PROCEEDINGS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

APPENDIX TO VOLUME VI.

EDINBURGH:
PRINTED FOR THE SOCIETY BY NEILL AND COMPANY.

MDCCCLXVII.

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OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

EIGHTY-FIFTH SESSION,

1864–65.

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CONTENTS.

APPENDIX.

ON ANCIENT SCULPTURINGS

OF

CUPS AND CONCENTRIC RINGS, &c.

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VICE-PRESIDENT OF THE SOCIETY OF ANTIQUARIES.

Among the earliest, and yet the most enduring traces of archaic man in this country, are probably to be reckoned his cuttings or sculpturings on rocks and stones. Some of his rudest, and hence, perhaps, his most primitive lapidary carvings, consist of rounded shallow excavations, pits, or cups, and of incised rings or concentric circles. In the present communication it is my object to collect and describe a variety of instances of these ancient lapidary markings of man as they are seen both on separate stones and upon solid rocks in Scotland; illustrating them freely, as occasion may require, by examples taken from other parts of the British Islands.

In attempting to follow out this object, I shall describe first, the chief generic forms of the cup and ring cuttings, and the principal deviations from these generic forms; the localities in which these archaic sculpturings have been found, with the peculiarities of the individual specimens; and the analogous lapidary sculptures found in one or two neighbouring countries. Afterwards, I shall consider various general questions in regard to their meaning, their geographical distribution, the kind of instruments by which they were cut, the age at which they were produced, the people who probably carved them, &c.

PART I.

Varieties in the Sculpturings.

The cup and ring-cuttings, which constitute the special subject of the present essay, vary much in configuration, size, relations, form, &c. We know, however, that they are all allied to each other, and have a common origin, and probably a common import, from the fact that, though not unfrequently seen separate, we often also find them more or less grouped and co-existing together in different combinations upon the same, or upon adjoining stones and rocks. Amidst the numerous varieties of them which have already been discovered, six or seven general types can be easily traced; and the enumeration of these types in the first instance will simplify the study of the whole subject.

CHAPTER I.—PRINCIPAL FORMS OR GENERIC TYPES OF THE CUP AND RING CUTTINGS.

FIRST TYPE.—Single Cups. (See Plate I. Type 1.)

The simplest type of these ancient stone and rock cuttings consists of incised hollowed-out depressions or cups, varying in diameter from an inch to three inches and more in diameter. For the most part these cup-cuttings are shallow. Consequently their depth is usually far less than their diameter; it is often not more than half an inch, and rarely exceeds an inch or an inch and a half. On the same stone or rock surface they are commonly carved out of many different sizes. These cup-excavations are on the whole usually more smooth and polished over their cut surfaces than the ring-cuttings are. Sometimes they form the only sculpturings on the stone or rock, as on many Scottish monoliths; but more frequently they are found mixed up and intermingled with ring-cuttings. Among the sculptured rock surfaces, for instance, in Argyleshire, there are in one group at Auchnabreach thirty-nine or forty cup-cuttings, and the same number of ring-cuttings; and at Carnban there are twenty-nine figures,—namely, nine single cups, seven cups surrounded by single rings, and thirteen cups encircled by a series of concentric rings. (See Plate XXII.)

Hitherto archæologists have had their attention chiefly or solely taken up with the concentric circles or ring-cuttings, to the comparative or entire exclusion of the cup excavations. In some model specimens, for example, of the so-called "Concentric Ring-Cuttings," from Chatton-law in Northumberland, published in the *Illustrated News* last year (March 19, 1863), and copied into Plate XXIV., there are more cups than rings. On several others of the sculptured Northumberland stones the cups considerably exceed the groups of rings in number.

The simple cup-cuttings are generally scattered singly, and apparently quite irregularly, over the surface of the stone; but occasionally they seem placed in groups of four, six, or more,—almost in a methodic and constellation-like arrangement. Usually the edge of the cup is smooth and regular in its circumference; but occasionally it is depressed or guttered at one point, or on one side. (See Plate II. fig. 1.)

Before proceeding further, let me here remark that all the cup-like excavations which we meet with on megalithic circles, monoliths, &c. &c., are not by any means the work of man. Many of them are, on the contrary, the work of nature; or, in other words, the results of the weathering and disintegration of the stone from long exposure. Among the endless vagaries of shape and form effected on rocks by weathering, cup-like excavations occur frequently on the surfaces of sandstone and other softer rocks, like those of the Lundie Stones in Fife and the Duddo Circle in Northumberland; and I have found them also on the surfaces of far denser stones.[1] Occasionally they are the result of the mineralogical constitution of the rock, as of softer portions weathering out, or of the enucleation of fossilized organic remains, or of imbedded stone-nodules. Thus the surface of the Carline Stone, near Dunmore House, presents a series of smooth, cup-like excavations; but they are all the result of

[1] The very hard "Sarsen" stones or sandstone grits of Abury and Stonehenge show in many parts weathered irregular cavities and excavations; some of them large and deep. Speaking of the Abury stone, Dr Stukely long ago observed, "In some places I thrust my cane, a yard long, up to the handle, in holes and cavities worked through by age, which (he argues) must needs bespeak some thousands of years continuance" (see his "Abury," pp. 17 and 39). The massive rusty conglomerate blocks forming the circles at Stanton Drew are still more remarkably drilled with crystalline cavities, and the corrosions of time.

round included masses having been weathered out of the amygdaloid rock of which the stone is composed. Nor are all cup-like excavations, which are not the effect of weathering, the result of human agency. On visiting the so-called cromlech or chambered tumulus on the Orme's Head above Llandudno, I found various excavations on its stones, and specially on the interior of the covering stone; but a little examination of their smooth surfaces and expanding interiors showed that the excavations had been the work of the Pholas, when these stones formed part of the sea-beach.

In many cases it is difficult, and indeed impossible, to determine conclusively whether cup-excavations, when found alone, are the product of human art or the product of nature. But various collateral circumstances often tend to evince their artificial origin, such as—1. The limited size, regular rounded forms, smooth surfaces, and shallow depths of the excavations; 2. Their existence upon the surfaces of rocks too hard to be readily weathered; 3. Their arrangements in rows or in other artificial positions and groupings not referrible to any mineralogical peculiarities in the stone; and, 4, and specially, their co-existence with other cups surrounded by single or multiple rings, such as we have now to describe as additional types of these ancient lapidary carvings.

SECOND TYPE.—Cups surrounded with a Single Ring or Circle.

(See Plate I. Type 2, three figures.)

In this second type each round excavation or cup-cutting is surrounded by an incised ring-cutting. The ring is usually considerably shallower than the cup, and forms, as it were, a border or setting to it. It is more frequently placed around large than small cups. Sometimes the ring is complete and unbroken; but often also it is traversed at one part by a radial groove or gutter, which occasionally runs directly from the central cup outwards through, and even beyond the ring. More rarely the groove appears in the edge of the cup, and not in the corresponding part of the ring. Sometimes the ring, as it meets the straight radial groove, flexes and bends downwards with it; and more rarely it terminates in new cups. (See Plate XIV. figs. 3 and 4.)

THIRD TYPE.—Cups surrounded with a series of Concentric Complete Rings. (See Plate I. Type 3.)

In this type of these lapidary sculpturings, the central cup is surrounded by two or more concentric rings. Each ring is, as we proceed from within outwards, larger and more expanded than that which it encloses, and every ring in this type is in itself a perfect circle. The series of concentric rings varies in number, from two up to six, seven, or even more. In this complete annular form the central cup is generally more deeply cut than the surrounding rings,—but not always.

FOURTH TYPE.—Cups surrounded with a series of Concentric but Incomplete Rings, and having a straight Radial Groove. (See Plate XXV. Type 4.)

This type constitutes perhaps the most common form of the circular lapidary carvings.

It consists, like the last annular type, of a series of expanding rings cut around a common cup centre. But in this fourth type the circles of which these incised ring lines consist are not complete; and this *incompleteness* in the circles constitutes, along with the direct radial line, channel, or duct which produces the incompleteness, the double characteristic of the fourth type of these lapidary carvings.

The incompleteness is produced by an incised straight, radial line, channel, or groove, running from the centre of each circle to its circumference. The circles generally, at either extremity, touch this radial line; but sometimes they terminate on each side of it without touching it. This incised radial groove occasionally extends considerably beyond the outermost circle; and generally, but not always, it tends in a direction more or less downwards along the stone or rock. Sometimes it runs on and unites into a common line with other ducts or grooves coming from other circles, till thus several series of concentric rings are conjoined into a larger or smaller cluster, united together by the extension of their radial branch-like grooves. More rarely it runs into, and ends upon, the circumference of another circle, or even traverses part of it.

In this fourth type the average number of concentric rings is from

three to six, and the average diameter of the outermost ring-cutting from ten to sixteen inches. But occasionally the diameter is much larger, and the number of rings greater. I measured one specimen at Auchnabreach, in Argyleshire, three feet in diameter, and consisting of eight concentric rings. (See Plate XXI.) One of this size, and consisting of seven concentric rings, existed sometime ago on Chatton-law, as I am informed by that excellent archæologist, Mr Tate of Alnwick, but has latterly been much destroyed. He has measured another in Northumberland still larger,—viz., three feet three inches in diameter, and consisting of eight circles and a portion of a ninth.

FIFTH TYPE.—Cups surrounded by Concentric Rings and Flexed Lines.
(See Plate I. Type 5.)

In a fifth type of the ring-cuttings, the series of circular lines, instead of abruptly ending when they approach the straight or radial groove, turn downwards at that point at nearly a right angle, and run parallel for a greater or less distance along each side of the groove line. In this class the groove line itself is sometimes double. The number of inclosing or concentric rings is generally fewer in this type than in the two last preceding types, and seldom exceeds two or three in number.

SIXTH TYPE.—Concentric Rings without a Central Cup.
(See Plate I. Type 6.)

Occasionally, but with comparative rarity, the concentric rings are formed of the various types described, but without any central cup or depression. This absence of an excavated centre has been most frequently remarked along with the complete annular type of the concentric rings which I have already spoken of in the third type. For example, on a slab-stone about twenty inches in length and in breadth, found at Great Hucklow, in the Peak of Derbyshire, and a cast of which has been kindly sent me by my friend Dr Aveling of Sheffield,[1] there are seven concentric rings cut around a common centre; but the centre shows no cup or depression, and has a convex rather than a concave form. (See Plate XVI. fig. 2.) The diameter of the outermost ring is about twenty-two

inches.[1] Sometimes concentric circles, both with and without central cups, are found cut upon the same stone. Thus on the interior of the cover of a kist-vaen at Craigie Hill, there are carved nine groups of concentric circles. Of this number two show central cups or depressions; one is doubtful; and in the centres of the remaining six series of circles there are no cup-markings. (See Plate XV.)

SEVENTH TYPE.—Concentric Circular Lines of the Form of a Spiral or Volute. (See Plate XXV. Type 7.)

A seventh type of these lapidary markings is characterised by their cut line or lines running out from the centre in the form of a continuous spiral or volute, like a watch spring.

The carving consists of one line continued spirally outwards, with its circle expanding at each turn; instead of consisting, as the last three or four preceding types do, of a concentric and enlarging series of separate concentric lines. The spiral line usually, but not always, begins at its central extremity in a cup-like excavation.

The volute or spiral is perhaps the rarest of the forms of circular ring-cuttings in Great Britain; but this type seems common on the incised stones of Ireland and Brittany.

PLATE I.

COMMON TYPES OF CUP AND RING CUTTINGS.

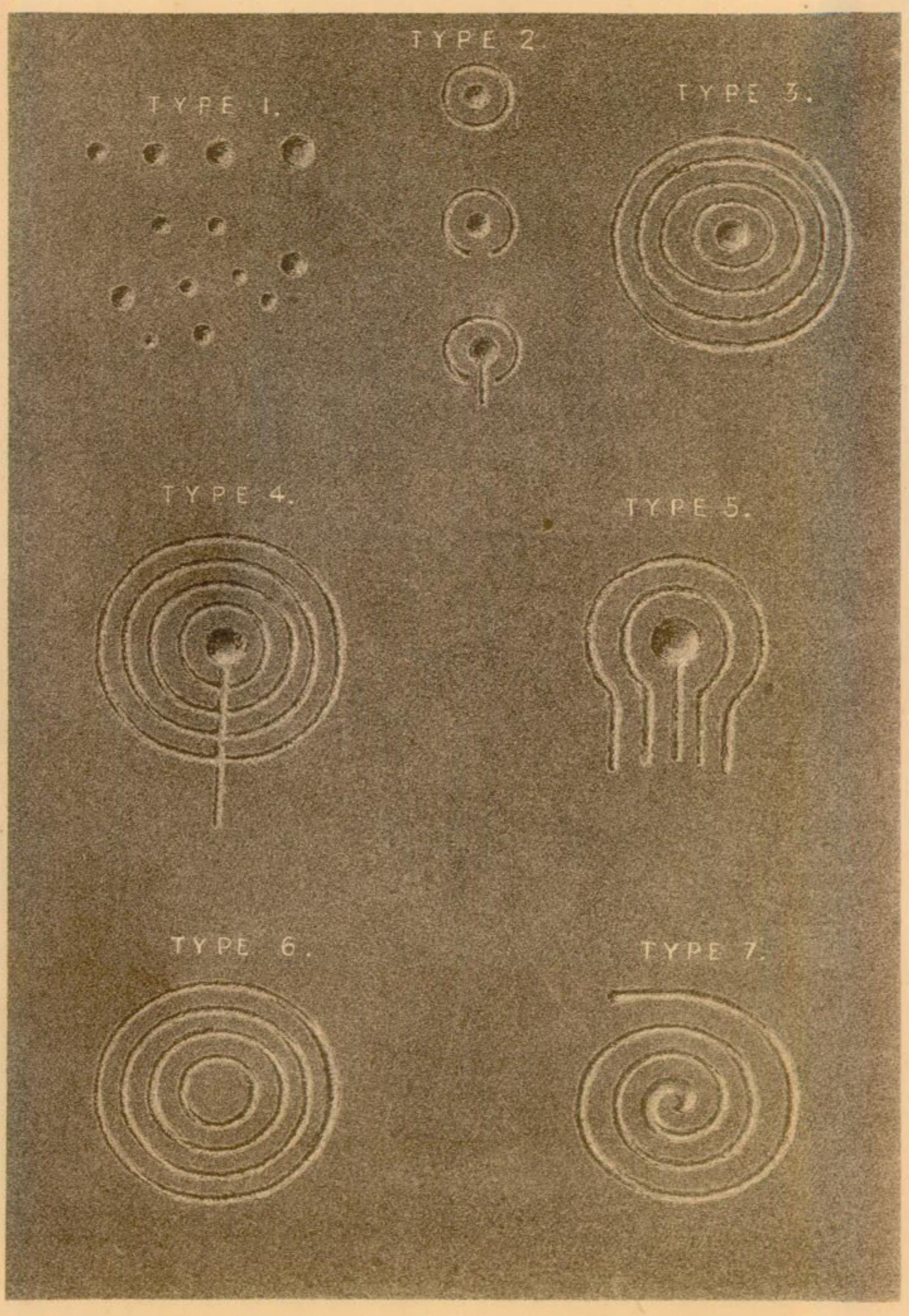
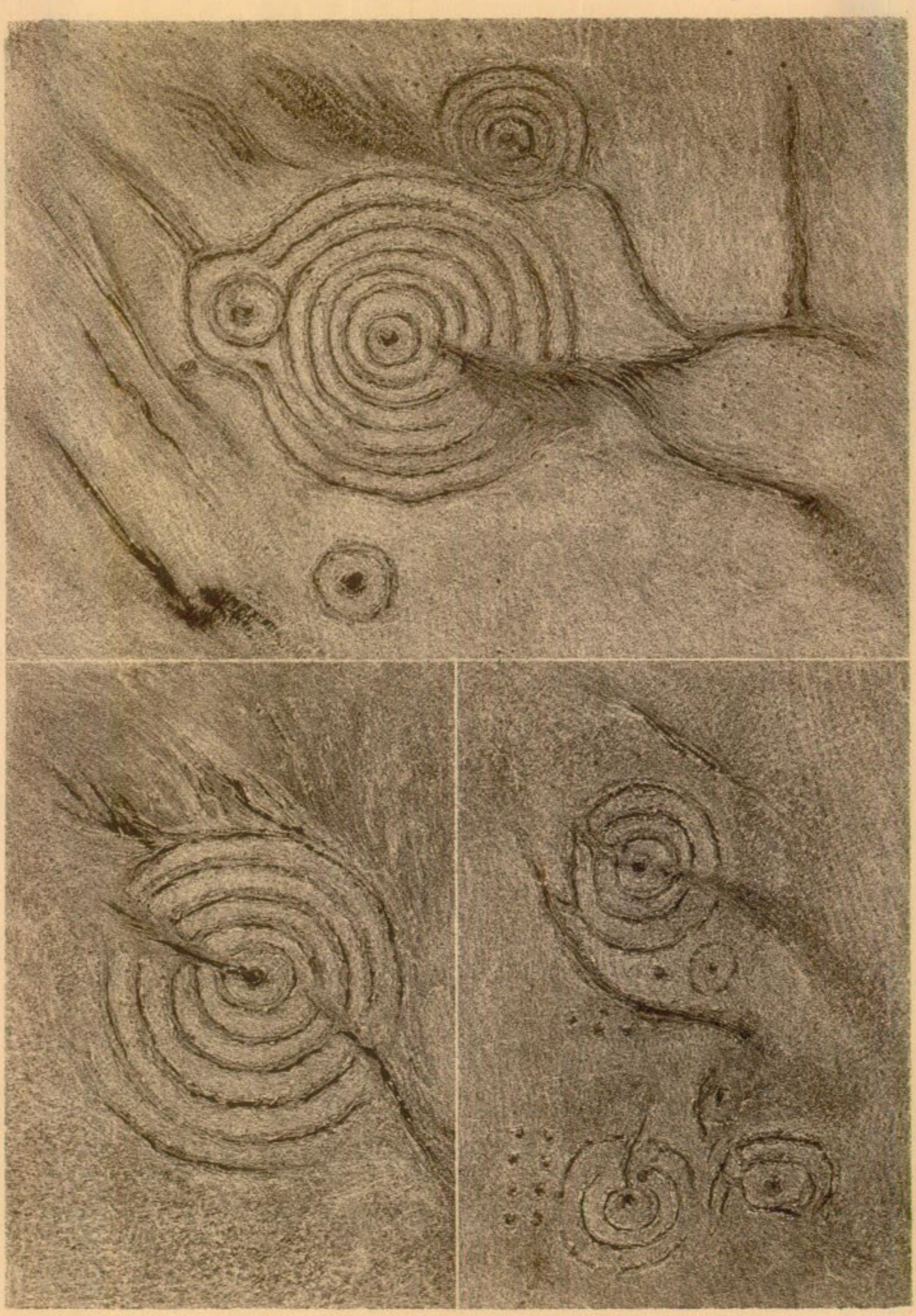


Plate XXIV.

ROCKS AT CHATTON LAW, NORTHUMBERLAND.



Co-existence of different Types.

That all these various types of cup-cuttings and ring-cuttings are intimately allied to each other, belong to the same archaic school of art, and have a community of character and origin, is proved, as already hinted, by the fact of two, three, or more of them being occasionally found carved together upon the same stones or rocks. For if, in some instances we have the sculpturing entirely of one single type or character, we have, in other instances, all, or nearly all, the types appearing in one position. Thus, on the rocks at Auchnabreach, near the Crinan Canal, there are cups both single and ringed, with all kinds of concentric circles and volutes. On the megalithic circle of stones, termed the Calder Stones, standing within a few miles of Liverpool, I lately traced

[1] The original stone is in the Museum of the Literary and Philosophical Society of Sheffield.

out all the different types,—as single and ringed cups, concentric circles of various forms, and volutes,—as shown on the sketches of them in Plate VI.

CHAPTER II.—SOME OF THE CHIEF DEVIATIONS FROM THE GENERIC TYPES.

Each of the generic types of cup and ring cuttings which I have attempted to describe is liable to present many diversities and differences of form. A brief glance at some of the principal deviations of form presented by them may enable us to take a more comprehensive view of these lapidary sculpturings.

The cup-cuttings, such as constitute our first type, rarely deviate much from the usual round form. But various occasional combinations and arrangements of them are worthy of remark. Thus two or more of them are sometimes conjoined by a straight incised line or groove. Occasionally the uniting groove is perpendicular, uniting two placed above each other, either of the same or of different sizes (Plate II. fig. 1). In other instances it is lateral (Plate II. fig. 3). I have seen an instance at Ballymenach, in Argyleshire, of a lateral or transverse groove uniting a line of five or six cups. (Plate XVII. fig. 4.) Occasionally the conjoining gutter is of an irregular branched form, connecting two or more cups (see Plate II. fig. 4 and Plate XIV. fig. 4); and more rarely two connecting grooves cross each other in a crucial form.

The uniting channel is sometimes, partly perhaps from weathering and disintegration, as deep as the cups which it unites.

In a few rare cases, two or more cups are placed in the centre of a ring-cutting, as seen in the Northumberland examples sketched in Plate II. figs. 5 and 6. More rarely, a series of small cups or stars forms a kind of beaded arrangement around the circles, as in the Jedburgh stone (Plate XVI. fig. 1). In the Pitscorthie and Letham stones, instead of an incised ring, six or seven cups at one part form a circle around a central cup (see Plate XX. fig. 1).

In specimens of the common interrupted concentric rings of the fourth type, the radial groove, instead of being single, is sometimes

double or even treble, as in a Northumberland specimen represented in Plate II. fig. 7).

A straight bisecting line, in addition to the radial groove, traverses in a few rare instances the whole ring-cutting, as seen in a specimen at Auchenbreach, figured in Plate II. fig. 8.

The radial groove is occasionally more or less zig-zagged, instead of straight, as it traverses the various concentric rings of its circle. In the fourth type everything is, in a few instances, apparently complete, and the space for an incised radial line or groove left, but it remains, as it were, uncut (Plate II. fig. 13).

Two or more of the series of concentric circles or their grooves occasionally touch and amalgamate, as in Plates XV. and XXII.; and smaller circles are seen sometimes included within the area of larger circles, as in Plate XXIV. Occasionally the fifth type assumes a kind of horse-shoe pattern, as in Plate II. fig. 9. There is an example of this kind on a rock at Calton More, in Argyleshire.

At Auchnabreach, in the same county, there are specimens of two and three volutes conjoined together. (See Plate II. fig. 10 and Plate XXII.)

In one specimen of the ring-cutting at Rowton Lynn, in Northumberland, the circumference of the outer circle has nine straight lines, diverging at nearly right angles from its circumference. (See Plate II. fig. 11.) At Auchnabreach there is another specimen of three still longer straight lines, radiating off from the outer rim of the circle. (See Plate II. fig. 12.)

In a few instances the congeries of concentric rings forms an oval, a a reniform, or a pyriform, instead of a round figure. (See Plates XXI. and XXIII., &c.)

There, occur also, in some localities, along with the circular type of concentric rings, angulated and irregularly straight lines; or even lozenge-shaped concentric forms, as in Plate II. figs. 14 and 15, and Plate XIII. fig. 4, which perhaps ought to have been considered as an eighth type of these markings; and still more rarely straight and angled conjoined lines of a broken gridiron pattern appear. In some rare examples, as in castings and drawings kindly sent me by Miss Dickson from Doddington, there are angled inclosures cut around a series of circular markings

and cups (see Plate II. fig. 15). In a few instances, also, an irregular circular enclosure, in the same way, comprehends a series of cuttings; or, projecting from the circumference of a ring, it includes a number of cups and depressions, and other minor forms.

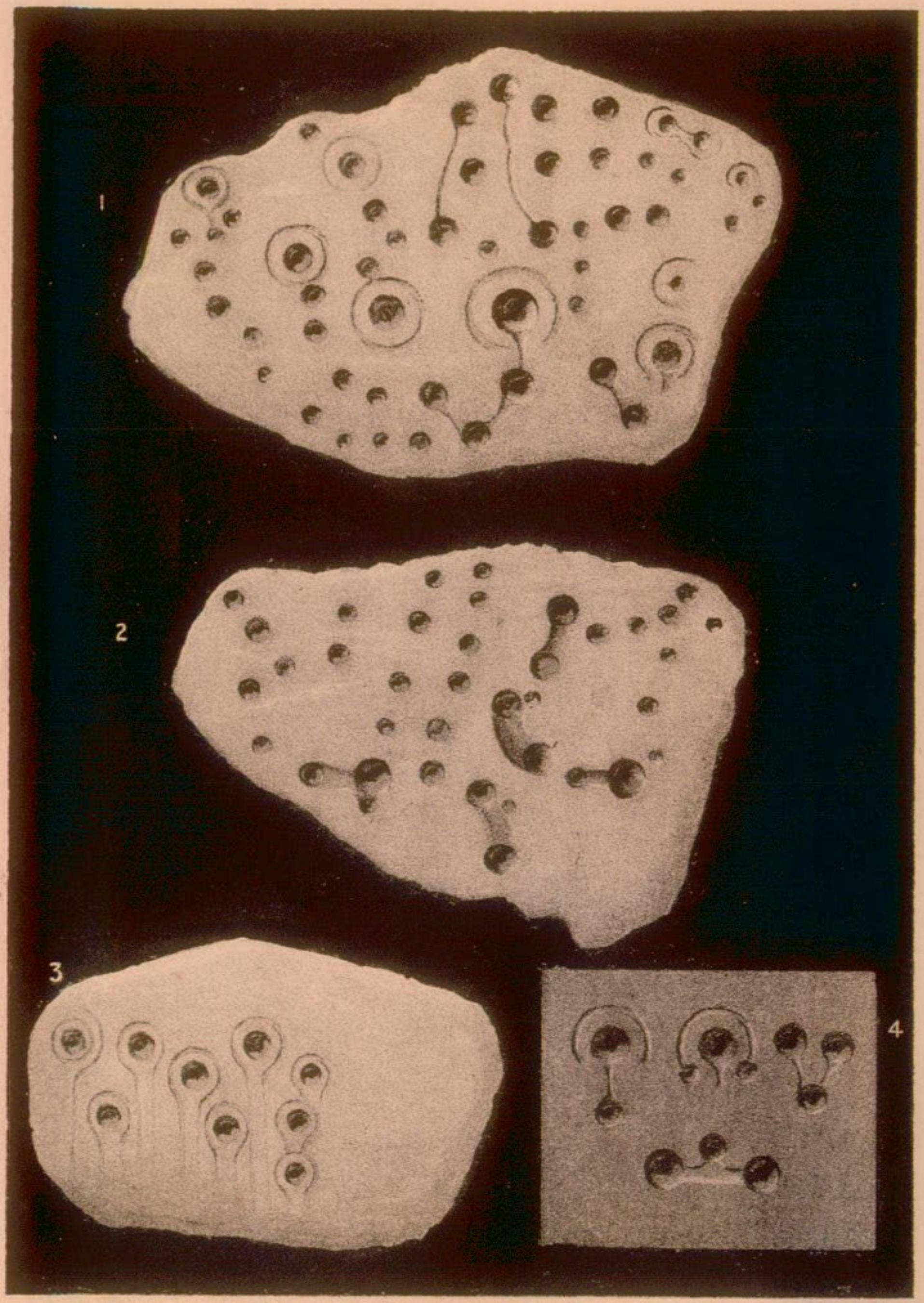
Usually the circular lines of a concentric ring are cut with great regularity, and almost mathematical precision. But not unfrequently they display no very marked accuracy of form, and unite very irregularly. In the sketch, for example, of a specimen from Auchnabreach (see Plate II. fig. 8), it will be observed that the two outer rings do not meet at corresponding points as they approach the radial grooves; and there are two or three specimens in the same locality where the series of concentric circles are so very clumsily drawn as to seem deeply indented and crushed in at one side.

Plate II.

CHIEF DEVIATIONS FROM THE GENERAL TYPES.

PLATE XIV.

STONES FROM ROSSHIRE AND FORFARSHIRE.



CHAPTER III.—MODES OF PRODUCTION OF THE SCULPTURES; CARVED STONE SURFACES NOT PREVIOUSLY PREPARED.

Generally the sculptured lines and cup-depressions are rounded and smooth on their surfaces, as if, after their original cutting, they had been ground and polished either by art, or by time and the effects of the elements. And probably one mode of their artificial production consisted chiefly or entirely of a kind of scraped work, or of abrasion or grinding.

But a second and more constant method of sculpturing these cups and rings no doubt consisted of the use of a chisel and mallet. Evident proofs of this are seen in those specimens of the sculptures that are found inside of graves, where they have been deposited shortly after the carvings were executed, and were thus preserved in their original state from the effects of weathering and disintegration. Similar evidence of their original mode of execution can sometimes be obtained on examining the sculptures cut upon open rock surfaces, when they have happened to be long buried over with earth and soil, as in a specimen which I uncovered at Auchnabreach of a deep layer of earth or turf, which had probably overlaid for long ages the sculptures cut on the solid schist rock. The concentric rings in this instance were three in number, with a central cup and long radial groove, which extended a foot or more beyond the outer circle. The outermost ring admitted the tip of the

finger, which seemed a good measure of its width and depth. Another part of its circles, and the long groove, allowed two fingers to be placed within it; but everywhere the edges felt almost as sharp as a recently-broken piece of the same schist rock; and the rugged surfaces of the grooves and lines showed distinctly that the circles had been chisselled or chipped out.

I have not seen on our Scottish stones any decisive specimen of these sculptures that gave the idea of their occasional execution by that process of picking or punching that has long been used in some forms of stone carving and lettering. The only exception, if it be an exception, is on a stone doubtfully belonging to this class at Jedburgh, where a circle of pits or stars exist, probably produced in this way. (See Plate XVI. fig. 1.) In some Irish sculptured stones the circles are cut out in the form of dots or by punched work; and are not continuous lines.

The ancient sculptures which we are describing are all cut upon the natural and uneven surfaces of the stones or rocks on which they are found. No artificial levelling and hewing of these surfaces has been made before or at the time the figures were carved upon them. Very generally rock surfaces that are naturally and comparatively smooth have been selected for these sculptures. But often also they are cut upon undulating and broken faces of stone; and in this last case the lines of the sculpture follow continuously, without stop or interruption, over all the irregularities of the stone-surface, dipping into its sinuosities and mounting over its elevations, quite irrespectively of its heights, hollows, and other inequalities.

Frequently by exposure, and the disintegration of the rock, the cup and ring cuttings have become much faded and obliterated; and no doubt in numerous instances they have been utterly destroyed by the surface of the stones weathering and splitting off. Many old basaltic monoliths, for example, have all their surfaces so disintegrated and scaled off, that any sculpturings which perchance existed on them must have been long since erased and gnawed off by the tooth of time.

PART II.

Localities in which the Cup and Ring Sculptures have been found.

The cuttings of cups and rings described in the preceding pages have now been discovered under various circumstances, and in various positions and localities. They have been often found on stones used in connection with the burial of the archaic dead, and with various forms of ancient sepulture. They have also been detected within the underground-houses, the domestic cyclopic dwellings, and the fortified strongholds of archaic living man. Numerous examples of them have now likewise been found cut upon stones and rocks lying within and without the walls of the ancient camps or towns in which the communities of our olden forefathers dwelt. And latterly, these enigmatical carvings have been traced engraven on the surfaces of isolated stones, and of rocks *in situ*, covered over in some instances by turf and soil that has evidently been the accumulation of many long centuries. I shall adduce a few specimens of them in each of these various localities.

CHAPTER IV.—ON STONES CONNECTED WITH ARCHAIC SEPULTURE.

This is no fit place to debate the question whether the megalithic or so-called "Druidical" circles, which formerly stood in great and imposing numbers in different localities in Great Britain, and many remains of which still exist, were used by our archaic forefathers as temples for worship, or places for political assemblages, or courts of law, or places of sepulture,—or whether all of these characters and uses did not pertain to them. Various analogies and inferences from superstitious usages, &c., have been adduced; but we have no classical or other ancient and direct data left us to prove them to have been sacred fanes or courts of convention and justice. The circles themselves offer no tangible or visible evidence that can settle such questions.[1] But they usually contain within their

[1] By far the ablest defence of the sacred or temple character, &c. of our Megalithic Circles is to be found in Dr Thurnam's very learned Essay on the Historical Ethnology of Britain in the "Crania Britannica," p. 121, &c.

flat area sufficient evidence—as ascertainable by the spade and mattock—that they were used as places of human sepulture at least, whether they were used for other purposes or not. Occasionally the centres of the smaller circles contain sepulchral mounds or barrows; or, perhaps, more correctly speaking, the barrows are surrounded by a single or double circle of stones. Again, in regard to our ancient cromlechs, we have not the slightest evidence that they were ever intended for aught else than sepulchres; but we have ample evidence that they were used for this purpose, in the finding of bones, urns, and sometimes of cists, within their cavities. The same proof applies to the old chambered tumuli, which often, indeed, contain within their centres cromlech-like structures as their skeletons or nuclei. The single standing stones or monoliths of our island,—erected occasionally, we know from ancient records, for various other purposes,—were often also raised as monumental stones for the dead, as we learn from the sepulchral urns, and the human bones and ashes oftentimes found deposited at their base. The remains found in the interior of the ancient kist-vaen or stone coffin, and of the stone-covered urn, afford also incontestible evidence of their sepulchral character. And in all of those localities of ancient sepulture,—on the megalithic circle, on the cromlech, on the stones of the cairn and chambered tumulus, on the monolith, on the lid of the kist-vaen, and on the stone-covering of the mortuary urn,—cup-cuttings and ring-cuttings have been detected.

1. *ON STONES OF MEGALITHIC CIRCLES.*

I have had the stones of many megalithic or "Druid" circles in Scotland and England examined, with the view of ascertaining the presence or absence of cup or ring-cuttings. In most instances no marks of ancient artificial tooling or sculpturing have been traced upon the surfaces of the stones. But in several examples, both cup-markings and ring-cuttings have been detected upon them, as in the following examples:—

Circle at Rothiemay, Banffshire.—About a furlong north from the house of Rothiemay "stands a Druidical temple," to use the language of the old Statistical Account of Scotland.[1] The circle consists of five

[1] Statistical Account of Scotland, 1797, vol. xv. p. 386.

remaining stones, the others having been removed. My friend Dr Black examined the stones for me, and found one of them distinctly marked. The marked stone is an immense oblong block thirteen feet long, six feet high, and about four in thickness. On the side of it, looking to the interior of the circle, are between fifty and sixty cups. Two of the cups are surrounded with rings. The sketch of this stone in Plate III. is accurately copied from a photograph of it. On the upper surface of the stone are also ten or twelve cup-cuttings. Upon the adjoining stone in the circle there are also four or five cups.

Circle at Thorax, Banffshire.—The circle is situated in the parish of Marnoch, Banffshire. It consists of six stones. On the inner surface of one of them, carefully copied into Plate IV. fig. 1, from a photograph, are numerous cup-cuttings; and an appearance of a ring-cutting is traceable around two or three of the largest cups. The cut stone, in this instance, as in the one at Rothiemay, is a hard granitic or syenitic rock.

Circle at Bankhead, Banffshire.[1]—About four miles from Thorax is a stone marked with cups. It stands in the parish of Boyndie. In the new Statistical Account of Scotland it is stated that "three Druidical circles are in the parish; one near the parish church; another within a mile to the north-east; and a third on the farm at Bankhead." Of this last circle three stones only remain, two standing and one lying. On the north side of one of the erect stones—a granite—Dr Black found twelve cup excavations of the usual size. He could not detect any similar markings on the other stones.

Circles at Bruiach, Inverness-shire.—At Bruiach, near Beaufort, stands a double circle of stones. About a dozen stones of the outer circle remain. On the upper surfaces of two of the fourteen or more stones left to form the inner circle, the Rev. Mr Joass of Edderton lately discovered markings of a few cups, and one or two connecting gutters, similar to those which his brother had discovered on other stones in that vicinity, as depicted in Plate XIV. At Bruach the inner circle is thirteen yards in diameter, and the distance between the inner and outer circle about nine feet. None of the stones are very high or large. Eight or nine measure about three feet in height, and the same in breadth.

[1] See the Spalding Club Volumes on the Antiquities of Aberdeen and Banff, vol. ii. p. 118.

Circle at Cults, Perthshire.—In the parish of Caputh there exist at Cults, within a few miles of Dunkeld, three stones,—the remains, it is alleged, of a large circle. Two of the stones are erect. The third is half prostrate. This reclining stone is nearly six feet long, and about two feet nine inches broad. Its upper surface is marked with numerous cup excavations, most of them round, a few oblong, and three sets of of them joined together by intermediate grooves or gutters.

Circle at Glendevin, Perthshire.—Two or three miles from the Cult stones, and within the policy of Glendevin, is an elevated round barrow now planted with trees. A circle of several large stones formerly stood around this barrow. On the face of one of them, which still remains, I found three or four cup excavations.

Circle at Moncrieff, Perthshire.—Behind Moncrieff House, a few miles south of Perth, is a small but complete megalithic circle. The stones are apparently secondary traps. In the centre was formerly a barrow, as the partial rise in the ground still indicates. Lately bones have been found in this position. A large block, which is said to have been removed from the centre of the circle about forty years ago, and now lies a few feet outside of it, has carved upon its surface a series of cups of different sizes, as represented in the sketch of it given in Plate IV. fig. 2.

Circle at Craighall, Perthshire.—Cup excavations exist also upon an erect stone standing at a megalithic circle behind Craighall House, Blairgowrie. The cups are five or six in number, and placed in a group near the foot of the stone.

Circle of Turin, Forfarshire.—On a large erect stone which once formed one of a fine circle of boulder stones at Nether Turin, my esteemed friend Dr Wyse discovered "several carefully excavated cavities upon its top in groups, without circles."

Circles of Graystone and Holywood, Dumfriesshire.—Dr Dixon of Dumfries has been so good as send me drawings of a stone at Graystone, the only one left of a circle that formerly existed there. Its face is marked by four small cups, which (he writes) "occur in a linear series, and are obviously artificial." The stone is a whin. In a subsequent section I will have occasion to allude to cup-marked stones in the great Circle at Holywood, in the same neighbourhood.

Circle of Calder Stones, Lancashire.—I have already (p. 7) referred to the circle standing near Liverpool, as remarkable by presenting specimens of all the types of cup and ring cuttings. The Calder circle is about six yards in diameter. It consists of five stones, which are still upright, and one that is fallen. The stones consist of slabs and blocks of red sandstone, all different in size and shape.

The fallen stone is small, and shows nothing on its exposed side; but possibly, if turned over, some markings might be discovered on its other surface.

Of the five standing stones, the largest of the set (No. I.) is a sandstone slab between 5 and 6 feet both in height and in breadth. On its outer surface—or the surface turned to the exterior of the circle—there is a flaw above from disintegration and fracture of the stone; but the remaining portion of the surface presents between thirty and forty cup depressions, varying from 2 to $3\frac{1}{2}$ inches in diameter; and at its lowest and left hand corner is a concentric circle about a foot in diameter, consisting of four enlarging rings, but apparently without any central depression. (See Plate VI. fig. 1.)

The inner surface (Plate V. fig. 2 of this Calder stone slab (No. I.), or that surface which is directed to the interior of the circle, has, near its centre, a cup cut upon it, with the remains of one surrounding ring. On the right side of this single-ringed cup are the faded remains of a concentric circle of three rings. To the left of it there is another three-ringed circle with a central depression, but the upper segments of the rings are broken off. Above it is a double-ringed cup, with this peculiarity, that the external ring is a volute leading from the central cup, and between the outer and inner ring is a fragmentary line of apparently another volute; a double-ringed volute being common on some Irish stones, as on those at the great archaic mausoleum at New Grange, but extremely rare in Great Britain. At the base of this stone, and towards the left, are two volutes respectively of two and three turns.

The next stone, No. II. in the series, is about six feet high, and somewhat quadrangular. On one of its sides, half-way up, is a single cup-cutting; on a second side, and near its base, a volute, consisting of five turns, and seven inches and a half in breadth; and on a third side (that pointing to the interior of the circle) a concentric circle of

three rings placed half-way or more up the stone. (See Plate VI. figs. 3 and 4.)

The stone, No. III. (Plate VI. fig. 5), placed next to it in the circle, is between three and four feet in height, thick, and somewhat quadrangular, but with its angles much rounded off. On its outermost side is a triple circle, produced by a spiral line starting from a central cup. The diameter of the outermost circle of the volute is nearly ten inches. Below this figure, and on the rounded edge between it and the next surface of the stone to the left, are the imperfect and faded remains of a larger quadruple circle. On one of the two remaining sides of this stone (Plate VI. fig. 6) is a double concentric circle, of an oval form, and measuring five inches by seven. The two rings are united together by a radial groove or gutter, the only instance of the radial groove which I observed on the Calder stones.

The fourth stone (No. IV.) is too much weathered and disintegrated on the sides to present any distinct sculpturings. But it is flat on the top, and there are nine or ten cups—one large and deep (being nearly five inches in diameter); and seven or eight of these cups are irregularly tied or connected together by linear channels or cuttings.

The fifth stone is too much disfigured by modern apocryphal sharp-edged cuttings and chisellings to deserve archæological notice.[1]

Circle of Salkeld, Long Meg, Cumberland.—By far the most magnificent megalithic circle in the north of England is that of Salkeld, formed of sixty-seven stones, some of them of very great size. Standing a few yards outside of the circle is a huge square-shaped monolith, formerly about eighteen feet in height, and known under the quaint name of "Long Meg." This monolith is—unlike the stones composing the circle—formed of sandstone. Three of its four sides are utterly destroyed by weathering. The fourth or east side is much more entire. Upon it Sir Gardner Wilkinson discovered a concentric circle of four rings, placed around a cupped centre. Lately I had an opportunity of

[1] The whole circle was enclosed some years ago by Mr Walker within an excellent iron railing, and the generous protection thus afforded will, it is hoped, save them for many years from farther mutilation. The day on which I visited these stones was damp and wet. On a brighter and more favourable occasion, perhaps, some additional markings might be seen.

examining this stone, and found, not one, but several series of concentric circles carved upon it, three or four of them low down on the stone, and much faded. The most entire—that discovered by Wilkinson—consists of four concentric circles, and is about ten inches in diameter; a straight radial groove or gutter runs from its third circle, outwards and upwards through the outermost ring, and onwards to the edge of the stone. This gutter does not apparently penetrate the two innermost circles. From the centre of this circle to the ground is a distance of four feet and a half. A foot lower down, and more to the middle of the stone, is a second series of four concentric rings, with a shallow cupped centre and a radial groove running from the innermost ring obliquely downwards and outwards. Still lower, and to the left, a third ring-cutting of four concentric circles, with its centre one foot nine inches high above the ground, has a sharpish radial line, most probably a natural fissure in the stone, passing from the cupped centre outwards and downwards to the edge of the monolith. A fourth ring-cutting of three concentric circles is placed immediately below this third or last group, and is connected to it by a groove or channel which runs from the centre of the concentric circles above to the edge of the group below. Alongside of it and to the right is another faded circle, apparently of three rings. Other more indistinct appearances of portions of circles are traceable higher up the stone than the circle first described, and between it and the second circle. My friend, the Rev. Mr Paterson of Melmerby, had a photograph of the stone kindly taken for me; and from this photograph the figure of Long Meg, in Plate VII., is taken. I found no traces of human art upon the surface of any of the sixty-seven stones of the Salkeld circle, except one, a large block placed on the opposite side of the circle from Long Meg, and which has the doubtful appearance of a faded circle upon its western face.

Circle at Maughanby.—Ring-cuttings have recently been found by my friend the Rev. James Simpson, vicar of Kirkby-Stephen, on two boulders, forming part of a circle of eleven stones placed around a short cist in a large cairn situated a few hundred yards to the east of Long Meg. I have seen them along with him. Two or three cairns or tumuli existed till lately in the same locality. One of them, of large size, stood on land belonging to the free school of the township of

Maughanby. After removing from its central mound or barrow a quantity of cobble stones mixed with earth, several large stones, one of them only erect, were found arranged in a circle about eighteen feet in diameter. Several of them were buried beneath the projecting edges of the barrow. In the centre of the circle was placed a semiovoid cist formed of rough stones, and measuring only three feet nine inches in length, two feet four inches in breadth, and ten inches in depth. The cist contained an urn, burnt bones, and charcoal. The only ornament upon the rude urn was a raised line near the top. No ornaments or weapons were detected, though careful search was made for them. On the inner and upper side of a large whin boulder, forming one of the eastern stones of the surrounding circle, is cut a spiral line which makes four turns or circles, the outermost having a diameter of ten inches. Alongside of it is a group of four concentric circles without any cup-centre or radial duct. The diameter of the innermost circle measures four inches, that of the outermost nineteen inches. The outermost edges of the volute and of the concentric circle touch and meet at one part. (For a drawing of this combined volute and series of concentric circles, see Plate V. fig. 1.) On the top of a second stone on the western side are two circles, both about eight inches in diameter. The lower has its centre cut out; the higher encloses within it the remains of a small central cup, with a ridge around it, as is shown in the sketch, Plate V. fig. 2.

Circle at Oatlands, Isle of Man.—Small megalithic circles, placed around a central kistvaen, like that previously described at Moncrieff, &c., seem to have constituted a not unfrequent form of sepulchre in ancient days in the Isle of Man. One of the best marked of these sepulchral mounds and circles that remains is situated at Oatlands, on the right side of the old road between Douglas and Castleton. In the centre of the mound is a stone cist, surrounded by a closely set circle of stones, seven of which are still in place. A second or outer circle is planted at the distance of some yards; and of this outer circle only four stones remain. On the outer surface of a stone belonging to the inner circle are some eighteen cup-markings, methodically arranged in five rows, as represented in Plate VIII. fig. 1. No artificial markings have been discovered on any of the other stones of this sepulchre.

Plate III.

STONE FROM CIRCLE AT ROTHIEMAY.

A. Ritchie, Lith. Edin.

PLATE IV.

STONES AT 1, THORAX. 2, MONCRIEFF. 3, DUNBAR,

A. Ritchie, Lith. Edin.

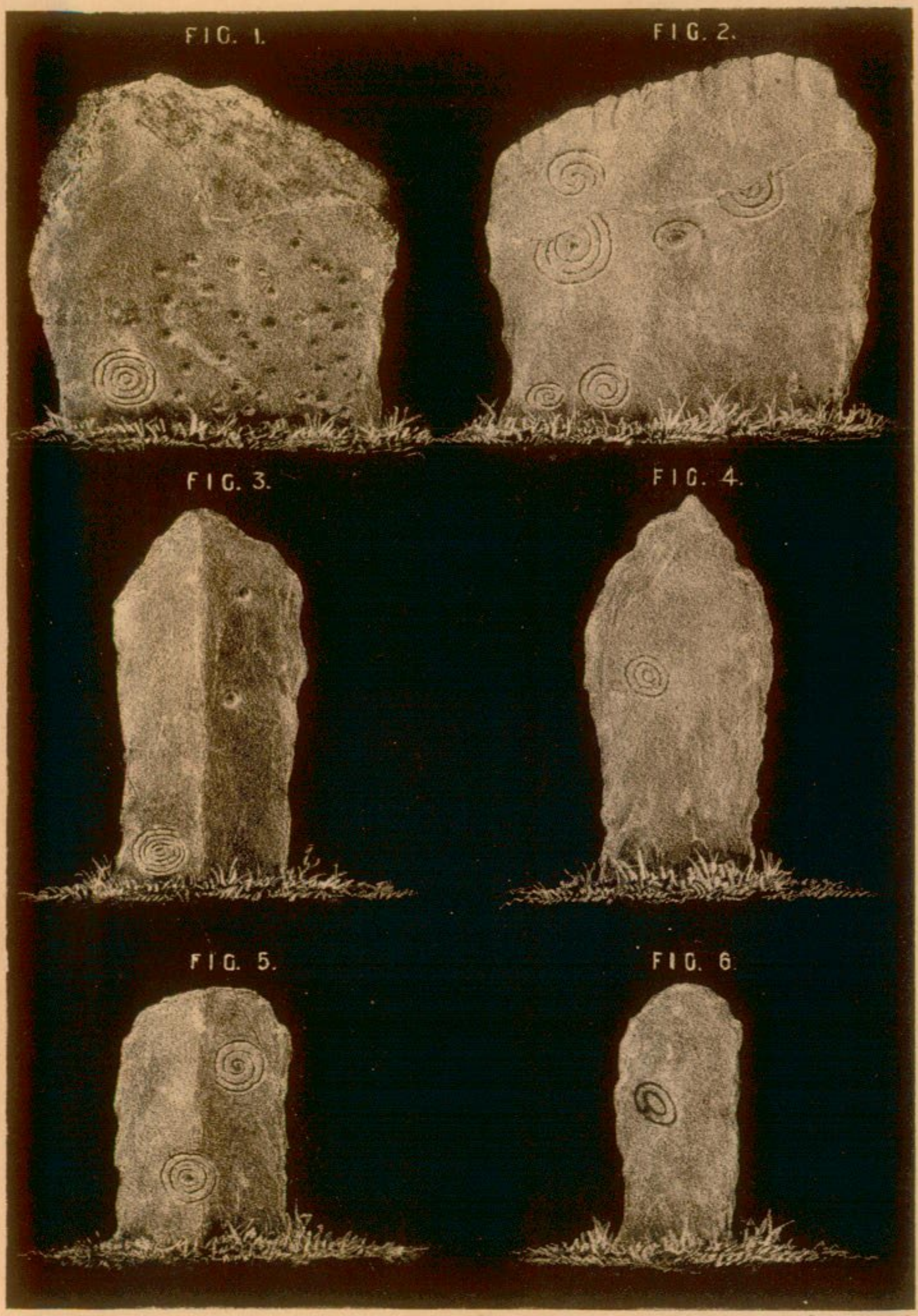
PLATE V.

STONES AT MAUGHANBY AND CARGILL.

A. Ritchie, Lith. Edin.

PLATE VI

THE CALDER STONES



A. Ritchie, Lith. Edin.

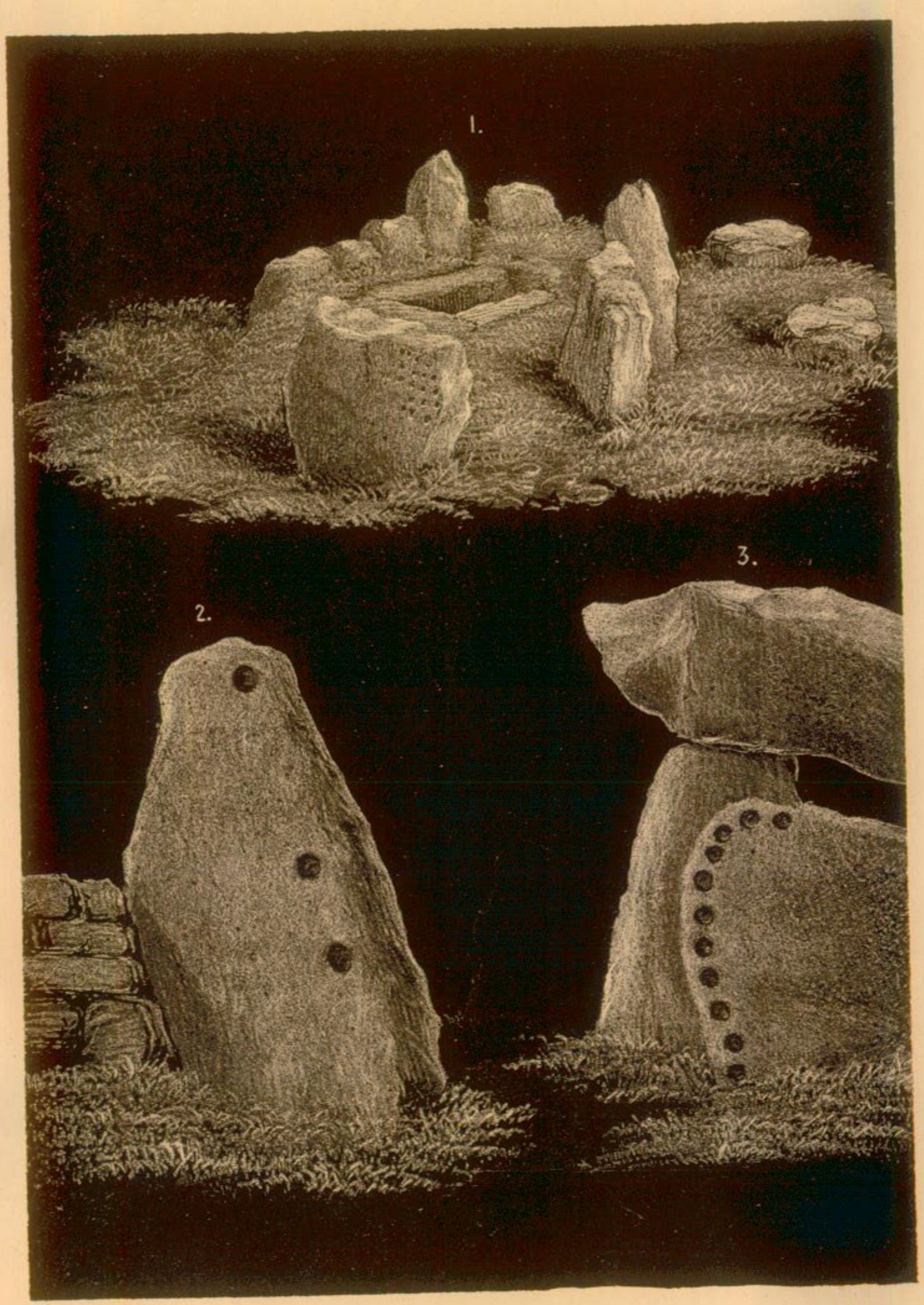
PLATE VII.

"LONG MEG," FROM SALKELD CIRCLE.

A. Ritchie, Lith. Edin.

Plate VIII.

OAKLAND CIRCLE, ISLE OF MAN, & CROMLECH, &c. IN GUERNSEY.



2. *ON STONES OF MEGALITHIC AVENUES.*

Leading to some megalithic circles are planted, in a few instances, long double rows of megalithic stones, generally spoken of as alleys or avenues. The most marked instance of this arrangement in England was that which formerly existed at Abury. At Callernish, in Lewis, we have a well-known example of a Scottish megalithic circle, with its avenue, still standing.

Formerly a long avenue of this kind seems to have existed near the circle or circles at Shap, in Westmoreland. Camden, in his "Britannia," writing towards the end of the sixteenth century, describes the avenue at Shap as consisting of "huge stones of a pyramidal form, some of them nine feet high and four thick, standing for nearly a mile at an equal distance." In Gough's edition of Camden's "Britannia," published in the latter part of the last century, it is stated that within the memory of man this avenue, or "double row of immense granites," extended for about a mile through the village of Shap, but has since been "removed to clear the ground."[1] A few of the stones, however, of this Shap avenue still exist. One of them is an oblong massive block, about nine feet high and five feet broad, now half fallen, and prostrated against a bank of earth in Aspers' field. On its flattish top I measured one cup six and a half inches broad, and one inch and a half deep; and a second cup nearly three inches in breadth, three-quarters of an inch deep, with a single circle nine inches in diameter, cut around it. These cups and ring-cuttings on this Shap stone are represented on Plate XVII. fig. 4, but the outline of the stone itself is imperfectly given in the lithograph.[2] A second of the Shap avenue blocks stands still erect about one hundred and fifty yards south of this marked monolith, and is known under the name of the "Goggleby Stone." It is a hard, round block, about ten feet in height and eighteen in circumference. On its north side, about two and a half feet above ground, there is carved out upon it a circular disc, five inches broad, excavated but flat in the centre—the remains, I believe, not of a cup, but of a worn-out ring-cutting. I could

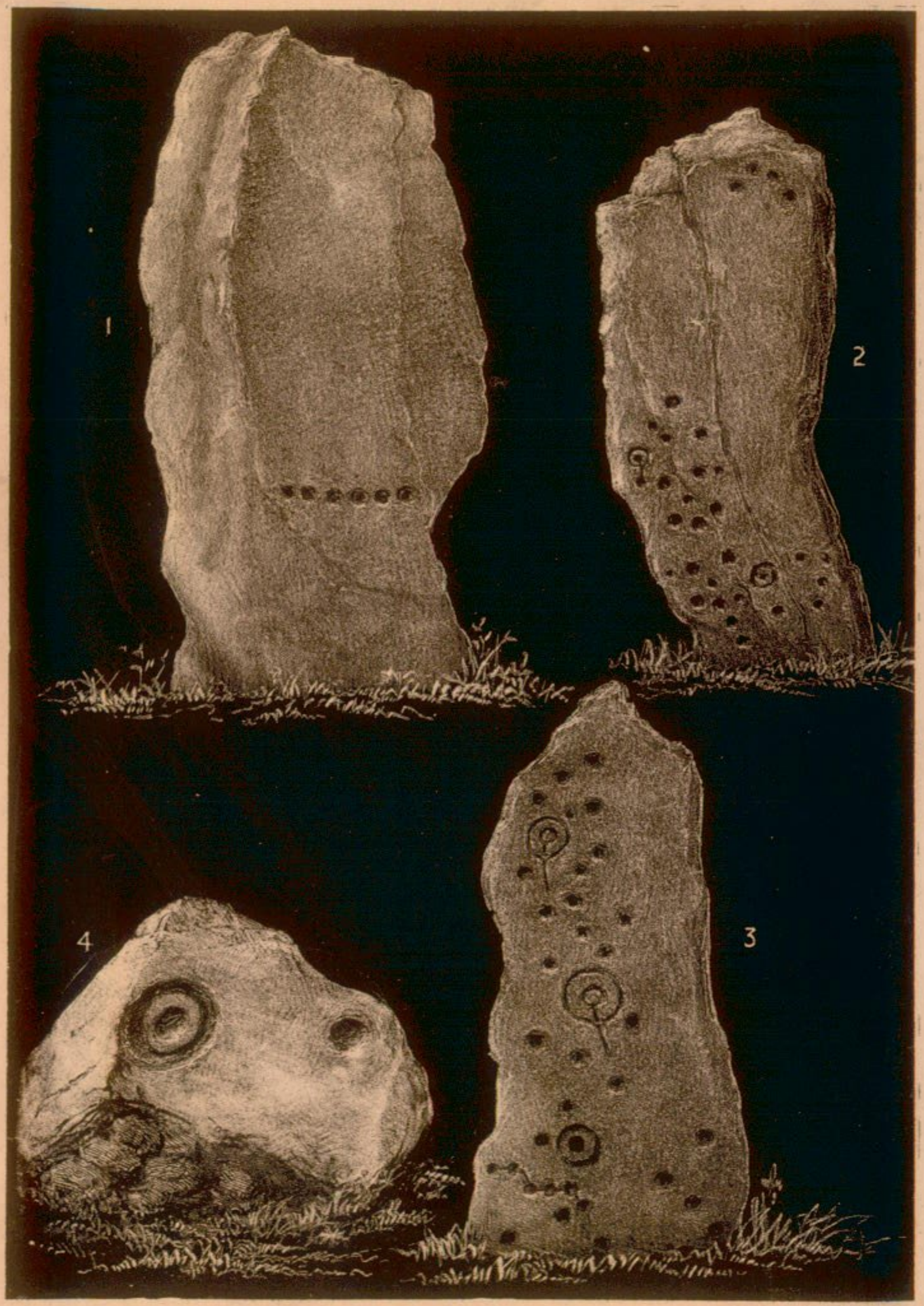
[1] See Gough's edition of Camden's Britannia, 1806, vol. iii. p. 414.

[2] This stone is noted as marked in Hodgson's work on Westmoreland, p. 139.

not trace any evidences of artificial tooling on any of the stones of the Shap circle placed by the side of the railway, about a mile south of the village, nor on the double circle at Gunnerkeld, two or three miles northward.

PLATE XVII.

OBELISKS AT COLINTON, LARGIE, BALLYMENACH AND SHAP.



A. Ritchie Lith. Edin.

3. *ON CROMLECHS.*

Cromlechs, or structures consisting of a large, heavy, flat capstone, resting upon two or more upright stone props, appear to have formerly existed in considerable numbers in various parts of the British Isles. Their numbers are now much reduced.[1] The stones composing these massive archaic monuments are usually and correctly described as presenting no evidence of having been tooled and cut by man. But there are some exceptions to this general law in the appearance of incised cups and lines upon them. For instance, a remarkable example of a sculptured cromlech-stone, popularly called the "Witch's Stone," exists at Ratho, within eight or ten miles of Edinburgh.

Ratho Cromlech.—On the farm of Bonnington, about a mile beyond the village of Ratho, Mid-Lothian, are the remains of this "partially ruined cromlech" (as it was first described by Professor Daniel Wilson), with the capstone partially displaced, as if it had slid backwards upon the oblique plane of the huge stones or stone which still supports it. Two or three large blocks lie in front of the present props. Its site occupies a most commanding view of the valley of the Almond, and of the country and hills beyond. The large capstone is a block of secondary basalt or whinstone, about twelve feet long, ten in breadth, and two in thickness. 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

[1] By far the largest and most imposing cromlech which I have seen in Scotland is the so-called "Auld Wives' Lift," at Baldernock, nine or ten miles north-west from Glasgow. It consists of three enormous sandstone blocks. Their surfaces are cut in many parts, but the carvings are all, I believe, quite modern and apocryphal. There are various smooth scalps and outcrops of rock near this cromlech, but I could trace no sculpturings upon any of them.

in diameter, and half an inch in depth; but most of them are smaller and shallower than this. Professor Wilson[1] speaks of these cups as "possibly indicating a design of splitting it [the stone] in two." But the shallowness and scooped form of the cups show that they would have been utterly incompetent to accomplish any such object in a whin block so massive, hard, and thick. The lateral cups offer strong additional evidence against any such idea. Besides, among the various concentric ring and cup carvings which I have seen at Old Bewick, in Northumberland, one huge squarish block of stone which is carved with concentric circles on its upper surface, has a row of cup-carvings cut along two of its sides exactly similar to those on this cromlech; and no one can possibly imagine that on the Northumberland rock the cup-cuttings were made with any object, but as a portion of the numerous rude ring and cup sculpturings which abound upon the upper surface and sides of this block.[2] (See this Bewick block and its cups and ring carvings represented in Plate XXV. figs. 1 and 2.)

Clynnog Fawr Cromlech (See Plate IX. fig. 2).—About ten or twelve miles from Caernarvon, and half a mile to the south-west of the village of Clynnog Fawr, stands near the sea a cromlech, consisting of a cap-

[1] See his "Prehistoric Annals of Scotland," vol. i. p. 95. On a very large prostrate block of Sarsen stone, lying on the left side of the avenue, and several yards to the exterior of the outermost circle of Stonehenge, there is a row of six small oblong, narrow, and deepish cavities. They are evidently artificial, and apparently made to cut off, as it were, a corner of the stone. But the cavities are too sharp in their edges and sides to be of any great age. One of the prostrate trilithons which, in falling, has broken into three pieces, has on one of its fractured surfaces a large and a small lateral cavity, with smoother surfaces already weathered out upon it.

[2] Since the account in the text was printed I have had an opportunity of re-examining this Ratho or Bonnington group of stones, and altogether doubt if they are the remains of a cromlech consisting of isolated and separate stones. They appear to be formed, on the contrary, of one large boulder of whin, which has partially split up. The upper layer or so-called "capstone" has cleft off by disintegration, and is slid backwards about a foot upon the earthfast masses which form its props. The largest of these props or under-masses is as broad at the "capstone," and after underlying all its eastern side, projects beyond it. The large fragments in front are fallen and separated portions of the same mass of rock. If either a heavy boulder or a mere outcrop of rock, it would resemble the sculptured projecting stones and rocks at Bewick, Rowtin Lynn, and elsewhere in Northumberland.

stone and four props. This cromlech is described, under date 1772, in the old Rhyl MSS., compiled by the Rev. J. Llwyd, of Caerwys, as having upon its capstone "near a hundred shallow cavities running in oblique but almost parallel lines along its surface, three much larger than the rest in a triangular position; it is supported by four strong bearers, and in length four cubits, in breadth three, its inclination towards the setting sun."[1] One large and two small carved or chambered cairns formerly stood near it. For the accompanying sketch (Plate IX. fig. 2) of this interesting cromlech as it exists at present, I am indebted to the great kindness of my friend, Dr Hughes of Llanwrst. The cup depressions are isolated and separated, except where some of the largest are united by a groove or gutter.

Lancresse Cromlech.—Among the numerous remains of cromlechs and sepulchral chambers which exist in the Channel Islands, none (according to Dr Lukis) show any carving or ornamental work upon them. "But," he adds, as exceptions, "in a small cromlech at Lancresse, Guernsey, there are on one of the props about fourteen circular hollows, as if they had been drilled with the intention of breaking the prop in the direction of the line of hollows. These depressions have been evidently worn with a rude muller to the depth of about one inch, and three or four inches in diameter. Only in one instance have I observed," he adds, "depressions similarly made; it is upon a menhir-like stone appertaining to the Abbacy of St Michel du Valle, situated in the bourg or village of the Forest, Guernsey."[2] For sketches of this cupped cromlech prop, and monolith, I am beholden to the courtesy of Mr Uniacke. (See Plate X. fig. 2.)

Cromlech and Circle at Holywood, Dumfriesshire.—A few miles from Dumfries is a megalithic circle nearly eighty feet in diameter, and eleven of its massive compact stones are still left. The largest, about ten feet long and seven broad, is prostrated forward, and has upon its face, its top, and one of its sides, about thirty smooth and rounded cup excavations. At one side of the circle, and somewhat within the circuit of it, are three or four stones, which appear to me to be the prostrated remains

[1] See the Archæologia Cambrensis for January 1849, p. 1.

[2] Journal of the British Archæological Association for 1858, vol. iii. p. 276.

of a cromlech and its supports. The capstone has, running across its back, four oblique rows of cup-like excavations, some of them round and others irregularly elongated in form. One of the fallen props is similarly marked. It would be important to note accurately if the various strings of cups correspond in any degree with natural lines in these stones, and if, therefore, they may possibly have a natural origin; or if they are arranged quite independently of the mineralogical peculiarities of the blocks, and are hence, as they seem to be, the results of artificial tooling.

Rathkenny, Meath.—The cromlech markings which I have hitherto spoken of consist only of cups or excavations. An instance of a cromlech carved both with cups and circles has lately been discovered at Rathkenny, near Slane, in Ireland, by Mr Conwell of Trim; and I hope he will soon himself publish a full account of it. In the meantime, he has kindly favoured me with a sketch of the upper surface of the capstone. From this sketch the cups or depressions, whether natural or artificial, seem to be above a hundred in number, and are intermixed with straight lines or scores running in diverse directions. The capstone is about ten feet long, and six feet broad. On its under surface are "seven separate circles; and seven other circles of varying size are cut on the upright stone or prop upon which it leans, at an angle of 32°."

In Great Britain, perhaps the most celebrated cromlech is that known as Kits Coty House, near Maidstone, in Kent. On visiting it some time ago when professionally in that neighbourhood, I found the huge capstone completely perforated or "holed" on one of its projecting sides, like some of the "holed" cromlech stones in Yorkshire[1] and Cornwall, in France, Algeria, Circassia, and India.[2]

[1] See Rooke in the Archæologia, vol. viii. p. 209.

[2] See Mr Brash on "Holed Stones" in the "Gentleman's Magazine" for December 1864, where a number of instances are collected. As examples of holed cromlech-stones additional to those mentioned by Mr Brash, I may refer to the model in the British Museum of one that formerly stood at Trevethy in Cornwall (see Norden's "Cornwall"); and to the holed prop of the cromlech at Trie in France, described and figured by Carro ("Voyage chez les Celts"). Bertrand, in a late essay upon the "Monuments Primitifs de la Gaule" incidentally states, that in perhaps a dozen of cromlechs ("*dolmens*") in France there are "holes" ("*trous*") "in the supports." The capstone of a cromlech at Oulad Mohammed in the African province of Constantin

This capstone and its three supports are further scooped out in various parts by cup-like hollows, for the most part shallow, but some of them passing deeply into the stone. The outer or exposed face of the eastmost of the three props shows about fifty such round, smoothed excavations, two inches and upwards in diameter. Their irregular distribution, and the occasional obliquity and depth of their orifices, seemed to me to prove that they were the work of nature rather than of art. They are comparatively wanting, however, on the exposed edges of the blocks; and they exist, in some instances, on the protected interior aspects of the stones of this cromlech. One on the inferior and protected surface of the capstone penetrates upwards some eight or ten inches into its substance. The stones themselves are extremely hard blocks of limestone grit. It would be interesting to observe whether that rock *in situ*, where it had been long exposed to the action of the elements, weathered into any similar forms. They might, it must further be remembered, have been weathered blocks even before being used in the construction of the cromlech; and possibly they, and some similar stones, are originally hardened lapidary nuclei, left as relics and waifs out of geological superficial strata, the softer materials of which have all been long ago washed away by the action of water and time.

In a paper by Dr Lukis, in the "Archæologia,"[1] on Ancient Celtic Lapidary Remains, the author incidentally refers to traces of human chiselling upon cromlechs in the district of Dyffryn, North Wales—a region rich in antiquities. The reference is specially, I believe, to a cromlech called Arthur's Quoit, near Llanddwywe, Merionethshire. There is a second and larger cromlech within a few feet of it, and numerous cairns in the immediate neighbourhood. One of the supports of Arthur's Quoit has

was found "holed" by M. Feraud ("Revue Archæologique" for March 1865). Lately Captain Meadows Taylor has shown that a form of cromlech or external kistvaen, "holed" in one of its props or sides, is very common in the Dekkan of India. In the district of Bellary alone he alludes to 2129 cromlechs and kistvaens, 583 of which have "slabs on four sides, roof slab, and one side perforated by a circular hole;" and 527 as presenting no top or covering slab, but composed of four sides, and one of these sides "pierced with a circular aperture." (Trans. of R. Irish Academy, vol. xxiv.)

[1] See Archæologia, vol. xxxv. p. 250.

the heavy capstone resting merely on its edge; and the remainder of the summit of this prop-stone is flat, but weathered and broken off at two sides. The free and uncovered flat top of the support presents a surface of about eighteen by twelve inches, and it has eight or nine very slightly curved, parallel, deepish lines run obliquely yet fully across it. These lines, if artificial, are quite different in form from any described in this essay. The sepulchral character of these two cromlechs—and consequently of cromlechs in general—is strongly shown by their interiors still containing short stone cists about four feet long and three feet high.

Plate VIII.

OAKLAND CIRCLE, ISLE OF MAN, & CROMLECH, &c. IN GUERNSEY.

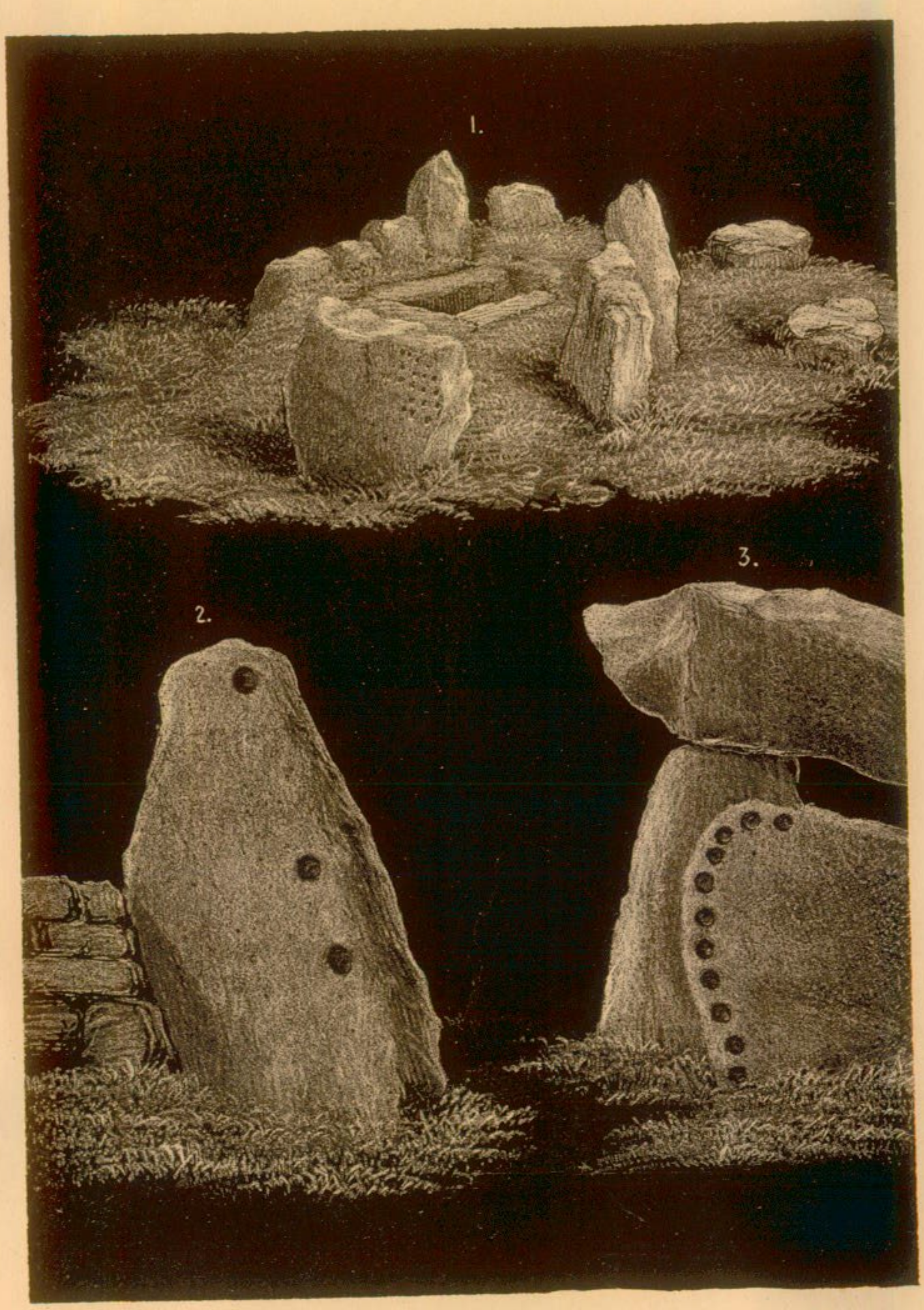
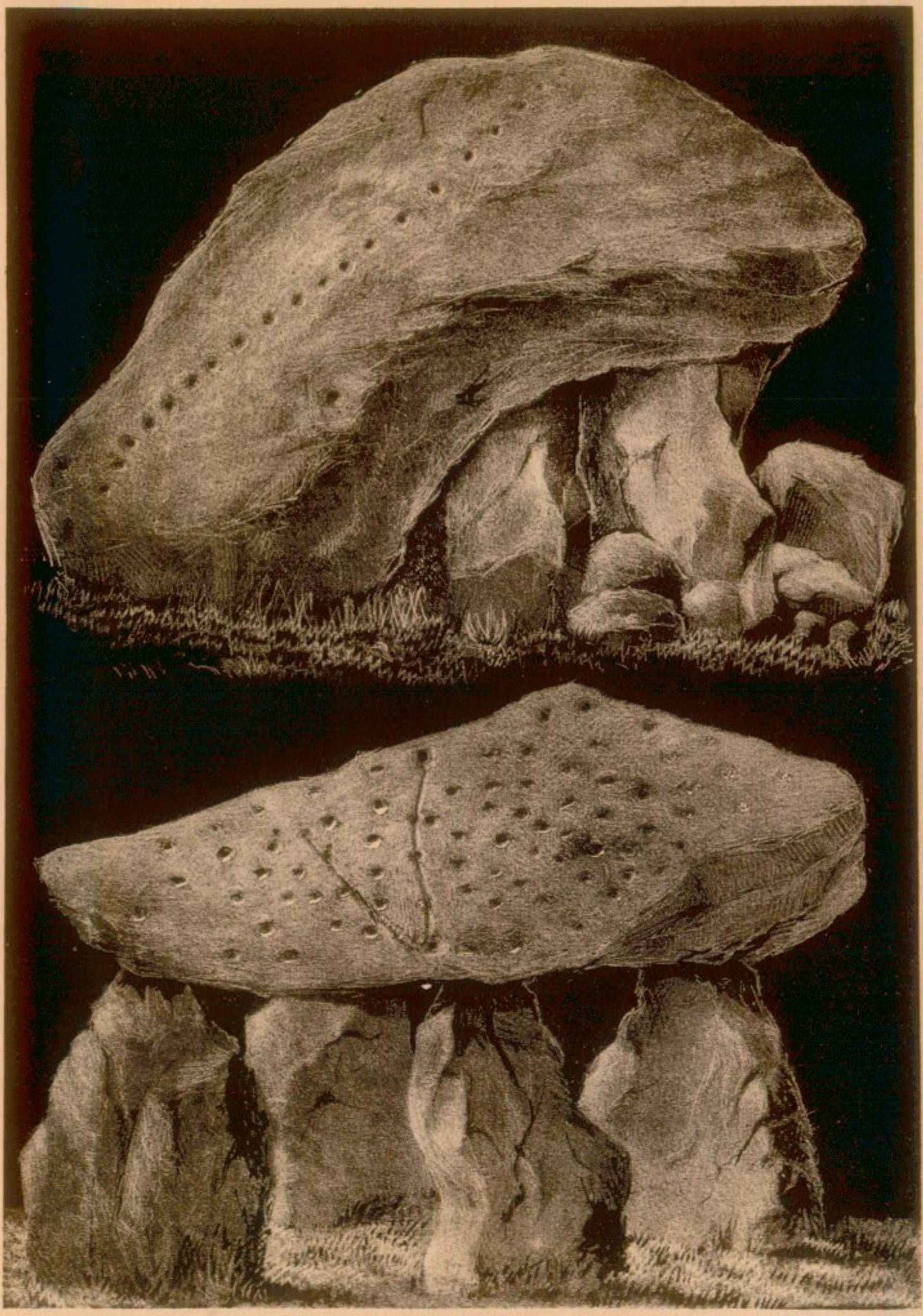


PLATE IX.

CROMLECHS AT RATHO AND CLYNNOG-FAWR.



A. Ritchie, Lith. Edin.

4. *ON THE STONES OF CHAMBERED TUMULI.*

Many of the chambered tumuli and cairns which the ravages of time have spared us, have been diligently ransacked in search of their osseous and other contents; but the stones composing them have in very few instances been examined with the view of tracing any human tooling or sculpturing upon their surfaces. Perhaps a more extended search in this direction will yet be followed by success, as the following examples tend to show:—

Clava, Inverness-shire.—One of the most remarkable archaic cemeteries or cities of the dead in Scotland, is well known to be that of Clava, near Culloden. It is now much destroyed and dilapidated. Several cairns, however, and chambered sepulchres, still remain more or less entire, and have been described and figured by Professor Innes in the Proceedings of this Society (vol. iii. p. 47, Plates VI. and VII.) My friend, Dr Grigor of Nairn, has examined the chambered tumuli for me. He has found cup-markings on some of the stones in two or three of the Clava sepulchral chambers. Thus in Plate X. are represented, at figs. 1 and 2, the circles of supporting stones forming the walls of two of these chambers, and the entrances leading to them. The two stones painted dark in these sketches, both present, on their interior surfaces, cup excavations, as represented in figs. 3 and 4 of the same Plate.

As an instance of both cups and concentric circles found on the stones of chambered sepulchres in England, let me cite the observations

of Mr Tissiman of Scarborough, published in the "Archæologia" for 1851.

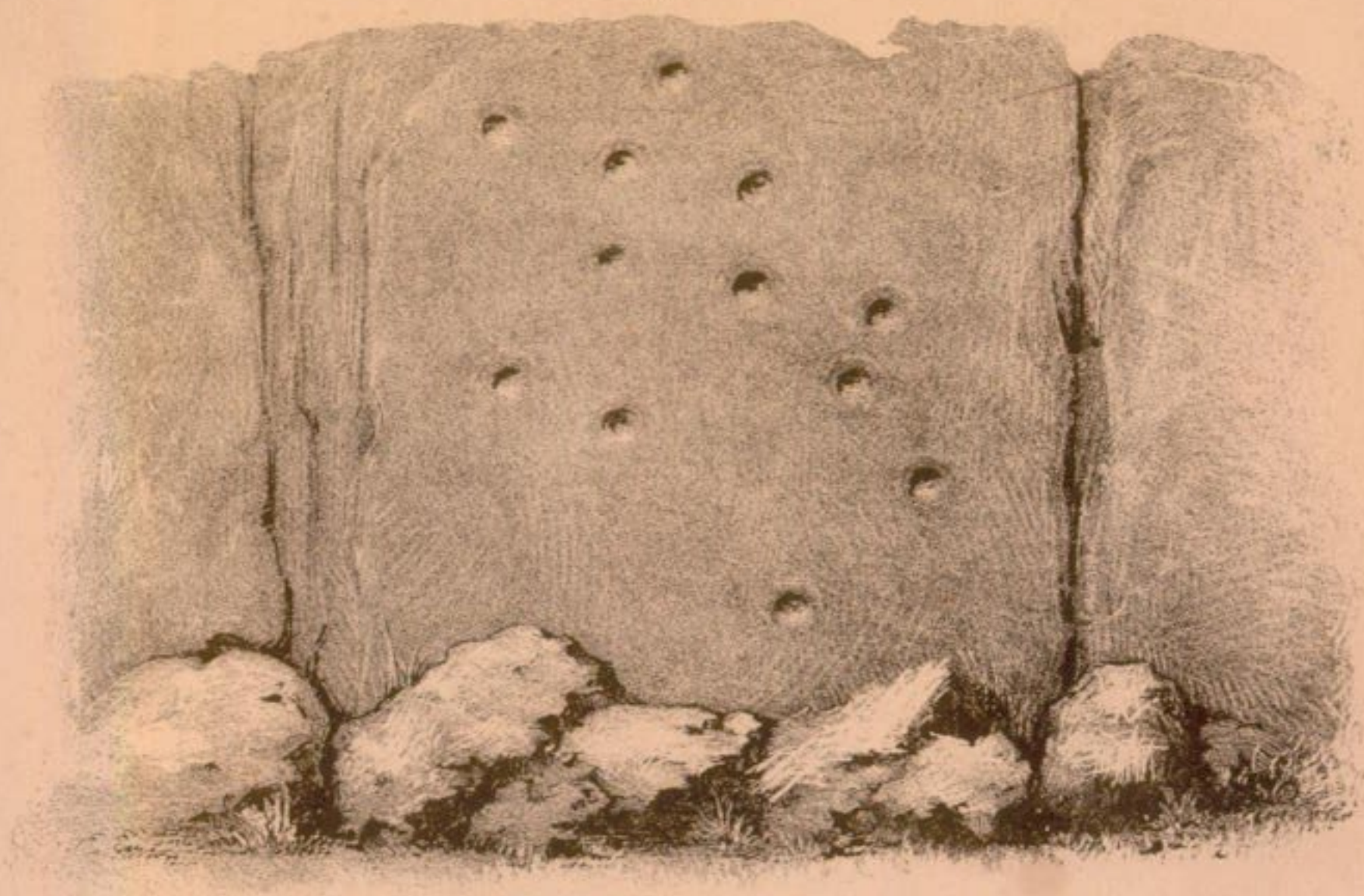
Cloughton Moor, Yorkshire.—On Cloughton Moor, near Scarborough, are the remains of a so-called "Druidical circle" and some sepulchral cairns. Within the area of the megalithic circle are the remains apparently of one side of a vault or chamber, "near which was found" a stone with cup excavations or "pecked holes." The figure of this "pecked" stone is copied into Plate XI. fig. 4. "In very numerous openings of tumuli," observes Mr Tissiman, "I have often found stones with pecked holes, varying in number of holes and sizes, and in most instances immediately surrounding the interments." At Ravenhill he met with a vault or cist, with four concentric circles incised on one of its end stones, as shown in Plate XI. fig. 3; and he represents two other slabs, "part of the sepulchral chamber of a cairn," covered over with cups and grooved concentric circles.[1] Copies of these figures are given in Plate XI. figs. 1 and 2; and an urn found in the tumulus is represented in fig. 5 of the same plate. The Museum at Scarborough contains, I am told, other cupped stones from the same locality.

I shall have to refer in the sequel to the existence of cups and circles, as well as of far more elaborate carvings upon the interior of some of the chambered tumuli of Ireland and Brittany.

Plate X.

FROM CHAMBERED TUMULI AT CLAVA.

3



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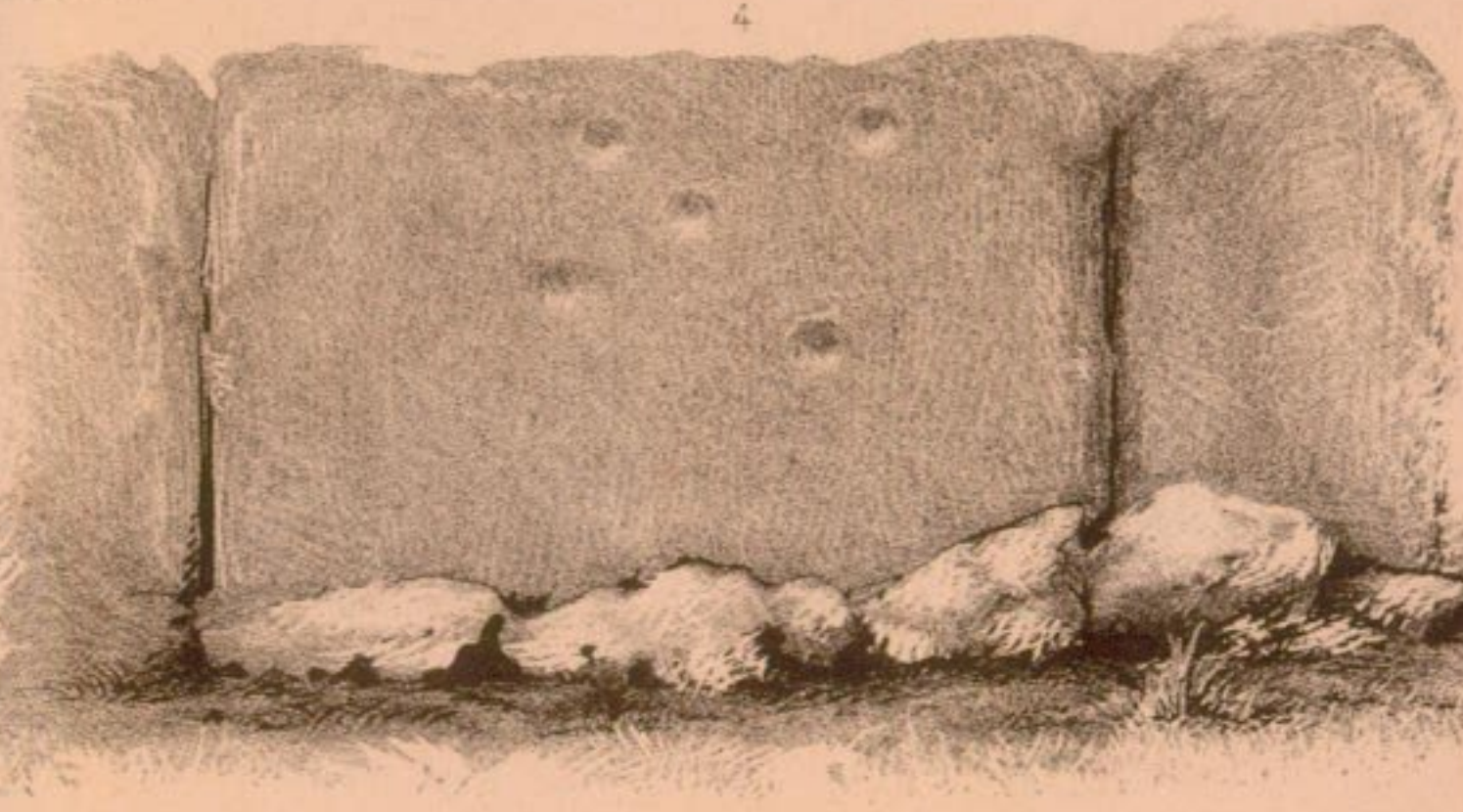

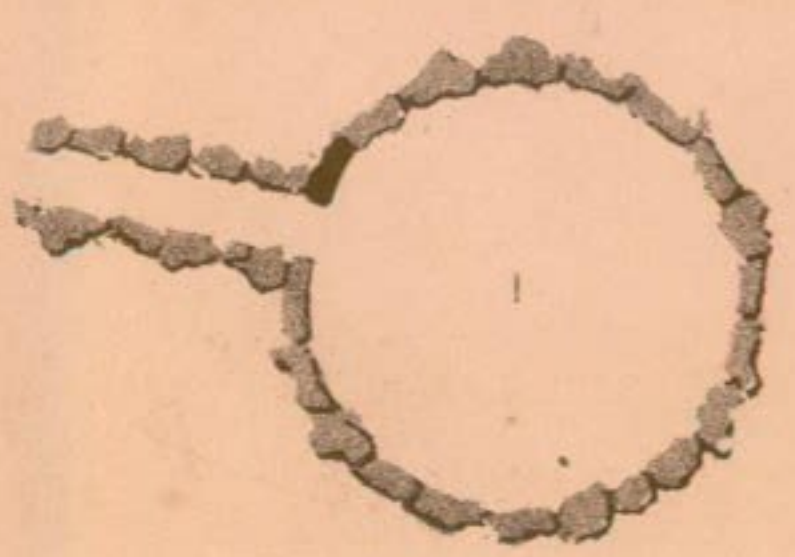

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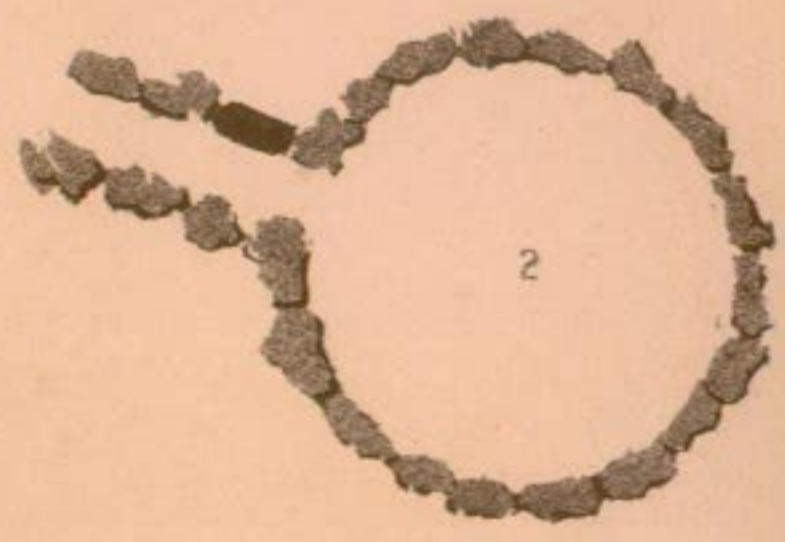

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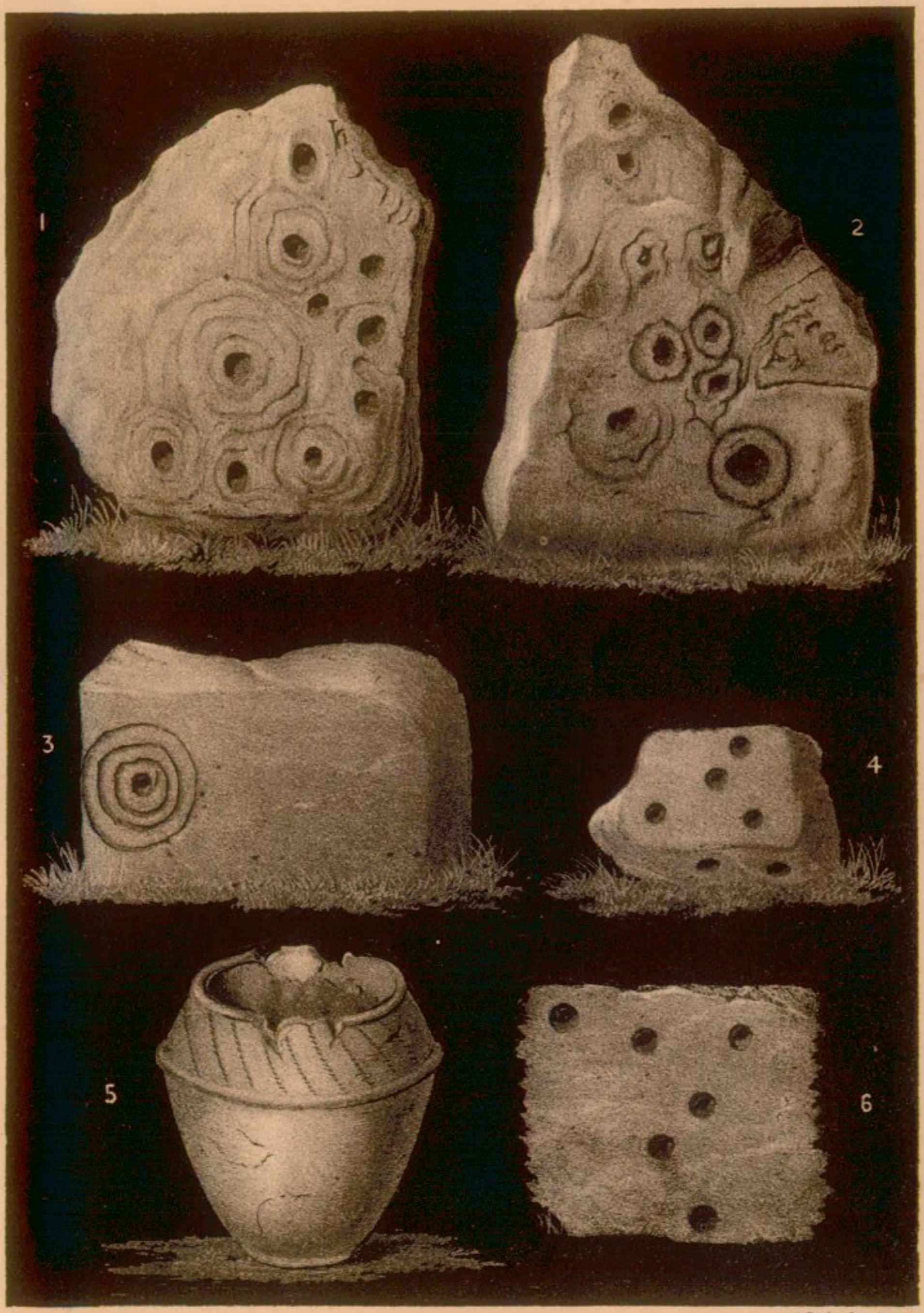
A. Ritchie, Lith. Edin.

Plate XI.

FROM YORKSHIRE AND BRITTANY TUMULI.



A. Ritchie, Lith. Edin.

The first instance in which the concentric ring-cuttings seem to have been made a subject of special observation, referred to specimens of these carvings upon the stones of an ancient kistvaen or stone coffin. This stone coffin was dug in a gravel pit upon the classic land of

Coilsfield, Ayrshire.—In 1785, Colonel Montgomery, afterwards ninth Earl of Eglinton, sent a drawing of the cover of the kistvaen and enclosed urn to the Royal Society of Edinburgh. The cist cover was about five feet in length and two and a half in breadth. Internally, it

[1] See the Archæologia, vol. xxiv. p. 446. Mr Greenwell informs me that in a tumulus at Way Hag, near Hackness, a few miles from Cloughton Moor, slabs were found, showing several groups upon them of concentric circles, provided with the usual cup centres and radial ducts.

had cut upon it a series of concentric circles, consisting of six rings placed around a central cup, the rings traversed by a straight radial groove. On the drawing are marks of other cups and rings, or rather volutes, and a number of angular lines. Unfortunately, a variety of inquiries which I have made after this interesting stone, shows that it has been lost now for many years, and that it is therefore impossible to correct the rough original drawing of it, copied into Plate XIII. fig. 1. This sculptured stone covered an urn of the pattern given in the same Plate, fig. 2.[1]

Craigie Hall, Edinburgh.—About forty years ago, when a new road was cut through Craigie Wood, eight miles from Edinburgh, the end of a stone cist was left exposed. It lay about three feet below the surface of the soil, and long remained there projecting out of the side of the cut, and overhanging the road by eight or ten feet, as seen represented in a sketch made several years ago for me by my friend Mr Drummond, and copied into Plate XV. The breadth of the cist was thirty inches, and its depth eighteen inches. Latterly its length was under three feet, but a part had been broken off. From the removal and disintegration of the earth around this sandstone kistvaen, it threatened to fall; and the proprietor of the ground, Mr Hope Vere, has latterly removed the stones, and carefully preserves them. The cist consisted of two lateral stones and apparently two end stones, with a covering slab which is about three feet broad, and now only about four feet long. The interior of this slab is carved with nine or ten groups of concentric circles; and formerly one or two more sets existed in portions of the stone that were broken off. Of these circles some have, and others have not, a central cup, as represented in Plate XV. fig. 2. The diameter of the largest circle is about ten inches; the smaller do not exceed four or five inches. As usual, the circles are carved on the rough unprepared surface of the stone, and follow into its sinuosities and depressions. This sepulchral cist seems to have contained an "urn;" if we interpret aright the irreverent observation of one of the workmen still alive, who states that, on opening it, they found within it "an auld can."

Caerlowrie, Edinburghshire.—On the low ground, about a mile south-west of the kistvaen on Craigie Hill, my friend, Mr Hutchison, has

[1] See Dr Wilson's Prehistoric Annals, vol. i. p. 480.

lately found within his policy at Caerlowrie a short cist, with the interior of the covering stone marked with three series at least of concentric circles. The grave was so near the surface, that the carved stone had been much broken by the plough. The cist was composed of rude, unmarked freestone slabs; but without a stone bottom. It contained a stratum of unctuous, black, fatty earth, with traces of decomposed softened bones, and one or two human teeth. The widest diameters of the sets of rings cut on the inside of the lid is about five inches, and each set is composed of five concentric circles.

Bakerhill, Ross-shire.—At Bakerhill, on the estate of Brahan, and about two miles west of Dingwall, during the trenching of some uncultivated land, a cist-like structure was met with, consisting of slabs set on edge, and covered by an overlaying schist stone, four feet in length, two and a half feet in breadth, and six to eight inches in thickness. One of its sides is marked by above thirty isolated cups, and by several sets conjoined together in groups of two or more by connecting grooves or gutters. Six or seven of the cups are surrounded by a circle, usually imperfect or wanting at one point or side. See Plate XIV. fig. 1. This stone was discovered on the roadside, some time ago, by Mr Joass of Dingwall, and its history traced by him. I am indebted to his courtesy for these particulars, and for a sketch of the sculptures.

Carnban, Argyleshire.—Carnban, or the White Cairn, is a village and station on the line of the Crinan Canal. It derives its name from a large cairn which formerly stood in the field opposite to the present Inn, but the stones of which have now been almost entirely removed. Placed on the rock, and at the base of the cairn, was found, and still exists, a stone cist. Dr Hunter of Lochgilphead, and Mr Richardson Smith of Auchnaba, opened and cleared it some years ago, and found a schist slab,—slid in as an upright loose panel,—and resting against the stone forming the western end of the grave. This moveable panel is twenty-five inches long, eighteen broad, and two and a half in thickness. It has cut on one surface a series of five concentric lines, and the commencement of a sixth, not of a round, but of a lozenge or quadrangular form (see a sketch of the carving in Plate XIII. fig. 4). The sculpture is seventeen inches long by fifteen broad. It is not placed centrally on the slab; and portions of its outermost parts have been broken off,

apparently to reduce and fit the slab to the size of the cist. There is an appearance of a central depression, and of a straight bisecting line passing through the middle of the lozenged lines. This panel was presented by Mr Smith to the Edinburgh Antiquarian Museum. When discovered, its cut surface was directed to the interior of the grave. I had, some time ago, an opportunity of re-opening the cist with Dr Hunter. We could find no markings on any of the other stones composing it. Its bottom was formed by the solid rock, and its sides, ends, and lid, each of separate slabs. The cist is short, being only four feet in length. It is one foot ten inches wide, and about two feet two inches in depth. The covering stone or lid is a large heavy slab five feet and a half in length, and two and a half feet in breadth. When the cist was first opened there was found within it yellow sand with some black charcoal and several burnt bones lying upon its bottom. Some flint fragments have, I believe, been discovered in a later search. Stone hatchets, and forty or fifty large chipped flints, were found some time ago in the moss of the Hill of Craighlas, immediately opposite to Carnban.

High Auchinlary, Wigtonshire.—On the farm of High Auchinlary, in the parish of Anwoth, are six standing stones, apparently the remains of a "Druidical circle." Some years ago, on this farm, there was turned up by the plough, when trenching a piece of waste land, a slab presenting on one side a variety of concentric linear cuttings, as represented in Plate XIII. fig. 3. One of these sculptures is a grooved concentric circle of six rings. Other cuttings are of the fourth type in one series, and one presents a series of circular dots or cups between two of its rings. Mr Stuart, who has figured this slab in his great work on the "Sculptured Stones of Scotland," compares it to the cist-cover at Coilsfield, &c. Unfortunately the exact relations of this Auchinlary slab to any cist or other stones do not seem to have been ascertained at the time of its discovery.

Forfarshire.—A slab marked with several concentric and single circles and deep cups, united by radial lines, one of which assumes an unusual zigzag form, was some years ago found at Walltown, Forfarshire,[1] and a drawing of it has been obligingly made for me by an excellent antiquary,

[1] Attached to a pencil sketch of this Walltown slab shown me by Mr Stuart is a note written by Dr Hibbert, about 1827, as follows :—"Part of stone at Walltown, near Forfar; the other part said to remain in the ground at St Peter's Well."

the Rev. Mr Shaw of Forfar. It belongs to this same category of doubtful cist-stones or covers. It was found in a locality where numerous sepulchral remains exist. See a figure of it in Plate XIII. fig. 5.

In England stone urn covers have been repeatedly found carved with concentric rings, and especially in

Northumberland.—Several examples have been discovered in Northumberland principally by the Rev. Mr Greenwell, of the cutting of cups and concentric circles upon stones covering cists or the mouths of sepulchral urns and pits. Instances of this kind have in particular been found at Black Heddon, and Ford West Field. One of the urn slabs in this last locality was cut on its under surface with three incomplete concentric rings on its inferior surface (see Plate XV. fig. 3); another showed only cup excavations. Six or eight similar urn covers were quite unmarked. All of them, both the marked and unmarked, covered small sepulchral pits dug in the soil. Two of those discovered by Mr Bigg at Black Heddon were apparently the coverings of urns placed in tumuli. In all cases, I believe, in which these sculptured cist or urn covers have been found in Northumberland, the accompanying bones and urns indicate cremation.

Dorsetshire.—In his antiquarian researches in this county, Mr Warne opened, at Camedown on the Ridgeway, a tumulus of rather an unusual form. At its base, when reached, were found the remains of six unburnt human skeletons, placed without order or regularity, and some few bones of the ox. Above them, and in the centre of the tumulus, was built up a cairn or heap of flints around a coarse and broken urn, which contained calcined bones. This mass of flints was surrounded and coveredby a horizontal rough slab. Above and upon this slab was built another large heap of flints, six or seven feet in thickness. This second heap was capped with another rough slab, lying two or three feet below the surface of the tumulus. Both these flat unhewn covering slabs had a group of concentric circles cut upon them. Fig. 1 in Plate XII. represents a section of the tumulus, and fig. 2 gives a sketch of the circles on one of the stones.[1]

[1] For a copy of these sketches I am indebted to the courtesy of Mr Warne. They form part of a forthcoming volume by him on the Antiquities of Dorsetshire. Some account of this tumulus is published in the Journal of the Archæological Association, vol. iii. p. 51.

Plate XII.

FROM DORSETSHIRE, NORTHUMBERLAND AND FORFARSHIRE.

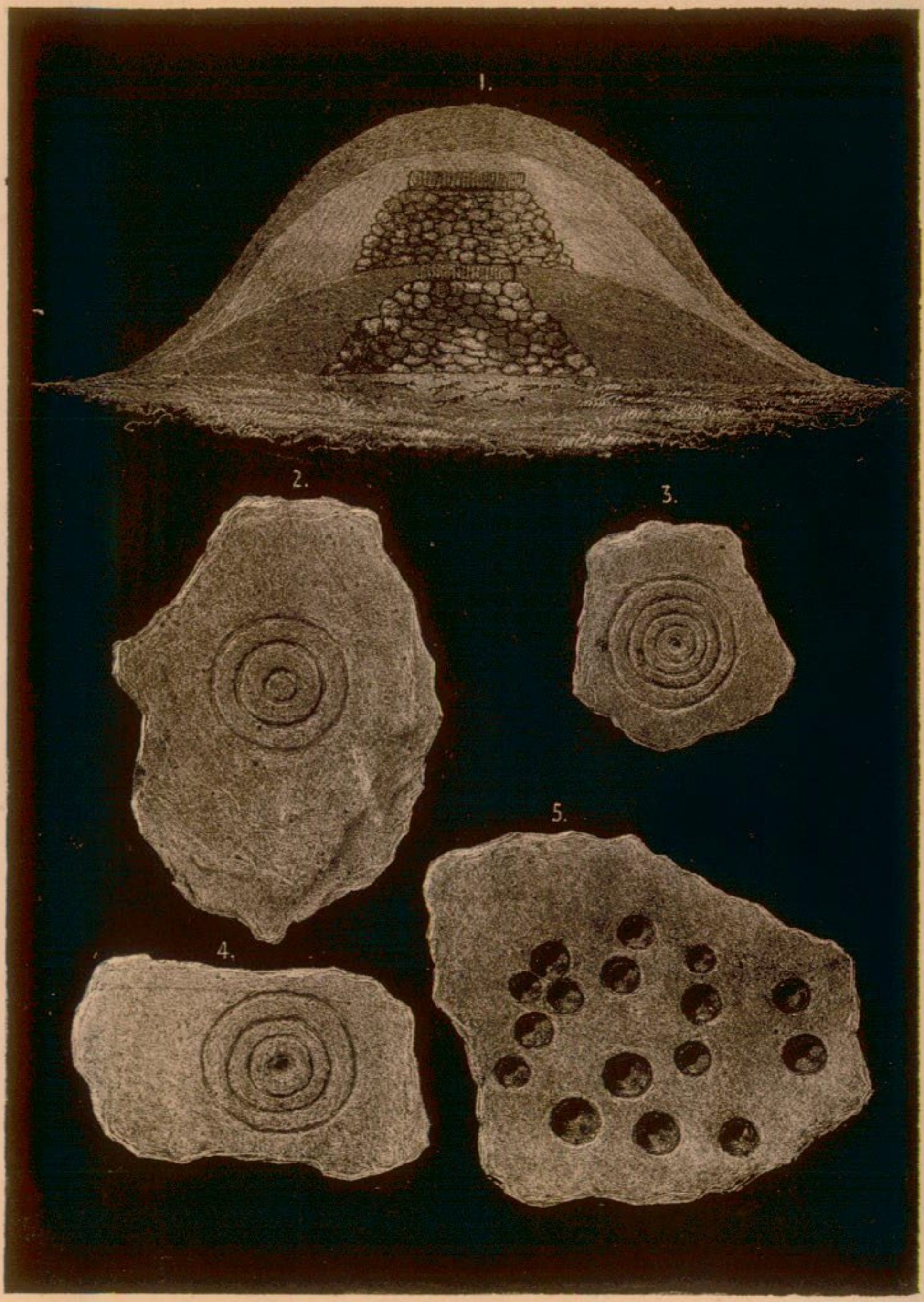
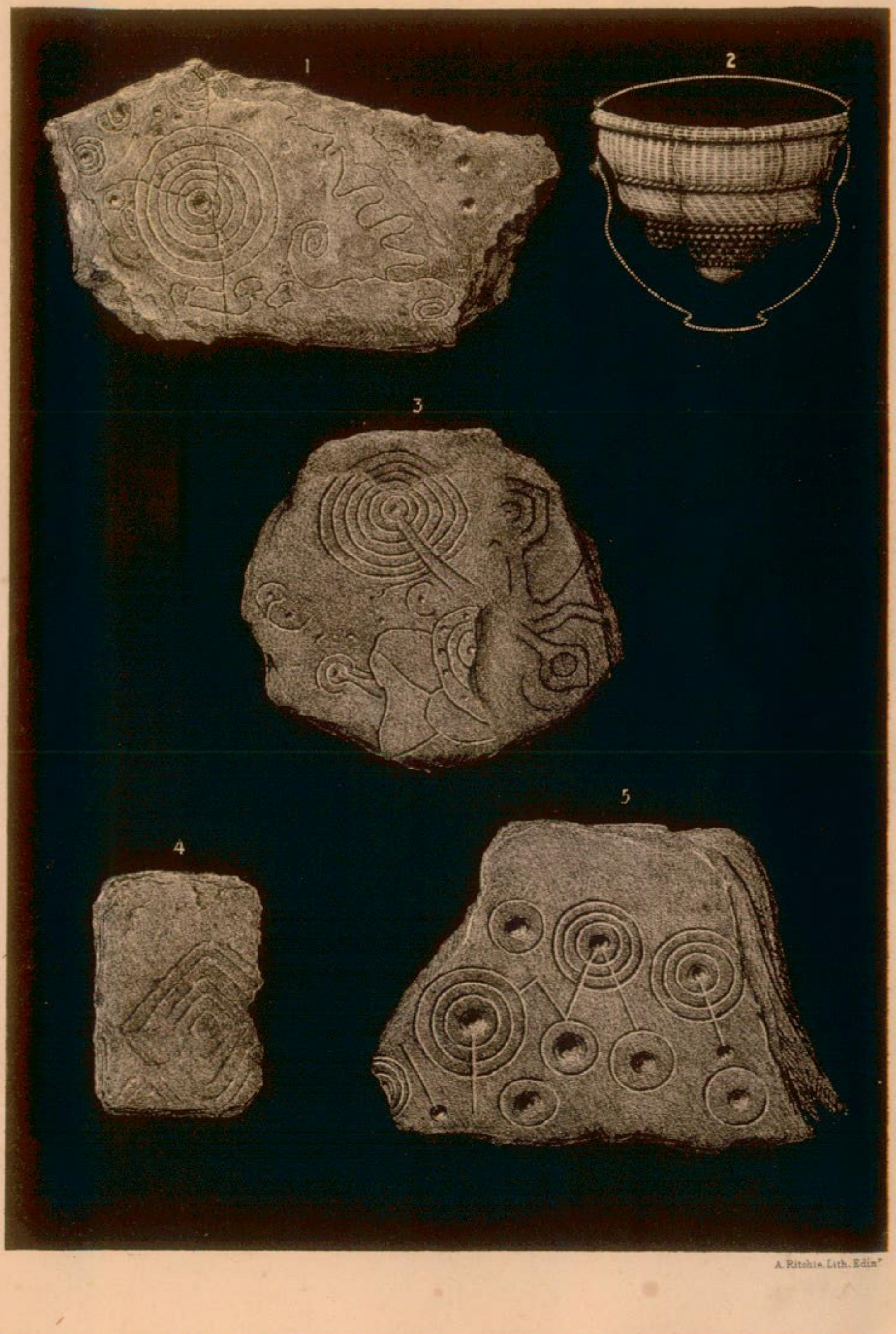


Plate XIII.

CISTS AT COULSFIELD, ACHINLARY, CARNBAN, AND WALLTOWN.



A. Ritchie, Lith. Edin.

PLATE XIV.

STONES FROM ROSSHIRE AND FORFARSHIRE.

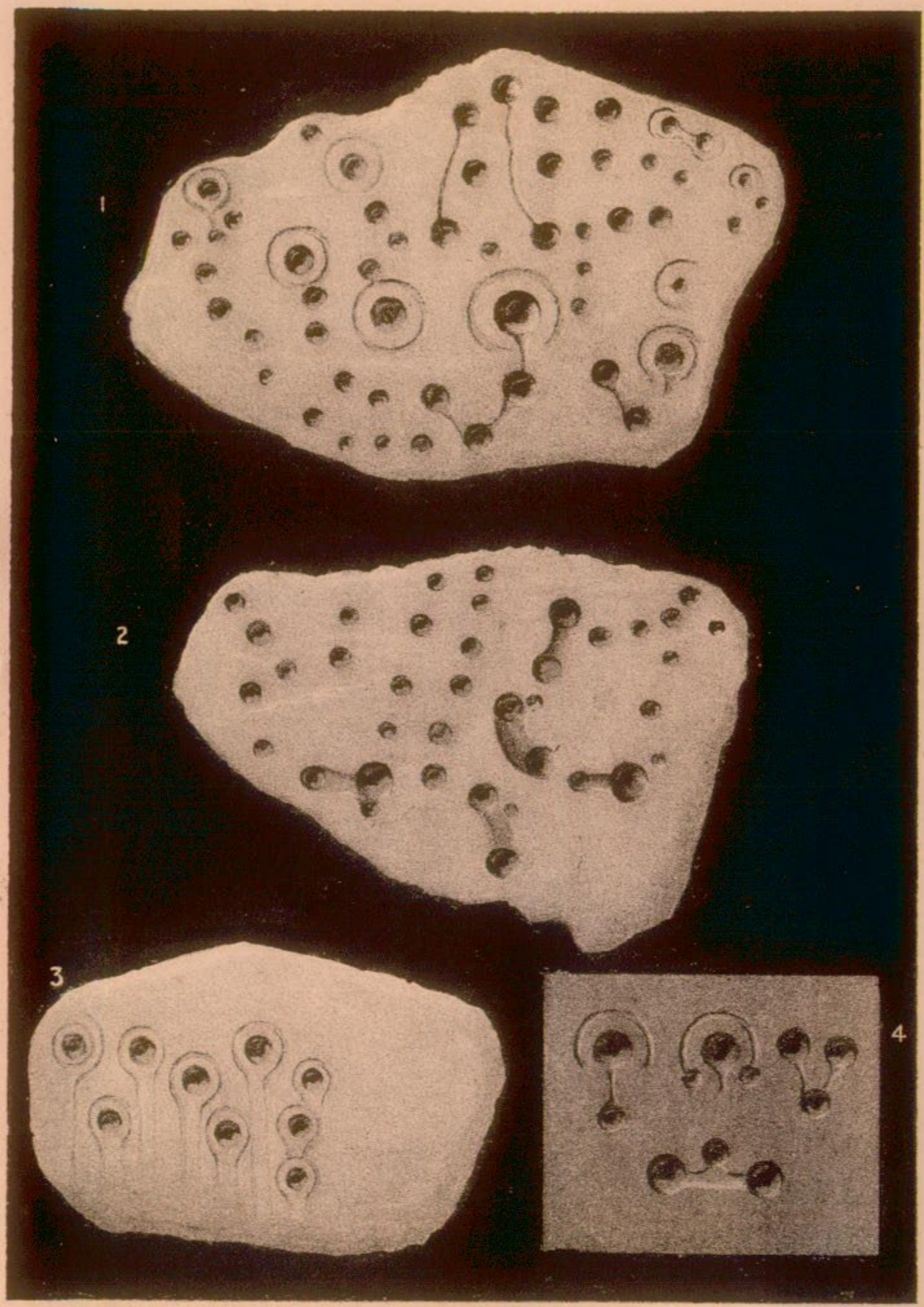


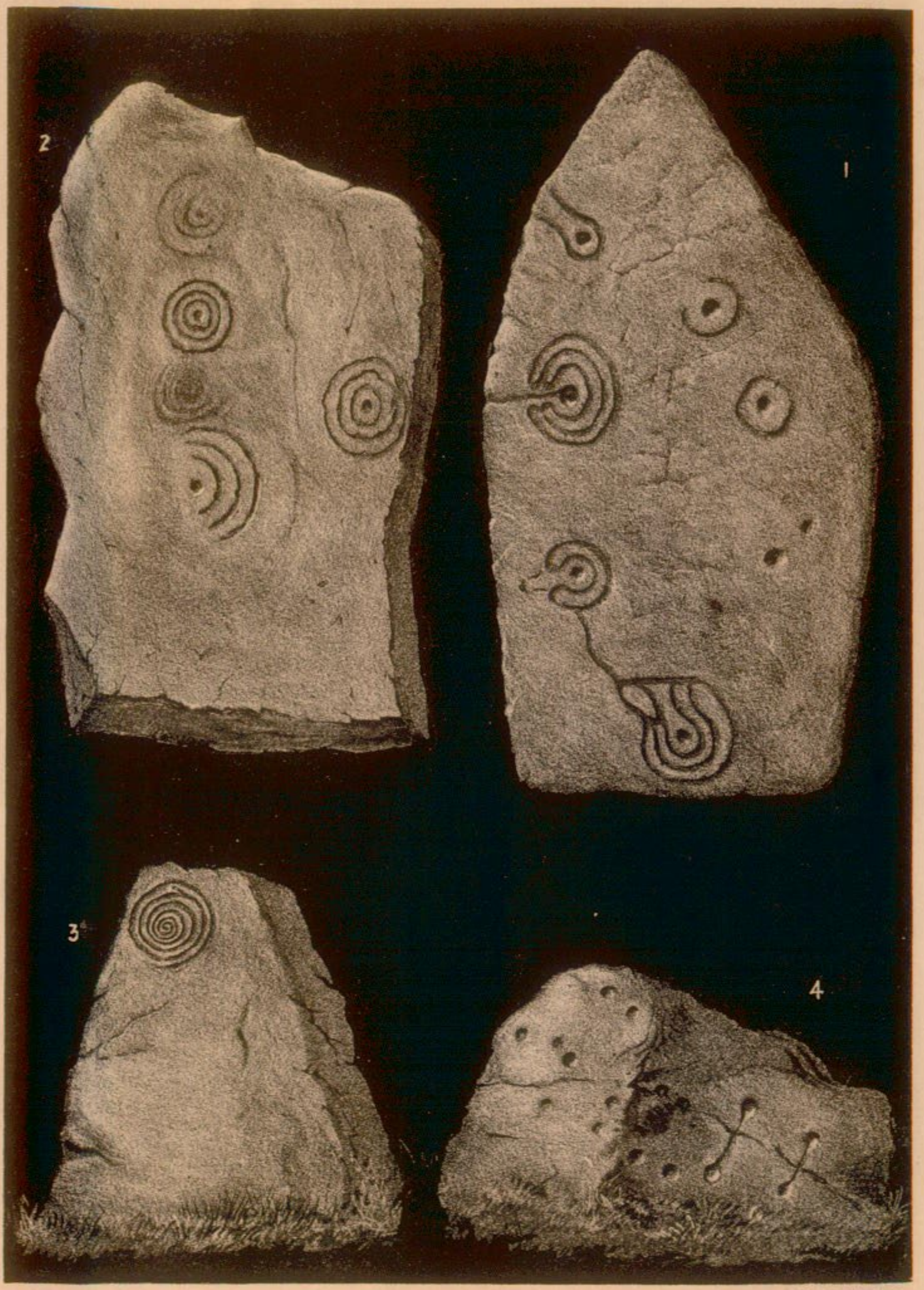
PLATE XV.

KIST-VAEN, AT CRAIGIE-HILL, LINLITHGOWSHIRE.

A. Ritchie, Lith. Edin.r

Plate XXVI.

From Carlowrie, Robin Hood's Bay, &c.



A. Ritchie, Lith. Edin.r

6. *ON STANDING STONES OR MONOLITHS.*

Large unhewn standing-stones, stone columns, obelisks, monoliths, or menhirs, abound in different parts of Scotland, sometimes standing alone, more rarely placed in groups or lines. They were, as already stated, raised with various objects. One of these objects was, as we know from the urns and bones near their base, as a memorial of the dead.

"Of single memorial stones," says Professor Wilson, "examples might be cited in nearly every Scottish parish; nor are they wanting even in the Lothians, and in the immediate vicinity of Edinburgh, where the presence of a busy population, and the unsparing operations of the agriculturist, have done so much to obliterate the traces of older generations. But nearly all are of the same character, differing in nothing but relative size, and the varying outlines of their unhewn masses. They have outlived the traditions of their rearers, and no inscription preserves to us the long-forgotten name."[1] In every district of North Britain, according to George Chalmers,[2] these stone pillars are to be found "in their natural shape, *without the mark of any tool.*"

This last observation certainly holds good with regard to most of the Scottish standing-stones. But latterly, since studying the subject of lapidary cup and ring cuttings, I have found these archaic tool-marks on no small number of our ancient monoliths; and the surfaces of some of the stones have become far too broken and disintegrated to show them now, if ever they did exist on them. In his "Prehistoric Annals," Dr Wilson gives figures of two monoliths standing in the Lothians,—namely, the Caiy stone within a few miles of Edinburgh, and a tall monolith near Dunbar. Markings were only lately detected on them when they were specially examined for that purpose.

Caiy Stone near Edinburgh.—The Caiy stone, in the parish of Colinton, about three miles south-west of Edinburgh, is a massive, unhewn, flattened sandstone obelisk, standing about ten feet high. Its surface is much weathered, but near its base there are still distinctly marked the remains of seven cup excavations of the usual form, and arranged in a row like those on the cromlech at Bonnington, some six or seven miles

[1] Wilson's Prehistoric Annals of Scotland, 2d edition, vol i. p. 130.

[2] Chalmers's Caledonia, vol. i. p. 87.

distant. The sketch of these cups on the Caiy stone, given in Plate XVII. fig. 1, is from the able pencil of Colonel Forbes-Leslie. There are other more dubious and lesser excavations placed higher up. "On digging," observes Professor Daniel Wilson, "in the neighbourhood of this primitive monument, a quantity of human bones were found."[1]

Monolith at Dunbar.—When speaking of the great memorial stones which still survive in dumb forgetfulness in many a populous centre of the low country, Dr Wilson gives a masterly sketch by Mr Drummond[2] of, to use his own words, "one such fine monolith which stands in massive rudeness in the vicinity of Dunbar. In a neighbouring field," he adds, "a number of rude cists, containing sepulchral urns, were dug up in the early part of the present century."[3] When Mr Drummond originally sketched this stone, he did not observe any cup excavations upon it. But lately he has furnished me with a new drawing of the monolith, copied into Plate IV. fig. 3, taken by a friend, and showing five cup markings upon one face of the stone.[4]

I have notes of similar cup markings upon other Scottish monoliths, as in Fifeshire, at Pitcorthy and Torrie; in Stirlingshire, at Ruehill, near Doune; in Perthshire, at Belmont Castle; in Wigtonshire, on a standing stone at Whirlpool, in the parish of Stoneykirk; in Cantyre, on a monolith near Campbelltown, &c.; and no doubt many others exist; and many others which formerly existed, cut both with cups and rings, are now lost and destroyed.[5] By far the most interesting specimens

[1] Prehistoric Annals of Scotland, vol. i. p. 137.

[2] See the stone represented in Mr Drummond's interesting paper on Stone Crosses, in the Proceedings of the Society of Antiquaries of Scotland, vol. iv. p. 87.

[3] See his Prehistoric Annals, vol. i. p. 125.

[4] Four large obelisks stand within a few miles of Dunbar, viz., one at Kirklandhill, a second at Markle, and two on Standingstone farm, near Dunpender. None of them have any markings upon their present surfaces; but they are all much weathered.

[5] As an illustration of this remark, let me adduce a notice of a monolith in Galloway which Andrew Simson alludes to in his history of that district, written towards the end of the seventeenth century. In Camerot Muir, in the old parish of Kirkdale, there is, says he, a stone four or five feet in diameter, called the Penny Stone, which "hath upon it the resemblance of that draught which is commonly called the walls of Troy," viz., a volute or spiral. (See Mr Nicolson's History of Galloway, vol. ii. p. 47.) It is stated in the last Statistical Account that this stone has disappeared.

which I have myself happened to see are in the vicinity of Kilmartin, in Argyleshire, at a short distance from the western end of the Crinan Canal.

The village of Kilmartin is situated upon a rising ground, and commands a striking view of the valley of the Add and of the mountains beyond. Its interesting and antique churchyard is—like some others in Argyleshire—full of sepulchral slabs and tombs, covered with rich olden floriated and figure carvings. But, stretching out for a course of three or four miles below it, is a scattered archaic necropolis of immensely older date,—and having spread over it, at various distances, single and grouped monoliths and megalithic circles, cairns and barrows, chambered tumuli, stone cists, &c. Some of the monoliths show no decided evidence of tooling upon them. But amongst the extant groups of ancient obelisks at Nether Largie, Ballymenach, &c., several of the stones are strongly carved, and hence require more notice from us here.

Largie, Argyleshire.—Along the low ground, from Kilmartin to the farm of Largie, runs a string or succession of large cairns or barrows, terminated by a group of six or seven tall monoliths, planted very irregularly—six of them in pairs. One of these obelisks, about nine feet high, and three and a-half broad, presents on its flat eastern side a series of above twenty cup-markings. This stone is represented in Plate XVII. fig. 2. Two of the cups are each surrounded by a deep and smooth ring. The largest of these circles is from six to seven inches in diameter, and its central cup three inches broad. One of these ringed cups has a groove or gutter traversing its circle, and running downwards into a second cup placed a few inches below. The base of this monolith is surrounded by a circlet of stones placed on edge. The ring-markings upon it were first discovered by the Rev. Mr Mapleton, to whose extreme courtesy I—and other antiquarian visitors to the district—feel most deeply indebted. One of the other Largie stones has an appearance of three cup excavations upon it. With this exception no other tool-markings

In the Archæologia, vol. v. p. 315, &c., there was published in the last century an account of several megalithic circles at Achencorthie in Kincardineshire, and two stones are alluded to having each a cup and channel leading out from it. These circles have latterly become much destroyed, and some friends have searched in vain for me for those described as cupped and channelled.

seem to exist on the Largie obelisks; nor on the thirteen upright stones which form the remains of a megalithic circle, fourteen or fifteen paces in diameter, standing on the opposite side of the road, and surrounding a stone cist, five feet long and two feet nine in breadth. In the adjoining field are the remains of a large cairn containing several sepulchral chambers; but no apparent markings exist upon any of the huge stones composing the walls of these chambers.

Ballymenach, Argyleshire.—Proceeding along the valley from the Largie group of monoliths, we pass on the left a cairn in a wood, with one or two large chambers or cists already opened within it; and about a mile beyond the Largie stones, we come upon another still more stately and imposing cluster of seven pillar-stones standing on the farm of Ballymenach, in the parish of Kilmichael-Glassary. The field containing them is skirted at two sides by woods, which have been found the seat of isolated stone cists. In the field itself are placed the levelled remains of two barrows or cairns, and a small closed circle of stones, the circle measuring only six paces across, and the stones being about three feet in height. Thirty or forty paces behind this circle stand arranged in a straight row the four tallest monoliths, looking nearly directly east; about forty paces further back are a pair of the stones placed side by side, and parallel with the first row; and some twenty paces still further back, but obliquely, and somewhat to the left, the remaining seventh pillar-stone is situated. In Plate XVII. fig. 1 is represented this group of seven stones, with the small stone circle placed in front of them.

Four of the seven Ballymenach monoliths show no appearances of artificial cutting upon their surfaces; the most southerly in the first row presenting no markings, though it is the most stately in the whole group, overtopping them all by two or three feet. Three of them are more or less carved—two on the eastern, and one on the western side of the stone or slab.

The two stones principally carved are the two innermost of the first row of four. The most southerly of these two is a huge slab above twelve feet in height and six in breadth. To trace all its markings, Dr Hunter and I were obliged to clear portions of its surface of accumulated moss. Its eastern face shows about forty cup excavations. Five

of the cups are surrounded each with a deep circle or ring, and near the top is a sixth appearance of a ring without any central cup. The circles are from seven to nine inches in diameter. The central cup of the largest is nine inches broad and about two and a half in depth. Four of these cup and ring cuttings show the common radial groove passing through the circle. The western face of this stone does not present any markings. In Plate XVII. fig. 2, is a representation from a careful sketch, kindly drawn for me by Mr H. D. Graham, of the eastern surface of the stone, showing the appearances I allude to. The opposite or western surface of the next stone in the row has about forty cup markings upon it. Three of the cups are surrounded by rings with a traversing radial gutter. Six of the cups are tied together by a continuous grooved line. The carvings on this stone are represented in Plate XVII. fig. 3. The isolated monolith is the only other one exhibiting any markings. It is above nine feet in height, and its eastern face shows eighteen cup excavations. (See the sketch of it in Plate XVIII. fig. 3.) In addition, it is a specimen of a so-called "holed stone;" for between two and three feet above its base it is completely perforated.[1] The opening which is represented in the sketch is much splayed on either side. At its centre it is about three inches wide; and externally

[1] The stone at Torrie, Fifeshire, alluded to at p. 31, is a flattened sandstone flag, deeply guttered in longitudinal lines, and presenting cup-markings on its eastern side. It has been attempted to be made "a *holed* stone," like this block at Ballymenach, but the artificially splayed perforations from the opposite sides do not meet in the middle. About fifty paces from it are the remains of a small circle of stones. Let me here add, what I ought to have noted before (p. 25), that two of the stones at Stonehenge are "holed;" no doubt merely by weathering and disintegration. One of the holed stones is the first upright stone in the avenue at Stonehenge; the perforation is very irregular in shape, and traverses obliquely its south-east angle. The second holed stone is one composing the first upright trilithon on the right side of the circle. It has a deep longitudinal perforation in its back; and below this perforation there is, to use the old description of Dr Stukely, "a cavity in which two or three persons may sit, worn by the weather." (See his "Stonehenge," 1740, p. 29.) In his "Abury" (1743) he describes a perforated stone standing outside the southern interior circle, which has, he states, "a hole in it, and probably was designed to fasten the victim in order for slaying it. This I call the Ring Stone," p. 25. I did not observe this holed stone in visiting Abury; but the Rev. Mr Ross, late rector of Abury, tells me that it still remains.

it is seven inches in diameter on the east side and four on the west. There are no cups nor rings on the eastern side of this stone.

Passing along the road from Kilmartin to Lochgilphead, we come, about a mile or less beyond Ballymenach, to a field lying between the road and the farm of Dunadd, where stands a very broad and tall monolith. At the distance of half a mile or so beyond this point is the new village of Kilmichael-Glassary. On the western side of the village, and on the banks of the river Add, are placed, on the farm of Dunamuk, first, three stately stones, of about nine or ten feet each in height, arranged originally in a straight row as a trilith, but the middle stone is now prostrate; then a quarter of a mile higher up the stream there stands together a pair of still taller monoliths; and lastly, in the field above this erect pair, and on the higher ground, are two great prostrate pillars, with the remains of three large cairns—one of them within a few feet of the fallen monoliths. There are stones also showing the remains of three circles and cairns in the adjoining and lower field, but their true appearances have lately been destroyed by blasting them with gunpowder. On examining the surfaces of these various monoliths, I could only trace on one of them—namely, the eastermost of the tall standing pair—one circular cup depression of the usual form, and near it an elongated smoothed oval cavity, measuring about six inches in length and one and a-half in breadth and depth.

My friend Mr J. MacGow Crom has lately examined for me other standing stones near Kilmartin, as two on the road to Ford, and one at Lechguary to the northward of Kilmartin, twelve feet high,—all of them unmarked. But about a mile or more above the village of Kilmichael-Glassary he found a carved stone above ten feet high, at a place bearing the name of "Tor-a-Vlaarin" or "The Mound of the Battles." The stone was "half buried in the earth, and almost all its marks were placed low down below ground." These marks consist of several cup excavations on the north and south sides of the stone; and one of them on the north side is surrounded by a circle, like the ringed cups on the Largie and Ballymenach stones, and has also, like them, a radial duct or groove traversing it.

I have examined two monoliths placed on the low ground below Auchnabreach, and hence a mile or more further down the valley of the

Crinan Canal than Dunamuk; but I could discover no markings or cuttings on them. One of them, which is now prostrate, was found, it is said, to have evidence of sepulture near its base.

There has been already described and figured the panel (see Plate XIII. fig. 4), with angulated concentric carvings, taken from the barrow at Carnban, about a mile or so nearer Kilmartin.

We shall see subsequently that several rocks *in situ* on the sides of the Crinan Valley, and in the vicinity of this archaic cemetery—running from Kilmartin to Auchnabreach—are cut with numerous groups of concentric circles and cups.

Hence in this limited district we have specimens of rings and cups cut upon the surfaces of solid rocks, upon monoliths, and upon cist-stones; and the specimens already discovered amount, I believe, to upwards of two hundred in number, in a locality about five or six miles in length and a mile or two in breadth.

In England the most striking and magnificent group of monoliths that I have seen are the so-called "Devil's Arrows" at Borough Bridge, in Yorkshire. Three only of these tall and enormous monoliths are now left, and stand in a line about a stone's throw from each other. They are all pillars of a squarish shape, and said to be formed of millstone grit. Each at its upper part is deeply and vertically guttered, apparently by long weathering and exposure; and their lower portions show round, smooth, cup-like excavations upon some of their surfaces. The most northerly of these imposing monoliths is especially marked in this last way. Many, if not all, of these excavations, have probably been effected by the elements and weather; while some of them, which look more artificial, are of the same shape and form as those on the Kilmartin stones, &c. But unfortunately we have not here the presence of rings or circles around the cups to determine conclusively their artificial character.

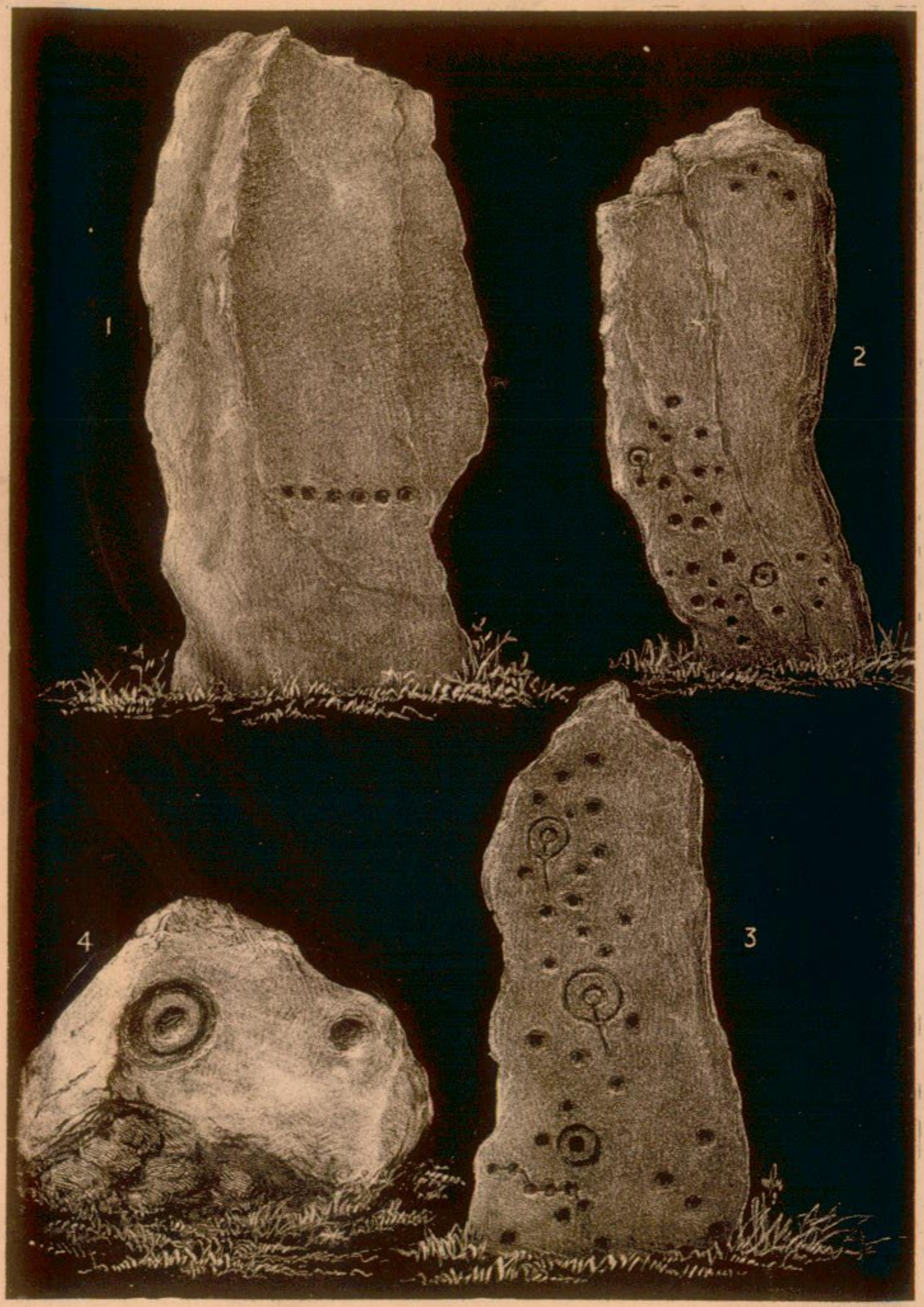
PLATE IV.

STONES AT 1, THORAX. 2, MONCRIEFF. 3, DUNBAR,

A. Ritchie, Lith. Edin.

PLATE XVII.

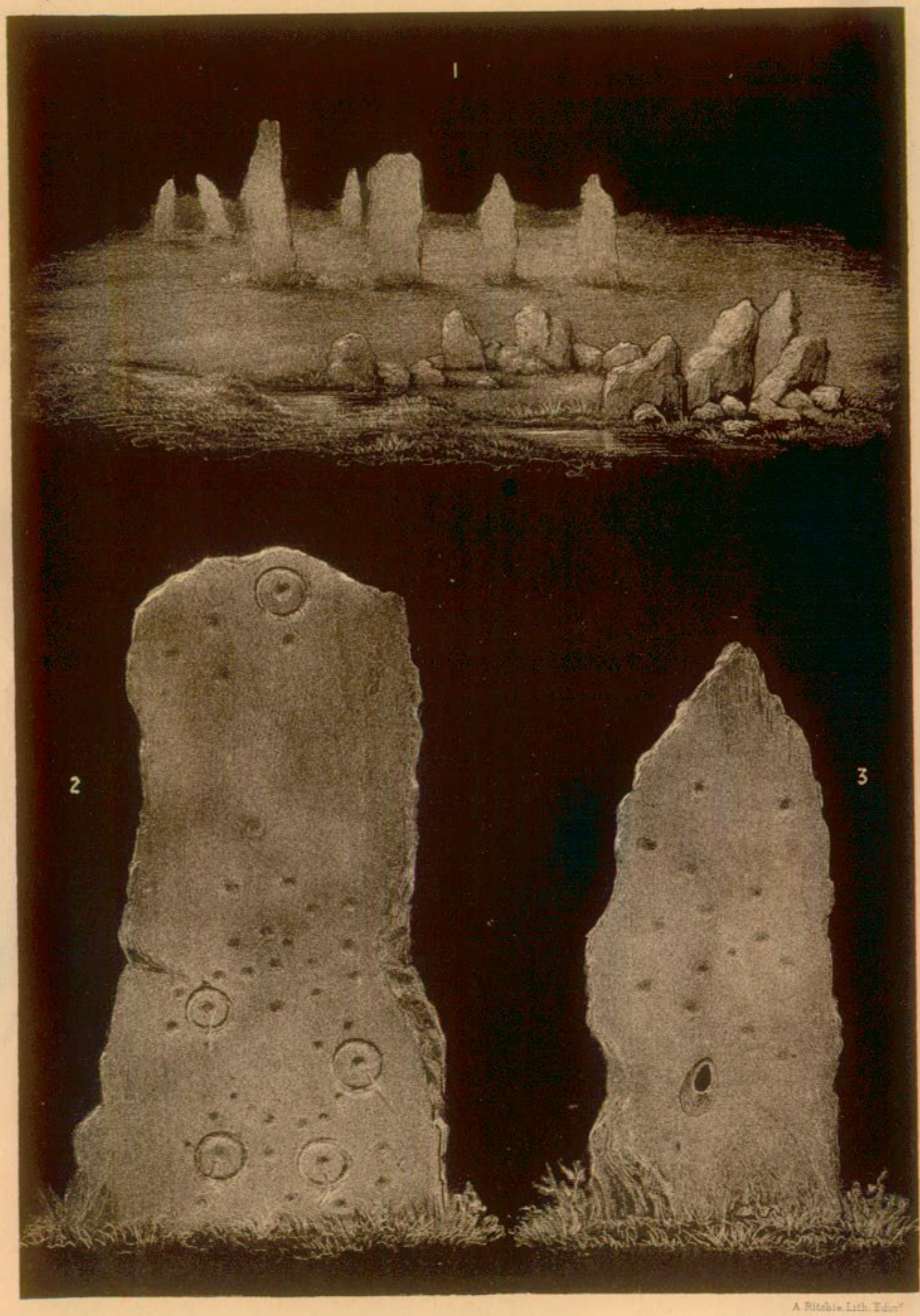
OBELISKS AT COLINTON, LARGIE, BALLYMENACH AND SHAP.



A. Ritchie Lith. Edin.

PLATE XVIII.

STANDING STONES AT BALLYMENACH.



A. Ritchie, Lith. Edin.

CHAPTER V.—ON STONES CONNECTED WITH ARCHAIC HABITATION.

Hitherto we have spoken of these rude ring and cup carvings as seen

on stones, all of them probably connected with the sepulture of the archaic dead. But the same strange and curious markings have been found connected with the dwellings of archaic living man,—as in the dwellings and forts which he occupied, and within or near his ancient towns and camps. I shall proceed to adduce a few examples in illustration of this remark.

7. *IN UNDERGROUND HOUSES, &c.*

Among the oldest forms of primitive domestic architecture of which we have the remains in Scotland, are those rude and dark subterranean, or semi-subterranean dwellings which are known under the names of "Earth Houses," "Picts' Houses," "Weems," &c. These cave-like dwellings are usually built with rough cyclopic walls of large stones, and roofed over by flat flags and a covering of earth and soil. Some of their component stones have been found marked with circles and cups; as at

Eday, Orkney.—There is in the Museum of the Antiquarian Society a stone from the island of Eday, Orkney, marked with two sets of triple concentric circles, each having a cupped centre; and a faded portion of a third set. There is also a double spiral cutting of several circles; and the outer spiral line of one volute crosses and makes a junction with the outermost spiral line of the other volute. The stone was discovered in Eday a few years ago, in a large pile of ruins which had once formed a so-called "Pict's house." The building, according to Mr Hebden—who presented the stone to the Museum—was about forty yards long and ten broad. The incised slab is of sandstone, and is three and a-half feet long, fifteen inches broad, and eight inches in thickness. (For a representation of the cuttings on it, see Plate XIX. fig. 4.)[1]

Holm of Papa Westray, Orkney.—In 1849, in examining a Pict's house in the Holm of Papa Westray, my friend, Captain Thomas, found on a stone —built into the wall near the entrance—a neatly engraved circle about four inches in diameter, and two other small conjoined circles on another stone in the building. Mr Petrie has more lately detected on other stones in this subterranean building other circular and linear markings, which,

[1] Proceedings of the Society of Antiquaries of Scotland, vol. iv. p. 185.

he says, "it is easy to see have been formed by a pointed instrument tolerably sharp."[1]

Pickaquoy, Orkney.—In 1853, Mr Farrer excavated a built subterranean structure in Pickaquoy, near Kirkwall. The building was so dilapidated that it was difficult to trace whether it was a grave for the ancient dead or a house for the ancient living. Mr Petrie, a most excellent judge on such a question, thinks that it was an archaic dwelling-house. In one of the chambers a stone with a central cup and a group of concentric circles engraved on it was found built upright into the wall. The appearance of the circles upon this stone is copied into Plate XIX. fig. 5. Another long slab was found with thirteen small cavities along one of its edges, and a larger cup or cavity in the centre of one of its sides. "When," remarks Mr Petrie, "a short time afterwards I examined the engraved circles, and especially the cavities cut in the stones in the walls of the Pict's house at Papa Westray, the similarity was so striking that it required no stretch of imagination to suppose that the same instrument chiselled the figures in both places."[2]

Frith, Orkney.—Mr Petrie has found an elongated stone sculptured on one end in a ruined wall in the parish of Frith. The sculpturing consists of a volute or spiral line making four turns. The diameter of the outermost circle is above six inches. See it drawn in Plate XIX. fig 6. I allude to this stone here, chiefly as forming one of the Orkney group; and partly because it had been used in building, though not apparently in the construction of a Pict's house. The ruined wall, in the base of which it was discovered, stood at an ancient broch or burg at Redland, where it turned up in some diggings conducted by Mr Farrer. But this was possibly not the original site of the stone; for it seems to have been used casually for building material. The stone itself is now in the Antiquarian Museum, Edinburgh.

We do not know the age at which the "weems" or underground houses were used by our Scottish forefathers; but there are one or two pieces of evidence which go far to prove that the carving of cups and

[1] See notices and figures of these carvings, in the Proceedings of the Society of Antiquaries of Scotland, vol. ii. p. 61.

[2] Proceedings of the Society of Antiquaries of Scotland, vol. ii. p. 61.

circles upon large stones existed apparently before these underground houses were built, as in the following instance in a Pict's house at

Letham Grange, Forfarshire.—Several years ago the stones forming a Pict's house built into the banks of the river Brothick, near Letham Grange, were removed for building purposes. Some of the foundation stones of the walls were left. Lately, on removing these foundation stones, one was found carved on both sides with cups and circles, and has been kindly presented to the Museum of the Society by Mr Hey of Letham Grange. It is a sandstone block measuring three feet nine inches in length, three in breadth, and one in thickness. Both sides are very rough and broken, and in this uneven condition have had chiselled upon them the cups and circles, single and double, which they contain. See Plate XX. figs. 1 and 2. One side of this sandstone block has carved upon it some forty cups. Most of these cups are isolated; but some are connected together by intervening ducts or gutters. The two largest and deepest are surrounded each with two encircling rings traversed by the usual radial groove. Several cups have one surrounding ring. At the upper and right hand corner a centre cup is surrounded by a circle of seven cups. Two of these cups are themselves ringed. On the opposite side of the block are carved fourteen or fifteen cups; three of them surrounded by a single guttered or incomplete circle; and seven of them encircled with two rings each, with the usual radial duct traversing them.

The original underground house, of which this sculptured block had been used as one of the foundation stones, was a structure about six feet in diameter, and six feet in height. It was built into the side of a gravelly bank or ridge. The masonry was of the rudest description. The floor of the house was only a foot or two above the level of the Brothick. The sculptured foundation stone was built—the Rev. Mr Duke of Arbroath writes me—"into the base course of the south wall, with the most deeply marked side facing the interior. Of course, as the whole building was originally under ground, the other side of the stone on which there were also ring markings was embedded and hidden in the soil. It is thus (he adds) clear to my mind, that whatever may have been the meaning or use of these markings, they were made at a date anterior to the building of the house,—that the stone, in fact, was an old stone, and had served

a different purpose before the Pict built it into the foundation of his dwelling."

Ruthven, Forfarshire.—A notice and sketch of a sculptured stone, from another weem in Forfarshire, has been obligingly furnished to me by my esteemed friend Dr Wise, of Rostellan Castle, Ireland, who, a few years ago, devoted great attention to early Scottish antiquities, when residing in this country. This carved stone was an oblong piece of sandstone, which formed a portion of the roof of a weem at Ruthven, near Meigle. Upon one of its surfaces are several isolated cups; two, surrounded by a single ring; one, by a double ring; and another is enclosed by three circles. Three of the ringed cups are traversed each by a radial groove or duct which runs downwards into three cups set in a row. See Plate XXV. fig. 3. "The cups and circles were," Dr Wise writes me, "partly covered with the other roofstones of the weem, proving the sculptures to have been cut before this carved stone had come to be used as a corner building stone."

Plate XIX.

FROM TORWOOD, STIRLINGSHIRE, AND ORKNEY.

A. Ritchie Lith. Edin.

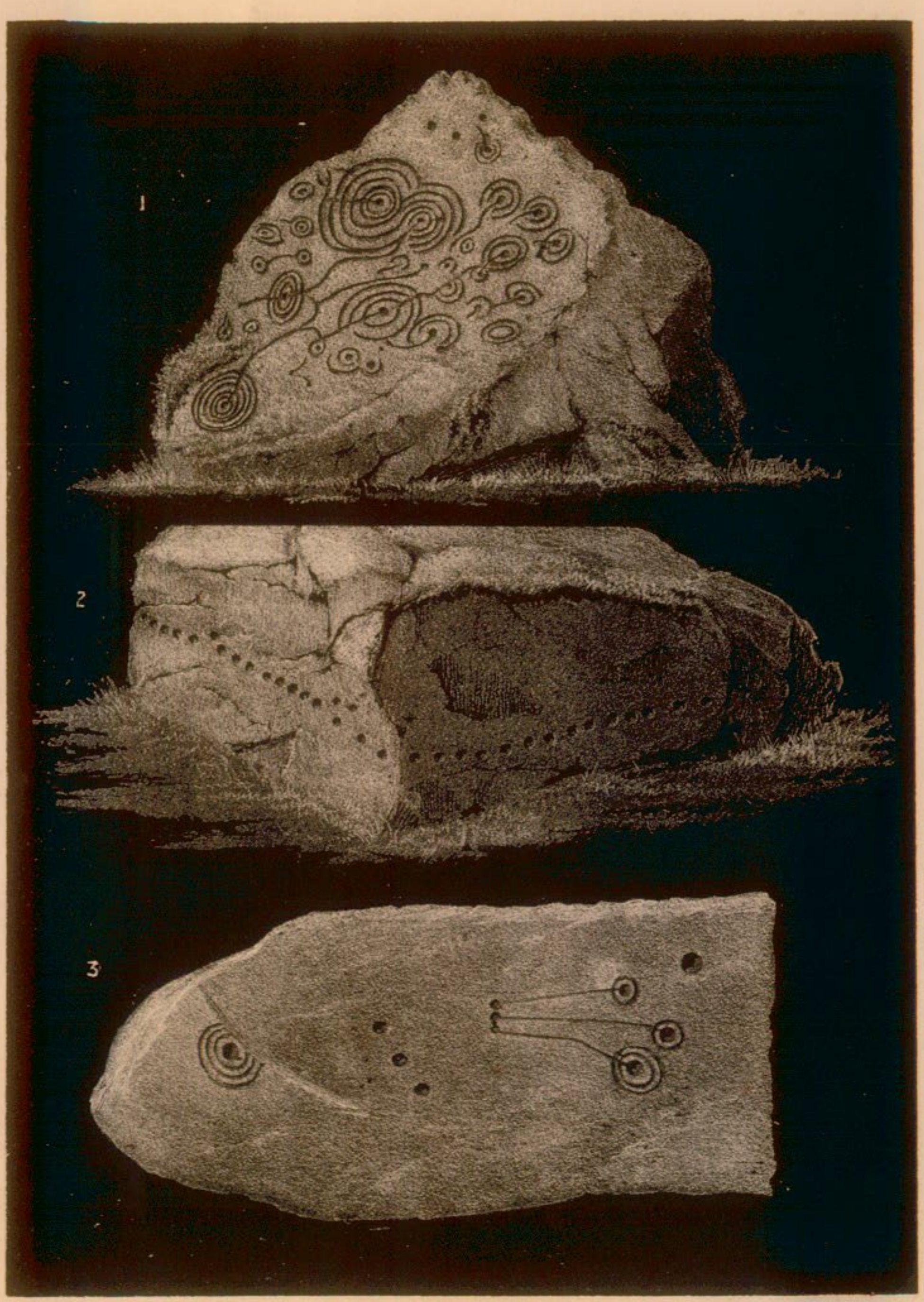
PLATE XX.

FROM WEEM AT LETHAM GRANGE, FORFARSHIRE.

A. Ritchie Lith. Edin.r

PLATE XXV.

ROCK AT BEWICK, RUTHVEN WEEM.



A. Ritchie, Lith. Edin.

8. *IN FORTIFIED BUILDINGS.*

The spade and mattock—those indispensable aids to archæology—have of late disclosed to us, in the eastern parts of Scotland, strange types and forms of archaic houses and places, furnished with more or less powerful artificial defences, analogous to, and yet differing from, the archaic burgs of the northern and western counties. In one or two such fortified dwellings, or clusters of dwellings, stones have been found cut with ring and cup carvings; as at

Tappock, Stirlingshire.—In the old forest of Torwood, lying between Falkirk and Stirling, Colonel Dundas, of Carronhall, has lately made some antiquarian excavations which have resulted in striking success. On the top of a hill in the wood he thought that he saw some indistinct evidence of building. He cut down the trees growing upon the spot, and, digging downwards, he excavated, with great zeal and skill a large strongly-built circular area, above thirty feet in breadth, and ten in depth. A passage from this central area was followed outwards, and opened externally, after going through twenty-five feet of continuous wall. The walls of the passage were built of large stones; and it was

roofed over by horizontal blocks. A second door passed out of the central area, and led to a stair, which mounted upwards to the ground, on a level with the top of the circular building. Externally the building has sloping sides all around; but whether it was originally constructed in this fashion, or the slope is the result of earth and stone accumulated by time, has not yet been ascertained. The interior walls of the central area are cyclopic, or built of large stones without lime. Probably at one time this circular structure was much higher, as Colonel Dundas found in its interior a great accumulation of large stones, similar to those composing the remaining lower portions of wall; and this accumulation looked like the debris of a higher portion of the building that had tumbled and fallen inwards. Amid this debris Colonel Dundas found three stones with circles cut upon them. The carved lines are about an inch broad and half an inch deep. These three stones are represented in Plate XIX. Like the walls of the building, they are composed of sandstone. Two of the stones (figs. 1 and 3) are each about two feet long, by fifteen inches or more in breadth at the broadest part. The stone (fig. 1) shows upon it the remains of two double concentric circles, each provided with a central cup. The stone (fig. 3) has sculptured upon it two concentric rings, the broadest and outermost being nearly six inches in diameter. There is no distinct central cup, but a radial duct or groove traverses the two circles. The second stone (see fig. 2) is about eighteen inches long and sixteen broad, and has on one edge a broken portion of a similar double circle and central cup; and a second figure, consisting of a single ring without a central cup. Three of the four double rings or concentric circles on the stones have thus central cups. From these carved stones being broken in some points through the line of the circles, Colonel Dundas inclines to think that they were probably cut and sculptured before they were used as building material in this ancient structure. Within the central area were found some flat querns.

Laws, Forfarshire.—To another Scottish proprietor, who has made upon his estate extensive diggings, in the same scientific and generous spirit as Colonel Dundas, we owe the disentombment of another and still more extensive series of old fortified buildings. I allude to my friend Mr Neish, of the Laws, who, as is well known to the Members of the Scot-

tish Society of Antiquaries, has, in digging upon the high grounds above his house at the Laws, between Dundee and Arbroath, disclosed a building, having a central circular area like that at Tappock, paved with two or three layers of stone; and near it and around it a long series of strong and strange cyclopic walls running in the most enigmatical and curious directions. (See the *Proceedings of the Society of Antiquaries of Scotland*, 1860, vol. iii. p. 440, &c.)

In the course of his diggings among the old and puzzling structures covering this hill, Mr Neish has met with and preserved some stones with cup excavations; and one with a series of three concentric circles cut around a large central cup, the outermost ring being about eleven inches in diameter. This ringed stone and another from the Laws, with cup markings alone, is represented in Plate XII. figs. 4 and 5. The stone with the ring cuttings on it is apparently a fragment of a larger stone. Another similar piece was found, and lost.

Plate XII.

FROM DORSETSHIRE, NORTHUMBERLAND AND FORFARSHIRE.

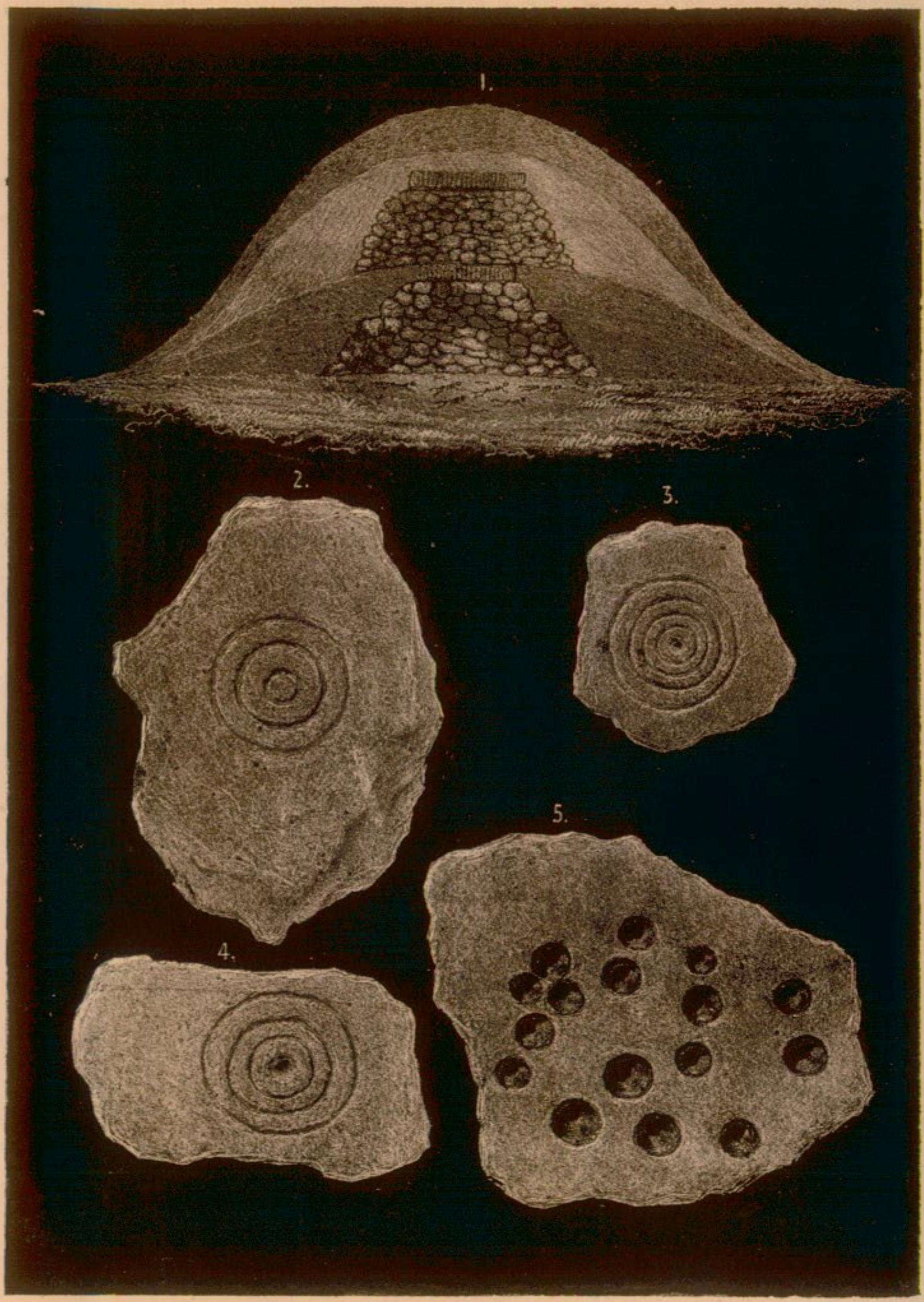


Plate XIX.

FROM TORWOOD, STIRLINGSHIRE, AND ORKNEY.

A. Ritchie Lith. Edin.

9. *IN AND NEAR ANCIENT TOWNS* (OPPIDA) *AND CAMPS.*

In many parts of Scotland and England we have the remains of the structures in which large congregations or communities of the ancient inhabitants dwelt, in the form of more or less extensive strongholds, defended by ramparts and ditches, and containing within their circuit the round foundations of those hut circles which then formed the dwellings of our British forefathers. Often, when the strongholds are on elevated spots, the clusters and relics of the hut circles are found arranged together, lower down the hill, in more favoured and sheltered situations. Near these remains of olden British habitation are sometimes seen megalithic circles, monoliths, and barrows; sometimes the cairns of the ancient dead are interspersed among the hut dwellings of the ancient living;[1] and occasionally the cairns now alone remain.

[1] One of the most remarkable examples of this kind which I have seen exists in the parish of Kirkmichael, in Strathardle, Perthshire. In this parish there formerly stood above twenty megalithic circles (see their enumeration in the old Statistical Account, vol. xv. p. 516, and in Chalmers' Caledonia, vol. i. p. 72); and Archdeacon Williams and others have hence described the locality in question as an ancient centre of Scottish Druidism. Some time ago, when in the neighbourhood, I took

Within and near these archaic and now nameless towns, cup and ring cuttings have been found occasionally, as in the following examples :—

Lothians.—The summits of various hills in the Lothians and adjoining districts have remains of ancient strongholds and defences upon them. These fortified hills are generally not the highest, but those of minor elevation, and isolated. Within the walls, and oftener still below on the slopes of the hills, are frequently the remains of hut circles, and other pit-like excavations. Few or none of them have yet been searched for sculptured stones and rocks. On the middle hill of Craigiewood I found, some time ago, within a few miles of Edinburgh, an ancient British city of this description, abutting on a steep rock on the eastern side; and on its other sides defended by a triple rampart, and entered by gates placed obliquely. The proprietor, Mr Hope Vere, was so kind as to examine, by the spade and mattock, the mode in which the three inclosing valli on the western side were constructed. We found that originally they each consisted of a rude cyclopic wall of uncut stones, now buried under a covering of accumulated soil and turf. The area of the inclosed town extends to about forty acres. In different parts of it are still visible the hollows or pits which formed the flooring of the original houses or huts; and a little digging beneath the turf showed rude circular walls built around over several acres. Not many yards outside the southern wall of this ancient town was placed the stone cist, which I have described (page 28) and figured (Plate XV. fig. 2), with nine groups of concentric circles cut upon its covering stone; and, in the low ground below, another cist at Caerlowrie, with circles cut inside the stone lid.

occasion to examine the few stones now left of the circles, with a view of ascertaining whether they presented any ancient cuttings upon them; but detected none. On walking up to the higher muir-ground above, in the direction of a rocking-stone and some other reputed "Druidical" relics, I unexpectedly came upon a series of extensive stone remains of circular hut foundations; and in the midst of this extensive archaic town stood a very large cairn which had been partially thrown down in an attempt to open it. In the "Old Statistical Account of Scotland" it is stated, that from the east side of this cairn there formerly extended two straight stone avenues, above thirty feet broad and a hundred yards long, while each had a small cairn at its further extremity. My excellent and active friend, Mr John Stuart, has latterly prosecuted various researches with the spade and mattock amid these remains of ancient human habitations.

In describing previously (p. 28) this cist-cover at Caerlowrie, I omitted to refer to the drawings of it, kindly made for me by Mr Hutchison, and copied into Plate ~~XVI~~ XXVI. fig. 2.

The Caiy Stone, in Colinton parish, a few miles south of Edinburgh (see antecedently, p. 32), is also placed near the remains of ancient sepultures and dwellings. "Not far from it," writes Dr Daniel Wilson, "are still visible the rude earthworks of a British camp."[1] Maitland, in his History of Edinburgh (1753), describes the Caiy Stone as standing in the neighbourhood of "divers large cairns," which were placed near a "large oval camp," through which an old military way passed.[2] General Roy speaks of this military way as the continuation of the English Watling Street, which runs "under the east end of the Pentland Hill," onward to Cramond.[3] Professor Walker describes this ancient encampment as of an oval figure, surrounded by one great ditch and rampart, and containing about fifty acres of ground.[4] This fortified inclosure was, in the end of the last century, more correctly described by the Rev. Mr Whyte, of Liberton, as an ancient town rather than a camp; and this obliterated and long-forgotten city "must" (he naively remarks) "have made an important figure before the Castle of Edinburgh—so greatly famed for antiquity—existed, and, consequently, long before there was any appearance of the adjoining city, which is now so flourishing and extensive, and which has been so much admired on account of the height and grandeur of its buildings."[5]

Ross-shire.—Perhaps we may justly refer to this division some sculptured stones lately found by Mr Joass, of Dingwall, near that town. The hill Crock-ri-avach is situate about two miles from Dingwall. A mutilated megalithic circle stands on its south-west shoulder. Near its site, within a dilapidated circular wall, about fifty yards in diameter, is a hut circle, nearly thirty feet across; and at a short distance there are the more indistinct remains of a second. On the hill, nearly half a mile from these habitations, lie nine or ten loose schistose slabs, averaging

[1] Prehistoric Annals of Scotland, vol. i. p. 138.
[2] History of Edinburgh, p. 507.
[3] Military Antiquities of the Romans in North Britain, p. 103.
[4] Essays on Natural History, p. 605.
[5] Proceedings of the Society of Antiquaries of Scotland, vol. i. p. 308.

about five or six feet in length and breadth, and a foot and a half in thickness. Their upper surfaces are exposed, and sculptured with cups and rings. The figures vary from single isolated cups to two or more cups connected together with a groove or gutter, and others are surrounded completely or partially by a single ring. In some instances, the incompleted ring surrounding the central cup ends in two cups or depressions, as represented in the diagram of them in Plate XIV. fig. 1. On one slab there is the appearance of one central cup, surrounded by a circle of seven other cups. A piece of yellow flint was found near one of the stones. Near a hut circle on the top of the hill, flint arrow heads and cups are reported to have been formerly found in abundance. One of the sculptured stones was carefully dug under by Mr Joass, and was found to lie on undisturbed boulder-clay, while the boulder-clay rested on the soft shale of the district.

Kirkcudbrightshire.—The Rev. Mr Greenwell has directed my attention to a flat rock-scalp on the farm of High Arvie, in the parish of Parton, Kirkcudbrightshire, as presenting appearances of artificial stone-cutting, which he believes to be referable to the class described in this memoir. The carved rock is known as the "Cow's Cloot," and is marked with three or four cup-hollows of the usual form and size, and a slanting ovoid circle, not unlike that which a cow's foot produces in softish soil. It would be interesting to examine and uncover the neighbouring rock surfaces in search of other markings. Cairns, &c., exist in the immediate vicinity.

Berwickshire.—About two miles west from Spottiswoode is Harefauld, a camp or habitation of an irregular circular shape. The walls are formed of stones, and in many places are from ten to twenty feet thick. The enclosure is about fifty-five yards across in one direction, but more in an opposite line. There are vestiges of a dividing wall, running from north to south. On the north side, in the thickness of the wall, are several cells or houses—one of them measuring nine feet long by four across; and others also occur in the thickness of the wall towards the west. On the north side are circular walls projecting into the area from the outside wall, forming inclosures of varying size, from six feet to twenty feet in diameter. On the south side, in the wall, and near to what was the entrance to the fort, my friend, Mr John Stuart—to whom I am indebted for these and other notes—found a large slab or

gate-post, having several cup excavations of varying size cut upon its surface.

Doubtlessly a little more extended inquiry in Scotland will increase much the number of instances of stones with cup and ring carvings, found in connection with those aggregated hut circles, towns, and camps of ancient man that lie scattered in various positions over the country. If, passing from Berwickshire, we cross the Tweed, we find—within a few miles of the Scottish border—numerous and remarkable examples of cup and ring carvings upon the stones and rocks of Northumberland; and many of these lapidary sculptures stand in more or less direct relation with the sites of ancient human habitations in that county. In this district their character and numbers are so interesting as to deserve a more detailed notice of their position and peculiarities.

Northumberland.—A high and broad ridge of sandstone runs for a distance of many miles from north to south through the moorlands of Northumberland. There still remain, scattered thickly along its course, numerous relics and evidence of ancient human habitation, in the form of old camps or cities, hut-circles, cairns, barrows, stone cists, &c. The sandstone of the district projects upwards in different places, in the form of bare scalps and blocks of rock; and in various localities, near the sites of ancient human occupation and dwelling, these scalps and blocks have cup and ring markings cut upon them. It is further remarkable that,—as has been specially pointed out to me by my friend, Mr Tate, of Alnwick,—while the sandstone rocks in the northern region of Northumberland are thus profusely sculptured, the hard porphyry rocks in their immediate neighbourhood, forming the Cheviots, show no sculptures at all, although on their lesser heights, flanks, and spurs there are also camps, hut-dwellings, and sepulchres apparently of the same type and same age as those situated on the adjoining sandstone moors. Mr Tate believes that the sandstone, as more easily cut than the hard porphyry rock by the imperfect tools of the archaic sculptors, was alone carved by them. But possibly any sculpturings made on the porphyry rocks have—like other similar carvings on hard rocks elsewhere—disappeared before those on the sandstone, in consequence of the more deep and destructive weathering of the surface of the former.

The sandstone blocks and platforms on which the Northumberland

lapidary sculpturings have hitherto been chiefly found, stretch from Rowtin Lynn, not far from the village of Ford, to Beanley Moor, near to Eglingham. Betimes they will probably be detected running further south. Between Rowtin Lynn and Beanley Moor—or within a distance of twelve or fifteen miles—between forty and fifty sculptured rock scalps and stones have been already detected, with, I believe, above three hundred examples of rings and concentric circles cut upon them. Mr Langlands, of Old Bewick, who most kindly showed me the rock carvings in his neighbourhood, was the first to notice one of these Northumberland sculptures as far back as 1825. In 1852, a most accomplished and able archæologist, the Rev. William Greenwell, of Durham, when accidentally resting, as he has informed me, near the sculptured rock at Rowtin Lynn, observed some appearance of carving upon an exposed piece of it, and speedily satisfied himself of the fact, by removing from the surface of the rock portions of its thick and ancient covering of turf. A few months afterwards, Mr Greenwell read an account of his discovery to the Archæological Institute, at its Newcastle meeting; but unfortunately the paper was lost, and hence not published in their Transactions. Next year (1853) Dr Johnston of Berwick figured and briefly described the Rowtin Lynn rock in his "Natural History of the Eastern Borders." Subsequently notices of this remarkable rock were given to the Berwickshire Club, and to the Society of Antiquaries of Scotland by Mr Tate, who has extended his inquiry into all the other known sculptured stones of Northumberland with indefatigable zeal and characteristic talent.[1] Another very distinguished Northumberland antiquary, Dr Collingwood Bruce, has laboured most assiduously in the same walk, and

[1] The publication of the present essay has been greatly delayed by various circumstances, besides the more urgent claims of professional work; as by the search after new specimens; by the collection of drawings of the sculpturings; and, above all, by the misfortune of a half of the manuscript being lost with a travelling portmanteau on the railway. After it was communicated to the Society of Antiquaries, I had the pleasure of reading over the principal heads of it to Mr Tate, and found that in most points he and I were agreed. He has latterly drawn up and published, in the "Proceedings of the Berwickshire Naturalist's Club" for 1865, p. 153, a long and admirable account of all "The Ancient British Sculptured Rocks of Northumberland and the Eastern Borders," illustrated by careful and accurate plates.

has collected for the Duke of Northumberland an elaborate series of large and magnificent drawings of these sculptured rocks and stones.

The Northumberland rock sculptures present all the usual types of these lapidary carvings, with the exception of the form of the volute or spiral; no instance of which, I believe, has yet been detected among the three hundred and odd ring sculptures which have been found in that county. Cup-cuttings, though not specially noticed by the Northumberland antiquaries, are as frequent upon their rocks as upon our Scottish stones. On the rock at Rowtin Lynn, which stands out as an irregular oblong outcrop of stone some ten feet high by sixty feet in length and forty in breadth, there are still about fifty or sixty ring-cuttings and about thirty cup-cuttings;[1] but many more probably existed on it formerly, as a considerable portion of this rocky outbreak has been removed by quarrying. This is still the largest of the carved rocks in Northumberland, though some other rock-platforms and stones in the district—as those at Old Bewick and High Chorley—have each on their surfaces twenty or more groups of ring-cuttings. The figures in Plate XXIV. give a good idea of the general character of the Northumberland rock cuttings. They are taken from one of Dr Bruce's drawings of the sculptures on Chatton Law, two or three miles south of Rowtin Lynn. But, as already hinted, one of the most interesting facts connected with these sculptures on rocks *in situ* in Northumberland, and the circumstance which leads me to notice them under the present head, is their relation to the numerous old British towns, cities, or camps of the district. The position of these archaic towns or camps is marked by the existence of ramparts formed of rude earth and stone walls, and ditches; and sometimes, as at Beanley, Bewick, Horton, and Dod Law, the roots or foundations of the ancient hut circles or dwellings can be yet traced within the enclosed space. The camp or town walls are,—like the many similar structures in Scotland and England,—usually of a roundish form, and have generally a large second or supplemental enclosure—less perfectly defended—attached to one side of the primary camp. All, or almost all, of the Northumberland sculptured rocks are situated within a

[1] On the Rowtin Lynn Rock is an example (the only one I have noticed in England) of a cup surrounded by a circle of five or six cups—instead of a circular line—a already described at p. 8.

distance of ten, fifty, or at most a hundred yards of those archaic dwellings of human communities; and a few of the carved rocks are placed within the artificial ramparts. The camp or city of Old Bewick —strongly and strikingly situated on the brow of a high hill, with one side protected by a deep cliff, and the other, or land side, defended by four high and formidable ramparts—has two sculptured rocks or stones within the ramparts, and two or three placed outside of them. In Plate XXV. figs. 1 and 2, are two sketches, kindly drawn for me by Miss Langlands, of one of the sculptured stones at Old Bewick. The stone, which is placed about one hundred yards outside the walls of the camp, is nearly ten feet square on its slanting top, and stands about three or four feet high. Fig. 1 shows the ring sculptures on the top of this large sculptured block of rock, and fig. 2 represents a row of cup-cuttings carved upon its sides. The large sculptured rock at Rowtin Lynn stands within the enclosure of a secondary camp, the primary camp or town being defended by four separate ramparts and ditches. The carved stones at Beanley, placed amid the foundations of hut circles, are also situated in the supplemental enclosure near the old strongly-walled camp.

Stones sculptured with cups and rings have been found in connection with ancient camps and towns in other districts lying still farther southward, as in Yorkshire, Wales, Cornwall, &c.

Robin Hood's Bay, Yorkshire.—A large mass of sandstone in the moor above Robin Hood's Bay, near Whitby, had some sculpturings upon it, part of which were split off by Mr Kendall of Pickering, in whose garden I have seen the slab of carvings which he thus procured. Mr Kendall's slab is about five feet long and two and a-half broad. Upon its surface are three or four isolated cups about an inch and a-half in breadth, and five or six others surrounded by ring-cuttings. See a sketch of it in Plate XXVI. fig. 1. Two or three of the ring-cuttings consist of single circles. One consists of a triple circle and straight radial groove. The ends of the circles, as they reach the traversing groove, turn round and unite together, as in the horse-shoe pattern in Plate II. fig. 9. The two remaining circles, which are respectively five inches and eight inches in breadth, and consist of cups surrounded by two and by three circles, are conjoined together by a long gutter. The upper circle shows a single and the lower a double horse-shoe pattern. In the uppermost or

double circle the rounded ends of the rings are united and bestridden by a shallow right-angled line; and the ends of the lowest or triple circle are in part also conjoined by the gutter which runs from the double circle above, and by a cross straight line which runs off from it. The circles are more imperfectly finished than usual, and at some parts present almost an appearance of being punched out rather than cut out.

I am not aware whether or not any other evidences of the habitations of ancient man were found in the immediate vicinity of these rock-carvings on the Robin Hood Bay Moor; but, in his excellent History of Whitby, the Rev. George Young has shown that, in the vicinity of that town, barrows, stone circles, and pillars are common; and the remains of clusters of hut circles and circular pits, or "ancient British settlements, abound."[1]

Wales.—No careful search has yet, as far as I know, been made among the ancient fortified stations and towns scattered over Wales for the presence of ring or cup carvings; but I have seen one remarkable specimen, and from it I should expect that many others will betimes be discovered in the Principality. Near the village of Llanbedr, in Merionethshire, are two tallish monoliths, and one intermediate stone of much smaller size, inscribed as "Meini Hirion" in the Ordnance map. The three are placed near each other, and stand in a row. The two lateral monoliths are respectively about seven and ten feet high. The short intermediate stone is only about three feet in height, and is cut on one of its faces with a faded volute, consisting of six or seven spiral concentric lines, the diameter of the outermost being about eleven inches. But this carved stone, instead of being a part—as supposed—of a set of standing stones belonging to the spot where it now stands, was—as I am assured by Dr Griffith of Hyeres—removed several years ago down to its present site from one of the ancient fortified enclosures, camps, or towns, which abound on the neighbouring high grounds.[2] See Plate XXVI. fig. 3.

Cornwall.—My friend Mr Blight, of Penzance, who has already done so much for the archæology of his native country, writes me, that he has found at Lancreed, on a fine-grained granite rock *in situ*, five cup carvings, with a curved incised line over them. The cups are, as usual,

[1] History of Whitby, 1817, vol. ii. p. 666.

[2] Mr Cliffe, in a short letter published in the Archæologia Cambrensis for 1849,

from two to three inches in diameter. These sculpturings are placed, Mr Blight adds, "about two hundred yards from a strongly fortified group of hut circles, and one hundred yards only from the site of a large walled grave, which, on being opened by a former occupant of the estate, was found to contain an urn with ashes."

Isle of Man.—In the wood situated immediately behind the churchyard of Kirk Braddan—a locality so celebrated for its number of Runic inscriptions and crosses—is an ancient city or town, with an angled portion of its strong encircling walls still standing, and faced with huge upright stones. The foundations of circular and other forms of ancient structures and dwellings exist in a secondary town or camp within the circuit of the wood. On the sides of the largest outcrop of rock standing within this circuit, Professor Babington and I traced, after the removal of a covering of old moss, a number of cup excavations, some of them conjoined together, by grooves or guttered lines, as represented in Plate II. figs. 1 and 2. One of a great group of massive stones placed on the northern border of the wood has between twenty and thirty cups cut upon it,—some of them apparently arranged in a circular form. Three or four stones within or near this interesting site of an ancient Manx community, appear to show artificial straight lines and markings, for tracings of some of which I am indebted to the kindness of Dr Alcock of Birmingham. In his "Vestigia Insulæ Manxiæ Antiquiora" (pp. 96 and 190), Dr Oswald alludes to this ancient town, and states that its remains extend over ten acres or more; and he gives a drawing of portions of the walls, and of a flat excavated flagstone surrounded by the remains of a small circle.[1]

p. 321, alludes briefly to some of the many megalithic remains in this district of Merionethshire, and incidentally states that, in a large cairn on the summit of Penmorn, he observed "a huge stone with remarkable indentations." Are these indentations artificial cup excavations?

[1] Another old churchyard in the Isle of Man, rich in Runic monumental stones,—that of Manghold,—is still surrounded at different parts with a deep ditch and a high rampart. Within the area of these ancient fortifications at Manghold stands the church, thickly surrounded by graves. The line of fortifications is much more extensive than the site of the interments, containing about five acres; and in other parts within their circuit, I traced in the green sward the remains of old hut

Plate XXIV.

ROCKS AT CHATTON LAW, NORTHUMBERLAND.

PLATE XXV.

ROCK AT BEWICK, RUTHVEN WEEM.

A. Ritchie, Lith. Edin.

Plate XXVI.

From Carlowrie, Robin Hood's Bay, &c.

A. Ritchie, Lith. Edin.r

10. *ON THE SURFACES OF ISOLATED ROCKS.*

Several of the lapidary carvings included in the last section were found cut upon rocks *in situ* within or near old British strengths or towns. But there is another section of them carved on rocks which are so far isolated, that nowhere near them do there now exist any traces of ramparts, walls, fosses, or circular hut foundations, such as are so often observable in our island in localities of ancient human communities.

In all likelihood, however, the rock carvings I allude to were cut originally in the vicinity of collections of human population, though there now remain no visible evidences of that population except their rock sculptures and their sepultures.

We have a variety of examples of this last kind in Argyleshire, in the district lying between Lochgilphead on the east, and Crinan on the west coast of that county. In other words, on the higher grounds skirting the valley in which the Crinan Canal passes from Loch Fyne or Loch Gilp to the Atlantic Ocean, several localities have been here discovered with the rocks *in situ*, sculptured with ring and cup carvings; as at Carnban, Auchnabreach, Tyness, and Calton Mor.

Carnban, Argyleshire.—The first notice of the rock-sculptures in Northumberland, and, as I believe, in England, was published, as I have just stated, in 1852. The Rev. Mr Greenwell, of Durham, who discovered the carvings on the Rowton Lynn, &c., read, as already stated, a paper on the subject earlier in the same year to the Archæological Institute. In 1830, or twenty-two years before, a notice of the analogous rock ring-cuttings at Carnban was published by Mr Archibald Currie, formerly a schoolmaster at Rothesay, in his Description of the Antiquities, &c., of North Knapdale. He urges that the lapidary carvings on the sculptured rock at Carnban are "worthy of the attention of the scientific antiquarian;" and to his account of the ring-cuttings there

circles and dwellings. At Manghold, as at Kirk Braddan—which were both probably in ancient times the sites of fortified towns—there now are to be seen within the area of the old walls, the graves of the modern dead, and the remnants of the dwellings of ancient living man. In the centre of each is the Christian church—the only modern building—and in both localities it may possibly occupy the site of some ancient fane for Pagan worship.

he adds a theory of their import which possesses probably one merit, namely, that it is at least both as reasonable and as ridiculous as many hypotheses that have since been broached on the same subject. "In the hill," writes Mr Currie, "about a mile above the 'Doctor's' (the sobriquet, as I am told, by which Mr M'Callum, the former innkeeper at Carnban, was usually known), on a rock whose surface is level with the plain, there are cut groups of concentric circles, three in a line, and fifteen in number. These circles are similar to those used in astronomical plates for elucidating the revolution of the planets round the sun. Of these circles, there are five in each of the concentric ones, probably to correspond with the number of the planets then known. The Doctor is of opinion that this is one of those methods which were in use previous to the introduction of letters into this country, for commemorating extraordinary events; and in the case in question, he thinks these circles represent the right of the proprietor to the estate where the rock lies on which they are engraved, and that they signify that his descendants were to enjoy it as long as the celestial luminaries which the circles represent should perform their unerring revolutions round the sun. This opinion is not at all improbable; for of old, rights to inheritances were in many instances conveyed by hieroglyphic symbols, similar to those now described. I am informed, on unquestionable authority, that the right of Macmillan to the estate of Knap, in South Knapdale, was cut in rude characters in the Celtic language on a rock in the shore at the point of Knap, which are now obliterated by the action of the waves on its surface." [1]

Auchnabreach.—About a mile and a half north-eastward of Carnban, and higher on the sides of the valley, are rocks which show still more extensive ring-carvings.[2] On the high ground upon the farm of Auchnabreach

[1] See Description of the Antiquities and Scenery of the Parish of North Knapdale, Argyleshire, by Archibald Currie, author of the "Principles of Gaelic Grammar, &c., Glasgow, 1830, p. 34. The appearances presented by the cup and ring cuttings on the hill above Carnban are all faithfully represented in Plate XXII., and it is hence unnecessary to describe them. I have already (p. 2) enumerated the figures of which they consist. No other carvings have hitherto been found on the same hill.

[2] The existence of sculptures at Auchnabreach was first discovered by the former intelligent farmer there, Mr Maclean, now innkeeper at Kilmartin.

are various bare, rounded scalps of Silurian schist, projecting to the height of two, ten, twenty or more feet above the surface. These scalps are magnificent specimens of rock surfaces ground and planed down by old geological glacier action. The surfaces of three of these rocks—thus smoothed and prepared as it were by the gigantic polishing machinery of nature—have been subsequently scratched and carved in numerous places with rude cup and ring cuttings by the frail and feeble hand of archaic man. See specimens of these Auchnabreach carvings in Plates XXI. and XXIII.

The three rocks on which the cup and ring carvings have hitherto been discovered are in the second field above the old farm-house of Auchnabreach.

The first and highest of these rocks has, scattered over a surface twenty-nine yards long and seven yards wide, about forty concentric ring-cuttings, and nearly an equal number of cups and hollows without circles around them. The Rev. Mr Mapleton, who has most carefully examined these sculpturings, informs me that of the ring-cuttings one is three feet in diameter, and composed of seven circles and a central cup; a second, two feet five inches in diameter, consists of six circles cut around a central cup; a third, two feet seven inches in diameter, is formed of four concentric circles; a fourth, one foot nine inches broad, contains six circles and a central cup; a fifth, eight inches in diameter, has a cup surrounded by two circles; and so on.

The second rock scalp at Auchnabreach is about forty feet long, and thirty-six feet broad. It contains thirty-six groups of ring-cuttings, and fourteen cup-cuttings. The largest concentric ring-cutting is two feet seven inches in diameter, and consists of nine or ten circles; a second, of nearly the same diameter, has nine circles carved around its central cup; a third, seven circles; and so on. Almost all, but not all, of these concentric circles at Auchnabreach are traversed by the usual straight radial groove or duct. These grooves run on in some instances and unite with others. Their direction is generally, but not always, downwards.

My kind friend, the Rev. Mr M'Bride of Bute, the well-known geologist, discovered the third sculptured rock here, when looking for the effects of glaciation. This third rock is placed about a hundred or a

hundred and fifty yards south of the others, and its exposed surface is much smaller than the other two, being as yet cleared of turf only to the extent of about three yards in length, and two in breadth. Upon the cleared portion I counted twelve ring cuttings, each with a radial groove, and seventeen cups and hollows with no surrounding circle.

On the Auchnabreach rocks most of the concentric circles are so scattered as to be separate and unconnected with each other, but occasionally two or more touch at their edges. The radial groove is usually, but not always present. Some consist only of one cup and one surrounding ring, and the radial groove is untraceable in several of these. There are two or three peculiar sculpturings, especially on the second rock-scalp. One of them consists of a very distinct double volute, as represented at the bottom of first section of Plate XXII., the whole lateral breadth of the two combined spirals being about ten or eleven inches, while their depth is about eight inches. A second group of three circles near this touched each other and amalgamated at their sides. (See the same Plate.) Near these two groups was a third, consisting of one concentric ring around a central cup, and with a radial groove. The ring was six inches in diameter. From its outer edge, on the side opposite the radial groove, proceed three straight parallel lines, each about eleven inches in length. See Plate II. fig. 12. The radial line from this same circle joins the outer circle of another ring-cutting. These, and some surrounding circles and cups, are represented in Plate XXXII., first section. Some of the ring-cuttings, particularly on the third rock, are much twisted and indented on their sides (see same Plate, second section), and by no means so accurately and regularly round in form as these lapidary circles usually are.

The rock upon which the first and largest collection of concentric rings and cups at Auchnabreach is placed has a Gaelic name, which, according to John Kerr, an old shepherd brought up on the farm, is "Leachd-nan-Sleagher"—the rock of the spears. Mr Henry D. Graham, to whom I am much indebted for drawings of the Auchnabreach sculptures and others, believes the word to be "Leachd-nan-Sluagh"—the rock of the hosts or gatherings. The Rev. Mr M'Bride has perhaps more happily suggested it to be "Leachd-nan-Slochd"—the rock of the pits or impressions. The rock itself, let me add, is in a position which commands a

charming view of the waters and shores of Loch Gilp and Loch Fyne, with the distant and magnificent hills of Arran serving as a gigantic background.

Callton Mór and Tyness, Argyleshire.—A few years ago, when a few miles west of Auchnabreach, some rock in the garden of Calton Mor, the beautiful seat of Mr Malcolm of Poltalloch, was being blasted and removed, several carved concentric circles were observed by the workmen to be cut on the rock when it was exposed. But, unfortunately, ere these sculpturings attracted sufficient attention, all were destroyed except two specimens, which are carefully preserved, and show the usual forms of these concentric rings and cups. Calton Mor is four or five miles distant from Carnban; and about a mile north from Calton Mor are the sculptured stones at Leargie, near Kilmartin, described already at p. 24.

Near Calton Mor, is a rock at Tyness, with eleven ring cuttings upon it, and some cups. Mr Mappleton informs me, that on the hill-top above Tyness there stood a cairn, in which he found lately the remains of two cists and some burnt bones, with "a skeleton, of later date, between the two cists, but probably put there by the men who destroyed the cairn. There is also," he adds, "apparently the remains of a 'dun,' a quarter of a mile north-east of Tyness."

I have spoken of these sculptured rocks at Carnban, Auchnabreach, Tyness, and Calton Mor as "isolated," because few or no evidences of ancient camps or communities are now, as far as I could observe, to be found near them. They all lie, however, within a few miles of each other, along the valley of the Crinan Canal; and that valley—forming the neck to the peninsula of Cantyre—is, as we have already seen, full of the sepulchral remains of an ancient and large population. All the neighbouring ground belongs to the rich and princely estate of Poltalloch, and is in most places too highly cultivated, agriculturally, to allow of the foundations of hut circles, ramparted walls, and other such signs of human habitations, to have remained. But the very nomenclature of the hills, lying within the circuit of this valley of sculptured rocks and stones, sufficiently attests its former populousness and importance, by showing that every hill-top was formerly a fort or "dun." My friend, Dr Hunter, pointed out to me that, standing on the hill on which the Carnban sculptures are cut, we had, within a radius of one or two

miles only, Dunamuck, Dunans, Dunbuy, Dunchain, Dunamarak, Duncraigig, and Dunadd,—the last of these a fort, still remarkable by its huge cyclopic walls, and the high and isolated conical rock on which it is built. In the seventh and eighth centuries it continued to form, as we know from ancient Irish annals, one of the most important strongholds in the Western Highlands.[1]

Plate XXI.

ROCKS AT AUCHNABREACH, ARGYLESHIRE.

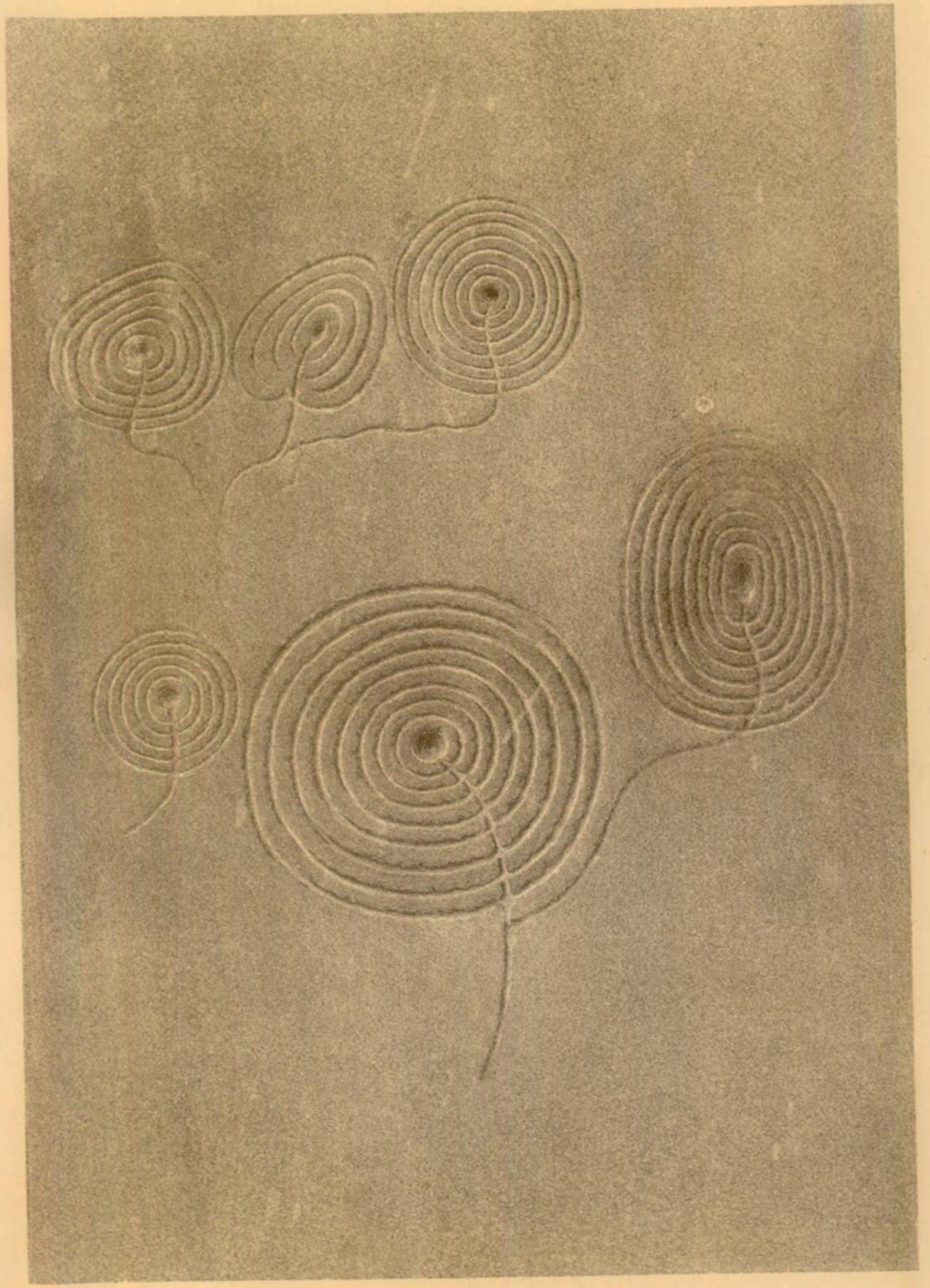


PLATE XXII.

SCULPTURED ROCK AT CARNBAN.

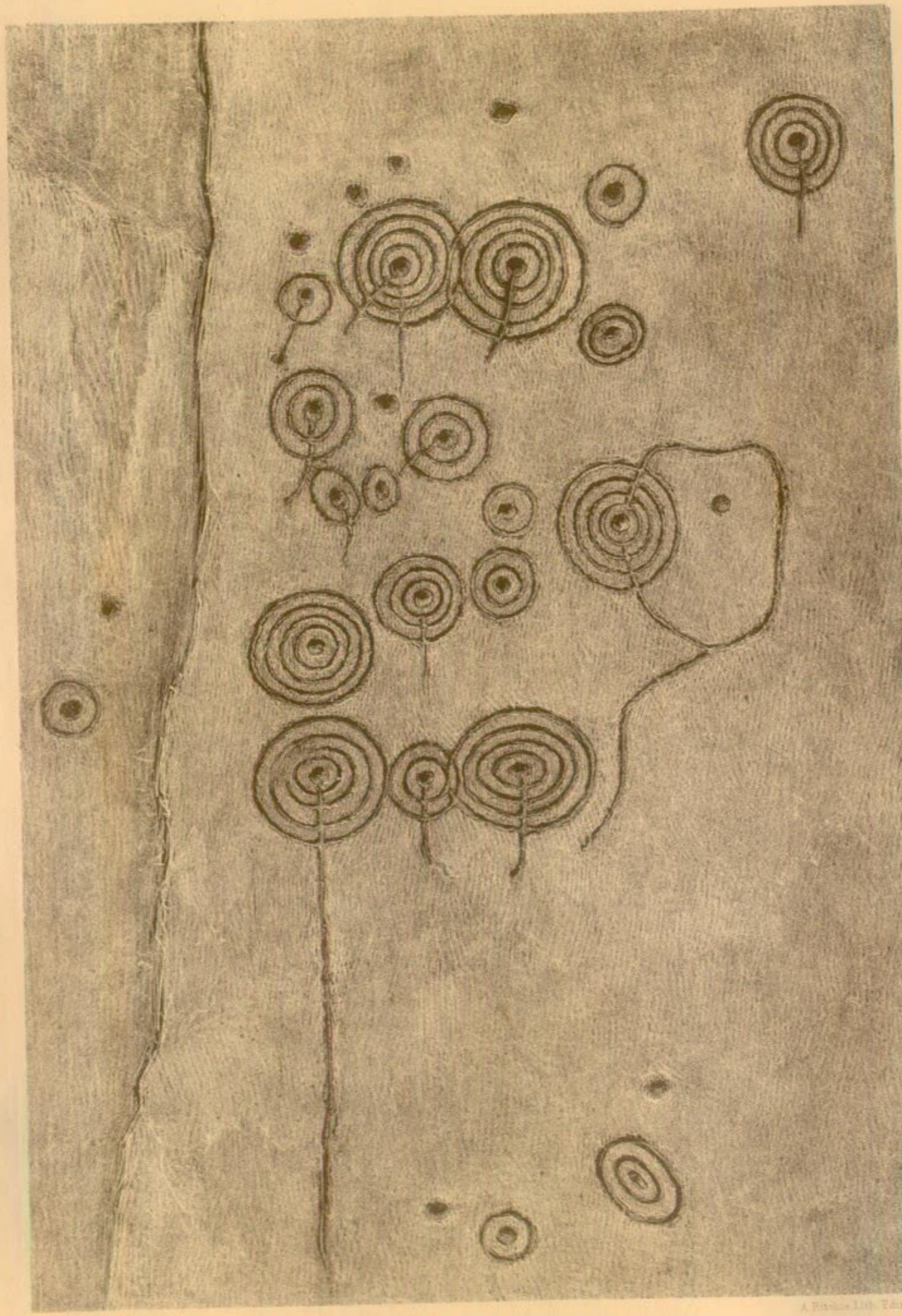
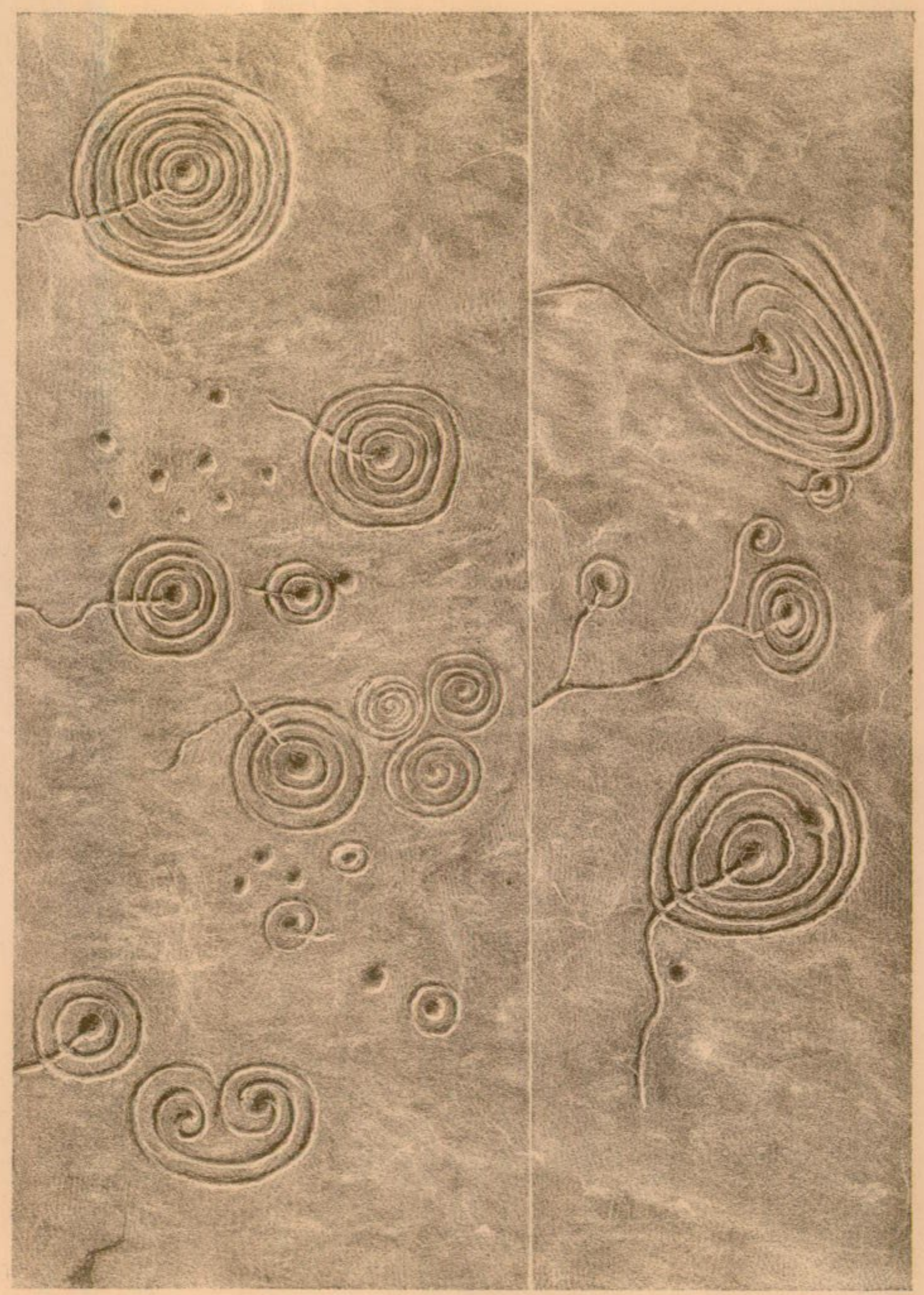


PLATE XXIII.

SCULPTURED ROCKS AT AUCHNABREACH. (SEE ALSO XXI.)



A. Fotheis Lith. Edin.

In the preceding pages I have cited numerous examples of the cup and ring carvings, as found on individual stones connected with archaic sepulture or habitation. Some of the examples already quoted, as the stones found at Walltown, Auchinlary, Frith, &c., are so indeterminate in the conditions under which they were found, that perhaps they should have been more correctly placed in this chapter. I have notes of a few instances where the sculptures were found on stones of a still more isolated cast; as at

Balvraid, in Glenelg, Inverness-shire.—Mr Joass, of Dingwall, discovered, about half a mile from the well-known old brochs of Glenelg, a stone covered with cup-markings, and represented in Plate XIV. fig. 2. "The stone, which measures above six feet in length, is," he writes me, "lying on the ground. The markings I have sketched are quite distinct; but there are a great many more, particularly towards the left-hand end, which are rather faint, and they appear to be disposed in rows with a certain degree of regularity."

Cargill, Perthshire.—In the thirteenth volume of the first Statistical Account of Scotland, a description of the parish of Cargill was published about fifty years ago. It is therein stated, "Near the village of Cargill may be seen some erect stones of considerable magnitude, having the figure of the moon and stars cut out on them, and are probably the rude remains of Pagan superstition. The corn field where these stones stand is called Moonshade to this day" (p. 536). The stones thus marked, and standing in Moonshade or Moonbutt's field, were dug around and under,

[1] See Dr Reeves' Life of St Columba, pp. 377 and 384; Anno Dom. 683, "Obsessio Duin At.;" Anno Dom. 736, "Œngus Mac Fergusa, rex Pictorum, vastavit regiones Dailriatai et obtinuit Dun Att."

and buried some half century ago in the agricultural improvement of the ground. Mr Fergusson, the very intelligent schoolmaster of the parish, has repeatedly tried to discover these buried stone relics, but hitherto in vain. But he has been more successful in disinterring other marked and carved stones in his neighbourhood.

A. In Newbigging, which borders upon the Moonshade fields, he raised a stone, a corner of which jutted from the earth. It is a slab of grey whinstone, three feet six inches in length, two feet one inch in breadth, and seven inches in thickness. Upon one of its faces—as represented in Plate V. fig. 3—are five series of concentric circles and some isolated cups. The external rings of four of the series of circles run more or less into each other. The radial ducts from two of the largest unite into a common gutter, which, after running a considerable space, ends in an isolated cup. Two of the circles do not show any radial groove.

B. More lately in Gladesfield, about ten or twelve hundred yards west of the supposed site of the Moonbutts, Mr Fergusson has uncovered a stone still more sculptured. The stone is about five feet in height, and three and a half broad. One side of it is sculptured in the way represented in Plate V. fig. 4. The sculptures consist of a number of scattered isolated cups, of several cups surrounded with circles, and of radial grooves, some of which are connected with a gutter which runs straight along the surface of the stone for a distance of about four feet. Some of the circles are single; one cup has two, another three, and a fourth has four or five concentric circles drawn around it. One concentric circle has its outer ring passing in its course through three cups; and its radial duct runs outward to the left, and forms the beginning or end of the long, linear straight groove which passes longitudinally along the face of the stone.

C. About two hundred yards north of the stone (*A*) is the Brisbane stone, about six feet in length, and three and a half in breadth, with a cup-marking or two upon its face.

D. Upon a stone, about a hundred yards or more east of the schoolhouse, Mr Fergusson has found a stone with twelve or fifteen cup-marks upon it. The stone was discovered in "a small mound" composed of stones and earth. The mound is about twenty-four feet long, fifteen broad, and three high. Further researches in this mound or barrow may

possibly result in the discovery of sepulchral remains, which may prove interesting.

Mr Fergusson believes that the stones at Cargill are arranged in a methodic and angulated direction in regard to each other. In their near neighbourhood one or more megalithic circles are reported to have formerly stood.

Migvie, Aberdeenshire—At a distance of about two hundred yards eastward from the old churchyard of Migvie, the plough, a few years ago, struck upon a flat stone, which, when dug out, was found to be nearly triangular in shape, about two feet nine inches long, and three feet across at its broadest part. Part of its surface was covered with various cup excavations, four of which were united crosswise by ducts or gutters, and some in pairs by grooves of various depths. For a drawing of the stone I am indebted to the kindness of Dr Robertson, of Indego. The field in which this stone was discovered, and still lies, is about a mile distant from an earth-house or weem, which was found in the same parish.

Inchture, Perthshire.—My friend, the Rev. Mr Honey, of Inchture, showed me some time ago a whinstone block, found in the foundation of a wall opposite the church, and having on its hard and smooth surface three or four cup markings, of the usual breadth and depth.

Arbirlot, Forfarshire.—About two miles from the Kirktown of Arbirlot, Mr Gibb, of Aberdeen, some years ago observed and sketched an earth-fast stone presenting the cup and ring markings figured in Plate XV. fig. 3. They will be observed to belong to the second type, described in p. 4. Other similar stones are said to be in the neighbourhood. Dr Dickson, of Carnoustie, and Mr Miller, of Arbroath, have both of late searched, but hitherto unsuccessfully, for these marked rocks. The so-called "Girdle-stone," in the adjoining parish of Rescobie, about four feet long and three broad, is cut on its surface with two circles, the largest of which is above two feet and a half broad, and hence does not, I believe, belong to the class which we are considering in this essay.

Pitscandly, Forfarshire.—In Mr Stuart's work on the "Sculptured Stones of Scotland" he mentions a carved fragment at Pitscandly, in Forfarshire. Mr Shaw has kindly examined this stone for me, and furnished me with a drawing of it, which is copied in Plate XVI. fig. 4. The stone is about a foot and a half in breadth and length; on its surface are two

or three cup-excavations, a single incised ring, and two concentric circles, with a central cup and long radial groove. In the "Proceedings of the Society of Antiquaries of Scotland," vol. ii. p. 190, Mr Jervise mentions this piece of carved stone, and describes it as reputed to have scaled off from one of the two remaining large obelisks of Pitscandly—an opinion which, he informs me, some later observations of his own have confirmed. These Pitscandly stones stand on the top of an artificial mound. One of them is of great size, and "both," adds Mr Jervise, "appear to be the remains of an ancient circle. A clay urn, with burned ashes, was found at the base of one of the stones. The whole of the locality abounds in traces of ancient sepulture."

La Mancha, Peeblesshire.—A broken slab, about two feet square, covered with very rude double rings and a spiral circle, was found by Mr Mackintosh, at La Mancha, in Peeblesshire, in digging in a bank of gravel. There were some other large stones near it; none of them marked. Possibly this stone, therefore, is sepulchral in its character. The half-effaced circular sculptures upon it are represented in Plate XVI. fig. 3.

Jedburgh, Roxburyhshire.—Sometime ago Mr Tate, of Alnwick, discovered in the garden of Mr Matthewson at Jedburgh a stone cut with concentric circles, possibly a sepulchral cist, but peculiar in some respects. The stone is roundish, but broken off at one side, and about eighteen inches broad. Its face is covered by five incised concentric rings, and through the central cup pass at right angles two straight lines, which completely bisect all the circles. The outermost circle is about fourteen inches in diameter. Some inches to the left of the central cup is a second, with one incised circle around it. Arranged circularly outside of the outermost circle is a series or ring of points or stars, each cut out—so Dr Falla writes me—"as with a single stroke of a pick, rather than hewn out." I am indebted to the same gentleman for the sketch of this stone, given in Plate XVI. fig. 1.

High Hucklow, Derbyshire.—A detached flat stone, found in the Peak of Derby, and which I have already alluded to at page 6, is of the same shape as some of the urn covers met with elsewhere. The cast of it sent to me by Dr Aveling shows it to be a broken slab, measuring twenty-one inches by eighteen, and cut on one side by a concentric

circle of seven rings, and probably of twenty inches in diameter, when the stone was entire. There is no central depression nor radial groove. See a representation of this fragment in Plate XVI. fig. 2.

PLATE V.

STONES AT MAUGHANBY AND CARGILL.

A. Ritchie, Lith. Edin.

Plate XIV.

STONES FROM ROSSHIRE AND FORFARSHIRE.

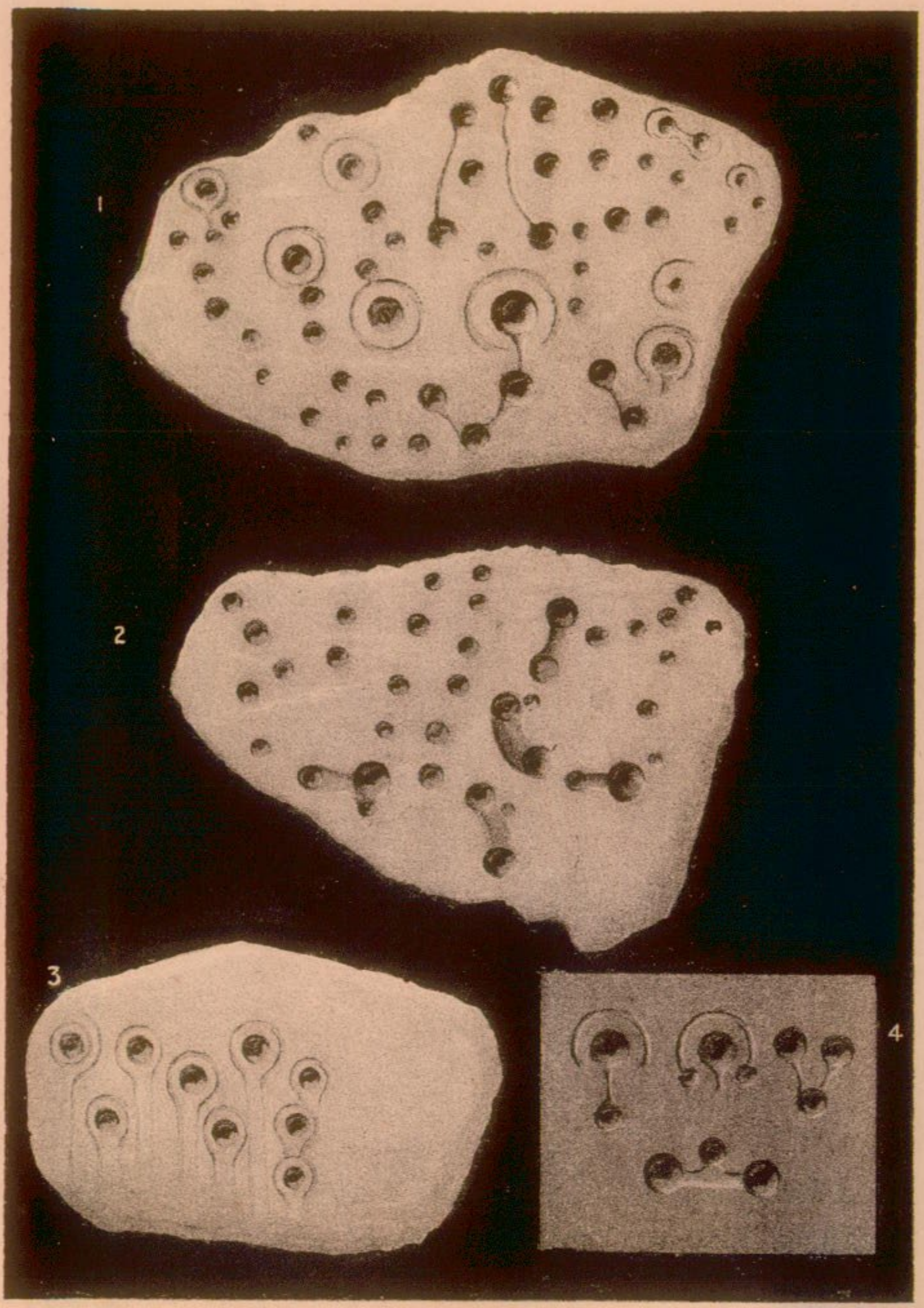


Plate XVI.

ISOLATED STONES FROM JEDBURGH, &c.,

PART III.

Analogous Sculptures in other Countries.

The instances of cup and ring sculptures which I have described or alluded to in the preceding chapters, have—with a few exceptions noted in the context—been all discovered within the last few years; and, no doubt, very many more examples will be detected in other localities in Scotland and England, when sufficient archæological investigation is directed towards them. But, in the meantime, it is not uninteresting to inquire if any similar lapidary sculptures have been found elsewhere. On this subject there still exists as yet very limited information. I am not aware that any carvings of the same early art-type have hitherto attracted the notice of antiquaries or travellers in any distant quarters of the world; and Brittany and Scandinavia are the only parts of the Continent of Europe where, as far as I know, any analagous sculpturings have as yet been met with. They have been found also in Ireland. I shall very briefly advert to some of the leading instances and forms of the analogous early lapidary sculptures of Ireland and on the Continent, with a view of comparing and contrasting them with the simpler cup and ring cuttings of Great Britain.

In Ireland, stones, sculptured with cups and concentric rings exactly like those we have described in the preceding pages, have been found, I believe, in different parts of the island. For example, in Plate XXVII. is a rough sketch of a large slab cut with cups and rings, and groups of circles apparently with radial grooves similar to those of Scotland and England, which was found in the western county of Kerry. A

cast of it has been for many years in the Museum of the Royal Irish Academy.[1]

I have been furnished by Dr Wise with a sketch and note of a flag sandstone found by him at a place called Aghnacerribb, near Dingle, in Kerry, partially carved in a similar style to the preceding stone from the same county. The stone at Aghnacerrib is about five feet three inches square, flat on its surface, and probably *in situ*. Upon it are four cups of different sizes, surrounded by two or three concentric circles, made with almost geometrical precision. No radial ducts or grooves traverse the circles. In the neighbourhood of the stone are other interesting archæological remains, as stone circles, a circular fort, and many clog-hauns, or ancient stone dwellings.

As specimens of apparently similar sculptures found existing on the eastern side of the island, I may refer to two slabs of granite, discovered and sketched by Mr Du Noyer, from two localities in the county of Dublin. The first, a slab lying close to the base of the round tower of Rathmichael Old Church, in the county of Dublin, has cut upon it two groups of four concentric circles, each connected by three lines. The second slab was used as a tombstone in the churchyard of Tullow, and has an ornamentation. In both these specimens the circles are, I believe, formed by intermittent dots or pits, and not, as in the British specimens, by continuous incised lines. But these sculptures are peculiar from another circumstance, namely, that outside the circles, and intermediately between them, are marked out straight lines running in different directions, an appearance never seen around the cup and ring cuttings of Scotland and England. Mr Du Noyer suggests that those two stones under discussion were "carved in Pagan times, and the stones subsequently adapted to Christian uses."[2]

I have in a previous page (p. 24) referred to a cromlech at Rathkenny

[1] Dr Graves has, I am informed, made an important collection of analagous sculptures from stones and rocks in various parts of Ireland, and we may soon expect a full account of them from his able pen.

[2] Proceedings of the Royal Irish Academy, vol. viii. p. 61. I have seen sketches of stones found in Ireland at East Goulane and Banoge with rings and cups, and with the same exterior straight lines; but the circles in these stones are also, I am informed by Mr Stuart, made up of pits, and not of lines.

in Ireland, sculptured with cups and rings, and apparently, from the sketch sent to me, scratched over with many straight lines.

A series of most interesting sepulchral sculptures has lately been discovered by Mr Conwell, of Trim, upon the stones of an extensive group of ancient chambered cairns, reared upon the summits of a ridge of hills known as Sleive-na-Callighe, in the county of Meath. The cairns are circular externally; and internally the largest consist for the most part of small chambers and cists arranged in a cruciform shape, the narrow entrance passage representing the shaft of the cross. The chambers are formed by large flags set on edge, and rough pillar stones, while the roofs are made of overlapping and converging slabs. Many of the stones forming the walls of the chambers and cists are carved, most frequently by punched or picked work, and sometimes by scraping and the chisel; and so varied is the sculpturing, that no two stones are exactly alike. I am indebted to the courtesy of Mr Conwell for some sketches of them. Among the figures are numerous cup excavations, groups of concentric circles, with and without central depressions, the rings being sometimes complete, sometimes incomplete, and interspersed with volutes or spirals. But in addition to these figures, and freely commixed with them, are much more elaborate sculptures in the form of lunet-shaped, zig-zag, and straight lines; loops, arches, lozenges, and diamond or cone-shaped figures; dots, stars, and circles, with radiating rays; some quadrangular, triangular, and reticulated forms, devices like the stalk and fibre system of a leaf, &c. In the "Meath Herald" for 21st October 1865, Mr Du Noyer, an excellent Irish antiquary, compares some of these carvings at Sleive-na-Callighe to the figures of a wooden shield, of a gold torque, a two-wheeled chariot, a boat with high poop and stern, &c.

Within these ancient graves, the walls of which are so curiously carved, Mr Conwell has found many portions of burned human bones; with various relics and implements, as pieces of broken and very rude pottery; several round stone balls[1] of syenite and ironstone, &c.; the beads of a stone necklace; a white flint arrowhead, and some flint flakes; two or three hundred sea-shells, and rounded white sea-pebbles: an

[1] The late Dr Petrie had in his collection one of these balls, which he told me had been found within the sepulchral chambers of New Grange.

enormous collection of bone implements, as portions of bone pins, numerous broken pieces of bone tools and combs, many of them carved with figures, curved lines, and circles,—one of them containing the representation of a stag in crosshatch lines; besides hundreds of broken pieces of bone, levelled or smoothed apparently with cross lines, as if intended for carving; an ornamented bronze pin; one or two pieces of jet; and in the southern side crypt of one of the largest cairns, and near the entrance of the crypt, a few small amber beads, with portions of several small bronze rings, five or six fragments of glass and glass beads, a ring of iron about half an inch in diameter, an iron punch five inches long, with a chisel-shaped point and broadened head, and five or six other small corroded pieces of the same metal. The drawings in Plate XXVIII. are copies of the figures cut on some of the cysts or chambers; the last and lowest drawing being much more finished by the artist than the first, and giving a general view of the most elaborate crypt yet detected in this most interesting necropolis. A large stone basin was placed on the floor of the crypt.

I do not know whether the remarkable sculptures within the chambered cairns or tumuli of Sleive-na-Callighe should be regarded as earlier, or later, or contemporaneous with the diversified and decorative carvings which exist in Ireland on some of the stones of the gigantic old barrows that stand on the lower banks of the Boyne, a few miles above Drogheda. Several years ago I had an opportunity of visiting the great old necropolis there, and of seeing the megalithic interior of New Grange along with my friend, Sir William Wilde. From his admirable work on the Boyne and Blackwater, there is copied into Plate XXIX. a series of specimens of the sculptures cut on the stones of the tumuli of New Grange and Dowth.

Figure 1 shows the double spirals, &c., carved on the enormous curbstone that stands at the entrance to the passage or gallery of New Grange. This gallery, which is sixty-three feet long, leads into the high dome-roofed chamber which forms the centre. These volutes, like others in the interior of this vast sepulchral mound, are formed of a double coil, commencing with a loop. On this curbstone the lines are said to differ from those on our lapidary cuttings in Scotland and England by being apparently raised in relief, rather than incised. In

fig. 6 is represented a small portion of the edge of a lintel, which projects horizontally a short distance above and within the line of the present entrance of the gallery—carefully carved in lozenge and sandglass patterns—and with the lozenges partially dotted or pitted with minute pick work. The great interior chamber has three crypts or recesses leading off from it; and fig. 2 gives a view of the eastern crypt, which is slightly narrowed at its entrance, and has the stones composing its roof carved over with circles, volutes, and chevrons. These carvings have been executed after the stones were built into their present places, as the patterns pass from one stone to another. In the bottom of the crypt is seen—what existed in all the three recesses—an oval, slightly concave, stone basin. A similar stone basin of still larger size is represented in Plate XXVIII. as having been found in one of the crypts at Sleive-na-Callighe. In fig. 3 we have a more enlarged view of some of the markings in the eastern crypt,—the double spirals, in most instances, having seven turns. Fig. 7 shows another variation in the type of the cuttings, as seen on one of the blocks forming the roof of the same or eastern crypt. A leaf-like or fern pattern, cut upon the surface of one of the stones of the western crypt, is shown in fig. 4. A peculiar linear and angulated scroll, like a broken gridiron, is cut upon a stone facing the western crypt, and is reproduced in fig. 5. Several of the stones in this pyramid-like tomb have round cuttings upon them, which Sir William Wilde speaks of as small sockets or mortises (cups?), made "for the insertion of wedges, either to split the stones or lift them."

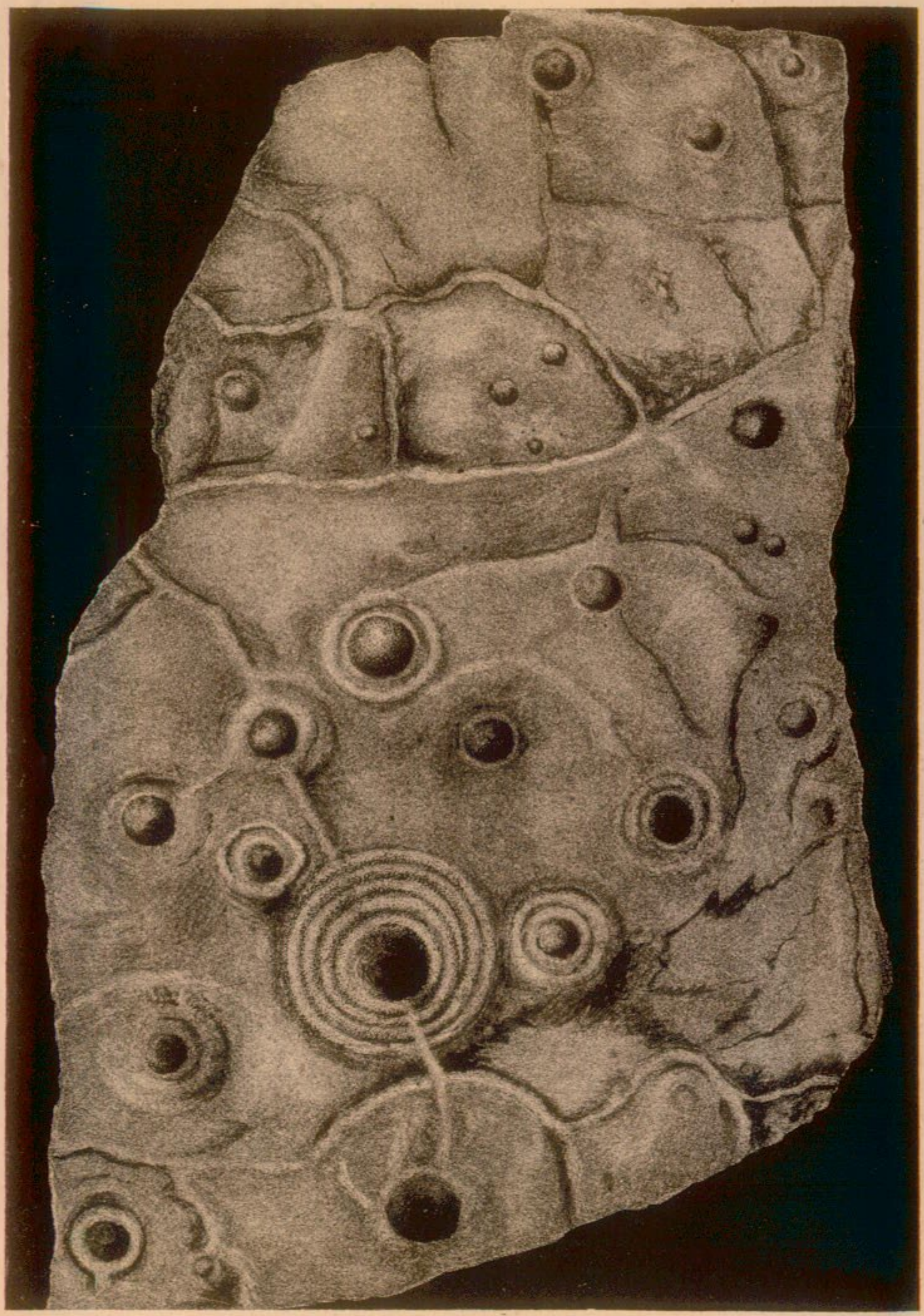
When describing the sculptures of New Grange, Sir William Wilde states, that in Ireland, tomb-sculpturing or tomb-writing of similar characters "have been found in analogous megalithic tombs in the counties of Down and Donegal," and in the great sepulchral mound at Dowth, about half a mile from New Grange. Several of the blocks forming an interior chamber at Dowth are carved like those at New Grange, and present no small beauty of design; but some of the patterns are different—as, for example, two selected in figs. 8 and 9, showing concentric circles around a central cup; a double ring with a crucial pattern in its centre—such as is not unfrequent in Scandinavian lapidary sculptures; another ring, with numerous straight star-like radii diverging from its outer surface (a common device upon the sepulchral stones at

Sleive-na-Callighe), and another double circle with straight lines cut below it, and straight lines and zig-zags placed over it.

The two Plates XXVIII. and XXIX. are given with the view of showing the highly decorative and ornamental style of some of these Irish lapidary sculpturings, as compared with the comparatively ruder and simpler, and hence in all probability earlier, cup and ring cuttings which are found on the archaic carved stones of Scotland and England.

Plate XXVII.

SLAB FROM KERRY, IRELAND.



A. Ritchie. Lith. Edin.

PLATE XXVIII.

FROM CHAMBERED TUMULI AT SLEIVE-NA-CALLIGHA, IRELAND.

A. Ritchie, Lith. Edin.ʳ

Plate XXIX.

FROM TUMULI OF NEW GRANGE AND DOWTH, IRELAND.

A. Ritchie, Lith. Edin.ʳ

CHAP. VII.—LAPIDARY SCULPTURINGS IN BRITTANY.

In Brittany, the lapidary carvings upon the stones of some of the ancient tumuli and cromlechs must perhaps be considered—from their distinct representation of various actual objects—as still more advanced than those of Ireland.

But the simplest sculpturings also are sometimes seen on the Brittany sepulchral stones; as, for example, six cups upon the inner surface of one of the roofing-stones of the elongated chambered tumulus of Mount St Michael at Carnac, and which,—sketched by the kind assistance of Mr Barnwell,—are copied into Plate XI. fig. 6, from an interesting essay of his in the "Cambrian Archæologia" for January 1864. My friend, Captain Thomas, informs me, that on a propstone of the dolmen of Mené-Lud at Locmariaker, he found eighteen small cups arranged in the form of "an irregular circle and a short straight avenue leading from it;" and I could not quote a more accurate and careful observer.

I have seen no account of any separate concentric ring cuttings having been observed on the Brittany stones, except the statement by Baron Bonstetten, that on the interior surface of the capstone in the dolmen or cromlech called "Pierres Plates," at Locmariaker, there are cut-out circles or concentric discs, along with arched lines, leaves of fern, &c. Mr Barnwell tells me he has seen, on the "Pierres Plates," central dots or cups and annulets cut out, similar in appearance to the figures given as the symbol of the sun in astronomical works and almanacs. Captain Thomas has shown me rubbings which he made of cups and rings arranged upon these "Pierres Plates" in rows, which are again inclosed in

surrounding settings of elongated lines. He did not find in Brittany a single example of any concentric rings with a radial duct.

But many of the Brittany stones are cut much more elaborately. Thus the blocks used in the construction of the gallery and chamber of the great sepulchral mound at Gavr Inis, in the *Morbihan*, are everywhere densely covered over with continuous circular, spiral, zig-zag, looped, and various other types of carving, as represented in sketches of three of the stones forming a portion of the entrance gallery copied into Plate XXX. fig. 1. The other stones forming the gallery, &c., of this magnificent monument are all carved in analogous styles,—except where the quartz blocks have apparently proved too hard for the tools of the sculptors. These Gavr Inis sculptures represent a still more elaborate type of carving than that seen at New Grange, &c. in Ireland;—and besides, they display on several stones the important addition of the outlines of actual objects, namely, triangular-shaped celts[1] and well-drawn snakes placed among the ornamental lines.[2]

In other large Brittany tumuli more perfect, though still rude, representations of various other objects have now been detected upon the component granite stones by M. Galles, and by the remarkable researches of Mr Samuel Ferguson, of Dublin.[3] These gentlemen have lately discovered, upon the stones of the tumuli and cromlechs at Locmariaker, Isle Longul, &c., figures of various military weapons and arms, as battle-axes or hatchets (see Plate XXX. fig. 3), handled, and sometimes

[1] Dr Jameson has sent me a note of the figure of a celt or triangular "dagger," cut out upon a tall monolith at Auchonear, in the Scottish island of Arran. The figure, he states, is about 9 inches long, and 3 inches broad, at its base, and points upwards. There are no other markings on the stone. This is the only celt figure in Scotland of which I have heard. Dr Jameson has kindly inspected for me all the other standing-stones and circles in Arran, without discovering any markings or toolings upon one of them. I found none on those which I examined in the adjoining island of Bute.

[2] One of the stones in the gallery at Gavr Inis is "holed" or perforated obliquely on its face, the entrance and exit of the artificial perforation—which admits the hand—being about fifteen inches apart. Each opening has a semicircle or half ring in relief surrounding it. I am indebted to Miss Young for an excellent sketch of this stone.

[3] See the Proceedings of the Royal Irish Academy for 1864.

plumed,—bows, semi-circular and cross,—and oblong shields (see figs. 3 and 4); with some imperfect figures of animals. Many of these remarkable sculptures, it is to be remembered, were, as we shall see subsequently, found in sepulchres where abundance of stone weapons and objects were discovered,—but unaccompanied by any metallic instruments or ornaments.

In addition to these few remarks on the Brittany catacomb sculptures, let me add, that carvings also exist upon the stones of the open cromlechs in that country. In a celebrated cromlech at Locmariaker, called the Merchant's Table, the head stone is cut with a succession of rows of long parallel vertical lines, straight in their middle, and curved at their extremities; and besides there are carved out on the inferior surface of the capstone,—and before it was placed *in situ*,—various lines, and specially the figure of an axe, with a long looped handle and a floreated head, as represented in Plate XXX. fig. 2.

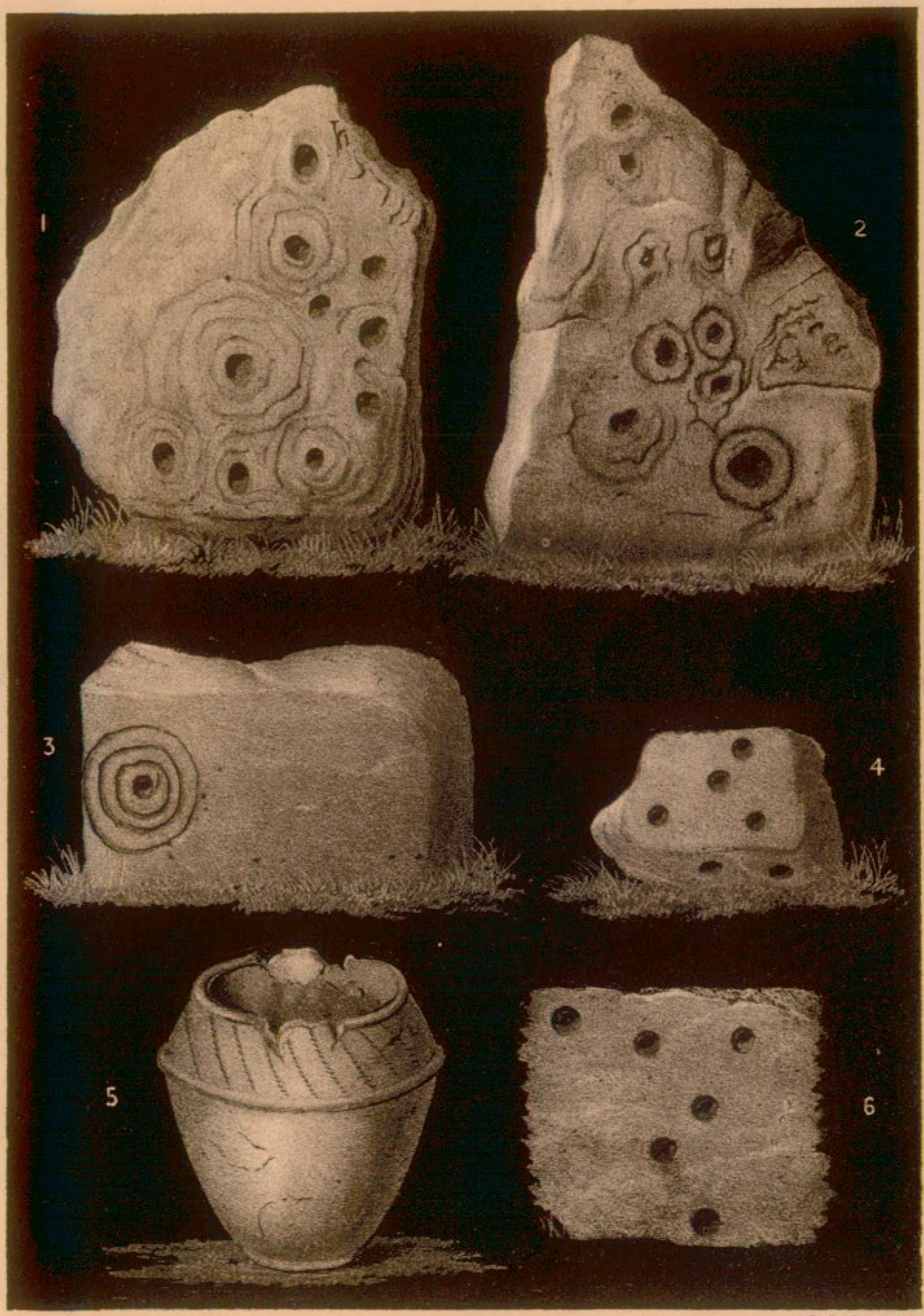
Some of these Brittany sculpturings are raised, and not incised, like those which I have described on the Scottish and English sculptured stones; and hence in this respect, as well as from the objective character of the sculptures, they seemingly indicate a higher type of art.

The surfaces of the megalithic structures in other parts of France do not appear to have been yet examined with any great accuracy. M. Alex. Bertrand, in his "Monuments Primitives de la Gaule," states, that above two thousand "dolmens" (megalithic tumuli and cromlechs) still exist on the soil of France; 500 of them being in the department of Lot alone, and 500 in that of Finisterre. New discoveries in prehistoric sculptures are almost certain to be attained in this extensive archæological field.[1]

[1] Lately, in his work upon the Antiquities of Poitou (*Epoques Antediluvienne et Celtique du Poitou*), M. Brouillet describes and figures some roundish and irregular excavations upon the capstones of several cromlechs in that neighbourhood, which he believes to be probably artificial; but they seem to me to be much more like the corrosions and destruction produced by weather and time. His observations upon the contents of various French cromlechs are more important. In the interior of several he found successive layers of human bones, separated by layers of flat stones. These bones were apparently all more or less bruised and often gnawed, and lay in regular anatomical order. No objects of metal were found along with them; but some pottery, bone weapons, and implements of flint and stone, were occasionally discovered within these cromlech sepulchres. In a preceding note at p. 24 I am

PLATE XI.

FROM YORKSHIRE AND BRITTANY TUMULI.



A. Ritchie, Lith. Edin.

Plate XXX

FROM SEPULCHRAL TUMULI AND CROMLECH OF BRITTANY.

1

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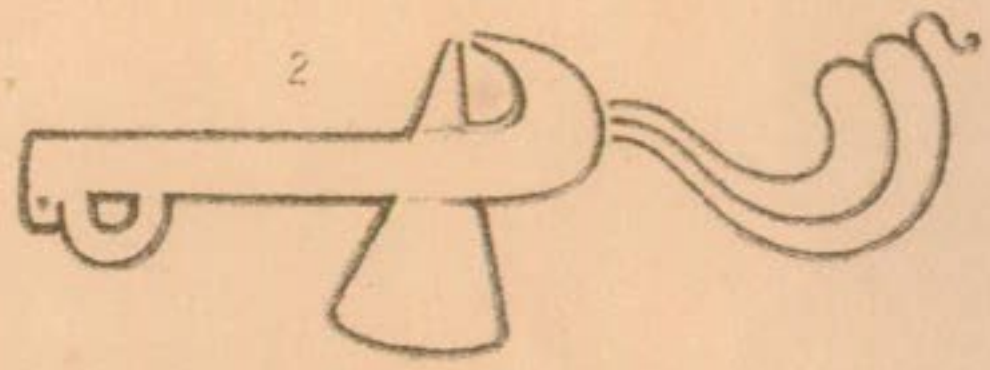

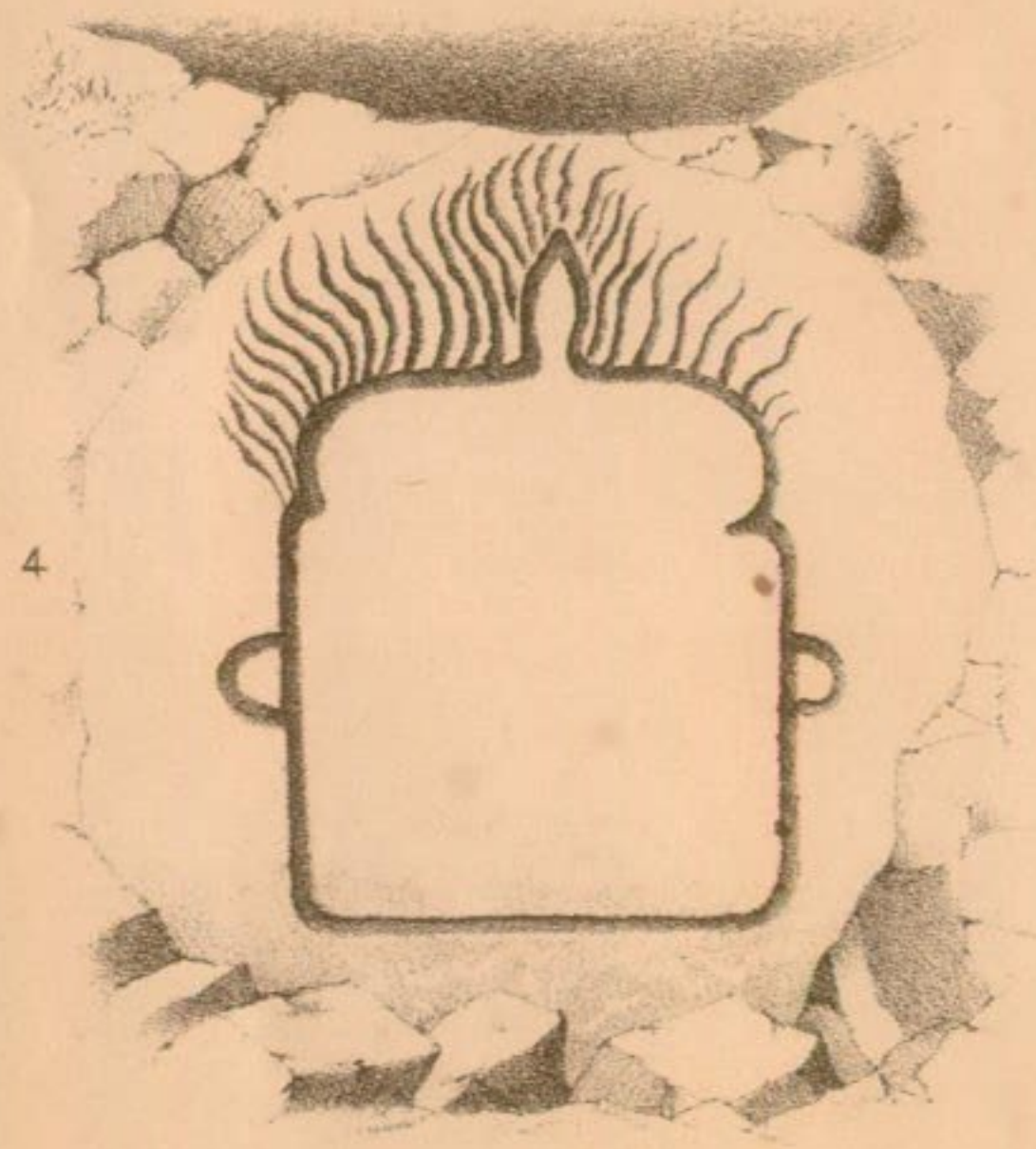

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CHAPTER VIII.—LAPIDARY SCULPTURINGS IN SCANDINAVIA.

I am not aware that the active school of Archæology in Scandinavia has hitherto paid any special attention to archaic pre-lettered carvings upon stones and rocks. But amidst their antiquarian literature, specimens are incidentally alluded to of lapidary cup and ring carvings, which are interesting in relation to the present inquiry; and some forms of ancient sculptures, different from ours, and peculiar to Sweden and Norway, have long attracted the attention of the northern antiquaries. One or two specimens and figures of each kind will be sufficient to illustrate my meaning.

Cup markings exist on a granite block, known as Balder's Altar, Baal's or Balder's Stone, near Falköping, in Sweden. The stone is of a somewhat ovoid shape, about six or seven feet long, and three feet high. Its upper surface is covered with cups of different sizes. Four of the largest and four small cups form a row obliquely across the middle of the stone; and along the side of the block there is another row of such cups, like those on the Bewick Stone, figured in Plate XXV. fig. 3. "Such holes," observes Professor Nilsson, "are frequently found in large stones both in Sweden and abroad, and are supposed," he adds, "to have been made upon heathen (or Baal) altars, in order to receive part of the blood of the sacrifice"—an opinion in which he seems inclined to join. But the cups, in some of their positions, as upon the sides of the Balder and Bewick Stones, and upon the surfaces of erect monoliths, could never possibly contain any fluid.[1] I have had copied into Plate XXX. fig. 1, a sketch of the Balder Stone, as given by Professor Nilsson in his "Scandaniska Nordens Ur-Invänare," p. 133.

Concentric circles are figured by the same author in another part of the same work (p. 167), as cut upon a large standing stone on Asige

perhaps wrong in conceiving that M. Bertrand states there were not above a dozen out of the many hundred cromlechs in France which were "holed" or perforated in their props; for since reading M. Brouillet's remarks, I believe M. Bertrand probably refers to incomplete and doubtful holes (*trous*), and not to complete perforations.

[1] Professor Nilsson thinks that these cupped Baal altar stones became the earliest holy water stones when Christianity was first introduced into Sweden.

Moor, in Halland, Sweden. The stone is probably one which formed the side of a tall trilithon, like those in the middle circles at Stonehenge, but one stone is now prostrate; and near them stand, six feet apart, two similar stones, from fourteen to sixteen feet in height, above three broad, two in thickness, and flat on the top, where apparently a transverse impost was formerly placed. These great pillars are known under the name of "Haborg's Gibbet," or "Hanging Stones." The circles made on the standing stone are concentric, and six in number, as represented in the copy from Nilsson, given in Plate XXXI. fig. 2. Further, the circles are not cut in continuous lines, but as dots or pits, in the same way as some of the Irish stones. (See *ante*, p. 64.) In Nilsson's woodcut and brief description, there is no note of the presence of a central cup or radial duct. Remains of a megalithic avenue and large monoliths exist in the neighbourhood.

A sculptured cromlech in Denmark is described and figured by Axel Em. Holmberg in his "Skandinaviens Hällristningar," p. 79, and his sketch of it is copied into Plate XXXI. fig. 3. Among the many naked and mound-covered cromlechs of Denmark this is one of the very few that have been hitherto discovered presenting any appearance of tooling and carving. The cromlech in question is situated in the parish of Grevinge, in Zeeland. It was entirely concealed within an earthen mound or barrow, until it was accidentally discovered by adventurers searching for treasure, and now stands free and exposed. Some urns with tools and pieces of flint were found within its interior chamber, which is six feet high, and formed of six upright supports, covered by a large capstone. On the upper surface of this capstone are several figures, so slightly carved that they only become very distinct in a good light. These figures consist—1. Of two small circles, with a third and larger circle, each of them inclosing two lines, which cross or intersect at right angles; and 2. Of three very rude figures of ships, with crews varying from eight to twenty-four. There are three or four other imperfect linear markings on this capstone, which Holmberg[1] considers to be probably nothing but natural marks. "Some antiquarians," he observes, "look upon this monument as belonging to

[1] *Scandinaviens Hällristningar*, p. 80.

the very oldest age, when metals were unknown; and they believe, therefore, that the sculptures must have been done with stone. Others, and among them Professor Worsaae,[1] ascribe it to a later date, because the vessels contain more men than single-tree canoes or skin boats could hold."

Circles, containing within them two right-angled lines, in the form of an equal-limbed cross—like the circles on this Zeeland cromlech—are very common on sepulchral and other stones and objects in Scandinavia. Some northern archæologists conceive the figure to represent a shield or wheel; but others of them hold that it, and the "fyllot," or four-angled cross, are symbols of Baal or Woden.[2]

Very rude sketches of ships and crews, like those on this Zeeland capstone, have been found carved in great numbers on rocks in Scandinavia; and the age of the earliest and latest forms of these "hällristningar" has by no means been as yet determined. In the latest, the ship outlines are often mixed up with wheels, simple and crossed, rows and groups of cup-like excavations, one or two volutes, and many rude figures of armed men, animals, &c.[3] Holmberg has published drawings of above one hundred and fifty of these "hällristningar," and each drawing contains several figures. Two boats with various accompanying figures were discovered a century or two ago sketched upon the interior stones of a chambered cairn at Kivik, and lately this Kivik tumulus has attracted much attention in consequence of a very learned and deeply respected Scandinavian archæologist—Professor Nilsson of Lund—maintaining that the figures are Phœnician in their origin, of the bronze age, and connected with the worship of Baal. Let us, therefore, for a moment consider this Kivik monument at somewhat greater length,—the more so as Professor Nilsson attributes this monument and our British ring sculptures to the same people and the same age.

The Kivik or Bredarör cairn is placed to the south of Kivik, in the county of Skåne, and district of Christianstad, Sweden, and stands about three

[1] Danmarks Oltid, oplyst ved Gravhöge, &c., p. 71.

[2] Holmboe, in the Christiania "Videnskabsselskabs Forhandling" for 1860, figures several of these cross markings, and seems to look upon them as emblems of death.

[3] For drawings of these "hällristningar," see Holmberg's work, and Dr Aberg, in the Annaler for nordisk Oldkyndighed, for Aaret 1839.

hundred yards from the shores of the Baltic. The great original size of the cairn cannot be now ascertained, as for many long years its stones have served as a quarry for the building of bridges, houses, walls, &c., in the neighbourhood. Before the middle of the last century its interior chamber was reached and examined. It measured thirteen feet in length, and three in breadth, and lay north and south. Its walls were found to be composed of upright stones or slabs, some of which were sculptured, others were not. Probably the chamber had been previously entered and harried, and two of the sculptured blocks were displaced. The chamber was roofed in above, not with flat slabs, but with large irregular stones of considerable size,—some of them laid edgewise, but sufficiently preventing the mass of small cairn stones placed above from falling in. The carved or sculptured stones lining the chamber were of granite, and on an average about four feet high, three feet broad, and eight or nine inches in thickness. The carvings upon them are rude and rough, yet confessedly graphic.[1] Various archæologists have discussed and figured these Kivik sculptured stones and sculptures, as Lagerbring,[2] Abrahamsen,[3] Sjöborg,[4] &c.; but I have drawn the notice and sketch of them (copied into Plate XXXII.) from Professor Nilsson,[5] as the latest authority on the subject. He holds that the figures on most of the stones are symbolical or religious; while those on the two last (figs. 7 and 8) are more strictly historical, and represent a victory, or rather the rejoicings and human sacrifices following it; and he believes that the representations upon the carved stones of the cairn show the victors and its builders to have been worshippers of the eastern sun-god Baal.

A granite block stands at either end of the sepulchral chamber. The

[1] A second smaller chamber or cist, only four feet in length, has been discovered in the Kivik cairn; its stones are quite unsculptured. It lies south of the larger and sculptured chamber.

[2] Specimen Historicum de Monumento Kivikensi. Lond. Gothen. 1780.

[3] Scandinaviskt Museum, 1803, p. 283–302.

[4] Samlingar för Nordens Fornälskare, tom. iii. p. 142.

[5] Die Uereinwohner des Scandinavischen Nordens I. Das Bronzealter. Hamburg, 1863. Lately Professor Nilsson has published, in the 4th volume of the Transactions of the Ethnological Society of London, p. 244, a remarkable essay on Stonehenge, as probably a Solar Temple of the Bronze Age. It formed originally a supplemental part to his "Bronsäldern."

stone at the north end (fig. 5) has no carving upon it. That at the south end (fig. 1) has cut upon it below, the outline of a crewless and perhaps defeated boat; and above it two bronze axes and two other weapons, perhaps javelin-points, on either side. Placed intermediately between these instruments is a cone or obelisk, which Professor Nilsson maintains, from various eastern emblems and evidence, to be a symbol of the Sun-god, who, he adds, "granted the victory by means of the arms here represented." Fig. 2 contains merely a rude outline of a vessel and its crew, such as exists so frequently on Swedish rocks. Fig. 3 represents four animals (horses) in a square or panel, with a series of straight and interlaced zig-zag lines, and lozenge-shaped squares, separating two of these animals above from the two below. Fig. 4 represents a cartouche or panel, ornamented with zig-zag lines, and containing within it two quartered discs,—or, in other words, two circles, each with two inclosed cross-lines. Fig. 5 shows another panel, inclosing two quartered discs below; and two crescents above, with a horned or spiral line passing upward out of each end of the crescent. Professor Nilsson, and those who argue for the eastern origin of these symbols, find an emblem of Baal or the Sun-god in the obelisk, in the horses, and in the quartered circles or discs, and an emblem of the Moon-goddess in the crescents and horns.

The two next sets of sculptures are, as already stated, more historical. The first of the two, fig. 7, seems to represent in its first line a warrior in his double-horsed chariot, preceded by prisoners, who appear to have their hands tied behind their backs, and to be guarded by a person holding a raised sword; on the second line are two horses opposed to each other, and a boat (?); and on the third line is a row of men dressed, according to Professor Nilsson, in flowing priestly costume, and who walk in procession after a person holding on high a quadrangular implement or banneret in his right hand. Fig. 8 is more elaborate still. Its first line consists of a procession, which Professor Nilsson considers as a continuation of the conqueror's festival procession in the first line of fig. 7. First, there are two musicians, apparently playing upon large horns; a third holds a squared instrument like the figure in fig. 7; a fourth personage has his limbs, according to Professor Nilsson, set for dancing; and the two last play upon a kind of suspended double

drum or "tympanon," a form of musical instrument which Nilsson holds to have been known to the Israelites and Egyptians in the East. The second line seems to consist of priests, advancing to an altar in the midst of them; while the third line contains, apparently in different attitudes, two small groups of the prisoners, with their hands bound behind their backs,—attended by a keeper with a drawn sword,—and having two circles incomplete, and with angled extremities,—like two inclosures or prisons,—for the reception of the captives.

Professor Nilsson, while believing this cairn at Kivik to have been erected in commemoration of some victory—probably a naval one—by worshippers of the eastern sun-god Baal, holds, further, that it is a monument which belongs certainly to the bronze age; although human figures, and any other objects,—except geometric circles and lines,—are rarely found on stones and implements of the bronze period. Farther, he believes—as we shall see in a subsequent chapter—that all the traces of Solar or Baal worship hitherto discovered in Scandinavia have been invariably found in connection with the bronze era; and on the Kivik monument he conceives that the long-flowing dresses of the priests are such as we would expect from the account of the peculiar vestments, mantles and pili, of the worshippers of Baal, as given by Herodian, Lucian, &c.

It is perhaps proper to add, that Professor Nilsson, like Mr Münter,[1] considers the two last Kivik stones (figs. 7 and 8) to represent an immolation of some of the vanquished, as sacrifices for the victory obtained, and that the priests are assembled around the altar or cauldron for that purpose. The immolation of prisoners of war was a practice followed among some old nations. When Carthage, originally a Phœnician city or colony, was besieged by Agathocles, the inhabitants sacrificed two hundred boys of the highest descent as burnt-offerings; and afterwards, when they had obtained the victory, they immolated the most beautiful captives in like manner (Diodorus xx. 14,565). We know from this and various other sources that the Phœnicians or Canaanites, and the worshippers of Baal, had no remorse against the barbarous sacrifices of the infants and subjects even of their own

[1] Antiqvariske Annaler, Copenhagen, for aar. 1815.

race[1]. While conducting their sacrifices, some of the priests of Baal seem to have jumped or danced,[2] as Nilsson believes to be the act in which one of the personages or priests in the first line of fig. 8 is engaged; and perhaps each individual with the upraised four-sided instrument in figs. 7 and 8, may be looked upon as occupied in an analogous manner.

Professor Nilsson makes one critical remark on the position of the figures on the last two stones, which seems worthy of quotation. The figures are arranged on the slabs from right to left, and are only intelligible when taken in this order. They form, as it were, a writing in figures instead of letters, and in doing so, they followed the course of Phœnician and other Semitic documents in reading from right to left, instead of from left to right.

Such sketches as are cut on the Kivik stones are not unique in Sweden. Professor Sjöborg[3] has described a very heavy flat stone, a relic of another

[1] Professor Nilsson alludes to the large double drum or instrument, represented in the first line of slabs (fig. 8), as the eastern "tympanum." He does not advert to the circumstance, that our best Hebrew scholars derive the name of Tophet from the Hebrew word "Toph," signifying the drum or tabret, beaten to drown the cries of the human victims. See Milton's allusion to this in "Paradise Lost:"—

> "Though for the noise of drums and timbrels loud,
> Their children's cries unheard, that passed through fire
> To his grim idol."

It is well known that Tophet, or the valley of the son of Hinnom, placed near one of the gates of Jerusalem, was long noted for the sacrifices to Baal, perpetrated at it by the Israelitish followers of the Phœnician gods, who there burned "their sons and daughters in the fire" (see 1 Kings xxiii. 10, and Jeremiah vii. 31). Hence the title of the place is commanded to be altered to the significant name of "the valley of Slaughter" (Jeremiah vii. 32, and xix. 5, 6).

[2] About 900 years before the commencement of the Christian era, we find, in 1 Kings xxvii. 26, that the priests of Baal "leaped upon the altar which they made," an expression which Pyle, Patrick, Gotch, and other commentators, hold as meaning in the original, they "danced about the altar." Professor Nilsson cites the opinion of Dr H. M. Melin to the same effect. Herodian, in his History (Lib. v. cap. 3, 5), states that, under Heliogabalus, the worshippers or priests of Baal danced around the altar of the sun-god, in the Phœnician manner, to the music of drums, cymbals, and other instruments.

[3] Sammlung für Nordische Alterthumsfrounde, vol. iii. p. 146.

Swedish tumulus at Willfara, and cut with rough representations upon it, like those at Kivik, of a two-wheeled chariot, drawn by a pair of horses, three boats, and about a dozen cup excavations. That these excavations were, however, of an older date than the objective figures is proved by one simple fact. A line forming the side of one of the ships traverses one of the cups, and cuts its way along the concavity or bottom of it, so far proving that the cup marking was older than the line marking. In digging into the barrow, from which apparently this stone had been taken at Wallfara, Professors Sjöborg and Nilsson found a very perfect flint knife and a small piece of bronze ornament.

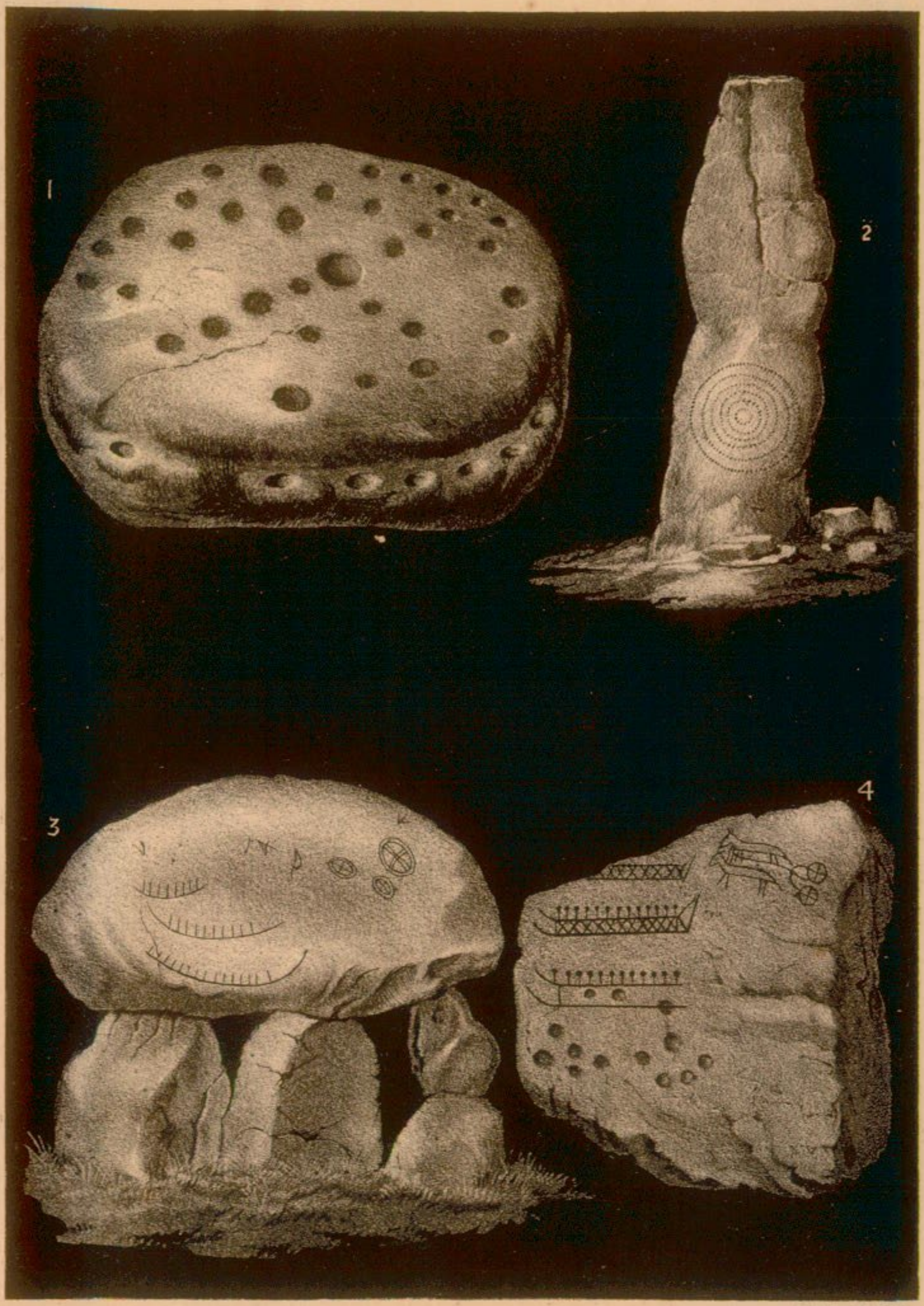
The school of sculpture that carved these Kivik figures is one which we naturally surmise to be much more advanced than that simpler and more primitive school which was content with cutting only the rude lapidary rings and cups which form the subject of the present memoir; and whatever may be the age at which the Kivik sculptures were cut, the age of the lapidary circles and cups in Scandinavia and in Britain must, I believe, be allowed by all to be at least either still more remote and archaic in point of time, or carved by a ruder race.

Let me here add, that the search after cup and ring cuttings in our own country has been only recently begun; and in the course of a few years many more specimens of them will doubtlessly be discovered. But the search for them among the archaic remains of distant countries in Europe, and in other divisions of the Old and New World,[1] will probably bring to light many new facts, both as to the sculptures themselves, and as to the ethnological relations which possibly they may help to prove among different portions and localisations of the human race.

[1] I have heard of cup markings in Switzerland. Miss Paterson, of Leith, a keen and accurate observer, saw some markings on stones behind Smyrna, in Asia Minor. In the bed of a winter torrent at Bournabat, seven miles beyond Smyrna, she discovered a large boulder, with several concentric circles on it, similar to drawings of lapidary circles which she had seen in my possession before leaving Edinburgh.

Plate XXXI.

FROM SWEDEN AND DENMARK.



A. Ritchie. Lith. Edin.

Plate XXXII.

FROM KIVIK CAIRN, SWEDEN.

A. Ritchie, Lith. Edin.r

PART IV.

GENERAL INFERENCES.

In reference to the lapidary concentric ring-cuttings and cup-cuttings in Scotland, &c., I will take the liberty of adding a few general observations about their possible import or meaning, their date, &c.

CHAPTER IX.—IMPORT OF THE RING AND CUP SCULPTURES.

Of the real objects or meaning of these stone-cut circles and cups we know as yet nothing that is certain. They are archæological enigmata which we have no present power of solving; lapidary hieroglyphics and symbols, the key to whose mysterious import has been lost, and probably may never be regained. But various doctrines and hypotheses which have been proposed as to their origin and object necessarily require more or less consideration on our part.

They have been supposed, for instance, by the Rev. Mr Greenwell, Sir Gardner Wilkinson, Dr Graves, and others, to be archaic maps or plans of old circular camps and cities in their neighbourhood, telling possibly of their direction and character—"such (observes Sir Gardner Wilkinson) as are traced in time of danger by the Arabs on the sand to guide the movements of a force coming to their direction" (Journal of British Archæological Association for January 1860, p. 109). But I believe this idea has now been abandoned as untenable by some, if not by all, of the antiquaries who first suggested it.

The carvings have been held by some as intended for dials, the light of the sun marking time upon them,—or upon a stick placed in their central cups,—and its shadow corresponding with one of the central radial grooves; but they have been found in localities which neither sun nor shadow could reach, as in the dark interiors of stone sepulchres and underground houses. Others have regarded them as some form of gambling table; but they occur on perpendicular and slanting, as well as flat rocks; and besides, if such were their use, they would scarcely have been employed to cover the ashes of the dead.

I have heard them spoken of as rude representations of the sun and stars, and of other material and even corporeal objects[1] of natural or Sabean worship; but all attempts to connect the peculiar configurations and relations which they show with any celestial or terrestrial matters have as yet confessedly failed. Nor have we the slightest particle of evidence in favour of any of the numerous additional conjectures which have been proposed,—as that these British cup and ring carvings are symbolic enumerations of families or tribes; or some variety of archaic writing; or emblems of the philosophical views of the Druids; or stone tables for Druidical sacrifices; or objects for the practice of magic and necromancy.

My friend Mr Dickson of Alnwick has, in some archæological observations relating to the incised stones found upon the hills about Doddington, Chatton, &c., "suggested that these carvings relate to the god Mithras (the name under which the sun was worshipped in Persia), that about the end of the second century the religion of Mithras had extended over all the western empire, and was the favourite religion of the Romans," a system of astrological theology; that in the sculptured Northumberland rocks the central cup signifies the sun, "the concentric circles, probably the orbits of the planets;" and the radial straight groove "the way through to the sun." In consequence, Mr Dickson holds these rock sculptures to be "the work of the Romans, and not Celtic," having been cut, he supposes, as emblems of their religion by Roman soldiers near old British camps, after they had driven out their native defenders. But if they were of Roman origin, they would surely be found in and around Roman stations, and not in and around British localities—in Roman graves, and not in old British kist-vaens. The fact, however, is that they abound in localities which no Roman soldiers ever reached, as in Argyleshire, in Orkney, and in Ireland. And possibly even most of them were cut before the mythic time when Romulus drew his first encircling furrow

[1] Two archæological friends of mine—both dignitaries in the Episcopal Church—have separately formed the idea that the lapidary cups and circles are emblems of old female Lingam worship, a supposition which appears to me to be totally without any anatomical or other foundation, and one altogether opposed by all we know of the specific class of symbols used in that worship, either in ancient or modern times.

around the Palatine Mount, and founded that petty village which was destined to become—within seven or eight short centuries—the Empress of the civilised world.

Some archæologists have attempted to carry back the lapidary cuttings to the influence of an eastern race, who appear to have known the west, and perhaps the north, of Europe, for several centuries before Rome even was founded, and who are imagined to have cut the lapidary rings, not for the worship of the Persian god Mithras, but of the Phœnician god Baal. From its novelty and peculiarities this theory requires a more detailed consideration from us than any of the preceding suggestions.

CHAPTER X.—THEIR ALLEGED PHŒNICIAN ORIGIN.

The chief supporter of this theory of the Phœnician origin of the cup and ring cuttings is the eminent Swedish archæologist, Professor Nilsson, to whom I have already referred in chap. viii. He holds that the Druidism or Druidical worship, which Julius Cæsar found prevalent in Gaul and Britain at the time of his invasion of these countries (viz., upwards of half a century before the Christian era), was a form of religion that never reached Scandinavia, and which at that time was—relatively, at least—recent in England and France, being only, perhaps, two or three centuries old, and fundamentally a younger type of a more ancient and oriental creed. For he believes that anterior to Druidism in Britain there existed here, and in the north of Europe,—as a result of Phœnician commercial intercourse and colonisation,—a form of eastern Solar worship; that our megalithic circles, &c., were reared by these Sun worshippers, and not by the Druids—for in none of the classical notices of Druidism are these stone circles ever distinctly alluded to, whilst they exist in many countries where neither Celt nor Druid was ever known;[1] that Stonehenge, Abury, &c., were erected as Sun

[1] Stone circles have been found in almost every country in the old world, from Greenland southward. Nor are ancient circles of this kind wanting even in Australia. My friend, Mr Ormond, informs me, that he has seen many, especially in the district near the Mount Elephant plains, in Victoria. "The circles (Mr Ormond writes me) are from ten to a hundred feet in diameter, and sometimes

temples to the Phœnician Sun-god, Baal; and that our lapidary ring-cuttings on the stones of New Grange and Dowth, and upon the rocks of Northumberland, &c., are also the work of these Sun worshippers, and were cut for the purpose of symbolising the sun;—the single central cup and central ring indicating the solar luminary, and perhaps each additional circle afterwards added around this solar figure, recording and honouring—as he suggests—the death of some near relative.[1] Professor Nilsson further maintains that this supposed Solar worship in Western and Northern Europe prevailed during the Bronze era; and that circular or concentric figures and designs upon ornaments, implements, weapons, &c., are invariably associated in these European countries with the Bronze age, and consequently with the era of Sun worship,—except where they have descended, and been adapted to articles of the Iron age, as designs which were ornamental merely, and without any inner signification.[2]

In relation to these opinions let me here observe, that it seems to be a fully established fact in ancient history that, on the shores of the Atlantic Ocean, the Phœnicians founded Gadir, Gadeira, or Gades (Cadiz),[3] about

there is an inner circle. The stones composing these circles, or circular areas, vary in size and shape. Human bones have (he adds) been dug out of mounds near these circles. The aborigines have no traditions regarding them. When asked about them, they invariably deny knowledge of their origin."

[1] See his Skandinaviskd Nordens Ur-Invnåare, p. 143.

[2] Professor Nilsson has published at length his observations on the early Phœnician intercourse and colonisation of Western and Northern Europe in the essays already referred to at p. 73, *ante*.

[3] For the special historical data proving the date of the founding of Gadeira, see Mr Kenrick's scholarly and learned history of "Phœnicia" (p. 125, &c.), or the more extended work, "Die Phœnizier," of Professor Movers of Breslau, vol. ii., p. 147, &c. "The foundation," remarks Mr Kenrick, "of Gades by the Tyrians, twelve centuries before Christ, is one of *the* best attested facts of such ancient date" (p. 209). In Strabo's time (20 B.C.), Cadiz, which, after six or seven centuries, had become a Carthaginian, and ultimately a Roman conquest, was still, according to him, a city second only to Rome in population; and, as a proof of the extent of Phœnician colonisation in Southern Spain, he states (iii. 11, § 13), that "the whole of the cities of Turdetania and the neighbouring places" in the Spanish Peninsula, were in his days inhabited by the Phœnicians,—including under that term, as he always does, the inhabitants of Carthage, as well as those of Tyre and Sidon. See

eleven or twelve centuries before the commencement of the Christian era; and this colony or city was not perhaps, by one or two centuries,[1] the earliest of the many Phœnician settlements[2] established upon the coast of Tartessus, Tarshish, or Southern Spain. We know that the powerful and wealthy city of Tyre, "the crowning city," whose "merchants are princes," and itself "a mart of nations" (according to the striking language that, seven or eight centuries before Christ, Isaiah uttered in regard

also Mr Grote in his History of Greece, vol. iii. p. 374, as to these towns being "altogether Phœnicised." Strabo mentions (iii. 11, § 6), that the largest merchant ships which in Roman times visited the ports of Naples (Dicæarchia) and Ostia were the ships of Turdetania—representatives, as they were, of the ancient "ships of Tarshish," a name given to large vessels in ancient Biblical times, apparently on the principle that all commercial ships of unusual size were, in Great Britain, thirty or forty years ago, called "East Indiamen," whether they traded eastward or not.

[1] "Phœnicia," observes Mr Kenrick, "had, no doubt, been enriched by intercourse with Tartessus during the [anterior] period of the ascendancy of Sidon, before any attempt was made to obtain a permanent establishment there" (p. 124). The mention of Tarsis as a gem in the breastplate of the Jewish High Priest (Exodus xxviii. 20), shows that precious stones were already imported from Spain to the East as early as about fifteen centuries B.C. (see Kenrick's Phœnicia, p. 118, and Professor Mover's "Die Phœnizier," Band ii. p. 592). "We are therefore, surely," observes a cautious and critical writer, Sir John Lubbock, "quite justified in concluding that between B.C. 1500 and B.C. 1200 the Phœnicians sailed into the Atlantic and discovered the mineral fields of Spain and Great Britain" (see his Prehistoric Times, p. 46). Homer represents Sidon as abounding in works of bronze (ἐκ Σιδῶνος πουλχάλκου) at the era of the Trojan war (Odys. xv. 424).

[2] "Scylax (c. 1), whose Periplus was composed about 340 B.C., mentions," observes Sir Cornewall Lewis, "many factories of the Carthaginians to the west of the Pillars of Hercules, apparently on the European side."—(*Astronomy of the Ancients*, p. 449. See also Strabo in Note 2, p. 82, *ante*). Eratosthenes speaks of the coasts of Mauritania (southward from Cadiz and the Straits of Gibraltar), as containing in early times 300 Phœnician settlements (see Kenrick's Phœnicia, p. 135; and Grote's Greece, vol. iii. p. 367). Sir Cornewall Lewis lays down the voyage of Hanno, whose Periplus is extant, as being partly for the foundation of colonies, and partly for discovery. "He is supposed," adds Sir Cornewall, "to have sailed along the [Atlantic] coast as far as Sierra Leone, and according to the best considered conjecture, his expedition took place about 470 B.C."—(*Astronomy of the Ancients*, p. 454). The Rev. Isaac Taylor, in his work on "Words and Places," points out Phœnician names running along the Atlantic coast of Africa (p. 39. See also Mover's "Phœnizier," vol. ii. p. 534).

to it), had in her fairs—as Ezekiel witnesses, about 600 years B.C.—"silver, iron, tin, and lead," from Tarshish; and further, that Tarshish was then her merchant, "by reason of the multitude of all kinds of riches" (Ezekiel xxvii. 12). Further, there is the greatest probability, if not certainty, that the tin—alluded to in Ezekiel—which was sometimes used as a metal by itself,[1] but which was far more indispensably necessary in the formation of bronze[2]—one of the most valued and popular metals in these and in still more ancient times[3]—was derived either from the

[1] TIN *by itself*.—In ancient times tin seems to have been used sometimes by itself, as well as in the form of alloy. The earliest separate mention of it as a metal is about 1450 B.C., when it is enumerated among the spoils taken by the Hebrews from the Midianites (Numbers xxxi. 22). Homer describes Agamemnon's corselet as containing twenty rods or bars of tin (*Iliad*, xi. 25), and his shield as showing twenty bosses of the same metal (*Il.* xi. 34). The greaves of Achilles were made, we are told, of ductile tin (*Il.* xliii. 612, and xxi. 592), and his shield is represented as having been welded of five layers, the two innermost of which were of tin (*Il.* xx. 271); while some of the devices moulded upon its surface were formed of tin, as the fence round the vineyard (*Il.* xviii. 564). Tin is represented also by Homer as entering into the composition of the chariot of Diomede (*Il.* xxiii. 503). In ancient times, let me add, it was not always employed in the formation of bronze and metallic implements. Thus, it has been lately ascertained that the glaze of the bricks of Babylon and Nimrod contain an oxide of tin; and these bricks are supposed to have been made about six or eight centuries B.C. (see Kenrick's Phœnicia, p. 455).

[2] Bronze generally contains about 88 or 90 per cent. of copper, and 10 or 12 per cent of tin. "It is remarkable," observes Mr Kenrick, p. 213, "that the same proportions result from the analysis of the bronze instruments found in the sepulchral barrows of Europe, of the nails which fastened the plates with which the treasury of Atreus at Mycenæ was covered, and of the instruments contained in the tombs of ancient Egypt. . . . . In the mirrors of the ancient Etruscan tombs the proportion of tin is sometimes as high as 24 or even 30 per cent." (See more instances of the composition of ancient bronzes in Smith's Dictionary of Greek and Roman Antiquities, 2d edit. p. 25.)

[3] In our English Bible, the Hebrew word "nahas," signifying bronze, has been translated brass. But brass, a metallic alloy of copper with zinc, was probably little, if indeed at all, known in these ancient times, as one of its components—zinc—seems to have been undiscovered (see Dr Percy's Metallurgy, Part i. p. 519). Some of the Biblical notices of the use of bronze—and hence of the import of tin—are both early and remarkable. Shortly after the Israelites left Egypt, about 1490 B.C., the women gave up the mirrors of polished bronze which they had brought from Egypt

streams and mines of Spain, or the far richer stores of Cornwall, or the Cassiterides;[1] and that the Phœnician amber trade was conducted from a

(see the composition of Egyptian bronze in preceding note) to form the brazen laver (Exodus xxxviii. 8); and at the building of Solomon's temple, about 1000 B.C., the Phœnician metallurgists cast, of bronze, enormous pillars, a molten sea supported by twelve oxen, lavers upon wheels, &c.,—works which would test the skill of the best modern artificers in metals.

[1] TIN, *whence derived in ancient times.*—Till some later discoveries in metallurgy, only two or three portions of the earth were known to contain tin in any available or marketable quantity, namely, first, Banca, and other adjacent islands in the Straits of Malacca, in the East Indies; secondly, Drangiana or Sejestan, Persia; thirdly, Spain and Portugal; and fourthly, the Scilly Isles, Cornwall, and the adjoining part of Devonshire. From which of these localities was the tin which was used in ancient times derived?

First, We have the very best reason for knowing that in former times the tin used by the civilised nations that were spread along the shores of the Mediterranean was not derived from Banca or the East. In Arrian's "Periplus of the Erythræan Sea," we have recorded with all the minutiæ of a modern invoice the exact articles of traffic carried backwards and forwards between Egypt, Ceylon, Africa, India, &c., some eighteen centuries ago. In these authentic documents we have various notices of tin as a recognised article of merchandise. We find it, for example, as an article of commerce at the following emporia, namely, Canê, on the southern coast of Arabia; Barygaza, at the mouth of the Nerbudda (north of Bombay); and at the port of Bacaré, on the Malabar coast. But then, at these points, instead of being carried from the East to Egypt, it is invariably entered in them as exported from Egypt to them. The trade in tin at these parts is from the West to the East, and not from the East to the West, though in this latter direction, in these invoices, we have articles entered from the farthest parts of India, and even from China. If tin had in ancient times ever been brought commercially from Banca —where the supply is abundant—the knowledge of the locality of such a rich and valuable commodity would never have been lost.

Secondly, Strabo, writing about 20 B.C., states regarding the district of the Drangæ:—"Tin is found in the country" (Book xv. chap. 11, § 10); but, according to his able translators, Messrs Hamilton and Falconer, "none is said to be found there at the present day" (see Bohn's edition, vol. ii. p. 126.) We have no authority, so far as I am aware, except that of Strabo, as to tin being found in Drangiana, a district at the eastern end of the present kingdom of Persia. At all events, it had not been found in quantity enough to have been sent down within the century after Strabo wrote to India to interfere with the tin traffic from Alexandria and the west of Europe to India, as described by Arrian in the preceding

point still further to the north—both forms of merchandise being chiefly or entirely carried by the seaward route through the Straits of Gibraltar, till at last the land and river routes from the Germanic and Atlantic Oceans to the Mediterranean became more opened up. And we must not forget, that a nation which—besides navigating her vessels to Malta, Sardinia, the Balearic Isles, and other parts of the Mediterranean Sea —traded to Tartessus, some 2500 miles from home, would have comparatively no insurmountable difficulty in reaching the southern parts of Britain. Indeed, when we consider the first and leading fact, that this most active commercial and marine people had factories and colonies, that proved rich and thriving, and some of which were planted on the Atlantic shores of Spain, at the least 1100 or 1200 years B.C., it seems hardly possible to resist the second and resultant fact that, during the course of the long centuries which they thus spent on one part of the Atlantic ocean, the same innate energy, and the same irrepressible love of enterprise, would induce, if not compel, the same people to visit with their vessels

paragraph. Nor, several centuries earlier does the tin of this country seem to have been worked to any considerable extent, as we find no notice of it in Ezekiel's description of this merchandise of that "mart of nations," Tyre, 600 B.C.

Thirdly, Spain and Portugal contained in former times, and contain still, a small quantity of tin, both in streams and lodes. But at the present day they furnish an extremely small quantity of that metal, and probably in ancient times never furnished any great supply. In the two last London Exhibitions specimens of Spanish or Portuguese tin were shown; and Mr Forrester tried to work it in Galicia, but, I believe, has given up the enterprise; and Dr George Smith (in his able essay on the Cassiterides, pp. 1 and 46) shows from official information that there is little or no tin-mining now in the country, and that Spain never appears to have produced any considerable quantity of this metal.

Fourthly, Cornwall and Devonshire.—Dr Smith points it out as an axiom in tin-mining, that "wherever tin has been produced in any considerable quantities within the range of authentic history, there it is still abundantly found" (p. 45). In the last year's return from the tin mines in Cornwall, the quantity raised is reported to be as great as it was ever known to be in any one year. No doubt these British mines were, as pointed out by Strabo, Diodorus, and other ancient authorities, the great source of tin from the earliest historic periods. It is remarkable that in olden times we have no allusion to any want or scarcity in the production of this metal; and the quantity used in the bronze age must have been very great indeed.

the coasts of that same ocean, and its nearest islands, such as Britain. Indeed, to reach the Eider or shores of the Baltic[1] for its electron or amber,[2] or even the northernmost part of Norway or Thule, was not so

[1] Professor Nilsson holds that, probably, the Phœnicians traded as far north as the celebrated fishing-grounds in the Lofoden Isles, within the arctic circle, bringing from thence fish, furs, &c. The fires of Baal were lit till lately at Beltane time in some of these islands. That fish was a great article of merchandise among the Phœnicians we know historically from different points, and from their coins, &c. They had stations for making salted provisions, as at Mellaria, in Spain, &c. (Strabo iii. 18). Incidentally we learn that the Tyrians had a fish market at Jerusalem in the time of the prophet Nehemiah, or about 440 B.C. (Nehemiah xiii. 16).

[2] AMBER.—Pliny (xxxvii. 11) tells us that the word "Electron" or Amber was applied in ancient times to our common bituminous amber (which—as he long ago hinted—naturalists now regard as probably the gum or product of a primeval pine); and secondly, to either a natural or artificial mixture of about four parts of gold to one of silver,—an alloy, perhaps, showing some of the colour or appearances of amber. Some very early notices of amber occur, as in the Odyssey of Homer (iv. 73, xv. 460, and xviii. 296). In the two last of these passages the amber was in pieces, and the use of the plural shows that it was probably not a metal. In the first passage the amber is represented as brought to the island of Syria by a Phœnician ship, before the breaking out of the Trojan war. Some centuries later, about 450 B.C., Herodotus describes amber, as in his time, one of the things imported, like tin, from the western extremities of Europe, as their only known source—a description that can apply to common bituminous or vegetable amber alone, and not to any alloy of gold and silver, the elements of which abounded around them in Greece. Herodotus states that the story of his day was, that amber came from the river Eridanus, which opened into the Northern Sea (iii. § 115). The shores of the Northern Sea or German Ocean along the western coast of Denmark have always served as the principal source of the amber trade; and in his late learned disquisition on the subject, Professor Werlauf of Copenhagen states (Bidrag til den Nordiske Ravhandels Historie, p. 91) that though the coast has become greatly changed and washed away in the course of centuries, yet the shores and mouth of the Eider, in Holstein —in all probability the old Eridanus—and the islands opposite it, have, up to our own time, supplied this bituminous substance in the greatest quantity, though it is cast up also upon some other beaches after rough weather. Pliny states that it was latterly brought overland from the shores of Prussia to the head of the Adriatic, and hence to southern Europe; but this appears not to have occurred till the time of the Roman Emperors, or many centuries after it had been carried seaward into the Mediterranean from the shores and isles of the German Ocean (xxxvii. 11. 3). In early times there may have been land routes across Europe for such light and

long a voyage from Tartessus, as Tartessus originally was from the parent cities of Sidon or Tyre.[1]

valuable commerce, which we cannot now easily trace. Pytheas, the Massilian astronomer and traveller, who calculated, with his gnomon alone, the latitude of Marseilles within a few seconds only of correct time, voyaged, passing by the Straits of Gibraltar, about 350 B.C., to Britain and Northern Europe, and first described to his unbelieving contemporaries and successors Thule as a district or island on the Norwegian coast, as far north as the 66th degree of latitude. He tells us that in the islands where the amber was obtained, there was an estuary (*æstuarium*) of the ocean, implying an ebb and flow of the sea,—such as, of course, occurs on the coast of the Germanic Ocean, but which could not possibly hold true in regard to the waters and shores of the Baltic. (See Pliny xxxvii. 11; Nilsson, p. 71; and Humboldt's Cosmos, vol. ii. note 171). He states that Thule and other neighbouring seas contain neither earth, air, nor water separately, but a concretion, which he had himself seen, of all these, resembling marine sponge or jelly-fishes, which he was told could neither be travelled over nor sailed through (see Strabo ii. chap. 4 § 2). This description is now acknowledged to apply exactly to the appearance put on by the circular pieces of sludge or young ice, when the freezing of the Northern Sea threatens to begin. (See Nilsson's "Nordens Ur-Invånare," p. 140, and Sir John Lubbock's "Prehistoric Times," p. 42.) And his allegation, that he reached a northern mountain in Thule where the nights were only two or three hours long, and where the barbarians showed him the place in which the sun lies in bed (ὅπου ὁ ἥλιος κοιμᾶται), is an observation which Professor Nilsson of Lund, in the present century, has confirmed; for the inhabitants of Dunö showed him exactly in the same way a hill-top from which the sun was visible the whole of midsummer night, repeating to him the observation which had been made to Pytheas between two and three thousand years before (p. 74). Yet these two observations, and others, of Pytheas, have induced many literary men in his own, and even in later times, to look upon him as telling traveller's fables. Pytheas states about amber, that at the place where it was obtained it was sometimes found in such great quantity that it was burned as a light—an occurrence which, according to Werlauf (p. 42), has happened also in later times amongst the inhabitants of Western Slesvig. From the electrical power which amber possesses of attracting light substances, the Greek philosopher Thales argued, according to Diogenes Laertius, that it was endowed with a soul; and as Thales lived above six hundred years B.C., the specimens of amber which he saw and experimented upon in Greece could not have reached there by the Massilian land route, which did not then exist, but it must in all probability have been carried thither from the western extremities of Europe by ships which possibly had been already engaged in the far distant amber and tin trades for centuries before.

[1] *Phœnician Navigation.*—It seems only idle to argue, as some have done, that the

But there are strong objections against the triple idea of Professor Nilsson, that (1) the age of bronze in western and northern Europe is (2) the age of our Megalithic circles, and that both are (3) the direct effects of Phœnician influence and colonisation among us.

It appears, for example, difficult or impossible to explain why the Phœnicians should not have introduced into western and northern Europe both iron and bronze, or iron as well as bronze. They early possessed both metals, and worked in both. They exported both from Tarshish. Ten centuries before Christ, the Phœnician craftsman sent from Tyre to Jerusalem was skilful to work in iron as well as in gold, silver, and bronze—as stated in the letter of King Hiram of Tyre to king Solomon in 2 Chronicles ii. 14. Four or five centuries earlier, or about 1440 B.C., the Canaanites (and the Phœnicians, if not, as many good ethnologists hold, of the same race, and only "Canaanites by the sea," were at least their nearest neighbours) had apparently abundance of iron and iron implements (Joshua xvii. 16, and Judges i. 19). Jabin, king of the Canaanites about 1300 B.C., had as many as "900 chariots[1] of iron" (Judges iv. 3 and 13); and mention of the possession of such chariots by the Canaanites is made about a century and a half previously (Joshua xvii. 16). Besides, iron was used for many and various other purposes by the early Israelites,[2] Assyrians,[3] Greeks,[4] &c.

voyages of the Phœnicians were all coasting cruises in sight of land,—seeing we know for certain that they constantly crossed the Mediterranean Ocean to Malta, Sardinia, &c., where no land was visible for many long days, guided probably by the sun by day, and using, it is alleged, during the night the fixed stars "Cynosure," or the Little Bear, as a means of directing their course (see Kenrick's Phœnicia, pp. 235, 236),—means which, I am assured, modern navigators still occasionally employ,—especially when their compasses go wrong, an occurrence not very unfrequent in iron-built ships.

[1] In the time of Isaiah, or 600 B.C., "there was in the land no end of their chariots" (Isa. ii. 7). Yet, in accordance with the desolation of the land and its highways, predicted thirty-three centuries ago (see Leviticus xxvi. 32, and again Isaiah xxx. 8), there does not exist at the present day, in any part of the Holy Land, "such a thing as a single wheeled carriage" of any sort, "*not even a wheelbarrow*" (see Dr Robert Buchanan's "Clerical Furlough" in 1859, p. 93). "Roads for wheeled carriages,' observes Dean Stanley, "are now unknown in any part of Palestine" ("Sinai and Palestine," p. 134).

[2] Thus iron was employed in the construction of various implements and instru-

Perhaps, however, the marked prevalence of tools, implements, and ornaments of bronze, in northern and western Europe—as specially proved to us in our grave-diggings—before the introduction to any notable extent of articles of iron, is explicable by the same circumstances—whatever these circumstances may be[1]—which led in the East

ments (see Numbers xxxv. 16); for hewing tools (Deut. xxvii. 5); for axes, agricultural instruments, and saws (Deut. xix. 5; 2 Kings vi. 5, 6; 2 Sam. xii. 31; 1 Chron. xx. 3); for nails for the doors of the gates of the temple (1 Chron. xxii. 3); for spear-heads and weapons of war (1 Sam. xvii. 7, where it is stated that Goliath's spear-head weighed 600 shekels of iron). Mines of brass and ironstone are mentioned in Deuteronomy viii. 9. The 28th chapter of the book of Job proves the high degree of perfection to which the art of mining had reached in his day, for we have in this chapter, says Mr Kenrick, "a complete description of the art of mining —tunnelling through the rock by artificial light, the construction of adits, shafts, and water courses, whether for obtaining a stream or for draining the mine, and the application of fire to separate the metal from the ore." (See his *Phœnicia*, p. 265).

[3] Iron seems, according to Mr Layard, to have been the most useful and most abundant of metals amongst the Assyrians (*Nineveh and its Remains*, vol. i. p. 341, and vol. ii. p. 415). Amongst other objects of iron from Nineveh in the British Museum, "may be particularly specified," says Dr Percy, "tools employed for the most ordinary purposes, such as picks, hammers, knives, and saws." Mr Layard ("Discoveries in the Ruins of Nineveh and Babylon," p 198) gives the figure of a saw found by him in the northmost palace at Nimroud. It is a double-handled saw, similar in form and shape to that used by carpenters of the present day for dividing large pieces of wood. It is about three feet six inches in length. "There is," observes Dr Percy, "no object in the Museum of greater interest than this rusted saw, and it is computed that while it could not be later in date than 880 B.C., it may have been considerably earlier" (see Dr Percy's *Metallurgy*, Part ii., *Iron and Steel*, p. 875).

[4] Thus a ball of iron, and twelve pieces made fit for arrows, are given away at the games held at the funeral of Patroclus (Iliad, xxvii. 125 and 850); and Homer mentions the use of iron for axles of chariots (Il. v. 723), for fetters (Odyssey, i. 204), for axes, bills, &c. (Il. iv. 485, and Od. xxi. 3 and 81.) (See p. 89 for references to notes above.)

[1] The relative age at which copper, bronze, and iron appear among different nations, and in different parts of the world, seems to be by no means always the same. Last century, in the Polynesian Islands, the stone age at once ceased, and that of iron began at the advent of Cook and other voyagers. In a very few parts of the world, as in North America and Eastern Hungary, a kind of copper age, in which tin and bronze were unknown, seems to have followed that of stone. In the early periods of the Chaldean monarchy, or about 1500 B.C., all the implements found

to the early and general preponderance of bronze over iron weapons. In the Trojan war and the heroic age of Greece, all the military weapons mentioned seem made of bronze,[1] though Homer speaks of iron as used

amidst the primitive Chaldean ruins are either in stone or bronze. Flint and stone knives, axes, and hammers abound in all the true Chaldean mounds, but by no means so unpolished as those of the drift in France and England. In the early times of Chaldea iron is seemingly unknown, and when it first appears is wrought into ornaments for the person, as bangles and rings.—(See Rawlinson's *Five Great Monarchies*, vol. i. p. 119, &c.

[1] Homer describes the spears, swords, and other weapons of his heroes at the Trojan war, or about 1200 B.C. as made of "χαλκος." The original meaning of χαλκος is, no doubt, copper; but some of its alloys, and particularly that with tin forming bronze, passed under the same name, just as at the present day shillings and sovereigns in our coinage pass under the names of silver and gold, instead of being called alloys of these metals which they virtually are. We know that the armour, and particularly the offensive armour of the ancient Greeks, must have consisted of bronze and not of copper, because it possessed the physical qualities of the former and not of the latter. A bronze sword or spear can be made both very sharp in its edge and strong in its texture, whilst it is impossible to invest a similar copper instrument with the same qualties. Homer represents Ulysses as striking Demacoon on the temple with such force that his spear passed twice through the cranium, the point penetrated through the opposite temple (Iliad, iv. 502.) If it were possible to effect such a penetrating wound with a bronze spear, it was certainly not possible to produce this and many other extreme wounds mentioned in the Iliad with instruments of copper alone, as copper spears or swords would have bent or twisted under the force applied to them. The cutting power of these ancient weapons comes strongly out in the speech of Apollo to the Trojans, immediately after the fall of Demacoon, when he argues with the Trojans that "the flesh of the Greeks is neither made of stone nor of iron, so that when struck it should resist the flesh-rending bronze" (Iliad, iv. 511). But further, before the Trojan war bronze and its qualtites were well known to the Greeks. In the old city of Mycenæ, Pausanias (II. 16 § 5) describes the treasury and the tomb of Atreus, the father of Agamemnon, the great leader of the Greek hosts against Troy. The structure is probably entirely sepulchral, and according to Gell, Hughes, Dodwell, and others, is as old, and probably older, than the Trojan war. On examining, within this century, the nails which had fastened the plates of metal that formerly lined the interior of this Atreian tomb or treasury, Sir William Gell found them to consist of bronze, and that the tin and copper composing them were in the usual proportions (see his *Itinerary of Greece*, p. 33, plate 7. See also Hughes, in his *Travels in Sicily, Greece, &c.*, vol. i. p. 234). As another argument for χαλκος or copper being used as a term to include other metallic

for other purposes.[1] Was it the greater existing amount of bronze, or of the elements of bronze—and hence its relative cheapness—in these ancient times,[2] or was it the greater facility of melting and working and giving it a sharp edge,—or was it a want of knowledge of any easy means of rendering the iron sufficiently hard and useful as a weapon of war,[3] that led, in these early eras, to the general adoption of bronze, and the rejection of iron, as metals for cutting and military weapons? I do not know if these or any other reasons, as yet suggested, are adequate to explain the difficulty of our British ancestors, for instance, manufacturing for themselves—or purchasing from others, as the Phœnicians—implements of bronze[4] in preference to implements of iron. Or, seeing this

alloys, let me merely add, that the word originally used for copper-smith came to be employed betimes to include a worker in metallic compounds generally, so that the smith or iron-worker, for example, passed under the general designation of χαλκευς, or brazier. For instance, Herodotus (I. 68) speaks of a coppersmith (χαλκευς) being engaged in his workshop in beating out iron. In still earlier times, Homer speaks of the manufacturer of iron axes as ανηρ χαλκευς, literally a brazier; and a smithy, as χαλκειον (Odys.) ix. 391). See a learned paper on the early history of Brass by Dr Hodgson, in the "Archæologia Æliana," vol. i. p. 17 *seq.*

[1] See footnote on this point, No. 4, p. 90.

[2] When the accumulation of materials made by David for the building of the Temple at Jerusalem is mentioned in Chronicles, it is significantly stated that "David prepared iron in abundance for the nails for the doors of the gates, and for the joinings, and brass in abundance," so as to be both "*without weight*" (1 Chronicles xxii. 3 and 14). It seems here implied that the amount of bronze in relation to iron was comparatively unlimited. Elsewhere it is stated that Solomon, in forming the vessels of the temple, used such an amount of brass or bronze, that its weight "could not be found out" (2 Chron. iv. 18, and 1 Kings vii. 47). When we remember that one-tenth of all this bronze or brass "without weight" consisted of tin from the west of Europe, and particularly from Cornwall, it tends to give us some idea of the immense extent of the tin trade in these days. Other facts strengthen this idea, as at Babylon, the hundred massive gates, with their lintels and side-posts all entirely made of bronze, as mentioned by Herodotus (Lib. I. c. 179).

[3] Yet Homer, in the Odyssey (ix. 392), gives an excellent account of tempering iron by plunging it when hot into cold water.

[4] Both Strabo (iii. 5 § 11) and Cæsar (B. G. iv. c. 22) speak of bronze as one of the imports at their day into Britain, though the raw tin was for long, no doubt, their richest export from the island,—as we import cotton from America, the East Indies, &c., and send it back to the same countries as cotton cloth. The Phœnicians pro-

difficulty, ought we to go farther back into prehistoric archæology, to reach an era when bronze, in relation to iron, was, in this and other parts of Europe, almost the only metal employed in the arts either of peace or war?[1]

That our Phœnician visitors and colonists raised our megalithic circles, and sculptured rings upon our rocks as Solar worshippers, is still more a question of doubt.

In imitation of the Canaanites and their Phœnician kinsmen and neighbours, the Hebrews sometimes, in their idolatry and obduracy, paid worship "to the sun, and to the moon, and to the planets, and to all the hosts of heaven" (2 Kings xxiii. 5; xvii. 16; xxi. 3–5; Deuteronomy iv. 19; xvii. 3.) "Baal and Ashtaroth, the two chief divinities of Phœnicia," to quote Mr Kenrick, "were unquestionably the sun and moon; and the minor deities appear either to have been the same heavenly bodies, or at least to have represented objects of astral worship" (p. 298). In addition to the worship offered to Baal in his original solar character, his name came to be regarded as that of supreme god and ruler. He occupied the place of both Apollo and Zeus or Jupiter in the mythologies of Greece and Rome. That Baal worship extended widely at an early period over western and northern Europe, is so far rendered highly probable by various circumstances, as, for example, by the frequent prefix of Baal to the names[2] of localities in the West as in the East; and,

bably brought back the tin mixed with copper, in the form of the elegant bronze weapons and ornaments that we meet with in ancient British tombs, &c., but which, as we know from the moulds left, came betimes to be manufactured in this country. The abundant copper deposits in Cornwall seem never to have been worked till the fifteenth century; and the Cornish ore is difficult to reduce to pure copper—one strong reason for it not being used in very early times (see Dr Thurnam in "Crania Britannica," p. 102).

[1] For ample evidence, as drawn from our cemeteries, &c., of the predominating use of bronze by our British ancestors before iron was much or at all used, see the very masterly work of Sir John Lubbock on "Prehistoric Times."

[2] "In Syria and the East, the numerous names of places," argues Mr Kenrick, p. 300, "to which Baal is prefixed in Palestinian geography, as Baal-Gad, Baal-Hamon, Baal-Thamar, Baal-thelisha, indicate the early and wider diffusion of his worship." The same argument applies to the west and north of Europe, where we have names with the same prefix of Baal, in Balerium (or Land's End), Bel Tor, in Devonshire,

specially by the persistence and popular representation of some of the older observances of Baal-worship,—such popular superstitions being always very difficult to eradicate when the results of a religious creed.[1]

Bel-an, in Montgomeryshire, Baal Hills, Yorkshire, &c.; and, according to Nilsson, in more northern names, as the Baltic, the Great and Little Belt, Beltberga, Baleshangen, Balestranden, &c. According to him, Baal is a prefix as far north in Norway as the Lofoden Isles, where it occurs in the villages Balself and Balsfsord. (Nilsson, p. 48.)

[1] FIRE-FESTIVALS.—Few superstitious usages of former times have continued for a longer time than the keeping of days for fire-festivals. Two great fire-festivals seem to have been formerly observed in our own country, and over a great extent of northren and western Europe, namely, 1. Beltane, upon the opening of summer on the first of May; and, 2. Samhain or Hollowmass eve, on the first of November—new or old style. A third fire-festival day has betimes sprung up at midsummer's eve or St John's eve (22d or 23d June), usually displacing, where it is observed, the Beltane festival, and accompanied by the same customs. It is to the first of these festivals namely, Beltane, from *Baal*, the Phœnician god, and *Teine*, *Tine*, or *Tene*, fire, as a possible and probable continuation in the west of the old oriental fire-worship of Baal, that I chiefly advert in the text. For the former great, and comparatively late annual prevalence of Baal-fires or Beltanes in Great Britain, in Scandinavia, on the Continent, &c., see numerous extracts in Brand's "Popular Antiquities" (May-Day and Midsummer Eve); Jamieson's Scottish Dictionary, article "Beltane;" Hislop's "Two Babylons;" Nilsson's "Skandinaniska Nordens Ur-Invnaåre" (pp. 14–76); Grimm's Mythologie, pp. 579, &c. &c. Some Celtic authors have described it as a Celtic festival, but it has long been practised in the Lofoden Islands, and in other parts too far north in Norway for a Celt to have reached. Latterly, I have seen it stated that the word "Beltane," or "Beltein," does not signify Baal's fire, but merely "a lucky" fire. Unfortunately, however, for this suggestion, the name of it in Scandinavia is Baldersbål or Balder's pyre, a word which no Celtic ingenuity could easily change into "lucky" fire. The distinguished geologist, Leopold von Buch, who saw the Baal-fires or Baldersbål lit up at Midsummer's-eve at the island of Hindön, in the far north of Norway, and within the arctic circle, shrewdly remarked that it was almost inconceivable to suppose that such a northern people should ever have themselves originated the idea of lighting fires on the hill tops in their own country at Midsummer's-eve—a time when daylight is almost so continuous with them, that the smoke rather than the flame of the fire was visible; and from this alone he argued the foreign or eastern source of the practice;—a practice, besides, which surely must have been brought from some common centre, since it could scarcely spring up spontaneously among so many distant countries and populations. In the Isle of Man—the geographic

But the idea promulgated by Professor Nilsson, that our great Megalithic circles in this and other adjoining countries were originally reared as

centre of the British islands—the month of May bears the old significant name of Boaldyn or Baal's fire; and on the eve of May-day, old style, there are still numerous fires lit up in all directions,—so numerous", says Mr Train, "as to give the island the appearance of a general conflagration" (Train's Isle of Man, vol. i. p. 315); whilst the individuals surrounding them blow horns and hold a kind of jubilee on the occasion. Mr Harrison, in his late edition of Waldron's "Isle of Man," says that it was customary to light two fires in honour of the pagan god Baal, and to drive the cattle between these fires as an antidote against murrain or any pestilential disease for the year following (p. 124). Mr O'Flaherty tells us that in the tenth century, King Cormac was in the habit of erecting two fires, between which both the people and the cattle of the district were driven for purification (see "Transactions of the Irish Academy," vol. xiv. p. 100, &c.); in the same way as when the Hebrews "served Baal, they caused their sons and daughters to pass through the fire" (2 Kings xvii. 16, 17). Mr Toland, an Irishman by birth, but who resided much in this country and on the Continent, writing 150 years ago, observes: —"Two rude fires, as we have mentioned, were kindled by one another on May-eve in every village of the nation (as well throughout all Gaule as in Britain, Ireland, and the adjacent lesser Islands) between which fires the men and the beasts to be sacrificed were to pass. One of the fires was on the cairn, another on the ground." (See his *History of the Druids*, 1814, p. 117.) Mrs Abbott, of Copenhagen, tells me that on both the Danish and Swedish coasts of the Baltic, the Baal-fires may be still seen, on the evening of the 23d of June, lit up in a long line at the distance of about one mile from each other. Tetlan and Temme (Preussische Sag, p. 277) say, that in Prussia and Lithuania, on St John's-eve, fires are seen as far as the eye can reach. Grimm remarks that, in the celebration of their fire-festivals the northern parts of Germany have adopted Easter or May-day, as Lower Saxony, Westphalia, Holland, Friesland, &c.; while the more southern parts, as the shores of the Rhine and Austria, with the kingdoms lying between them, hold the 23d of June as their fire-festival; and again some parts, like Denmark and Kärnten, keep both days (Grimm's Deutsche-Mythologie, p. 581). For similar fire-festivals in other parts of Europe, see Grimm, pp. 589–591, &c. In Scotland formerly various forms of frolic and merriment reigned on Beltane-day, as we know from King James the First of Scotland's celebrated poem, "Peebles to the Play," describing some of the usages of our forefathers on that festival in the early part of the fifteenth century; and Robert Burns has similarly described the superstitions and festivities of Hallowmass or Halloween. Fires were formerly burned at this last festival or November eve, as well as on May-eve. "On the eve of the first day of November," says Toland, "there were also such fires kindled [as on May-day]; accompanied as

Baal or Solar temples, by the spread of Phœnician influence and colonisation among our ancient forefathers, is an opinion which seems open to the gravest objection. Stone circles of varying sizes are, as we have just seen in a footnote to a preceding page (p. 81), known in almost every portion of the world, from Greenland to Australia, and consequently in many portions where Phœnician fancies and ideas never reached. Besides, if gigantic megalithic circles, like Stonehenge, Abury, Salkeld, Callernish, &c., were erected in Britain as solar temples to the Phœnician Baal, we should naturally expect that many circles on the same gigantic scale should be found to exist, or to have existed, in Phœnicia itself, and in its numerous eastern colonies. I am not aware, however, that there can be adduced any evidence whatever to this effect; for the exceptional presence of a single small circle, as observed by Dean Stanley, near the site of Tyre, scarcely deserves consideration in such a question as this.[1] Again, that our English large megalithic circles were not

they constantly were by sacrifices and feastings." (*History of the Druids*, p. 117.) In some parts of Scotland these November fires are still lit up. Dr Arthur Mitchell informs me, that a few years ago, he counted within sight of a railway station in Perthshire ten or a dozen of these Samhain fires burning in different directions on a Halloween night.

[1] It has been sometimes argued that the erection of megalithic structures with rude and unhewn stones implied necessarily on the part of the builders a want of knowledge of metallic tools. But certain circumstances tend to refute this as an absolute idea. Thus a Semitic race—living contiguous to the Phœnicians—viz., the Hebrews, erected the first stone circles and single monoliths, of the rearing of which we have any historical record, after—if we should except the very earliest, which is even doubtful—they were possessed of bronze and iron tools. All the monoliths spoken of in Scripture, and the twelve stones reared at Gilgal after the passage of the Jordan, seem to have been erected as memorials of important facts, events, or covenants, or as sepulchral stones; but the circles of twelve stones which Moses raised at the foot of Mount Sinai, inclosing an altar of earth within its circuit, was more certainly of a religious character. For an interesting and ample discussion of the various bearings of the single pillar-stones, stone circles, cairns, &c., mentioned in the Bible, I would beg to refer to some dissertations on the subject in Dr Kitto's "Palestine; the Bible History of the Holy Land," pp. 241, 356, 404, and 428. Dr Kitto does not allude to the remarkable fact that it is several times specially commanded that, although iron and other instruments were well known and used at the time, the stones used to build altars should

Phœnician solar temples, is strongly borne out by the fact, that none of the solar temples of Phœnicia and the East consisted—as our megalithic circles do—simply of a circular series of open and more or less distant upright stones. On the contrary, they were built, as we have every reason to believe, from the remaining temple walls in Gozo, Malta, &c., solidly of stones; and though possibly, like some large eastern public buildings left occasionally roofless above, this appears not to have been usually the case with Phœnician temples.[1] The coins of Berytus, Byblus, Tripoli, &c., seem always to represent Astarte as standing under a roofed temple. Doubting, then, that the megalithic circles of Great Britain were raised as solar Phœnician temples, we doubt also entirely that the concentric circles and cups carved upon our rocks and stones were cut out upon them by sun-worshippers, and that they were sculptured by them as symbols

be whole, and not hewn or touched by any tool. (See Exodus xx. 25, and Deuteronomy xxvii. 5.) "An altar of whole stones over which no man hath lift up any iron" was in consequence erected on Mount Ebal by Joshua about 1450 B.C. Some twelve or thirteen centuries later, the altar erected in the Temple—after the profanation of it by Antiochus Epiphanes—was, according to the first Book of the Macabees (iv. 47), built of "whole [or unhewn] stones, according to the law."

[1] Josephus quotes the Greek author Menander, the Ephesian, to the effect that some ten centuries B.C., Hiram, king of Tyre, raised in the city "a bank on that called the 'Broad Place,' and dedicated that golden pillar which is in Jupiter's [Baal's] temple; he also went and cut down timber from the mountain called Libanus, and got timber of cedar for the roofs of the temples,"—one of which he rebuilt and consecrated to Hercules, and another to Ashtaroth (see Whitson's translation of Josephus' Works, Essay against Apion, Book I. § 18). Menander's circumstantial account of the position of the bank on the "Broad Place" or "Broadway" of the city—no doubt a well known street or square in ancient Tyre (as it is in its mighty representative—the modern American Tyre)—was possibly copied from the public records. Josephus elsewhere states (§ 17), that the Tyrians kept "with great exactness" their public records, both domestic and foreign; and it is certainly much to be deplored that these chronicles, with the history of the Phœnicians by Dius, and all the other native literature of Phœnicia, have, with one questionable exception, utterly perished; a loss which is the more to be lamented, for none of the nations of antiquity diffused more widely over the ancient world a knowledge of industry and of the blessings of peace and commerce. What another flood of light might we have on ancient history if, by any strange chance, a copy of Pytheas's account of his travels in Britain (350 B.C.) should ever turn up in the yet unexplored parts of Pompeii or elsewhere. Pytheas "travelled all over Britain on foot" (Strabo ii. 4 § 2).

of their Sun-god. The idea that these circles and cups are in any way connected with Baal or Solar worship seems to me entirely hypothetical, and without any direct proof or evidence whatever in its favour. In answer to Professor Nilsson's lengthy and ingenious archæological speculations upon this point, it may be enough, on the present occasion, to reply, in regard to British stone concentric ring-carvings and cups—

1. That the carvings of concentric circles and cups are not by any means confined to the bronze era, for they are found from the earliest to the latest ages in architecture and lapidary carving; while, on the other hand, the bronze era itself, besides displaying so frequently circular and spiral forms, contains many bronze articles, cut and ornamented with angulated double and single zig-zags, chevrons, and rhomboid lines (see Nilsson's Skandinaviska-Ur-Invånare, p. 2); and stones, also, as in the Kivik monument—supposing it, as Nilsson thinks, to be of the bronze age—carved with weapons, animals, chariots, and men differently dressed and armed. Nor must we forget that during the bronze age in the East, metallic figure sculptures were common, as on temple offerings, and on the helmets, shields, and chariots of some of the Greek heroes.

2. That we have no evidence whatsoever, from any Phœnician or any other ancient remains, that a series of cups or of successive concentric circles or rings—divided or not by a traversing radial duct or groove—was ever anywhere connected with Solar worship, or with the religion of Baal.

3. That it is altogether gratuitous to imagine that our cups and series of concentric lapidary rings were cut to symbolise the sun, to which they have no similarity except the one equivocal attribute of roundness.

4. That over the shores of our own country, as well as in the interior of it, these lapidary cuttings have already been discovered extending far too widely and generally for being the possible product and effects of Phœnician influence and civilisation among us, unless—contrary to all existing ideas—the Phœnician people had found an extensive general domicile in this island. On the other hand, it must further be remembered, that the same specific lapidary carvings remain as yet undiscovered in the true colonies and country of Phœnicia.[1]

[1] I have seen drawings by Mr Adams, Miss Smith, Mr Bartlett, and others, of a few stones marked in the Giant's Temple (Torre dei Giganti) at Gozo, and the ruins of

5. These lapidary concentric rings and carvings are found profusely cut upon chambered tumuli in Brittany, where—as we shall see in a subsequent chapter—the contained relics of the barrows do not include bronze instruments, nor have any apparent connection with Professor Nilsson's Bronze and Phœnician era,—but are all, on the contrary, of the anterior materials belonging to the so-called "Stone age." And,

6. Though carefully looked for by Sir Gardner Wilkinson in Devonshire, and by him and by Mr Blight in Cornwall, lapidary cups or circle cuttings have not yet been found, with one single exception (p. 52), in any part of these two counties. Yet if these cups and circles had been Phœnician in their origin, they ought certainly to have been discovered more abundantly in these two counties than in any others, seeing they formed the district in which alone the tin trade existed. In reference to this last remark, let me here add, that the abundance of the lapidary cup and circle cuttings in some counties, as in Northumberland, Argyle-

Hagar Keem, near Crendi in Malta, but with one exception—that of a stone with two or three concentric circles at Hagar Keem—all the few others seemed short ornamental raised volutes, such as Rawlinson represents as forming a double bracket for a statue of Astarte in Etruria (see his edition of Herodotus, vol. ii. p. 543). Besides, we have no adequate evidence that the old cyclopic buildings in Gozo and Malta were built by the Phœnicians at all. A few of the stones are minutely dotted or picked over the surface, as in the case of some of the lozenged ornaments at New Grange, Ireland. I have seen it suggested, that possibly our British lapidary circles may be found similar to those cut on the pilasters and other stones discovered at the entrance of the so-called Treasury of Atreus at Mycenæ. But the drawings of Mr Dodwell (see his *Tour through Greece*, vol. ii. p. 232) and of Mr Donaldson (see Stewart and Revett's *Antiquities of Athens*, Supplement, p. 32) show the carvings on these Mycenæan stones not to be single nor concentric circles, but to consist of long and elegant continuous strings of double spirals, encircling the columns, and introduced between chevrons and soffits. Besides entirely varying from the ancient British sculptures in this respect, and in the advanced spirit of design which they display, they are further different, in being not incised; but, according to Mr Donaldson, "cut in very low relief." Mr Dodwell states the curious fact, that upon the fragments of pottery scattered on all sides near this so-called tomb of Atreus, spiral and zig-zag ornaments are seen similar to those sculptured on the marbles and pillar at the entrance (p. 237). Dodwell, Clarke, Mure, and others, believe the architectural spiral zig-zag ornaments at Mycenæ not to be Greek in their origin, but rather Asiatic or Egyptian. No one, as far as I am aware, has suggested their Phœnician origin.

shire, Orkney, &c., and their nearly entire absence from others, as Cornwall, Devon, and Pembroke,[1] is a subject by no means undeserving of attention, and one which may yet contribute to the solution of the difficulties connected with their origin and object.[2]

Are not the Kivik Sculptured Stones Cimbrian?

Before leaving altogether Professor Nilsson's ideas and opinions on these and other questions connected with the present inquiry, I will take this opportunity of adding, that—though I have hitherto cited without criticism—his observations on the Kivik monument, I have the gravest doubts of—even as to that monument—being Phœnician in its origin. On the contrary, I incline to think that the historical figures answer better to the accounts which we have of the customs of the neighbouring ancient Cimbri than to any account which we have of the Phœnicians. In other words, in all probability, they are native rather than foreign. During a century or two before the Christian era, large masses of Cimbri traversed and devastated various parts of Europe, and invaded Gaul and Italy. They at different times defeated no less than five Roman consular armies (Tacitus, *Germania*, cap. xxxvii.) A nation of these Cimbri seems to have been fixed from the time of Pytheas[3] at least (350 B.C.), down to the time of the Roman Emperors,[4] in the

[1] The Rev. Mr Barnwell and Mr Blight have examined most of the megalithic structures in Pembrokeshire without finding any example of the circle or cup cutting, and yet the eyes of both were well instructed for the purpose. I should have already stated (p. 20) that it was Mr Barnwell who discovered the circle-cutting in the Goggleby stone after several antiquaries had passed without noticing it, and I confess to have been one of the number.

[2] In the special localities in which the ring and cup sculptures are, there is this analogous difficulty: Why are they found, as at Caerlowrie, upon the lid of one kistvaen only out of several placed in the same ground? Or, as at Ford, on the lids of two out of several mortuary urns or pits? Do they note any specialty of creed, office (as priests), or rank on the part of those, over whose remains they are placed? Why are some megalithic circles marked, and not others? Why only some of the obelisks at Largie, Ballymenach, &c., and not on all of them?

[3] Mommsen's History of Rome, vol. iii. p. 178.

[4] See Tacitus's *Germania*, § 37; and *Mela*, iii. 123 3.

modern kingdom of Jutland or Denmark—the ancient Cimbrian Chersonese, the *Promontorium Cimbrorum* of Pliny: and Tacitus describes them, as in his time, small in number, but still great in renown. This, the "original country," of the Cimbri, as some have termed it,[1] stands at a short distance across the Cattegat, from Scania, where the site of the Kivik monument is placed. The sculptures on the monument, especially on the stones 7 and 8, perhaps portray more faithfully a victory festival of the Cimbrians than of the Phœnicians. "The Cimbrian," writes Mr Mommsen, "fought bravely—death on the bed of honour was deemed by him the only death worthy of a freeman, but after the victory he indemnified himself by the most savage brutality. . . . The effects of the enemy were broken in pieces, the horses were killed, the prisoners were hanged, or preserved only to be sacrificed to the gods. It was the priestesses—grey-headed women in white linen dresses and unshod—who offered these sacrifices."[2] These priestesses thus dressed, and, adds Strabo (Book vii. chap. 11, § 4), bearing drawn swords, went to meet the captives throughout the camp, and having crowned them, led them "to a brazen vessel containing about twenty *amphoræ*, and placed on a raised platform, which one of the priestesses having ascended, and holding the prisoner above the vessel, cut his throat. . . . . In battle, too, they beat skins stretched on the wicker sides of chariots, which produces a stunning noise."[3]

[1] See *Cimbri*, in Smith's Dictionary of Geography, vol. i. p. 623.

[2] History of Rome, translated by Professor Dickson, vol. iii. p. 180. On the practice of immolating prisoners of war by the natives of Anglesea, see Tacitus's *Annales*, lib. xiv. cap. 30.

[3] Strabo, Book VIII. chap. ii. § 3. In 1845, Lisch found inclosed in a mound at Peccatel, in Mecklenburg, a round cauldron three feet in diameter and two in depth, placed between what he conceives to be a large altar on which the victim was placed, and a station which he supposes to have been the position of the sacrificing priest or priestess in such Cimbric rites. The edge of the cauldron projected about a foot above the level of the altar. The skeleton of an unburnt human body lay in a trough or coffin six feet long, three feet broad, and one in depth, in the neighbourhood of the cauldron. Both this coffin and the so-called altars and sacrificing station were made of sand, mixed clay, and hardened up with clay. (See "Jährbucher des Vereins für Mecklenburgische Geschichte und Alterthumskunde," ix. p. 369).

The strange figures around the caldron or altar, in the second row of stone 8, and last row of stone 7, probably portray the dress of women rather than of men; and their great numbers is more in accordance with the fact stated by Strabo, that the Cimbri were accompanied in their military expeditions by their wives, than with the idea that the Phœnicians would carry such an array of priests as we have on these stones, to such a very distant shore as the coast of Scania. Under this view, we would beg further to suggest, that the conical body represented centrally in figure 1, is not a symbol of Baal, but possibly a representation of the elongated spear or *materis*, which the Cimbri carried (Mommsen, iii. 179). In the drawings of the Kivik stones,[1] given by Hilfeling, Sjöborg, and Holmberg, this central cone is very much more elongated and spear-like than it is in the sketch published by Nilsson. Holmberg considers it to be a bronze celt seen in profile; the narrow bodies on either side to be bronze arrow points; and the lateral hatchets, with knobbed handles, to be true representatives of the bronze form of that weapon.

CHAPTER XI.—THEIR PROBABLE ORNAMENTAL CHARACTER.

Without attempting to solve the mystery connected with these archaic lapidary cup and ring cuttings, I would venture to remark that there is one use for which some of these olden stone carvings were in all probability devoted—namely, ornamentation. From the very earliest historic periods in the architecture of Egypt, Assyria, Greece, &c., down to our own day, circles, single or double, and spirals, have formed, under various modifications, perhaps the most common fundamental types of lapidary decoration. In prehistoric times the same taste for circular sculpturings, however rough and rude, seems to have swayed the mind of archaic man. This observation as to the probable ornamental origin of our cup and ring carvings holds, in my opinion, far more strongly in respect to some antique stone-cuttings in Ireland and in Brittany than to the ruder and simpler forms that I have described as existing in Scotland and England. For instance, the cut single and double volutes, the complete and half concentric circles, the zig-zag and other patterns, which

[1] See Holmberg's *Hällristningar*, p. 15, and Tab. xliv. fig. 162, &c.

cover almost entirely and completely some stones in those magnificent though rude Western Pyramids that constitute the grand old mausolea of Ireland and Brittany, appear to be, in great part at least, of an ornamental character, whatever else their import may be. The great curb-stone, for example, at the entrance of New Grange, covered with double volutes (see Plate XXIX. fig. 1), and many of the lapidary cuttings in the interior of that gigantic barrow, the granite blocks forming the props of the passage into the sepulchral chamber at Gavr Inis (see Plate XXX. fig. 1), and some other Brittany stones, seem to present patterns of ornamental lapidary carving.

In some of these, and in other instances, the stones are densely covered with various and endless rock-cuttings, with curved, spiral, and angled lines, like the face of a tatooed [1] Polynesian, and possibly somewhat like the faces of our British forefathers in those distant days when they stained their skins with woad. The surfaces of the stones in the Irish and the Brittany instances I have referred to in the preceding paragraph, and the surfaces of the tatooed Polynesian faces, are indeed so much alike in general character, as to suggest a possible general origin—in the one instance as well as in the other—in that craving which naturally exists, even among the rudest people, for decoration and embellishment; and, after all, an elaborately tatooed stone is not, perhaps, to our ideas at least, so strange as an elaborately tatooed skin. In far later and mediæval times we see the old sculptured stones and crosses of Scotland and Ireland decorated in a more perfect but yet analogous way—and for an analogous object too—by endless and elegant scrolls, circles, volutes, chevrons, and other interlaced and ever-varying patterns cut upon their faces and sides.

The Scottish concentric ring-cuttings and cup-cuttings, however, are far ruder and simpler than the Irish and Brittany examples of old lapi-

[1] M. Dumont d'Urville, in his "Voyage de l'Astrolobe," gives numerous figures of tattooing amongst the Polynesians. The principal figures upon the face consist of simple or compound spirals (see the accompanying plates, tom. i. pl. 63, 74, &c.) They indulge also in abundance of circular and crescentic lines and figures.

dary ornamentation to which I have referred. They lack that elaborateness and diversity of detail which characterise the cuttings within the Irish and Brittany sepulchral chambers. They are also in most cases far more sparse in their distribution, and more rough and rude in their details, than we would naturally perhaps expect in rock or stone surfaces carved for mere and pure decoration only. At the same time these ancient rock-cuttings in Scotland and England present indisputably, wherever they occur, the same archaic "handwriting on the wall,"—they are everywhere so wonderfully similar in their type of art,—so nearly and entirely like to each other in all localities in their general artistic conception and details, as to prove that they originated in some fixed community of objects or ideas among those that cut and formed them—whether their origin was ornamental, or symbolic, or both. But, whatever else was their object, that they were emblems or symbols connected in some way with the religious thoughts and doctrines of those that carved them, appears to me to be rendered probable, at least, by the position and circumstances in which we occasionally find them placed. For in several instances we have seen that they are engraved on the outer or inner surface of the stone lids of the ancient kistvaen and mortuary urn. The remains of the dead which occupied these cists and urns were covered over with stones carved with these rude concentric circles, apparently just as afterwards—in early Christian times—they were covered with cut emblems of the cross placed in the same position. Man has ever conjoined together things sacred and things sepulchral,—for the innate dread of death and the grave has ever led him, in ancient as in modern times, to invest his burial rites and customs with the characters and emblems of his religious creed.

In some instances the carved stone employed to cover the body or ashes of the dead, or used in the construction of their megalithic cists, seems to have been taken for that purpose from other localities where possibly it had been already regarded as sacred, and had possibly served for other religious purposes. Thus, for example, the carved cist-cover at Craigiehill is, at one end, broken off right through two or three series of concentric rings (see Plate XI. fig. 2), which must have been cut upon it before it was reduced to its present shape and size; the small slab from the cist at Carnban has been similarly mutilated through the

linear course of the carving upon it, to allow of it being placed as a panel in the end of the grave; and a few of the sculptured stones in the megalithic sepulchral crypts and galleries of Ireland and Brittany have been ascertained to be carved upon their hidden as well as upon their exposed sides, showing that they were sculptured, in part at least, ere they were placed in their present situations.

Perhaps it might be further argued that the presence of the concentric rings and cups on the sides of Long Meg, the Calder stones, and the stones of other "Druidic Circles," goes to show their sacred or religious character,—whether we regard megalithic circles as places of worship, or places of sepulture, or both. The same remark applies to their appearance upon cromlechs; and, if possible, more emphatically still to their occurrence upon sepulchral monoliths and standing stones.

CHAPTER XIII.—THEIR AGE, OR THE DATE OR DATES AT WHICH THE RINGS AND CUPS WERE CUT.

The central cup, with or without a surrounding circle or circles, constitutes one of the most simple, and consequently most frequent, forms of ancient sculptured ornamentation. Nothing could possibly be more rude and primitive, except it were one or more unornamental straight lines or grooves such as we occasionally see both traversing and passing beyond the cups and rings. The very simplicity of the cup and circle forms is one strong reason for our regarding these types of sculpture as the most archaic stone carvings that have been left to us. When once begun, such types of lapidary carving and ornamentation would—for the same reason—be in all likelihood readily transmitted down to future generations—and perhaps to races even—that followed long after those who first engraved them on our stones and rocks. Possibly their sacred symbolisation—if they were sacred—contributed to the same end; for forms and customs that were originally religious observances often persist through very long ages after their primary religious character is utterly forgotten, and even where the type of religion has been totally changed.[1]

[1] As, for example, the use of the old pagan marriage-ring in the Christian marriage rites of some churches; the general avoidance of marriage in May, a superst-

As yet, we want a sufficient body and collection of data to determine with any accuracy the exact age or ages and periods at which the lapidary cup and ring cuttings we have described were sculptured. But the facts we possess are quite sufficient, I think, to prove that the date or dates at which they were for the most part formed must be very remote. In evidence of this I shall appeal in the following chapters—though at the risk of some recapitulation—to their precedence of letters, and traditions; to various data regarding the connection of these rude sculptures with the dwellings and sepultures of archaic man; to the archaic character of the antiquarian relics with which they have been found in combination; and to their geographical distribution as bearing upon their antiquity.

CHAPTER XIV.—THEIR PRECEDENCE OF LETTERS AND TRADITIONS.

In no instance have the lapidary cup and ring cuttings been found in Scotland or England conjoined in any way with any attempts at any form, however rude and primitive, of letter-cutting or letter-writing. We have no reason whatever to believe that the ring and cup cuttings are themselves, as we have heard suggested, unknown words, or hieroglyphics, for they are too few in number and too analogous in form for such a purpose;[1] and if any type of letters had been known to the carvers of the cups and rings, examples of these letters would almost inevitably have been found somewhere cut alongside of these sculptures.[2] We are

tion described some eighteen centuries ago by Ovid; the ancient heathen well-worship, which is not yet extinct in some parts of the British islands; the lighting up of Baal-fires on May and Midsummer's eve, &c., &c.

[1] All the cups, for example, upon the cromlechs and tumuli, figured in Plates VIII., IX., and X. are so similar—as are all the concentric circles upon Long Meg, in Plate VII.—that they offer singly no such differences as render them capable of being interpreted as individual and separate letters.

[2] Governor Pownall, in the "*Archæologia*" (vol. ii. p. 260), imagines the broken gridiron-looking markings at New Grange (Pl. XXVII. fig. 5) to be some old Eastern or Phœnician inscription; and Mr Du Noyer, in the *Meath Herald* for October 21, 1865, reports among the sculptured tombs of Sleive-na-Caillighe what he believes to be short Ogham inscriptions or letters. But my observations in the text apply to British antiquities, and not to those of Ireland.

not aware when a knowledge of letters reached the western shores of the Old World, and whether they came in, as some hold, with a race using bronze weapons and ornaments,[1]—or with a later race, using iron implements, as others maintain. At all events, they were not apparently known or employed in Western Europe for centuries after the inhabitants of Western Asia had engraved their deeds and thoughts upon rocks and stones, bricks and tablets of clay. And in regard to Britain, we are at all events fully entitled, I believe, to hold that the race or races that cut our many rude ring and cup sculptures were not, either at the beginning of the practice, or even up to the termination of it, acquainted with the use and carving of letters—or otherwise, as I have just stated, we would almost inevitably have found traces of their letters in connection with some of these lapidary sculptures.

Nor am I aware that in any spot in which the ring and cup sculptures have been found, has tradition preserved the faintest remembrance, either of their object or their presence. They are too decidedly "things of the past," for even the most traditional of human races to have retained the slightest recollection of them.[2] Thus, for example, in the kistvaen

[1] Certainly not with the bronze era, for traces of writing on old bronze weapons have not been found except in a very few instances. Two of these instances consist of bronze helmets, with Greek inscriptions cut upon them. One of them—the helmet of Hiero I.—is probably of the date of 474 B.C.; the second may possibly be a century earlier. (See these helmets and the inscriptions upon them figured in Mr Franks' valuable additions to the "Horæ Ferales," pl. xii.) Both of these helmets are now in the British Museum. At Constantinople there is still preserved the brazen stand of the famous golden tripod, which was dedicated by the confederate Greeks to Apollo at Delphi, after the defeat of the Persian host at Platæa, B.C. 479. On its stalk is engraved, in ancient Greek letters, a battle-roll of the Greek army, which was possibly used by Herodotus himself in drawing up his history. (See Rawlinson's Herodotus, vol. iv. p. 451).

[2] The carving of circular markings upon a kind of stone that is remarkable for the tempting facility with which it may be incised, is a practice followed in one spot of the British Isles at the present day. The rock at Fetheland Head, Shetland, is formed of steatite or soap-stone. It is as easily cut or whittled with a common knife as a piece of wood. Three years ago, my friend Dr Arthur Mitchell saw the herring fishermen, in a day of idleness, cutting circles with their knives in the face of the rock, without the operators being able to assign any reason for their work, except that others had done it before them. The circles were all single, round, and small,

of the large barrow which formerly stood at Carnban, in Argyleshire, some two miles west of Lochgilphead, we have seen (p. 31) a sculptured slab introduced as a loose panel, within the stone grave of the great chief or priest in whose honour the barrow was raised. Of all races, the Celtic is specially retentive of traditional descriptive appellations. But he who was buried in the cairn gives no more his own name to it—as, no doubt, he did at first for long ages; and instead of recognising the barrow by his special appellative, the neighbouring Highlanders have, from time immemorial, known it merely from the colour or figure of its stones, under the meaningless name of "Carnban," or "the white or fair cairn." Did the occupant of this originally great cairn, with his flint fragments buried beside him, belong to an earlier branch of the Celtic race than the present? Or did he and his brotherhood, who sculptured the rocks in the same valley with rings and cups, not pertain to a population or a race really older than the Celtic?

CHAPTER XV.—THEIR CONNECTION WITH ARCHAIC TOWNS AND DWELLINGS.

When cut upon rocks *in situ*, the cups and rings have usually been found, in Northumberland, within the walls of archaic camps or towns, or placed at a small distance from them. At Old Bewick, some of the sculptured stones stand both within and without the great and striking ramparts of that ancient British city; and at Rowtin Lynn and Chatton Law there are walled camps or citadels in the immediate neighbourhood of the sculptured rocks; and the sculptured rocks themselves are included within their secondary defences or out-towns (see *ante*, p. 50). We have found the same observation to hold good in reference to examples of other isolated cut stones in Northumberland, Cornwall, Isle of Man, &c.

But in highly cultivated districts the march of agricultural improve-

without any central cup or side duct. On the same rock were initials and crosses carved out. Dr Mitchell found also circular marks on the rock, varying in diameter from ten to thirty inches—of an older date, and some of them turf-covered—which had been made, not by a knife, but by a pick or pointed chisel. The larger circles are averred by the natives to be of Danish origin.

ment has generally swept away all traces of ancient human habitations in the neighbourhood of the sculptured cists and monoliths; though not always. We have, for example, found (p. 45), within a few miles of Edinburgh, the carved kistvaen at Craigie Hill placed outside the ramparts of an ancient walled town; and the monolith at Comiston occupying a similar position (p. 46).

There exist no pracise facts to fix the age at which the ancient British towns at Old Bewick, Rowtin Lynn, Craigie Hill, Comiston, &c., were inhabited; but probable data bearing on the point may yet be recovered in the form of buried tools, pottery, and weapons—as, for example, even in the varying and particular forms of their flint arrow-heads—in the special types of their walls and defences—in the characters and shapes of their included hut and house foundations and pits, &c. Wanting, however, still any adequate facts to determine the exact age of these towns or forts, we cannot through them approach with any accuracy the era of the archaic sculptures connected with them. Nor must we forget, in attempting to reason from the age of these ramparted dwelling-places, that in all likelihood—in ancient as in modern times—the same spots served for cities and communities through many long generations; and that the sculptures may belong to their earliest and not to their latest period of existence.

Within these archaic towns and camps no lapidary circles and cups have yet, I believe, been found in immediate connection with the stones of their hut foundations, circles, and pits—the dwelling-places of their olden inhabitants. They have been discovered, however, upon the stones of single human dwellings probably equally old. Among the most antique types of artificial human habitations in this country are our underground houses or "weems." I have already adduced instances of one or two of these underground weems having, in their structure, stones sculptured with rude cups and rings, &c. The origin and general age of this type of artificial human dwelling we know not, though the rude materials and relics occasionally found within them prove the earlier forms of them to be very ancient. But some facts show that the ring and cup cuttings were as old or older than the date of the building of the most ancient type of these weems; for in one or two archaic earth-dwellings of this kind, blocks of stone, carved with ring and

cup cuttings (see Plates XX. and XXV. fig. 3), have been discovered both in the foundations and roof of the weems, where they had apparently been introduced and used, after serving other functions as sculptured stones; and possibly at so advanced a date from the time of their carving, that all reverence for the sculptures themselves had died out in the minds of the generation who used them as simple building material.[1]

These underground weems are seemingly artificial representations of those natural caves which formed in all likelihood, at a still earlier period, the dwellings of our archaic forefathers. On the coast of Fife there are several of these natural caves or "weems," as they are still called in that district. One, which was lately opened near Easter Wemyss, contained numerous relics of bones, broken and split for the extraction of the marrow, as in the bones of the ancient Danish midden-heaps. In another cave, nearer the village of Easter Wemyss, which I visited with Dr Dewar, I found faded appearances of some depressions or cups with small single circles cut on the wall. Probably a more minute and extensive search in these caves would discover many more such carvings;[2] and it is not impossible that they or similar rude sculpturings

[1] The edges, however, of the rings and cups upon the large stone from the weem at Letham Grange, described at p. 41, are still so sharp as to show that the block had not been greatly exposed and weathered before it was buried in the foundation of this underground house. Could the builder of this weem have cut these markings upon the stone, with the hope of thus investing it with any sacred and protective character, before he placed it in the foundation of his dwelling?

[2] I leave this sentence as it was written, above two years ago. Shortly after that period I revisited Wemyss to inspect the other caves of the district, and make more minute observations than I could do in my first hurried visit, and discovered on the walls of some of them many carvings of animals, spectacle ornaments, and other symbols, exactly resembling in type and character the similar figures represented on the ancient so-called Sculptured Stones of Scotland, and like them, probably about a thousand years old. The small circles and cups which I saw in the Court Cave on my first visit, proved, on more careful inspection, to be the faded fragments of ends of two or more so-called "sceptres" or sceptre ornaments. On the occasion of my revisiting the caves, I was accompanied by Drs Joseph Robertson, Duns, and Paterson; but my esteemed friend Mr John Stuart, who has so admirably collated our Sculptured Stones, declined to make one of the party, as he deemed it im-

may yet be detected on the walls of those caves which, from their containing fragments of the bones of men and animals, with weapons, and other rude works of human art, are known to have been, in very distant and remote times, the dwellings of man; such as Kent's Hole, Wokey Hole, Brixham Cave, and the old inhabited caves of Belgium, France, &c.

CHAPTER XVI.—THEIR PRESENCE ON THE STONES OF THE MOST ANCIENT FORMS OF SEPULTURE.

Our archaic forefathers have left us many more specimens of the tombs of the dead than of the dwellings of the living; and ancient sepultures have ever formed great treasuries for archæological investigation. These sepultures are, as we have already seen, especially rich in the rude sculpturings after which we are inquiring. They have been found (see Chapter iv.) on the stones covering urns; on those forming the lids of kist-vaens, specially of the short and earlier form; within sepulchral chambers; and on the stones of cromlechs; not to speak of their appearance upon sepulchral stone pillars and megalithic circles. Some of these forms of sepulture, as the megalithic circle, the chambered tumulus, and its fundamental prototype, the uncovered cromlech, are in their origin beyond—perhaps very far beyond—our historic era. The carvings upon these sepulchral stones are probably all as old, and some of them even older, than the megalithic tombs of which these stones form a part. We have evidence of this in the facts I have already adverted to in pp. 81 and 105,—as that, for example, in one or two of the sculptured stones within the great sepulchral chamber at New Grange, some sculptures can be felt carved upon the backs of the blocks,—a position in which they could only have been cut before the sepulchre itself was reared. It is apparent that on other stones the sculpturings were made after the blocks were placed, as the patterns

probable that we would find anything interesting. I described at length these Fife Cave carvings to the Royal Society of Edinburgh on the 2d January 1865, and illustrated them by a full series of drawings of the sculptures made by Mr Drummond, R.S.A., and Dr Paterson. My communication on the subject (see Appendix) was published in the "*Proceedings of the Royal Society of Edinburgh*," vol. v. p. 521 to 526.

are continued from the face of one stone to another.[1] Not knowing with any reliable exactitude the era of these great sepulchral works, on the stones of which the cups, rings, &c. are cut, we fail of course in fixing the data of the sculpturings themselves. But that some of these sepultures and their attendant sculpturings are very ancient, we know from another piece of evidence which we shall consider for a moment, viz.,—the nature of the relics which have been found in connection with them.

CHAPTER XVII.—THE ARCHAIC CHARACTER OF THE CONTEMPORANEOUS RELICS FOUND IN COMBINATION WITH THEM.

Antiquarian relics found in connection with ancient human habitations, whether the dwellings of single families or of large communities, are liable, as archæological chronometers, to mislead us by the evident fallacy that these dwellings may have, in ancient times, been often the residences, not of one generation, but of many successive generations, and even of successive races of men.

A similar source of fallacy is often involved in the answers which the archæologist may obtain from the examination of ancient places of sepulture, unless he pursues his interrogations with all due caution; for chambered tumuli, burial mounds, and cemeteries when once rendered sacred structures and spots, by the interment of the dead, continued occasionally to be used as places of sepulchre, for long ages by later and distant populations. Hence the well-known fact, that as late as 785, Charlemagne had to issue a special order to his christianised Saxon subjects, that they should cease from interring their dead in the tumuli of

[1] When speaking of the lines cut upon the cromlech called the Merchant's Table, at Locmariaker in Brittany. Mr Lukis observes, that "the stones were engraved *previously* to the construction of the cromlech, for the scored lines pass over the tops of the props at the points in contact with the capstones. This ornament was, however," Mr Lukis adds, "completed [occasionally] after the erection of the whole structure, for in the instance of Gavr Inis, the small stones—wedged into the spaces between the principal—have the scored work continued over their surfaces."—*Archæologia* for 1853, vol. xxxv. p. 250.

the pagans, instead of burying them in the churchyard.[1] (*Ut corpora Christianorum Saxonum ad cœmeteria Ecclesiæ deferantur, et non ad tumulos Paganorum.*) Many of our oldest barrows and burial mounds contain, in this way, *secondary* or later interments, which have often been confounded in archæological researches with the *primary* burial, for which the barrow or mound was raised. The long barrows of England, for example, seem to have been originally the graves of a population who had elongated skulls,[2] and apparently possessed no metallic weapons; but in other parts of the long barrows, and before reaching

[1] Pertz's *Monumenta Germaniæ Historica; Legum*, tom. i. p. 49. In the same capitulary Charlemagne issued orders against the practice of burning the dead, and laid it down as a capital crime. ("*Si quis corpus defuncti hominis secundum ritum paganorum flamma consumi fecerit, et ossa ad cinerem redierit capite punietur.*")

[2] The doctrine of the greater antiquity in Britain, of the long-headed or dolicocephalic, as compared with the round-headed or brachycephalic race, was first broached some twenty years ago, by one of our greatest leaders in Scottish archæology, Professor Daniel Wilson. (See his Prehistoric Annals of Scotland, 1851, p. 160, &c.) A late writer on the subject, and a most keen and accurate observer, Dr Thurnam, in an essay "On the Two Principal Forms of Ancient British and Gaulish Skulls,"—in speaking of his own extensive experience in England, remarks, in regard to the long-chambered barrows of North Wilts and Gloucestershire,—"There is no well authenticated proof that metallic objects, whether of bronze or iron, have in any case been found in the undisturbed chambers of these tombs, which, however, yield well-chipped flakes and arrow heads, and also axes of flint. The skulls from these barrows, which are those of a people of middle, or even short stature, seem certainly the remains of a more ancient people than those who raised most of the circular tumuli of this part of the island." Dr Thurnam, in the essay referred to, p. 39, and previously in the "Crania Britannica," enumerates as the results of his observations and study of British barrows, in regard to their shape, and the skull forms of those buried in them, the brief axiom,—"Long barrows, long skulls; round barrows, round or short skulls." The connection of the long skull with the long barrow and the Stone period seems founded on well established facts by Dr Thurnam with regard to some parts of Great Britain; but it is doubtful if his axiom holds true of all parts of England, or of other countries, and still more distant human races. The skulls from the Neanderthal and Engis caves, when man was contemporaneous with the cave bear, are elongated in form; one from the cave of Lombrive in the "rein-deer period," is said, on the contrary, to be round. But the whole subject of skull forms, as connected with ages and races of men, is still at best involved in no small doubt and difficulty.

the spot in which their *primary* occupants have been placed, other graves are frequently enough met with in the same mound; and their *secondary* occupants are occasionally found to have been buried with weapons of bronze, and even of iron.

In this respect single graves or kist-vaens are freer from doubt than grave mounds, and barrows, and cairns. The sculptured slab in the Coilsfield cist covered an urn presenting, to use the language of Professor Wilson,[1] "the usual characteristics of primitive sepulchral pottery." (See figure of a portion of this sepulchral urn in Plate XIII. fig. 2.) In Plate XI. fig. 5 is sketched an urn with even ruder markings, found near Scarborough in a tumulus, some of the stones of which were cut with cups and rings. Yet archaic man ornamented his sepulchral and other pottery far oftener than he cut figures on stones; and his bone carvings were often more elaborate than his lapidary. The mode of burial, with the body more or less contracted and bent within a short cist or grave, is usually regarded as a form of interment older and more archaic than that with the body buried at full length and in long kist-vaens. Most, if not all, of the single cists hitherto found covered with sculptured slabs,

[1] Unfortunately this fragment of urn has not been preserved, and the original sketch of it, from which Dr Wilson made his woodcut, is also lost. On asking Mr Birch of the British Museum, the author of the well-known and classical work on the "History of Ancient Pottery," the probable age of this urn, as far as could be judged from the sketch of it given by Dr Wilson, and copied, as stated above, into Plate XIII., that eminent archæologist replied, "It is always desirable, if possible, to see the object itself before pronouncing an opinion, but the urn seems to me closely like those found in Wales and Ireland of the so-called stone period. Its closely-hatched lines have great similarity with the vases of North Wales and Ireland, and it was no doubt of a light brown, imperfectly baked clay, such as is commonly found in the early Celtic graves, and some examples of which are engraved at the end of my work on pottery (vol. ii. *ad finum*). It must therefore be assigned to a remote epoch as to style." My friend, the Rev. Mr Greenwell of Durham, another high authority on such questions, has kindly outlined, as seen in Plate XIII., the probable shape of this Coilsfield urn, and adds, that such urns are found not unfrequently in Ireland, are often associated with bronze daggers, and hence probably, he thinks, pertains to the bronze period. "The Scarborough urn (Plate XI. fig. 5) is," he adds, "of the type of those that contain the burnt bones of a body, and which in all cases, except in the Coilsfield instance, have been found with the circular-marked stones."

have been of the short form, and hence of the earliest type, as the stone-coffins at Carlowrie (p. 28), and Craigie (p. 28.) The cist at Carnban, which contained the sculptured stone panel, is only four feet in length. The cist at Oatlands or Balnakelly, in the Isle of Man (see p. 19), with a cupped stone standing near it, is short also, being two feet three inches in breadth, and between four and five feet in length. Some of the sculptured sepulchral lids were small, as they merely covered urns, and hence burned bones, and are important as marking the very frequent co-existence of the cup and ring cuttings with the practice of cremation.

Within the urns and cists connected with these sculptured stones nothing has been as yet found, I believe, except tools and weapons formed of flints and other stones, with implements and ornaments of jet and bone,—all of them works of a very antique type. But, as far as the British Isles are concerned, we still greatly lack data to indicate—on any large scale—the kinds of implements which co-existed and were buried with those men whose sepulchres show the ring and cup carvings. We want also greatly any characteristic crania from such sepulchres, in order if possible to arrive at the probable race or races of the primary carvers of these rude sculptures. It is true that the human bones hitherto discovered where the urn lid or kist lid has been sculptured with rings and cups have been few, and almost always destroyed by burning; for, as just stated, the sculptures and cremation are often conjoined. But in very ancient times, with the Celt, and probably the pre-Celt and Turanian, as with the Greek, Roman, and early Saxon, the inhumation was sometimes used as well as the incineration of the body; and in the ancient tumuli of Brittany, and the cromlech sepultures of the Channel Islands, the archaic dead have been found both buried and burned in different yet analogous barrows, and even within the same sepulchre.

In Brittany much more successful inquiries have been made than in our own country as to the contemporaneous relics and weapons of the stone carvers. We have already seen that the stones in a few of the great sepulchral barrows and chambers of Brittany have been found marked and carved,—the sculpturing in some of them, as at Gavr Inis, Locmariaker, Long Island, &c., being far more elaborate and objective than the simple rude cup and ring carvings of Great Britain,—and hence, we infer, later than them in date, unless we may hold—what is not

impossible—that the art of lapidary sculpturing advanced at a very different rate of progress in the two countries.

Many of the Brittany barrows have been opened in search of supposed treasures, &c., for years past, without the character of their contents having been ascertained; but the interiors of others, where sculptures exist, have been examined and determined with the greatest accuracy. Thus one large Brittany barrow,—that of St Michael's Mont, at Carnac,—was found to have the single large slab covering its contained cist cut with cups, like many of our Scottish stones. See a sketch of these cups on this Brittany slab in Plate XI. fig. 4. They were not, I believe, above one and a half inch in diameter each. This ruder cup-carving most probably marks this tumulus as of an age older than some of the other elaborately carved sepulchral chambers of the same district. The contents of the St Michael's Mont barrow are consequently interesting, as marking the kind of contemporaneous weapons, ornaments, &c., that were known to those men whose hands cut these cup sculpturings. There were found within the sepulchral chamber thirty-nine polished celts of jade, tremolith, and other stones; nine pendants and one hundred small beads, mostly of jasper, perforated, and hence probably the remains of necklaces; two fragments of flints; and a ring of small beads, said to be formed from the bones of a bird's leg. Fragments of the calcined bones of the occupant of the tomb were discovered underneath the floor of the chamber.[1]

Another and more gigantic Brittany barrow was opened a few years ago at Tumiac, in Arzon. On some of the slabs forming the sepulchral chamber of this Tumiac tumulus "curious ornamental work,"[2]

[1] See Mr Barnwell in the *Archæologia Cambrensis* for 1862, and "Fouilles du Mont Saint-Michel," by M. Réne Galles.

[2] The ornamental work on three of the stones of the Tumiac barrow was curious and exceptional. On one of the supporting slabs of the chamber, there was, at its upper part, a kind of double crescent, formed of two strings of circles or beads, like an imperfect necklace or collar. Lower down on the face of the same stone were four crossed and somewhat irregular lines, ending each in a very imperfect and irregular circle. On another of the stones were a number of projecting points, in rows, like small mammillary protruding pegs; and at its lower part, two parallel straight lines, which end in curves at both extremities. (See L. Galles' "Fouille du Tumulus de Tumiac en Arzon.")

observes Mr Barnwell, "was found, and a large number of stone implements,—some more than eighteen inches long; and necklaces of stone beads, the various articles being nearly forty in number. All the stone celts had been fractured across about two-thirds of their length." "On this occasion," adds Mr Barnwell, "and indeed on all other similar ones where these chambers have been explored, no copper or bronze implement has ever been found. The articles are invariably of stone, and in the case of the grand chambers of Plouharnel, of gold." The body in this Tumiac barrow was inhumed, and without incineration, whilst that contained in the neighbouring barrow at St Michael's Mont had been burnt.[1]

A remarkable sculptured slab containing carvings of hatchets, bows, &c., found in opening the tumulus of Manné-er-Hroek at Locmariaker, is represented in Plate XXXII. fig. 3. This carved slab was found amongst the stones filling up one end of the sepulchral chamber. In opening the tumulus MM. Lefebvre and Réne Galles dug down about thirty feet from the summit before they reached this central sepulchral chamber, which measured about thirteen feet by nine, and was about five feet high. Within it were found the following objects:—A hundred and four broken stone hatchets of tremolith and jade, one of them eighteen inches in length; two perfect jade hatchets, thirteen inches long, and of beautiful finish; five beautiful pendants of jasper; forty-four small beads in jasper, quartz, and agate; one prism of crystalline quartz; three pieces of sharp cutting flint; a quantity of charcoal; and some fragments of pottery. Earthy matter covered the floor to the depth of about a foot and a half, but no trace of bones or animal matter could be detected.

Weapons and ornaments of bronze have been found within some megalithic tombs and cromlechs, analogous in their type of building to those of Tumiac, St Michael, and Manné-er-Hrock.[2] When discovered they have

[1] *Archæologia Cambrensis* for 1862, p. 335.

[2] Baron Bonstetten, in his "Supplement d'Antiquities," states that in the megalithic tomb at Plouharnel a kind of ligula in bronze was also found; and more lately, in his "Essai sur les Dolmens," he adduces a few rare and exceptional instances of bronze implements being found in these catacombs in France and Spain, though throughout Northern and Western Europe their general and primary con-

been found usually, if not always, in circumstances showing that they were most probably introduced secondarily, or later than the primary age and use of the catacombs. Indeed layers, showing different and distant burial deposits, have been repeatedly found along with relics and bones displaced laterally to admit of the interment of others. Dr Lukis has specially pointed out this fact in relation to the megalithic catacombs in the Channel Islands, where he had an unusually favourable opportunity of studying the contents of these tombs and their interior arrangements, in consequence of their cavities having in long past times become silted up—and stereotyped, as it were, for modern investigation—by layers of sea-sand. We have figured a specimen of cup-carvings on the props of one of these cromlechs (see Plate VIII. fig. 2). In one only, however, of the many archaic sepulchres which he examined did Dr Lukis find an implement of bronze. In this instance, in the upper layers filling the interior of a cyclopic chambered tumulus in Guernsey, covered by nine capstones, he discovered beneath one of the capstones an ancient armlet made of a copper alloy. In subsequently pursuing his researches downwards among the contents of this megalithic tomb, Dr Lukis states that he "arrived at the usual varieties of pottery, bearing evidence of greater age . . . . accompanied by many stone instruments, mullers and mills of granite;" and he believes the metallic armlet—and another found near it of jet, pretty highly ornamented—must have been placed within the cromlech for security or otherwise at a subsequent period."[1] Elsewhere he has stated that,—with this spurious exception,—in all his extensive re-

tents are entirely of the stone age. But cromlech building, we must remember, has extended to other districts of the world, and has in them extended onwards into later periods. As proof of the occasional posterior introduction of relics into cromlechs with *secondary* interments or otherwise, M. Bonstetten states, that inside an archaic "dolmen" at Locmariaker, and sunk down twice the depth of some remains of archaic pottery and flints, two statuettes in terra-cotta of Latona, coins of the second Constantine, and some Roman pottery, were found. Messrs Christy and Ferand opened fourteen cromlechs near Constantin, in Africa, and discovered in their interior, besides the corpses,—which were buried in a bent or contracted position,—worked flints, bits of pottery, rings of copper and iron, and in one instance, a coin of the Empress Faustina, who died 200 A.C. (See *Recueil de la Société Archéologie de Constantin* for 1863, p. 214.)

[r] Journal of the British Archæological Association, vol. iii. p. 344.

searches among the deposits within the megalithic sepulchral chambers and cromlechs of the Channel Islands, "no metallic instruments nor ornaments were discovered, nor even indications of the knowledge or use of metals."[1]

We have had several megalithic catacombs and cists opened in England of late years, as at Rodmarton, Uley, Littleton Drew, West Kennet, Long Lowe, Nympsfield, Arlington, &c., where the relics found interred with the dead were entirely those of the Stone age; but the walls of these olden tombs have not been examined with the necessary care for the discovery of cup and ring markings, and possibly none may be present. In the field adjoining the sculptured stones of Largie, in Argyleshire (see anteriorly, p. 34), a megalithic round tumulus with three chambers or compartments in it was lately examined by the Rev. Mr Mapleton and Mr Greenwell. One of the three chambers was nearly twenty feet long. They found within these catacombs burnt and unburnt bones, charcoal, flints, and several urns or rather portions of urns, some of which were ornamented externally. The Rev. Mr Greenwell believes, from the examination which he has made of this great barrow, that the dead deposited in it at different periods were at one time inhumed and at another burned. But he concludes further—contrary to the general opinion on such subjects—that the age of cremation in this tumulus preceded, and perhaps long preceded, the age of burial.

At present I am not aware that within any of the sepulchres, whose stones are marked only with the incised ring and cup cuttings, any kind or form of metallic tool or instrument has yet been found. Should further and more extended observation confirm this remark, then it will naturally follow that the *commencement* of these sculpturings must be thrown back to the so-called Stone period, or to an era anterior to the use

[1] I have mentioned anteriorly (p. 65) Mr Conwell's discovery at Slieve-na-Calligh, in Ireland, of an extensive old "city of the dead," containing a great number of chambered tumuli with carvings on their stones. In one of the crypts of one of these chambered cairns Mr Conwell found what in all probability were the remains of a secondary and late interment, viz., a few fragments of iron and of small bronze rings and glass beads. No similar metallic relics have hitherto been found anywhere else in this large necropolis, except a bronze pin, probably also a secondary introduction.

of metals; unless, indeed, we can imagine, with some archæologists, that in consequence of the extreme age, moisture, &c., of these places of interment, any bronze or iron articles deposited in them have disintegrated and totally disappeared in consequence of the destructive oxidation of the metals—an idea contradicted by the chemical fact that the human and other bones have been more or less spared under conditions which, on this supposition, have removed all the metallic objects.

I have no doubt, however, that at whatever time the simple cup and ring sculptures were first begun to be cut, the practice of carving them —if it did not initiate in—was at least continued into, and indeed extended during the so-called Bronze era, and perhaps till a later period;[1] for bronze tools and ornaments have been occasionally found in localities in Argyleshire, Northumberland, and elsewhere near to spots where the sculptures exist in unusual numbers; though none yet have been discovered, as far as I am aware, in immediate and direct connection with these carved stones or cists themselves.

Mere peculiarities in the artistic type of the figures found cut on stones and metals, on pottery and bone, &c., have been sometimes held as suffi-

[1] Last century an example of lapidary circles, &c., was found upon the sepulchral slabs of a cist which contained iron weapons. The discovery was made in opening a barrow at Aspatria in Cumberland, and is casually described by Mr Rooke in the *Archæologia*, vol. x. p. 113. On digging the barrow, a stone cist was exposed containing the skeleton of a tall man. Beside the skeleton lay a long iron sword and dagger, their handles ornamented with silver; a gold buckle and a figured ornament, in the end of a piece of belt; with remains of a shield and battle-axe, and of a horse-bit and spurs, all very much corroded by rust. The stones marked were two cobblestones which inclosed the west end of the cist. The sculptures upon them consisted of single and double rings, some with cups and others with crosses in their centres. One of the stones had on it "marks which resemble" letters, but none such are visible in the accompanying sketches in the *Archæologia*. These lapidary rings, however, differed entirely from all the British forms described in this essay, as their "rims and the crosses within them are cut in relief,"—raised and not incised. Lately I made, through Mr Page of Carlisle, full inquiries after these stones of Aspatria, but unfortunately they have disappeared. The crossed circles or discs on these Aspatria stones is common on Scandinavian stones (see anteriorly p. 73); but I know no other example of it in Great Britain. The relics are such as we would expect to find in a Scandinavian grave, and probably mark the interment as a result of the Scandinavian settlement of Cumberland.

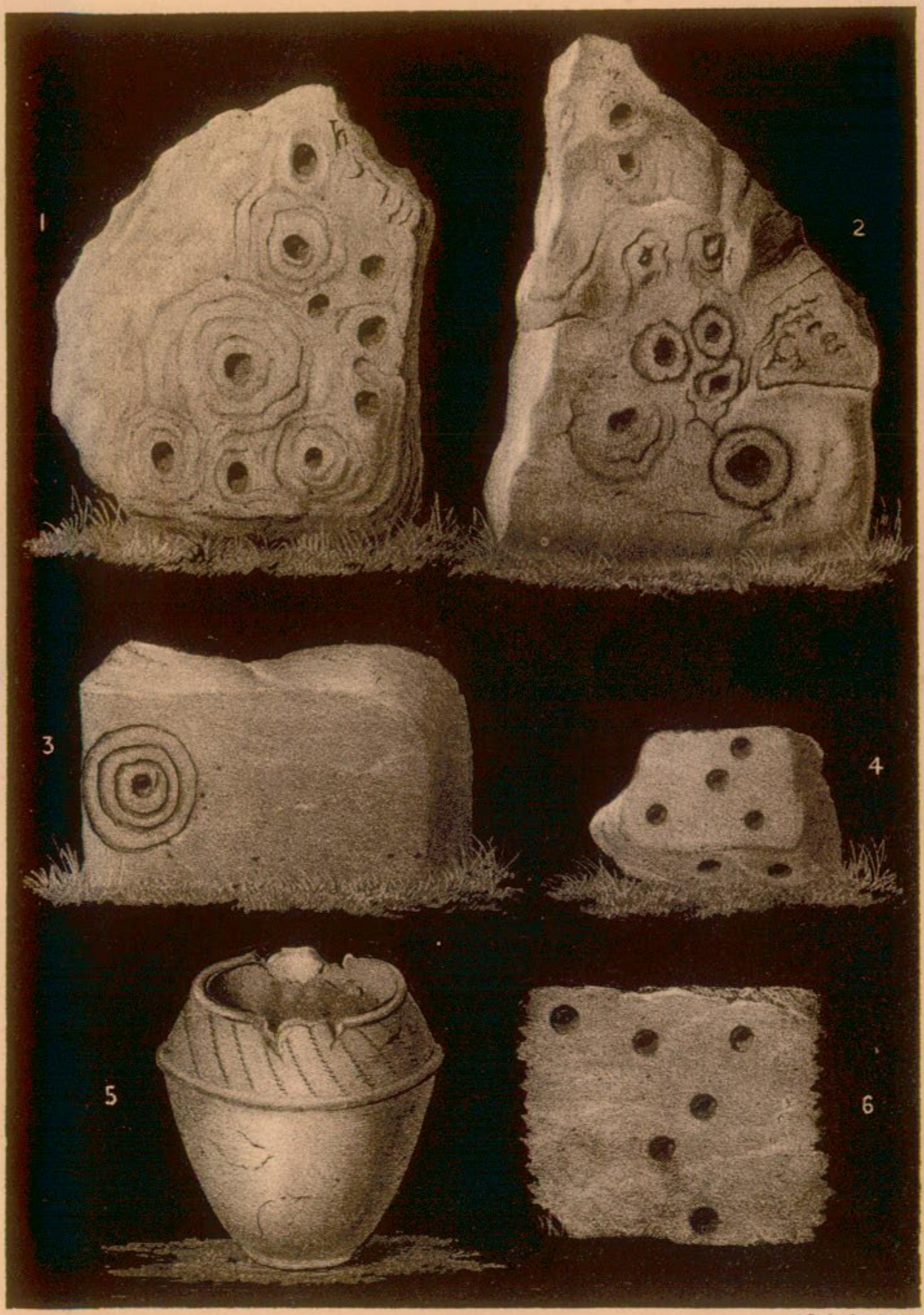
cient criteria for determining the age of their production. Thus the pottery, for instance, of the Stone and of the Bronze age, shows usually on its surface only dots, nailmarks, and compositions of straight lines, from the markings of cords or thongs upon the soft clay; and occasionally, in addition, we find some curved, circular, and spiral lines. It has been stated by various antiquaries,[1] that, on the contrary, while all attempts at the representation of natural objects, as plants, animals, weapons, &c., are rare, the ornamentation of the bronze age is specially characterised by combinations of circular, spiral, and sometimes zigzag lines; and certainly such are the geometric patterns generally seen on the most ancient bronze ornaments and weapons—whether we regard these combinations and peculiar types of decoration as foreign or native, Semitic or Aryan, Asiatic or European, Eastern or Western, in their origin. Again, however, if we turn to carvings on stones, we find that in some localities, apparently before metals were much if at all used, archaic man attempted to cut representations of external objects, as celts, animals, &c., upon the walls of his sepulchral chambers, as we have already seen (p. 69-70) in the cromlechs and chambered tumuli of Brittany. While we are not entitled, then, to draw any strong inference as to the age of the lapidary cup and ring sculptures from their artistic characters being supposed to be comparable with the geometric forms of ornamentation of the Bronze era, we are yet perhaps entitled to hold that —from their rudeness in artistic type—our Scottish and English cup and ring sculptures are earlier than those lapidary carvings and representations of natural and artificial objects which, along with circles and zigzags, exist in the cairns of Brittany;—and are consequently, according to this mode of reasoning, to be carried back with them in their origin to the so-called Stone age.

But the very formation and cutting of such lapidary cups and rings has been supposed of itself to involve the use of metallic tools. Let us, therefore, in the next chapter inquire for a moment into the soundness of this opinion.

[1] See Kemble's Horæ Ferales, p. 78; Lubbock's Prehistoric Times, p. 25; and Nilsson's Skandinaviska Nordens Ur-Invanare, p. 2, &c. Professor Nilsson and his school regard all the earlier and finer ornamentation upon our archaic bronzes as Semitic or Eastern, and not Celtic or Western, in their origin.

PLATE XI.

FROM YORKSHIRE AND BRITTANY TUMULI.



A. Ritchie, Lith. Edin.

CHAPTER XVIII.—THE KIND OF TOOLS BY WHICH THE CUP AND RING CUTTINGS WERE SCULPTURED.

It has been argued that such sculpturings could not belong to the distant and so-called Stone age in archæology, because they could not have been cut except by metallic implements. In speaking, for example, of some sculptured stones in the sepulchral chambers and cromlechs of Wales and Brittany, Dr Lukis observes that it is difficult to conceive the possibility of the stones being cut by any but metallic tools (*Archæologia*, vol. xxxv. p. 250). MM. Merimée and Closmadeuc express a similar opinion as to the impossibility of sculpturing the stones of Gavr Inis without metallic implements (*L'Ile de Gavr Inis*, &c., p. 14).

In most localities the ring and cup cuttings are found chiefly, and in some instances solely, carved upon the comparatively soft and easily worked sandstone rocks of the district. In Northumberland, as already stated, all the sculptured rocks hitherto discovered are sandstone, while the older and harder rocks in the neighbourhood of the sculptured stones show no markings whatever. But in other localities the rings and cups are engraved on stones and rocks far more difficult to cut, as on whinstone in the cromlech near Ratho; on dense schist as in Argyleshire; or on hard primitive granites, syenites, &c., as on the stones at Rothiemay, Midmar, &c. The presence, however, of the rings and cups upon these harder and more primitive rocks does not necessitate the knowledge and the use of metallic tools on the part of the sculptors. For I have found experimentally that the rings and cups can be engraved deeply and without difficulty upon the Argyleshire schist, and even upon hard Aberdeen granite, with a flint celt and a wooden mallet. In the Edinburgh Antiquarian Museum there is a block of grey Aberdeen granite from Kintore, forming one of the sculptured stones of Scotland, and containing upon one side two crescents, &c. (See it figured in Mr Stuart's "Sculptured Stones of Scotland," pl. cxi. fig. 3.) On the back of this hard granite Mr Robert Paul, the doorkeeper of the Museum, tried for me the experiment I allude to, and cut, in two hours, two-thirds of a circle with a flint and wooden mallet. The flint used was about three inches long, an inch in breadth, and about a quarter of an inch in

thickness. The circle which he sculptured with it in the granite was seven inches in diameter; and the incision itself was nearly three quarters of an inch broad, above a quarter of an inch in depth, and very smooth on its cut surface. In hewing out the circle with the flint, its sharp tips from time to time broke off, but another sharp edge was always immediately obtained by merely turning it round.

The result of this simple and decisive experiment seems to me to be important, as showing that if these archaic cuttings could be sculptured alike either by stone or by metallic tools, their mere character and form afford no evidence whatsoever that they were not carved till after the discovery and use of metallic implements. In other words, the experiment shows that they might have been produced before the introduction of metals—or during the Stone age.

CHAPTER XIX.—THEIR ANTIQUITY AS SHOWN BY THEIR GEOGRAPHICAL DISTRIBUTION IN THE BRITISH ISLANDS.

The ring and cup sculpturings have been found in many of the inland districts of England and Scotland. But—for the sake of argument only—let us look at their distribution for a moment in districts nearer our shores. Taking this view of their localisation, we find that they have now been discovered along the *whole length* of the British Isles, from Cornwall and Dorsetshire in the south to Orkney in the far north; and also across their *whole breadth*, from Yorkshire and Northumberland on the eastern coast of England to Kerry on the western coast of Ireland. At these distant and diverse points, and in the mainland districts between them, they everywhere present a sameness of type and form, showing—like a peculiar language—a sameness among the race or races that carved them. In other words, they all evidently indicate, wherever found, a common thought of some common origin, belonging to a common people. But how very long is it since a common race inhabited, simultaneously or successively, the four different and distant parts in the British Islands that I have just named, and dwelt also in the inland and intervening districts? Yet it was evidently at some such remote date that these rude and simple lapidary carvings were primarily

and chiefly made; and the last question that meets us is, What race or races cut them?

CHAPTER XX.—THE RACE THAT FIRST INTRODUCED THE CARVING OF THE LAPIDARY RING AND CUP SCULPTURINGS.

British historical records can only be truly said to begin with the notices of our Island and its inhabitants left us by Julius Cæsar, half a century before the commencement of the Christian era. At that date the population appears to have been mainly Celtic, but partially also Belgic and Iberian (if we may trust to the subsequent observations of Tacitus upon "the dark and curly-haired Silures"); and many have held that the Celts—including the two divisions of the Cymry and Gael—were the aborigines of these islands. During the ten or twelve centuries that followed the commencement of our historical records, we know that England was subdued and overrun by four different races of conquerors, viz., by the Romans, the Saxons, the Danes, and the Normans; and during the long prehistoric ages that preceded the notices left by Cæsar, our country was probably then—as afterwards—the seat and scene of repeated immigrations of new inhabitants and conquerors. For we know that when the curtain of western European history first rises in Pre-Christian times, it affords us strange glimpses of whole nations and hordes, like the Cimbri and Helvetii, changing from site to site in greater and smaller masses in quest of new settlements and new conquests. By the era of the first Roman invasion of Scotland, A.D. 81, our forefathers were already so advanced in civilisation as to build and use war chariots—a fact in itself showing no mean progress in the mechanical arts; and they had ere this time passed through the era of bronze weapons, for they fought at the battle of the Mons Grampius with what, to the Roman eye, seemed huge (*ingentes*) swords, large and blunt at the point (*enormes gladii sine mucrone*),[1]—a form of weapon which we can only suppose to have been made of iron.[2]

[1] Tacitus, *Vita Agricolæ*, § 32.

[2] A century and more before Agricola invaded Scotland, Julius Cæsar had found the Celtic nations of Gaul provided with long two-edged iron swords (see Livy,

We have no adequate data as yet to fix the date of advent to our shores of the Cymry and Gael, and to determine whether or not they brought along with them, at their first arrival, as some hold, a knowledge of the metallurgic arts. But much evidence has been gradually accumulating of late years to prove that there had existed some pre-Celtic races in Britain.[1] Without venturing in the least to point out all,

xxxviii. 17 and 21). Diodorous Siculus states that they had also spears formed with a long blade of iron, and had invented iron coats of mail (V. 30). When the Roman armies first encountered those of Gaul in 222 B.C., the Gauls were even then, according to Polybius (ii. 33), provided with iron swords; but the metal was soft, and bent in battle. It was, says Mr Aiken, when describing this circumstance, "of the kind at present called 'hot-short,' a defect which," he adds, "much of the iron now made in the southern departments of France is very liable to" (*Illustrations of Manufactures*, p. 251). When Julius Cæsar attacked by sea the Veneti, or inhabitants of Armorica, in the year 56 B.C., he found them furnished with a strong fleet of oak ships, above two hundred in number, clinker-built with large iron nails, and the anchors of the vessels provided with chain cables of iron. In a very suggestive chapter in his late interesting work on the "Early Races of Scotland," Colonel Forbes Leslie hints that the Veneti owed probably their knowledge of naval architecture to the previous influence of Phœnician art and science among them (p. 47 to 61).

[1] Perhaps comparative philology, and the study of the ancient names of some of our mountains, rivers, and places, may yet afford the archæologist surer means than we generally use of ascertaining the presence in this island, in ancient times, of races before the Celtic. That Iberians, speaking the Basque or Euskarian language, partially inhabited the southern and western parts of Great Britain in the time of Tacitus, and long previously, is generally admitted to be of high probability; and their presence in western Europe is held by most ethnologists to be ante-Celtic. Perhaps they will yet be found to have left some of their language and appellatives not in south Britain only, but even far northward. One of the best known provinces of Spain bears the Basque name of Asturia, or, in other words, a district of "river and rock," from *Asta*, rock, and *Ura*, water. In Scotland we have the Basque word "Ura" forming—apparently now in modified forms—the names of various streams and lakes, possibly before the advent of the Celts; as the rivers and lochs Ure, Urr, Ury, Ore, Orr, Ayr, Aire, Yar, &c., used either singly, or as prefixes and affixes to other names. Tacitus tells us that Agricola, after passing the isthmus formed by the estuaries of the Clota and Bodotria (Clyde and Forth), stationed his army during the winter before the battle of the Mons Grampius, or A.D. 83, in the land of the "Horesti," a district which is usually supposed to be Fife, or more probably the southern part of Perthshire. May this term "Horesti"

let me simply note two or three. A race of Megalithic Builders—if we may so call them—who have not left in their sepulchres, and therefore we infer did not possess, in their earlier era at least, any metal tools or weapons, seem to have either preceded the Celts, or to have formed our first Celtic or Aryan wave; and judging from the extent of their remains in massive chambered catacombs and cromlechs, in numerous cyclopean forts, gigantic stone circles, &c., they must have held the country for a considerable length of time, and overspread the whole of it by the diffusion of their population. From their remains, as left in their tombs and elsewhere, we know that they employed weapons and tools of horn, wood, and *polished* stone; manufactured rude hand-made pottery; had ornaments of jet, bone, &c.; partially reared and used cereals, as indicated by their stone mullers and querns; and possessed the dog, ox, sheep, and other domestic quadrupeds. I do not stop to discuss the various questions whether these Megalithic Builders did or did not hollow out and use the archaic single-tree canoes found on our shores, rivers, and lakes;—whether they were the people that anciently whaled in the Firth of Forth with harpoons of deer-horn, when its upper waters were either much higher or its shores much lower than at present;—whether they or another race built the earliest stone-age crannoges or lake habitations;—and again, whether there was not an antecedent population of simple fishers and hunters, totally unacquainted with the rearing of corn and cattle, and who have bequeathed to Archæology all their sparse and sole historic records in casual relics of their food, dress, and weapons buried in heaps and mounds of kitchen refuse which they have incidentally accumulated and left upon our own and upon other northern and western coasts of Europe. Whether these formed one, or two, or more races, let me add, that long anterior to the Megalithic Builders

not be composed of the same elements as the Basque word Asturias, but reversed; the *Ura* or *Or* being placed first, and the *Asta*, or *Esta*, being last; and the whole signifying—like the analogous Euskarian word—"a land of rivers and rocks, or hills?" Sometimes the accidental change of a single letter makes the recognition of an old word very difficult, as in the instance of the word cited above (Bodotria). It has been often said that there is no traceable relation between the river Forth and this its old Latin name Bodotria. But the properly spelt form was possibly Fodotria, and if so, the analogy between it and Forth then becomes self-evident.

there certainly existed in our Island a tribe of inhabitants that dwelt, in part at least, in natural or artificial caves, where their bones and their contemporaneous relics have been found; who possessed implements and weapons of stone and flint, but rough, and *not* polished like those of the Megalithic Builders; who seemingly possessed no pottery; who—if we may judge from the want of rubbers and querns to grind corn food—had little or no knowledge of agriculture; and who lived in those far distant times when the colossal fossil elephant or mammoth,[1] the woolly-haired rhinoceros, the gigantic cave-bear, the great hyæna, &c., were contemporaneous inhabitants with him of the soil of Britain; when the British lion[2] was a veritable reality and not a heraldic myth; and when possibly England was still geologically united to the Continent, and the Thames was only a tributary of the Rhine. I am not aware that we have yet sufficient evidence to consider as of the same family with these ancient Cave-men, or as of a race still anterior to them, the Flint-folk of the southern counties of England, whose *unpolished* flint hatchets—besides being found in great abundance on the banks of the Somme and Loire—have been discovered in various parts in the river-drifts of south England, and an excellent specimen of which, along with the bones of an elephant, was dug up, in the last century, from a gravel-pit near Gray's Inn Lane, in the centre of London itself.[3] It sounds like an archæological romance

[1] According to Professor Buckland the fossil elephant was—judging from the specimen found in the ice at Tunguss—"clothed with coarse tufty wool of a reddish colour, interspersed with stiff black hair, unlike that of any known animal; that it had a long mane on its neck and back, and had its ears protected by tufts of hair, and was at least sixteen feet high." (See his *Reliquæ Diluvianæ*, p. 172. See also a drawing and description of it in Figuier's "World before the Deluge," London, 1865, p. 350.) Between the years 1820 and 1833, on the coast of Norfolk alone, the fishermen, in trawling for oysters, have fished up no less than two thousand molar teeth of the fossil elephant—one proof among others of the former abundance of the animal in this part of the world. (See *Ibid.* p. 336.)

[2] The *Felis spelæa* or pleistocene lion, has (observes Mr Owen) left its remains in many stratified deposits of the pliocene period in Britain (*Palæontology*, p. 384). It measured, if we may judge from its remains, "four yards" in length, according to Figuier, "with a size exceeding that of the largest bull" (*World before the Deluge*, p. 354). Lately Messrs Dawkins and Sandford have shown that the *Felis spelæa* is a large variety only of the *Felis Leo* (Palæontographical Society Essays, vol. xiii.)

[3] The original account of the discovery of this British elephant and the stone axe,

thus to find the rude weapon of an archaic Briton, who hunted of yore on the ground where the metropolis of England now stands, apparently lying alongside of a skeleton of the wild game which he then and there pursued,—and that game nothing less than a British elephant.[1] What

as given in a letter written by Mr Bagford in 1715, and published in Hearne's edition of Leland's *Collectanea*, vol. i. preface, p. lxiii., is probably worth quoting. Mr Bagford is not, of course, aware of the specific difference between the British elephant (*Elephas primigenius*), whose fossil tusks, teeth, and bones, often turn up in our soil, and the African and Asiatic elephant (*Elephas Africanus* and *E. Asiaticus*), known to the Romans. After speaking of the antiquarian zeal of Mr John Conyers, Mr Bagford remarks:—"'Tis this very gentleman that discovered the body of an elephant, as he was digging for gravel in a field near to the sign of Sir John Oldcastle in the fields, not far from Battlebridge, and near to the river of Wells, which, though now dried up, was a considerable river in the time of the Romans. How this elephant came there is the question? I know some will have it to have lain there ever since the universal deluge. For my own part, I take it to have been brought over, with many others, by the Romans in the reign of Claudius the Emperor, and conjecture (for a liberty of guessing may be indulged to me as well as to others who maintain different hypotheses), that it was killed in some fight by a Briton; for not far from the place where it was found a British weapon, made of a flint lance, like unto the head of a spear fastened into a shaft of a good length, which was a weapon very common amongst the ancient Britons, was also dug up, they having not at that time the use of iron and brass, as the Romans had. This conjecture may perhaps seem odd to some; but I am satisfied myself, after having viewed this flint weapon, which was once in the possession of that generous patron of learning, the reverend and very worthy Dr Charlett, Master of University College, and is now preserved among the curious collections of Mr John Kemp, from whence I have thought fit to send you the exact form and bigness of it." A rude figure of this flint weapon was published by Hearne; and a more careful one is given by Mr Evans in one of his excellent papers on Flint Implements in the Drift (see the *Archæologia*, xxxviii. p. 301). This London flint weapon is not smooth and polished like those found in the Brittany and other megalithic tumuli and cromlechs, but rough, unpolished, and similar in shape, size, and form to those found on the banks of the Somme and Loire. It is now preserved in the British Museum.

[1] Dr Buckland enumerates various localities in the valley of the Thames where the remains of the mammoth have been discovered. These remains seem to be specially frequent on the site of London. "In the streets of London," he observes, "the teeth and bones are often found in digging foundations and sewers in the gravel." Again, he speaks of the remains occurring "in almost all the gravel pits round London," (see his *Reliquiæ Diluvianæ*, pp. 174, 175);—as if forsooth the site of the

a contrast do such antiquarian revelations suggest between the objects of pursuit of the archaic and of the modern Londoner!

To which of these races of men, or to what others, should we refer the first sculpturings of the cup and ring cuttings which we have been considering in the present essay? The question is one which, in the present state of archæological knowledge, cannot be positively answered. Many additional data are required,—particularly in the way of more careful and correct observations on the contemporaneous works and relics with which the sculptures are generally connected; and also on the extent of their diffusion. Do they exist over Europe generally, or are they limited to special localities in it? Sculptures, analogous, at least, to the cup and ring carvings of Britain, are, we have seen (see p. 71), traceable in Scandinavia. Are they common in that or other countries which the Celtic race never reached? But still more, are they to be found in the lands of the Lap, Finlander, or Basque, which apparently neither the Celt nor any other Aryan ever occupied? Do they appear in Asia within the bounds of the Aryan or Semitic races? Or can they be traced in Africa or in any localities belonging to the Hamitic branches of mankind? Do they exist upon the stones or rocks of America or Polynesia?

But we have some data which perhaps entitle us to suggest a possible approximate opinion on the question of the race or races that first cut these cup and ring carvings. They have now been found in sufficient abundance upon the stones of the chambered catacombs, cromlechs, and megalithic circles of this country, of the Channel Islands, and of Brittany. We have already, a few pages back, seen that the relics found in some of the chambered catacombs where these rude lapidary sculptures are carved, belong entirely to the Stone period, and consequently we infer that the age of the earliest of these sculpturings—as found in this connection—was the Stone era. But further, if any of them were thus carved in the Stone age, they were carved—according to the chronological opinions of most archæologists—anteriorly to the advent of the Celt to our shores.

English metropolis had been formerly a favourite haunt and home of the gigantic English mammoth. In Plate XXI. he represents a section of the cave called Goat-Hole, in Glamorganshire, where an elephant's head and human skeleton are marked on the spot in which they were actually found—lying near to each other (p. 275).

Besides, on another ground, we believe the earlier of these stone carvings are possibly anterior to the age of the Celt, namely, because they are *found—though hitherto but sparingly—on cromlechs and dolmens;* and cromlech-burying and building is not characteristic of the Celt; for in all probability this form of sepulture—involving, as it does, a rude but quaint type of architecture often so massive and gigantic as to be difficult of execution—was commenced and practised anterior to his arrival in our Island and in Western Europe. For though found in some countries—like Brittany, Cornwall, Wales, Ireland, &c.—inhabited since the beginning of the historical era by the Celt, yet both the simple and galleried cromlech are relatively or entirely wanting in other countries—like Cisalpine Gaul and some of the most central and eastern provinces of ancient Gaul[1] itself—districts that were assuredly Celtic in their popu-

[1] In his excellent essay, *De la distribution des Dolmens sur la Surface de la France*, M. Bertrand points out that, geographically, these megalithic structures—"dolmens," and open galleried cromlechs or chambered barrows—exist chiefly on the islands, capes, and coasts of Northern and Western France, from the mouth of the Orne to the mouth of the Gironde; that in the interior of the kingdom they are met with principally in proximity to the course of navigable, and particularly of large, rivers that they are almost entirely wanting, however, along the chief ancient tracts of Celtic and Pre-Roman commerce by the valleys of the Rhone, of the Seine, Soane, and Upper Loire; that they are similarly sparse and deficient in the last, and in the very heart of ancient Gaul or in the olden Celtic districts of the Ædui, Senones, Lingones, Bituriges, Arverni, Cenomani, Boii, and Ambarri, except at some points where these districts are penetrated by the rivers Garthe, Eure, and Orne; that they apparently belong, in their larger and most massive forms, chiefly to the latter part of the Stone age, and to a population which generally buried and did not burn the dead; and that their builders did not migrate across France from east to west, but penetrated first from the sea-shore, and by its rivers, into the western portions of the kingdom. Baron Bonstetten, in his *Essai sur les Dolmens*, endeavours to show that—as far as we can judge from the aggregations and chains of stone relics that they have left—the race of cromlech-builders, along both of the shores of the western portion of the Baltic, through Denmark and the Danish Isles, onwards to the northern parts of Holland, stretched their habitations at the same time from the shore inward into Mecklenburg, Hanover, &c. According to the same author, without remaining in Belgium, they seem to have passed onward into France, following the geographical points and routes pointed out by M. Bertrand. They crossed over into Great Britain, and occupied principally its western section

lation in the earliest historical times. Besides, it is a form of sepulture which has been followed in countries, as Scandinavia, where the Celt never dwelt, and in others, again, where neither the Celt nor any other branch of the Aryan race ever penetrated, as in Barbary, Constantin, Algiers, Oran, on the banks of the Jordan, &c.[1] In other words, the race that erected

and the eastern and southern section of Ireland. Arrived at the Gironde, they left the sea-shore, avoided the travelling difficulties of Gascoigne, and crossed southern France, obliquely in the direction of the Gulf of Lyons. Thence their remains are found running like a broad belt along the whole northern and western shores of the Spanish peninsula. They reappear in Grenada and Andalusia, on the southern coast of Spain, and stretch southward across the Mediterranean to Algiers, Constantin, and other parts of northern Africa; and perhaps passed, Baron Bonstetten suggests, to Egypt, and there formed the Tamhu (or men of the north) under Rameses [who, we may remark, are represented in the Theban tombs with leather dresses and tatooed limbs]. All the more northern cromlechs that remain in Europe are found to be of the Stone age. But as we pass southwards, bronze implements, at first seemingly altogether of foreign manufacture, gradually, though sparingly, appear, till at last, in the cromlechs of Africa, bronze, stone, and iron are found mixed up together in their contents. In this long pilgrimage the race of cromlech-builders, whilst apparently always keeping near to the sea-shore, still spread to a certain distance inwards for pasture and food for their flocks, which consisted evidently, from the various relics left, of the ox, sheep, horse, &c. Their weapons in the earlier and northern part of their European journey seem to have been entirely those of the Stone era, with the celts, axes, beads, &c., in some instances highly worked up and polished. Baron Bonstetten—whose account I have been following—further believes that, before appearing on the shores of the Baltic, they had passed or been pursued across Europe from the Black Sea and Caucasus,—and perhaps from still more southern districts,—where their remains are traceable; and that at different times they sent away offshoots that reached India, Palestine, Greece, Etruria, and elsewhere. In their long pilgrimage from the Baltic to the African shores of the Mediterranean, the nomadic race of cromlech-builders formed, Baron Bonstetten maintains, a pastoral people, living upon the products of their flocks, and upon fishing and hunting; and he holds, that the chain of cromlechs which they have left in their long and probably slow migration from the shores of the Baltic to the frontiers of Egypt, are so similar in general type as to prove the identity of the great tribe or nation of men who, out of veneration for their dead, reared them;—and yet the very name of this people is lost in prehistoric darkness. They succeeded, in his opinion, to the Cave-men of the west; but preceded all historical races. He adds an interesting map illustrative of his ideas of the geographical course and extent of their pilgrimage.

[1] See the observations of Mr Rhind in Journal of Archæological Association, vol. i.

megalithic cromlechs has been much more widely diffused over the world's surface than the Celtic; possibly, or indeed probably, sojourned in our country before them;[1] and in other parts, as Greece, pre-existed the oldest remains of the earliest traces of historic civilisation.[2]

(1859), and in the Archæologia, vol. xxxix.; Shaw's Barbary and Levant, p. 67; Irby's Travels in Syria and the Holy Land; Madden in Transactions of Royal Irish Academy for 1863, p. 117; Sir Gardner Wilkinson, in Journal of Archæological Association for 1862, p. 43, &c.

[1] Archæologists, very zealous for the continuation of the most archaic practices down to the most modern times, might argue that the old memorial standing stones and slabs are perpetuated in our present churchyard obelisks and upright gravestones; and that cromlechs have *their* prototypes in the table or flat form of tombstone supported by lateral slabs or by stone props, that is so common in many of our Christian burying-grounds. In the churchyard of Santon, Isle of Man, is a very massive unhewn slab, formerly supported by corner-stone props, and which no doubt formed, before it fell, no contemptible specimen of a cromlech. In 1656, the vicar of the parish, Sir John Cosnaghan, was—in consequence of a strong desire expressed by him before death—buried under this, "The Great Stone," as it was then termed. But for a far more interesting notice of the continued construction in the present day in Upper India of cromlechs of this form, and other megalithic structures, see Dr Hooker's "Himalayan Journal," vol. ii. p. 276.

[2] We have already alluded in a preceding footnote (see p. 99) to the very ancient tombs or so-called treasuries at Mycenæ; and they afford us a kind of chronometer of the great age of our European cromlechs. For, near Mycenæ, there is an old cromlech of the usual form, built of massive unhewn stones, according to the common type and arrangement. (See a sketch of it in Bonstetten's *Essai sur les Dolmens*, p. 41). How very much older must this rude megalithic structure be than any of the ruins in the city of Mycenæ itself, archæic as these ruins are? The so-called tomb of Atreus or Agamemnon is usually considered as reaching to twelve or more centuries B.C. (see Gell, Hughes, Clarke, &c.), "the remains of Mycenæ being," to use the language of Mr Dodwell (*Travels, &c.*, vol. ii. p. 229), "enveloped in the deepest recesses of recorded times." The tomb is of the form of a gallery, chamber, and side crypt, very analogous in type to that of New Grange and other western catacombs; but its stones are polished and hewn, and the ornaments upon its pillars are, from the specimens left, of a simple yet elegant character. (See footnote in a previous page, 99.) The enormous lintel stone placed over the entrance of the dome-shaped chamber or tomb may "perhaps (observes Dr Clarke) be mentioned as the largest slab of hewn stone in the world" (*Travels*, 4th ed., vol. vi. p. 503). If these tombs are, as usually believed, thirty centuries old, the rude unhewn cromlech near Mycenæ, and other similar cromlechs, must be many

It appears to me not improbable, therefore, that the race of Megalithic Builders, whether Celtic or Pre-Celtic, who had tools of flint and polished stone, first sculptured our rocks and stones with the rude and archaic ring and cup cuttings. But the adoption, and even more extended use, of these forms of ornamental and possibly religious symbols passed down, in all likelihood (with their sepulchral practices, and with other pieces of art and superstition), to the inhabitants of the Bronze age, with its era of cremation and urn-burial,—and thence onwards to other and later times; and perhaps they can be still traced in the spiral, circular, and concentric figurings upon our ancient Celtic bronze weapons and ornaments; on their stone-balls and hatchets; on ancient bone implements and combs; and even possibly among some of the symbols of the so-called "Sculptured Stones" of Scotland.[1]

It is important, at the same time, to recollect that the *origin* of the cup and ring cuttings may be still older than even the age of the earliest Celts or of the Megalithic Builders, for no doubt man attempted to carve and sculpture at a still earlier epoch in his history. We have proofs of this in the works of the archaic Cave-men of the Dordogne in France, who were contemporary in that district with the reindeer, had no pottery, and apparently possessed no domestic animals—not even the dog. Among their cave relics[2] there have been found several rude draw-

centuries older still. Let me merely add here, that the so-called Gate of the Lions at Mycenæ—built, along with its cyclopean walls, at a very early period of the city's existence—is archæologically interesting as the oldest piece of known lapidary sculpture in Europe; and it is interesting to connect with it the other fact, that scenes in the Agamemnon of Eschylus and the Electra of Sophocles—plays written four or five centuries before the commencement of the Christian era—are placed by their ancient authors in front of this very archaic sculptured gate, the remains of which continue comparatively entire down to our own times.

[1] See, for instance, the drawings of these Sculptured Stones in Mr Stuart's magnificent work on the subject in Plates IX., XXV., XXVII., &c.

[2] See M. Lartet's *Cavernes du Perigord; objets gravés et sculptes des temps Prehistoriques, &c.* See especially the drawings in pp. 20, 29, and 31. Latterly M. Lartet has found in these caves a broken plate of ivory, scratched with a portrait of the mammoth, and evidently executed by one who had himself seen this fossil elephant. (See a copy of this remarkable portrait in the *Annales des Sciences Naturelles*, 5me série; *Zoologie et Paléontologie*, tom. iv. Pl. xvj.)

ings of animals, &c., scratched on bone and stone, apparently by means of the sharp point of a flint implement; and a poinard made of the horn of a reindeer, and having a rude attempt at the carving out of the form of that animal upon the handle of the weapon. It is possible, as I have already ventured to hint, that the examination of the *walls* also of these old inhabited caves and rock-shelters may yet detect upon them also some attempts at lapidary cuttings or sculpturings,—and none could be well conceived of a more primitive and rude type than the cup and ring cuttings described in this essay.

APPENDIX.

(See *ante*, p. 110.)

NOTICES OF SOME ANCIENT SCULPTURES ON THE WALLS OF CAVES IN FIFE.*

THE county of Fife abounds in caves or "weems"—a derivative from the Gaelic name for caves—and their existence gives a title to the earldom of Wemyss. Some of the caves in Fife are historical, as St Rule's at St Andrews, St Adrian's near Elie, and St Margaret's at Dunfermline. St Serf of Culcross, the great patron saint of the west of Fife, is described by one of his biographers as having usually spent the forty days of Lent in a cave named, as such retreats often were, the *Desertum*. This cave at the *Desertum*—(or Dysart, to use the modern form of the name)—was used as a church up till near the time of the Reformation. About two miles eastward of Dysart, and near the village of Easter Wemyss, there is a range of large caves, seven or eight of which are at the present time open; but probably several more exist, having their openings covered over with fallen and accumulated debris. They stand about ten or twenty feet above the level of high tide. Some of them are eighty to a hundred feet in length, and of corresponding height and breadth. Two or three of them are perfectly dark, and require to be entered with candles. Last summer, when on a professional visit to Fife, I made a hurried visit to two of these caves, the Gas-work and Court Caves, along with Dr Dewar, Kirkcaldy, and saw some rude

* Extracted from the *Proceedings of the Royal Society of Edinburgh* for 2d January 1866, Vol. v. p. 521, &c. One or two observations which I have already expressed in the preceding essay may be found to be repeated in these Notices; but it did not seem necessary to obliterate or alter them.

sculpturings in the last of these. This discovery induced me to return for further search, accompanied by my friends, Drs Joseph Robertson, Duns, and Paterson, when two or three new caves were visited—particularly Jonathan's Cave and the Doo Cave—and their walls found to be covered at different parts with representations of various animals, figures, and emblems.

The cave sculpturings in Fife are of special interest to the Scotch archæologist, for this reason, that they exactly resemble, in type and character, the carvings on the so-called Sculptured Stones of Scotland. In his magnificent first volume on the Sculptured Stones of Scotland, Mr Stuart has collected one hundred and fifty examples; and latterly perhaps fifty more have been discovered. These Sculptured Stones extend along the whole east coast of Scotland, from the Forth northwards. Only two have been found south of the Forth. In general ornamentation, they resemble the sculptured stones of the west of Scotland, Ireland, Wales, and England; but the peculiarity of the Scotch stones is, that they have additional figures and symbols upon them that have been seen nowhere else in the world. These peculiar and characteristic symbols consist of the crescent or crescent-ornament, sometimes intersected with the V sceptre; of the so-called spectacle ornament—a double set of circles connected by middle lines—with or without the intersecting Z sceptre; of figures of elephants, fish, serpents, mirrors, combs, arches, or torcs, &c. The arrangement of these symbols upon the stones is in no two instances alike. On the oldest stones they are cut upon unhewn blocks, without any surrounding ornamentation. In the Sculptured Stones of a later date, they are cut in a raised form, with surrounding ornamentations, and often combined with figures of the Christian cross. Other figures are found carved on these stones, as portraits of priests and dignitaries, processions of men; the sacrifice of the bull; war and hunting scenes; animals, native and foreign—and particularly of Eastern origin—as the lion, tiger, camel, and monkey; the battling and devouring of men by wild animals; men with monster heads of beasts and birds; representations of dragons and monsters, &c. There is one instance of the representation of a boat on St Orland's Stone at Glammis; and another of a chariot, on a stone at Meigle.

These rude sculpturings have, with one exception, been (previously to

the present time) found only on sepulchral stones or monoliths; but in the Fife caves they exist in great abundance on the cave walls. These walls are usually comparatively smooth; and in many places, though not in all, they retain the figures cut upon them. The cave figures consist of animals, as the elephant,—exactly of the form seen on the Sculptured Stones,—the deer, the dog, the swan, the peacock, fish, serpents, and monsters, a tripod, jar, &c., &c. On them we see also representations of the mirror, comb, and arch or horse-shoe. No perfect example of the crescent ornamentation exists in these cave sculpturings; but many specimens of the spectacle ornament are to be found on their walls both with and without the intersecting Z sceptre.

One of the cave-figures is specially interesting, from the fact that it is the exact counterpart of the only analogous carving found on aught except a monolith, viz., a scale of silver armour presented to the Antiquarian Museum of Scotland by Mrs Durham of Largo, and whose history is this:—A man still living in Fife—a huckster—acting, it is said, upon an old tradition, that a knight lay buried in silver armour in a small barrow called Norrie's Law, stealthily dug into it, found in reality the silver armour, and removed and sold it in pieces to the amount, it is alleged, of four hundred ounces. By the time this spoliation was discovered, the silver armour was all melted, except a few fragments. One of these fragments is a scale, having cut upon it a spectacle ornament traversed by the Z sceptre, and having appended to one end of it the head and shoulders of a dog, as in some modern Orders of European Knighthood. A similar figure, with the appended dog's head, is carved upon the interior of one of the Wemyss caves.

On the walls of some of the Wemyss caves there are crosses of various forms, and particularly of the equal-limbed or Greek type; and, in two or three parts, appearances somewhat resembling letterings, and symbolic arrangements of figures or hieroglyphics. On the walls of St Adrian's cave are lines which have been believed to be half obliterated Runes; and the Rev. Mr Skinner of St Andrews has a loose stone from this spot which presents, he thinks, Runic characters.

Among the cave sculpturings at Wemyss there is a figure of a man of diminutive form; and Mr Stuart has traced among them faded outlines of a human figure, apparently tailed, as if he formed one of the provok-

ingly missing links which some enthusiastic ethnologists are so anxiously and vainly searching after.[1]

The caves of Fife, both those that have sculptures and those without them, have almost all occasional complete perforations or holes cut in the course of their angled or projecting ledges, as well as in their floors and roof; and these perforations or "holdfasts" seem fitted for a thong or rope to be passed through them, as if they were intended to suspend or to affix objects.

The age of these cave sculptures can only be fixed by approaching the age of the analogous figures upon the Sculptured Stones. The earliest of the Sculptured Stones are perhaps very old—possibly as far back, if not farther, than the period of the Roman invasion. In opening last year a cairn at Linlethan in Forfarshire, a figure of the elephant, exactly similar to those existing on our sculptured stones, was found on a stone lying upon the covering of the stone-enclosed cist. This cist contained a bronze weapon and an urn. The elephant carving was as old, therefore, as the era of urn burial and bronze weapons—*except* the carved fragment of stone had got by pure accident into its present position when the barrow was opened twenty years ago. The ancients sometimes buried both stone and bronze relics with their dead, after apparently they had iron instruments and weapons. But if the bronze dagger at Linlethan was a weapon used by the person buried under the cairn, the date is probably pre-Roman. For when Agricola invaded Scotland in A.D. 81, our Caledonian forefathers had apparently already passed through the bronze era, as, according to Tacitus, they fought the Roman legions with swords "long and without a point;" in other words, with iron swords. (See *ante*, p. 124).

But most of the Sculptured Stones, particularly the more elaborate varieties of them, were of comparatively later date, and were probably erected as late as the eighth or tenth century. An elaborate specimen found buried in the old churchyard of St Vigeans, having upon its surface the spectacle ornament, the crescent, the mirror, the comb, several animals, a hunter attacking a boar with bow and arrow, &c., all in raised

[1] Since these Notices were published I have, in revisiting the Caves, seen this figure, which is above two feet in height; but neither Mr Drummond nor I could make out any appearance of a tail appendage.

figures, has an inscription on it, which is probably the only Pictish inscription and sentence now remaining. It speaks of the stone as erected to Drosten, son of Voret, of the race of Forcus; and a Pictish king Drosten was killed in the battle of Blathmig or Blethmont—a mile or two off—in the year 729, as we learn from the Annals of Tighearnach. The crosses found among the Fife cave sculptures at Wemyss show that they were cut after the introduction of Christianity; and in one or two spots there are appearances of Christian monograms. Within St Adrian's cave at Caplawchy, near Elie, there are many crosses, generally of the eastern form, on the walls; stone seats cut out, &c.; but no animals or symbols.

The meaning of the mysterious symbols on the caves and sculptured stones, and the purposes for which they were cut, are archæological enigmata that no one has yet solved. As long as they were found on sepulchral monoliths only, they were supposed to be hieroglyphic or heraldic *funeral* inscriptions or emblems. This doctrine is so far gainsaid by this late discovery of them on the walls of caves. But possibly they may be sacred symbols of some description, or of some unknown form and meaning. For around and upon his gravestones man has always been in the habit of cutting emblems of his religious creed whenever he has cut anything at all.

Other Scotch caves have sculptures cut upon their walls. The so-called Cave of Bruce, in the Island of Arran, has been found by Dr Mitchell and Mr Stuart to have deer and serpents carved on its interior; and many years ago, within St Maloe's Cave, in Holy Island, Dr Daniel Wilson found ancient Scandinavian inscriptions written in Runes.

In many counties in Scotland, both on the sea-shore and inland, there exist large caves, the walls of which require to be now carefully examined. in order to find if our ancient forefathers had carved upon them any such emblems and sculpturings as have been traced in Fife. The Fife caves have formerly been inhabited. From some of the Wemyss caves a collection of bones have been obtained, split to remove their marrow, like the bones found in the old Danish midden heaps, &c. Among the bones were those of the deer, sheep, ox, &c.; shells, also, of limpets, &c.; and microscopic remains of cereals were found in cavities in the rocks that had been apparently used as rubbers or querns. Perforated stones

and two implements from the tyne of the deer's horn were picked up from the rubbish upon the floor; but the debris of these caves requires to be more carefully searched, before all that could be ascertained on this point becomes known to archæologists. In Scotland, there is one cave still occasionally inhabited, at Wick, and within which Dr Mitchell has seen living a family of eight or ten. But cave men are common elsewhere. Mr Barnwell has lately recorded the interesting fact, that in the neighbourhood of Chartres there are at present living, in caves, about 150,000 human beings, in the very centre of France. In Africa, Asia, &c., caves are still inhabited, as they were by the Troglodites and Horites of old.

In England, we know that in archaic times caves were inhabited by the men of those distant ages, such as Kent's Hole, the Brixham Cave, the Kirkdale caves, &c. In these caves the bones of man have been found with his stone weapons; and along with them the bones of long extinct animals, as the mammoth, the cave bear, the hyæna, &c. But in his earliest and rudest times, man has been a sculpturing and painting animal; and his old attempts in this way may possibly yet be found upon the walls of those ossiferous English caves. Sir Charles Nicolson and Sir William Wallace have both stated to me the curious fact, that at the heads of Sydney harbour rude and ancient figures of the kangaroo, &c., have been found sculptured on the rocks, when the turf was removed for building operations there. Mr Graham has likewise informed me that at the Cape, the Bushmen—one of the rudest existing races of humanity—live much in caves, and frequently paint on the walls of them the animals in their neighbourhood, and sometimes battle and hunting scenes,—always in profile. Mons. Lartet has lately shown that the caves of Perigord have been inhabited by archaic man, at a time when apparently he had as yet no metallic weapons, and when the reindeer still inhabited the south of France. Yet amongst the relics found in these Perigord caves have been discovered sculpturings upon stone, bone, and ivory, of different animals; and latterly a rude sketch of the mammoth itself. All this entitles us to hope that, if these cave researches are prosecuted, we may yet find on some *Cave Walls* sculpturings done by man in the most ancient times, and containing fragments of his earliest history.

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ERRATA.

In consequence of one or two plates having been changed during the printing of the Essay, some errors of reference have occurred in the text, which the reader is requested to rectify, viz.:—

Page	5,	line	11, *for*	XXV.	*read* I.
„	7,	„	8, „	XXV.	„ I.
„	9,	„	19, „	XXII.	„ XXIII.
„	23,	„	26, „	2	„ 3 and 2.
„	35,	„	23, „	XVII.	„ XVIII.
„	36,	„	7, „	XVII.	„ XVIII.
„	46,	„	3, „	XVI.	„ XXVI.
„	52,	„	30, *add*		See Plate XXVI. fig. 3.
„	53,	„	15, *add*		XXVI. fig. 4.
„	57,	„	13, *for*	XXII.	„ XXIII.
„	57,	„	25, „	XXXII.	„ XXIII.
„	71,	„	16, „	XXX.	„ XXXI.