

ART. XXII.—*Report on the Excavations carried out at the "Druids' Circle" on Birkrigg in the Parish of Urswick, September, 1911.* By the REV. CHARLES GELDERD, D.Sc., St. Cuthbert's College, Ushaw, Durham, and JOHN DOBSON, Urswick.

Communicated at Carlisle, April 11th, 1912.

THESE remains* consist of two circles of stones, of which the outer is somewhat incomplete at the present time. They are situated on Birkrigg Common, just south of the road over the moor from Bardsea to Sunbrick, on ground sloping slightly towards the south-east. A well-defined trench runs close to the circles on the north side, the origin of which is unknown. The inner circle consists of ten† upright stones belonging to the locality, namely carboniferous or mountain limestone, but it is not concentric with the outer circle, also formed mainly of upright limestone boulders. The circumferences of the circles approach one another on the northern side.

The exploration of these remains was begun under the supervision of the Rev. Charles Gelderd, D.Sc., on the 19th September, 1911. A trench of about a foot in width was first dug from the circumference of the inner circle on the north-east towards the centre, and it was found that the circle was paved in a very rough manner with undressed cobbles of the stone known as "blue rag," lying at depths varying from 2 to 6 inches below the

* Previously mentioned by C. M. Jopling, *Archæologia* xxxi., 450; Dr. H. Barber, *Prehist. Remains of Furness and Cartmel*, Royal Arch. Inst., 1883; and *Furness and Cartmel Notes*, 340; H. S. Cowper, F.S.A., *The Ancient Settlements, etc., of Furness*, *Archæologia* liii; marked on the 6-inch Ordnance Map as "Stone Circles."

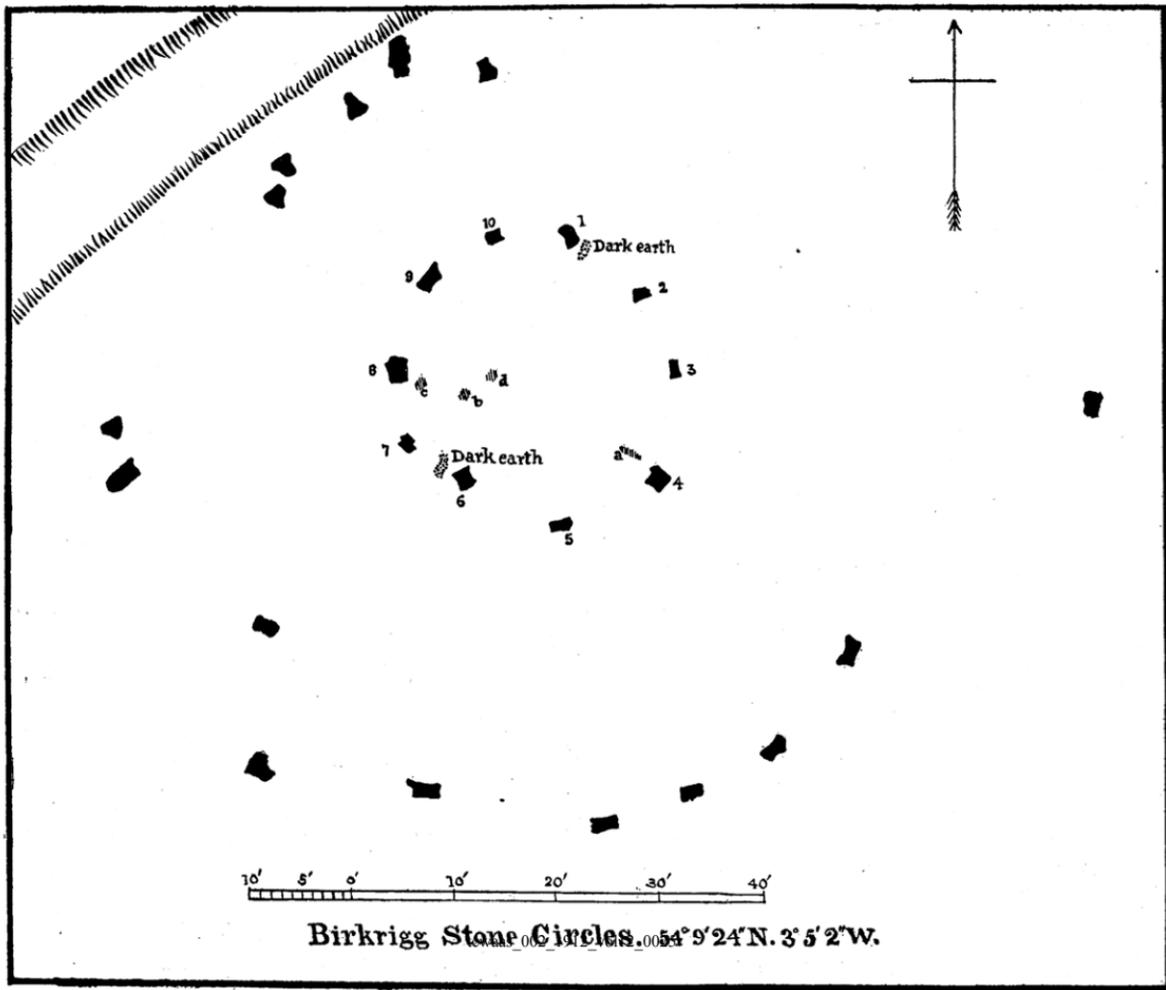
† Jopling found twelve, Mr. Cowper in 1892 or 1893 found eleven stones in this circle.



THE "DRUID'S" CIRCLE, BIRKRIGG.

Photo. by M. H. Grocock.

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upper surface of the turf. On reaching the centre, part of the pavement was removed so that the middle portion to a greater depth might be examined, and another layer of cobbles was discovered separated from the upper by a thin layer of soil. In the centre, an oval-shaped stone, much larger than the ordinary cobbles, was found. The lower pavement was of a similar character to the upper, and rested on marl which had no appearance of ever having been disturbed. Some of this underlying marl was, however, removed over a small area in the centre to a depth of 6 inches, and was tested with a bar to a greater depth, but no trace of any deeper pavement or large stone or former disturbance of the soil was found.

The two pavements in the centre were slightly depressed, forming a saucer-shaped cavity with a diameter of about 3 feet. On testing the ground in several different places it was ascertained that both the inner and outer circles were paved, the pavement ending at the circumference of the outer circle. Limestone was exceedingly scarce in the pavement, only a few pieces being found.

Around the large boulders which form the circumference of the inner circle the paving was found to be of a different nature, being characterized by the presence of larger cobbles, many of which were flat and set up on end immediately around the boulders. They were tightly packed together, and were evidently intended to support the boulders; the latter, however, rested directly on the marl in which holes had been dug before the boulders were inserted.

A systematic examination of the whole of the inner circle was next undertaken, and on the removal of the south-eastern portion of the pavement, beginning from the centre, a burial was discovered at a short distance from one of the upright boulders in the position marked "a" on the plan. Beneath the upper pavement lay a flat undressed stone measuring 26 inches by 19 inches

which formed part of the lower pavement. It was lying lengthwise directly east and west. It was tightly packed in all around with stones somewhat smaller than the ordinary stones of the pavement, and was itself resting upon a third layer of stones of its own area. In this place, then, there were three layers of stones. When the large flat stone was removed, a few fragments of calcined bones were seen embedded in moist soil lying between it and the third layer. Intimately mixed with the bones and soil were a number of sharp flakes of stone—slate or blue rag—but without any signs of their having been worked into tools. With them also were the two halves of a flake of fine sandstone, which had, before being broken, once formed a regular disc with very sharp edges. The edges showed signs of having been used (see p. 274) and, in fact, tools formed from the same kind of sandstone have formerly been found in the district. No pottery was found with the burial nor in the portion of the circle then under examination. The bones were simply small fragments, of which the largest—which seemed to belong to a forearm—was not more than an inch in length. There were no teeth. When the bones and earth were removed, it was seen that the third layer of stones was in the shape of a shallow dish, the central portion of which was $1\frac{1}{2}$ feet below the surface of the sod.

Immediately below the third layer of stones the marl was quite loose to a depth of about 6 inches. When this loose earth was taken out, it was found to be lying in an oblong cavity of the same shape and size as the large stone which covered the bones. Beneath the burial, at the depth of 2 feet from the surface of the sods, a layer of black earth from 2 to 3 inches in thickness was found. It was covered by a few inches in thickness of the ordinary brown marl and extended beyond the area of the burial. It appears on careful examination to contain no traces of charcoal, but seems to be of a loamy

character. No traces of fire were found on the stones in the vicinity of the burial.

At the distance of a foot from the burial, towards the south-west, a large square stone of undressed porphyry was lying beneath the upper pavement, but there was nothing underneath.

A sample of the black earth, referred to above as having been found below burial "a," was submitted to Mr. J. Stewart Remington, F.C.S., Aynsome, Grange-over-Sands, who very kindly analysed it and gave the result as follows :
 " Calculated on dried sample—

Insoluble matter	..	..	..	81.68 p.c.
*Organic matter	..	..	..	7.55 "
Iron oxide and alumina	..	..	..	8.32 "
Lime	..	..	..	0.50 "
Manganese oxide	..	..	..	1.23 "
Phosphoric acid	..	..	..	0.17 "
Undetermined	..	..	..	0.55 "
				100.00

*Containing Humus	..	..	5.69 p.c.
„ Nitrogen	..	..	0.12 „

In his remarks on the sample, Mr. Remington points out that the organic matter is almost entirely vegetable, and calls special attention to the relatively large proportion of manganese oxide, to the presence of which he thinks the very dark colour of the earthy matter is mainly due.

After the discovery of burial "a" in the south-eastern part of the circle, the work of removing the pavement and examining the underlying moorland earth was continued, and the sections between stone No. 4 (near which the first burial was found) and stones No. 5 and 6 towards the south, and from No. 4 by Nos. 3 and 2 towards the north were worked over, but nothing of importance was found. It was observed, however, that from the east

to the north the pavement became gradually thinner and the stones composing it smaller, until there was in the north barely one layer of paving, and this was afterwards found to be the case from the north by north-west, where the paving gradually became thicker and more even again until, when the west side was reached, it consisted, as in the east and south, of two very definite and closely packed layers.

When the work of excavation entered the section of the circle lying between south and west or between stone No. 6 and stone No. 8, the interest deepened. About 2 feet 6 inches to the west of stone No. 6, some 18 inches below the surface and extending well outside the circumference of the inner circle, a mass of dark earth, some 6 to 8 inches thick, was come upon, in character very similar to that found beneath the first burial discovered by Dr. Gelderd. The material seemed to be of a peaty nature but without any evident signs of organization—something like a bed of leaf-mould, so far decayed and disintegrated as to have lost all signs of fibre, at least to the naked eye. The whole mass of this dark earth was not examined—all lying within the inner circle was dug out and part of that outside the circumference—but the place was so left and noted that it would be easy at any future time to examine the remaining portion if deemed desirable. Another similar but much smaller deposit was found on the eastern side of stone No. 1, again on the circumference of the circle. All the stones of this inner circle have an inward batter or slope, just as have those found round the great central hut at Urswick Stone Walls.

As the work of excavation proceeded in the quadrant of the inner circle between south and west, a second burial was met with at a point marked "b" on the plan, some $6\frac{1}{2}$ feet north of stone No. 6, $6\frac{1}{2}$ feet north-east of No. 7, and $6\frac{1}{2}$ feet east of No. 8. On the removal of the lower

pavement, which here consisted of somewhat larger and flatter stones, the earth underneath showed signs of having been disturbed, in that it was of a looser character than in other parts where the "moor-pan" had not, to all appearance, been broken. Some 6 inches of this loose soil under the pavement being carefully removed, the lower part, over a circular area about 15 inches in diameter, was found to be of a dull red colour, as if the yellow-brown carbonate of iron which colours the ordinary moorland soil had been oxidized by heat. Under this loose and reddened earth, in a hollow or pit, the bottom of which was 3 feet below the sod, were found calcined bones and charcoal, probably about an imperial peck. The bones were in a very friable condition, but the head of a large bone, humerus or femur, and two pieces from the top of the skull were taken out fairly hard, as well as many soft fragments of the pelvic bones and numerous pieces of charcoal from quite thick wood. The burial pit was carefully cleared out to the bottom by hand and the whole contents examined, but no sign of earthenware, weapon, or tool was found. The pit itself, under the reddened earth, was about 15 inches in diameter and shaped like the inside of a basin. It would appear that the body had been burned in a fire of wood over a small pit or hollow excavated in the surface of the moor, and that, while the burning mass was yet glowing, earth to a depth of several inches had been thrown over and the lower half burnt red by the fiery mass. Whether the pavement was laid immediately after this burial or any of the others discovered cannot certainly be determined. No signs of reddening in the earth at the bottom of the burial pit were noticed, but at the sides, especially near the top of the hollow this reddening appeared to a small extent. After examination, the greater part of the bones and charcoal was returned to the pit and the pavement above made up.

Another and similar interment, marked "c" on the plan, was found on the south-east side of stone No. 8, and not more than a foot from the stone itself. The burial pit, as before, was under the lower pavement, its position marked by a comparatively flat stone some 12 inches in diameter in that pavement, underneath which was found the same 5 or 6 inches of loose earth with the lower 3 inches reddened by the oxidation of the carbonate of iron by heat as in burial "b." The bottom of the pit was 3 feet below the grass, and its diameter at its widest part 18 inches. The mass of bone and charcoal under the reddened earth exceeded that at "b" in quantity, and the bones were more perfectly calcined. Here again no sign of earthenware or of tool or weapon rewarded a careful search, though pieces of stone, apparently flaked off from the sides of rounded cobbles, were found both in this pit and in the one at "b," as was also the case in the first burial found at "a" by Dr. Gelderd. A portion of the concentrated mass of bone from this pit was taken as a sample, and the burial made up again.

Still working in the quadrant between south and west, at a point 8 feet east from stone No. 8 and some 2 feet to 2 feet 6 inches north north-east of burial "b," a most interesting and important discovery was made in the shape of a vessel of soft earthenware. Here, under the lower pavement, the soil again being of that loose nature which would lead to the conclusion that it had been previously disturbed, some 20 inches below the sod, the vessel was found inverted over a mass of black earthy matter, charcoal and calcined bones. This mass extended eastward from the inverted vessel a distance of 18 to 21 inches, and the vessel itself rested partly on the undisturbed soil at the edge of what proved to be another burial pit and partly on the mass of charcoal and earth which covered this burial pit to the north of it. The fact



URN (restored):
FOUND AT THE "DRUID'S" CIRCLE AT BIRKRIGG.

Photo. by M. H. Grocock.

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that the vessel rested partly on firm ground and partly on the more yielding mass above the burial had caused it to tilt, and it was found to have its axis sloping to the eastern horizon at an angle of about 45° . Unfortunately, no covering stone nor change in the colour of the overlying earth gave a hint of the presence of any such find—though a flat stone in the pavement partly covered the burial marked “d” on the plan—and an unlucky push of the spade had cut off and shattered the bottom part of the vessel before its existence was noticed. As soon as it was seen what an important discovery had been made, the broken pieces were collected from the earth on the spade, and every possible care was taken to extract the vessel without further injury. It was subsequently found that not only had the vessel tilted over but also that one side had been broken by the pressure of the overlying earth and a large piece pressed inward among the contents. The vessel which has been restored with great skill by Mr. W. G. Atkinson, stands $4\frac{3}{4}$ inches high and is of good form. From a base $3\frac{1}{4}$ inches in diameter it bulges out with a good curve until at $2\frac{1}{4}$ inches from the bottom its outer diameter is about 6 inches. Then comes a neck with an inward sweep of half an inch where it joins the collar at a further height of $1\frac{1}{4}$ inches. The collar, which is half an inch thick and 6 inches in diameter at its lowest part, slopes inward in its height of $1\frac{1}{4}$ inches to a diameter of 5 inches at the top. The thickness of the sides is from three-eighths to half an inch; and the capacity of the vessel about 1.63 pints. The neck and collar are both ornamented by cross broaching formed of impressed lines with a general slope of 30° from the perpendicular, and from three-eighths to half an inch apart. They would appear to have been impressed on the soft clay with a piece of thin cord or twisted thong. Round the lip of the vessel there were two incised lines ornamenting the rim. The material of which the vessel

is composed is a coarse clay containing many small pebbles, imperfectly fired and very friable.

The contents of this vessel, on examination when dried, proved in the main to be fine earthy matter and charcoal. The earthy matter filled up the bottom part of the vessel, which, as it lay in the ground, was uppermost, fractured and tilted, so that it seems likely that a good deal of this earthy matter had filtered in through the fracture and so had filled up the cavity caused by the inversion of the vessel, with no durable covering at its mouth, over the mass of charcoal which lay above the burial with which the vessel was most probably connected. Among this earthy matter was a considerable quantity of white material, so far disintegrated that it was impossible to say with certainty whether it had been bone or not. The mouth of the vessel to a depth of 2 inches or rather over was filled with charcoal, many fragments of which were of considerable size, evidently from fairly thick branches and showing very clearly a woody organization. They would appear to have entered the vessel from below after its inversion over the burial mass. No trace of metal or tool of stone was found within the vessel.

The burial, marked "d" on the plan, lay in the main due east of this vessel and at a considerably greater depth, with a layer of earth between the mass of charcoal on which the inverted vessel rested and the black earthy matter, charcoal and calcined bone which filled the burial pit below. This pit extended some 18 inches across the top, was circular and bowl-shaped like those at "b" and "c," with a depth of 6 or 7 inches, and contained a larger body of material than any of the burials previously unearthed. Right in the centre of this burial pit and surrounded on all sides by the charcoal and black earth was a fairly compact mass of bone, not very perfectly calcined, some of the fragments being quite hard. Altogether, the contents of the pit might reach a couple of

pecks. After a careful examination, which revealed no trace of tool or weapon, this mass was replaced and the pavement above made up again as at the other burials. A few fragments of stone, showing signs of firing, were picked out of the burial, but none of these appeared to have been shaped by human agency.

The remaining portion of the inner circle was afterwards examined, namely the section from the west at stone No. 8 round by north to stone No. 2 in the north-east, but nothing of importance was found except the thinning out of the pavement in this part of the circle already mentioned, and the turning up of a mass of dark earthy matter on the east side of stone No. 1, before briefly alluded to. Here a fairly large piece of decaying Kirkby slate was found at the depth of the lower pavement, and underneath this, traces of dark earth were visible. The material was carefully removed in the hope of discovering another vessel, but the dark earth proved to be of no great thickness, not more than 2 or 3 inches, and was mixed with pebbles from the surrounding boulder clay, unlike the mass of peaty material found west of stone No. 6.

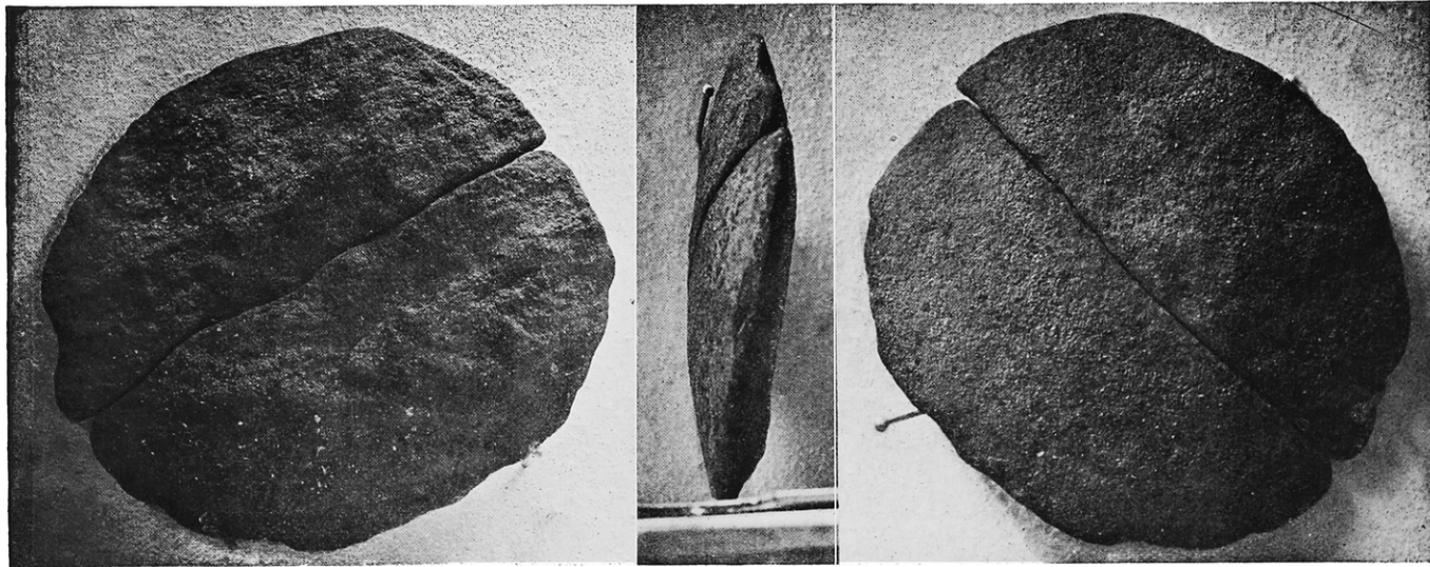
The whole area of the inner circle having now been gone over, the ground was made up, the turf replaced, and the excavations discontinued for the season. The discovery of the vessel in conjunction with the burial or burials at "d" would, according to the usually accepted theory, stamp this "Home of the dead" as belonging to the early bronze age in this district, and the peculiarities of the burial at "a" would lead to the supposition that the cremation took place at a distance, and that only those pieces of bone of some size and not the whole mass of charcoal and calcined material were collected and buried within the circle.

The work of excavation was carried out by the North Lonsdale Field Club, and the compilers of this report

would place on record their appreciation of the assistance rendered by Mr. James Martin, who, as Deputy Steward of the Manor of Muchland, obtained from the Crown authorities permission to carry on the excavations ; Mr. W. G. Atkinson, who restored the broken vessel ; the late Mr. B. Whitley, who surveyed the site and drew the plan ; Messrs. James Randall, Alfred Fell, J. F. Lord, and H. B. Turney ; Mr. Myles H. Grocock, to whom we owe the photographs ; Mr. James Fell, of Sea Wood Farm, who, though not a member of the Club, freely lent his skilled assistance in the work ; and Mr. John Jackson, who not only did the heavier part of the manual labour, but also showed the keen observation of a trained worker.

After this article was in type, Dr. Gelderd showed the sandstone disc found with burial "a" to Canon Greenwell, and reported as follows :—

I took the sandstone disc to show Canon Greenwell. He was very much interested in it and says that it is *most certainly* a tool ; also that it has been worked, the signs of which are visible on the rough side at the edge. This working was evidently intended to make the edge sharp. He thinks that it may never have been *used* as a tool, for the edges are still sharp. One side, however, shows signs of some wear. He thinks that it is a knife and not a scraper, and perhaps used to cut meat or soft material, but may be of use as a scraper for wood, and says that it is not too soft for that purpose. He told me that his authority could be used for the fact of its being a worked tool, and also for the statement that it is most probably a knife. He would not hear of its being a rubber for grinding down grain, as it would certainly be too soft for that purpose. Probably it is a flake from a water-rolled stone, worked so as to have a sharp edge.



ROUGH SIDE.

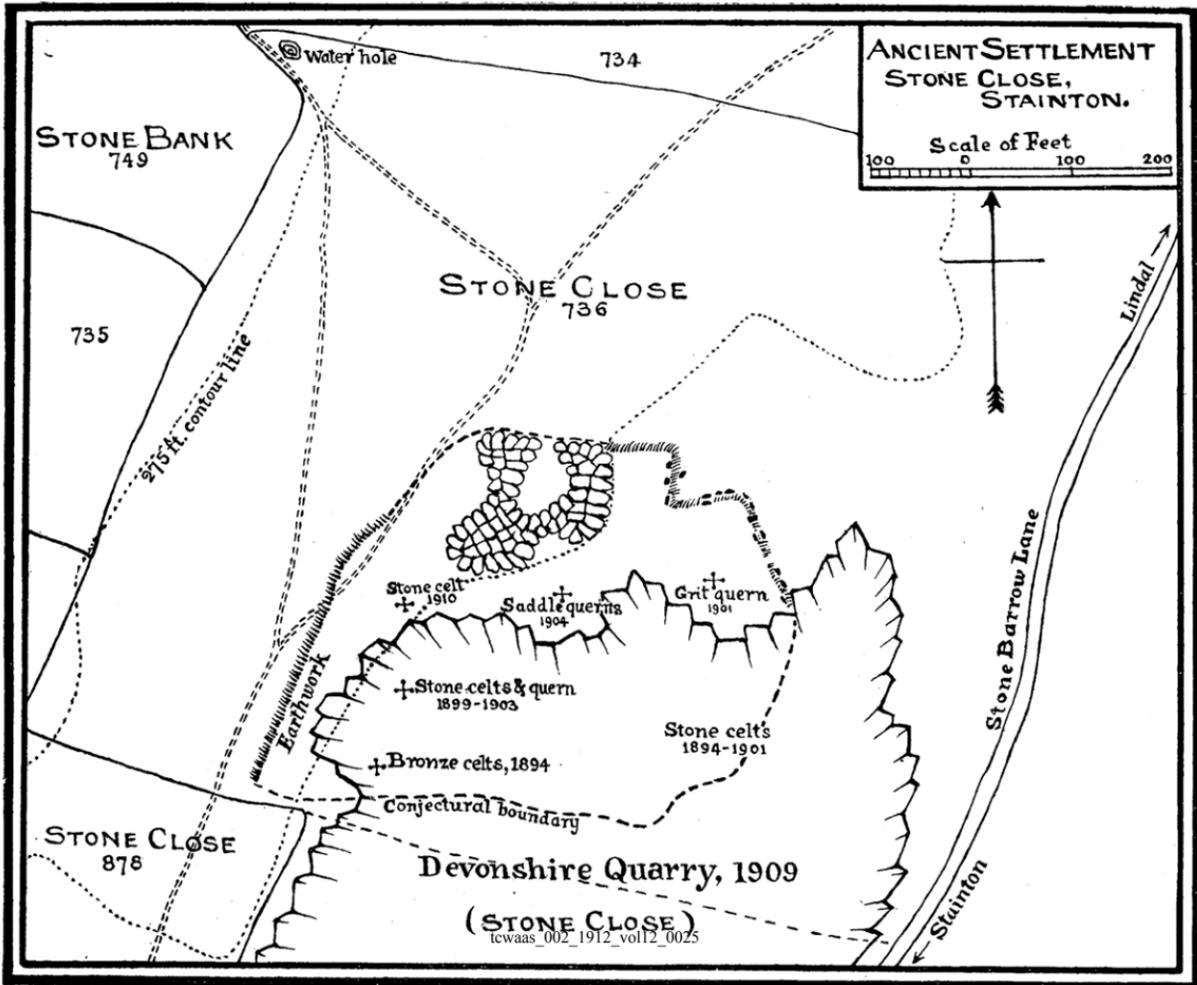
EDGE.

SMOOTH SIDE.

SANDSTONE DISC FOUND AT THE "DRUID'S" CIRCLE, BIRKRIGG.

Photo. by Myles H. Grocock.

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(STONE CLOSE)
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