Deepdale Cave, near Buxton.

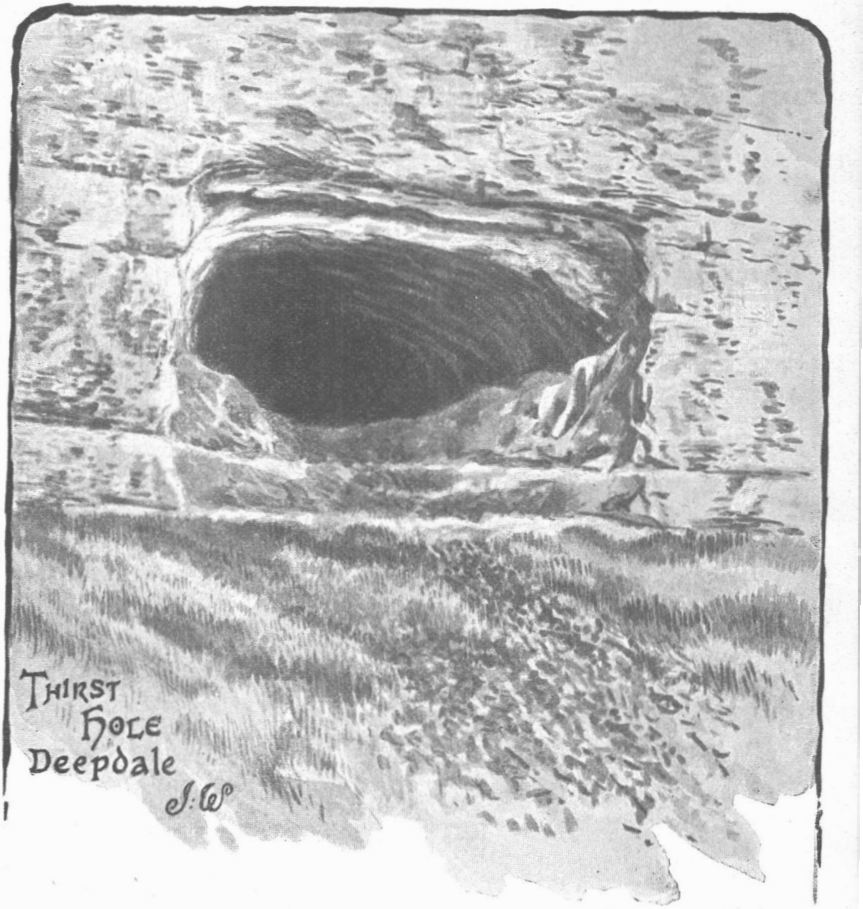
By John Ward, F.S.A.

SEVERAL short papers on the discoveries made in this cave have been published in past volumes of this Journal, but as yet no general description of the cave itself. I have been asked by the Editor and several other members of this Society to contribute a paper upon this aspect of the subject. This I do with the greatest pleasure; but let me say at the outset that, not having been engaged in any actual work in the cave, I am not able to write upon it with that degree of certitude and minuteness with which I drew up my Rains Cave reports. I have frequently visited the spot and explored the interior of the cave—that is as far as I cared to go; and have been in constant communication, personally and by letter, with Mr. Micah Salt and Mr. Millet, junior (both of Buxton), who have under many difficulties disinterred so fine and valuable a collection of relics of the past. I am greatly indebted to them for the help they have afforded me in drawing up this paper, and, indeed, they well deserve the best thanks of the Society for the care with which they have conducted their work, and their unselfish communicativeness, by which the interesting results of that work have become the property of the community.

The dale—Deepdale—in which this cave is situated, is one of several which have their source in the high land south of Buxton, and which, after a more or less northerly course, debouch into

the Wye valley. This high land commences about two miles south of the town, and curving, eastwards, ends in the vicinity of Taddington, Hindlow and Brierlow being amongst its most elevated points. Two of these valleys bear the name of Deepdale; but the one that we are about to consider is as nearly as possible midway between Buxton and Miller's Dale station, while the other is between Taddington and Ashford. The entrance to our Deepdale is about half-a-mile west of the junction of the Buxton branch of the Midland Railway with the main line to Manchester, and at a point immediately before the first railway bridge is reached on the highway from Bakewell to Buxton. The visitor cannot mistake the valley. The road crosses over the small stream which flows down it, by a bridge; its sides are gaunt and steep, something more than two hundred feet in height; and he can look up it, but only for about a third of a mile, as at that distance it suddenly veers to the right, that is, to the west. Up to this bend there is a small footpath; but beyond, the visitor must thread his way as best he can amongst the tall grass and the loose shingle it hides from view. The little stream soon disappears from sight, except in wet weather, but its underground course is indicated here and there by damp hollows with greener and ranker herbage. After a half-mile of this westerly direction, the valley pursues a general S.S.W. course for about a mile. The sides still retain their first character—steep, but nowhere too steep to be scaled, except where long lines of perpendicular rock break through the greensward. The trees are few and dwarfed, and the bleak and deserted appearance is increased by the absence of human habitations, although the little old-fashioned village of King's Sterndale is only a few hundred feet behind the right brink. After the first quarter of a mile of this general S.S.W. trend, the valley makes a gentle swerve to the west, and then a sharp bend of about four hundred feet to the S.S.E. The left side, that is, the side facing the E.S.E., is precipitous, consisting of two escarpments, the one above the other. The lower one, however, is the larger, and more clearly defined and perpendicular; and near its centre is the

large and very conspicuous portal of the cave we are about to consider. But before doing this, the visitor should explore the upper parts of the valley. After two more minor bends—a right one and a left—the valley forks, the one branch proceeding due



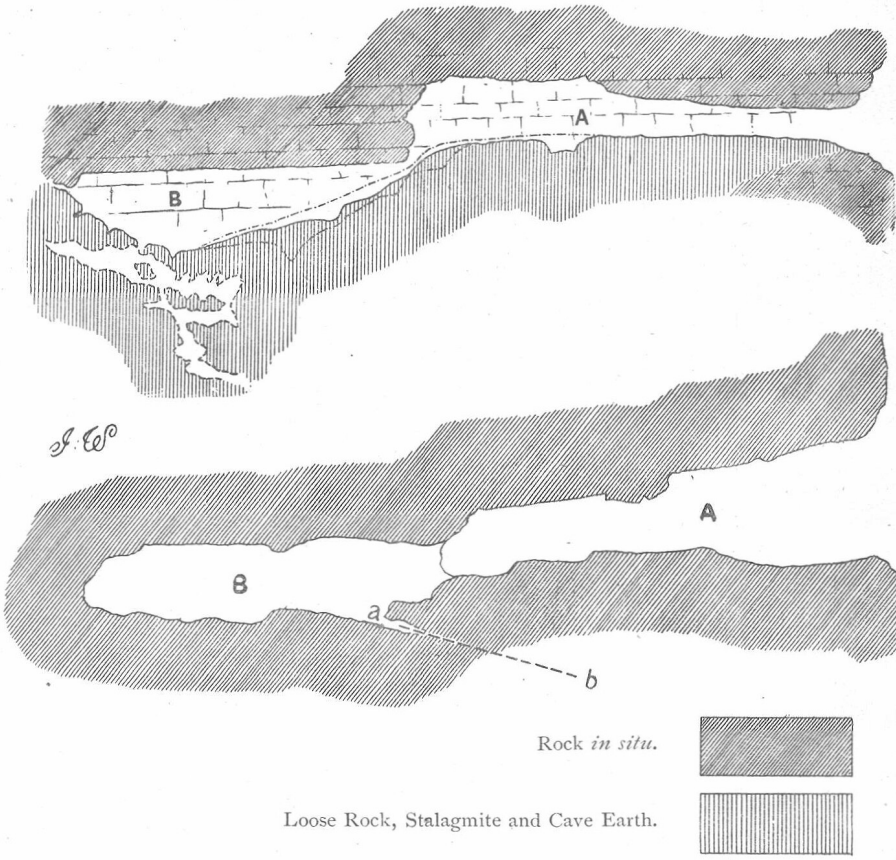
south, and the other south-west. The former of these is known as Horse-shoe Dale, and it dies out about a mile hence in the vicinity of the main road from Ashbourne to Buxton. Along the bottom of this branch is a footpath to King's Sterndale called the Priest Way—why, I cannot say; but the name is suggestive

of medieval antiquity. The other branch reaches the same road at a point a mile nearer to Buxton. Throughout their whole course Deepdale and its tributary valleys are carved out of the lower beds of the carboniferous limestone (or fourth limestone, as it is sometimes termed), and the main portion is crossed by at least three mineral veins or "rakes."

The entrance of the cave, as already stated, is in a long wall-like escarpment facing the E.S.E. This escarpment does not rise sheer from the bottom of the valley. At its foot is a steep slope about fifty feet high, which, almost beyond a doubt, consists wholly of "screes" (*débris* from the rocks above), and is now covered with soil and grass. The portal of the cave is singularly artificial in appearance, an effect heightened by the wall-like character of the escarpment. It has the form of an elliptical arch, about twenty-six feet wide, and fifteen feet in height in the centre, set within a shallow rectangular recess in the rocky face. This opening is at the foot of the escarpment, so that the interior may be easily reached by climbing up the talus outside. The external height, as just given, does not represent that of the interior. Within the portal a steep and narrow path ascends a few feet to the actual floor of the cave, and, at the same time, the roof drops a trifle, the two combining to reduce height within to about six feet. This height, however, is not long maintained, for at twenty-eight feet from the entrance the roof ascends to twelve feet or more. The floor is tolerably level, and unencumbered with fallen stones. The sides are as irregular as the roof. From a width of about twenty feet, just within the entrance, the cave is narrowed down to about ten feet, where the roof begins to ascend; and from this point the width remains tolerably constant to the back, some eighty-eight or ninety feet from the entrance. Nevertheless, in spite of these variations as to width and height, this portion of the cave (for there is another large chamber in the rear at a lower level) is remarkably straight and tunnel-like, with a course nearly due east and west. The roof and sides have but little stalagmitic deposit upon them, so it is not strange that several old inscriptions are still legible and

sharply defined. The most interesting of these is a dated one, "T. E. 1661," on the left-hand side.

Towards the end of this chamber the floor gently sinks, and terminates in a short, steep, downward passage into the second

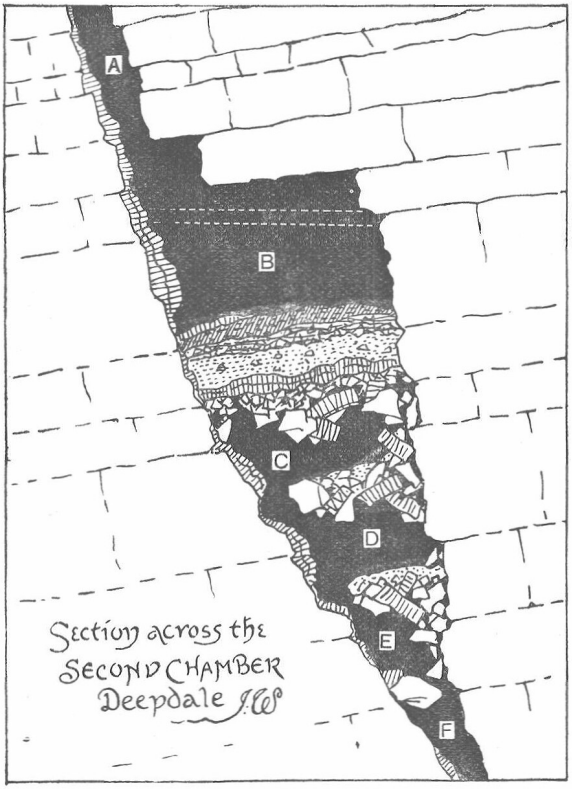


LONGITUDINAL SECTION AND PLAN OF DEEPDALE CAVE.

A—First or Upper Chamber. B—Second or Lower Chamber.
a, *b*—Denuded mineral vein.

chamber. The accompanying longitudinal section and plan will make the relative positions of the two chambers clear to the reader. The upper dot-and-dash line represents the floor before

Messrs. Salt and Millett commenced their diggings, and the lower, the depth they reached to. Even now it is not easy or pleasant to slide down the slope into this lower apartment, but in its old condition it must have been a very serious operation indeed for those who were not dressed suitably for the purpose. This second



A, F—Denuded Mineral Vein. B—Second Chamber, an expansion of this fissure. C, D, E—Irregular Chambers or interspaces in the *débris* of the floor. The dotted lines indicate a former stalagmitic floor.

chamber is the converse of the first; instead of the floor being level, it makes a steep descent to a point somewhat beyond the middle, and then as rapid an ascent, while the roof is remarkably flat. The floor, moreover, is much incommoded with huge blocks of stone; and the upward slope at the end seems to be a

mass of rocky *débris* cemented together with stalagmite. The length is a little less than that of the first chamber, being about seventy-two feet. Stalagmite is abundant. Along the right-hand wall is a well-defined horizontal ridge of this substance, the edge of an old stalagmitic sheet, and the opposite wall is to a very large extent covered with large masses. This side demands special attention; and a study of the next illustration, which is a transverse section of this second chamber, will make all plain enough to the reader. He will notice that the roof does not join the left wall; in other words, that this chamber is an expansion of a large fissure extending upwards to A, and downwards below D.

This feature is of great importance, as it throws some light on the origin of the cave and the small cavities below the second chamber. These cavities are shown in both my sections. They are entered through a crevice in the stalagmite-covered slope at the back of this chamber.* I believe Mr. Millett is the only person who has explored them, their exploration being very difficult and even dangerous. I am indebted to him for the following particulars, also for the details which I have incorporated into my sections. As he has only roughly measured them, these details must not be otherwise regarded than as approximately to scale; they are indicated on the general section by dotted lines. According to Mr. Millett, these cavities are haphazard spaces in a jumbled mass of fallen *débris*, consisting chiefly of broken stalagmite, and masses of limestone varying from a few pounds to five or six tons in weight. The stalagmite he identifies with the ancient sheet referred to above, of which the broken edges along the side of the second chamber are the sole remains *in situ*. These blocks are frequently in a very loose condition, as may be judged from his own words—"It is very dangerous to work in these places. If you remove one block several others are sure to

* This way into these cavities was accidentally formed by Mr. Salt and Dr. Bennet, of Buxton, in 1886. The original entrance was at the lowest point of the floor of this chamber, but is now covered up with the *débris* of the excavations.

fall, and in consequence of this I have had some very narrow escapes." The lowest of these cavities which he has explored always contain water, no less than twenty-five feet in rainy weather. At such times the surplus water issues into the valley as a spring at the foot of the slope below the entrance of the cave; "but," remarks Mr. Millett, "I have never at any time seen one-twentieth part running into these cavities as springs up in the valley outside." Where he has dug he has found that this accumulation of *débris* is covered, first, with a layer of smaller stones mixed and cemented with stalagmite; then, above this is a seam of crystallised stalagmite, varying from one foot in thickness; overlying this is a bed of clay and sand, with stones from four to six feet thick; then layers of loose stones, gravel, and thin stalagmite; and, above all, a blackish soil containing Romano-British remains. All these deposits are indicated in the transverse section of the second chamber.

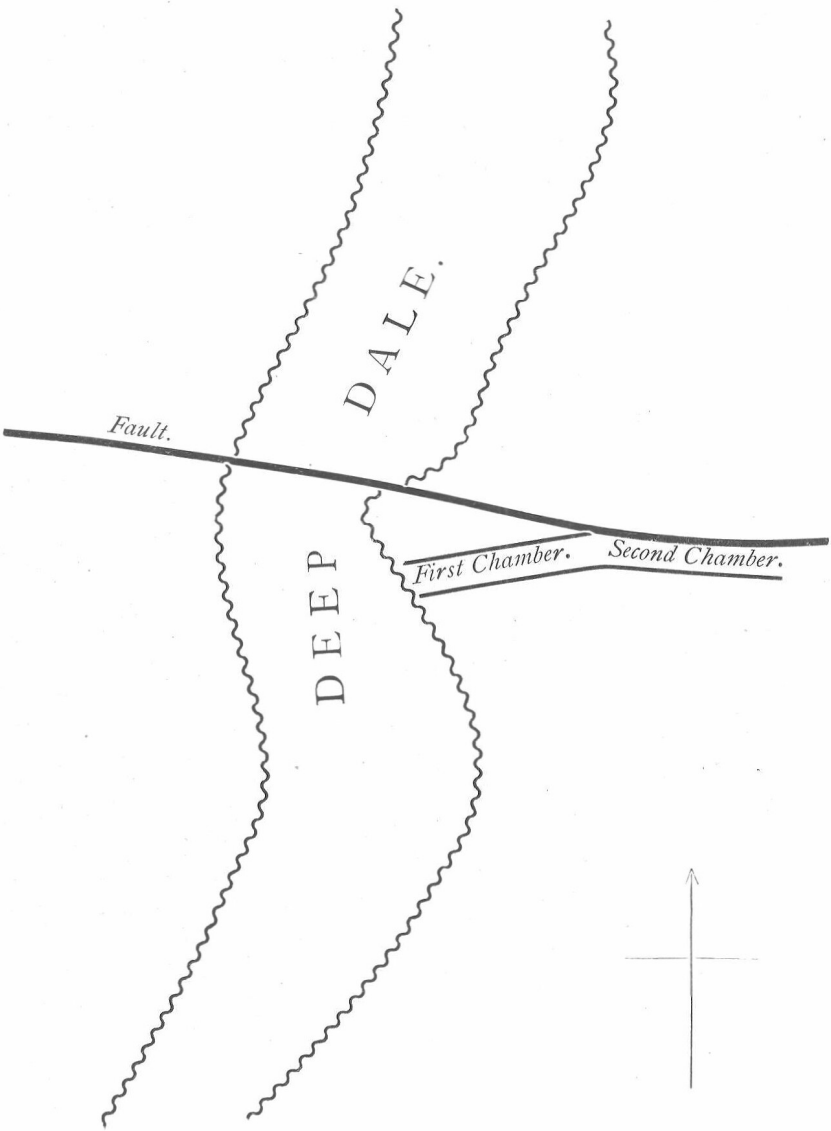
The first chamber has the important point of difference from the second of being drilled (so to speak) out of the solid limestone rock, a circumstance which, no doubt, is answerable for the difference of level of the two floors. To judge from Mr. Salt's excavations in this chamber, the following sequence of deposits seems to be general. In descending order, there are (*a*) a dark surface-soil containing bones, bronze objects, pottery, etc., (*b*) a sheet of stalagmite, and (*c*) a yellowish red cave-earth mixed with stones, but, so far as it has been penetrated, devoid of objects of human manufacture. In the anterior half of this chamber Mr. Salt found that the surface soil was about one foot in thickness, and the stalagmite about eighteen inches, while near the back the latter attained a thickness of even three feet. Thick as this stalagmite in the back portion of the chamber was, and, therefore, long as it must have been in formation, there were evident traces of man's presence beneath it in the shape of a seam of dark earth highly charged with charcoal, and varying from three to six inches in thickness.

The soil throughout the cave is the tenacious pasty clay known as "fox-earth," invariably found in caves and fissures of limestone

rocks. It differs considerably from the gritty variety found in like situations in districts where the limestone is more or less dolomitised, as described in the second report of Rains Cave.

With these facts before us, we can proceed to the consideration of the origin and history of our cave. The fissure that has just been noticed, is a portion of a mineral vein stretching in a W.N.W. and E.S.E. direction, from High Cliff, half a mile west of Deepdale, to the vicinity of Chelmorton Low. The outcrop of this "rake" in the valley-side can be distinctly traced a few dozen feet lower down the valley, just beyond the point where it bends to the N.E. One portion is cleared of its contents, apparently naturally, and forms a fissure-like cave at a higher level than the one which is our subject. The heaps of sparry refuse on the valley-side below indicate that the vein has been worked, but certainly to no great extent. It hades, or leans, to the left, that is, north, exactly as the fissure in the second chamber does; and it is of about the same width. It is almost beyond a doubt that this fissure is a denuded portion of the same vein. There is a small cave high up the opposite side of the dale which has all the appearance of having also originated in a cavity of the same vein. A reference to the accompanying diagramatic plan will facilitate the reader's grasp of the above statements.

The reader may have observed that natural cavities are very common in mineral veins and in the parent rock immediately adjacent. This is in great measure due to the fact that the mineral fillings of these veins are not so hard as the rock; and that having been deposited from solution in water they are very susceptible of re-solution. The great depth and length of these veins are, moreover, very convenient lines of subterranean drainage. When, in consequence of the lowering of the land-surface by denudation, the portion of the vein now exposed in Deepdale was brought within range of the action of surface-water, it is not extraordinary that it should have become part of a line of drainage. Once pervious to this water, by no matter how small a channel, it was a mere matter of time for this


DALE.
Fault.
DEEP
First Chamber.
Second Chamber.

channel to become enlarged into a succession of caves. We can, however, go a step further. Starting with this small channel, it is possible to account for the present shape of the second chamber. If the reader will again refer to the transverse section he will observe that the rock has been removed more from the right hand, or south, than from the opposite side. This is not because the solvent power of the water has been greater on this side than the other, but because of the greater liability of blocks of stone on that side falling when slightly undermined by this action, in consequence of their overhanging character. Look at the roof of this chamber! Some day the great plate of rock which now forms the roof will break off, and even if the stratum above remains in its place, this will mean a *per saltum* increase of some three feet to the height. If this chamber should again happen to become a water-course, the broken fragments of this fallen stratum would, through contact with the fluid, be, comparatively speaking, rapidly dissolved away. In contrast to the above, note what a vast amount of rock would have to be dissolved on the opposite side before the strata immediately above could fall.*

Whence and whither the succession of cavities, of which this Deepdale cave is a link, conveyed water in the first instance, is an interesting question, but, unfortunately, it is not easy to answer. The first and most natural suggestion is that it drained the high ground on the east, and conveyed the water into the dale. It certainly does so at present, only the valley being now so much lower than the cave, the water has cut for itself a lower channel—the spring already alluded to. But the cave has the remarkable feature that, while towards the back of the first chamber, and even as near the entrance as twenty-four feet, there are a succession of deposits which have not yet been cut through, *the threshold is of solid rock.* This plainly shows that the rock-floor sinks as it recedes from the entrance, and the lower level of the second chamber further

* The fall of blocks of stone is a most important factor in the enlargement of caves, and in most may be seen fallen blocks which exactly fit the roof immediately above. Within the entrance of the large cave at the end of the Lathkil valley are some huge tabular pieces of rock, lying just as they fell from the roof.

confirms this. As water is not in the habit of running uphill, this will perhaps suggest the answer, that, instead of conveying water *into* the dale, the cave originally conveyed it *away*—that is, that it was a "water-swallow." This would mean that at that time the dale was trough-shaped, the cave being its outlet. Ignoring the difficulty of accounting for the stream forsaking its underground outlet and carving a new one, those who may advocate this theory have to explain why the dale below this point is as ancient looking—just as weathered, and its sides as smoothed down—as that portion above. For it is obvious enough that if this be the explanation, the former portion of the valley is the more modern. I can only imagine a third answer, that the two caves, one on each side of the valley, were originally one, and are more ancient than the valley. It is interesting in connection with this to observe that the opposite cave is on a much higher level, so that if these caves were connected, the general floor would continue the slope observed in the first chamber. Does not this suggest that previous to the excavation of Deepdale this subterranean passage drained the high ground on the west? But where the water was conveyed to, I cannot imagine, unless the passage gradually veered to the north-east, and debouched into a short abrupt valley pointing to the south near the commencement of the dale. Such abrupt valleys as this usually terminate in a large spring, which in a limestone district is frequently connected with a cave. This small valley is no exception, for it terminates in a pit-like cave, known as Churn Hole. The ravine leading to Peak Cavern at Castleton is a parallel example, but on a grander scale. There is nothing improbable in Churn Hole being an outlet of Deepdale Cave, for the fall to it cannot be much less than one hundred feet. I know that it will be objected that from the moment Deepdale broke into our cave, its waters would be engulfed, and the valley below deserted. Still, it is not impossible that the cave had already long since ceased to be a water-course, and in consequence was blocked with deposits. Under such circumstances, a surface stream would have nothing to gain by deserting its old course.

The subsequent history can be traced with much greater certainty. It was mentioned above that in the second chamber there was the edge of an old sheet of stalagmite, and that in the *débris* below the present floor Mr. Millett observed many broken pieces of it. I have indicated the position of this old sheet by two dotted lines in the transverse section. It need hardly be said that stalagmite must be deposited upon *something*, and that this something in the present case was an ancient floor. Mr. Millett has satisfactory proofs that this floor consisted of cave earth, with fragments of limestone, exactly corresponding with that of the first chamber. This is interesting, for it tends to show that the thick sheet of stalagmite in that chamber is a continuation of the same sheet; in other words, that the whole cave had a tolerably level floor of cave-earth, covered with a continuous and thick layer of stalagmite. I cannot think that this cave-earth was washed in at the time the valley bottom was level with it. If so, a time would come when the valley was so deep as to leave the cave out of reach of flood water, when of course *that* deposit would cease. The stalagmite shows that the cave was closed against the ready access of animals and vegetable matters, as fallen leaves. Under such conditions a solid sheet of stalagmite could be deposited.

The next great event was the removal of cave-earth from the second chamber. This is not strange when it is considered that this chamber originated in a mineral vein. We see the cause in operation to-day:—the stream of water which Mr. Millett saw, and which issues into the valley hard by—this, by dissolving away the mineral filling and limestone, would inevitably undermine the cave-earth above and wash it away, until the sheet of stalagmite would be left hanging like a floor in mid-air, if it had not already been smashed up by falls of rock from the roof. In this case, of course, it would sink with the cave-earth; if otherwise, sooner or later a fall of rock would bring about its destruction. Under any circumstances, after the finer materials were removed, the larger masses of rock and stalagmite would settle down, and thus allow of new deposits being formed upon

them—loose stones, one foot of stalagmite, four to six feet of clay, sand, and stones, minor layers of stones and stalagmites, and finally the blackish soil with human antiquities. The story these tell is not difficult to make out. The stalagmite is probably a continuation, in respect to time, of the fallen sheet below; that is, both were deposited in the same period of closure against the outside world, and except for the accident just described, would now form one sheet. If this be so, the stalagmite sheet of the first chamber is the equivalent of the two. The thick beds of clay, sand, and stones, point to the access of water down the fissure above during heavy rains. The accumulations thus derived became smaller and less frequent, perhaps owing to a lower rainfall. The intervals were now sufficiently long to allow of the formation of thin stalagmites. The last phase of all was the present accessibility of the cave which admitted of the introduction of vegetable mould on animals' feet, or in the form of dust by the wind; of autumnal leaves, also blown in by the wind; and of man's implements, and the charcoal of his fires—the whole making up the dark carbonaceous surface soil.

This introduces the connection of man with this Deepdale cave. I will, however, preface my attempt to interpret the facts of the excavations, by some account of the discovery of its archæological remains, and of the old-time stories connected with it. To Mr. Millett belongs the credit of being the first to bring the former to notice. A letter from him upon his early visits to the cave, and how he came to find out the ancient remains, is so very interesting, that I will quote a portion of it *verbatim*. "I became acquainted," he writes, "with the dale as a boy, nine years ago (1884). I used to spend hours and hours rambling among the rocks in search of jackdaws' eggs, in company with my school-fellows. We used to gather large quantities of dried grass, and carry it into the cave, set fire to it, and then see who dare venture through the smoke farthest. The cave has always been an attraction to boys. I am told by the oldest Buxton inhabitants that they used to visit it sixty

and seventy years ago in search of some supposed money left there by an old miser * who disappeared suddenly and mysteriously; this also prompted us. At that time I was reading Professor Boyd Dawkins' 'Cave Hunting,' and this set me following his example, in a very modest way, of course. I soon began to find bones and fragments of pottery, including Samian ware. At length, I found the skull of a bear, and this set me cave-hunting in right good earnest; Mr. Salt joined me, and you know the results."

I need not describe these results, as they are well known to the members of this society through former papers contributed to the *Journal*. I will only remark that nearly all the objects that have been found in such profusion are of Romano-British age, and that from no other English cave has so remarkable and large a series been obtained. The story of the miser is by no means uninteresting. Hidden treasure was popularly associated with most caves in bygone times; but it is very probable that in the case of Deepdale the story may have originated in, or at least have received corroboration from, occasional discoveries of Roman coins and other objects. It cannot be doubted that hunters after treasure would be sure to turn them up in their rummaging expeditions.

Whatever may have been the nature of the human occupation of the cave in ancient times, no memory of it lingers in local tradition. The cave is marked on the Ordnance Survey as "Thirst House." But another name that the old people of the district know it by is "Hob's Thirst House," and it is a pretty example of phonetic corruption, and of the origin of myths therefrom. Mr. Millett, in the above-mentioned letter, gives the popular story—how Hob charmed the spring below the cave, and how in consequence they who quench their thirst with its sparkling water on Good Friday (with proper faith, of course) are cured of

* Since writing the above, Mr. Salt has informed me that another local tradition connects this miser with a robbery at Pig Tor in the vicinity. The proceeds of the robbery were supposed to be hidden in the cave, and a search was made, in which the small cavities and the pool below the second chamber were examined, but without result.

their ailments. This is why the cave is called Hob's Thirst Hole, and the story carries us back to the days of faith in fairies and goblins. A hob-hurst was a capricious wood elf, *hurst* being an old English word for a wood or forest. When in a good humour this elf made everything on the farm, particularly in the dairy, go smooth and prosperous; made the cows give plenty of milk, the cream churn quickly into butter, and increase the quantity of hay. But when irritated he would make the cows go dry, the milk turn sour, the crocks smash, and generally infuse a spirit of contrariness in everything. It is interesting to observe that there is a Hob Hurst's House, or simply Hob's House, in the district —a huge mass of slipped rock, full of dark fissures, overlooking the Wye from the slopes of Fin Cop. I remember reading this Derbyshire charm against Hob's trickiness in an old volume of the *Reliquary*—

"Churn, butter, churn!
Peter stands at 'our gate
Waiting for a butter cake!
Churn, butter, churn!"

This cave was the reputed residence of Hob Hurst, and the story of the curative power of the water arose thus. By a very simple process of abbreviation the cave would come to be also known as Hurst, or *The* Hurst House, or Hole, that is, in Peak parlance, Th' Hurst House. Indeed, I am not sure if the goblin himself was not also known as the Hurst. The meaning of *hurst* being forgotten, the spring suggested a reason for the name, and Th' Hurst became Thirst.

A little higher up, I spoke of the days of faith in fairies as passed. I have just received a letter from Mr. Salt, in which it appears to be about as strong as ever in the district. A local farmer told Mr. Salt, three years ago, that he frequently found small tobacco pipes when ploughing his fields, and he accounted for them by the tradition that Deepdale had been a noted place for fairies in past times. He further stated that a workman crossing the dale, on his way to Chelmorton, caught one of them, and put it into his bag, and took it part way home, but it shrieked so pitifully that he let it go, whereupon it ran back to the dale!

The silence of history and tradition compels us to seek an explanation of the human occupation from the results of the excavations only. It is not my intention to go minutely into Messrs. Salt and Millett's work—they probably will favour us with an exhaustive paper upon it—but to point out its salient features. Both have used their spades and pick-axes here and there throughout the cave; Mr. Millet's work, however, has chiefly been in the second chamber and the cavities below its floor, while Mr. Salt has given much of his attention to the first chamber, but probably his most successful and valuable work has been in the slope outside below the entrance of the cave. The deposits of the interior have been described; a few words must be said about the nature of the soil outside. I visited the spot with Mr. Salt about three years ago, some months after he had found the objects illustrated in last year's volume. The difference between the soil he had disturbed on that occasion and that elsewhere in the dale was most marked. Right and left of the cave the slightly darker superficial mould passed into the usual ruddy-buff sub-soil. But soil below the entrance was very dark, and when examined was found to contain an abundance of particles of charcoal and fragments of pottery; in fact, it was impossible to mistake its origin—it was ancient refuse of human habitation. Another point I noted—this stratum of dark earth was very thick, being sometimes as much as three feet, so Mr. Salt assured me. He also informed me that as the cave was approached, this deposit became darker and more carbonaceous, while towards the bottom of the slope it was largely mixed with broken limestone.

This dark earth outside the cave seems to be the equivalent of that of the interior, for the "finds" of both are distinctively Romano-British. There may have been more ancient and more recent objects present; but, as a class, no one who has any acquaintance with Roman antiquities can possibly mistake their age. On the occasion of my visit with Mr. Salt I turned over the surface soil outside with my stick, and every fragment of pottery I met with was of the common hard wheel-made varieties,

plentiful enough on Roman sites. How numerous the "finds" have been the reader may judge for himself, all the fibulæ and other bronze objects in the collotype in the last volume, besides many others of iron, etc., were found within an area of eight square yards, rather nearer the bottom of the valley than the cave. Mr. Salt assures me that in this area the number of potsherds he noticed was about thirty in every square yard. An important feature was the even distribution of these various objects, thus proving (as this gentleman points out) that the coins, brooches, and other more valuable finds, must not be regarded as hoards, but as accidentally dropped at various times and thus lost. None have been found below the thick sheet of stalagmite in the cave, but outside they occurred at a depth of five or even six feet. The Roman coin, No. 1, plate ix., was found at a depth of five feet, and at six feet fragments of coarse pottery have just been turned up. An equally noteworthy point was the comparative thinness of the post-Roman mould. So far as I could make out this did not exceed a few inches; indeed, Mr. Salt, in describing his excavations, quite ignored it.

The similarity of the deposits within this cave with the superficial ones of the famous Kent's Cavern at Torquay is most striking. In a lecture by the late Mr. Pengelly (whose name is so intimately connected with the excavation of that cave), delivered at the Hulme Town Hall, Manchester, in 1872, he thus described the latter:—"Beneath and between these blocks (blocks of stone on the floor) was a black material, which we call *black mould*, consisting of vegetable *débris* to a large extent, and which covered the cavern in every direction to a depth of three inches to a foot or more. Below that was the stalagmite, varying in thickness from an inch to upwards of five feet, but on an average from sixteen to twenty inches thick. In one particular part of the cavern there was under this floor a layer called the *black band*, covering a space of one hundred square feet, and consisting mainly of charcoal. Below that we have what we call the *cave-earth*, which we excavated to a depth of four feet. It is a light red loam, and with it there were mixed up about fifty per cent. of

angular pieces of limestone." The objects found in the black mould ranged from pre-Roman and Romano-British times to the date of an 1846 sixpence, while those of the deposits below reached far back into pre-metallic ages. The parallel between the surface deposits of the two caves is obvious enough, as also is that of the charcoal immediately under the stalagmite. There is a contrast, however, between the lower deposits in respect of objects of human manufacture—while none for certain has been found below the top deposit at Deepdale, many of remote pre-metallic times have been yielded by Kent's Cavern. The former is, rather than the latter, after all, what one would expect; for the stalagmite certainly points to a time when the cave was wholly, or at least partially, closed to animals and man, and if the cave-earth was washed in by flood water, it was no suitable residence for even primitive man.

Whatever the use may have been that the cave was put to by the Romano-Britons, the evidence of their presence is so overwhelming that it may be said to have crowded out of view all indications of earlier and later occupancy. It is very puzzling to understand why people so cultured as the finds indicate them to have been, and, indeed, as history describes the natives generally under the Roman sway, should have frequented a damp and gloomy cave like this of Deepdale. Professor Boyd Dawkins' theory is that they were refugees of the time of the English invasion. There is little doubt that the Britons did resort to caves for safety during this event, and there is no reason to doubt that our cave was such a hiding-place when the district fell into the hands of the English after the capture of Chester in 613. But it is quite inconceivable that this episode in the history of the cave was of sufficient duration to have accounted for the remarkable abundance of Romano-British objects and the thickness of the deposit in which they were found. The victorious advent of the invader would cause general consternation throughout the district, and we can well imagine a party of Britons hurrying from Buxton to our cave. If capture meant death or bondage, as popular history represents, their only chance of

ultimate safety lay in getting out of the subjugated region as quickly as possible. Meanwhile a few *might* escape detection for a considerable time, but it is difficult to see how a large party could. Food would have to be sought, and it would be almost impossible to search for it unseen. Under any circumstances the refugees would endeavour to keep their hiding-place as secret as possible. They would not light fires in front of the cave, nor throw rubbish down the slope below. But the strongest argument against the refugee theory as an explanation of all or most of the Romano-British relics is the magnitude of the deposit in which they are diffused. It is quite impossible to conceive that an accumulation spread all over the cave floor, and down the slope in front, and sometimes exceeding two feet in thickness, could have resulted from so transient an event. It seems rather to point to a period of habitation extending over centuries.

It is well known that from the most remote times caves have been used for human habitation; so far, it is not strange that this Deepdale cave should have been utilised for this purpose. But it is curious, and at first sight puzzling, that this use should have been confined wholly, or, at all events, chiefly, to the Roman occupation—a period of orderly government, luxury, and great personal security. Had the relics been as characteristically pre- or post-Roman, it would not have been so surprising. We know that lead mining was carried on in the Peak with great vigour during this occupation, and nothing is more likely than that miners lived in the cave from time to time, or used it as a shelter or storehouse. There is likewise no reason to doubt that during this period, nomads, corresponding to our gypsies, paid it brief but frequent visits. I think, however, another suggestion is well worth keeping in mind. I need hardly remind the reader of the great fondness of the Romans for thermal waters, and that those of Buxton (which we know was a very important station) would make that place a great centre of fashionable resort. An almost continuous stream of wealthy Romans and natives must have traversed the five or six great roads converging on it, one of which passed within a mile and a half of the cave. The Roman hold

upon Britain lasted four centuries, sometimes with a firm, and sometimes with a feeble hand. It would be wonderfully strange if during this long period the country at large, and especially a wild and hilly district like the Peak, were never infested with bands of marauders, who, like the highwaymen of a century ago, plundered travellers. Such a gang of desperadoes preying on the traffic of the Buxton roads would find the Deepdale cave of great service when in the vicinity. We can imagine them returned from one of their looting expeditions, and leisurely examining their booty at the cave. Gold and silver are their prey; all else is discarded. This, perhaps, explains the large number of bronze fibulæ, rings, pendants, etc., found during the excavations.

Such are some of the ways in which the Deepdale cave could have been utilised during the Roman occupation; but I strongly incline to the opinion that most or all of the objects of this period were left by miners. This receives some confirmation from the presence of coal found under conditions which pointed to its introduction in Roman times. The nearest spots where this fuel is found are the millstone grit shales west and south-west of Buxton, and at least three miles away from the cave.* It is not likely that coal would be brought so great a distance merely to warm a cave and cook rude dinners—timber would have answered those purposes far better. On the other hand, it is well known that coal was extensively used in Roman times in the manufacture of lead and other metals. To miners working in the vicinity such a cave would be a boon in many ways—a shelter, a storehouse, and even a dwelling. Its suitability for the storage of coal and ore is obvious enough; and even if coal was not stored there, there is nothing unlikely that coal might be carried there for

* Mr. Salt states that the coal found in the cave is identical with that found in these shales near Buxton. At Thatch Marsh and Axe Edge it forms a seam three or four feet thick, and in the latter hill it was extensively worked until quite recent times, but I am not aware that millstone grit coal is worked now in Derbyshire. In the vicinity of Buxton the seams crop out on the hill and valley sides, and there are abundant evidences that they were extensively quarried in bygone times, probably for smelting purposes. For a note on millstone grit coal, see note in *Notts. and Derbyshire Notes and Queries*, i., p. 5.

domestic purposes from time to time from some neighbouring smelting place.

It was remarked above, that, in consequence of their greater character and number, the Romano-British finds had, so to speak, crowded out of view any earlier or later occupancy of the cave. The relics of pre- and post-Roman times do not, as a rule, tell their own history. A few flint implements and broken flakes and fragments of hand-made pottery were found. These *may* be pre-Roman, or they *may* be British of Roman times. The only safe means of determining the relative age of such objects is to carefully note their stratigraphical position, but so far this cave has not been excavated with that precision which modern science requires.*

* Through an oversight the concluding paragraphs of this paper were appended to another paper, "Romano-British Objects from Deepdale, Autumn, 1891," in last year's volume, the present paper being intended for the same volume, but was held over through want of space.