

## I.

NOTES ON THE BRITISH FORT ON CASTLE LAW, AT FORGANDENNY,  
PERTHSHIRE, PARTIALLY EXCAVATED DURING THE SUMMER OF  
1892. BY EDWIN WESTON BELL, F.S.A. SCOT. (PLATES I., II.)

Castle Law of Coltucher is 900 feet above sea-level, and situated on a spur of the Ochils, about 2 miles south of the village of Forgandenny, and  $2\frac{1}{2}$  miles south-west of the Bridge of Earn.

For a fort situation nothing could be better, commanding as it does one of middle Scotland's most charming landscapes. Away eastward the eye wanders over the valley of Lower Strathearn. There, near to the Round Tower of Abernethy, the Earn, serpent-like, loses itself in the Tay. Yonder in the distance the Tay Bridge is distinctly seen, and beyond stand out in clear outline Broughty Castle and the Buddon Lighthouse. The whole finely undulating line of the Sidlaws stretches before you: there again backed by the outflanks of the Grampian range—the "Dorsum Britanniae" of prehistoric days. Away in the north rises the distant summit of Schiehallion; while westwards the whole valley of the Upper Earn unveils itself. The range of hills in the Crieff and Callander districts forms a noble western boundary. The southern view is blocked by the Ochil range with the western Fife "Lomond" and "Norman's Law" towering above his fellows.

From the local distribution of hill-forts, we find that Castle Law

Fort occupies a central position, being surrounded by numerous other forts, supposed "Roman" camps and "Roman" roads.

At Abernethy we have the Castle Law Hill-Fort, 600 feet high, commanding a grand military situation. This fort from all appearance has not been of large area, but judging from the amount of ruin, must have been of great strength. It has outworks and a lake with mound on the west side. Then there are the remains of forts on Moncrieff Hill, Dunbarnie, Dunbules, Rossie Law in the Parish of Dunning; and  $1\frac{1}{2}$  miles from Castle Law to the south-west on Ardargie Hill, there are traces of a so-called "Roman" camp, but the plough has rendered them difficult to determine. On the south side of the Earn we have an ancient "Causeway" at Gask; and a supposed "Roman Outpost" at Mayfield. In point of fact, all along the ridge of the Ochils on summit after summit we find vestiges of the strongholds of the ancient inhabitants.

Topographically, Castle Law is bounded on the immediate east by Glenearn Hill, which shuts out its view to a great extent on the east-south-east, also a hill burn or "Deich," which separates the one hill from the other. This "Deich" dips to a great depth, and may have been made use of for access to the fort, and from its rocky nature would form a strong protection against advancing foes.

To the south of the hill is a deep hollow, that seems to have been a lake at one time, receiving its supplies from the accumulating waters from the hills around, and from the springs which are still plentiful in the immediate neighbourhood. This lake-like depression stretches round to the westward. From this point rises another hill in the same range (marked on the Ordnance Survey Map 1028 feet), beyond a valley, and then another spur or two to the west. On the north is the valley of Lower Strathearn, and all the various advantages for a military position, which have been enumerated, must have presented themselves much as we see them to the military skill of the ancient warriors who had chosen this particular site for one of their strongholds.

Looking at the surface summit of the hill, no definite conclusion could be arrived at in regard to the ruins which lay buried under the moss-strewn stones, and grass-covered debris. We know that little can be

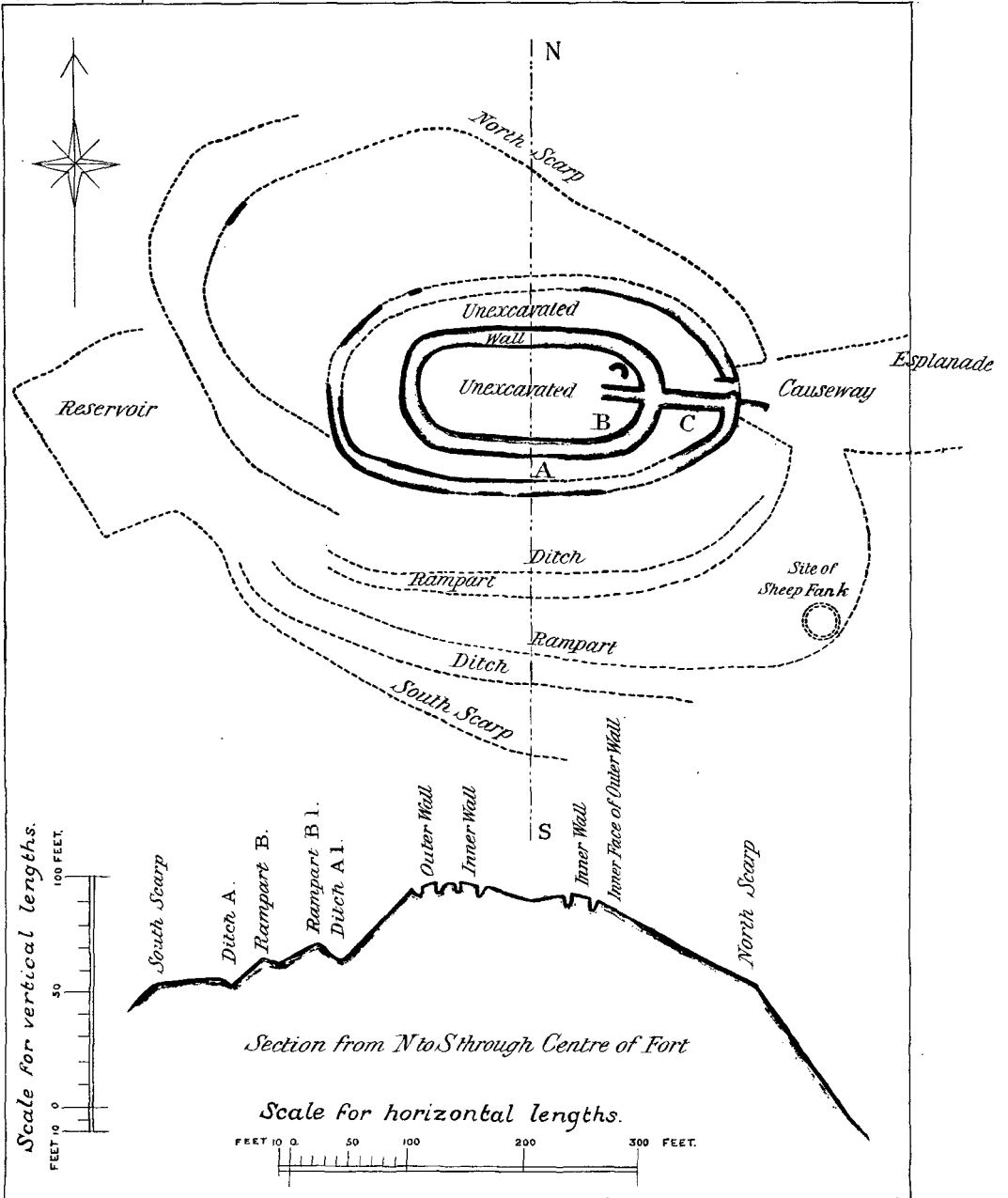
gained from mere surface knowledge, and Dr David Christison's well-timed remarks on this subject are conclusive—"No really satisfactory progress can be made until surface observations have been supplemented by excavations."

Having obtained the necessary permission and the hearty co-operation of the proprietor of the ground, C. Lindsay Wood, Esq. of Freeland, we commenced operations. The first puzzle which presented itself was, Where can the entrance have been? After careful examination we concluded that the east side, protected as we have seen by Glenearn Hill, was the most likely. Our supposition was correct. We started therefore 40 feet from what we found afterwards to be the real entrance. Having removed the turf transversely to the entrance, and at a short distance from the surface, we came upon a rough causeway. This we followed westwards and inwards to the fort.

We then came to the outer entrance represented by a wall of masonry 25 feet long and 2 feet 6 inches high on the south side; and on the north by only 5 feet of masonry 3 feet high. This was the only trace of placed stones on that side, the remaining wall being composed of stones and earth, and presenting no appearance of the same careful building as the south side. This was built in front of the rampart on the south side, the wall forming the north scarp.

The causeway still continued till it came to the entrance proper, and here we were met by a wall across the entrance, and over this the causeway went. This we discovered by lifting some of the blocks; and we found that the outer wall went right across the entrance as if meant for a support to the causeway.

But before entering into details respecting the entrance and interior, I purpose giving some idea of the area of the fort and its outworks. Transversely from north to south it measures 514 feet; while from the entrance on the east side to the rampart on the west it measures 358 feet. The south side being more exposed, greater care has been given for its protection, as will be seen from the remaining outworks which, from the southern scarp to the wall of the fort, consist of a ditch, a rampart, another rampart, and a ditch beyond, or two ramparts facing each other with a ditch on either side, and the southern scarp.



FORT ON CASTLE LAW, FORGANDENNY, PERTHSHIRE.

Ground Plan & Section.

To the south-west, lying between Castle Law and a hill immediately to the west, are remains of a mound with three sides, terminating in the south scarp. Through this mound passes an old roadway leading to the "Commonty" of Forgendenny. The first or outer ditch begins on the south-west from a natural rising of the hill, and terminates in a declivity of the hill in the south-east. The first or outer rampart commences on the same natural rising and joins the yet unexcavated esplanade on the east. The second rampart begins 25 feet north of the first rampart, and ends widening out on the south-east to 113 feet, where it joins the fort at the entrance on the outside wall of the fort proper. Then there is the inner or nearest ditch to the fort, 7 feet from the rampart side, and 29 feet 6 inches from the fort side, owing to a rising of the hill on the south flank: so if we look at the vertical section of this part of the fort and outwork, we see on the south side from the foundation of outer wall to the foot of nearest ditch to be 29 feet 6 inches; while from the foot of the same ditch to the top of the rampart it is 6 feet 6 inches. Then an undulation of 8 feet till we come to the first or outer rampart, this being 12 feet above the foot of the outer ditch, and dipping gradually from the top of the ditch to the south side till it ends in the south scarp, where it descends to the lake-looking hollow. These measurements are taken as the ground at present presents itself, but after a section has been made, in all probability they will differ, as there must be a considerable quantity of débris in the fosses. On the south-east side and close to the rampart we found a circular construction of stones, marked on the plan as "Sheep Fank," which requires further examination.

The outermost wall on the west and north-west joins on to the rocky face of the hill. On the north, where the contour of the hill renders the possibility of an attack less formidable, the fort is protected by only one wall, which commences at the north of the entrance at a breadth of 30½ feet, and widens out to the north-west to 147 feet, and joins on to the outer wall of fort at the south-west. This wall is constructed of boulder work loosely put together, the whole length being about 800 feet.

We now come to the fort proper, which consists of outer and inner elliptically-shaped walls. The outside wall measures in circumference 867 feet, being 456 feet from east to west, while from north to south it

measures 190 feet. The whole area, deducting the thickness of the walls, is about  $75\frac{1}{2}$  poles, the distance between the walls being 16 feet, but varying to 52. [See the plan on Plate I.]

The inner wall enclosing the inmost area is in circumference 668 feet; the major axis measures 228 feet, and the minor 65 feet, the space area measuring  $47\frac{1}{2}$  poles. The thickness of the outer wall is 15 feet, varying in height from 1 foot to 5 feet. The inner wall is 18 feet in breadth, but at some places it may be more; this is owing to the quantity of ruin pressing on it and causing it to bulge out. The height of the remaining wall varies from 2 feet to 6 feet. From the interior area running eastward to the inner wall, we found another wall at right angles to the inner side of the inner wall, yet not in any way bound to it. This wall measures 11 feet in width at the foundation, and rises in an inclined plane for 3 feet, where it meets the inner wall at a breadth of 14 feet. The inner wall here intercepts it, but it begins again and runs on to the entrance for 57 feet, meeting and joining with the inside of the outer wall, at a width of 16 feet and height of 4 feet 6 inches on the north side, and 3 feet on the south side. Whether this wall, with this inclined plane to the interior, has been used as a means of access and egress to the inner and outer battlements still remains in obscurity.

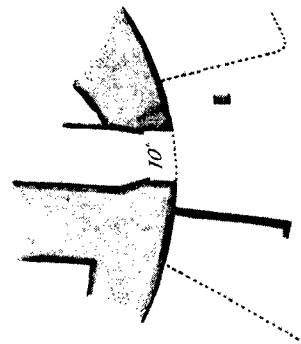
No indication of any passage-way or entrance from the outer area is shown anywhere round the wall enclosing the central area. This may be accounted for by supposing that the entrance may have been higher up than the remaining wall masonry, which by devastation has been brought below the entrance level.

The outside entrance from the outer wall inward to the gateway, a distance of  $5\frac{1}{2}$  feet, is 10 feet wide; at the gateway it narrows to 9 feet, and 6 feet inside the gateway it widens out to 11 feet, then for 16 feet it has a uniform breadth of  $11\frac{1}{4}$  feet, where the north entrance wall dips into the hill. The south entrance wall runs inward as already described. On the north only 4 feet 6 inches of masonry is left, and probably this is the outer casing of a broad wall. This has yet to be excavated.

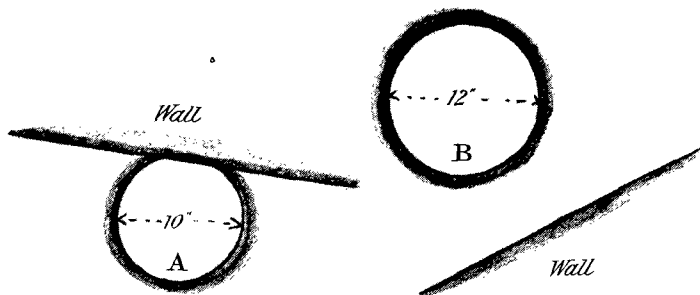
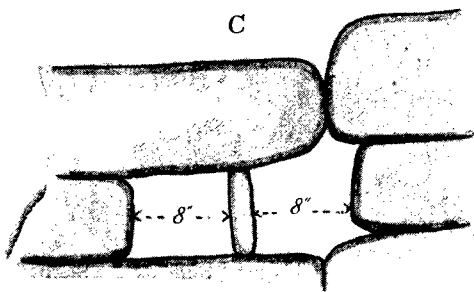
In excavating we came across no opening indicating chambers or guard-rooms either on one side or other. The "bar holes" on either side of the doorway, however, are still in good preservation.



*View of Entrance from the east.*



*Plan of Entrance.*



FORT ON CASTLE LAW, FORGANDENNY, PERTHSHIRE

*Details of Structure.*

The walls throughout the entire fort are built of large stonework, comprising in each wall an outer and inner casing, while the intervening space is filled with coarse rubble of a moderate size, no earth or gravel being mixed with it. It is noticeable in the outer walls that the stones forming the casing are larger on the east side than on the south-west side; and that the interior wall is more substantially built than the outer wall. The stones forming the walls appear to have been brought chiefly from the valley below. The hill itself is composed largely of several varieties of amygdaloid interspersed with fragments of porphyry in which the felspar crystals are largely converted into kaolin. Several other varieties of igneous rocks of the basalt type are observed among the débris on the summit, and these also are probably local. But the great blocks of stone of which the walls of the fort are built are, with very few exceptions, composed of the well-known grey sandstone, so characteristic of the Lower Old Red, which must have been transported from some locality in the Old Red Sandstone area surrounding the hill. The exceptions mentioned refer to a few blocks of a red sandstone which is probably Upper Old Red, which also occurs in the neighbourhood. The igneous rocks of the hill seem also to have been utilised to some extent in the building, since many fragments are found among the débris showing signs of vitrification, some being completely fused into a black glass resembling obsidian.

To the north-east of the inner wall are the remains of an old semi-circular lime-built watch-tower constructed on the ruins by one of the late Lords Ruthven of Freeland. Some few years ago this stood at a height of 4 feet, but now only the foundation remains. At irregular intervals round the outside and inside of the inner wall of the fort there are curious openings in the masonry, and this occurs most noticeably on the south-east side. One of these is shown in diagram C, Plate II., the openings measuring 8 by 7 inches. They consist generally of an upright stone between two courses of masonry, and in one case the upper and lower courses are divided by two upright stones. Charcoal was found in and around these wall openings. Whether they had been used as sockets to support beams of wood cannot be clearly ascertained until a careful section be made through the walls, beginning at



the top, and working cautiously down. In two instances, at the foundation of the wall in which these wall openings occur are two circular pits hewn out of the rock, the one at A measuring 10 inches, and the other at B, 12 inches in diameter and 18 inches in depth. Such pits have not, I think, been found in any hill-fort previous to this. The pits and wall-spaces are not immediately opposite each other, the one being on the inside of the wall, the other at the outside of the same wall, and at a distance of 62 feet. In the pits there was found a dark-coloured clay mixed with the white ashes of wood.

A certain amount of clay was found nearly all over at the foundation of the walls, and in some instances was mixed with charcoal and charcoal ashes. Charcoal was met with in all directions, mixed with the *débris*, but in smaller quantities as compared with that at the foundation of the walls. It generally began about from 1 foot to 18 inches above the foundation of the walls, and in some places was in large fragments; but nothing in the shape of a beam was noticeable either at the walls or between the walls. In making a section in the interior we came across a layer of charcoal evidently indicating a beam about 6 or 8 inches broad, but so decayed that it would not lift. Fragments of this when examined were found to be oak. The presence of so much charcoal indicates the consumption by fire of a large quantity of wood at one time or another; and noticeable too is the amount of rock which occurs throughout, but especially at certain parts, where the heat had evidently been very great. Though the presence of fire is not traceable as having direct connection with the curious wall openings which have been referred to, yet the stones in the *débris* opposite one of these openings are very much burned, which seems to indicate that the fire had occurred after, or during, the falling of the fort. But for the full investigation of this point, we must wait with patience till cross-sections have been made in the walls, which will enable us to ascertain whether beams of wood had been built into or through the walls. This charcoal throughout was intermingled with bones of animals. Of the bones found generally some were burned and others not, while those surrounded by stones were better preserved than those in the *débris*. Many bones were found close to the walls, and even jammed in between

the courses of masonry. Large quantities of teeth were also found intermixed with the bones and charcoal. The bones most frequently found were those of oxen, but there were also bones of swine (probably wild boar) and of the wild roe-deer. No traces of human bones have been found; but what lies concealed in the interior will remain a mystery until further excavations are made. Some of the bones are no doubt of more recent date than the building of the fort, but they all have their interest as having been found in association with it. For those interested in such finds of bones, I enumerate the following:—Tusks of boar, hips of hog, tibia of hog, lower jaw and teeth of hog, humerus of hog, canine tooth with part of jaw of hog, lower jaw of ox and teeth of same, horn of ox, bones of the foot of ox, rib of ox, forearm of ox, numerous vertebræ, scapula of ox, humerus of ox, and humerus of roe-deer.

Vitrification occurred in various places, several vitrified pieces having been picked up out of the débris both inside and outside of the fort and ramparts; but there seems to have been no attempt at a general vitrification.

Re-occupation has evidently taken place, as on excavating we have come across what appears to have been secondary buildings and not of the same workmanship, but denoting a more recent era. The pottery found also points to different ages.

Among other relics the following were found:—

1. Part of a ring or bracelet of jet.
2. Stone implement with cup-shape depression.
3. Pottery—(a) dark brown in colour, very rude, with no sign of ornament; (b) a red coloured bit, better fired, with still no attempt at ornament; (c) a light brown pottery, harder in substance and glazed. All these very fragmentary.
4. A shaped disc of red sandstone.
5. Whetstones—(a) right-hand whetstone; (b) oblong whetstone; (c) small whetstone, very thin.
6. Three water-rolled stones with abraded ends showing work.
7. A whorl 1 inch in diameter, slightly damaged on the surface.

8. Small stone seemingly used as a polisher.
9. Three cup-marked stones—(a) with fifteen cup-marks, one of them large and fourteen small; (b) eleven cup-marks on one side with four on the other—a red sandstone; (c) one very well shaped; (d) a large stone with cup-markings. This last was found on the surface, moss-grown and face downwards; the others were found among the débris during the excavation of the walls.

To theorise on incomplete data relating to structures such as this only tends to stimulate imaginary ideas which may prove destructive to future facts and to minimise the honest work of investigation. Let me here, therefore, close this paper with the expression of a hope that all lovers of archæology will lend a helping hand to further this work, already so well begun in other parts of Scotland, so that at no distant date we may be able to present to those who come after us an exhaustive survey of all the forts and duns of Scotland, and thus become the pioneers of a complete history of the earliest Scottish times.

I am indebted to Professor A. M. Paterson of University College, Dundee, for the trouble he took in determining the bones for me. I would at the same time express thanks to Mr Henderson of Dunning for superintending the works in my absence; to the workmen one and all, who showed at all times a lively interest and worked with a will; also to Mr J. H. Cunningham, C.E., the Treasurer of the Society, for making the plans; and last, but not least, to Principal Peterson and Professor M'Cormick of University College, Dundee, for their kindly help on various occasions.