

### III.

NOTES OF ROCK SCULPTURINGS OF CUPS AND CONCENTRIC RINGS,  
AND "THE WITCH'S STONE" ON TORMAIN HILL; ALSO OF SOME  
EARLY REMAINS ON THE KAIMES HILL, &c.; NEAR RATHO, EDIN-  
BURGHSHIRE. BY JOHN ALEXANDER SMITH, M.D., V.-P. S. A. SCOT.

*Rock Sculpturings on Tormain Hill.*—Last summer, by the polite invitation of Mr James Melvin, Bonnington, Ratho, I accompanied him and a friend to examine the sculptured markings which I have now to bring under the notice of the Society. These rock sculpturings were found on removing the shallow soil or turf from the rock on the summit of Tormain Hill, which is partly included in Mr Melvin's farm of Bonnington, and partly in the adjoining property of Hatton. Tormain is a low hill, with long sloping sides on the west and north, and is more abrupt to the east and south; it rises to a height of 480 feet above the level of the sea. Looking from Edinburgh along the wide valley to the westward, two short, steep, and abrupt hills are seen rising up on its southern side, somewhat in front of the Pentland range of hills; these prominent hills are the well-known Dalmahoy and Kaimes hills, which rise to a height of 800 feet above the sea-level. Now, about two miles in front of the Kaimes Hill, to the north, there rises up the lower eminence of this Tormain Hill, on the very borders of the low country; indeed, it is the most prominent object in the district to the west of Corstorphine Hill on the north, and the Dalmahoy Hill on the south, until we reach the Bathgate Hills or Binny Craig, in Linlithgowshire to the west.

From the summit of Tormain Hill Mr Melvin informs me that portions of no less than twelve counties may be seen on a fine clear day.

The rock of which the hill is composed is a coarse-grained greenstone, familiar to us from a great part of the streets of Edinburgh being causewayed with it, for which purpose, however, it has now been found not to be perfectly suitable, from the unequal manner in which it wears when exposed to the action of the weather and much carriage traffic. The groups of cup and circle cuttings (of which a few diagrams were exhibited) belong to the same series of rock sculpturings which have been found in so many different parts of the country, and have been so fully detailed by the late Professor Sir James Y. Simpson, Bart., in his elaborate memoir published in the Proceedings of the Society for 1864-65. They occur on this hill cut on the surface of the natural rock, where it has been exposed on the summit of the hill, and although they are not deeply cut, being probably smoothed a good deal by time and weather, still they appear to be decidedly different in their character from the ordinary unequal surface caused by simple weathering, and to be due, like the many other examples described, to artificial rock cuttings, probably of a comparatively early period. Mr Melvin has been long cognisant of the existence here of the cup-like depressions, but it was only after a visit from Sir James Y. Simpson, when preparing his memoir already referred to, that Mr Melvin discovered the additional rings or circular cuttings which are cut on the hardest and most enduring portions of the rock. Sir James was to have returned to examine them just before he was seized with his last and fatal illness. I have now, therefore, brought them under the notice of the Society, as an addition to those described by him in his memoir. This group of rock sculpturings consists of cups and circles, several cups with two or more circles surrounding them—one cup, indeed, has four concentric circles, and a little below this there is a group of three cup-like hollows near the highest summit of the hill; this last has, however, been altered in our own day by the officials of the Government Ordnance Survey combining them into one figure, by drawing from cup to cup their well-known and characteristic mark of the Queen's "broad arrow."

Mr Melvin tells me he has examined the tops of all the other rocky eminences in his district for traces of these cup and ring markings, but as yet without any success; only he thinks, as those on Tormain Hill so long

escaped notice, others may exist on some of the hard whinstone summits, though still it may be lying hid under their covering of thin earth and adhering lichens. It adds considerably to the interest attached to those old rock cuttings on Tormain Hill to find in the vicinity, as I shall immediately describe, traces of a large and early occupation of the district. Several querns have been found upon the hill turned up by the plough, and a few broken pieces are still lying about.

*The "Witch's Stone."*—On the north-west slope of this same Tormain Hill, about 200 yards below its summit and at an elevation of 435 feet above the sea, lies the large mass or group of stones which has long been known by the name of "The Witch's Stone." It consists now of a large sloping cap-like mass of greenstone, measuring 11 feet in greatest length, by 10 feet or so in breadth across the top, about 2 feet 3 inches in depth, and about 33 feet in circumference. Along the greatest length of the upper surface of this large sloping stone there is cut a regular series of twenty-three shallow cup-like depressions. This large cap-stone rests apparently on three blocks of stone, and two other smaller portions have fallen out from below it in front, at the highest end of the mass; which measures there about 8 feet in height. Below these different portions of stone there appears to be a large foundation-stone underlying them all. Indeed, looking at the stones as a whole, they suggest the probability of this great mass being, or rather having been, one large block of stone, which has by weathering separated into three beds, the upper or cap-stone, the middle bed with the broken portions of rock now fallen from it, and the lowest bed the foundation-like stone below. The whole is formed of one kind of rock, and were the pieces that have fallen out of the end of the middle bed replaced, the solid mass would be again complete. I fear, however, there would then be no room for an interior chamber of any kind, and the conviction is rather unwillingly forced upon you, that instead of being a cromlech, as it has been described, it is simply a very large boulder-stone which has begun to fall to pieces under the long-continued influence of the weather. I may mention that Mr Melvin agrees with me in this opinion.

Dr Daniel Wilson was, I believe, the first who described and figured this mass of rock as a cromlech, in his valuable "Prehistoric Annals of

Scotland ;" but even he was apparently moved to this more by the fact of the existence of the row of cups or hollows cut along its surface, suggesting the hand of man on it, than by the appearance of the stones themselves. He says, in the first edition of his valuable work, were it not for the remarkable line of perforations along the centre of the cap-stone, the whole might have been ascribed to a natural origin. Looking into Sir J. Y. Simpson's memoir "On Ancient Sculpturings," &c, published in our Proceedings, vol. vi., 1864-66, I find that although he has there figured "The Witch's Stone" as a cromlech in Plate IX., he adds a note to his description, to say he has since visited this group of stones, and altogether doubts their being a cromlech, but considers them to be either a large boulder or an outcrop of the greenstone rock (p. 22).

Sir James gives the following detailed description of the cup-cuttings on its surface :—"Its upper surface has sculptured along its median line a long row of some twenty-two cup-cuttings, and two more cup-cuttings are placed laterally, one, half a foot to the left of the central row and at its base ; the other, two feet to the right of the tenth central cup, and near the edge of the block. The largest of the cups are about three inches in diameter, and half an inch in depth ; but most of them are smaller and shallower than this."

This great stone is, however, of much interest from this series of cup-cuttings on its surface, and its being in the immediate neighbourhood of those sculpturings on the rock *in situ* at the top of the hill, which I have just described.

In July 1869 I paid a visit to an old friend in his summer quarters in North Wales, and as the district was new to me, I visited with great pleasure most of the objects of interest in the vicinity. At the village of Bettws-y-Coed I was much struck with a series of deep cup and circle cuttings spread irregularly over the surface of the large natural rock which rises from the bed of the river, just above the bridge. Returning shortly afterwards to the village of Llanfairfechan, on the northern coast of Caernarvonshire, I strolled along a footpath on the high bank of the stream, overlooking the picturesque old village, lying almost hid from view, and away from the lower and new series of houses and villas of the modern village of Llanfairfechan, near the sea-shore. Here I stumbled on a large rounded boulder-stone which had a long series of

cups cut along its surface, in the line of the greatest diameter of the stone, and each of these cups had a distinct channel connecting them all together. The cups themselves were, however, deeper and more cylindrical in character than any I had seen elsewhere. I hailed a passing villager, and asked if he could tell me anything about these curious rock cuttings. He knew them well : it was old, he said, and was a "stone gun;" it had been last used a few years before, when it was fired on the son of a neighbouring proprietor coming of age. The plan of firing it was this—a charge of powder was placed in each of the deep cups, which were then firmly rammed down or stopped above, a train of powder was laid in the connecting grooves between each, and at the proper time a light applied to the end of the train fired the volley; which could be repeated, of course, as often as required. The villagers were quarrymen, working and blasting the rock in the adjoining stone quarries, and the stone gun seemed a simple way to them of firing a *feu de joie* or salute, when occasion called for such a demonstration. It was a lesson of caution to me not to be led away by appearances, without investigating as far as possible all the circumstances connected with any object apparently of rude antiquity. The Society, I trust, will pardon this digression, suggested by "The Witch's Stone," with its row of sculptured cups along its rounded summit: these latter, however, are more shallow depressions, and their use or meaning, like the other rude cup and circle markings, if anything more, than apparently an all but universal style of simple early ornament among men of almost every clime,—I fear, remains still to be explained. The name of "The Witch's Stone" is not an uncommon designation of other large or remarkable boulder-stones in different parts of the country.

Mr Melvin, at my request, since this paper was read, has made a more careful examination of "The Witch's Stone," by digging under its lowest slab or foundation-stone, to see whether it was an outcrop of the rock of the hill itself, or simply a very large erratic or boulder-stone. I am now, therefore, able to give a more definite statement on the subject. Mr Melvin writes me:—"I satisfied myself that 'The Witch's Stone' is a boulder, and is not quite the same rock as that of the hill (I send you a portion of each); the difference is apparent." [This difference has been since considered due to weathering, and the stone at least resembles that of the hill.] "Besides, I dug under the lower portion or sole, and found it

to rest on drift, or the upper boulder-clay, over three-fourths of its length ; the other fourth rests on the rock of the hill. The lower block of stone, which is flat above, is, however, irregularly, but much rounded off below the surface, and is smooth where it is embedded in the clay or drift. I could not observe any striae or groovings on it, but it has been ground round by rubbing."

This large mass of greenstone is, therefore, beyond all doubt, not a mere outcrop of the rock of the hill itself, but from the shape, and relations of its under surface, is probably a travelled boulder ; and if it does not belong to the hill itself, there is plenty of very similar greenstone rock to the westward, from which it might have come, and all the more likely, perhaps, from its being left stranded, as it were, on the north-west face of this Tormain Hill.

I asked Mr Melvin to give me some idea of the weight of this mass of stone, supposing it to have been a single boulder, and he therefore goes on to say :—"The block, when laid where it is, must have weighed about seventy tons. At present it consists of six pieces, all of which fit into one another, and have fallen asunder by the weather. The top may weigh fifteen tons ; the main side support, twenty tons, one small support, three tons, two pieces which have fallen out, three and four tons respectively (these last have all belonged to the middle bed of the stone) ; while the sole seems, so far as we traced it, to be of larger dimensions than the top, say twenty tons ;—in all, say sixty-five tons. Another block has, however, probably fallen away from the north face of the stone, and has been removed ; to all appearance it would be in two or three pieces, and may have weighed other five tons ; so that we may assume the weight of the whole mass of the stone to have been about seventy tons. Of the locality from which it has come I am not certain. One block, equally large, but much sunk in the clay, I removed from the farm of Starlaw, which is eight miles to the south-west (two miles east from Bathgate), it was of very much the same variety of greenstone, and must have come from some of the outbursts of rock further west. I think it resembles closely some of those Linlithgowshire traps westwards of where they smell so strongly when rubbed. Another boulder-stone of even a larger size was broken up for building purposes by my father some sixty years ago, on the farm of Ratho Mains, one mile east of this hill."

Mr Melvin informs me the field where this "Witch's Stone" lies has long been designated "Knock-about," which may probably suggest the early Gaelic name connected with this great stone or *cnoc*, meaning a rock or knoll. The name of the hill itself, Tormain, suggests possibly an older and British origin and etymology of a similar kind, and, indeed, very little changed even at the present day,—*Tor-maen*—"The Hill of the Stone," being probably the ancient British descriptive name of this locality, referring to the presence of this great stone, the prominent character of which on the hillside may have suggested at that early date the distinctive appellation for the hill itself.

*The Stancross.*—At no great distance, Mr Melvin informs me, from the field of "The Witch's Stone," another enclosure to the south-east is designated "The Stancross," and here an upright block of sandstone, which stands 5 feet in height above the ground, and has been used as a gatepost, has cut on its face a long-shaped rectangular cross about 3 feet 6 inches long, of which Mr Melvin has since kindly sent me a rubbing. The cross is well defined on the stone by a groove or border of an inch or two in breadth round its margin. The head and foot of the cross taper slightly, becoming narrower towards the transverse arms, which spring at about 18 inches from the top, and also taper or expand gently outwards on each side to a length of about 8 inches, and at their junction with the stem or upright part of the cross there is cut the usual curve or circular rounded hollow which is common on crosses of a considerable antiquity. The name given to the field is stated to be old, and the cross itself was all but unknown to any resident in the neighbourhood, although some of them had been born and lived there for eighty years, a wall having been built, and hid the cross. They could not tell why the field had got the peculiar name.

Although of very considerable antiquity, this rude stone cross belongs, of course, to a comparatively recent date as compared with the other remains of early antiquities which I have attempted to describe.

*The Kempflat.*—Another field at no great distance to the west is styled the "Kempflat," where the remains of what may have been an ancient earthen dyke or rampart are still to be traced. Mr Melvin writes me:—"The earthen mound is placed on the summit of a sharp greenstone ridge, about 12 chains in length, varying from 4 feet to 8 feet in height, and

from 10 feet to 14 feet broad at the base, tapering up to 6 feet or 8 feet on the top. It seems to have suffered little change for many generations, as the turf covering is thick and old, while the trees with which it had been planted have preserved it for nearly a century."

*The Kaimes Hill.*—The rock sculpturings on Tormain Hill are not, however, the only remains of early antiquities in this locality, for, as already referred to, there rises, a little to the south of Tormain Hill, the well-known Kaimes Hill, to a height of 800 feet above the level of the sea, on which a camp was long ago described as existing, and the following description of it is published in vol. i. of the "New Statistical Account of Scotland," Edinburgh, 1845, in the description of the parish of Ratho, Edinburghshire, by the Rev. James Clason, &c., under the date of 1839. He describes the South Platt Hill at Ratho Hall, in the northern part of the parish, as having been formerly the site of an ancient encampment:—"The Kaimes Hill, which is in view of this part, is the site of another encampment of similar construction, and apparently of the same era. Of this encampment the remains are visible. The space occupied by it is about three acres in extent, and includes the summit, with a considerable part of the eastern declivity. The area is surrounded by a double fosse and rampart, founded in one place with stones and black earth, except on the north side, where the rock is so precipitous as to form of itself a sufficient defence. The access to the camp is from the east, two large stones still marking the place of entrance. On the very summit of the hill there is a cairn of stones, concave in the centre, which is covered with turf greener than the ground around it. Toward the north-east, in a small valley immediately under the brow of the hill, there are to be seen at least ten circles formed with stones, indented or laid in the ground. These, which are all within the line of the defences, and in the most sheltered place of the encampment, are not improbably the remains of huts, raised for the purpose of accommodating the sick and wounded during the period of the hill's occupation. At their extremity is still a spring, which was no doubt of use to the army generally, and might, in conjunction with the shelteredness of the position, afford a strong motive for such erections in this particular spot. The appearance of the ground in some of these circles, a few of the stones being covered with a rich moss and bearing

some stalks of stunted nettles, renders it possible that some bodies may be here interred. It might contribute to the advancement of antiquarian lore if some of these circles were dug up and examined. The situation of this encampment, by whomsoever occupied, must have been a place of considerable strength and of great utility, commanding as it does an extensive prospect on all sides, and consequently not liable to the danger of sudden surprise." (P. 92.) Mr Clason follows Chalmers in his "Caledonia," in the suggestion that the name of the parish of Ratho is apparently nearly allied to the British Rath, or Rathau in the plural, and the Celtic Rath; may it not be connected with some of those ancient artificial works by which it was defended? More recently it has been marked on the Ordnance Survey Map of the county that a Fort exists here; the cairn already referred to is also figured in the fort.

I walked over the Kaimes Hill along with Mr Melvin and friend, and found it more interesting than either of these notices would suggest. It appears, indeed, to have been probably the site of an early British occupation of considerable importance, and was probably a town corresponding to other ancient sites which occur in different parts of the country. The Kaimes Hill is very steep towards the north and west, but less so in the other directions; on its east side you still can trace the remains of three lines of stone walls or ramparts, through which are a series of entrance openings or gates, and the ramparts still in part surround the hill, being especially distinct to the east and south. One of these entrances leads to a natural shelf near the upper part of the hill on its front to the north, where you find the remains of a rampart running along the brow of the hill, and on this natural shelf itself are to be seen traces of some fourteen or more hut circles, varying from 18 to 30 feet in diameter. A fine spring of water rises towards the western extremity of this shelf, and runs down the side of the hill. Above this shelf you see at least traces of other walls or ramparts and hut circles, generally taking advantage of the various heights and hollows over the top and round the brow of the hill, perhaps to the extent of some eighteen or twenty more hut circles, which are more or less distinctly indicated. Mr Melvin informs me the whole upper part of the hill is composed, he conceived, of columnar close-grained basalt, though he finds it has more lately been described as greenstone by Professor Geikie. This rock is lying above sandstone strata which

dip to the south. Mr Melvin says the surface of the hill has never been under the plough, nothing having ever been attempted there in the way of cultivation, and little change has therefore come over it since he first knew the locality, now some forty years ago. The walls round the hill-top form a parallelogram, rounded at the corners, of about 14 chains in length from east to west, by about 6 chains from north to south, and the space enclosed may amount to about 8 acres. The actual space now occupied by the hut circles is, however, much less. The fine spring of water already referred to rises about the centre of the north wall of the enclosure. Probably the existence of this spring had much to do with the selection of this commanding and elevated spot as a place of residence and security. The closely adjoining eminence of Dalmahoy Hill, to the east, which is about the same height and of a similar character, and therefore from its abruptness could have apparently been even more easily defended, has no spring of water on its summit or sides, and Mr Melvin tells me it shows no traces of any early remains. Mr Melvin also informs me that the stones forming the old lines of defence of the Kaimes Hill are chiefly whinstone boulders; some, however, are angular, as if they had been quarried, while a few sandstone blocks occur among them, and still fewer, any of the travelled older rocks of the district. Advantage has been taken in several places of depressions in the rocks to aid the line of defence. The hut circles are chiefly seen in the spots most sheltered from the south-west winds. The floors of the hut circles are covered by about a foot of soil, and appear at some places as if they had been flagged or roughly paved with thin stones, generally in those very partially examined by us, of sandstone, which in some places seemed to show marks of being blackened, possibly by fire.

*Standing Stone at Lochend, &c.*—There are other early antiquities still remaining in this district, especially in the valley of the Almond river. On the northern border of the parish of Ratho, at Norton, there is a standing stone five feet high. In the adjoining parish of Kirkliston, about two miles to the north of Tormain Hill, a quarter of a mile from the Almond, and a little to the west of the farm-house of Lochend, on the south side of the Edinburgh and Bathgate road, and about eight miles from Edinburgh, there is another large standing stone, also of coarse

greenstone. It bears no inscription or sculpturing of any kind, and measures about 10 feet in height from the surface of the ground.

*Tumulus at Old Liston.*—Immediately to the west of Lochend, just referred to, at Old Liston, there is a tumulus, apparently of earth, still of a considerable size, which we also visited. It lies a little to the south of the Edinburgh and Bathgate road, and is now enclosed by a low wall; this enclosure measures about 31 yards in diameter. Three large standing stones still retain their old position, as part, probably, of a stone circle which had formerly enclosed this tumulus or mound, at some considerable distance from its present circumference. One of these stones, a large unhewn greenstone block, about 8 feet high, stands on the north-west of the mound; another block, about 7 feet high, on a corresponding position to the south-west; while the third rises on the east side of the tumulus. These blocks are all of greenstone, which is believed to resemble that of the Kaimes Hill, some five miles distant, but where the rock is of a somewhat columnar character, and therefore could have been obtained without difficulty in large monumental-like masses.

Dr Daniel Wilson, in the chapter on Sepulchral Memorials of his "Pre-historic Annals of Scotland," refers to this tumulus; he states that—"In a large encircled barrow, called Huly Hill, opened in 1830, at Old Liston, a few miles to the west of Edinburgh, a bronze spear-head was found, along with a heap of animal charcoal and small fragments of bones, but neither cist nor urn." I quote from the first edition of 1851. From the slight details given, I should suppose that the examination of the tumulus had not been very minute, and that it still remains ready to reward the careful explorer with fuller details of its long-buried contents.