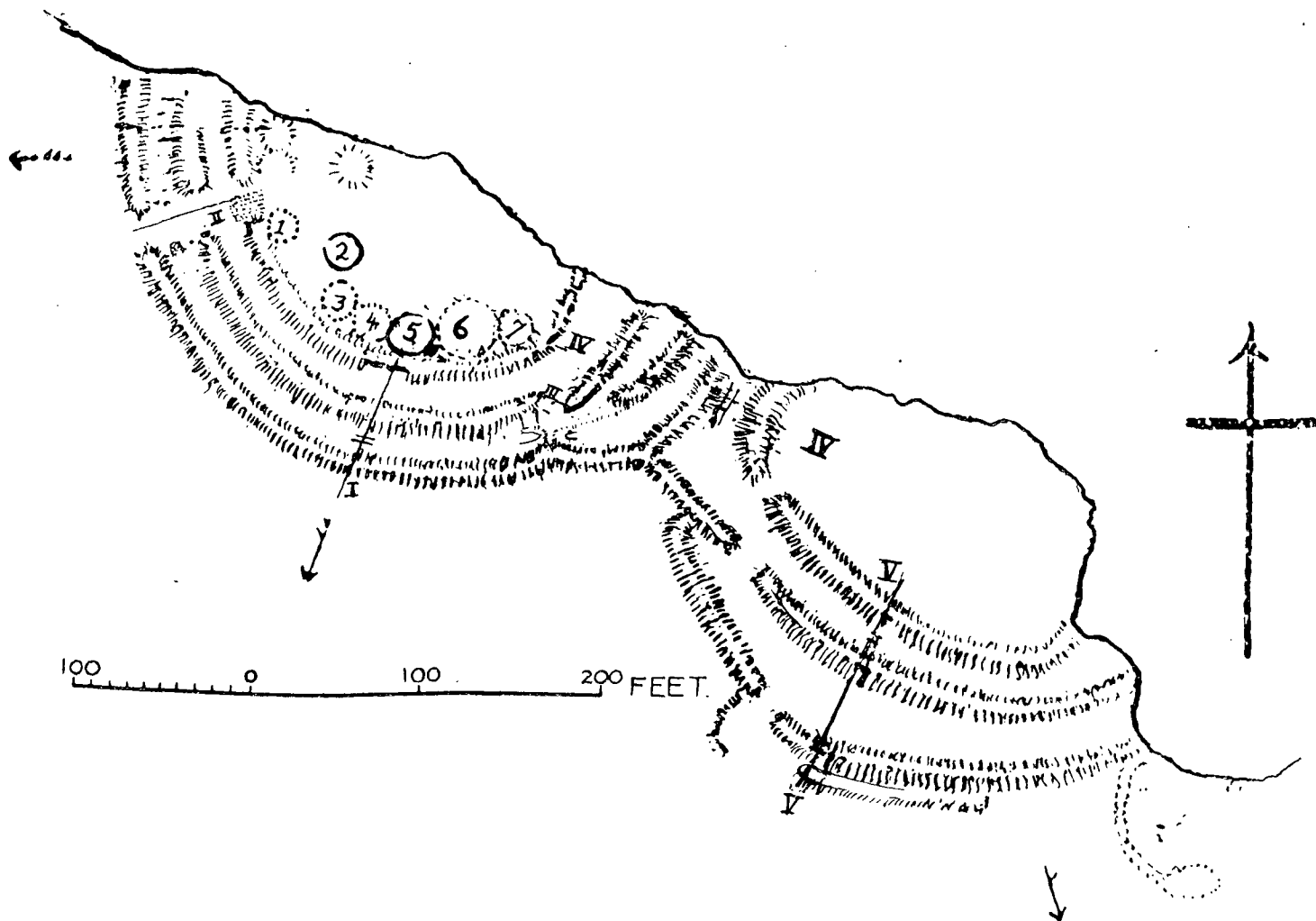
Irregular block of stone about 5 inches by 4 inches square with a circular hollow 3 inches in diameter, pecked out in the centre—a door socket or small mortar—Hut-circle 5.

From East Fort: clay button or playing man, flat on one side and convex on the other, measuring about 1 inch across, and a similar object of bone.

The complete absence of iron (a horseshoe, mediæval or modern, was, however, found just under the turf in the entrance to West Fort), Roman pottery, coins, glass or shale ornaments and bone implements, is very surprising. The relics, unfortunately, give no clue as to the relative ages of the two forts. On the strength of the pottery and brooch, West Fort at least must have been occupied at some date between A.D. 150 and A.D. 400.

¹ *Proceedings*, vol. xxxix. p. 367.

² *Ibid.*, vol. xlix. p. 167, figs. 23 (7) and 24 (3).



Forts at Earn's Heugh, after Plan by J. H. Craw.

Professor V. GORDON CHILDE and Professor C. DARYLL FORDE.

PLATE V.

[To face page 182.

EXCAVATIONS IN TWO FORTS AT EARN'S HEUGH. 183

The Animal Bones, all in a very fragmentary state, from the ditch of East Fort and from Hut-circle 5 in West Fort were kindly examined by Mr Bryner Jones of the Welsh Department of Agriculture. He identified ox and sheep or goat.

The Wood Ash and Charcoal were examined by Mr M. Y. Orr of the Royal Botanic Garden, through the courtesy of the Regius Keeper. He was able to recognise oak, hazel, birch, and perhaps willow.