AN ANCIENT BRITISH SETTLEMENT, CONSISTING OF
A DOUBLE ROW OF PITS ON DANBY NORTH MOOR,
YORKSHIRE.

By J. R. MORTIMER.

These lines of excavations are the most regular in size
and arrangement of any I am acquainted with, and, reviewed
as a whole, they seem to have a greater claim to be the
remains of pit-dwellings than any other group which has
come under my observation.

Nevertheless, the application of the pick and the
shovel is the only reliable means likely to determine their
original use.

The first published description of this and other neigh-
bouring groups of pits is by Dr. Young, in 1817, of
which the following is an abstract:

"These three clusters of pits have all the same form and appearance,
but other three have been discovered in the district, differing from
them very materially. The most singular is on Danby Moor, between
Danby Beacon and Wapley. Here the pits are also round, but,
instead of being scattered about irregularly, they are arranged in
two parallel straight lines; and the earth dug out of the pits at their
formation, instead of forming a border round each pit, has been taken
to form a wall or fence on the outside of the lines, so that two walls
run parallel to the two rows of pits throughout their whole length,
inclosing the pits between them. The pits are not placed in the
zigzag form, but opposite each other; and while the outer margin of
each row is close to the valum (i.e., bank) on the outside of it, there
is a vacant space between the rows. These double lines of cavities,
with their enclosing walls, are not all in one spot, in the same con-
tinued lines, but are found partly on one side of a hollow or valley,
with a stream running through it, and partly on the other. The
stream runs from south to north, or rather from south-west to north-
est; and the lines on both sides are nearly at right angles to it.
Those on the east begin on the verge of the sloping bank on that side
of the valley, and extend eastwards above 100 paces. In this range
are 28 pits, 14 in each row. The breadth of the whole range is about
50 feet, including the walls on each side. The breadth of each pit is
about 10 feet, which is nearly the distance between one pit and
another. Beyond this range, 100 paces to the south-east, is the com-
 mencement of another, containing only 6 pits, 3 in each row,

2 These are not shown on the Ordnance Survey.
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having a wall on each side like the other. But the principal collection is on the west side, commencing at about 150 paces from the western edge of the valley, and extending westwards to a great distance. This collection, which is not exactly in a line with the first range, being a little south, is composed of two ranges: the one 130 paces in length, comprising 30 pits, 15 in each row; the other about 140 paces, containing 34 pits, 17 in each row. These two ranges are nearly in a line, an interval of 25 paces being left between them. They are a little broader than the first range, a wider space being left between the rows of pits, which are enclosed by the same kind of low earthen walls on the outside. There are no walls at the ends of any of the ranges, these being left open, apparently with a view to admit of additions. The most westerly range, which is also the largest, is distinguished by this peculiarity: that near the middle of the south row we find, instead of a pit, a circular space, 35 feet in diameter, enclosed by the low wall on this side, which here projects in a semicircle outwards, and another semicircle inwards, to form this circular space; the centre of which is, therefore, not in the line of the pits, but in the line of the wall."

Secondly, in the Gentleman's Magazine for 1861, in an article on encampments and earthworks, this series of pits is also referred to, as under:

"The most interesting and instructive site (speaking of pit settlements) is that on the Danby Moors. For the following account of this remarkable spot I am partly indebted," says the writer, "to a MS. report of an investigation by a party of gentlemen 12 or 14 years since" (about 1846), "but not less to my own personal and repeated examinations. The site consists of a collection of pits. These pits are circular in form, and divided into separate groups; but every group is arranged in two parallel lines—pit over against pit; an arrangement which is deviated from, in one or both particulars, in other sites, both here and elsewhere.

"All of these excavations have been from 4 to 5 feet deep, as compared with the present surface of the surrounding moor; all of them paved at that depth with stone, and probably rough-walled with uncemented stone within as well, and from 10 to 12 feet in external diameter. (These measurements were obtained from the explorations made by the Whitby gentlemen previously referred to.)

"There are two principal groups:—One composed of two members, or streets, not in exactly the same straight line, and with an interval of 25 feet between their several terminations; the other which lies beyond a small stream, and on the verge of the slope towards it, is smaller in dimensions. It contains 30 or more pits. About 100 yards to the south of this is the supposed commencement of another. This contains six pits. Some, it is supposed, have become indiscernible through lapse of time and its effects. The one upon the further or western side of the stream is larger, and numbers 68 excavations in all—30 in one division and 38 in the other. This range is broader by some feet than the eastern group, which is 50 feet from side to side. That measurement includes the walls, formed of earth heaped over stones and fragments of rock, and each 2 to 3 yards thick, which
encloses the sides of each group of pits. In the larger sub-group of the western division, one of the excavations (see Fig. 1) in the south row is of much greater dimensions than any other in the assemblage, being not less than 35 feet in interior diameter; and on coming to it the enclosing wall, which, if continued, would pass through its centre, sweeps round it in a semicircle and then continues its rectilinear course. But the enclosure of the pit in question is completed by the addition of an interior semicircular wall. This interrupts the regularity of the 'street' in this case. In each of the other groups the street is perfectly straight and even. The ends of the rows or so-called 'streets' are open in every case; although in one instance the two pits at the end are placed nearer each other than the remaining ones, so as to contract the entrance to the interior. If all were placed end to end the total length would be from 1,200 to 1,300 feet.

![Fig. 1.—The British Settlement on Danby North Moor from the 25-Inch Ordnance Map.](image)

Thirty years later, Canon Atkinson, the writer of the previous article—after having, it may be supposed, obtained new facts and further information on the subject—like a true philosopher, changes his views, as in his *Forty Years in a Moorland Parish*, published in 1891, he abandons entirely the pit-dwelling theory, and assigns almost every group of pits to mining operations, and at p. 175, in specially referring to the pits now under discussion, says:

"Even at the British village on our Danby North Moor, between the Beacon and Waupley—perhaps honoured with more pilgrimages
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than any other on the list—the tale-telling map places a seam of 'impure ironstone' inconveniently close by. And yet this is the one, of all others, the circumstances and surroundings of which admit of most doubt as to their original intention or raison d'être. For they are not only not arranged in more or less quincunx order as the rest are (or have been), but they are in two parallel rows, and apparently with an intended outside bank or protection. They have never been properly examined, or indeed subjected to any process of exploration that would satisfy the merest tyro in such inquiries; for the recorded examination already referred to was, as a scientific examination, altogether delusive. True, the inevitable 'bottom' and the inevitable 'charcoal' were found, and the burnt stones, and so forth. But the full and convincing investigation remains to be made; and from my own personal experience on the spot, I am disposed to think that when true bottom is found, the British village theory will be disposed of for good."

At p. 174 Canon Atkinson remarks:

"For my own part, if only the opportunity could be achieved, I should go in for an examination of any of those so-called British villages with very definitely preconceived opinions as to what should be looked for, and the way in which the looking for it should be conducted; and for one thing I should have no more doubt about finding horizontal operations than about the fact that the pits were there. If I did not find the ironstone it would be because it had been removed."

This is strong faith, without the least attempt to verify it.

Being desirous of personally inspecting these pits, I took the train to Lealholm Station on August 28th, 1893, in company with Dr. Wood, of Driffield, and then walked to Danby North Moor.

Though we were supplied with a 6-inch Ordnance map, on which the pits were very distinctly shown, after traversing the moor in various directions, we were much disappointed in not being able to find them. On July 4th, 1894, in company with Mr. C. H. Read, of the British Museum, and Mr. T. Boynton, of Bridlington Quay, I was more fortunate. We found these pits to be very uniform in size and arrangement, considering that they were much encroached upon and partially filled in by the growth of peat. From external appearances their age seemed uncertain. Though my two colleagues thought they might not date back more than two or three centuries, I am inclined to think that they are much older.
After our return, I informed Canon Atkinson of our visit, and expressed my surprise that some antiquary interested in those pits had not during the last twenty years attempted to settle their origin by carefully cleaning out two or three of them. I received the following reply:

"The pits you refer to were dug into by and in the presence of a large body of wise men of Whitby, some fifty years ago, and a long report of the exploration of the pits, and of the adjacent howes, drawn up and presented to the then lord of the manor, and by his son, the Lord Downe, was handed over to me. I have it still, and I can say of it that it is absolutely valueless. Many years ago I did something towards an investigation, and soon convinced myself that these wiseacres had not reached the bottom, as they said they had. I proposed to Mr. Greenwell (as he was then) to come over and join me in a thorough examination of their nature. Circumstances at the time intervened to prevent the scheme, and I need not tell you, who have seen them with the water standing in them, that it is not every year, if any, that investigation is easy, or indeed possible. I chose a dry year; yet not more than three or four permitted deeper digging than 1½ to 2 feet. When that depth was reached, water began to stand in them. I do not seem to think that they would have been very comfortable or healthy residences under such circumstances."

Believing that nothing less than a further and careful application of the pick and the shovel in the hands of an experienced workman would give any certain clue to their age and purpose, and dispel these contradictory reports, I wrote a letter to Canon Atkinson on May 20th, 1895, an abstract of which I give below.

"I have just read your account of the Danby North Moor group of pits, in your very interesting book (Forty Years in a Moorland Parish), and I have the same doubts as to their origin as you seem to express at p. 175. To endeavour to clear up this doubt it does seem to me most desirable that two or three of the Danby North Moor pits should be emptied by an experienced workman. I therefore beg you will excuse me taking the liberty of saying that, if you will kindly obtain permission to excavate, say two or three pits, I will undertake to send (supply) a competent workman, and pay all expenses."

I was disappointed in receiving the following reply, dated May 25th, 1895:

"Dear Sir,—Viscount Downe absolutely prohibits any such tampering with the pits on Danby North Moor as that suggested in your letter to me, and desires that the manorial officers should be warned against any possible attempt of the kind. From my last
letter you would see that, so far as your project was intelligible to me, I am heartily at one with his lordship.

"Faithfully yours,

"J. C. ATKINSON."

To this I answered:

"May 29th, 1895.

"Dear Sir,—I beg you to excuse the trouble I have given you in writing about the pits. I feel I must apologise for not making the matter more clear to you in my letter of the 20th inst. What I meant, and what I should have said, was, I would take a competent workman—not send one. Of course you would have had an opportunity of being present, and also Canon Greenwell, and any one you desired, to see the excavations. Perhaps I seemed to you to put too much reliance on 'a competent workman,' but no stranger to such work would be likely to distinguish the limits of the original pits; hence the probability that he would, unknowingly, break into the sides and bottom of the pits, and so their true size and shape would not be ascertained. No antiquary would wish to remain in the interior of the pits all the time the work was going on; therefore an experienced workman should be employed—of course under proficient supervision. Your knowledge of this kind of work for over forty years, and my experience (without any theory to support) for more than thirty years, should be something better than tampering with the pits. The next generation even may not be able to supply much longer experience than ours in this matter. Again apologising for the trouble I have given you,

"I remain,

"Yours truly,

"J. R. MORTIMER."

After this refusal I thought that the next best thing would be to revisit and carefully examine the pits, in company with my friend, the Rev. E. M. Cole, F.G.S., of Wetwang, whose knowledge of earthworks in general is well known. On July 8th, 1896, Mr. Cole and I visited these pits, and the following is Mr. Cole’s opinion:

"On July 8th, 1896, I accompanied my friend, Mr. J. R. Mortimer, to make an inspection of the pits on Dandy North Moor. By an unaccountable order of Lord Downe, the owner of the manor, we were debarred from making any excavation, which is the only possible method of obtaining a correct result. Seeing that the pits in question are in an open moor, far from any human habitation, it seems absurd to suppose that any harm could be done by emptying a few of them of the sludge which in course of ages has collected in them, for the purely scientific purpose of trying to ascertain their origin. But I do not wish to blame His Lordship; I think he has been unwisely influenced, and would withdraw his opposition were the matter laid properly before him.

"The difficulty was to find the pits. From Danby Station you
must first find your way to Beacon Hill, N.E. This is easy enough. Then a mile away over ling and heather, N. by E., you must direct your course for three 'howes,' which stand on a ridge between two hollows on either side excavated by incipient streams. About a hundred yards to the north of the howes are the pits which are the subject of this memoir. They have been so correctly described by preceding authorities, narrated above by Mr. Mortimer, that little information is wanted here. My own opinion is all that is asked, but this is no easy matter to give. The pits were filled nearly to the top with a black-looking sludge, in which grew rushes. There was every indication of abundance of water, though the weather for a long time had been exceptionally dry. It seemed to me that if the pits had been emptied of sludge they would quickly have been filled with water. Under such conditions the idea of their having been habitable seems absurd. But when they were excavated might not the moor have been forest, and the climate different? Possibly, but the more forest the greater rainfall; so that does not help us.

"What is meant by being 'paved with stone' at the bottom?" The geological formation shows a thin bed of Kellaways sand-rock resting on Cornbrash. The Cornbrash is limestone, and the only limestone available for a long distance. Could the limestone have been quarried for smelting purposes? But as the limestone comes nearer the surface, a few yards south of the howes, one would think that would have been the more suitable place for obtaining it. But the said limestone is also ferruginous, and has been worked in various places, though with little success, for iron. True, but the same remark applies as before: Why not have sought the ore where it comes to the surface? Still, it is an important fact to bear in mind, in considering the origin of the pits, that both iron and lime could be obtained there, and to my mind the probability that this is the true explanation is very great. It follows that the pits need not be very ancient. If something more fanciful is sought for, at all events let the habitation theory be discarded, and then consider the following brilliant suggestion now invented for the first time:

"As nothing but hoary antiquity will suit, imagine a body of ancient Britons with flint-tipped arrows and bronze daggers issuing from their wigwams which clothed the sides of Roseberry Topping, and making for the vast forest which covers the hills to the east and conceals amid its gloomy recesses the burial mounds of their more gifted chiefs. It is a hunting expedition. Their object is to capture the wild animals—deer or blue hares—which inhabit the forest, and so provide food for their little ones and pit-holds. For this purpose they have skilfully constructed a series of pitfalls extending across some rising ground from one slight valley to another, in the immediate neighbourhood of three recently-erected howes, and moreover concealed the approach by earthen banks on either side, so that when the affrighted animals leap the bank they shall fall unconsciously into, &c.

"If this fails to satisfy, I have nothing more to add."

My doubts as to the origin of these pits being still as strong as those of Mr. Cole, I decided to make, at the
first opportunity, a clandestine examination of them. Therefore, on July 19th, 1897, I, in company with an assistant, revisited these pits. This time I was supplied with a pointed steel rod, for the purpose of probing them, believing we should do no more harm to the heather-clad moor than would be done to a rick of hay by pricking it with the point of a needle. Though this proceeding was much less satisfactory than would have been the application of the pick and the shovel, we obtained results which, to a great extent, may be relied upon.

We probed and measured five pits situated in different places in the group with considerable care, and their close uniformity in size is shown by four having a depth of 4 1/2 feet and the fifth of 4 feet. In each pit the probe (steel rod) reached the hard undisturbed rock at the bottom. To make allowance for the crumbling in of the edges of the pits, we took two opposite diameters of each pit, and in every instance by measuring from the edge of the pit where the probe reached the firm rock at a depth of 18 inches. From these points the diameters of the pits ranged from 9 1/2 feet to 11 1/2 feet.1 This group of pits, consisting of two rows similarly arranged, is distinctly different from the single lines of small pits forming the groups on Allerston Moor, in the neighbourhood of Scamridge Dykes; and it differs from the group known as the “Killing Pits,” on the north-west brow of Goathland Moor. Both these groups have been described by me in previous numbers of the *Archaeological Journal* (Vol. LII, p. 266, and LIII, p. 144), also in the *Proceedings of the Yorkshire Geological and Polytechnic Society’s Journal*, Vol. XIII, 1896.

Mr. Cole’s pitfall theory seems at first sight a plausible one, but for such a purpose the wide opening or gateway shown crossing the Group No. 2, near the centre, presents a decided objection.

Neither is the situation near the foot of the sloping

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1 These measurements closely correspond with those given by Mr. Atkinson (as he then was), the writer in the *Gentleman’s Magazine* for 1861, which I quote at p. 156. These are the measurements obtained during the excavations made by the Whitby gentlemen quoted, and then believed in by Mr. Atkinson in 1881, though afterwards he stigmatised these same as “wiseacres.”
ridge well chosen, as the animals would have been much more readily forced into pitfalls situated in the hollow ground (small valleys) through which run little streams of water near the ends of the line of pits, as shown on the accompanying map (Fig. 2). Besides, the pits in the two lines should not have been planned diametrically opposite, as they really are, so as to give a clear passage straight between two pits in both lines. Moreover, the bank of earth—traces of which still remain—fencing the pits on both sides is, I think, fatal to their having been constructed to drive wild animals into. On the other hand, their small and uniform depth, as well as their arrangement at regular distances one from another, in two parallel lines, would not have been adhered to had they been made to obtain minerals of any kind. Besides, there is no mineral worth excavating.

Therefore, if we must admit these objections against their suggested origin, for what purpose were they made? The old belief that they were pit dwellings Canon Atkinson
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at one time very strongly supported;¹ and—as we must believe—from what he considered reliable evidence. However, it will have been observed that later he firmly opposed this view. His chief objection seems to have been that these pits are mostly in a swampy condition. Why did he not observe this during his early studies of these pits, and at the time he so ably pleaded their habitation purpose? Might it be because the pits were then less charged with slushy peat than now? This is very probable; and it is quite possible that, through some different surface conditions existing when the pits were dug, the peat had not even commenced to form, there being then nothing (as hinted at by Mr. Cole) to prevent the natural drainage of the sloping surface, which consequently might be firm and dry. In this case we must assume the growth of peat to have taken place afterwards. Such an instance is given by the Rev. H. H. Hutchinson in *Prehistoric Man and Beasts*, p. 26. He alludes to a bed of peat, 5 to 6 feet in thickness, that had accumulated over a pavement of small stones in the centre of a small circle at Moyness, in Nairnshire. Other instances of a similar kind could be given.² That these pits now hold surface water is mainly due to the growth of heather and peat, which in this case is probably of somewhat modern accumulation. Taking all the evidence into consideration, I am now—though in the absence of positive proof—strongly inclined to believe—at least, until further evidence is obtained—that this series of pits (unlike many others) was an assemblage of primitive habitations. The site is a well-chosen one, near the foot of a low ridge (Three Howes Rigg), between two small streams of water. The diameters of these pits are of convenient size for being roofed by placing round their edges branches of trees, leaning inwards and meeting at the top. Their depths also are just such as would enable an adult to tumble in and scramble out unaided by mechanical assistance.

Most probably their interiors would be lined by small twigs and dry grass, making them places of warmth in winter and cool retreats in summer—just such places as

¹ See his anonymous paper in the Gentleman's Magazine for 1861.  
² Several occurrences are given in Loch Etive, by A. Smith.
would well serve a small community of primitive hunters living mainly in the open air.

That these pits were contemporaneous with the contiguous howes, and that under these barrows now rest the remains of the chiefs of this early settlement is not improbable.

The conclusion derived from the exploration made by what Canon Atkinson terms "the large body of wise men from Whitby" I believe to be the true one.