

I.

THE FORTS, 'CAMPS,' AND OTHER FIELD-WORKS OF PERTH, FORFAR,
AND KINCARDINE. BY D. CHRISTISON, M.D., SECRETARY.

Having at various times visited and made rough plans of nearly all the forts in this large district, and being privileged to use the plans and descriptions of the few that I have not seen, but which have already been published in our *Proceedings* by Mr Alex. Hutcheson,¹ I am thus able to give a tolerably exhaustive account of the whole.

The course of my investigations naturally led me to see also a good many of the 'Roman Camps' of the district, and of the obscure field-works, the precise nature of which cannot be ascertained without excavating them—if then. Of the latter, I have attempted to give some account, and I have referred briefly to others of the same kind that I have not seen, classing them all in a group by themselves; but I have not described the 'Roman Camps,' because the subject is so large as to require separate treatment.

The map (Plate I.) shows the general elevation of the land by the contour lines of 500 and 1000 feet above the sea, and the principal streams. To avoid overcrowding with names, the only inhabited places entered are the larger towns and such of the villages, generally of great antiquity, as are near the forts and serve as guides to their position. Besides the forts and the obscure field-works noticed in the text, the 'Roman Camps,' although undescribed for the reason just given, have been introduced on the map to give some additional value to it as a record of the fortified works of the district. All the works either have their special designation attached, when they have one, or are named after the hill on which they stand, or the nearest inhabited place. The different classes are distinguished by the marks explained on the map,

¹ "Notes on the Stone Circle near Kenmore, and of some Hill Forts in the neighbourhood of Aberfeldy, Perthshire," by Alexander Hutcheson, F.S.A., Architect, Broughty Ferry, *Proc. S. A. Scot.*, xxiii. 356.

and as the objects in each class are taken in the text from the south and west northward and eastward, their place on the map should be the more easily found. Certain obscure works in Glenlyon, which lie beyond the map, are given from the Ordnance Survey on a separate little chart (fig. 55).

My plans are oriented with the north to the top of the Figures, and they are on the scale of 120 ft. to the inch, unless when otherwise stated. The profiles are usually on twice that scale. All heights of ramparts, etc., are perpendicular heights.

A few contractions of words that occur frequently are used in the text. Most of these are easily enough understood, and all that seem to require explanation are O.M. for Ordnance Map ; O.S.A. and N.S.A. for the Old and New Statistical Accounts of Scotland.

GENERAL DESCRIPTION OF THE DISTRICT.

The district dealt with nearly corresponds with the South Pictland of Skene, including the vaguely defined Fortrenn, but without Fife, which is reluctantly excluded, as I have no personal knowledge of its forts. It is a district well defined by nature as well as by the isolation of its forts from other groups. On the east it is bounded by the North Sea. On the north, a wide elevated tract destitute of forts divides it from the Aberdeenshire group. On the west, the Grampians, also entirely without forts, limit the united groups of Angus and the Mearns, and if in Perthshire the forts do creep up the Highland glens it is only to find themselves cut off by a vast space from groups further west. Finally, on the south, a tongue of high tableland projecting from the Highlands towards the Ochils opposite Gleneagles, and the Ochils running thence to the Firth of Tay, form a well marked boundary.

Besides towns of importance at the present day, or in some instances long before it, the district contains Abernethy, Forteviot, and Scone, the now decayed capitals of the Picts, besides Dundurn, the probable chief stronghold of Fortrenn, also many villages whose great antiquity is testified

by the carved stones still existing at them, and although the number of forts is comparatively small, there is no other district in Scotland that contains so great a proportion of large and important examples.

The country people, particularly of Angus and Mearns, although allocated in our military system to Highland regiments, appeared to me to be of a marked Lowland type in character, manners, and appearance; and the very small proportion of Highland names on the tombstones in the churchyards, even those on the Highland border, indicates a small admixture of blood with the neighbouring Celts. I have been furnished by my friend Dr Beddoe with the following note on this subject:—

“*Surnames in Laurencekirk Kirkyard.*—Every tombstone was counted separately, but four or five identical surnames on one tombstone were reckoned as only one.

		Per cent.
Surnames: Highland,	20	8·5
„ Border or Lothian,	10	4·2
„ Doubtful,	14	6·
„ Others,	192	81·3

Some of those stated to be of doubtful origin may have been really Highland ones; the ‘others’ were of various Lowland Scotch types, or common to England and the Scotch Lowlands. The inference I draw is that there has not been much immigration from the Highlands since this part of the country was Saxonised.

In illustration, I may add the following facts extracted from the Parish Registers of Muthill in Perthshire:—

Out of 200 entries of names in the years 1697 to 1700, 83, or 41·5 per cent., were of Highland type. But in 200 names taken from the Registers of the period between 1845 and 1886, only 32, or 16 per cent., were distinctly Highland. In this case the change of population seems to have been due to a current setting in from the Lowlands, or perhaps partly from the Highland families moving into the large towns.”

The distinction of race is also strongly brought out by the difference

in the colour of hair and eyes, as ascertained by Dr Beddoe in observations made in 1898, but not yet published.

CLASSIFICATION.

A strictly scientific or accurate classification of objects that have suffered so much from gradual decay, and so much more from the ruthless hand of man, and which are often so overgrown with turf and weeds that without excavation we cannot even be sure whether they are of earth or stone, is obviously impossible. The best I can make of it is to divide the objects under the following chief heads :—

- I. Earthworks and probable Earthworks.
- II. Stone Forts and probable Stone Forts.
- III. Sites of Forts with little or no remains.
- IV. Dubious works or sites, marked Fort or Camp on the O.M.
- V. Dubious works or sites, possibly military, not marked Fort or Camp on the O.M.

I. EARTHWORKS AND PROBABLE EARTHWORKS.

(a) EARTHWORK RESEMBLING A TYPICAL MOTE.

1. If division of our subject be difficult, subdivision is still more so, but it may be said that only one work can be structurally classed without doubt as a Mote. This is the *Cairn Beth* of the O.M., the *Cairn Beddie*, *Caer Bed*, *Caer Beth* or *Macbeth's Castle* of the N.S.A. The true local name appears to have been Cairn Beddie, and the Caer Bed or Beth are probably interpretations to lead up to Macbeth's Castle, a title which I cannot trace to an earlier source than the N.S.A. The site is 5 m. N.E. of Perth, 700 yds. N.W. of St Martin's Church at the bottom of a gentle hollow, close to a small rill, and 250 ft. above the sea. The work is much ploughed down, but still shows the plan (fig. 1) of a typical mote with a squarish base court surrounded by a trench, the mote or mound descending on one side into the trench. The mote is now only 8 or 10 ft. high and the trench almost filled up, but the writer in the N.S.A. says that twenty-four years before he wrote, a great quantity of earth was removed, and even after his time the O.M. represents it as well preserved, the mote having a flat top 50 ft. in diameter, the base court measuring 230 by 200 ft. inside, and the trench 40 to 45 ft. in width.

(b) EARTHWORKS WITH SOME STRUCTURAL RESEMBLANCE TO MILITARY MOTES, OR WITH MOTE OR MOAT MARKED AT THEM ON THE O.M.

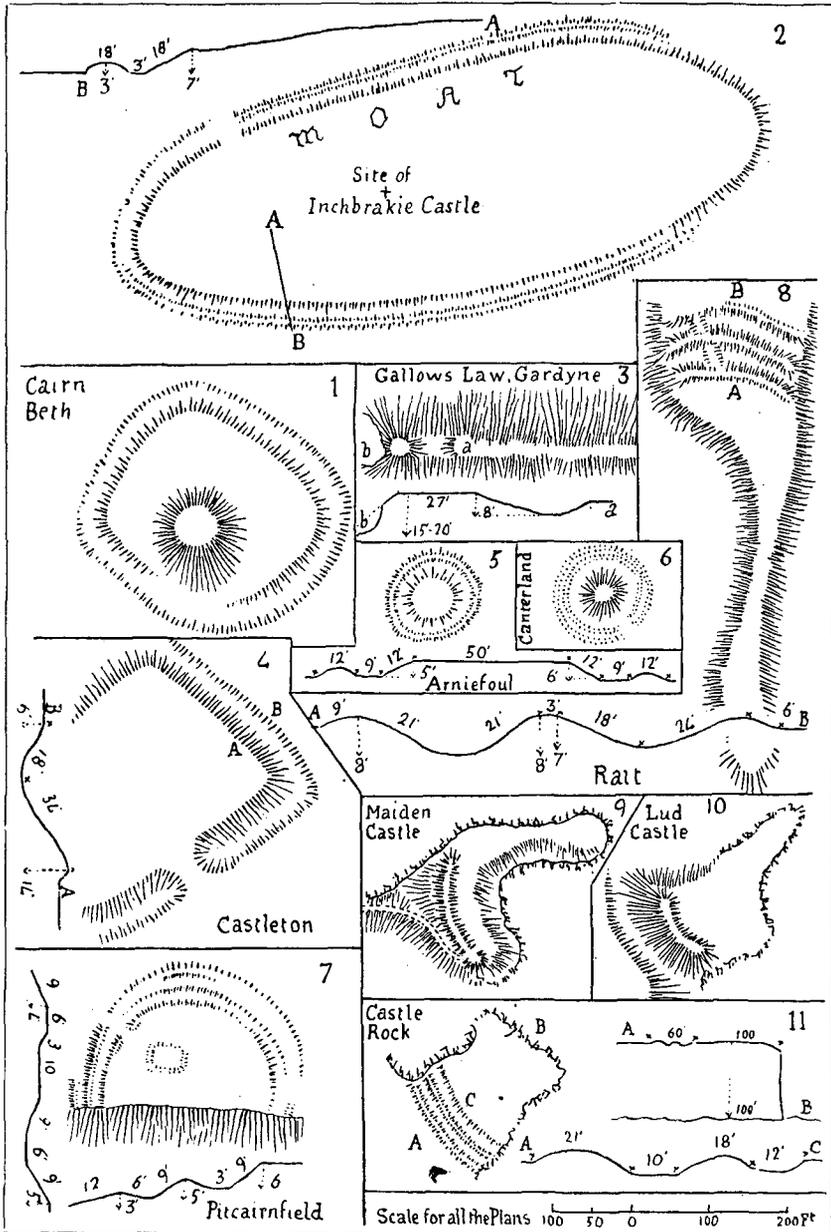
I have placed together all the works with the term *Moat* or *Mote* attached to them on the O.M. Unfortunately the term is there used in various senses, but by favour of Colonel D. A. Johnston, R.E., Director of the Survey, I am enabled to state in the following paragraphs in which cases it designates a mound, and in which merely a trench connected with a fort. The information, however, came too late to enable me to recast this unsatisfactory subdivision. In the present revision of the maps, the distinction between *Mote*, a military, generally circular eminence, and *Moat*, a trench, is to be observed, and neither term is to be used for an ordinary mound. It is questionable whether in any case in the district the term is traditional and local, or whether any of these works have been military motes. Most of them, as far as structure goes, have nearly an equal claim to the title of mote or fort.

2. *Inchbrakie*.—On a level field $2\frac{1}{2}$ m. E. of Crieff, in the grounds of Abercainey, 150 ft. above the sea, is this puzzling structure. *Moat* marked on it on the O.M., as shown in fig. 2, signifies the surrounding trench, which with its appurtenances is so drawn there as to be not quite intelligible; I have therefore, while adopting the form and dimensions of the Ordnance Plan, represented the enclosing trench, etc., so as to correspond with my section A B, which is given on a larger scale.

In form the work is a long, pretty regular oval, rather broader at the E. than the W. end, and the dimensions over all are nearly 900 by 350 ft. The structure rises gradually into a much-flattened dome, not more than 25 ft. above the level of the surrounding park, but it is pretty steeply scarped for a perpendicular height of 6 to 8 ft. down to the trench, which is only 3 ft. wide and is bounded outside by a mound 18 ft. across and 3 to 4 ft. high above both the trench and the field, so that the trench is not a dug out trench as far as appearances go. An entrance, much modernised, 30 ft. wide, comes in from the N. near the W. end, and at that part there seems to have been some levelling of the interior. Here and there a slight indication of a parapet may be seen at the top of the scarp.

Of the 'Castle of Inchbrakie' not a trace is to be seen, but the neglected fine old trees and dense undergrowth make a proper examination difficult. On the whole it seems not unlikely that this may have been a *Mote* of unusual form and size, on which a mediæval castle was afterwards built.

3. *Moat, the Law*, are the names given on the O.M. to a mound, $1\frac{1}{2}$ m. S.E. of Dunnichen Church and 500 yds. S. of Idvies House. It is situated 464 ft. above the sea, on the summit of a broad flat elevation or ridge, commanding an extensive view. The mound rises 12 to 15 ft. above the field, and is very conspicuous with its steep green sides crowned with trees. It has a slightly domed top only 18 ft. in diameter, green like the slopes, but with a small heap of stones on the top. The slope falls on a retaining stone wall 4 ft. high which girths the foot with a circumference of 280 ft. There is no sign of a trench, and the term *Moat (mote)* was adopted on the Ordnance Plan for the very unsatisfactory reason that criminals were said to have been executed on it. The small rounded top seems ill adapted to the use of the work as a *Mote*. 300 yds. N.E. of it is the "site of Idvies Church," with no remains.



Figs. 1 to 11. Earthworks in Perth, Angus, and Mearns.

4. *Mot, Gallows Law* (fig. 3), is the next example, 3 m. E.N.E. from the last, $\frac{1}{4}$ m. N. of Gardyne Castle, $\frac{7}{8}$ m. S.S.E. of Gulrie Church, and about 200 ft. above the sea. It is conspicuously placed at the very W. end of a singular, narrow, artificial-looking but natural ridge which runs E. and W. on a field sloping gently from S. to N. This mound rises gradually from the E., with a gently-rounded crest and steep sides, 15 to 25 ft. high on the S. and 30 to 45 on the N. On nearing the W. end, after

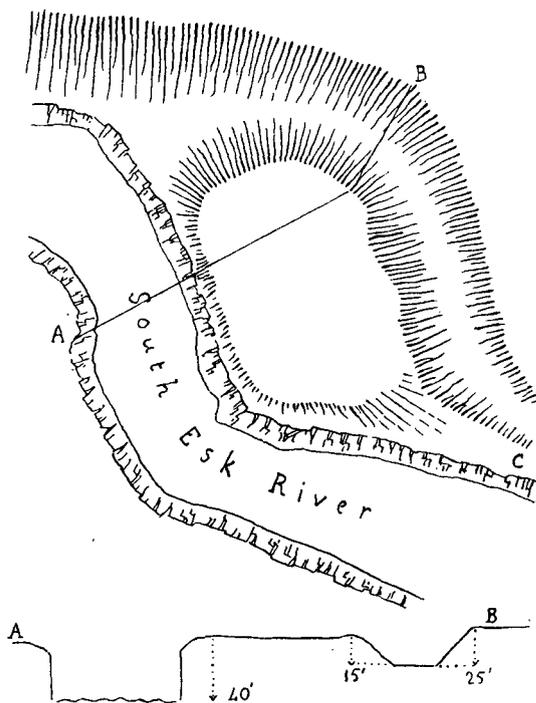


Fig. 12. Castlehill, Inshewan.

a course of 70 yds., a trench cuts off the mote, which rises 8 ft. above the trench, has a flat top, 27 by 18 ft., and falls steeply about 20 feet to the S. and 40 to the N., upon the field. The W. face is quarried away (at *b* on the plan and section) and shows nothing but sand and rolled pebbles from top to bottom. The name *Gallows Law* seems not inappropriate, from the following abbreviated reference in the O.S. account: "Two artificial conical mounds called *laws* exist at Idvie and Gardyne. An old man told Thomas

Lyel that he saw two Highlanders taken with stolen cattle, judged, condemned, and hanged on the Law of Gardyne" (early in the eighteenth century), but this is no reason for calling it also a *Moat* (*Mote*).

5. Passing now to the high tableland upon which the high road from Forfar to Brechin runs, we come on the *Mote of Melgund* of the O.M., the only instance, within our review, of the spelling *mote* in place of *moat*. The site is $1\frac{3}{4}$ m. N.E. of Aberlemno Church on the broad summit of Angus Hill, 451 ft. above the sea. It is represented on the O.M. as a very small, shapeless mound, and was probably then undergoing a gradual destruction, which seems to be now complete, as I could find no trace of it on the site in a field then under turnips.

6. Scarcely $2\frac{1}{2}$ m. E. of this, $\frac{1}{2}$ m. S.S.E. of *Aldbar Castle*, and 2 m. S.W. of Brechin, *Moat* is marked on the O.M. on a gently sloping field 316 ft. above the sea, at a place called Chapel. The term here means a trench, but it must have disappeared, and I could see nothing but a cottage and garden beside a square enclosure, fenced by a low mound, on the top of which was a ruined wall, of which the N. side, 104 ft. long, and part of the E. and W. sides, 84 and 48 ft., remained. The site seems to have been of some importance formerly, as on the O.M., besides the names *Chapel*, and *Priest Shed* (apparently the name of a field close to *Moat*), there is a *Court Law* 200 yds. to the S. and *Site of Church Barns* 400 yds. S.W. I have retained this and the preceding No. 5 in this class, because they are marked 'Moat' on the O.M. But strictly they should have been relegated to the class with no existing remains.

7. The last occurrence of the word *Moat* (here signifying trench) on the O.M. is at *Castlehill, Inshewan* (fig. 12), which is situated on the N. bank of the South Esk, about 300 ft. above the sea, 2 m. W.S.W. of Tannadice Church, and 500 yds. W.N.W. of Inshewan House. The river here flows between perpendicular cliffs, and the fortress is formed by cutting a deep trench landward, where there is a bend of the river, the land side of the long oval being protected by the trench, and the river side by the cliff 30 or 40 ft. in height, and the foaming river rushing along in its rocky bed below. The trench is remarkably deep and steep, and from the configuration of the ground the counterscarp is higher than the scarp in the proportion of 25 to 15 ft., where highest, about the middle. Eastward, however, from the natural fall in the landward ground, the height of the counterscarp diminishes rapidly as it curves towards the river, and the entrance, C, is here, close to the stream. The nearly level and pretty regularly oval interior measures about 150 by 100 ft. A slight banking up of the landward edge may be remains of a rampart. There are no signs of stone work and no stones lie about.

(c) EARTHWORKS WITH SOME RESEMBLANCE TO MILITARY MOTES,
BUT NOT MARKED MOTE OR MOAT ON THE O.M.

8. The only earthwork resembling a mote in the Highlands of Perth is on the *Torr Hill*, $\frac{1}{4}$ m. S.S.W. of *Aberfeldy*, on the left bank of Moness Burn, 400 ft. above the sea, within 50 yds. of the public road to Crieff. Mr Hutcheson, from whose paper I take the plan (fig. 13), calls it a very distinct and well-marked earthen fort, measuring internally 154 by 124 ft., rectangular in form,

with two trenches on the slope, varying from 24 to 36 ft. in width, and rising 40 to 45 ft. above the surrounding ground. He also states that, on the ascend-

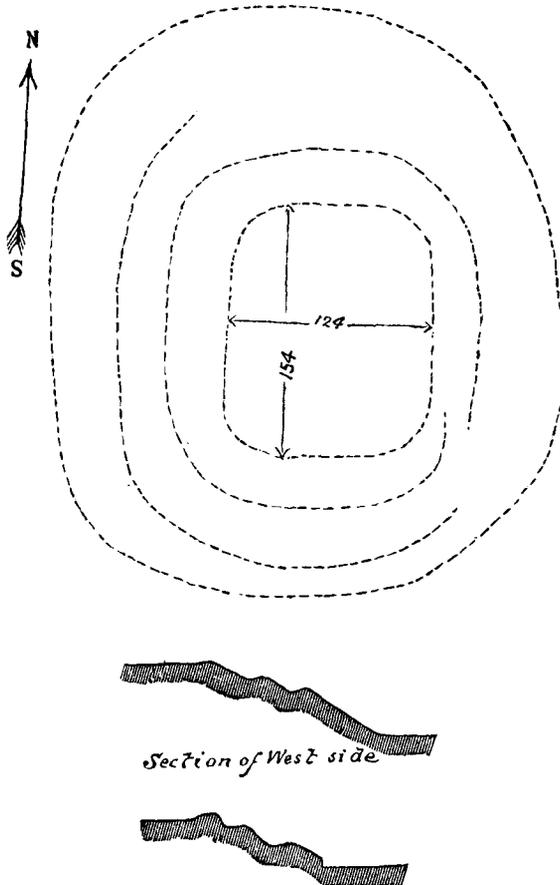


Fig. 13. Earthwork, Torr Hill, Aberfeldy. (Mr Hutcheson.)

ing slope of the hill on the S. of the fort, there are several other well-marked trenches, which may have been thrown up as outworks to protect the fort on that the most vulnerable side.

This work seems to be altogether of rather a unique kind. It is so in the first place because earthen forts are exceedingly rare in the Scottish Highlands; but it is also remarkable for its rectangular form. It will be observed from Mr Hutcheson's plan that, although the interior is rectangular with rounded angles, the trenches assume a more circular form. In these respects it resembles the 'Roman Post' of *Kairns Castle* between Ardoch and Strageath, and no other work with which I am acquainted. On paper the Torhill work is somewhat suggestive of a terraced mote, and what with that and its position so near to a low lying inhabited site, it seems not unlikely that it may be a work of the mote period.

9. *Dundee Law*.—This conspicuous green eminence rises on the N.W. side of the town of Dundee to a height of 572 ft. above the sea, the last 100 ft. being

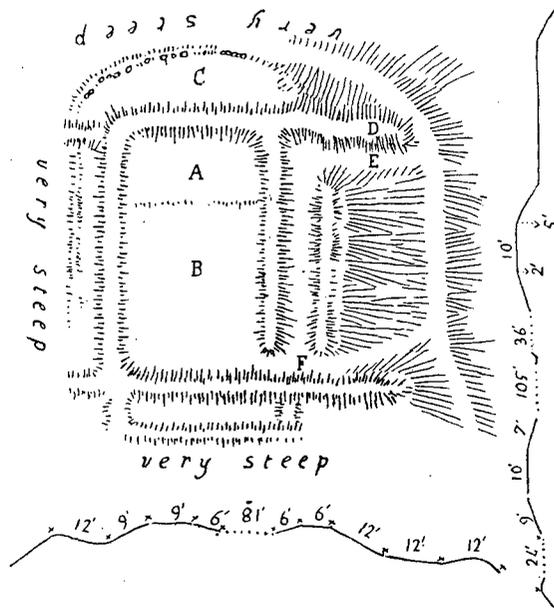


Fig. 14. Dundee Law.

very steep all round, but particularly on the N. The summit is nearly level but with a gentle incline to the S. and E., and the fort (fig. 14), measuring 260 by 170 ft. over all, occupies the whole of it. The work is peculiar for a hill site, being strictly rectilinear, except for a rounded annex at the N. end, which is outside the main rampart and follows the contour of the hill top there. The inner area measures about 140 by 80 ft.; and the northern part, A, for a breadth of 36 ft., is very slightly raised above the southern part, B, and has a

comparatively rough surface. The whole area is enclosed by a rectilinear mound 24 to 30 ft. across and with a flat top 6 to 10 ft. wide, which rises only a foot or two above the area, and 3 to 6 above the outside. On the N. side this rampart gives on the little level space, C, 33 ft. wide, with a rounded head, spoken of above, which shows slight remains of a stone wall, not necessarily ancient, at the rounded edge. The other three sides have a second and lesser mound a little in front of the inner one at the edge of the descent. In connection with these chief mounds or ramparts, the N. one is prolonged eastward, partly naturally perhaps, to the edge of the hill and down the hill to D, so as to bar the approach which skirts up the eastern flank of the hill to the rounded head. This limb, D, also flanks a possible zig-zag entrance, E, F. The S. rampart is similarly prolonged, flanking a direct entrance, F, from the east, and it also gives off short branches at either end towards the outer ramparts. The work seems to be of earth; at least I saw few little stones and no big ones lying about except at the rounded head, which lies beyond the main work. The rectangular form of the work gives it some claim to a Roman origin, but there is no proved Roman fort perched on a similar site in Scotland. The rectangular form, and the greater elevation, slight though it be, of one end, are also suggestive of a mote, and are not characteristics of a hill fort; the position, on the other hand, is much more that of the hill forts than of the motes. That it may be mediæval is also possible, although history is silent about it. Altogether this is an anomalous and puzzling work.

10. *Castleton*.— $8\frac{1}{2}$ m. along the high road from Forfar to Perth, and 3 m. E.N.E. of Meigle, 180 ft. above the sea, is a nearly square fortress, raised considerably above the surrounding country on three sides, but less so on the S.E., where the entrance is directly from the high road by an ascending broad ramp, either modern or modernised as the approach to a house and garden in the interior (fig. 4, which omits the western part, broken down for the site of the house and garden). The wide trench on the N.E. side has a scarp, steep and straight, 12 to 14 ft. high, crowned by an earthen parapet 3 ft. high to the interior. The counterscarp is only 4 to 6 ft. high, so that the interior has a great command. The fortification on the S.E. side is much the same, but the trench is not quite so deep. The S.W. side now shows only a rather easy slope, but the construction of the house and garden no doubt caused great alterations and the destruction of the defences there. On the N.W. the steep scarp again appears, but without the trench. A small burn runs at the foot of the S.W. side and there are signs of another little watercourse on the N.W. side. The dimensions of the interior on the O.M. are about 300 by 200 ft. and the width of the rampart and trench varies from 35 to 80 ft. in a straight line. An intelligent man told me there was no tradition of a mediæval castle, but he spoke of the trench as 'the moat,' and this may perhaps have been the traditional name of the whole fortress. It must also be the work said by Dr James Playfair¹ to have been formed by the English in the reign of Edward I., as its position, dimensions, and structure correspond exactly with his description. He gives no authority for his statement, but as far as it goes it confirms the mote theory. If not a mote it must be regarded as a Roman work rather than a native fort, although it has marvellously escaped being dubbed 'Roman Camp.'

¹ *Picture of Scotland*, James Playfair, D.D., i. 433.

11. $1\frac{3}{4}$ m. S.E. of Glamis Church, $\frac{1}{2}$ m. N.W. of *Arniefoul* hamlet, in Hayston wood (now much cut down), fully 700 ft. above the sea, on the top of a lofty ridge commanding a fine view, is this circular little work (fig. 5), consisting of a flat-topped mound not more than 5 or 6 ft. high, 30 ft. in diameter on the top, sloping gently to a slight rampart, if it may be so-called, 12 ft. broad and only a foot or two in height, which environs it all round, the over-all diameter being about 120 ft. Many rounded pebbles of considerable size show in chance breaks of the mound, but no stones suitable for building. The ground for a great distance round about has been surface-quarried for slate.

12. At *Canterland*, $\frac{1}{3}$ m. N.N.W. of the farm of that name, $1\frac{1}{4}$ m. E. of Marykirk, $4\frac{1}{2}$ m. N. of Montrose, 406 ft. above the sea, on the level summit of a ridge at the very S.W. end of Garvock Hill, with a commanding view to the S. and W., stands a work (fig. 6) closely resembling the last, being nearly circular, and having a central mound 6 ft. high but only 20 ft. in diameter on the flat top, with sides sloping gently to an encircling mound not 2 ft. high, which differs from that at *Arniefoul* in being double with some compartments, perhaps changes due to digging. The central mound has also been much dug into, revealing the same composition as at *Arniefoul*.

(d) APPARENT EARTHWORKS THAT ARE PROBABLY FORTS AND NOT MOTES.

13. Beginning from the south and west, as under the previous head, the first in this class is the *Fort* of the O.M. and *Post* of Roy on the *Grinnan Hill* of *Keir*.—The site is less than $\frac{1}{2}$ m. S.W. of Ardoch camp, 420 ft. above the sea, on the edge of a steep descent, 40 to 50 ft. high, to *Keir Burn*, but only slightly elevated above the field towards *Braco* village. It has apparently been an earthwork with a semioval triple line of defence (fig. 15), partly ramparted and trenched, partly terraced, the broad oval being rudely completed by the unfortified edge of the steep bank. The entrance, *a*, is along the narrow crest of a ridge, *b*, from the E., and it is likewise approached by a rude roadway, *c*, from the burnside below.

Roy's plan makes the work nearly complete, but the middle half of the lines no longer exists. He says that it may have been a work of the natives before the arrival of the Romans, but calls it a (Roman?) 'post.' There can be no doubt that it belongs to a common type of native fortresses. Its extreme length is about 320 ft., and the interior may have been about 200 by 170.

14. $1\frac{1}{2}$ m. E.N.E. of Blackford Church, 180 yds. N.W. of the cross-roads at *Loaninghead*, opposite the mouth of *Gleneagles*, the easiest pass through the *Ochils* from Perth to Fife, is another *Fort* (fig. 16), $5\frac{1}{2}$ m. nearly due E. of the last, which it closely resembles, and marked 'Roman Camp' on the O.M. The site, $\frac{1}{4}$ m. W.S.W. of *Crieff Junction*, occupies the whole of an oval eminence, 520 ft. above the sea, rising about 25 ft. above a field on the N.E. side, and only 8 or 10 above one on the S.W. side. This eminence forms the central part of a little ridge, but is approached from it at each end by narrow necks, *B* and *D*. The entrance, *I K*, is not from either neck, but from the field to the S.E. The defences at the ends, *AB* and *CD*, consist of a steep scarp from the interior, falling on a trench, beyond which is a rampart and second trench. The scarp and rampart are in some places 9 ft. above the bottom of the trenches in their

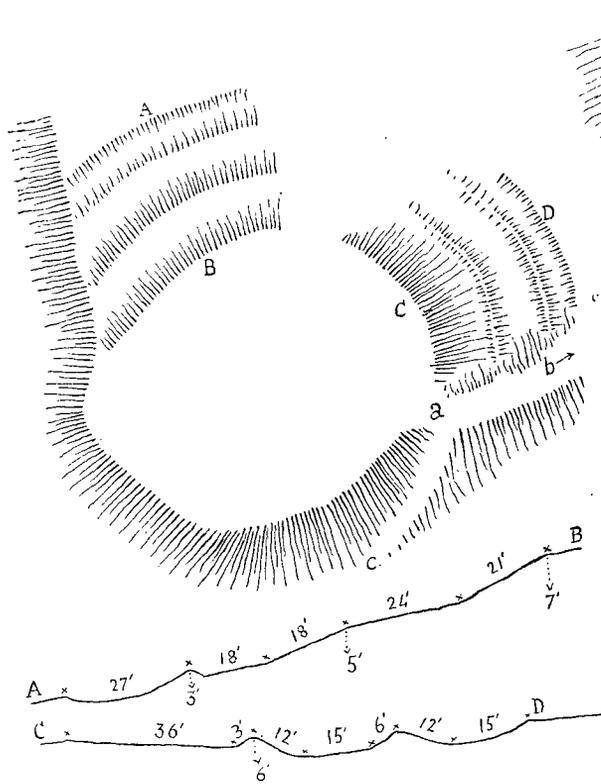


Fig. 15. Earthwork, Braco.

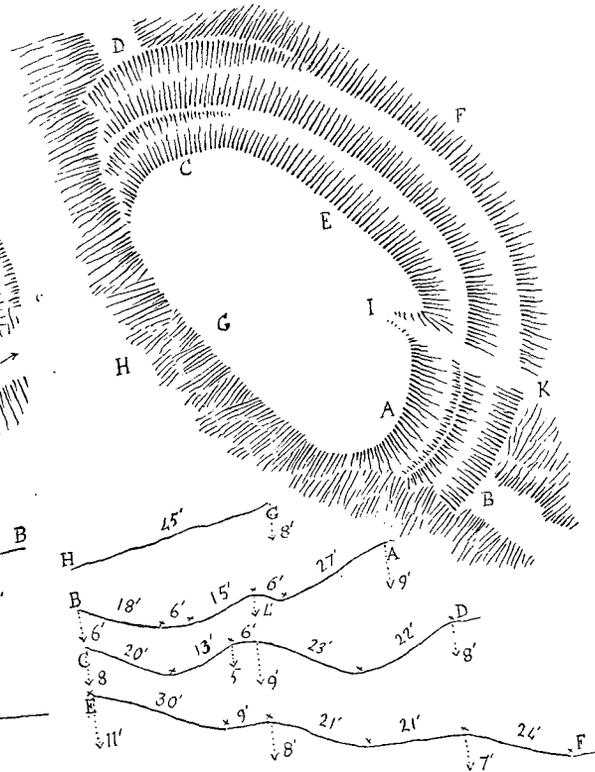


Fig. 16. Earthwork, Loaninghead, Crieff Junction.

front. On the N.E. face, E, F, the trenches pass into terraces which have no parapets. On the S.W. face, where they are most required, the defences are entirely gone. The dimensions of this oval fort are about 380 by 200 ft. over all, the interior being about 230 by 120.¹

15. On the edge of a steep wooded bank, 60 ft. high, which falls on a haugh enclosed to the S.E. and W. by a loop of the River Almond, 2 m. from its mouth, 100 ft. above the sea, at *Pitcairngreen*, is this semicircular work (fig. 7), the base being formed by the straight and unfortified edge of the bank. To the N. the semicircular lines face nearly level ploughed land and have been a good deal destroyed. Where most perfect, in a plantation at the W. end, they consist of a scarp 6 ft. high, with two mounds 5 and 3 ft. high beyond, on a pretty steep slope; but in the centre towards the N. there is a terrace 10 ft. wide in rear of the outer mound. The inner scarp is parapetted only at the entrance, which is from the N.W. The length of the base over all is 270 ft., and the width of the interior, which contains a rectangular foundation, from N. to S. 135. Apparently it is a pure earthwork.

16. The next on the list, within the grounds of *Cultoquay*, close to the high road, 2 m. N.E. of Crieff, $\frac{1}{4}$ m. E. of Gilmerton Church, 370 ft. above the sea, is marked 'Roman Outpost' on the O.M., but there can hardly be a doubt that it belongs to a common class of native works, in which the extremity of a ridge or tongue of land, whether on the coast or inland, is converted into a fortress simply by drawing an intrenchment across the top of the ridge, the enceinte elsewhere showing in general no fortification, and having been probably defended by a palisade wherever the natural strength was insufficient. In this instance the ridge, about 30 ft. high, rises steeply on the N. side, but the ascent is generally gentler from the S. The intrenchment runs nearly straight for about 120 ft. across the top of the ridge, and is carried partially down its slopes. It consists of two ramparts or mounds and two trenches covering a width of about 60 ft., and is peculiar in this respect, that it is apparently designed to defend, not the small extremity of the ridge to the E., but the main ridge, 200 yds. in length, to the W. The easterly mound in particular is massive, and at one point rises 9 ft. above the trench to the E. The straight course of the intrenchment is probably the only reason why it has been ascribed to the Romans.

17. Passing to the north and east side of the Tay we encounter two earthworks on the Sidlaw Hills. The first is at *Evelick*, 500 yds. W.S.W. of the ruined castle of that name, and $1\frac{1}{4}$ m. W. of Kilspindie Church. It is reared 200 ft. above the old castle and 890 ft. above the sea, on one of several little rather flat-topped eminences which form the tableland summit of Pole Hill, the highest of which attains 940 ft. The green height on which the fort stands is conspicuous from below and looks down upon the castle, but the fort is invisible till the hill is climbed, as the works face N.E. and N.W. to the tableland, whence they are easily accessible. In strong contrast to the accessibility on that side, the ground falls directly from the fort with extreme steepness 200 ft. to the S.E., 500 ft. to the S., to the chasm of

¹ By an unfortunate error in the figures of the scale, fig. 30, p. 95, of my work on *Early Fortifications in Scotland*, this fort and the preceding one, as well as all the others in the said figure, are given only half their proper size.

Pitrodie Burn, and to the S.W. forms a deep and steep cleft in the hill, like a natural trench. As the position is a characteristic one I have given a general plan of it (fig. 17), while the fortifications are shown on the usual scale in fig. 18. A slight mound at the edge of the steep descents is sufficient protection for the sides that are so well defended by nature ; but towards the E., where the ground is weakest, a scarp 7 ft. high falls on a terrace, and that again upon a second

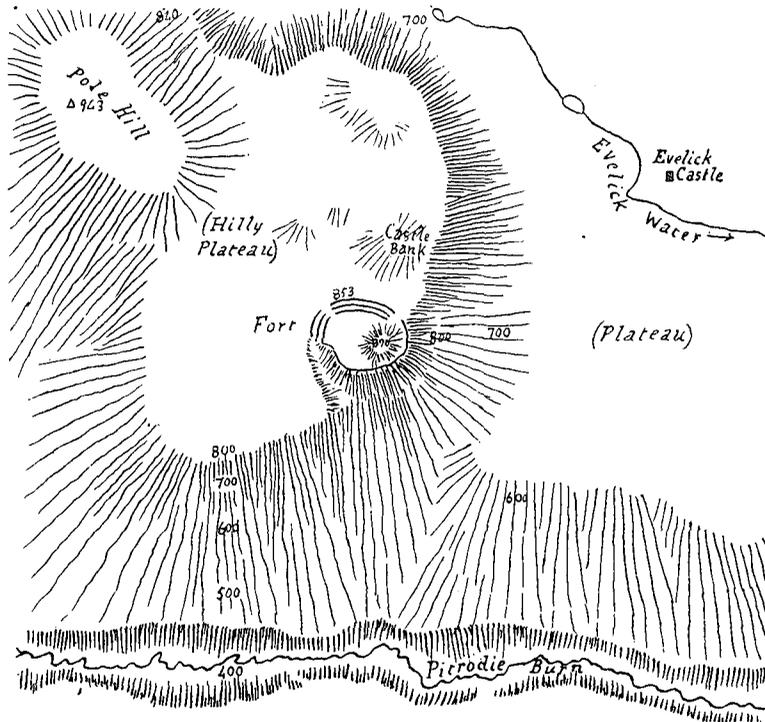


Fig. 17. Position of Evelick Fort on Pole Hill.

terrace, with a wide trench and two slight ramparts or mounds beyond. To the W. there is a much longer scarp 10 ft. high, a single terrace 9 ft. wide and a trench and single mound beyond. The change from one system to the other takes place at what seems to have been the chief entrance, which passes obliquely through the lines, but there was probably another where the lines end eastward at the steep face. The broad pear-shaped interior measures 350 by an average of 200 ft. on the O.M. and the dimensions over all 460 by 280.

18. The second of the Sidlaw Hill earthen forts is at the E. end of the little

hamlet of *Rait*, $\frac{2}{3}$ m. N.E. of Kilspindie Church, about 100 ft. above the sea, and at the very foot of the Braes of Carse (of Gowrie). This fortress (fig. 8) is of the same type as No. 16. A narrow, steep-sided spit of land, a sudden contraction of a gently rounded little ridge that runs down to the Carse from the steep braes, is cut off by three slightly curved and massive

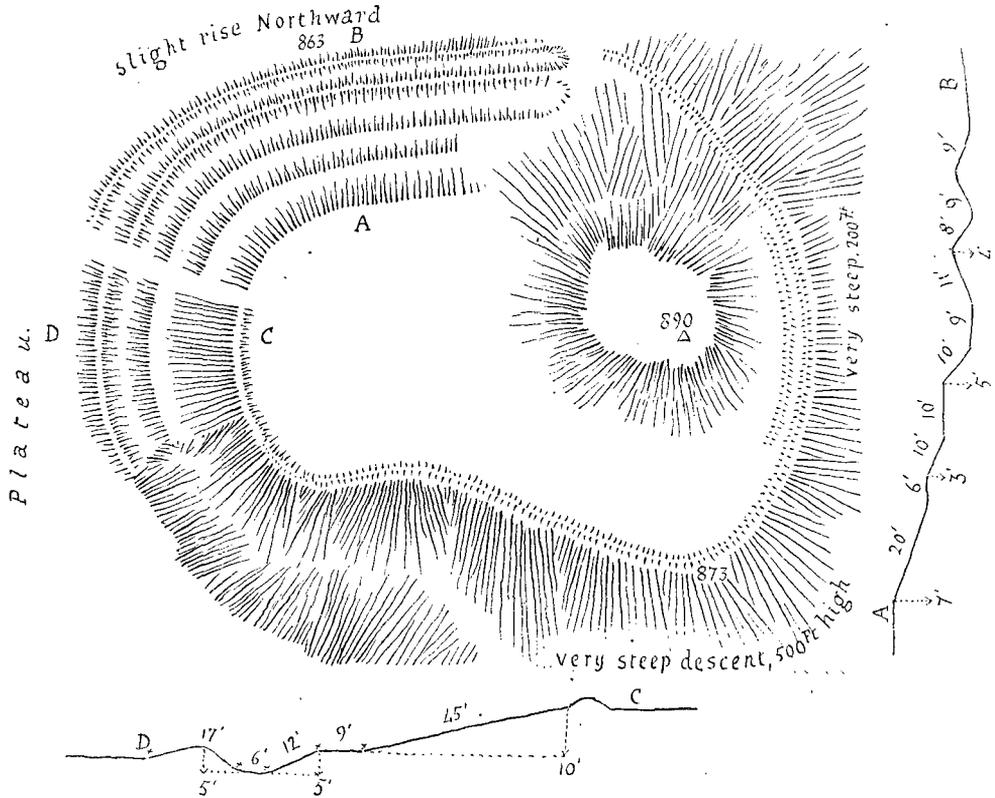


Fig. 18. Earthwork, Evelick.

mounds, 30 to 40 ft. wide and rising 7 to 8 ft. above the two intervening trenches. A ramp-entrance crosses the lines obliquely. The length of the cut-off spit is about 500 ft., its height 25 to 30 ft., and it ends by an abrupt descent to the highway at the very edge of the Carse. Its naturally scanty width has been much narrowed by the quarrying of sand and gravel from

its western face, so that in some places the top is now a mere crest a few feet wide.

19. Passing into the county of Forfar, we do not meet with any unequivocal earthen fort in the interior, but on the coast there are three which are little rock fastnesses, so strong by nature as to require but little aid from art. They are all of the 'cut-off promontory' type. The first is *Maiden Castle* (fig. 9 and sketch, fig. 19), $1\frac{3}{4}$ m. E.N.E. of Arbroath at the S. end of Carlingheugh Bay. A flat-topped, narrow point about 80 ft. high is protected by a mural precipice all round, except where it approaches the land on the N.

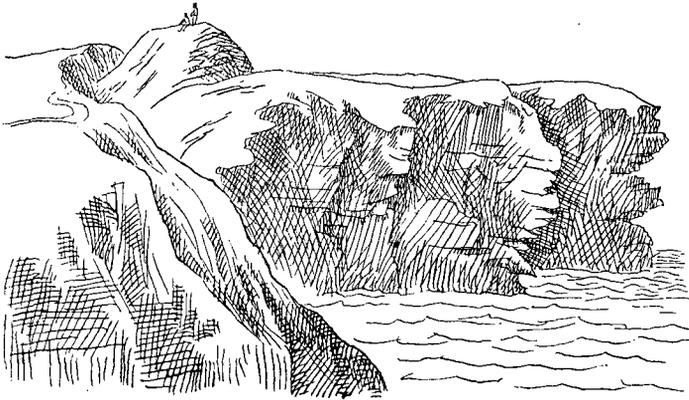


Fig. 19. Maiden Castle, near Arbroath.

(where the precipice is replaced by a very steep grassy slope), and on the land side itself, from which it has been cut off by a deep trench, above which towers a lofty, massive rampart of earth, rising about 21 ft. above the trench and 14 above the interior. This mound, as shown in the sketch, fig. 19, taken from the S., is very conspicuous on a coast where the land seems as if it had been close-shaven by the wind.

20. $1\frac{1}{4}$ m. to the N.E., further along the coast, and $\frac{1}{2}$ m. S. of Auchmithie, is *Lud Castle* (fig. 10 and sketch, fig. 20), forming the S. point of Castlesea Bay, 100 ft. high, girt with red precipices, except towards the land, where it has a broad, straight grassy front, which, falling steeply 40 or 50 ft., contracts to a narrow neck joining it to the mainland. This neck is precipitous on the N. side, and slopes steeply to the rocky sea, so that the access to the fort is difficult and even dangerous. Not content with this, the defenders have reared a massive mound, 5 ft. in height above the interior, from precipice to precipice at the top of the slope. The present path skirts obliquely up the slope to the S. end of the rampart. Probably this was the original access, as there are some signs of a passage cut through the rampart here. The interior is at first of full breadth in rear of the rampart, but quickly contracts to a narrow passage leading to a small level square at the far end, the highest

point. The sketch (fig. 20) shows the precipitous N. side of the neck, and the perfectly inaccessible N. side of the fortress.

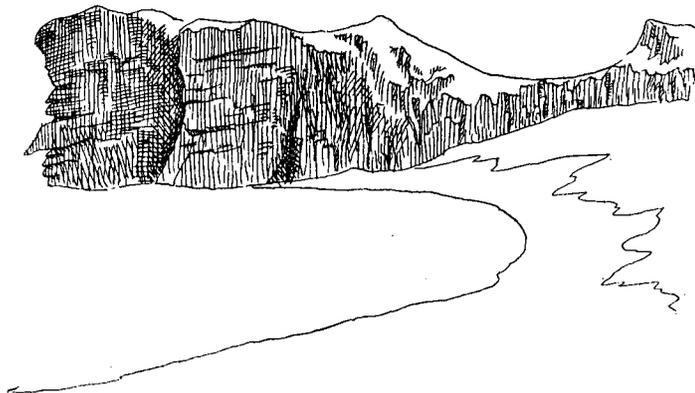


Fig. 20. Lud Castle, Auchmithie.

21. Facing the picturesque but decaying fishing village of Auchmithie (the Mussle Craig of *The Antiquary*), from a distance of a few hundred yards, is *Castle Rock* (fig. 11), a level-topped, square projection, measuring about 100 ft. each side, and about 100 ft. high. Three sides are of perpendicular rock, and the fourth is cut off from the mainland by a curved double mound with two trenches. The profile of these is very slight, but they stretch from edge to edge of the precipice and their combined width is 60 ft., so that there can be little doubt that the place has been a fortress.

22. In the interior of the Mearns there is no certain example of a coast rock-fortress, although *Bowduns*, near Stonehaven, may lay some claim to the title, and in the interior there are but two forts of the earthen type, one of which is now barely recognisable. This is *Castle Dikes*, of the O.M., $\frac{1}{2}$ m. E. of Arbuthnot Church, 150 ft. above the sea, on a flat promontory in the angle of junction of the steep little Chapel Den with the Bervie Water, raised about 50 ft. above the latter, with pretty steep slopes to the E., N., and S. A distinct enough, wide and straight undulation of the ground, 350 ft. long, crossing the flat and cutting off the promontory, is all that can be seen, but it corresponds in position with the rampart, 30 ft. wide, and trench on its W. side marked on the O.M.; and reasoning from analogy, there can be little doubt that this was a 'cut-off' fort with an earthen rampart now nearly ploughed down, the interior space being about 350 by 250 ft.

23. The other Mearns fort of the earthen class is 2 m. N.N.E. of Fettercairn Church, $\frac{3}{4}$ m. N.W. of Phesdo House, and about a mile from the site of ancient Kincardine town and the remains of the castle. It is the remarkably strong *Green Castle* (fig. 21) of the O.M. (although I could not find that it was known by that name locally). The site is a strong one, 400 ft. above the sea,

on a high point of land overlooking the Ferdun Water, and it is fortified by a single rampart of earth 8 or 9 ft. broad on the top, rising as much above the interior, and falling steeply 20 to 30 ft. in perpendicular height upon a wide trench with a counterscarp 3 to 8 ft. high. The height of the rampart above

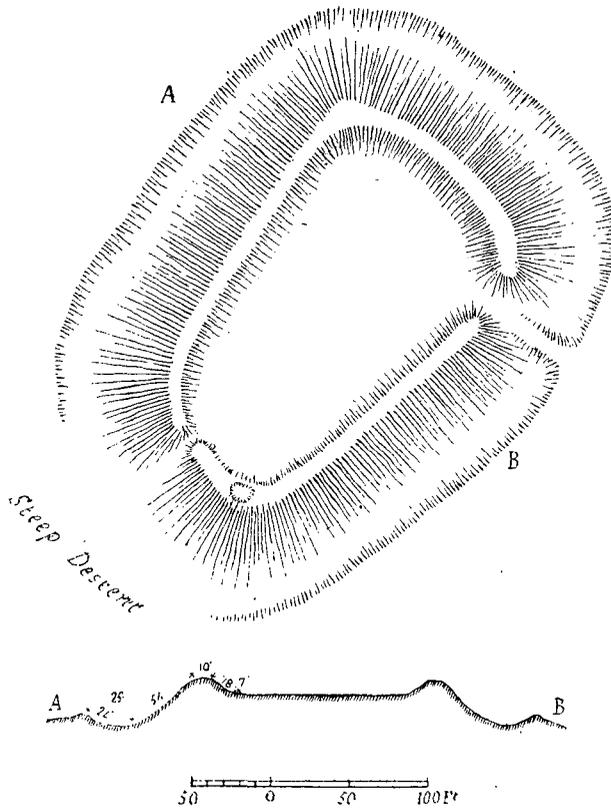


Fig. 21. Green Castle, near Kincardine Castle, Fettercairn.

the interior is a peculiar character, and shows that it must have been defended from the broad top, probably from behind a palisade. The dimensions over all on the O.M. plan are about 400 ft. by 300 at the broad and 200 at the narrow end of the pear-shaped structure. The interior within the rampart is 220 by 120 and 50 ft.

II. STONE FORTS AND PROBABLE STONE FORTS.

The Stone Forts of the district number twenty-two ; not many for so large an area, but several of them are among the largest and most interesting in Scotland. They are so distributed as to be conveniently divisible into groups, situated in certain mountainous or hilly districts.

(a) STONE FORTS IN THE HIGHLANDS OF PERTH.

The stone forts in the Highlands of Perth are seven in number, of which six are in the basin of the Tay. The solitary one in the west of the county, or in the basin of the Forth, was probably outside the Pictish kingdom, but it is noticed here, as it completes the list of Perthshire forts.

24. *Dunmore* on Ben Ledi, a two miles' walk from Callander, 1100 yards W. by S. of *Bochastle* Farm, and 350 N. of *Tarandoun*, perched upon a prominent knoll about 400 ft. above the high road and Loch Venachar, and 600 above the sea, is a fine example of the type in which a semioval front of fortification defends the accessible side of a fort, the other side or base resting on the edge of a precipitous bank (fig. 22). In this case the bank, which is on the east side, is about 150 ft. high, and is broken by rocky faces, and, although it can be climbed, is impracticable to an attacking force. To the west and north the ground falls pretty steeply from the interior for about a height of 25 ft., below which there is on the north a small enclosed but not fortified plateau, and on the west a quite gentle descent. On the steep part four parallel abrupt green mounds circle round, but large stones are everywhere embedded in them, and there can be no doubt, as Miss Maclagan¹ points out, that they are really stone walls overgrown with turf. These walls being built on a steep slope were much higher on the outer than the inner side, and must have had much the character of revêtements with stone tops or parapets. The top of the inner wall is now only faintly indicated. The height of the mounds varies from 6 or 7 to 10 ft. on an average, but in one place is as much as 13 ft. The second and the third mounds unite as they circle to the north, and there the front of fortification becomes straight. The flank of the wall here is the weakest part of the fort, as the ends of the lower walls are raised only a few feet above the moderately easy ascent from the east, and their front rises from the level plateau.

At the south end there is a smaller plateau before the entrance, which passes only through the first mound, and is continued by a footpath which passes over rather than through the other mounds, and is probably modern.

The entrance to the north plateau, at the S. end of its W. side, is approached by something like a roadway in front of the fortified lines. The inner area measures about 180 ft. from N. to S. by 150 from E. to W., but a part of the latter measurement, 60 feet wide at the broadest part, is a rather awkward slope to the precipitous edge. A deep hollow in the interior, moist at the bottom, probably marks a partially filled in well or cistern.

The ground plan is founded on that of the O.M., with which my tape-measurements of some of the chief dimensions substantially agreed.

¹ *Hill Forts and Stone Circles of Scotland*, Miss Christina Maclagan, p. 53 ; and *Proc. S. A. Scot.*, ix. 36.

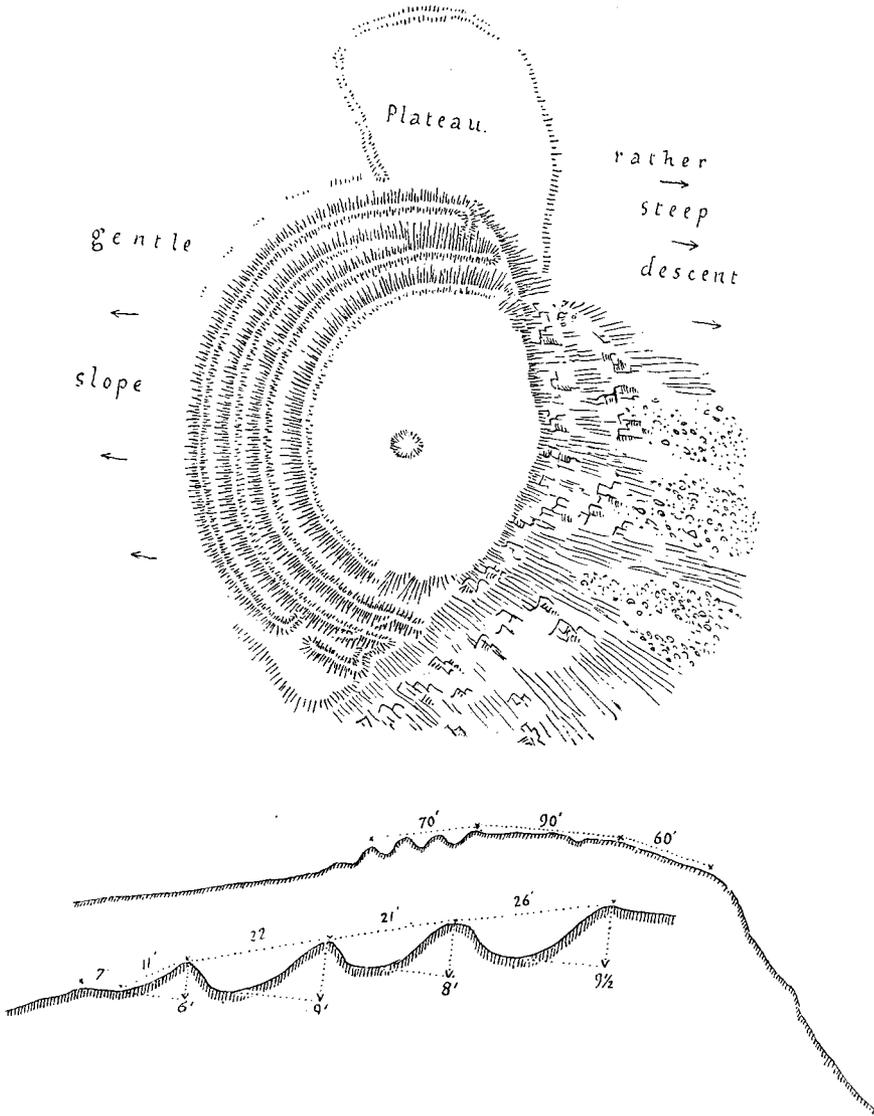


Fig. 22. Dunmore, Bochastle, Ben Ledi.

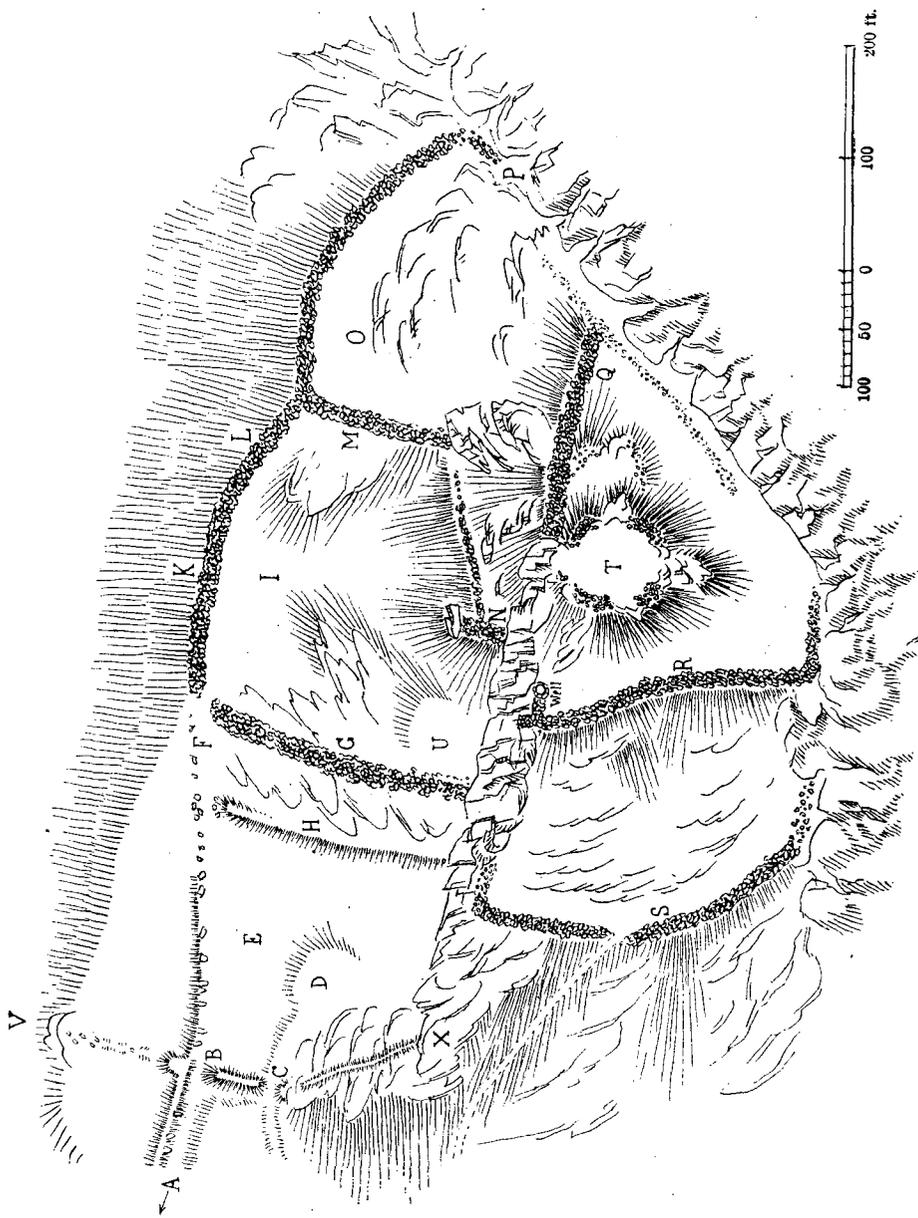


Fig. 23. Durdun.

EXPLANATION OF THE PLAN, FIG. 23.

North Side of the Fort.

- A Covered way, ascending from the plain.
- B X Earthen (?) mound.
- E First plateau, with levelled space, D.
- F G First wall entirely thrown down, like all the rest, with entrance at F.
- H Advanced mound, at foot of rocky ridge on which F G stood.
- I Second plateau, a rough hollow.
- K L Its north wall continued, rising abruptly from L, to the third plateau.
- N Its south wall, near the foot of the precipice, cutting off a possible but difficult ascent to the top.
- O Third plateau, 50 ft. above the second.
- M Its west wall, the second line of defence.
- P End of its north wall at edge of southern precipice.
- Q Third wall of defence, running from south precipice edge up a steep slope and above a rocky bluff to foot of a cliff near the top.
- T Level top 60 to 70 ft. diameter, defended by little cliffs joined by walls.

West Side of the Fort.

- S First wall, about half-way up, drawn along edge of a steep rocky slope from top of south to top of north precipice. A narrow passage runs in its rear, from which rises the rocky ascent to the second wall. Near the north end is an entrance, approached by a path up the hill from the plain.
- R Second wall, on edge of steep rocky slope, drawn from precipice to precipice, and very near the top.

25. *Dundurn*.—Elsewhere¹ I have given a full description of this interesting hill-fortress, and I shall quote here merely the chief points, elucidating them by a plan and two views taken from photographs (figs. 23, 24, 25). The name of the hill on the O.M. is *Dunifllan*, and it is not marked as having a fort. But I found that the recognised name of the hill on the spot is *Dunuirn*, and that it was occupied by an undoubted fort. It is therefore in all probability the *Dwinduirn*, identified by Skene² as the principal stronghold of Fortrenn, although he does not seem to have been aware that any remains of a fortress still existed on the hill. That distinguished authority points out that Dundurn is twice mentioned by the early annalists as the seat of historic events:—(1) A.D. 683, *Obsessio Duinatt et Dwinduirn*; (2) A.D. 878-9, when *mortuus est in Dundeorn* is recorded of King Girig; and Dr Skene holds that the identity of the place is proved by the lines of St Berchan (11th century)—

“ By him shall be attacked the powerful house.
 Ah, my heart! on the banks of the Earn
 Red shall be the colour of the house before him,
 He shall fall by the men of Fortrenn.”

The site is on an abrupt, craggy, isolated hill, rising almost to a point, and the walls of the fort have been built from crag to crag, or along the edges of precipices

¹ *Early Fortifications in Scotland*, 1898.

² *Celtic Scotland*, i. pp. 264, 330.

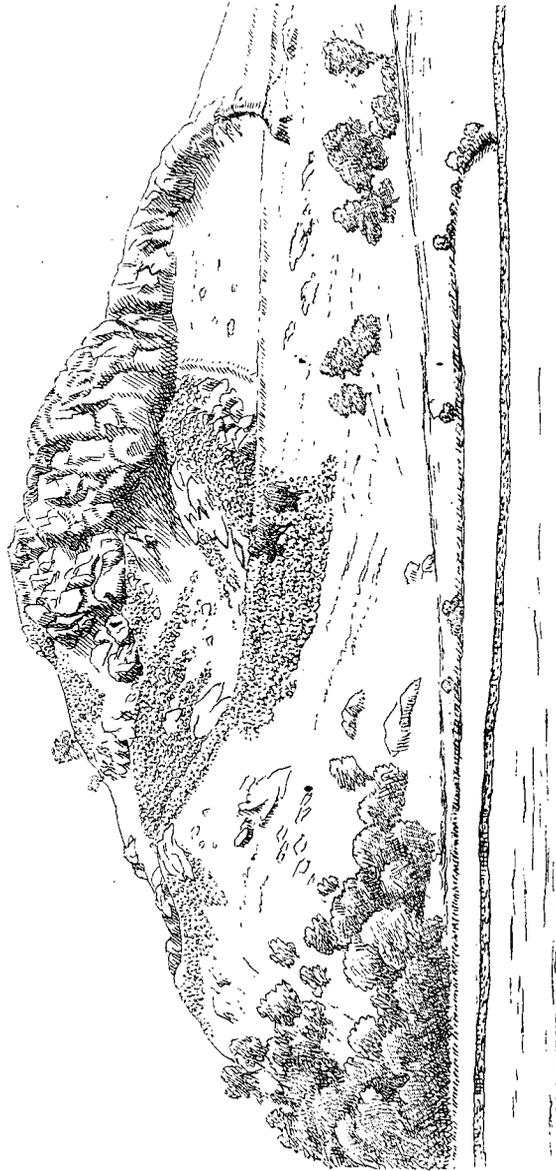


Fig. 24. Dundurn from the N. W.

and steep descents, just as the nature of the ground dictated. The hill rises to a height of 500 ft. above the sea, and 200 above the haugh of the Earn, a mile below its exit from Lochearn, in the midst of one of the most charming scenes in Scotland. Its form is somewhat triangular (fig. 23), the southern side rising by a nearly inaccessible precipitous face from the Alt Iogain, the western by a very abrupt ascent, broken by steeply sloping ice-smoothed rock-faces and little cliffs, while the northern, rising abruptly at first, eases off suddenly into three rough irregular plateaux, E, I, O, raised one above the other from W. to E., and bounded on the S. by a mural precipice, X N, which rises to the top of the hill, completely cutting off the two lower plateaux from the top, but leaving a difficult access from the third along the edge of the southern precipice.

The view from the N.W. (fig. 24) shows the defences on the northern side. Above the group of trees on the left is the outer mound (B X on the plan). Above the next three trees is the mound, H, in advance of the first wall of defence. The next two trees stand on the *debris* from the N. wall of the second plateau. Then comes the continuation of this wall up the slope to the third plateau. This plateau lies too high to show much, but its N. wall is seen running above the steep tree-covered slope to the sky-line, and the great *debris* mass of its W. wall, the second wall of defence, is conspicuous running to the foot of a rock, above which is the third wall of defence, with a tree and bush on the sky-line. Highest of all is the *debris* from the wall round the summit. Strictly speaking, the building of the walls is only inferred, as none is visible, but there can hardly be a doubt that the masses of *debris* conceal the bases of regular walls.

All these points can be made out in fig. 25, taken from the W. (some trees are omitted), the N. ends of the two walls of the western side being also visible.

The fort is about 600 ft. in length by an average width of 450, without reckoning the first plateau, E, which perhaps was not intended to be seriously defended. The contained area, therefore, is very large for a Highland fort, but the habitable space is limited to the hollow of the second plateau, to the third plateau (much curtailed by rocks), and to the summit, with some tolerably level ground at the foot of its little cliffs on the E. and S.

26. Two 'Forts' are marked on the O.M. in Glenahmond before it opens up on the lowlands of Perth, both of which I have seen. One of these, however, at *South Tulchan* does not seem to me to bear any resemblance to a fort, and I have placed it in the class of dubious remains. The other is *Dun Move*, 6 m. N.N.E. of Crieff. On the N. side of 'the Sma' Glen,' on the top of a heathery hill, 1520 ft. above the sea, with a steep descent of 850 ft. to the Almond River on the S.W., and with short, steep, rocky descents elsewhere, except eastwards, where the approach is nearly level, but by a narrow neck. The enclosed, irregularly oval top is almost level, and is girdled by an overthrown stone wall, resting with its inner side on the very edge of the slope and the outer one several feet lower, with rudely built portions still standing, but no well-built face remaining. Many of the stones are large. The cross diameters of the interior are 150 and 90 ft., and the thickness of the wall was probably 8 to 10 ft. Annexed to the E. and most accessible side is a crescentic work with a greatest interior width of 30 ft. and enclosed by a wall 300 ft. long, similar in size and condition to that of the main work. I have given no



Fig. 25. Dundurn from the West.

plan of this work, as Mr Hutcheson's plan of *Caisteal Dubh*, No. 30, might almost stand for it, although the latter is much larger.

27. Passing now to the valley of the Tay and its upper tributaries, the most remote work is *Dun Geal*, on *Creag a' Chaisteal*, 900 ft. above the sea, $\frac{1}{2}$ m. N.E. of Fortingall, Glenlyon. It has been well noticed by Miss Maclagan, as well as by Mr Hutcheson, who describes it as standing on the summit of a hill with a considerable extent of easy sloping ground around it; circular in form, 58

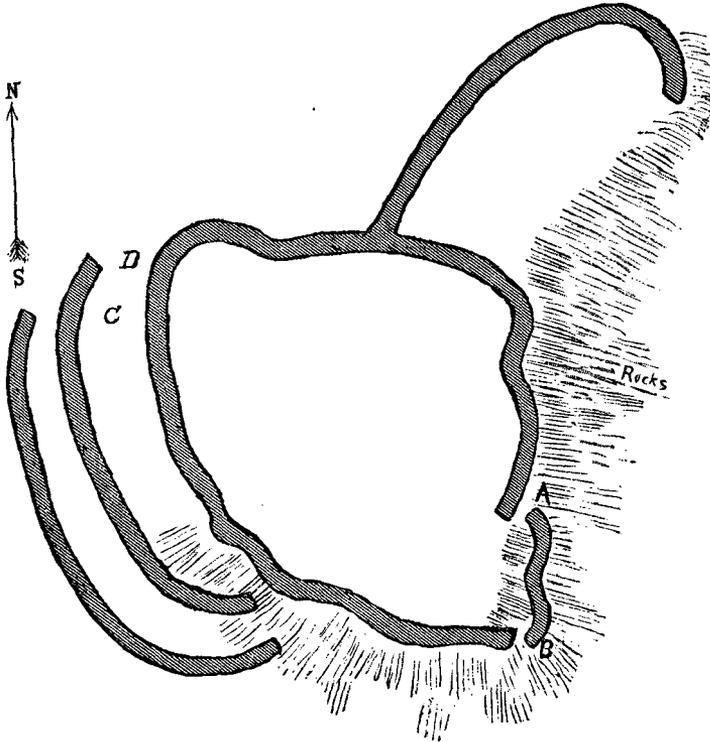


Fig. 26. Dun Mac Tual. (Mr Hutcheson.)

ft. in diameter within the wall, which averages 10 ft. in thickness, showing the outside and inside faces intact in several places; the masonry very massive, being erected almost wholly of stones separated either naturally or by art from the hill, and splitting easily into cubes.

28. The fort highest up the Tay proper is the very interesting 'Fort' of the O.M., *Caisteal Mac Tuathal* of Mr Hutcheson, or *Dun Mac Tual*, $2\frac{1}{2}$ m. E.

of Fortingall, 1000 yds. N.W. of Taymouth Castle, 900 ft. above the sea, on one of the eastern spurs of Drummond Hill. The chief facts in Mr Hutcheson's very full and accurate account, which I give, will be clearly understood from his reproduced plan (fig. 26). The fort occupies the summit of a bold projecting rocky knoll with precipitous slopes to the S. and E., but descending less steeply on the other sides. The walls follow the contour of the hill to suit the exigencies of the site, and thus form a very irregular somewhat square figure, the inner area measuring about 300 by 210 ft. A B on the plan is a short wall branching off to include a natural platform. The curved wall at the N.E. angle encloses a space about 165 ft. long, where there is a spur rising towards the summit. On the W., the most vulnerable side, two additional walls have been thrown up on the side of a hollow, some 25 ft. deep, that separates the fort from the ascending slope of Drummond Hill. At the bottom of this hollow is a spring of water. The main wall of the fort is much broken down, but in places the outer and inner faces still stand, and I give a sketch (fig. 27), which



Fig. 27. Remains of Wall, Dun Mac Tual.

I took many years ago, of a portion of the outer face, where it is best preserved. Mr Hutcheson judges from the quantity of stones lying below this face that the original height must have been 12 to 15 ft. The width here at the base is some 9 ft.; the outer face is almost perpendicular, but the inner slopes considerably. Mr Hutcheson states that the name is attributed to Tuathal, son of Argutso, Abbot of Dunkeld, mentioned in the *Annals of Ulster* as having died in A.D. 865.

29. *The Dun, Tyndun*, 1 m. S.S.E. of Aberfeldy, occupies the summit of a commanding height, 1100 ft. above the sea, and is described by Mr Hutcheson as being an almost complete circle, 110 ft. in diameter inside the wall, which is from 14 to 15 ft. thick. It is almost entirely destroyed, but the outside and inside faces can be clearly seen to have been formed of un-

dressed blocks, from 2 to 4 ft. long, closely set. There are appearances of a narrow entrance on the W. side. Three trenches or earthworks, 150 ft. long and 12 to 15 wide, give additional protection to the most vulnerable side, which is on the S.W.

30. *Castle Dow*, most unaccountably called "site of a supposed Pictish fort" on the O.M., and with no remains marked at it, is shown by Mr Hutcheson to be an undoubted fort (fig. 28). It is situated $2\frac{1}{2}$ m. W. by S. of Logierait

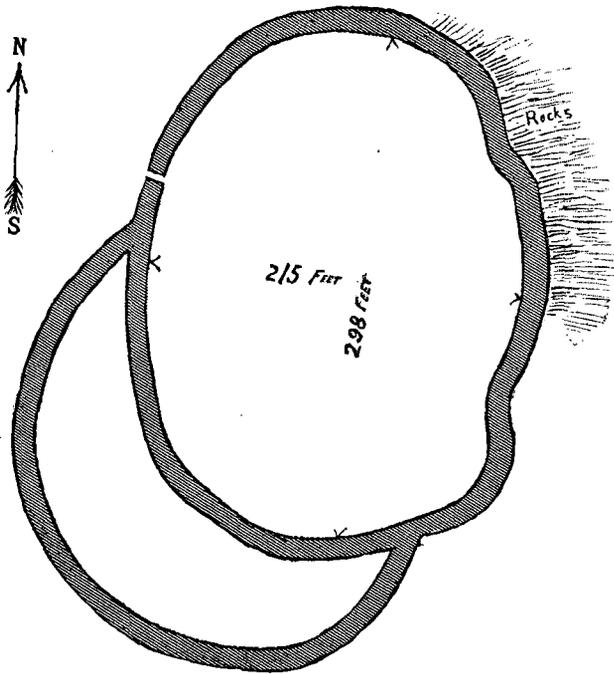


Fig. 28. Caisteal Dubh, near Aberfeldy. (Mr Hutcheson.)

Church, but on the opposite side of the Tay, 1050 ft. above the sea, on the top of an isolated height overlooking the valley of the Tay from Aberfeldy to Dalguise. It is an oval of 300 by 213 ft., somewhat sinuous on the E. The wall is much destroyed, but on the S.W. side there is a length of about 50 ft. tolerably well preserved, showing that the masonry resembled that of Dun Mac Tual. The wall is thicker, however, ranging from 14 to 16 ft. It is faced outside and in with large blocks. A crescentic annex, exactly as at Dun More (No. 26), strengthens the most vulnerable side: it projects about 80 ft.

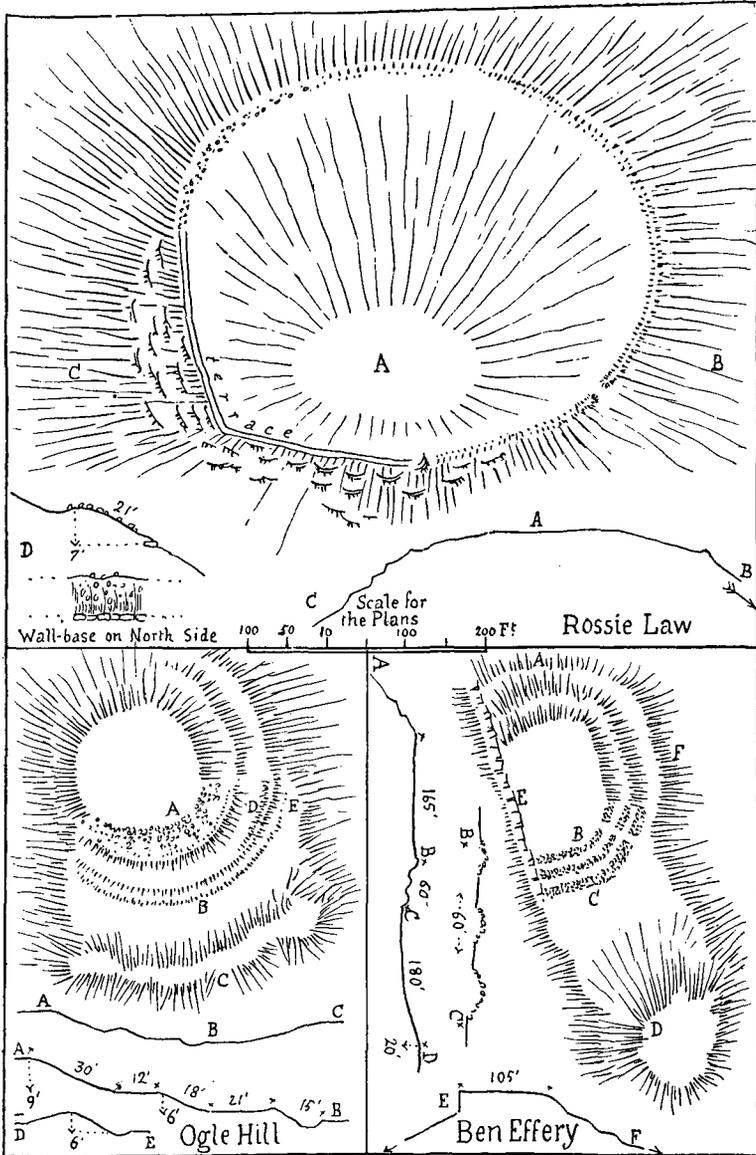
and is 240 ft. long. This side is further strengthened by a trench. The entrance to the main fort was apparently about the middle of the W. side, and the lunette contains remains of a circular structure 15 ft. in diameter. In this fort and in others, as at Dun Mac Tual, Mr Hutcheson noticed evidence of banking up with earth at the back of the wall.

(b) STONE FORTS ON THE NORTH SLOPE OF THE OCHILS.

31. For a stretch of 12 m. from the W. end of the Ochils eastward the northern slope of the chain is destitute of forts, and the first to occur, erroneously marked 'Roman Outpost' on the O.M., is 3 m. N.E. of Gleneagles, on the top of *Ogle Hill*, $1\frac{3}{4}$ m. E.S.E. of Auchterarder Church, 800 ft. above the sea, and 600 above the Ruthven Water to the N. A ridge descending gently northwards from Coul Hill (1006 ft.) and the main chain of the Ochils rises but a few yards to form Ogle Hill before falling abruptly to the valley of Ruthven Water. An apparently natural trench-like hollow, 75 ft. wide (B, fig. 29), separates the ridge from the site of the fort, A, which occupies the whole of the little summit of Ogle Hill, and is defended towards the ridge, reckoning from the interior, first by a scarp (section A B), 9 ft. high, without a parapet, but covered with loose stones, probably the remains of a wall fallen from the top; secondly, by a low rampart, at the foot of the scarp, falling on a terrace, which with a small trench forms an outer line of defence. The terrace has a rampart, D E, at the E. end only. These lines are much injured, and the only signs of defence on the flanks of the site is a doubtful double terracing. The interior may be about 150 ft. in length.

32. The next, also erroneously called 'Roman Outpost' on the O.M., is $\frac{2}{3}$ m. E. of the last, on the top of *Ben Effery* (1200 ft.). This hill lies between the deep and steep glen of the Pairney Burn on the W. and the smaller ravine of Green's Burn on the E., which at their junction are 600 ft. below its top. From this direction Ben Effery has a remarkably bold, sharp, conical appearance, and the fort on the top is very strong by nature on three sides, particularly on the W., where it stands on the edge of a mural precipice (E, fig. 30), but the access is easy from the ridge descending upon it from the S., and it is overlooked from the summit, D, of a little elevation on the ridge, 250 ft. from the interior of the fort. The S. end, therefore, was defended by three parallel drystone walls, B C, now cast down, 12 ft. apart, occupying a width of 60 ft., which run straight from the precipice edge for 70 ft., and then curve for about 50 ft. more to the angle of the E. face. The entrance is through this curved part. The steep faces of the E. side and N. end show traces of three or four terraces in continuation of the defences, till no longer needed on once more touching the precipice edge.

33. $1\frac{1}{2}$ m. further N.E., and 3 m. E. of Auchterarder, is a fort on *Rossie Law*, 1064 ft. above the sea and 900 above the valley. A single oval 'Ring,' about 600 by 500 ft. on the O.M., surrounds the top (fig. 31). The actual top is a level, dry, grassy, pleasant space, A, of about 270 by 150 ft. The ring approaches it on the S. within about 30 ft., and at a lower level of 10 ft., but separates from it on the N. till it is 300 ft. distant and about 70 ft. lower. The approaches are long and difficult, usually steepest on reaching the ring, when they ease off to the top. From the W. and S. the



Figs. 29, 30, 31. Forts on the Ochils, near Auchterarder.

descents are rocky and almost inaccessible. It is only for a small space on the E. that the approach is gentle. On the E. and N. the defence remaining is a grassy and stony mound, 15 ft. broad at the entrance, which is from the E. I could see no masonry, but in one part, for a stretch of about 100 ft., there is a row of large stones, 2 to 3 ft. in length, placed at the lower edge of the stony mound, and 7 ft. below its top (elevation and section, D), perhaps the base of a former wall built on the slope. A very large stone lies uncovered at the entrance. On the inaccessible S. and W. sides there is no mound or wall, but merely a terrace at the edge of the descent; and there is no sign of an inner defence for the level top.

34. Continuing still in a north-easterly direction along the N. slopes of the range for a distance of 5 m. we reach *Castle Law*, 2 m. S.S.E. of Forgardenny, on the top of a steep slope 700 ft. high, and about 950 above the sea, isolated on the other sides by short steep declivities. This fort was excavated in 1891 by the late Mr J. Weston Bell, Rossie, with the co-operation of Mr Lindsay-Wood, the proprietor, and was planned by Mr J. H. Cunningham, C.E., then the treasurer of our Society.¹ Some years afterwards I investigated the ground below the fort to the N. where several trenches and mounds were visible, and fig. 32 is founded on Mr Cunningham's plan of the fort with my own of the ground below.

Two irregularly concentric oval walls, the outer 15 the inner 18 ft. thick, were found, under the grass-grown rubbish, still standing all round to a height of from 2 to 6 ft., with well-built faces. The dimensions over all are 360 by 190 ft. The only entrance is at the E. end, approached by a causeway, and 10 ft. wide. But it only pierces the outer wall and there is no entrance through the inner wall anywhere. The gateway had bar holes, and the entrance within it was flanked on the S. side by a mysterious broad wall connecting the outer and inner enclosures and prolonged into the interior. Beginning at the entrance and for a considerable distance along the S. side, the outer surface of the inner wall was pierced with a row of square holes and slits running deep into the substance of the wall (fig. 33), containing a great quantity of charred wood chiefly in powder, evidently the remains of timber that had been incorporated with the wall.

To the N. the ground sloped gently to the edge of the steep descent, along which ran a low mound, concealing the remains of a substantial wall, enclosing between itself and the N. wall of the fort a space (*a*, fig. 32) equal in area to the interior of the main work.

To the S. a short steep descent from the wall falls upon a trench (*b* on plan and enlarged section), with a mound on its outer side. The trench begins at the S. side of the entrance, whence a ruined wall projects so as to flank it; and at its W. end it is blocked by a little mound, *d*, which descends steeply beyond it upon the lower level space, *e*. Beyond the trench is the gently sloping space, *f*, which bears traces of terracing, bounded by a second trench, *g*, beginning close to the W. end of the first, but diverging eastward and ending abruptly after a course of about 150 ft. In the first half of its course it has a rampart on its inner side.

Beyond the second trench comes another nearly level space, *h*, bounded on the S. by a steep little slope or scarp, slightly mounded on the edge, and

¹ *Proc. S. A. Scot.*, 1892, xxvii. 14.

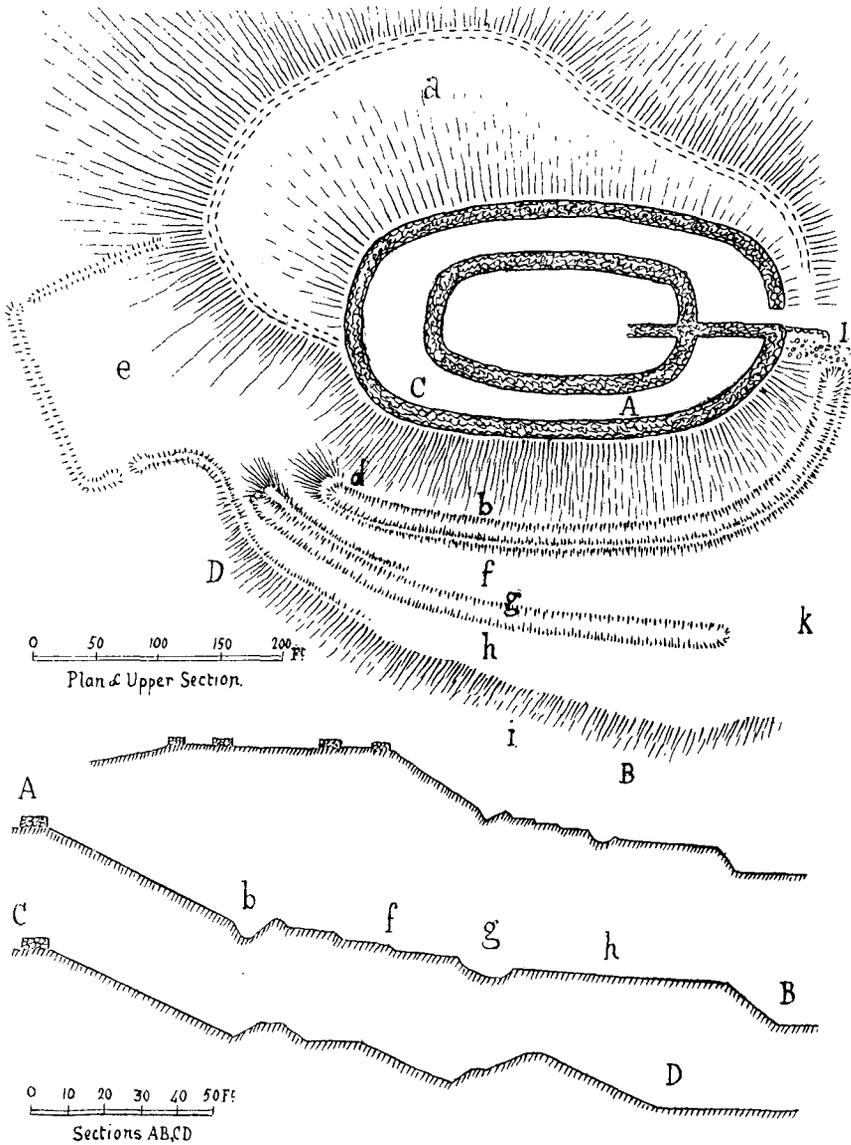


Fig. 32. Castle Law, Forgardenny.

falling on a narrow marshy space, *i*, with a slight decline westward, on the S. side of which rises the mass of the hill-range. This slight mound is prolonged westward so as to enclose the rectangular marshy flat, *e*, at the foot of the W. end of the fort-height. From the W. boundary of this apparent reservoir rises the prolongation of the range, and from the N. boundary the ground falls to the plain 600 ft. below. The spaces *f* and *h* unite eastward in a wide, nearly flat esplanade, *k*, which is unfenced, so that the eastern flank of *f* and *h* are quite open although the S. front is fortified.

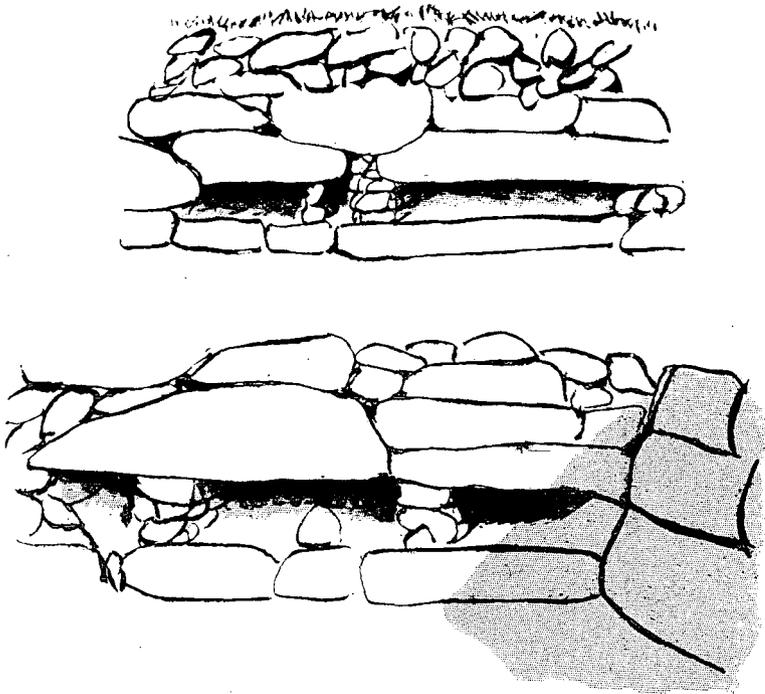


Fig. 33. Holes for Beams in the Wall of Castle Law, Forgandenny.

35. 5 m. W. of Castle Law the Ochils strike upon the junction of the Earn and Tay and the upper part of the Firth of Tay, and here, perched on a little knoll, looking down upon *Abernethy*, the ancient capital of the Picts, stands a fort excavated in 1896-98 by Messrs Alexander Mackie and James Marr of that place, latterly with some aid from our Society. The site is 750 ft. above the sea, and about 700 above the strip of carse land that separates the Ochils from the Tay to the N., and is strong by nature, being only approachable

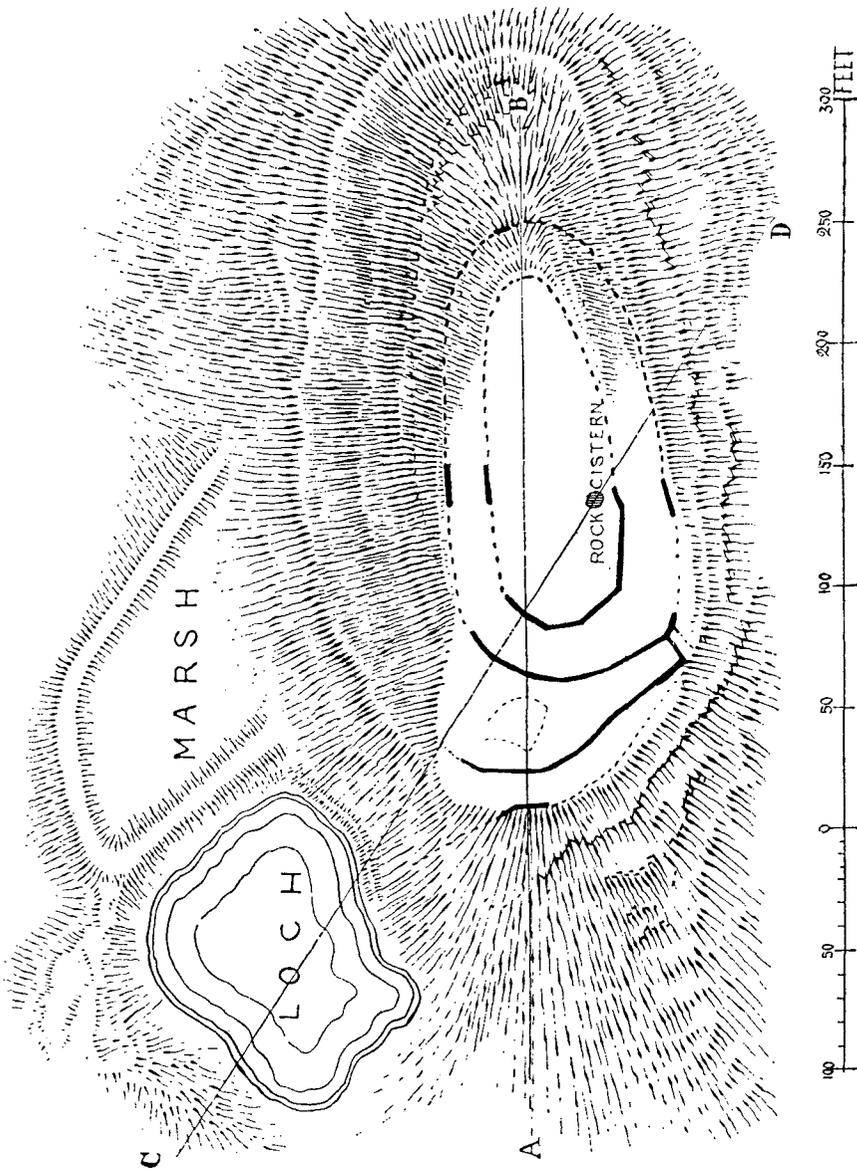


Fig. 34. Plan of the Site of Abernethy Fort. (Mr F. K. Coles.)

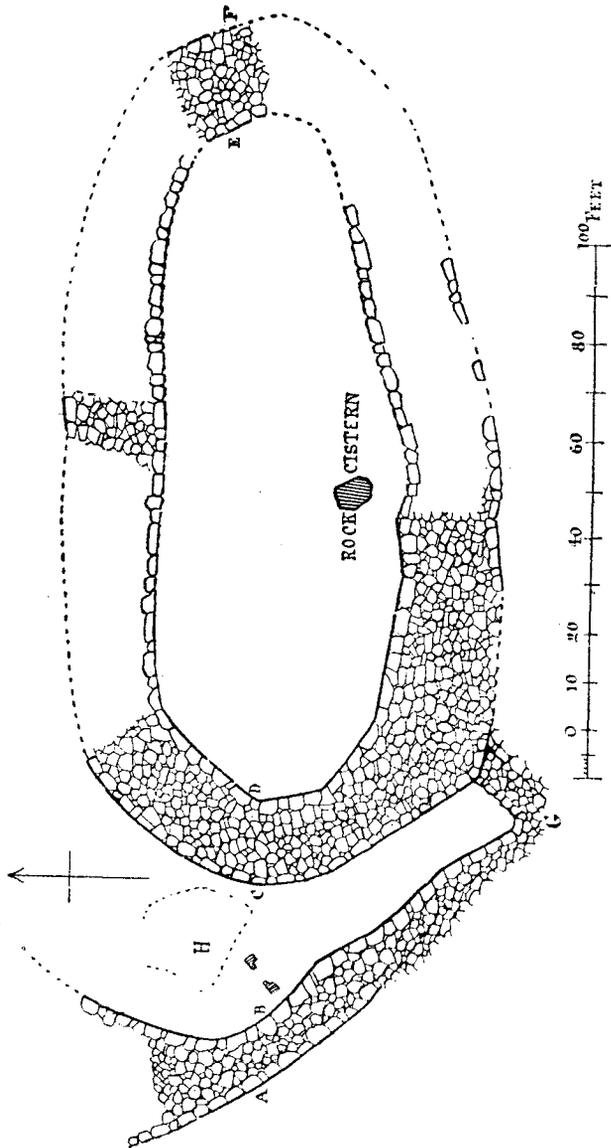


Fig. 35. Plan of the structure of the Fort on Castle Law, Abernethy. (Mr F. R. Coles.)

from the W. by a narrow neck. As will be seen from the plans (figs. 34, 35), a wall has been drawn across the neck, connected by a short branch with the inner and proper wall of the fort, and parting gradually from it as it crosses the neck and descends towards a dammed-up little loch and marsh in an elevated flat or recess of the hill-mass (fig. 34). This wall, although completely concealed before excavation, was still standing under the *debris* and earth accumulation to a height of from 6 to 10 ft., and was 18 ft. wide at the base, faced with excellent masonry.

The wall proper of the fort, also showing no sign of its existence on the level top of the site before excavation, completely enclosed the oval interior, which

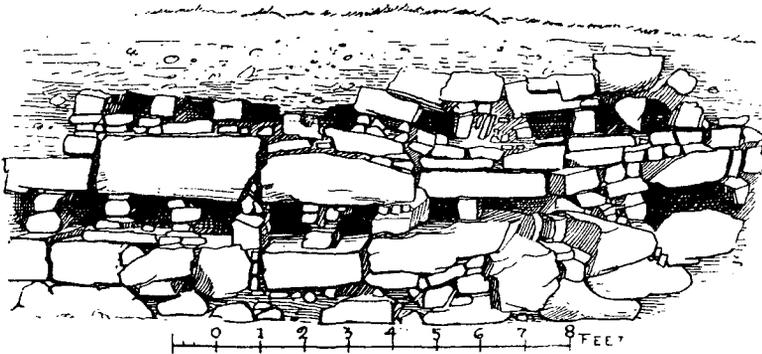


Fig. 36. Outer Face of inner wall, west end, Abernethy Fort. (Mr F. R. Coles.)

measured 136 by 51 ft., and, as in many other Scottish forts, was built with its inner face at the very edge of the slope, and the outer one some feet, in one place as much as 9 ft., perpendicular, down the slope below. The width of this inner wall was no less than from 18 to 25 ft., and it was still 7 ft. high in one place. As at Castle Law (No. 34), timber had been used in the construction, but to a much larger extent, as wherever both the outer and inner walls were examined, squared channels, in a double row (wherever the wall still stood high enough to show the upper one), were found running in from the outer face for about 8 or 10 ft. The regular loop-hole appearance of the openings of these channels and the general character of the masonry are well shown in the measured drawing taken by Mr F. R. Coles (fig. 36). On dissecting a part of the inner wall, longitudinal channels for timber were also found. Full details of this very interesting fort will be found in *Proc. S. A. Scot.*, 1898-99, vol. xxxiii. pp. 13-33.

(c) STONE FORTS ON MONCREIFFE HILL, PERTH.

36. The isolated *Hill of Moncreiffe*, 725 ft. above the sea, 3 m. S.E. of Perth, rises from the N. with a moderate slope to the edge of a precipice, from

which a very steep wooded descent, 600 ft. high, falls towards Moncreiffe House and the valley of the Earn. On the edge of this mural precipice two forts have been perched, the first of which, coming along the ridge from the

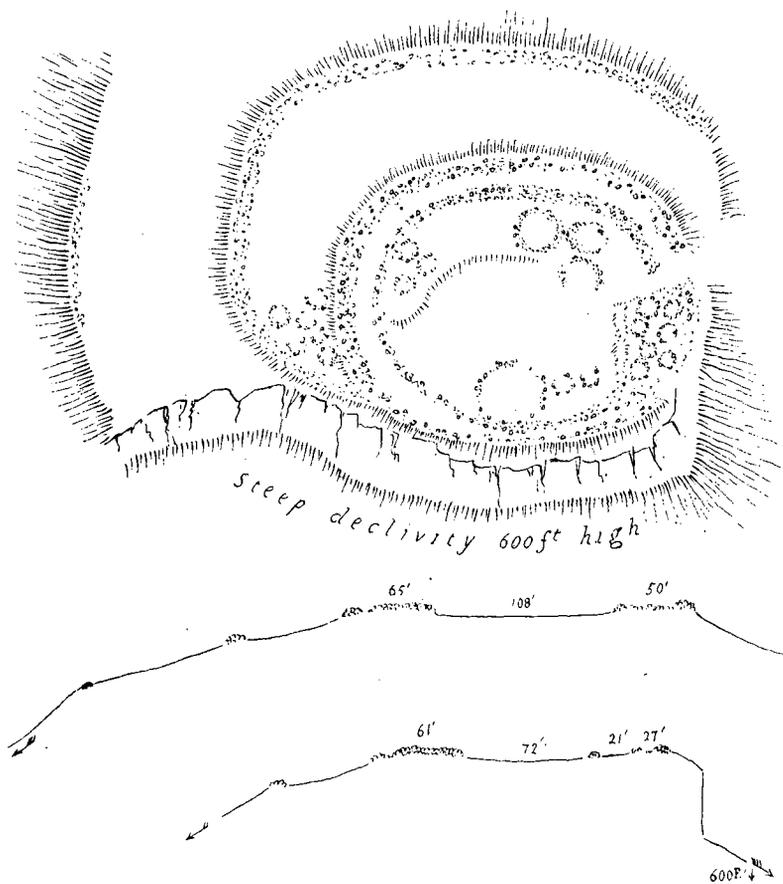


Fig. 37. Carnac, Hill of Moncreiffe.

W., is 600 ft. above the sea, and is now scarcely recognisable. The O.M. gives it an oval form measuring about 280 by 150 ft. I had some difficulty in finding any evidence of a mound or wall, but at last discovered a distinct mass of rude masonry in a chance break in the ground.

37. $\frac{1}{4}$ m. eastward, about 120 ft. higher, and on the very summit of the hill, is a comparatively well-preserved fort, marked *Carnac* on the O.M., which gives the title of *Moredun Top* to the summit of the hill. Perhaps this is an error suggested by the fort, *i.e.*, 'big Fort,' because $\frac{1}{4}$ m. N.E. there is a house marked not *Moredun* but *Moreden*. The fort (fig. 37), perched on the precipice edge, is quite inaccessible on the S., and on the N. has the protection of a long descent, but from the E. and W. is approached by short slopes.

The remains are so dilapidated and overgrown that it is difficult to plan them. The main wall is apparently double, except towards the precipice, where it is single, and built not on the edge, but retired about 20 ft. at the top of a dangerous slope down to it. The total width of the wall-mass is about 40 ft., and it stands up nowhere more than 3 or 4 ft. No building was visible in the wall, but at a point on the W. four carefully laid stones in a row look like the base of the outer face. At the W. end, another strong wall springs from the fort close to the precipice edge, and circles at a somewhat lower level three-fourths of the way round the inner wall, nearly enclosing a considerable crescentic space on the W. and N., but no connection with the inner wall at the E. end can now be made out. On this wall also there are traces of a facing. Still further out to the W., at the edge of a very steep short slope, I found remains of another less substantial wall, but it could not be traced far. Separated from the fort, by a slight hollow to the N.E., is another little stony, flat-topped eminence, not much lower than the fort, with a steep descent to the N. and N.E. The site was much obscured by weeds, but seemed to be oval, about 220 ft. long, and to be surrounded by the remains of a strong wall. This is beyond my plan.

The fort proper measures over all about 210 by 180 ft. On the N. and E. sides, in direct connection with the wall all along, and extending 40 to 50 ft. into the interior, is a mass of overgrown debris 3 to 5 ft. high. The only entrance to the fort is at the E. end, piercing the double wall and mass of ruins obliquely from the N.E. In the raised mass near the entrance and on the N. side of the fort is a circular space, 21 ft. in diameter, surrounded by a mound-wall 3 ft. wide. Two others of about the same size are near it, one of them touching it. Further W. are several small, round, saucer-shaped hollows. On the S. side of the entrance the raised mass contains eight or nine similar 'saucers,' in two irregular rows. The rest of the interior is vacant, except for another circular enclosure, measuring 35 by 20 ft., which touches the wall on the S. side.

(d) STONE FORTS ON THE SIDLAW HILLS.

We have seen that on the extensive Sidlaw range there are but two earthen forts, both on the eastern side; one, Evelick, on a high site, the other, Rait, low down at the very margin of the Carse of Gowrie. The number of stone forts on the E. is the same, but there are also probably two on the W. side, although one of the latter is not clearly proved to be of stone.

38. On the E. side of the Sidlaws, on the gently rounded top of *Dron Hill*, 684 ft. above the sea, $\frac{1}{2}$ m. W.S.W. of Dron Farm, and $1\frac{3}{4}$ m. N.W. of Longforgan Church, is a fort which on the O.M. looks like two ovals intersecting each other longitudinally (fig. 38). But on the ground it is pretty

evident that it is really an oval work, with one small crescentic annex on the N. and another large one on the S., springing from the same points of the oval. The fort proper measures 330 by 250 ft. over all. The greatly dilapidated wall is generally grass-covered, and only rises a foot or two above the surface. A wall I believe, however, it has been, as on the W. side a row of large stones, extending about 100 ft. southward and closely set, can hardly be anything else than the base of an outer casing, and a less complete row shows the position of the inner face, giving a width for the wall of from 9 to 11 ft. There are basal stones, also, here and there along the S. face, where the

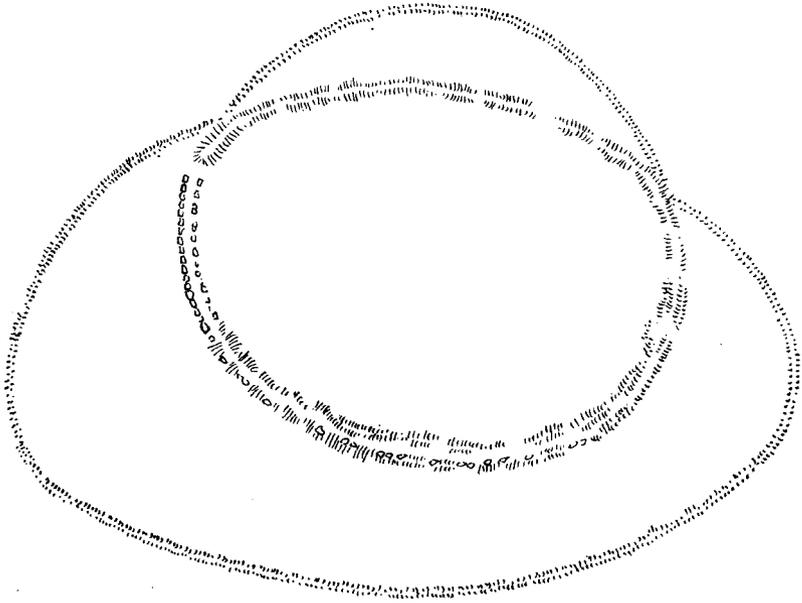


Fig. 38. Fort on Dron Hill, Longforgan.

mound is 27 ft. wide, perhaps from digging operations to remove the stones; and some very large stones have been torn from their place and taken a short distance as if for carting away. The N. and E. sides have been almost completely destroyed, and are merely traceable. The enclosing mounds of the annexes are not defensive; they are very low, only 6 or 7 ft. wide, and are probably ruined walls.

39. *The Lavs*, on the *Lavs Hill*, Drumsturdy, an outlying eminence rather than a part of the Sidlaws proper, is situated $1\frac{1}{2}$ m. N. by W. of Monifieth Church, 431 ft. above the sea. The site is on a small isolated height, partly

precipitous, the easiest access being at its E. end, and the fort occupied the whole of the nearly level top.

This fort, not so long ago perhaps the best preserved in Scotland, has been so knocked about, and the records of it are so confused and contradictory, that to form any intelligible idea of it, difficult enough at the best, is impossible without some reference to its modern history. The earliest notice, published in the *Trans. R. Soc. of Lit.* in a paper dated 1827, but from observations made about 1790, is by Dr John Jamieson, who described an outer wall, 500 paces in circumference, near the bottom of the hill on the E., slanting gradually up the southern slope till half-way between the summit and the brink of the precipice on that side, and continuing to ascend as it circled round till it reached the N.E. corner where one entrance was, another being apparently at the W. end. It is strange that no one else seems to have noticed this low-level outer wall, but perhaps it may have been covered by the operations to be described immediately. The inner wall, according to Dr Jamieson, surrounded the summit at a distance of several paces from the outer one, but varying according to the nature of the ground. He also mentions two or three other short walls running from the outer one to the brink of the precipice.

In 1859 Mr Neish, at that time the proprietor, excavated the site, and the results are recorded, with additional notes by John Stuart, in vol. iii. of our *Proc.*, pp. 440-54. Mr Neish states that before 1834 great quantities of stones were carried off for farm purposes, and Mr Stuart estimates, on the authority of a man who took part in the spoliation, that 9600 cartloads were removed in the four winters ending 1818. The author of the *Statistical Account of the Parish*, 1842, confirms this by the statement that persons then alive remembered when the ruins were 5 ft. higher than when he wrote.

Mr Neish also states that in 1834 the whole surface was levelled and portions of the wall thrown over near the E. end. Finally came his own excavations in 1859, the discharge of the rubbish from which seems to have been down the hill at the S.E. corner.

I have found it impossible to form a connected idea of the disposition and nature of the fortifications from Mr Neish's account of his excavations and the very sketchy plan.¹ But for the difficulties and anomalies suggested by these, and if I had trusted to my own observations on the spot alone, I should have had no hesitation in pronouncing the work to have been an ordinary stone fort of excellent dry masonry with a duplication of the wall at each end if not at the sides and without reckoning the no longer visible outer wall of Dr Jamieson.

The only part that I had time to study and measure with some care was the E. end, where Mr Neish's excavations were either most thorough, or are best preserved. As shown in my plan and section (fig. 39), the first thing met with from the outside is a terrace, D, 15 ft. wide, at the edge of the descent. Mr Neish explains that this was formed by the rubbish thrown out in the levelling operations of 1834 and in his own work. I may add that a pleasant terrace walk runs all round outside the wall, and probably is everywhere due to the same cause.

¹ A main difficulty in understanding Mr Neish's description arises from his treating the place as an area divided into irregular spaces by *wall faces* (instead of as a fortification surrounded by *walls*).

Within this terrace, and standing, no doubt, on the edge of the original descent, comes a wall, C, 8 ft. wide, with good facings, exposed for 3 ft. of height outside and 5 or 6 inside. The rubble, which doubtless exists between the facings, was perhaps not laid bare by Mr Neish, and now is hidden by green turf. Then follows an interval, B, between this wall and a second wider one, A, which has its outer face, like the inner one of the first, excavated to the full depth, in one place 7 ft., and the inner face only sufficiently cleared to show that it is there. This I take to be *the* wall of the fort, going all round. The outer wall, on the other hand, diverges from the inner one eastward, so that the interval between them increases from 8 to 12 ft., and is probably 14 or 15, at the far end. Thus, as at Abernethy, the outer wall is apparently detached from the main

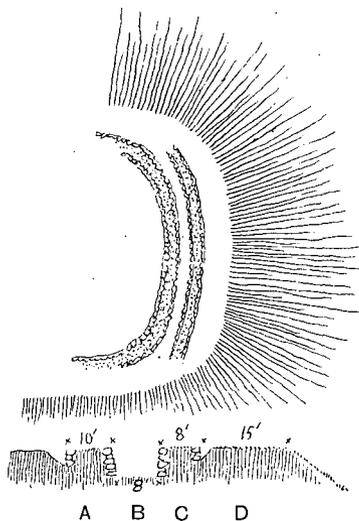


Fig. 39. East end of the Laws Fort, Monifieth.

wall of the fort at one end at least, although it may have run down the slope to join Dr Jamieson's problematical outer wall. It could not be that wall, as he says that the outer wall was at the foot of the hill at this end. The excavation of these walls has been a good piece of work, and they are still well seen, C for 160 and A for 180 ft. of length.

The wall of enceinte, A, as I took it to be, is exposed at intervals all round, and the W. end, more fully opened up, seemed to have an additional wall, although not distinctly shown.

In Mr Neish's excavations great quantities of rubbish testified to the former existence of extensive building in the interior, but the only structure of consequence remaining was the foundation of a circular tower with a wall a few feet high and 18 ft. thick and a paved area 36 ft. in diameter, according to the plan. It was of broch dimensions, therefore, but there was no opening in the wall, save

the narrow entrance, and no evidence of a stair, so that it cannot be proved to be a broch.

Vitrification.—There is the usual too common contradictory evidence on this point. Jamieson makes the startling statements that "This fort consists of two walls of vitrified matter, which surround the hill"; and "all the buildings are as regularly vitrified as the walls"; also "the vitrification is as perfect as that of the Fort of Finhaven." Mr Neish, on the other hand, declares that vitrified masses were indeed found all through the ruins, and often as if used for backing up the walls (and here I may explain that what he calls the walls are really the wall faces, so that he appears to mean that the vitrified masses were used in the rubble between the faces), but never as if the walls (*i.e.*, wall faces) had been vitrified. There can be little doubt that we should prefer Mr Neish's statements, as they resulted from a careful excavation, while Dr Jamieson relied on surface observations; and we need have the less hesitation, as it seems extremely unlikely that anyone would remove 9600 cartloads of such useless building material as vitrified masses must be. Moreover, I saw no vitrification on the extensive wall faces now visible, and as far as my observations go, vitrification is never found uniting the blocks of a handsomely built wall face. It is possible, however, that a vitrified fort existed here previously, from which the vitrified masses used in the rubble work of the present ruins may have been obtained.

40. *Dunsinnan*, the first of the two stone forts on the N.W. side of the Sidlaws, seems to be one of the very few primitive Scottish fortresses mentioned by the early annalists; at least there is no other existing claimant for the honour of being the *Dunsinoen* of the tragedy which led to the murder of Kenneth, King of Alban, in 995,¹ at Fettercairn.

In modern times the first to notice the place was Sir John Sinclair, who in 1772, when he can have been only eighteen years of age, gathered its local traditions.² These were of little consequence, but at the very end of that century, James Playfair, D.D., then minister of Meigle, afterwards Principal of St Andrews University, made some excavations, which were recorded first in a work not generally accessible,³ and again (very briefly in both instances) in a work of his own,⁴ twenty years later. Chalmers⁵ makes some sensible remarks about the place, and James Knox sums up the information known about it down to 1831, besides giving his own impressions from a personal visit.⁶

¹ A.D. 995. "Cinaeth MacMalcolaim Ri Alban a suis occisus est. Tigh. (per dolum, Ann. Ult.)." "Interfectus est a suis hominibus in Fotherken per perfidium Finvelae filiae Cunchar comitis de Engus, ejus Finvelae unicum filium predictus Kyneth interfecit apud Dunsinoen." *Chron. Picts and Scots*, 175, 287 (Skene's *Celtic Scotland*).

² *Beauties of Scotland*, Forsyth, iv. 319-21.

³ *General View of the Agriculture of the County of Perth*, James Robertson, D.D., 1799, i. 380.

⁴ *Description of Scotland*, 1819, i. 488, James Playfair, D.D.

⁵ *Caledonia*, i. 503.

⁶ *The Topography of the Basin of the Tay*, 192-202, 1831.

But it was not till 1854 that a second attempt was made to reveal the nature of the place by excavation, undertaken by Mr Nairne, the proprietor at that time, the results of which were recorded by Dr T. A. Wise.¹ Unfortunately, he seems to have paid only a fleeting visit to the works, so that he was led into serious errors, which I am now able to correct from my own observation and from a careful and generally reliable MS. record of the excavations, kept by the late Mr Andrew Stewart, Kinrossie, Collace, who took part in the excavations, for the loan of which I am indebted to his heirs, through the kindness of the Rev. Mr Baxter, F.S.A.Scot., Free Church Minister of Cargill. The last

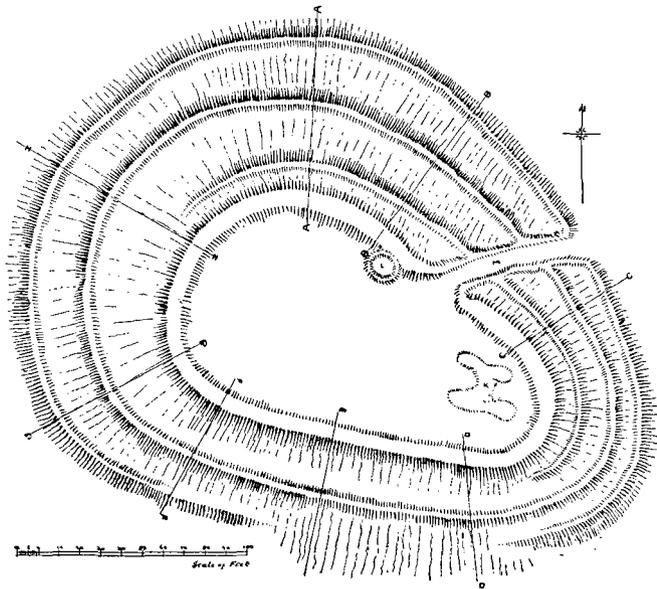


Fig. 40. Dunsinnan. (Mr Hutcheson.)

printed notice is by the Rev. Thomas Brown,² Collace, which, however, adds very little to our knowledge.

In the following account I shall make use of all these sources of information and point out the very serious misconceptions to which some of them have given rise; thus illustrating the evil results of unskilled, incomplete and hasty excavations, undertaken too often with the object of proving preconceived theories.

My own visits to the place were in 1898, in company with the Rev. Mr

¹ *Proc. S. A. Scot.*, ii. 93, 1859.

² *Op. cit.*, ix. 378, 1870-72, communicated by Alex. Laing.

Baxter, who assisted me in taking a rough plan, corrected afterwards by aid of Mr Ritchie, factor on the estate; but this has been superseded by the plan and sections (figs. 39 and 40) placed at my disposal by the kindness of Mr Alexander Hutcheson, architect, F.S.A.Scot., who generously waived his intention of writing a special article on Dunsinnan, when he heard that I was engaged on the present work.

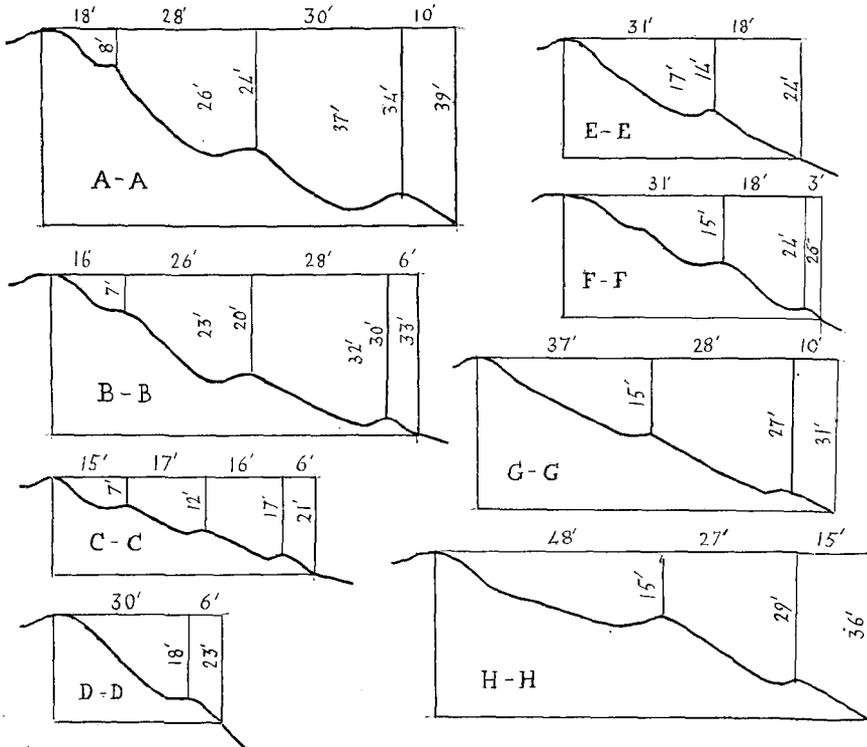


Fig. 41. Profiles of Dunsinnan. (Mr Hutcheson.)

The Site.—The hill on which Dunsinnan stands, $7\frac{1}{2}$ m. N.E. of Perth, is part of a ridge of the Sidlaws, running parallel with, and on the N.W. side of, the main chain, but not inferior to it in height, and is well isolated from the other summits on the continuation of the ridge to the N.E. and S.W. The ascent from the N.W. is gradual, but is steep and difficult in other directions, and the flat-topped fort is perched, 1012 ft. above the sea level, on a little green knoll which crowns the narrow summit.

The name, therefore, corresponds well with the site, if we accept the derivation from *Dun* and *sine*, 'nipple,' as the fort stands on 'the nipple' of a swelling hill top; but those who desire a more romantic origin will no doubt prefer the derivation, which has also been suggested, from *shangan*, 'ants,' because "Macbeth's men swarmed up and down like ants when building the castle."

Present Aspect of the Fortifications.—The nearly level top dishes down about 3 ft. to the middle, as ascertained for me by Mr Baxter, and the only suggestion of fortification round the area is a slight ridging at the edge, 6 to 12 ft. wide, not always perceptible to the eye, but made out by measurement. On the steep short slopes of 'the nipple' are a series of narrow terraces, sometimes level, sometimes higher towards the outer edge, sometimes becoming veritable trenches, as shown in Mr Hutcheson's plan and sections (figs. 40, 41). The trenched character is most marked on the N., particularly on the line A A, but

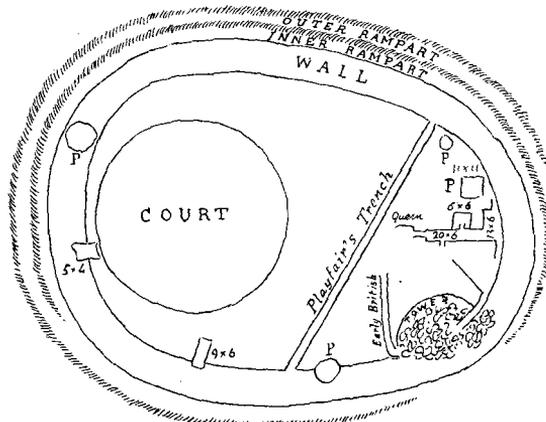


Fig. 42. Dunsinnan. (The late Mr A. Stewart, Collace.)

even there the depth of the deepest and lowest trench is only 3 ft. The number of these terraces and trenches varies from three on the N.E. to one on the S., where, however, another may have disappeared owing to the steepness of the slope. At the extreme E. end, the slope ends so soon on a precipice that there is little room for terraces, and I could not make out more than one. Mr Stewart's plan (fig. 42) gives a very cramped representation of them and names them 'Ramparts,' but this seems a very inappropriate title for them. Neither is there the slightest sign of a lower wall hinted at by him.

Plateaux below the Fort.—Immediately in front of the lowest trench on the N. there is a little level space, but a much larger plateau, 500 by 200 ft. on the O.M., interrupts the steep southern descent, about 100 ft. below the fort, and if there was a town as well as a Castle of Dunsinnan, the site would naturally be on these plateaux and some neighbouring easy slopes. The track

of an ancient wall round the edge of the large plateau is marked on the O.M., but I could see no sign of it, looking down from the fort.

General Dimensions.—The upper area, from crest to crest of the slight ridging at the edge, measures about 185 ft. in length by 105 in greatest breadth, which is towards the W. end of the oval space. At the corresponding part of the E. end the width narrows to 65 ft. Measured over all, 'the nipple' with its terraced or trenched sides comes out 325 by 240 ft. on the plan.

The Fortifications as revealed by Excavation.—As we have shown, the green top and sides give no clear indication of a rampart, but shortly before 1799, Dr Playfair, digging in from the outer slope horizontally through 21 ft. of ruins, came upon a part of what he, without hesitation, calls "Macbeth's strong rampart of stone," "cemented with red mortar"; "as entire as when it was originally constructed, founded on the rock, and neatly built of large stones."

Passing to the excavation by Mr Nairne about sixty years later, it is amazing, after Dr Playfair's experiences, to find Dr Wise describing and figuring the fortification of the top as an earthen vallum, 20 ft. broad at the base and tapering to a height of 10 or 12 ft. (fig. 43).

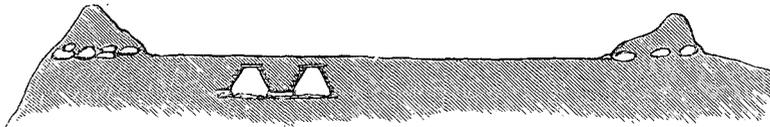


Fig. 43. Sectional View of Dunsinnan. (Dr Wise.)

But however this error arose, it may be confidently asserted that no such rampart ever existed, and Mr Stewart's MS. account of the 1854 excavations amply confirms Dr Playfair's description in all respects but one. Mr Stewart relates that the workmen, going in from the outside, cut through a mass 21 ft. thick, finding a wall "strongly built of large stones, both inside and out, while the filling in is a mass of loose stones, entirely without manipulation or mortar." We may dismiss as fanciful, therefore, the 'red mortar' of Playfair, who was probably misled, as will afterwards appear, by finding red clay among the ruins. Thus the wall of Dunsinnan falls into line with the well ascertained walls of the other Scottish stone forts that have been properly investigated. Mr Stewart gives no section along with his plan (given in outline, fig. 42), but I have constructed a section (fig. 44) from his very clear description which will aid the reader, as we proceed, in understanding the position of the wall and interior buildings. I need only point-out just now the position of the wall at E.

Entrance.—At present there is a very distinct entrance at the N.E. corner, penetrating obliquely through the defences to the central area, and this entrance is distinctly mentioned in the *Old Statistical Account* of 1798. It must have existed, therefore, at the time of Nairne's excavation, and a statement by Mr Stewart that the wall was traced all round without finding an entrance, must be intended to apply only to the stone wall. This is quite likely, as there was certainly no entrance through the inner stone walls, at least near their base, at Forgardenny and Abernethy forts.

Interior Buildings.—Dr Playfair states that, "having diligently explored the

area, now 3 ft. below the surface, and cut a deep trench across it," he found no vestige of building, but he cannot have gone deep enough, as the excavations of 1854 revealed much building at the E. end of the area.

Here again Dr Wise, misled by his imaginary vallum, regarded the chambers found as underground, *i.e.*, beneath the original floor of the fort; but Mr Stewart shows in the clearest manner that they stood *on* the floor. Reverting to my section (fig. 44), constructed from his description, the rock floor, D D, is seen sloping up gradually to the centre of the fort: on this stands the wall of fortification, E, and within it the chambers, F F, and a passage, H, between them and the wall, besides the "Quern Chamber," G, the whole enveloped in a mass of ruins and covered by accumulated earth, etc., under the grassy surface, A B C. Unfortunately, the construction of these chambers remains quite doubtful. The plans (figs. 42 and 43) of Dr Wise and Mr Stewart are utterly irreconcilable, and equally so are their descriptions, Dr Wise giving them a rounded figure with converging walls and no mortar, while Mr Stewart declares that they are all square, with perpendicular walls, and that, although the fort wall had no mortar, "yet all the square buildings contain considerable quantities of red mortar." His

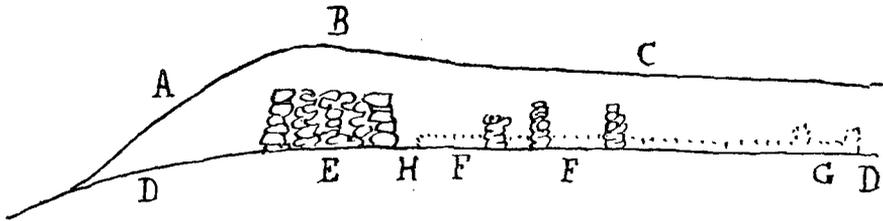


Fig. 44. Excavated Wall and Buildings, Dunsinnan (from Mr Stewart's description).

expressions on this point are rather obscure, as if he had not seen this mortar actually joining the stones, but only lying about, and he probably really means clay, as he uses the term mortar very loosely, in another sentence speaking of "an admixture of decomposed bones and charcoal of wood" as "a compound mortar."

It will be observed that Mr Stewart gives on his plan several remains of buildings not noticed in Dr Wise's account. A mass of ruin on the S. he considered on very slender grounds to have been a tower, and two passages leading to it he regarded as the only early British works, because they alone had converging walls. He also says that "within one-half of a large circular opening towards the west of the area, which seems to have been an open court," foundation walls still stood a foot high, but that the other half contained none.

Vitrification.—Dr Playfair makes no mention of vitrification, and Williams, the original discoverer of vitrified forts, and Knox declare there was none; but Wise found some deep in the excavations of the chambers; Laing also dug out several pieces, and Stewart asserts, not only that the whole ruins on the top were full of vitrified stones, but that many stones of the wall were fused with trap rock, sandstone, and quartz into one lump. This reads as if vitrified blocks

were used in the masonry, and not as meaning that the wall was vitrified. On the whole there can hardly be a doubt that the wall was not vitrified, although vitrified blocks, either brought from a distance or taken from an older fort on the same site, may have been used as building material.

Water Supply.—The excavators found no trace of any within the fort, but springs exist not far off down the hill, and Stewart speaks of a 'Flatt' immediately below the rampart wall to the S., covered by a "body of red mortar" (clay?) "which may have been a water tank."

The Finds consisted of (1) a quern in a fixed position in one of the chambers. (2) A spiral bronze finger ring, described by the Rev. Thomas Brown as of most perfect workmanship, in the form of a serpent, the eyes and scales on the back carved regularly and very minutely. It was kept by Mr Nairne, but in a year was lost. (3) And, on the authority of Mr Robert Chambers, two round tablets of metal resembling brass, one of them engraved with the legend: "The scone of kingdom come until sylphs in air carry me again to Bethel."¹

Conclusions.—It is much to be regretted that the excavations were so imperfect and so unscientifically conducted and reported; but on the whole we may conclude that Dunsinnan was defended round the top by a dry stone wall of the ordinary fort type and on the slopes by additional works, now assuming the aspect of slightly trenched or level terraces, the true character of which has still to be ascertained. Also, that it contained much building, the ruins of which, with the accumulated soil of centuries, favoured by burnt timber, of which many traces remained, brought the top to a nearly uniform level, completely burying both wall and buildings: that the evidence as to the form and structure of the buildings is contradictory and quite unreliable: that the same may be said as to the presence of mortar, by which probably clay was meant: that the few relics cast no clear light on the origin of the building: and finally that there is nothing to separate Dunsinnan from the class of ordinary Scottish forts of dry masonry.

41. *Denoon Law.*—The work here is a somewhat questionable example of a stone fort, as I could only see faint evidence of rubble work rather than building in the very few breaks in the massive green rampart. But Dr Playfair and Mr Knox both state distinctly that the wall was built of stone without cement, and the absence of trenches, the presence of a stone threshold at the entrance, as well as the whole aspect of the enceinte, is that of a stone rather than an earthen fort.

The position is on the W. side of Denoon Glen, here a broad open valley, but at some distance from the stream, $2\frac{1}{2}$ m. S.W. of Glamis Church, and 689 ft. above the sea.

The Law stands up conspicuously from every near point of view, being quite isolated and 100 ft. in height. The sides are steep, and the south-eastern ascent ends in a line of precipice, on the edge of which the fort stands (fig. 45). The area of the fort occupies the whole of the level top, and hence has a squarish oval form, and is girt by a single mound, massive and lofty at the N.E. end and on the N.W. face, where for a considerable stretch it is no less than 10 to 14 ft. high inside, a very unusual elevation, the base here, however, being probably natural. But even at the precipice edge on the S.E. the rampart is

¹ *Picture of Scotland*, Robert Chambers, 1828.

6 to 7 ft. high. Near the S.W. angle, however, the mound seems to have been altogether removed, and at the S.W. end it is only 4 ft. high, although the

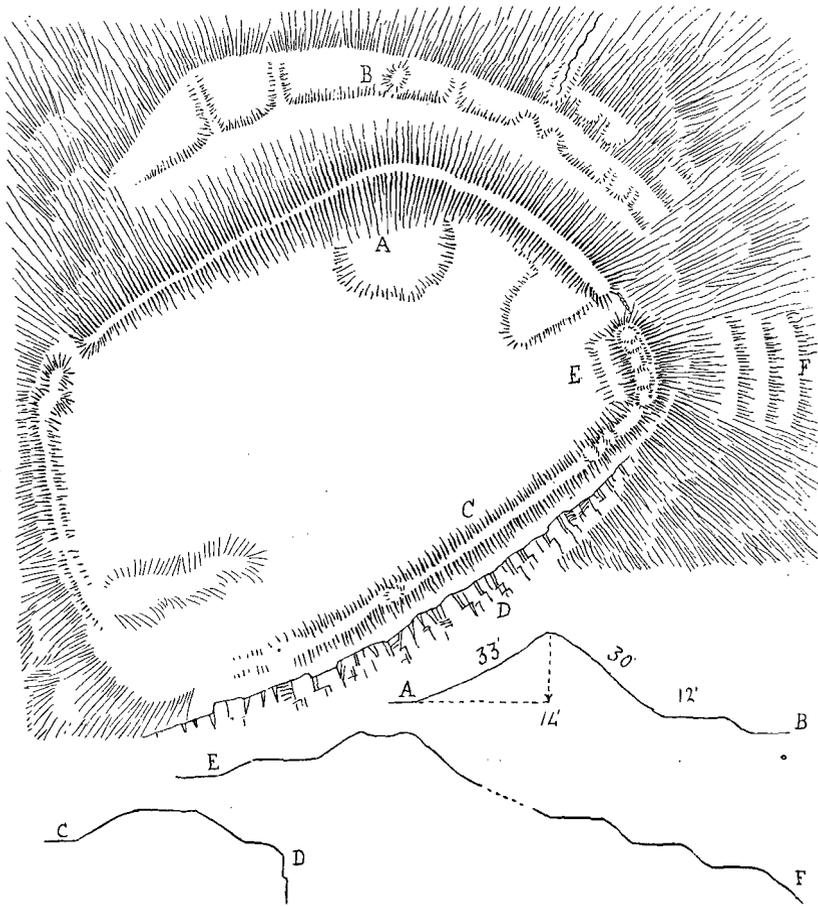


Fig. 45. Denoon Law Fort, Glamis.

necessity for defence is greater there, and it is almost gone at the N.W. angle. Thus it would seem to have been much injured at the S.W. end of the fort.

There seems to have been an entrance at the much injured N.W. angle, but

the only distinct entrance now is near the S. angle of the N.E. end. It is 7 ft. wide, has a stone threshold, and passes between the massive ends of the rampart, of which that on the N. side has a broad platform in its rear, while the other has a short terrace, an arrangement which flanks and defends the entrance inside. The top of the rampart is a mere crest on the N.W. face, is somewhat broader, and has two or three little 'saucer' hollows on the top on the S.E. face, but is as much as 6 to 10 ft. broad at the N.E. end, the short part on the S. side of the entrance being pitted with several 'saucer' cavities.

In the area of the interior there are some inequalities of the surface, particularly a wide shallow circular hollow at the N. side, and a large irregular mound, perhaps a rubbish heap, near where the rampart is wanting at the S.W. angle; these are probably modern interferences.

The dimensions of the interior from crest to crest are about 380 by an average of 230 ft. It is difficult to give the measurement over all, as the position where the rampart merges in the slope is unknown, but it must be about 430 by 280 ft.

On the outer slope at the N. angle and thence to near the entrance in one direction, and half-way along the N.W. face in the other, are two terraces, with a third below them for a short distance near the entrance; the middle one and the short one are subdivided by compartments, in a manner difficult to describe, but shown in the plan. Possibly these spaces were levelled and subdivided as sites for houses. Three short parallel terraces are also faintly visible on the S. side of the entrance. The terraces at Denoon Law are noticed by Alexander Gordon, who compares them to those of Romanno. They are also noticed but not described by Knox.¹ In planning these difficult objects and the fort generally I had the benefit of help from the Rev. Dr John Stevenson of Glamis, and my nephew Mr Arthur Cassels Brown.

(c) ISOLATED FORT NEAR ALYTH.

42. *Barra Hill* (or *Barryhill Fort*) is situated $1\frac{1}{2}$ m. N.E. of Alyth Church, on a spur of Alyth Hill. This long ridge, after rising from the W. to two summits, 966 and 871 ft. above the sea, falls on the E. to a neck about 500 ft. above the sea, over which passes the high road up Glenisla, and to the E. of the road the ridge again rises abruptly 150 ft. to a little eminence, 680 ft. above the sea, conspicuous from being thus thrust into the valley of the Isla. Here stands the fort with steep rocky descents on all sides.

The earliest notice of Barra Hill is by Dr Playfair, who saw it probably at the end of the eighteenth century,² and it has also been described by Sir George Mackenzie, whose visit must have been early in the nineteenth century.³

The fortress consists of a regular oval work (fig. 46), measuring on the O.M. 200 by 120 ft., occupying the level summit, and various appurtenances, which can only be understood by reference to the plan, founded on that of the O.M., but with considerable additions, and with sections by myself. Approaching, as a visitor would naturally do, from the W., we first meet a trifling mound-

¹ *Topography of the Basin of the Tay*, p. 172, James Knox, 1831.

² *Description of Scotland*, i. 485, James Playfair, D.D., 1819.

³ *Archæol. Scot.*, iv. 184.

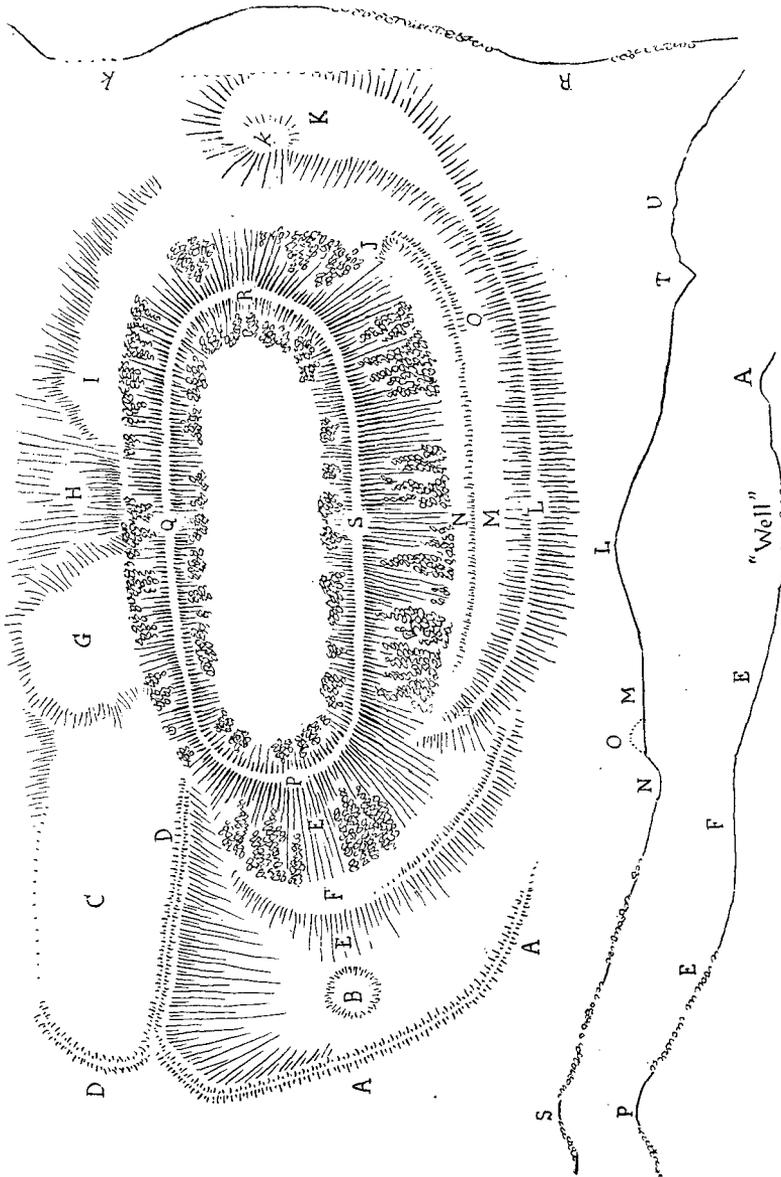


Fig. 46. Barra Hill Fort, Alyth.

fence, A A, at the edge of the steep ascent, bounding a plateau at the foot of the fort on which is the 'well,' B, a circular grassy hollow, stony at the bottom, 3 ft. deep, about 50 diameter, and quite dry at my visit.

Looking up from this plateau to the N. we see a steep ascent to another plateau, C, 25 ft. higher, partially enclosed by a low mound, D D, and dominated by the main work; looking now from the first plateau to the E., another ascent, E E, is seen, at first gentle, then steeper, interrupted by the wide terrace, F, and leading directly to the rampart of the fort proper.

G is another rough plateau, unfenced, higher than C, and very slightly dominated by the main work. At H the hill descends direct from the rampart of the fort, but beyond that a terrace, I, runs round eastward and southward as far as J, where there is a fall of 2 or 3 ft. to the trench, N.

The mound, K, about 50 ft. wide on the top, is probably natural, but carved into shape. It bears a little mound, *k*, at the N. end, and southward gradually narrows to join the very regular, evidently artificial, mound, L, the crest of which is 5 or 6 ft. wide, and which has in its rear a wide terrace, M



Fig. 47. Profile at Barra Hill. (Sir G. Mackenzie.)

(which may be regarded as continuous with the terrace, I J), rising only a couple of feet above the 6 ft. wide trench, N, from which it is fenced off by a low mound only at the E. end, O. Beyond L there is a little, perhaps natural, sharp-cut trench, T, shown only in my section, having on the further side a narrow, rough ridge, U, beyond which is the steep descent of the hill. This ridge would form a good natural first line of defence on the S. side of the fort.

Finally, with a bold command all round, except towards the plateau, G, and mound-head, K, where it is but slight, is the rampart, P Q R S, of the fort proper. Dr Playfair describes this as a mound of earth 6 to 8 ft. high, on which a wall of freestone was built without cement, of which the foundation of rough granite remained, 10 to 12 ft. wide, the same width as the top of the mound. I cannot help thinking, however, that he was mistaken, as there is no evidence now of such a wall, and the aspect of the mound is exactly that of the ordinary ruined and partially grass-grown walls of Scottish forts. Neither do I know any example among them of a wall constructed on the top of an artificial mound. Sir George Mackenzie tells us that the stones of the rampart are a red conglomerate from the hill, but does not mention any masonry, and I could see none.

Vitrification.—Dr Playfair and Sir G. Mackenzie saw only a few vitrified masses in the ruins of the rampart, and I noticed none amidst the great masses of stones that lie on its outer and inner slopes. Dr Playfair, however, describes

a thoroughly vitrified 'bridge,' 18 ft. long, only 2 broad in the middle, but widening to both ends, and covered with gravel, as crossing the trench (at the point J in my plan). But Sir G. Mackenzie, while confirming the vitrification, says and shows by a section (fig. 47) that this bears no resemblance to a bridge, and I can amply confirm him, in regard to its present state, as there is now nothing but a slight descent at J to the trench, N. Possibly a rough and pitted irregularity of the terrace or flat-bottomed trench, I, near J, now visible, may have suggested the idea of a northern side to this 'bridge,' which, unless it was purposely greatly reduced between Dr Playfair's and Sir George Mackenzie's visits, was so low that it cannot have been of any use as a bridge.

Dr Playfair calls this the only vitrified part of the fort, but Sir George, having found more vitrification at the point, I, makes the extraordinary suggestion, that if the turf were removed, a vitrified wall would be found all the way round from I to N. At the same time he confesses that he cannot account for a vitrified wall being found in so extraordinary a situation as the bottom of a trench.

No entrance through the rampart is marked on the O.M., although Dr Playfair speaks of one, apparently at the E. end, secured by a bulwark of stone. I could see neither the one nor the other.

(f) FORTS ON HIGH RIDGES BETWEEN FORFAR AND BRECHIN.

A few miles N.E. of Forfar two narrow parallel ridges, their crests from a mile to a mile and a half apart, run north-eastward, between the broad fertile valley of the South Esk on the one side, and Rescobie Loch and the pass through which road and rail escape from Strathmore *en route* for the Mearns on the other. These ridges rise boldly to a height of 750 ft. above the sea, and 500 above the low ground to N. and S., but the hollow between them is only 300 ft. deep, and is continuous with the table-land which carries one of the roads from Forfar to Brechin. Where the hollow debouches on the table-land is Aberlemno, celebrated for its large assemblage of early Christian monuments. The furthest north of these ridges is 5 m. long, beginning at Carse Gray on the W. and ending at Finavon Hill. The other, beginning near Luanhead and Pitscandle, is 3 m. long, and ends at Turin Hill. A large fort occupies each of these ridges at or near their highest points, and there is also a small work of a doubtful character towards the W. end of the Turin Hill ridge.

43. *Turin Hill Fort*, the *Camp or Kemp Castle* of the Statistical Accounts and of Mr A. J. Warden's *Angus*, is a very remarkable work of almost unique character and extent, and has hitherto escaped description, beyond the brief notices in the authorities mentioned above. It is $1\frac{1}{2}$ m. S.S.W. of Aberlemno Church and 800 ft. above the sea. The summit of Turin Hill is a peculiarly narrow level ridge which runs E. and W. and is 1600 ft. in length by only about 100 in breadth. The fort with its appurtenances occupies all this space, and runs besides some distance down the gentle descent to the N., so that the total occupied area is about 1600 by 400 ft. The descents from the narrow E. and W. points of the summit are steep, and to the S. the fort looks down from the edge of a low but mural cliff on a steep descent to Rescobie Loch 500 ft. below. As it is on the dominating point of the two ridges, which, as I have

explained, are interposed here between the Grampians and the low coast range, it commands a most extensive and beautiful view, and has a position of strategical importance. Its proximity to the very ancient *Aberlemno* may also be noticed.

The works will be best described from the west, whence the visitor is led by a farm road gradually skirting up the hill side from Clocksbriggs Station nearly to the summit, when it turns northwards through a little pass to the Aberlemno road. A short but steep ascent from this pass leads to the sharp-pointed W.

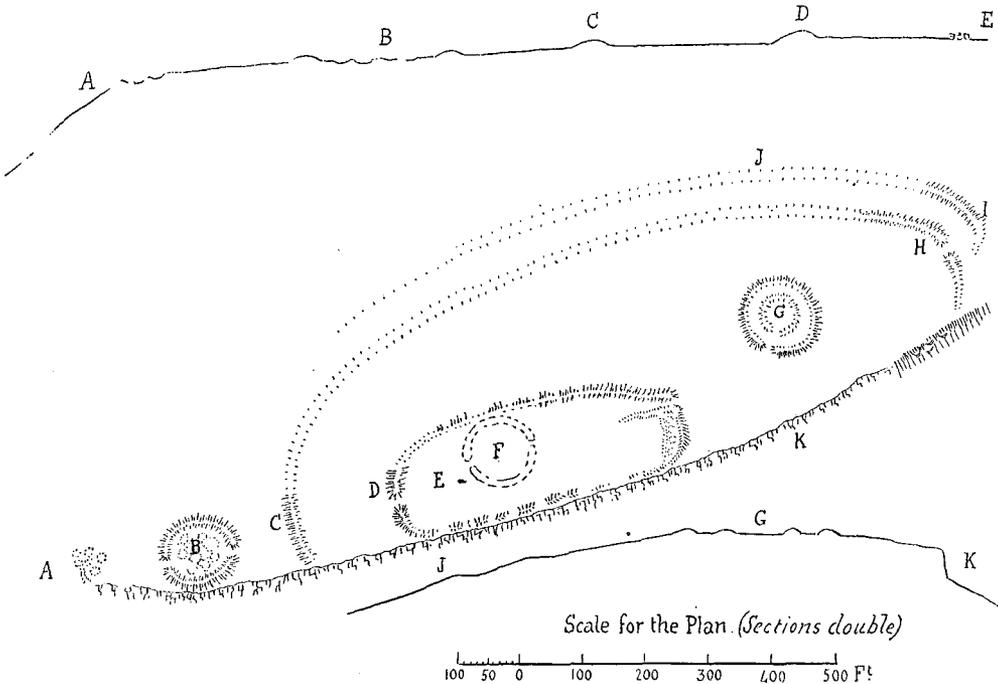


Fig. 48. Fort on Turin Hill.

end of the summit. Here (A, fig. 48) is a double row of cup or saucer shaped hollows, possibly foundations for hut circles.

Fifty yards further on is an oval work, B, 130 by 108 ft. over all, covering the whole width of the top, and environed by a mound 24 ft. wide and 2 or 3 high, grassy but with small stones visible. It has entrances from the E. and W., and the whole interior is irregularly cupped and mounded.

Nearly 100 yds. further, after crossing a wide mound, C, which we disregard in the meantime, we come to another mound, D, encircling the long oval space E,

about 500 by 180 ft. over all, the sides being not far from straight, the ends rounded. The enclosing mound is grass-grown, but shows small stones, and is no less than 35 ft. broad and 6 high on the outer side at the W. entrance. On the N. side it is nearly gone, but is distinct, though much ruined, on the precipice edge on the S. side, and is again well preserved at the E. end, where the entrance has the peculiar form shown in the plan, and has behind the rampart on the S. side a space of about 70 by 35 ft., enclosed by a low straight mound, and divided into four or five compartments.

Within the oval, much nearer the W. than the E. end, and touching the N. side, is the nearly circular 'citadel,' F. A mass of rubble all round, with many fine facing stones at the base, proves it to have been about 90 ft. diameter, inside a wall from 12 to 14 ft. thick, and the fine quality of the dry masonry is testified by a part of the outer face, 8 ft. long and $3\frac{1}{2}$ high, still standing (fig. 49). Many of the facing stones are $2\frac{1}{2}$ to 3 ft. long.

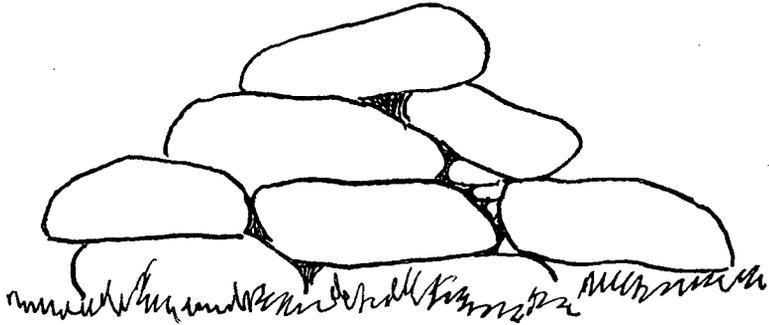


Fig. 49. Masonry of Turin Hill Fort.

Fifty yards further E. is another nearly circular work, G, 140 by 130 ft. over all, the low grassy and stony encircling mound being about 15 ft. wide, with an entrance to the S.W. Within it is a second encircling mound 10 ft. wide, the inner area of all being about 50 ft. in diameter.

About 100 yds. further we come to a massive mound, H, about 30 to 40 ft. wide, at the edge of the eastern descent. On the S. side of the entrance it rapidly diminishes in bulk, and soon reaches the precipitous edge, but on the other side it continues for a considerable distance curving round the N. side down the hill, and can be traced, more often as a terrace, all the way till it joins the mound, C, near the W. end of the site, where it runs out on the precipice edge; a very large semi-oval space of about 1100 by 370 ft., enclosing the inner oval and citadel, is thus shut in. On the S. side of the entrance a second mound, I, 70 ft. outside the first and lower down the hill, circles round with it. At first it is 30 ft. wide, but soon becomes a terrace, and I could not trace it more than half way round.

44. *Finavon*.—The ridge of *Finavon*, *Finaven*, or *Findhaven*, running parallel with the last, after attaining its full height of 751 ft. above the sea,

gradually falls north-eastward to the 500 contour line, where a winding road passes over it from N. to S. The ridge then rises again steeply 100 ft. almost immediately to a little level summit, on which stands the fort, a mile due W. of Aberlemno Church in the plain below. This summit is approached by a long moderate ascent from the N., and by a short but narrow one from the E., but it has a very steep fall to the S., beginning at a well-defined precipitous

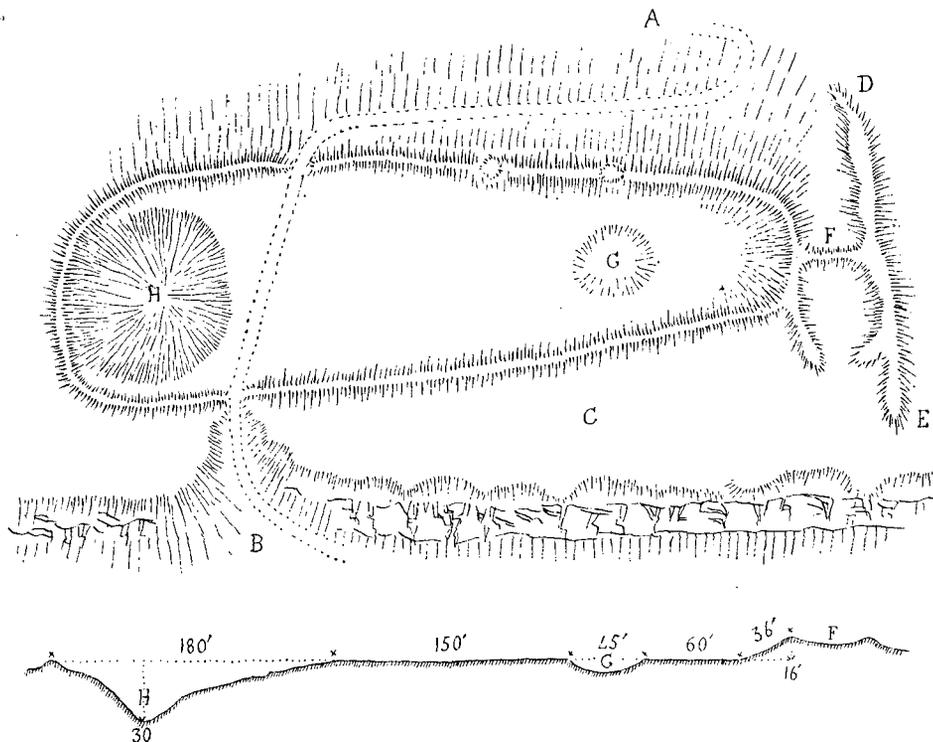


Fig. 50. Finavon, near Aberlemno.

edge. The fort, curiously enough, is not at this edge, but is withdrawn from 50 to 100 ft. from it, and it is also slightly withdrawn from the steep ascent at the W. end.

The plan (fig. 50) is very simple. Two long straight sides face N. and S., and the two ends are well rounded. According to the O.M. the dimensions from crest to crest are 500 ft. by 125 near the W. end, contracting to 110 at the E. end. It is therefore a peculiarly narrow fort. The mound rampart, even

on the side towards the steep descent, is in some places as much as 7 ft. high and 30 broad, and on the N., where its outer limit is not so easily made out, it is at least 40 ft. wide where my section was taken. At the W. end, on the other hand, which is not naturally strong, it is singularly weak, being narrow and only 3 ft. above a little plateau which comes right up to it. At the E. end it is connected by an earthen ramp, F, with a perhaps natural mound running parallel with that end, but extending in an irregular manner to within 40 ft. of the steep descent on the S. and some 100 ft. down the slope to the N. Ascending from the N. the visitor is deceived into the belief that the space between this mound and the rampart must lead to the entrance, but finds himself in a *cul de sac*. At present a cart road, A, winds up the hill from the N., passes close beneath the rampart from E. to W., crosses the fort obliquely, and goes down the steep descent to the S. Thus the only two existing entrances are formed. It is somewhat remarkable that the flat space on the S., which is about 60 ft. wide at the W. end and 100 at the E. end, and is on the same level as the interior, is neither fortified at the edge nor on its flanks.

The interior, as shown in my section, has, near the E. end, a shallow pit, G, 45 ft. wide, and at the extreme W. end a very deep one, H, shaped like an inverted cone, with grassy sides, descending directly from the slight rampart there to a depth of 30 ft.

According to Williams, Dr J. Jamieson, the Statistical Account, and the O.M. this fort is vitrified. Jamieson¹ had the opportunity of investigating it when the tenant was clearing away part of the wall, but unfortunately his description is almost incomprehensible. He says that after piercing through 8 or 10 ft. of rubbish the vitrified wall was found regularly built and standing from 10 to 14 ft. in height and 20 to 30 broad at the base. But the wall was not all vitrified, as he says that parts from top to bottom afforded no vestiges of fire, although others were completely burned. Apparently, also, it was not the built wall that was vitrified, for he says "the irregular concrete mass formed a buttress on each side for the regular intermediate wall." He also says that the stones were brought from various quarters: in one small heap he found seven or eight different kinds of stone; and that a great quantity of ashes of burnt wood was mixed with the stones. The rampart is now much overgrown, but a considerable part of its slopes are bare, and wherever that was the case I found the stones much bound together with a dull grey, ash-like substance, so that the fort seems to have as good a title to the name 'vitrified' as most others. The only true glassy piece I picked up was lying on the surface inside the fort, and had probably been dug up and left by some recent explorer.

(g) STONE FORTS ON THE HIGHLAND AND LOWLAND BORDER OF ANGUS.

The Caterthuns.—6 m. N.W. of Brechin the glens of the Grampians debouch on a stream that runs in a perfectly straight course for 6 m. at right angles to them. For 4½ m. the stream is known as the Paphrie Burn; it then joins the West Water, which follows the same north-easterly course for another mile and a half, when it takes a wide bend and flows eastward to join the North Esk. The southern side of the valley is formed by a correspondingly

¹ *Trans. Roy. Soc. of Literature.*

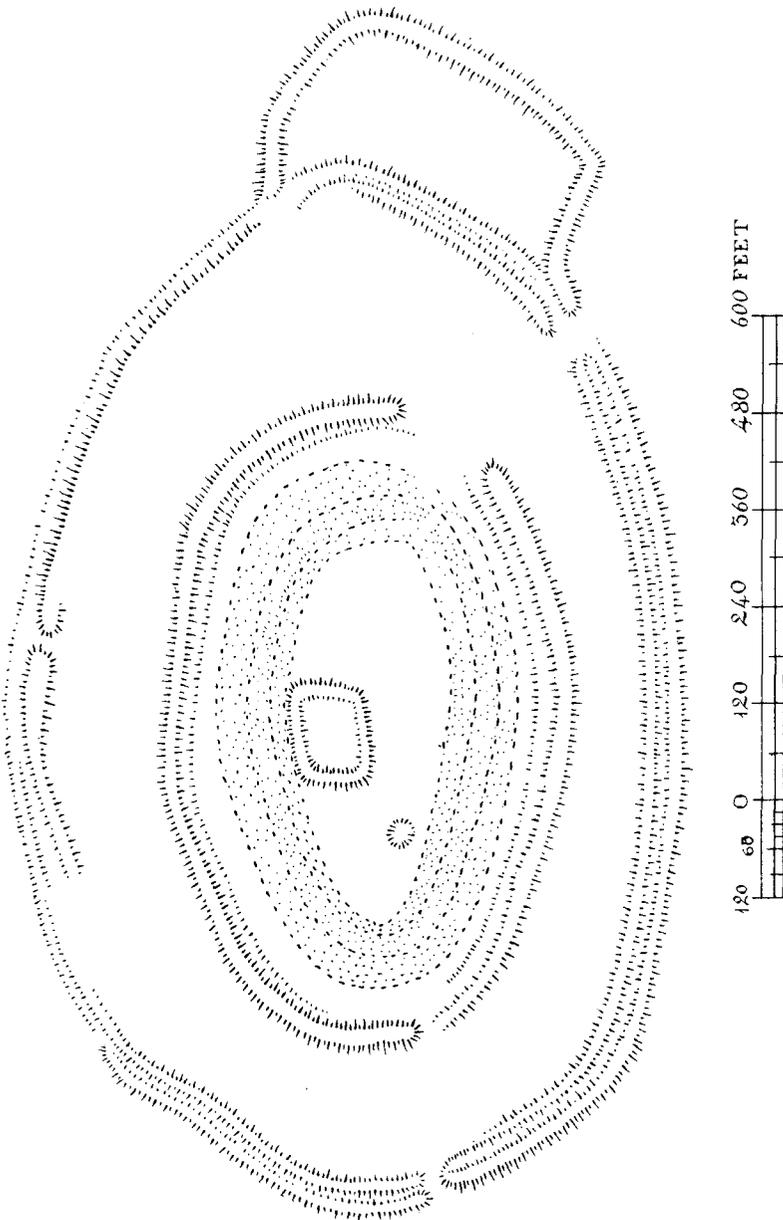


Fig. 51. The White Caterthun.

straight ridge, 7 m. long, which has no general name on the map, but might be called the Menmuir ridge, rising into a series of tops from 800 to 1000 ft. above the sea and 300 to 500 above the lowlands of Forfar. This ridge, therefore, forms a remarkable bulwark between the Highlands and Lowlands, and upon it,

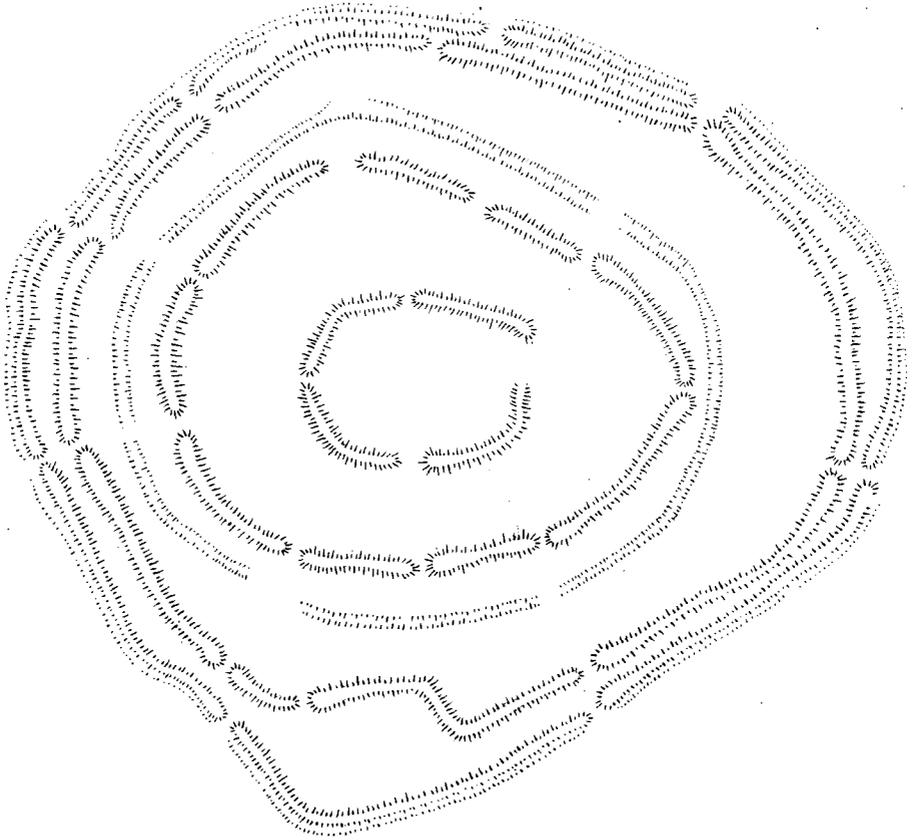


Fig. 52. The Brown Caterthun.

directly opposite the West Water pass through the Grampians, stand the famous *Caterthuns*, two great forts, placed on rival summits of the ridge, 978 and 943 ft. above the sea, whence they look upon each other across a hollow or pass three-quarters of a mile wide, with the Highlands of Forfar at their back and the Lowlands of the same county at their feet.

A general knowledge of their position, size, and ground-plan may be derived from Roy and the Ordnance Survey, but Roy's sections do not agree with his plan, and the best descriptions, those by Roy and Miss Maclagan, are brief and at variance with each other.

The two forts differ in almost every respect except position and size. The White Caterthun is oval in form, and its lines are drawn with some regard to regularity; whereas the Brown Caterthun is nearly circular, and is very irregular in its tracing. An enormous mass of exposed debris testifies that the former was a stone fort, although strengthened by intrenchments, whereas the latter, as far as surface appearances go, was mainly an earthwork. Another contrast is in the number of entrances, the White Caterthun having apparently had but one, while the other may have had seven or eight.

All these differences are well seen in the plans (figs. 51, 52) taken from the Ordnance map. Possibly they indicate that the two works were not contemporary, and that the White succeeded the Brown Caterthun.

45. *White Caterthun*, nearly 5 m. N.W. of Brechin. It is impossible, without excavation, to make out the original structure of the White Caterthun. Indeed, the variety in the disposition of the great mass of stone debris in the circuit of the inner enceinte is so perplexing that it is hard to lay it down in plan, and impossible to understand, even in an accurate plan, without numerous sections.

Roy speaks "of the astonishing dimensions of the rampart composed entirely of large loose stones, being at least 25 feet wide at top and upwards of 100 at bottom, reckoning quite to the ditch, which seems indeed to be greatly filled up by the tumbling down of the stones." And he accordingly shows this mighty rampart in the section (fig. 53, C), reproduced on a larger scale for comparison with my own. But Miss Maclagan correctly points out that the outer stony slope, which Roy took for a part of his rampart of loose stones, is merely the slope of the hill covered with fallen debris from a wall above. This comes out clearly in my general section (fig. 53, A, enlarged at D), taken with no other instrument than a tape, but with the expert aid of Mr J. H. Cunningham and Mr F. R. Coles.

Section D, across the N.E. face of the fort, shows—*a*, The inner slope of debris, rising only 4 ft. above the interior at this point, but as much as 7 in some other places. *b*, The top, 31 ft. wide and hollowed, as seen also in section E, taken on the S.W. side. This represents the fact, which seems to have escaped observation hitherto, that in its whole circuit the top of the wall is pitted with shallow, more or less circular, hollows from 20 to 30 ft. in diameter, and forty-eight or forty-nine in number. *c, c*, The exterior slope, 55 ft. in length and 14 in height, covered with debris. Here it must be remarked that the debris is not continuous; 28 ft. down there is an unencumbered strip of grass, *d*, 6 ft. wide, beyond which the debris lies again for 21 ft. to the edge of the trench. I found this strip of grass, although occasionally overrun by stones, to be, on the whole, a marked feature all along the N.E. face. *e*, The existence of a trench here has been doubted by Miss Maclagan, but I think it is evident enough, as shown in both sections D and E. I found it in general to be very free from stones. *f*, A mound 25 ft. wide, rising only 2 ft. above the trench and 5 above the exterior. There is no outward indication, that I could see, of its being anything but an earthen mound. Roy calls it "a simple earthen breast-

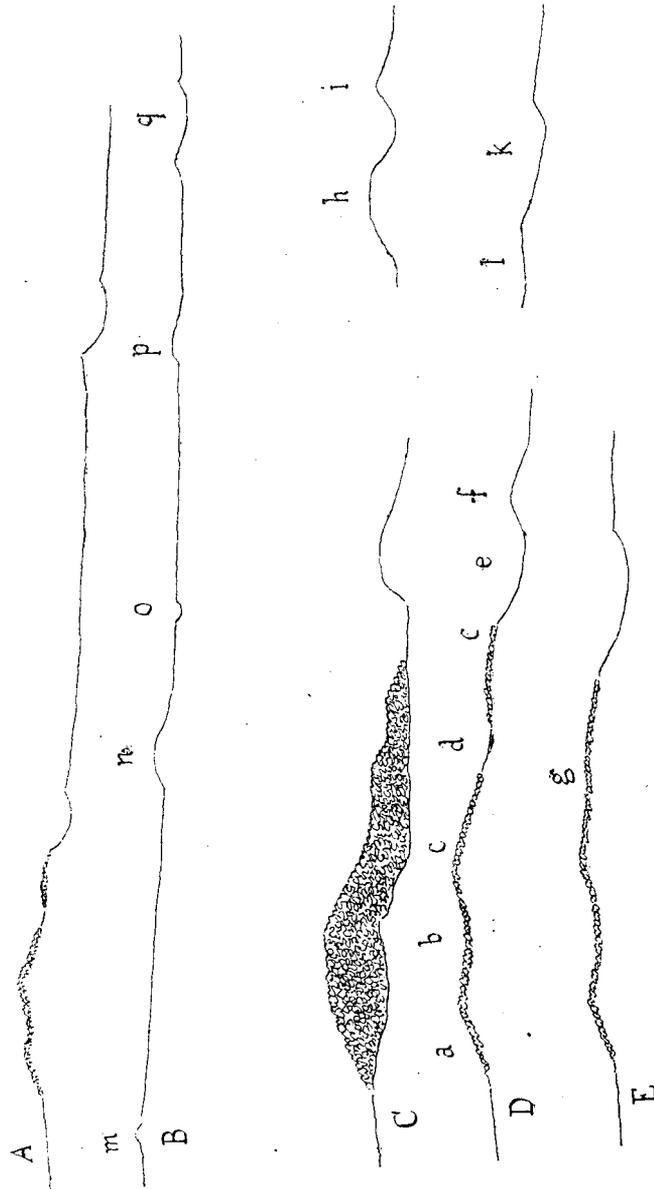


Fig. 53. Profiles of the Caterthuns.

work," and probably he is not responsible for the extraordinary development and form given to it in the engraving (section C).

On comparing section D with E, taken respectively on the N.E. and S.W. faces of the work, differences come out, probably due to the comparative gentleness of the slope on the N.E. face. Here it is neither so long nor so high as in D; it is interrupted about the middle by a level space, *g*, 7 ft. wide, and the whole surface is thickly covered with debris, instead of having the grassy interval of the S.E. section. The trench is again quite distinct, but it has no outer mound.

It is impossible from these surface characteristics to understand the original structure, but I believe that excavation would reveal remains of masonry representing a wall possibly 30 to 40 ft. thick. Whether the pitting on the top is due to mere searching for stones, or had a structural origin, is a question which also could only be solved by excavation. Possibly there were really two concentric walls, the interspace being filled up with cellular building of some kind or another; and there may have been another and slighter wall situated at the foot of the slope on the edge of the trench. The division of the debris on the slope into an upper and lower strip, as shown in section D, favours this supposition.

It remains to speak of the outer line of defence. Roy calls it "a double intrenchment," and his section C, fig. 100, represents two mounds, *h*, *i*, with a trench between. Where my section (D) was taken, however, I found nothing but a trench, *k*, with a 15-ft.-wide level terrace, *l*, in its rear, and this continued to be the case along a great part of the N.E. face, although towards the two ends there was a slight mounding both inside and outside the trench. The total dimensions of the White Caterthun are 1300 by 840 ft. and the area of the citadel is 470 by 210 ft.

It seems as if there had been but one entrance, situated at the E. end, where now a mere footpath passes over a hollow in the stony debris. At the opposite end are two similar paths, and it is possible that one of them indicates the position of a second entrance, but neither of them passes through a well-marked hollow like the path at the E. end.

46. The *Brown Caterthun* (fig. 52), $\frac{3}{4}$ m. N.E. of the last, is described by Roy as being "fortified by several slight earthen intrenchments." Their present slight character may be partly due to the boggy nature of a great portion of the ground. The inner ring (fig. 52, and *m*, section B, fig. 53), now scarcely traceable in some parts, is so trifling where preserved that it is questionable if it was intended for defence. It encloses the level summit, a space of about 280 by 190 ft.; but a little way down is a second much stronger ring, *n*, a mound 8 or 9 ft. high outside, which probably, as Miss Maclagan thinks, conceals a stone wall, and appears to have been the main defence. It encloses a space of 610 by 480 ft. The next ring is a trench, represented as perfect by Roy and the O.M.; but I found no remains of it in some stretches, although to the N.E. it was not only well seen, but had slight mounds in front and rear. About 120 ft. farther down is the fourth ring, *p*, a mound measuring about 30 ft. across and 5 or 6 in height to the outside. About 30 ft. lower is the fifth or outer ring, *q*, consisting of a slighter mound towards 20 ft. wide and rising only 4 or 5 above a narrow trench, which is bounded outside by a very trifling mound 6 or 8 ft. in width. The total dimensions are 1120 by 1010 ft.

The entrances through all these rings are numerous. Perhaps some of them are modern breaches, but as they are simply openings and nothing more, the point cannot be determined without excavation. Roy seems to have thought most of them genuine, as he says "the second or strongest [ring] has no less than seven gates."

III. SITES OF FORTS WITH LITTLE OR NO REMAINS.

1. *Craig Obney*, $2\frac{1}{2}$ m. S. by W. of Dunkeld, 1323 ft. above the sea, is marked by a dotted circle, 120 ft. diameter, as the site of a fort. I have no information about it.

2. *Jackshairs*, $1\frac{1}{4}$ m. E.S.E. of Forteviot, 339 ft. above the sea, on the highest point of a little wooded ridge on the skirts of the Ochils. The O.M. represents two, perhaps three, concentric rings round an area of 180 by 150 ft. with an inner ring of 80 by 60 ft., the whole measuring 350 by 250 ft. I could only find three faintly marked trenches on one side.

3. *Auchterhouse Hill*.—This well wooded and finely shaped summit of the

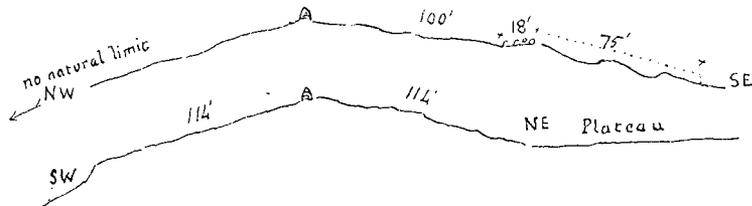


Fig. 54 Profiles of site of Fort, Auchterhouse Hill.

Sidlaws, 6 m. N.N.W. of Dundee, 1400 ft. above the sea, $1\frac{1}{2}$ m. N.E. of the Parish Church of Auchterhouse, has 'site of fort' marked on the O.M. on its very top. A century ago, Dr Playfair saw only faint traces of a fort. All that I found were a few stones suitable for building at the edge of a steep slope of 30 ft., on which were two concentric, low, artificial looking mounds which could not be traced far. This was the natural boundary to the S.E. On the N.W. the hill slope from the blunt conical site is continuous, and offers no natural limit. To the S.W. the descent is very abrupt, and to the N.E. it falls on a considerable plateau. The general nature of the site will be understood from the rough sections (fig. 54). The interior of the fort was probably circular, and may have measured about 200 ft. diameter.

4. *Dumbarrow*, at Kirkton Farm, $2\frac{1}{2}$ m. E. by S. of Dunnichen Church. A single oval ring of 120 by 100 ft. is marked on the O.M. on the top of a knoll 544 ft. above the sea, rising but little above the high and pretty level land to the S., but with a descent of 300 ft. to the low country on the N. The site is much overgrown with brushwood, and I could see nothing but a few large stones lying about.

IV. DUBIOUS WORKS OR SITES MARKED FORT
OR CAMP ON THE O.M.

1. *South Tulchan*.—A fort is marked here on the O.M., 2 m. N.N.E. of Fowlis Wester, 1 m. S. of the Almond, 600 ft. above the sea, in a field sloping northward to a small burn. The green elevation, 5 to 9 ft. high and 80 across, shows natural rock cropping out on the top. Breaks reveal quantities of large and small stones, and there is something like a circle of stones under the turf about a foot high, round the foot of the mound. This puzzling place did not seem to me to bear any resemblance to a fort.

2. *Duncan's Camp*, on Birnam Hill, 600 ft. above the sea, and 2 m. S.S.E. of Dunkeld Church, is drawn on the O.M. as a low, flat-topped elevation, triangular, with rounded angles, measuring about 180 by 100 ft. I have not seen it and have no information about it.

3. *Caledonian Camp*.—This pretentious name is given on the O.M. to an extensive enclosure, 3 m. W.N.W. of Blairgowrie, on Lornty Burn, Gormack Muir. An irregular rectangular space of about 4000 by 2000 ft. is enclosed by the 'Buzzart Dykes,' described to Dr Joseph Anderson by some natives as 'feal dikes.' It is on irregular ground, 600 to 850 ft. above the sea, and a great many cairns are marked on the O.M. both inside and on the muir beyond. Dr Anderson saw some of them, and thought they were not sepulchral, but might be remains of shielings.

4. *Rob's Reed*.—This is the peculiar title of a work also marked 'fort' on the O.M., but which seems to me to be a dubious fort. It is $1\frac{1}{4}$ m. W. by N. of Rescobie Church on an irregular plateau not quite on the summit of the ridge, here about 550 ft. above the sea, that runs on to Turin Hill fort. The work has no natural strength, and has an inner circular area 65 ft. diameter, which falls from 3 to 5 ft. below the level of the exterior, except to the W. It is enclosed by a low mound, 18 ft. wide and only $1\frac{1}{2}$ ft. high, of small stones, as far as can be seen, with a few large flat ones not of the kind commonly used for fort wall-faces.

5. *Druid's Camp, site of*, is marked on the O.M. $3\frac{1}{4}$ m. S.S.W. of Stonehaven on high table-land 480 ft. above the sea. There seem to be no remains, and I could get no information about the place or the origin of the name, but I did not go to the spot.

6. *Camp, Montgoldrum*.—Near the farm-house of that name, on the top of the very gentle yet prominent 'Camp Hill' of the O.M., 450 ft. above the sea, 2 m. N.E. of Arbuthnott Church, is an irregularly circular mass of stones about 60 ft. diameter, the outer edge of which is marked irregularly by some large rough stones not suitable for building. One huge block, apparently pulled from its place and blown up, must have been 6 ft. square when entire. But the mass consists of smallish water-worn stones, such as are abundantly ploughed up in the adjoining field. Mr F. R. Coles, after making a careful examination and taking a plan, believes that this is a ruined cairn. A number of large stones lie scattered to the N.E., which he thinks are the remains of a second cairn.

7. *Blackhill Camp*.—The site indicated on the O.M., $\frac{5}{8}$ m. N.N.W. of Duntottar Castle, $\frac{1}{4}$ m. S. of Stonehaven harbour, I found to be a space enclosed on the S.E. by a precipice rising from the head of Strathlethan Bay, on the

N.W. by a straight mound only 2 ft. high and 6 wide, on the S.W. by a branch at right angles to the last; and it is not enclosed on the N.E. The first-named mound is on the summit, 250 ft. above the sea, of the enclosed area, which slopes so steeply to the precipice that the work cannot have been a fortress of any kind, more particularly as the mound is so trifling.

V. DUBIOUS WORKS OR SITES, POSSIBLY MILITARY, NOT MARKED 'FORT' OR 'CAMP' ON THE O.M.

1. *Dunnichen*.—On the top of this detached height 764 ft. above the sea, $\frac{1}{2}$ m. N. of Dunnichen Church, overlooking the supposed scene of Ecgfrid, King of Northumbria's defeat in 685, the remains of a fort were visible according to Knox, *op. cit.*, p. 118. I have not been there, but nothing is marked on the O.M.

2. *Green Cairn*, $\frac{1}{4}$ m. W.S.W. of Fettercairn, 200 yds. S. of Cairnton cottage on the high road, is the name of a little eminence, measuring about 200 by 140 ft. on the O.M. My notes of it have been lost, but my recollection is that it was raised about 20 ft. above a level field, that it had an irregularly flat top, rough with many closely aggregated indefinite little mounds and fragmentary hut circles (?), but with no clear signs of fortification.

3. *Intrinchment* is the name on the O.M. of a straight mound about 450 ft. long in Drumsleed Wood, $\frac{1}{4}$ m. S.E. of Fordoun, 300 ft. above the sea, running parallel with and a little withdrawn from the edge of a steep descent, on an elevated flat. The parish minister, the Rev. J. Menzies, pointed out to me that several other mounds run off at right angles from the main one, but they are little more than broad undulations of the ground, whereas the 'Intrinchment' is substantial in height and width. The remains are puzzling but not suggestive to me of fortifications. Knox says that the country people call the place 'The Scotch Camp.'

4. *The Law*, *Tumulus*, are the titles given on the O.M. to a mound $1\frac{1}{2}$ m. W.N.W. of Kinneff Church, and 300 yds. N. of Largie Castle site. An extensive cutting on the W. side shows sandy soil and a few rounded stones. The flat top measures 75 by 33 ft. It may have served as a simple mote or fortress, but it is, I should think, of natural formation, as is a similar mound, with its long axis in the opposite direction, however, about 100 yds. to the N.

5. *Castle Hill*, 1000 yds. S. by W. of Kinneff Church, on the edge of a sea cliff, is represented as a strongly marked artificial mound on the O.M. I found it, however, to be quite inconspicuous and entirely without remains of building or fortification.

6. *Malcolm's Mount*, 2 m. W.N.W. of Stonehaven, $\frac{1}{2}$ m. N.E. of Fetteresso Church, 150 ft. above the sea. Growing crops prevented me from getting up to it, but it looked on a near view as if a natural mound rose to an artificial one. Taking the enclosed and planted top as the artificial part, it is a regular circle 100 ft. diameter as marked on the O.M.

7. *Remains of Rampart* is the title on the O.M. of a mound, only a foot or two high and 6 wide, that cuts off the promontory called *The Bowduns*, $\frac{1}{2}$ m. S.E. of Stonehaven harbour, on the N. side of the Castle Bay of Dunnottar. This precipice-girt point consists on the landward side of a squarish flat of 500 ft.

100 ft. above the sea, and of another flat beyond it at the extreme point about 50 ft. lower, of about half the extent. At the neck a narrow *geo* cuts in from the S., and at its head, nearly on a level with the flat, a ravine begins which gradually descends to the sea on the N.E. The artificial mound also starts from the head of the *geo* and runs down the *bottom* of the ravine to the rocks of Bowduns at the sea. Thus, although it cuts across the neck, from its position and trifling dimensions it can hardly be considered defensive. A similar mound in its rear courses along the top of the ravine, but this, like the other, seemed to me to be a *fence* rather than a *defence*.

8. *Circular Stone Structures in Upper Glenlyon.*—In this remote locality, 16 m. above the sufficiently remote Fortingall with its square fort in the flat and Dum Geal overlooking it from the hill, it is remarkable to find, within the length of a mile, the poor remains of four circular structures, too large for ordinary hut circles, but apparently not sufficiently strong or well built to have been fortified towers, besides being on indefensible sites in the level bottom of

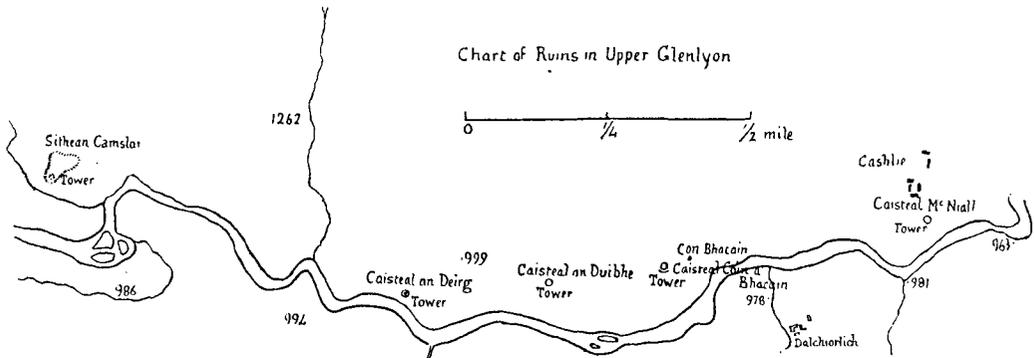


Fig. 55. Chart of ruined "Towers," Upper Glenlyon.

the valley. Towers, however, they are called on the O.M., and the Gaels call them "Caisteal," as shown in the chart (fig. 55) reduced from the 6-inch O.M. These names are also recognised by Mr Duncan Campbell in his *Book of Garth and Fortingall*. Miss Maclagan, *The Hill Forts, &c., of Ancient Scotland*, p. 85, calls them circular buildings, and describes and figures three of them, one of which seems to have a single row of stones, set on end, and therefore not very suitable for the foundations of the outer and inner facing of a broad rubble wall.

Mr Campbell also finds no less than seven *Motehills* in Glenlyon, but they do not seem to be known as such by the people, and the O.M. does not notice them either by name or drawing, except the *Sithean Camslai*, 17 m. above Fortingall, which is drawn on the O.M. as a triangular, flat topped, low mound with a tower on it, but is not marked *Motehill*. The tower appears to be a mistake, as Dr Joseph Anderson informs me it is a small green mound. One might wish, however, to know more of the *Tom na Cuairteig*, "directly above the

Kerruclach round fort, which, Mr Campbell says, 'puts the Tinwald of Man to open shame.'

Circular Stone Structures in Strathardle.—A large number of 'hut circles' and other circular structures of larger size in a very ruinous state have been described by Dr John Stuart at *Balnaboth*, and by Miss Maclagan, who also gives plans of them, as well as of others at *Glenderby*, Strathardle, and I have seen similar remains near the 'Roman Camp' of Raedykes, near Stonehaven. Doubtless they occur elsewhere in our district. They are always of an obscure, little understood character, and fall very doubtfully if at all under the head of fortifications.

GENERAL REMARKS.

I. CLASS OF EARTHWORKS.

(a) *Possible Motes.*

Number.—About half of the twenty-five earthworks (including two in the Postscript) have some claim, on structural grounds, although generally a feeble one, to the title of *Mote*. With one exception, the most that can be said is that they are, on the whole, more like motes than forts.

Height above the Sea.—Like the other earthworks, they contrast strongly with the stone forts in this respect, as their elevation is quite moderate. The only two that climb above the 500 contour line are *Arnieful*, 700 ft., and *Dundee Law*, 572 ft., and only four others reach the 600 contour.

Sites.—As a rule they are not on positions of natural strength—the exceptions being No. 8, the *Torr*; No. 9, *Dundee Law*—the last of which has perhaps the feeblest claim of all to be called a mote.

Plans.—No. 1, *Cairn Beth*, the best claimant, appears to have been a typical mote with a base court. No. 11, *Arnieful*, and No. 12, *Canterland*, are simple moated mounds on paper, but the resemblance is not so satisfactory in the field. No. 8, *The Torr*, is by no means unlike a terraced mote. As to No. 2, *Inchbrakie*, if not a mote, it is certainly difficult to call it anything else. It has the mound, the surrounding trench, and an outer rampart, but its unusual size and the feebleness of the rampart are contra-indications. No. 10, *Castleton*, and No. 11, *Dundee Law*, are possible examples of the square type of mote, ramparted and

trenched. The four remaining were possibly motes of the simplest type, mere artificial mounds without rampart or trench, always of necessity an uncertain class.

The Name Mote in the District.—It is very doubtful if the name has been applied locally to any of these works, even to Nos. 3, 4, and 5, and I failed to get any evidence of it in the neighbourhood. In the *Registrum Magnæ Sigillæ* I have only noticed one reference to a mote in the three counties—A.D. 1546, “lie Moit de Errole.” I do not know if there are any remains of it, but none are marked on the O.M. Three ‘motehills’ in Perth and two in Mearns are also mentioned, but the signification is probably different from that of ‘mote.’

(b) *Earthen Forts.*

Number.—The total number of apparently earthen *forts* in the district is thirteen, including two described in the postscript.

Elevation above the Sea.—As with the motes, the elevation is very moderate, with the exception of No. 17, *Evelick*, which attains 890 ft., a very unusual height for an earthwork. It is, however, not a deeply trenched but rather a terraced fort. The next highest barely passes the 500 contour line, and only two others reach the 400 contour.

Sites.—It is one distinguishing feature between this sub-division and the motes that, whereas all the most probable motes are on weak sites, the forts without exception are placed where they derive considerable strength from the nature of the ground.

Plans.—Where the constructors had a free hand, the form approaches that of the oval, but only in a single instance is the oval enceinte of fortification complete. The position being generally at the straight edge of a steep bank, which was left unfortified, compelled the form to assume a somewhat semi-oval figure. In the case of fortified promontories, inland or on the coast, where the fortification is confined to the neck, the form of the fort depends entirely on that of the cut-off point.

The only complete fortified enceinte is at *Green Castle*, No. 23. It is single, consisting of a rampart and trench, of uniform strength all round,

and this assimilates it to the stone forts. But I could see no sign of stone about it, and the fine broad rampart was amply accounted for by the deep and wide trench from which it was no doubt taken. In three instances, all of cut-off points, the fortified line was only single, but in the other examples of that type, and in all the ordinary forts with incomplete semi-oval fortifications, the lines were double or treble. Terraced fortification seems only to have been employed at *Evelick*, No. 17.

Water Supply.—Most of the earthen forts, as well as the motes, had a pretty direct access to streams running close under their sites, but whether they had springs or cisterns inside is uncertain, as not a single native earthen fortress in the district has been excavated.

Relics.—For the reason just given, we are equally ignorant of the relics they may contain.

Import of the Distinctions between the Earthen and the Stone Forts.—Although the earthen differ from the stone fortresses in the lowness of their situation, their structure, and their generally incomplete enceintes of fortification, it would be rash to conclude that these distinctions depend on a difference of date or of race in the builders. They can all be explained by the differences natural to sites on the hills or in the valleys, and by the ease with which stoneworks can be thrown up on the former, and earthworks in the latter.

II. STONE FORTS.

Number.—The number of stone forts, reckoning as such all that have the citadel of stone, whatever the nature of the outer defences may be, is twenty-three—but few for so large a district.

Elevation above the Sea.—The great comparative elevation of stone forts is shown by the facts that only one of the twenty-two comes down to the 500 contour, whereas only four of the twenty-five earthworks come up to it; and that none of the latter come within 100 ft. of the 1000 contour, while six of the stone forts are above it, and five more within 100 ft. of reaching it. The highest of all, *Dún More, Glendalmond*, is no less than 1520 ft. above the sea.

Sites.—With the exception of No. 27, *Dun Geal*, which, although on a height, is approachable by easy slopes all round, all the stone forts are strongly protected on one or more sides by precipices, ravines, or steep slopes.

Plans.—The great majority are oval in form, although in some the oval is so broad as to approach the circle. Only in a few, which are chiefly tower-like structures, is the form circular or very nearly so.

In seventeen of the twenty-three stone forts the artificial zone of fortification is a complete one of uninterrupted stone wall, often with little or no diminution of its thickness where the natural defence is strong, greatly contrasting in these respects with the earthen forts. In one, No. 25, *Dundurn*, the enceinte is also complete, but this is effected by drawing a series of stone walls irregularly from one inaccessible precipice to another. In No. 31, *Ogle Hill*, and No. 33, *Rossie Law*, the fortified zone is also complete, but a great part seems to have consisted not of stone walling, but of terracing. In No. 32, *Ben Effery*, the same double system appears to have been used, but one side, a straight precipice edge, was unfortified, and this with No. 24, *Dunmore*, which has a semi-oval front of fortification from edge to edge of an inaccessible bank, are the only instances of an incomplete artificial enceinte in the twenty-three, with the possible exception of No. 36, which is so dilapidated that no opinion can be formed about it.

Development of the Fortification.—In four, Nos. 27, 29, 33, and 41, the enceinte is single and simple. No. 44, *Finavon*, has in addition a mound at one end, doubtfully artificial, but connected by an earthen ramp with the main work. In three, Nos. 26, 30, and 35, there is an annex at one end. In No. 37, *Carnac*, the annex goes so far round as almost to form a second enceinte, and in 28, *Dun MacTual*, a second enceinte is also nearly completed by an annex at one end, and advanced stone walls at the other. In *Dron*, No. 38, two large annexes give a false appearance of a double enceinte, but they are merely slightly fenced. In the remaining eleven, excluding the too dilapidated No. 36, the enceinte is either double or treble, sometimes partially quadruple.

Structure of the Walls.—This has been determined with or without excavation in ten of the twenty-two, and in all these it is of the same type, the faces being of well-built dry masonry, and the core of rudely built rubble work. Two—No. 34, *Castle Law*, and No. 35, *Abermethy*—have had wooden beams in addition. As in all the Scottish stone forts that have been investigated, there appears to be no prepared foundation, and when the wall, as generally happens, stands on the edge of a descent, the outer face is lower—sometimes much lower—than the inner one. There seems little reason to doubt that the walls of the other stone forts of the district are simply buried under the ruins of their upper part or under the accumulated overgrowth of soil and vegetation of centuries. *Finavon*, No. 44, as a much vitrified work, is a possible exception, although Dr G. A. Jamieson, who saw sections made through the enceinte, declares in his rather incomprehensible description that it was a *built wall* buttressed with vitrification.

Water Supply.—From their general sites on pointed heights at considerable elevations the stone forts have not the ready access to streams which the earthen forts often possess. Neither are springs generally found near them at present on the hillsides. *Abermethy*, No. 35, has an exceptionally good, ready supply in the dammed-up loch close below it, and also had a large rock-cut cistern inside. Hollows in the interior of several, as at *Denoon*, No. 41, *Barra*, No. 42, *Finavon*, No. 44, and the *White Caterthun*, No. 45, may indicate the existence of old wells or cisterns, but in most of the areas there is nothing of the kind.

Relics.—The number of relics found has been remarkably small, but only two of the forts have been scientifically excavated. The result, as far as it goes, is that the finds are compatible with the existence of the forts about the Roman period, but not necessarily earlier, and that the range is considerably into mediæval times.

Brochs.—Several circular foundations of Broch size remain, but it is very doubtful if any really were Brochs. One that I have seen, *Robs Reed*, has been included in my class of dubious works, and it is not constructed of the regular masonry required for a Broch; the

same may be said, I think, of the 'Towers' in Glenlyon, as figured by Miss Maclagan, and described to me by Dr Joseph Anderson. The circular work at *Tyndun*, No. 29, is too large for a Broch, and if this is a less difficulty with *Dun Geal*, No. 27, the width of its wall is scarcely sufficient. In all respects the most likely Broch foundation is the excavated circular wall 18 ft. broad, with an area of 36 ft. enclosed, at *The Laws*, No. 39, but in the absence of evidence of a contained stair or chambers it cannot be proved to be the wall of a Broch.

Vitrified Forts.—It cannot be said that the authorities for vitrified forts in the district have done anything to clear up the obscurities that haunt this class of objects. Rather have they done much to illustrate the extraordinary discrepancies as to mere facts that meet the inquirer into their history at every turn. Take *The Laws*, No. 39, and we find Dr John Jamieson describing the two walls and all the immense mass of building within as thoroughly vitrified, whereas Mr Neish asserts there was no vitrification in the wall faces, the absence of which I verified, and that vitrified masses were only found in the backing or rubble of the wall. Or take *Dunsinnan*, No. 40, where Playfair makes no mention of vitrification, while Stewart asserts that the whole interior buildings were full of it, and that it was also used on the wall face.

The fort best entitled to be called vitrified is *Finavon*, No. 44, but only in the second degree. It cannot be compared with *Carradale*, in Argyle, with its 70 ft. of continuous vitrification standing up as a wall, still less with the Arisaig fort on *Eilean nan Gobhar*, recently verified by Dr Robert Munro to be, to a height in one place of 9 ft., a continuous vitrified wall wherever it is visible, and comparatively little of it is overgrown. *Finavon* rather ranks with *Tap o' Noth*, Aberdeen, where there is much vitrification, but as the late Mr Macdonald, Huntly Farm, found, bearing but a small proportion to the unvitrified stone, and where in one of his two complete sections no vitrification was found from top to bottom. This was also proved to be the case by sections at *Finavon*. These two forts differ, however, in the position of the vitrification, which

was certainly at and near the top at *Tap o' Noth*, whereas, if we may believe Dr Jamieson, it buttressed a built wall.

Lastly, it may be suggested under this head that the quantities of loose blocks of vitrification apparently found at *The Laws* and *Dunsinnan* may have been got from vitrified walls which preceded, on the same site, the unvitrified walls now existing.

DISTINCTION BETWEEN THE FORTS OF THIS AND OTHER DISTRICTS IN SCOTLAND.

It would take too long to make a comparison with all the other groups in Scotland, but confining the comparison to Argyle, the differences are very marked—perhaps more so than in any other case. One manifest distinction is that one-half of the forts in our district are of earth, while it is doubtful if a single earthen fort exists in Argyle. This may be partially due to the abundance of stone everywhere, in high or low ground, in Argyle, together with the rarity of deep soil suitable for making entrenched works. But more marked distinctions are the large number and small size of the forts in Argyle, and the small number and large size of the forts in our district. When it is considered that vast tracts in Argyle are destitute of forts, 171 seems a large number for the occupied tracts, as compared with the 45 scattered pretty generally over Perth, Angus, and Mearns. But the difference in size is even more striking. Adopting the standards used in my work on *Early Fortifications in Scotland*, it comes out that of 164 measurable forts in Argyle, 81 are very small, 72 small, 10 considerable, and only 1 large, whereas in our three counties, of 44 measurable, 5 are very small, 13 small, 19 considerable and 7 large; or, dividing them into two classes as large and small, 76 per cent. in the three counties and only 8 per cent. in Argyle are large, and 92 per cent. in Argyle and only 24 per cent. in the three counties are small.

These contrasts derive some interest from the fact that the one set are in the land first occupied in Scotland by the Scots, and the other in the seat of the chief power of the Picts. If we cannot positively affirm that

they are the forts of the Scots and Picts respectively, it is at least a very reasonable supposition.

That our knowledge of the forts in the whole district is still so imperfect is due mainly to the want of excavation. Only two have been excavated scientifically, and two unscientifically, and the clear and instructive results obtained in the first case are as encouraging to further scientific effort as the confusion and misconceptions that followed in the second should warn us against investigations undertaken with insufficient means to complete them or without expert guidance. It seems strange that, while means are found to carry on scientific investigations at the utmost ends of the earth, the hidden mysteries of our own country, so ready at hand and so comparatively easily unearthed, should remain neglected. But apparently neither the hour nor the man has come.

POSTSCRIPT.

In the account of the Society's excavation of Ardoch it is recorded that seven fortified works, noticed by writers of the 18th century as existing in the neighbourhood of the 'Roman Road' that runs from Ardoch to Strageath and beyond Gask, had disappeared, and could not even be accurately localised. Two of them, however, have been quite recently rediscovered by Mr Alexander Mackie, and have been excavated under his supervision by permission of Mr Samuel Smith, M.P., and Mr Kington Oliphant, the proprietors. Unfortunately, the discovery was so recent that neither could the forts be marked on my map, nor could the descriptions, with the plan taken by Mr Mackie (fig. 56), be inserted in their proper place in the narrative.

No. 47, *Orchill Fort*, is situated about $\frac{1}{2}$ m. N. of the house of the same name, and within the policy, 600 ft. above sea, on the wooded Muir of Orchill, in the sharp angle of junction of two trifling rills. From the one to the S. the ground rises steeply 40 to 50 ft. to the interior of the fort. On this side, further strengthened by a marsh, no artificial defence was deemed necessary, at least no evidence of such was found at the edge of the bank; but the comparatively weak northern face has

been fortified by a semioval line of earthworks, comprising, where fully developed, (1) a scarp 10 ft. high; (2) a rather angled trench; (3) a mound 5 ft. high and 25 wide; (4) a rounded trench, 5 to 7 ft. deep, of

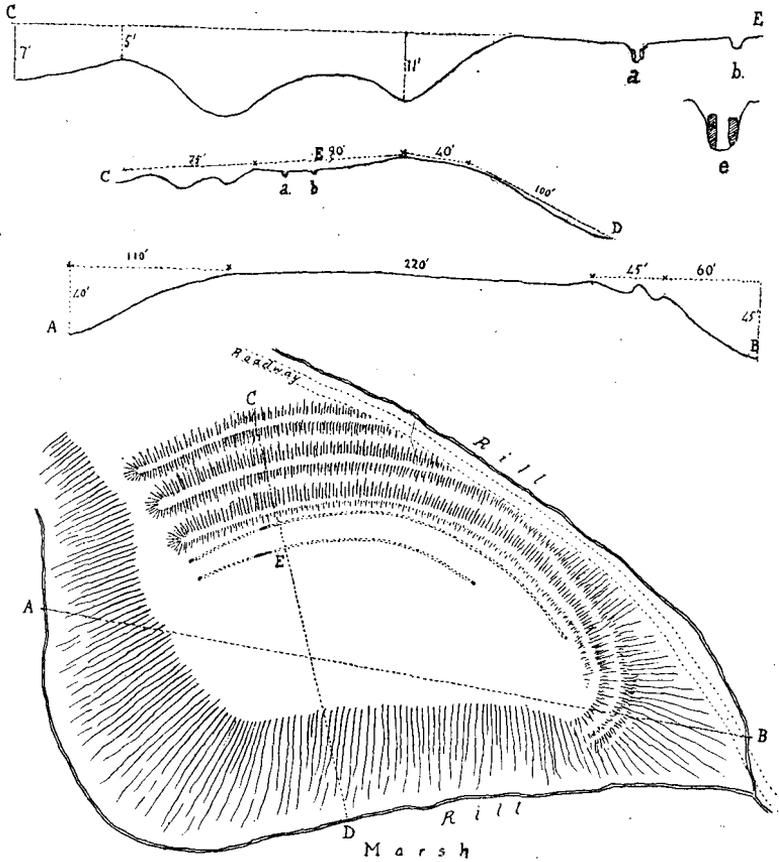


Fig. 56. Earthen Fort, Orchill.

which the counterscarp is rather higher than the scarp; (5) a mound rising 3 or 4 ft. above the exterior. But not all of these are carried round the whole front of fortification. They are found on its western half, where

the interior has a command northward of only a few feet, but eastward the exterior ground falls away, and the slope from the interior is steep, and here only the upper scarp (1) and its trench (2), much reduced in size, are met with. At the eastern sharply-pointed end of the fort, where the narrow front could only hold a few defenders, the first mound (3), and its trench (4), again appear, in front of (1) and (2), to strengthen this weaker point.

On continuing the transverse section through the inner area, two small trenches, *a* and *b*, about 18 in. deep, were discovered, curving round parallel with the earthworks, one about 10 ft. in rear of the top of the scarp, the other from about 12 to 18 ft. in rear of the first. They contained flat stones or flags, generally disarranged, but in some places still standing on end, so as to line the sides of the trenches, *c* in the enlarged section, leaving a space about 8 in. wide, which was filled with earth, containing decayed or charred wood in small fragments but in large quantity. It seems a fair conjecture that these trenches held palisades, and that the stone linings were intended to assist in supporting and fixing them. In some places, the same woody earth was found beneath the stones, as if the ends of the palisades had been fixed into a foundation-beam.

No. 48, *Kempy, Gask*.—This fort, much levelled by the plough, so closely resembles the last that it is unnecessary to give a plan of it. The position is $1\frac{1}{2}$ m. W. by N. of Findogask Church, 200 ft. above sea, on Kempy Knoll, from which there is a steep descent eastward to a rill, tributary of Cowgask Burn. This naturally strong side is unfortified, but a semi-oval double entrenchment, with a single small 'palisade trench,' exactly like those on No. 47, protects the N.W. front, which is accessible by a gentle ascent. The S.W. end is approached by a narrow ridge, nearly on a level with the interior, and here the abrupt end of the trenches, before reaching the edge of the descent to the rill, shows where the entrance had been. The dimensions over all are 385 by 215 ft., and of the interior 250 by 165 ft. The inner trench is about 15 ft. wide and 7 deep, and the outer one 8 ft. wide and 3 to 4 deep; but

these dimensions would be greater when the ploughed-down rampart, now 17 ft. wide on the top, retained its full height. The front of fortification is 48 ft. broad, including the 'palisade trench,' but narrows to 34 ft. at the entrance. The 'palisade trench' is there carried further than the defensive trenches, and it contains stones set on edge, charred wood, and black mould, like the similar trenches of No. 47.

As palisade trenches have not been previously noticed in Scotland, I am fortunate in being able to conclude my account of the forts of South Pictland with a record of so interesting and novel an observation; in forts, moreover, which have been rediscovered, after escaping notice for more than a century. No pottery or other relics of any kind were found in either of them.