

Ravencliffe Cave.

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(See D.A.J. vol. 32, 1910).

OPPPOSITE Monsal Dale station, and to the north of it, a little dale unites with Monsal Dale. Its name is Hay Dale; and throughout its length a narrow lane climbs till at the further end it meets the main road from Bakewell to Tideswell. Half-way up this lane the trees on the left-hand side abruptly end. If at this spot the wall is climbed, a cart-track, and later a not very clearly defined footpath, follow the direction of the "outrake," and eventually lead to Cressbrook Dale and Ravencliffe Cave. Here the east side of Cressbrook Dale is formed of towering crags from the base of which rough screes slope steeply down to the stream below. These Mountain Limestone crags have been carved out of one side of Wardlow Hay Cop, the conical hill above them. Piercing their face, and looking down upon the group of houses locally called Bury-me-wick, but named Ravendale Cottages on the Ordnance Map, is Ravencliffe Cave, its entrance facing south-west. It is almost hidden in a corner of the crags. Outside it there is a platform or terrace 23 feet wide from its outer edge to the cave-mouth, and then gradually narrowing both to north-west and south-east; and nearly 60 feet long from end to end. This terrace is the pedestal from which the huge mass of rock superimposed upon it became detached and fell headlong down the dale-side.

The excavation from 1902 to 1906 has been described in the 1910 volume of this Journal, but twenty-one years later the Derbyshire Caves Committee was anxious for further work to be done in the hope that in the lower beds some trace of palaeolithic man might be found. Accordingly operations were carried on during 1927 and 1928, and were financed by the British Association and the Sladen Trust. So far as actual finds were concerned the results have been disappointing, nothing more interesting being found than a few bones of rhinoceros, reindeer, and bear, all of which had occurred in previous years. But it would be a grave mistake to suppose that the labours of these two years have been fruitless, for they have shed much light on and have provided solutions of problems which in 1906 were unsolvable. It does not seem necessary to give any details of the methods and progress of either the earlier or later operations, as the problems can be stated and discussed without reference to them.

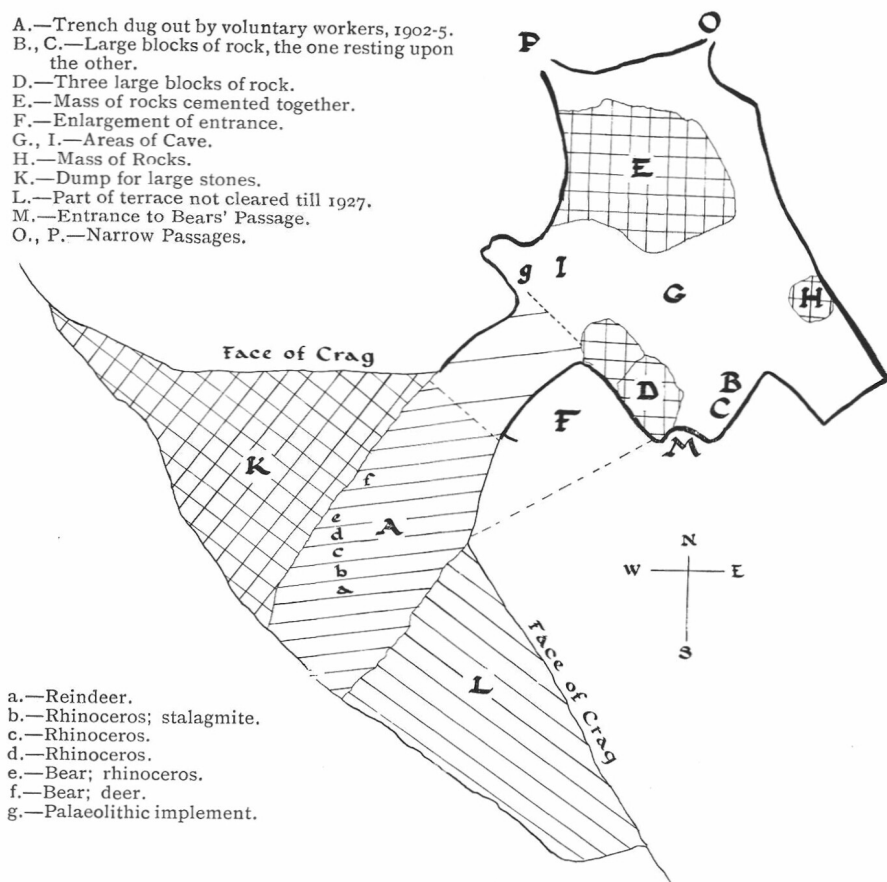
It is necessary, however, to keep clearly in mind the various beds or layers which occurred in the cave as it was in 1902, and in the extension of it which had existed long ago. Beginning with the uppermost these were as follows:—

1. Dark, vegetable soil, no doubt to a large extent the result of leaves which in the course of centuries had been blown into the cave. This bed varied in depth from 2 or 3 inches to 7 feet or more.

2. A thin layer of lighter brown colour, which here and there was intermediate between nos. 1 and 3.

3. Small, angular stones closely compacted together, and cemented by means of stalagmite into a very tough breccia, so tough that it only yielded to pick-axe and crow-bar. and consequently bones could rarely be extracted from it without fracture. This bed rested within the cave on solid stalagmite, and extended from

- A.—Trench dug out by voluntary workers, 1902-5.
 B., C.—Large blocks of rock, the one resting upon the other.
 D.—Three large blocks of rock.
 E.—Mass of rocks cemented together.
 F.—Enlargement of entrance.
 G., I.—Areas of Cave.
 H.—Mass of Rocks.
 K.—Dump for large stones.
 L.—Part of terrace not cleared till 1927.
 M.—Entrance to Bears' Passage.
 O., P.—Narrow Passages.



- a.—Reindeer.
 b.—Rhinoceros; stalagmite.
 c.—Rhinoceros.
 d.—Rhinoceros.
 e.—Bear; rhinoceros.
 f.—Bear; deer.
 g.—Palaeolithic implement.

RAVENCLIFFE CAVE, 1902-1928.

Scale— $\frac{1}{202}$.

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the north-west wall to the south-east, and through the entrance to within a few feet of the outer edge of the terrace. Wherever it had been exposed to weather, it was less hard. It is called the pleistocene bed, and surpasses all others in importance.

4. A bed of solid stalagmite covering the same area as no. 3. It reached a thickness of upwards of 4 feet, but gradually petered out towards the edge of the terrace.

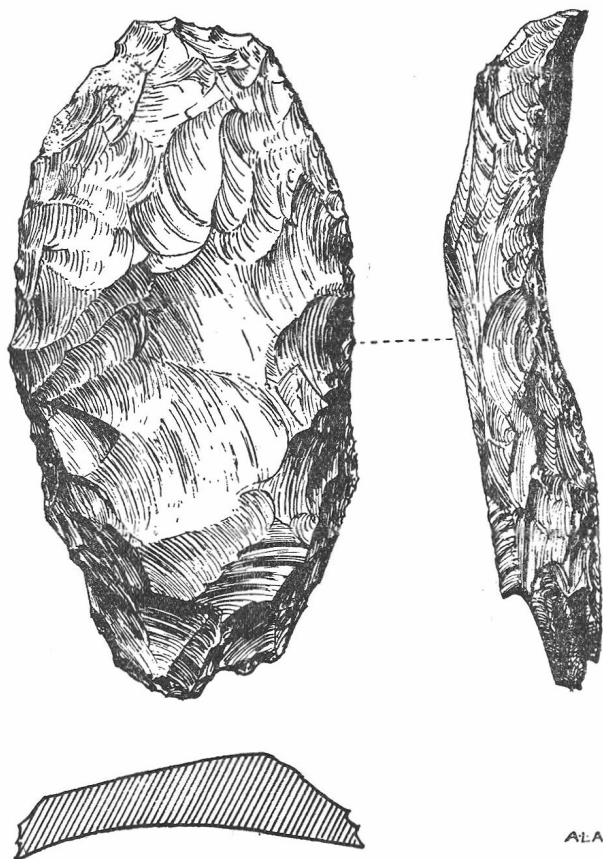
5. Between no. 4 and the solid limestone floor there was a layer of sticky yellow soil, in which only unrecognisable fragments of bones have been found up to the present date.

In the Journal (vol. xxxii, 1910, p. 143) it was stated that remains of reindeer, rhinoceros, and bear were found *beneath* the bed of stalagmite. But this is manifestly an error, which was probably the result of a mistaken deduction. No doubt in the early days of excavation the hypothesis was that beds no. 3 and 4 ran horizontally throughout their whole course towards the terrace-edge, and therefore that bones of reindeer, etc., found within a few inches of the solid rock must have been deposited before the stalagmite began to form. But the truth is that the further out these beds reached the more were they exposed to weathering, and that the stalagmite in particular became very much reduced in depth, and finally disappeared. And here the pleistocene bed passed beyond it and in turn reached the rock-floor, consequently, the true position of the first finds of reindeer, rhinoceros, and bear was above the stalagmite-bed and not below it.

It has already been stated that the purpose of the work in 1927 and 1928 was the discovery of traces of palaeolithic man. Now, it happened that on 1st June, 1905, a flint implement of peculiar form and character was found inside the cave in the area marked I on the plan, and it was extracted from the pleistocene bed. It was shown

to an authority at the British Museum, and he stated that it was neolithic, and it would have been impertinence on the part of an amateur to have questioned the diagnosis of an expert. Moreover, the report was divided into two parts, and the second part, dealing with artifacts, was written by Sir Hercules Read, President of the Society of Antiquaries, and Director of the Department of British and Mediaeval Antiquities at the British Museum. The implement in question was illustrated on the upper part of Plate III, fig. 3, and it was in the hands of Sir Hercules Read when he wrote his account of the artifacts. Nevertheless, he passed it over in complete silence. On p. 147 he remarked, "the occupation of the cave does not seem to date beyond the Neolithic age." That no doubt is true so far as actual occupation is concerned, and so far as evidence has been forthcoming up to date. But in 1927, the Abbé Breuil and Mr. A. Leslie Armstrong paid a visit of inspection to the cave, and afterwards came to see my collection. When the Abbé saw this flint among a number of neolithic implements, he at once singled it out, and exclaimed, "That is not neolithic: it is palaeolithic." In the course of years the particulars regarding its discovery had been forgotten; but, when it was examined, on its under side were the date of finding and the bed from which it had been derived. On referring to notes made at the time no doubt was possible as to its having been found in the same bed which had produced reindeer, rhinoceros, and bear. It follows that palaeolithic man had wandered in the neighbourhood of Ravencliffe Cave, even if he never voluntarily entered it.

Here it is necessary to insert a word of caution. No one, apart from the foolish and inexperienced, will be tempted to impute blame to the experts who as long ago as 1910 failed to realize that this was a palaeolithic implement. Younger students of the science may find



THE RAVENCLIFFE IMPLEMENT.

A side-scraper of Mousterian type and technique, $1\frac{3}{4}$ inches wide and $3\frac{1}{2}$ inches long, in a fine chalcedonic flint, originally of a brownish shade, but patinated a pale blue, flecked with white and resembling "basket patina." The edges are sharp and un-abraded. The implement has been worked on a thermally fractured piece of flint, or upon a flake struck from a thermally fractured surface which is seen on the under side of the implement. Except for very slight retouching on the underside at the narrow end, the whole of the flaking is upon the upper face of the scraper and consists of bold primary flaking over the whole surface of the implement and a fine secondary re-touch around the margins, much of which is step-flaking of typical Mousterian character. (A. Leslie Armstrong).

it difficult to conceive the immense difference between the knowledge of the subject at that date and now. To me the chief interest of the incident is that it reveals the fact that during the last twenty years archaeology has progressed by leaps and bounds.

Some suggestion seems to be called for—some attempt at an explanation of the presence of a single, isolated trace of palaeolithic man in this cave. Theories built on flimsy foundations are never satisfactory; and all I can suggest is that either this man armed with his inadequate weapon entered the cave for some purpose and was promptly slain by the bear whose den it was; or, that he was killed outside, and then dragged in.

In the 1910 account it was stated that there was evidence of a former extension of the cave outwards in the direction of the dale; but it was left to the reader to trace out that evidence. Therefore, it seems advisable to take this opportunity of offering a more explicit statement. In the first place, the formation of stalactite and stalagmite is dependent upon the presence of a roof from which water saturated with lime can drop, and the atmospheric conditions of a cave with a very slow rate of evaporation are conducive to this formation. Now, blocks of stalagmite were met with within 6 feet of the terrace-edge, and, as excavation advanced towards the cave-mouth, these increased in size and number till the solid bed of stalagmite was reached upwards of 12 feet from the present-day cave. Moreover, there were stalactites, some 4 inches in diameter, and these must originally have hung down from a roof. Undoubtedly, then, at one time the cave extended at least to within 6 feet of the terrace-edge. If any confirmation of this were needed, it would be found in the similar extension of the pleistocene bed.

In the same account reference was made to the hopelessness of tracing out the various beds with accuracy,



RAVENCLIFFE CAVE, DECEMBER, 1929.

The right-hand side of the entrance (14 feet 9 inches across) is hidden by stone built up on the terrace. Within the cave the face of the mass of rock (marked E. on the plan) is seen.

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because they were so frequently interrupted by large blocks of rock which had fallen from the roof. But during 1927 and 1928 the cave was cleared to an extent that had seemed impracticable in earlier days; and no doubt remains now as to the area and extent of the pleistocene bed. Again, the rapid dip of the stalagmite-bed from north-west to south-east was mentioned. And the pleistocene bed resting upon it dipped in a precisely similar manner. From this it is manifest that there was a time when the floor of the area marked G in the plan was very much lower than that of area I, and consequently there was a deep hollow and steeply sloping floor just at the most sheltered and commodious spot in the whole cave, the very place in fact which otherwise would be chosen for habitation. At the present day hawthorn, elder, and ash have their roots firmly anchored in the screes and clothe this eastern side of the dale. In winter leaves from them would year by year for centuries be blown into the cave, and would come to rest in this sheltered corner. Thus the great depth of dark vegetable soil in this area is accounted for. And possibly we find here the solution of another problem. In 1906 the natural passage between the mass of rocks (marked E on the plan) and the rock-wall at the back of the cave was cleared out to a considerable depth, and in the material which was removed there were found human bones and implements as well as bones of other animals mixed together in an entirely meaningless fashion; and no satisfactory explanation of this state of things could be offered. Is it not possible that at a date not earlier than A.D. 200, and probably later than that, fresh occupants sought the shelter of the cave, and in order to make it as comfortable a dwelling-place as possible, levelled the floor in this corner, and pitched the material, which they wanted to be rid of, into the aforesaid passage? What is more likely than that this

material contained bones and implements of former inhabitants? There is an obvious reason why this refuse would not have been tipped down the side of the dale. For, if that had been their method of disposal, a long line of dark earth would have contrasted with the light grey screes, and would have revealed the position of the cave to everyone who happened to stray on the other side of the dale.

The excavation during 1927 and 1928 has done much to unravel the history of the cave. It entailed work of a very laborious nature. My thanks are specially due to Mr. A. Leslie Armstrong for his constant encouragement, his unstinted help and advice, and his excellent drawing of the Mousterian implement; and to the Rev. C. H. Weller and my son, Mr. C. Storrs Fox, who superintended the work when the infirmities of age prevented me from going to the cave.