

### III.

#### NOTES ON A VITRIFIED FORT AT "AN-CNAP," SANNOX, ARRAN, AND VITRIFIED STONES AT MID SANNOX, ARRAN, AND AT PENNYMORE, FURNACE, LOCH FYNE. BY VICTOR A. NOËL PATON, W.S., F.S.A. SCOT.

The publications of the Society contain numerous papers upon vitrified forts in Scotland. John Wilson, a mineral engineer, published a paper on the subject in 1777—just over 150 years ago. An excellent epitome of the literature of the subject down to 1905 will be found in the Report on the Society's excavations of forts on the Poltalloch Estate, Argyll, in 1904-5 by Dr Christison, Dr Anderson, and Dr Thomas Ross, at pp. 270-3 of vol. xxxix. of the Society's *Proceedings*. Since 1905, we have had papers such as Mr Alan Reid's "The Vitrified Fort of Lochan-an-Gour, Argyllshire" (vol. xliii. (1908-9), pp. 34-42), and Mr A. O. Curle's paper on the Mote of Mark (vol. xlvi. (1913-4), p. 125). Several other references to vitrification appear in later *Proceedings*. In a publication of the Geological Survey of Scotland, "Geology of Cowal, 1897," I find mention of two vitrified forts with a report of a microscopical examination of a specimen of partially fused rock from one of the Burnt Islands in the Kyles of Bute. There may be similar notes in other publications of the Survey.

The specimens of vitrified stones "knit together by the flux," referred to in Mr Reid's paper (p. 39), are among the prehistoric exhibits in the museum here, and I understand that the Society has other specimens in store.

A perusal of much of the literature leaves me unable to answer either of the first two questions that an exploration of one of these constructions must prompt, viz.: How the vitrification was produced and to what period the forts are to be assigned.

At two of the places I inspected, a layer of wood ash, with fragments of charred wood, occurred immediately beneath the vitrified stones, and

immediately above, in one case the living rock, and in another case the undisturbed soil. Similar conditions have been noted elsewhere as affording evidence bearing upon the question of how vitrification was produced.

My main purpose is to place on record the finding of three places—hitherto unrecorded—where vitrified stones occur. Two of these, of which one is a fort, are in Arran, and these seem to be the first recorded cases of vitrified stones found in that island.

(1) *Site at An-Cnap, Arran.*—The notes I here submit upon a fort at “An-Cnap,” near Corrie in Arran, and the vitrification of its walls or ramparts, are condensed, because I think that it would be a mistake to burden our *Proceedings* with a full record of incomplete work. Such publication now might have the undesired result of delaying the thorough exploration which I should like to see undertaken.

The other finds, though apparently less important, are more fully noted here, because they seem less likely to excite such interest as would lead to further investigation.

The first of the Arran sites is undoubtedly a hill fort, although neither so marked by the Ordnance Survey nor noted as such in Mr J. A. Balfour's *Book of Arran*.

The position is indicated on the 6-inch Ordnance Survey Sheet, ccxxxviii. (1896) by the name “An-Cnap,” “△ 129.”

It lies immediately above “the fine crag called the Blue Rock,” referred to at p. 30 of the “Memoirs of the Geological Survey—Scotland; The Geology of North Arran, etc., Sheet No. 21 (Scotland) 1903.” The Blue Rock is a sheer cliff, perhaps 100 yards long by 100 feet high at its highest point. It is a well-known landmark from the sea, between the mouths of the Sannox Burn and the North Sannox Burn, about a mile and a half as the crow flies along the coast north of Corrie village on the east side of the island.

The fort has two lines of rampart, each some 10 or 12 feet wide, composed largely of stones of varying size, for the most part covered by turf. All my measurements are only roughly approximate. The ramparts do not extend along the east side of the fort, where the ground falls in steep slopes to the top of the precipice.

Had their general lines been traced along the east side so as to enclose an area of ground, the inner rampart might have been described as an oval, measuring roughly about 70 paces from north to south and 50 paces from east to west. The space between the ramparts is generally from, say, 4 to 6 paces wide, and the greatest length, embracing the outer rampart, may be as much as 100 yards.

The ground plan of the Fort at Duntroon on p. 274 of the

*Proceedings* for 1904-5 would serve as a ground plan showing the general lay-out of the fort at An-Cnap. The dimensions are approximately the same and there is a precipice at one side of each, but the inner rampart at An-Cnap seems to follow the line of the outer rampart, and, I think, will not be found to complete a central enclosure as at Duntroon. The other characteristics of the sites are quite different if, after the lapse of fifteen years or so, I recall Duntroon correctly.

Both ramparts at An-Cnap, where easily visible, are of the same character—a sloping “step-up” of a few feet on the outside and running into the higher level on the inside, so that the inner faces are only faintly marked. They have the appearance of fallen “dry-stane-dykes” or mere banks of stone, roughly heaped together and overgrown by accumulations of soil. They are not clearly traceable throughout their length.

The surface soil, within the fort, has a peaty look. The whole area is deep in bracken and thickly clothed with natural wood—birch, hazel, rowan, oak, etc.—which has no appearance of having been cut for many years. It is fairly level and there appeared to be a considerable depth of soil above what would be the surface of the fort when occupied. It might therefore repay extensive exploration, and as the noble proprietors, the Duke and Duchess of Montrose, permitted my small attempts at exploration and have since visited the site, I hope that this may be undertaken.

At one point at the south end of the fort I had a trench opened across the outer rampart. I found, at a depth of about 2 feet, on the top of the undisturbed red soil, a layer of from 1 to 4 inches thick of black vegetable ash containing fragments of charred wood, and, over that, mixed stones, much fired but not actually fused. The same line of trench, traced through the inner rampart but not cut down to the red soil, disclosed vitrified stones.

Following the line of inner rampart from that point west and north for about 30 paces, I found an almost continuous line of agglomerations of vitrified stones forming a sort of backbone to the rampart, sometimes slightly covered by soil and sometimes protruding from the surface. Further along, towards the north, I traced the same sort of thing at intervals. At the north end, there was a row of small granite boulders that may have formed part of a built wall. Wood ash was found under the vitrified stones at one point.

(2) *Site at Mid-Sannox, Arran.*—The second of the Arran sites is at a distance of less than half a mile, as the crow flies, from the fort, but a wooded hill, 164 feet high, divides the two. It is in the midst of

the abandoned clachan of Mid-Sannox, of which considerable traces remain. The village is marked on the 6-inch Ordnance Survey Sheet, cxxxxviii. (1895).

The spot where vitrified stones were found is at the toe of a slight ridge which runs from the Sannox-Loch-Ranza road towards the corner, furthest up the road, of the "dry-stane-dyke" which encloses the arable land of Sannox Farm. The road, at its highest point and before it begins to drop down to North Glen Sannox, passes a small cutting which, on the left-hand side (going towards Loch Ranza), exposes the red sandstone core of the ridge. The site is about 150 paces along the ridge from the road, and, in the opposite direction, about 18 paces from one corner and 12 paces from the other corner of a stob-and-wire fence which encloses a small area of marshy ground containing springs which include an old built well covered by a slab of concrete. The length of fence between these corners is about 22 paces and is practically on the line of the old abandoned road, which is easily followed from the high road above. The area where vitrified stones were found is so small that I have tried to record the position as definitely as I can in words.

In August 1925 the surface at this point was opened in lifting a small block of red sandstone which, by showing above the surface with an appearance of being hammer dressed, had attracted the attention of Mr Landsborough, the manager at Sannox Farm. His kindly interest in the local antiquities was of much service in rendering and procuring help in these explorations. The stone split in lifting, as if it had been subjected to considerable heat. A few strokes of a pick in the adjoining ground brought up a piece of vitrified stone. Further search exposed more specimens of similar material, and in August 1926, with the assistance of Mr Landsborough and his son, I opened out an area, roughly 5 feet square, with short trenches extending 3 or 4 feet in four directions. At a depth of 12 to 18 inches we found the living sandstone rock blackened on the surface, apparently by fire. The discoloration extended 8 or 9 inches into the rock, which was easily broken. Immediately over the rock was a layer of black vegetable matter containing small fragments of charred wood, over that an inch or less of what seemed like disintegrated granite, and over that perhaps a foot of mixed stones and sand. On the surface was a turf of rough grass. Among the stones were found a number distinctly vitrified, some "knit together by the flux." The underlying rock was less discoloured at a few feet in all directions from the point where the first opening was made and digging was discontinued where the appearance of firing ended. The vitrified stones were all within a

few feet of the first opening. Other small openings were made in various directions, but I found nothing more of interest.

I found no indication of a fort at this site. It seemed a most unsuitable spot for any sort of fort, but beacon fires have been suggested as an origin of vitrified stones, and a beacon fire burning here would have been visible southward, along the Arran shore and perhaps in Ayrshire, if not obscured by trees as it would be to-day. In other directions, rising ground at no great distance would have screened the beacon light from view.

Mr M. Macgregor, M.A., B.Sc., of the Scottish Geological Survey, kindly had a microscopical examination made of fragments of the vitrified stones, and informed me that they were artificially fused and not such material as would be expected to occur in connection with a bloomery.

(3) *Site at Pennymore Point, Loch Fyneside.*—As my notes on this site are not likely to be amplified by further exploration in the near future, I offer them without condensation as follows:—

Vitrified stones occur in considerable quantities over a small area on Pennymore Point on Loch Fyne, Argyllshire, which I inspected in August 1927.

Pennymore Farm lies on the shore road between the village of Furnace and town of Inveraray, about a mile and a quarter from the former and six miles or so from the latter. The point forms a bay which faces down Loch Fyne towards south-west. It is the south-west end of a high ridge, the highest part of which is marked "Bàrr Mòr" on the 6-inch Ordnance Survey—a rounded hill clothed in larch, Scots fir, etc., which falls precipitously towards the loch on the south-east. The ridge runs from north-east to south-west parallel with the loch side, and falls to a hollow, say, 20 feet above sea-level, to the east of the farmhouse. From this level Pennymore Point again rises in two hillocks, tapering off to sea-level at its extremity. It is less than 1000 feet long, and, at its widest, about 200 feet wide. The highest level of the higher of these hillocks is at about 400 feet from the extremity of the point. The lower hillock is nearer the hollow east of the farmhouse. The whole ridge from "Bàrr Mòr" is solid hornblende schist, which crops out on the summits and in cliffs. The point is clothed in stunted oak, beech, etc.

The vitrified stones occur on the higher of the two hillocks. On the landward side this hillock falls to the level "strath" of the bay. The actual point projects into the sea only about 400 feet, and no vitrified stones were seen on it.

The living rock comes up to the highest point of the higher hillock

at its north-east end. There is a small, fairly level, but irregularly shaped area on the top—some 6 or 7 paces across. The hillock extends south-west, in a ridge curving in a southerly direction, *i.e.* away from the bay, and partly enclosing a small hollow between the ridge and where the ground again falls steeply to the sea. Probed with a heavy crowbar this ridge seems to consist of a foot or two of smaller and larger broken stones between the living rock and a layer of turf. None of the stones exposed on the actual ridge, except close to the highest point, were definitely vitrified, but many, if not most of them, appeared to have been subjected to fire.

In a north-east direction on the summit, in a line running generally towards the sea, several large lumps of vitrified stones, some considerably larger than a man's head, outcrop on the surface. Then a face of the living rock about 6 feet high falls to the lower level towards the sea. At the foot of this face a number of lumps of vitrified stone are practically on the surface, and a line of similar stones extends eastward for a few yards to where the ground again falls steeply. In this direction the vitrified stones do not seem to extend further.

A few yards further south-west, on the lower level (*i.e.* on the level below that on which the other line of such stones ends), there is a large accumulation of vitrified stones.

A shaft, about 3 feet deep, with an opening of about 2 feet square, runs into the bank. The stones of this shaft have been extensively vitrified on the sides and on the lower side of the top. The bank itself appears to consist largely of broken stones.

There are two or three somewhat similar shafts close together, with large stones, perhaps shaped, forming lintels. One of these lintels was wedged up with two pieces of stone between it and an upright, but one piece of stone (vitrified) was taken out. There is no conclusive evidence of building, and even the shafts might conceivably be formed by the accidental fall of stones rolled from above.

A hole leading into the first of these shafts from above, about 3 feet back from the face, was easily opened by levering out stones with the crowbar. All the stones in these shafts were fired, some brick-red for, say, half an inch in from the surface, and some porous throughout. On the steep slope towards the sea, down towards a cleft in the rocks, considerable masses of agglomerated vitrified stones lay, some partly and some wholly covered by the turf, and all easily moved by the crowbar.

It does not seem possible to describe this as a fort. The area is small and the site seems unsuitable for defence, although the ridge is not easy of access from either landward or seaward side.

The fired stones do not seem to occur as if in the line of an encircling rampart.

If it is not a fort site, the alternatives seem to be that it may be the site of a bloomery or of a beacon, but I have failed to arrive at any conclusion on the problem.

A bloomery is a primitive furnace for melting ore, and on this subject I have referred particularly to "Notes on the Ancient Iron Industry of Scotland," by Dr W. Ivison Macadam (*Proceedings*, vol. xxi. (1886-7), p. 89), and "A Survey of the Ancient Monuments of Skipness," by Captain Angus Graham (*Proceedings*, vol. liii. (1918-9), pp. 112-3). Dr Macadam divided the slag heaps, widely distributed throughout Scotland, into four classes, according to the nature of their sites. This site does not readily fall into any one of these classes. Captain Graham catalogued and described briefly a number of bloomery sites in Skipness, but his observations upon these do not enable me to solve the present problem. All the evidence gleaned by me for or against this being a bloomery site is that, while no iron slag was found among the debris, the appearance of ingoing shafts on the lower level, with the considerable quantity of vitrified stones on the downward slope towards the sea, suggests that some process of manufacture had been conducted here.

I may add that Mr Macgregor of the Scottish Geographical Survey, who has seen the remains of many bloomeries in different parts of Scotland, after hearing what I could tell him of the facts, seemed disposed to think that it might prove to be a bloomery site. At Furnace, a mile and a quarter distant, there are the extensive remains of well-known old ironworks.

As to the other alternative of a beacon site, there seems to be no conclusive evidence that extensive vitrification of stones was caused by the action of beacons, and Pennymore Point does not appeal to me as a position that would have been selected for a beacon covering an area of the size here indicated.

I have to thank Mr Fergusson, the tenant of the farm of Pennymore in succession to his father, for having directed me to the vitrified stones on the Point in response to an inquiry as to whether he had seen on his ground such stones as I described to him.