

Pleistocene Deposits of Derbyshire and its immediate Vicinity.

BY THOMAS HEATH.

PERHAPS those experts who are acquainted with the meaning of the term Pleistocene, or Post-Pliocene, and the Geological period to which it especially refers, will be indulgent enough to bear with me while I very briefly explain it to those who have not made geology one of their special studies, so that they may be better able to follow me in my crude and imperfect remarks upon those Derbyshire remains which belong to this period. The difficulty of making such a technical abstract account of the "dry bones" of these deposits interesting will be obvious.

As far as I am aware this is the period in which the first evidences of man appear; for most of this fauna is "well known to have been contemporaneous with what is known as Palæolithic Man in Europe," a subject which I shall venture to intrude upon the indulgence of the Society on a subsequent occasion.

It is evident that the climatic conditions of that period differed considerably from the present. It covered a long period, in which is included our Glacial and Interglacial deposits. As Geikie says, "It was a period characterised by several extraordinary changes of climate, and certain considerable modifications in the outline of sea and land." This is most obvious, from the fact that among the Pleistocene Mammalia are well-marked Northern and Southern species; and so with the plants, and land and fresh water shells. Plant remains are not often found because of the nature of the alluvial sands,

gravels, or clays, which principally, if not wholly, constitute this deposit, and the proneness of vegetable matter to decomposition. Nevertheless many have been discovered, some of which are arctic plants, while others belong to a temperate, or even torrid zone. The same deposits have contained Mollusca, which it is impossible could have existed side by side. In Tuscany they have yielded an *arbor vitæ*, allied to the common one in our gardens, and the walnut. Also the laurel of the Canary Islands, a variety of our common laurel. Saporta describes this plant as growing on the French shores of the Mediterranean, where the orange is cultivated in the open air; its favourite locality, however, is the Canary Islands, where it flourishes luxuriantly in the woody regions, with a northern exposure, between a height of 1,600 feet and 4,800 feet above the sea—regions which are nearly always enveloped in steaming vapours, and exposed to the heavy rains of winter. Commingled are a number of species of pine, some of which have sought refuge in the Pyrenees, and in the mountainous regions of Central Europe. Remains have also been found of the vine and fig tree. The climate must, therefore, have been more temperate and equable than it has been even this last winter. We have, indeed, the clearest evidence of a genial, humid, and equable temperature at this time. On the other hand, the Pleistocene deposits have yielded the Arctic Willow, such as are natives of Spitzbergen, and high Alpine mosses, which now range north to Lapland and Greenland. The results of the investigations of the Mollusca, by Tournouër, are exactly analogous to those of Count Saporta of the Flora. Such were the climatic alternations of the long periods during which these remains were deposited.*

The first record we have in Derbyshire is in a cave in the Mountain Limestone, at

BALLEYE,

near Wirksworth, in 1663, when some bones and molar teeth of the elephant were found by a miner named George Mower, who

* Geikie's *Prehistoric Europe*, chap. iii. and iv.

left an account of the circumstance, which was preserved by White Watson, of Bakewell.

“An Account how the Giant's Tooth was found.”

“As they was sinking to find lead oar upon a hill att Bawlee, within two miles of Wirksworth, in the Peake, about the year 1663, they came to an open place as large as a great church, found the skeleton of a man standing against the side, rather declining. They gave an account that his braine-pan would have held two strike of corn, and that it was so big they cou'd not get it up the mine they had sunk without breaking it ; being my grandfather, Robert Mower, of Woodseats, in the County of Derby, had a part of the above said mine, they sent him this toothe, with all the tines of it intire, and weighed 4 pound 3 ounce. Within this 35 years, as Alderman Revel, of Chesterfield, and several others now living can justifie, I had the abovesaid account from my father, Robert Mower, and one George Mower, an old man and cousin of mine as near as I can remember.*

“Witness my hand,

“GEORGE MOWER.”

In a lead mine called the

DREAM CAVE,

in the hamlet of Callow, a mile from Wirksworth, some miners, in 1822, engaged in working a lead vein, sank a shaft about 60 feet, when they came to a large cavern filled with loose pebbles, earth, and fragments of limestone, through which they continued boring. As the shaft descended into the rock below, the loose stone and earth began to fall into it. About the middle of this falling mass they found a nearly perfect skeleton of a rhinoceros ; some teeth and bones of a horse, and many entire bones from the legs of an ox ; also many bones of deer, and pieces of horns. They were of a yellowish brown colour. The rhinoceros bones were in a high state of preservation, neither gnawed nor broken. They

* Buckland's *Reliquiæ Diluvianæ*, and *Transactions of the Royal Society*, vol. xxiv.

are now in the Oxford Museum. As the shaft drew off loose materials from the cavern, there was a sinking observed in the field above, D Fig. 1, which was found to be the mouth of a fissure

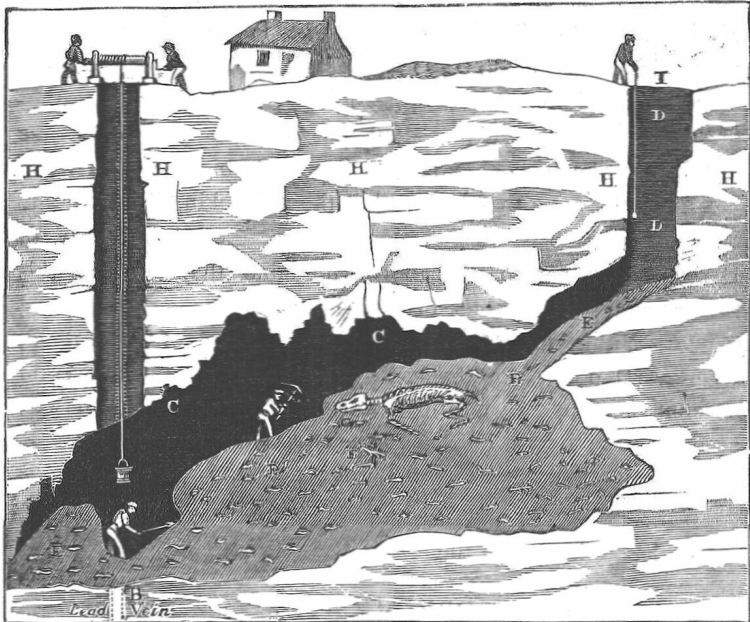


Fig. 1.—Section of the Dream Cave.

(BUCKLAND.)

opening into the cave below, and down which it was apparent the animals had fallen, or been washed by water; which also carried down the earth and stones that subsequently filled the cave.*

The late Mr. Edwin Brown saw in the collection of the late Mr. Carrington, of Wetton, a portion of a mammoth tusk which had been found in 1863 at

WATERHOUSES.

Afterwards Mr. Brockbank and others found in the same fissure a quantity of bones and decayed flakes of teeth, proving that one

* *Reliquie Diluviane*, p. 61.

or more mammoth had fallen into the fissure. On careful examination, Mr. E. Brown discovered that at some very distant period there must have been a swallow hole on the surface of the ground of twenty feet long by ten feet wide, narrowing below to six feet in width, down the sides of which water had trickled and coated them with stalagmite. The fissure was filled up with fragments of limestone from the adjacent rocks, rolled boulders of grit, and other stones from the country to the north and north west, and a red loamy clay, which it seems were washed there by the glacial sea, subsequently to the engulfing of the mammoths, the peculiarities of the ground forbidding the supposition that they could have been carried there by fresh water streams.* *The bones not examined have since been identified as those belonging to the Hippopotamus and Rhinoceros.*

During the latter part of 1864,

THOR'S CAVE

was explored under the supervision of the late Mr. Samuel Carrington. It is about four miles from Ilam, its mouth is in the north face of a cliff of mountain limestone, at a height of some 25 feet above the stream below. The roof is lofty, and groined so as to give it a Gothic appearance, and it is divided as it were into two aisles of buttressed columns. When first entered for the purpose of exploration the floor was of clay or red mud, which rose at the distance of 40 or 50 feet from the entrance to the roof. In this mud were found many tokens of the presence of man, in the shape of ornaments and implements of bronze, iron, bone, stone, and pottery. Beneath the clay was breccia; and under it, in some places, clay again; in this, in a recess at the south side, was found the end of a deer's horn, cut across by some rude implement, and perforated with two holes.† These are now in the Derby Museum.

In the *Philosophical Transactions*, vol. 43, p. 265, is an account of a human skeleton, and some stags' horns found near

* *Transactions of the Midland Scientific Association*, 1864-5, p. 34.

† *Transactions of the Midland Scientific Association*, 1864-5, p. 1-19.

BAKEWELL.

They lay about nine yards deep from the surface ; and above and around the small cavity in which they were found was a mass of rocky petrified substance, or tuft, a yard and a half or more in thickness ; but the bones themselves were not petrified, being mixed with a soft coarse clay or marl. The ribs were much decayed, and the skull crumbled as soon as exposed to the air ; the teeth were sound and retained their enamel.*

In 1832, while draining a bog near

MIDDLETON,

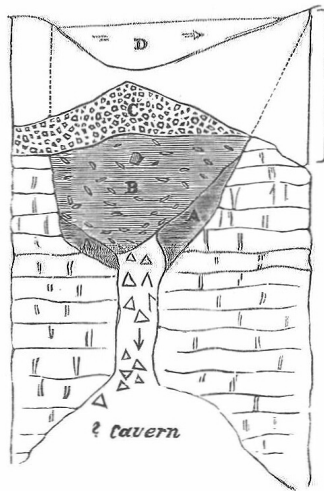
the workmen found many bones of animals, and an entire human skeleton of a young adult female ; the bones were black from the action of the tannin in the peaty soil. The remains, unfortunately, were not preserved.† The late Mr. Thomas Bateman obtained teeth of a large bear from Monsal Dale, near Litton, and the bones of the rhinoceros, horse, and red deer, from Lathkiln Dale. About 1863 Dr. Ransome discovered, in a deep fissure in the magnesian limestone, near Mansfield Woodhouse, the lynx, wolf, bison, reindeer, and roe deer. " Finds " continued to be made, from time to time, in small fissures, river gravel, and drift deposits, of the lower jaw and molar of *Elephas Meridionalis*, in a cutting on the Midland Railway, near Clay Cross ; of milk, molar, and bones of the woolly rhinoceros, bones of bison, carpal of mammoth, and a tooth of a boar at Hartle Dale ; of the reindeer at Bardwell, and the mammoth at Dove Holes. In Cave Dale, immediately under the walls of Peverel Castle, on the south side, were found, besides interesting implements of man, the *Celtic shorthorned ox, goat, red deer, hog, horse, wolf, fox, badger, dog, cat, hare, rabbit, duck, fowl, water rat, and shrew*.‡ In 1874, the same enthusiastic explorer, Mr. Rooke Pennington, B.A., F.G.S., etc., commenced to work out a fissure in

* *Reliquary*, vol. I, 1860-1, p. 227. † *Ibid.* p. 228.

‡ *Pennington's Barrow and Bone Caves of Derbyshire*, p. 87.

WINDY KNOLL

Quarry, near Castleton. This fissure, when traced to the bottom, proved to be a basin filled with clay, small blocks of stone, and the bones of animals. This rock-basin apparently was a swallow hole, which had filled with water and become a pool; and to it, as Prof. B. Dawkins surmises with much probability, vast numbers of animals had gone to drink, especially bison and reindeer, as they made their yearly migration "from the pastures of the valley of Hope, over the Pennine Chain into the plains of Cheshire, the two passes of the Winnetts and Mam Tor converging at that point." Judging by the way in which the bones were found, "with their proper articular surfaces together, . . . and dorsal vertebræ in a continuous chain," it is evident that they had been drowned when crowding together; others, especially the young ones, of which there were large numbers, may have fallen a prey to the carnivora that followed them, as bones of the bear, wolf, and fox are numerous; there were also found a few remains of the hare.



(BOYD DAWKINS.)

Fig. 2.—*East and West Section through Windy Knoll Fissure.*
(Scale 20 feet to 1 inch.)

- (C.) *Clayey débris forming the summit, without bones, and probably rubbish piled up when the quarry close by was worked at that level. 6 feet.*
- (B.) *Yellow clay, with large blocks of limestone, fragments of Yoredale shale washed down from the adjoining heights of Mam Tor, bits of elastic bitumen, or elaterite, and of fluor spar, derived from the deposits of those minerals close by, together with bones of bison, reindeer, wolf, fox, and grisly bear 8 ,,*
- (A.) *Below this a stiff, yellow loam, without any fossil remains, rested on the surface of the limestone.* 4 ,,*

This deposit was probably subsequent to that of Creswell, as no remains of the mammoth or woolly rhinoceros were found, and must, therefore, be referred to the late Pleistocene Age.

With the rival claims for the priority of this important discovery I have nothing to do. It is alleged that it was made by Mr. Rooke Pennington in 1870. If so, it is a great misfortune for science that he was unable to work it out before 1874, since considerable depredations were committed by farmers and quarrymen—by the former, who are stated to have carted the bones away for manure, and by the latter, some of whom informed me they had been in the habit for years of carrying them home for the “owd ’oman to sell ta’te ragman for a pint o’ beer.” It is to be regretted that the peculiar nature of, and interest attached to, these bones were not more fully realised by these people. Whether they were merely duplicates of the remains of similar animals to those subsequently discovered, or whether they might have added considerable and important species to the Fauna of Windy Knoll, is a problem that can never be satisfactorily solved now.

The first intimation the public received of this find was in a paper read on April 28th, 1874, before that remarkably intelligent and impartial Society, locally known as the Manchester Geological Society, by my friend Mr. John Plant, F.G.S., curator of the

* “*Quart. Jour. Geo. Socy.*,” Vol. 33, No. 132, page 725.

Royal Museum, Salford, to whom several students from Owen's College had taken a number of bones for identification, which had been found by them in this fissure during a geological tour, either in the latter part of 1873 or early in 1874. Messrs. Pennington and Dawkins' first paper was read before the Geological Society, at Burlington House, May, 1875. Who first recognised the real scientific value of this important and fertile fissure is mere hypothesis, but to Mr. Plant and the students, undoubtedly, belong whatever honour there may be in being the first to make it known to the scientific world; an honour that is enhanced by their perfect ignorance of Mr. Pennington's alleged previous discovery in 1870.

The next important find was at

CRESWELL CRAGS.

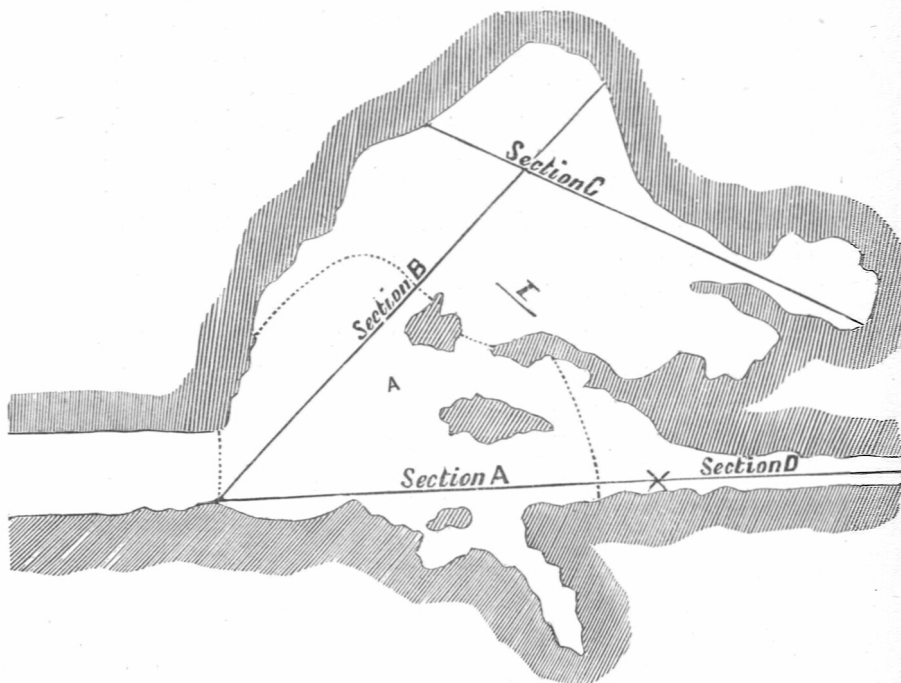
In about 1870 a labourer of the name of Woodhead, of Langwith, found a small mammoth tooth here. It is a beautiful ravine on the north-eastern border of Derbyshire, 9 miles from Mansfield and 6 from Worksop and Shireoaks. At its base is a large fish-pond, which divides the counties of Notts. and Derby; it is supplied by springs rising in the limestone above, and on its surface reflects the beautifully-wooded cliffs, which in some places rise to a height of 60 feet. These cliffs of magnesian limestone of the lower permian have many fissures, in one of which, in 1872, the late Mr. Frank Tebbet found a lower molar of the *rhinoceros tichorhinus*, in the cave now known as the Church Hole. The late Dr. Bergener (of Worksop), Mr. Bailey (of Mansfield), and others made finds here until April, 1875, when the Rev. J. M. Mello visited the caves for the first time. Subsequently, after working four days at the mouth of the Pin Hole, he discovered the remains of the following animals:—

<i>Homo.</i>	<i>Hyæna spelæa.</i>	<i>Rhinoceros tichorhinus.</i>
<i>Ursus sp?</i>	<i>Cervus megaceros.</i>	<i>Elephas primigenius.</i>
<i>Gulo luscus.</i>	— <i>tarandus.</i>	<i>Lepus timidus.</i>
<i>Canis Vulpes.</i>	<i>Ovis.</i>	<i>Arvicola,</i>
— <i>lupus.</i>	<i>Bos primigenius.</i>	<i>A bird sp?</i>
— <i>lagopus.</i>	<i>Equus caballus.</i>	<i>Fish sp?*</i>

* *Quat. Jour. Geo. Socty.*, Vol. 31, No. 124, p. 683.

Early in the following July, I began to assist Mr. Mello. After working out the Pin Hole, we began in what is called Robin Hood's Cave.

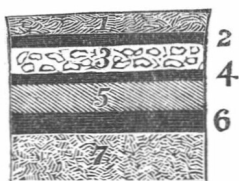
Fig. 3.



First, large blocks of limestone were removed from the mouth of the cave, then a section cut across down to the floor; for some little distance this averaged about 2 feet, then run out. So far there were no native layers. It produced rhinoceros bones, one jaw, four canines of hyæna, a human incisor, broken fragments of Roman pottery, and numerous remains of recent animals. After removing a large block of limestone from the east side, there appeared a fissure, in which was a layer of cave-earth containing the lower jaw, tarsus, metacarpal and humerus, and other fragments of the Irish elk; there was no trace of gnawing on these bones. Returning to the point where the section ran out,

there was a sudden dip in the floor, and rise in the surface soil along both sections A and B in Fig. 3; also a thick layer of stalagmite, which encrusted the whole of the west side for about 30 feet, and was from 12 to 30 inches in thickness. Under this was a thick bed of breccia. About four feet from this point was a thin layer of stalagmite, averaging from one to three inches in thickness; this overlay a thin bed of cave earth which gradually increased. About three feet further it was covered with another thin layer of stalagmite, much more irregular in thickness than the one above. This covered a thin layer of red clayey sand. A beautiful escarpment was thus laid bare in the following layers, 25 feet from the entrance, about letter A in Fig. 3.

Fig. 4.



1. Surface soil.
2. Stalagmite.
3. Breccia.
4. Stalagmite.
5. Cave earth.
6. Stalagmite.
7. Red sand.

In the surface soil were fragments of Roman pottery and Samian ware, some beautiful enamelled fibula brooches, a small gnawing tool, a rudely-carved bone ornament, and a long amber bead; in this layer were also found remains of the following animals:—

Wild Cat (*Felis catus*).

Bos longifrons.

Marten (*Mustela martes*).

Sheep or goat.

Meles taxus.

Horse (*Equus caballus*).

Dog (*Canis familiares*).

Hog (*Sus scrofa*).

Fox (*C lupus*).

Hare (*Lepus timidus*).

Red-deer (*Cerus elaphus*)

Rabbit (*L cuniculus*).

The stalagmite of the top layer (which in one place reached the stalactite, and joined the whole to the roof—A Fig. 3) had percolated through the crevasses in the breccia, and cemented it into a solid mass. It was very prolific in flint flakes and chips, with several cores; also some interesting flint and quartzite

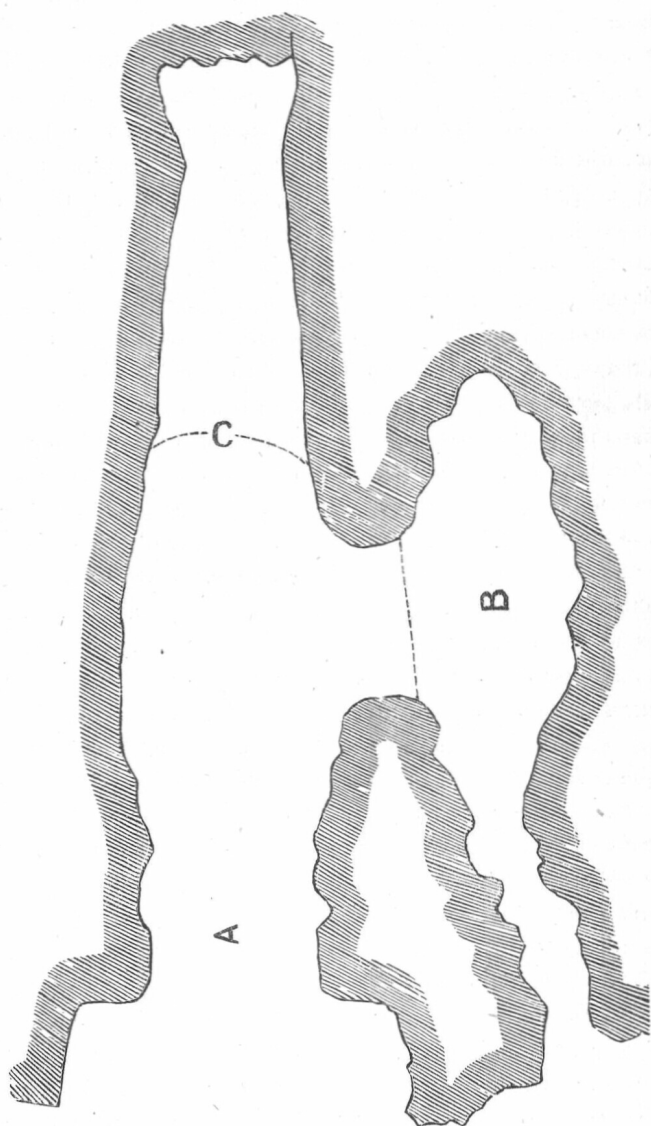
implements were found, several being of superior workmanship; also numerous teeth and fragments of bones of the hyæna, rhinoceros, and reindeer. The cave earth was the most productive of remains of both Pleistocene Mammalia and man. No species were found in the caves that did not also occur in this formation, some in great abundance, such as horse teeth, teeth and jaws (some very perfect) of the hyæna, teeth and gnawed bones of the *Rhinoceros tichorhinus*, bones and teeth of the reindeer, a jaw and several teeth of the Irish elk, and some teeth of the cave lion, bear, and wolf. There were implements of quartzite and ironstone, some of considerable finish; some resembling the "Choppers of Le Moustier, Le Madelaine, and of the British river gravels;" others like those at St. Acheul. The red sand contained comparatively few bones, and those, as a rule, very fragile—some being so far decomposed as to crumble as soon as touched. Intermingled with it were large patches of tough laminated clay, the sand around which contained much more moisture. Here the bones were in the best condition, and generally perfectly black, the most fragile being in the driest places. In this bed I found three milk molars of *Elephas primigenius*, several very perfect lower jaws of the hyæna: the most numerous were the bones of the rhinoceros, all gnawed down to one pattern, and the marrow portions scooped out at both ends. The teeth of the latter, as also those of the horse, were promiscuously scattered throughout the whole of this formation. Teeth and fragments of antlers of the reindeer were also found, and one molar of the bison. Some rude quartzite implements were found as well.

It will thus be seen that in this interesting series we have seven distinct periods, which illustrate the gradual development from the rudely-wrought implements of the first Palæolithic hunter to the artistic relics of the British-Welsh refugees. Thus, the red sand containing the rude quartzite implements was intermingled with the remains of the rhinoceros, mammoth, and other extinct animals. Then a layer of stalagmite, during the formation of which the cave was evidently uninhabited. Next the cave earth,

in which we find quartzite implements of superior workmanship to those in the layer below, and some very good implements of wrought clay ironstone. Flint chips and fine flakes begin to appear in all stages of wear. These are again intermingled with a similar fauna to the one in the layer below. The reindeer, which had been scarce, here becomes numerous; the bison and Irish elk also begin to increase; the cave lion, bear, and wolf appear for the first time. Then the second stalagmatic formation, representing another passive period, when the caves were again deserted. We then come to the breccia, and find flint instruments of a still higher order; and quartzite implements, similar to those found in the layer below, begin here to die out. These are again intermingled with a similar fauna. We have then another long period of repose during the formation of the top stalagmite, which in some places is of considerable thickness, and upon which is a superficial layer of surface soil, which produced a harp-shaped Romano-British brooch, richly enamelled; a flat lamina of bronze, pierced at one end; a carved head of the femur of the horse or ox, for the boss of the hilt of a sword or dagger; fragments of Samian ware and Roman pottery, and a few human remains. These bring the history of the inhabitants of these caves up to what is known as the Historic Age, the whole representing a period of time whose length it would be unwise to conjecture. From some fragments of pottery found, in which were embedded fragments of limestone, Professor Boyd Dawkins considers they "may imply that the cave was used as a shelter by Neolithic tribes as well as by Palæolithic hunters and Romano-British refugees."

The entrance to the Church Hole Cave (Fig. 5) had evidently been used at a very recent period either as a stable or cowhouse, the breccia and cave earth being mixed with straw and litter. About twelve feet from the entrance was discovered the largest molar of the *Elephas primigenius* found in the caves. It was eleven inches in width, by nine inches in height. It is now in the Derby Museum. Near this were three molars of the mammoth, and three bone needles. Chamber B had previously been

Fig 5.



disturbed in three places. From the entrance there was a sudden dip of the richest bed of cave earth we worked. In the centre, about 18 inches from the surface, it was one mass of the remains of rhinoceros, reindeer, horse, mammoth, and a few of the bear, wolf, and bison. All the bones were very much gnawed. Out of over a cart-load (the result of one day's work) there were only four whole ones—*i.e.*, two phalanges, one tarsus, and one metacarpal. The rhinoceros bones were in large numbers, and were gnawed down to the well-known pattern. There were also a large number of the teeth and fragments of the antlers of the reindeer. Though more remains of the mammoth were found here than anywhere else, we did not find an adult. Plates and fragments of the milk molars were found in profusion, and also several whole milk teeth, and part of a tusk, too fragile to secure whole. The jaws and teeth of the hyæna were found in the greatest profusion. Working from the middle of this chamber, the cave earth became cemented into a tough, stubborn breccia, which gradually ran out to the front, but at the back into a deep, narrow fissure. After working through about five feet of breccia, which was quite as prolific as the other part of the cave, we penetrated the fissure at the back for about six feet, coming upon a bed of red sand, amongst which very few remains were found. In all, I could determine the remains of 116 different animals, the result of this day's work; of this number, no less than 72 were hyæna. It is evident from the immense number and gnawed condition of the bones, and the large quantity of jaws and teeth of the hyæna, *minus* any bones of this animal, that this chamber was once the lair of the hyæna, advantage being taken of the privacy afforded to place the prey where it could be devoured at leisure. We did not find the least trace of implements or any remains of man, so that we may reasonably conclude that the occupants of this chamber were too persistent and demonstrative to permit their privacy to be even temporarily invaded by the Palæolithic hunter, as their roving contemporaries across the river had evidently done. Next day I finished this chamber, with the exception of a thick breccia adhering to the wall at the latter part of the cave.

Although Chamber C was worked out to the extreme end, nothing more of additional interest was discovered.*

In November, 1878, the cave called Mother Grundy's Parlour was explored, under the supervision of Mr. Knight, of Owen's College. It had previously been disturbed by a Creswell man, whose wife is said to have dreamt that treasure was hidden there. Below the surface soil was light red cave-earth, which contained the remains of bison, reindeer, bear, wolf, fox, and hyæna; also a few rudely chipped quartzite pebbles, and other Palæolithic implements. Beneath this were red clay and ferruginous sand, which overlay the lowest strata of white sand. In the ferruginous sand were found the remains of fauna hitherto undiscovered in these caves, namely, "fragments of the skull and other bones of hippopotamus, and teeth of *rhinoceros leptorhinus* of Owen, along with numerous skulls and jaws of hyæna, and some remains of bison." The hippopotamus skull was broken probably in the previous digging. The red clay was very stiff, and contained the remains of hyæna, bison, hippopotamus, and *rhinoceros leptorhinus*. At the far end of the cave there were blocks of limestone in the clay, and bones of bison wedged in between them. It will thus be seen that in the red clay and ferruginous sand were found the hippopotamus and leptorhine rhinoceros, the hyæna and bison, but no trace of man, the reindeer, or horse. In the red sand above these were the mammoth, woolly rhinoceros, horse, reindeer, hyæna, and implements of Palæolithic man.† The importance of the discoveries at Creswell Caves can only be considered second in importance in England, and is due chiefly to the energy and enterprise of the Rev. J. M. Mello. The annexed table will show them to have been the most fertile by far in the county:—

* *Quat. Geo. Jour. Soc.*, Vols. 31, 32, 33; Nos. 124, 127, 131; pp. 679, 240, and 579; and *Heath's Bone Caves of Creswell*, and *Creswell Caves*, v. *Prof. Boyd Dawkins*.

† *Quat. Geo. Jour. Soc.*, Vol. 35; Nos. 140, 724.

TABLE SHOWING DISTRIBUTION OF PLEISTOCENE ANIMALS IN DERBYSHIRE.

The mark + shows the locality in which each animal has been found.

	Bakewell	Bardwell.	Castleton.	Clay Cross.	Creswell.	Dove Holes.	Lathkiln Dale	Middleton.	Monsal Dale.	Pleasley.	Thor's Cave.	Waterhouses.	Wirksworth.
Man	+	+			+			+			+		
Bat			+										
Cave Lion (<i>Felis spelæa</i>)					+								
Leopard (<i>Felis pardis</i>)					+								
Lynx (<i>Felis lynx</i>)										+			
Wild Cat (<i>Felis catus</i>)			+		+								
Hyæna (<i>Hyæna spelæa</i>)					+								
Wolf (<i>Canis lupus</i>)			+		+					+		+	
Fox (<i>Canis vulpes</i>)			+		+								
Arctic Fox (<i>Canis lagopus</i>)					+								
Glutton (<i>Gulo luscus</i>)					+								
Brown Bear (<i>Ursus arctos</i>)					+			+					
Grizzly „ (<i>Ursus ferox</i>)			+		+								
Shrew ?			+										
Water Vole (<i>Arvicola amphibius</i>)			+		+								
Mammoth (<i>Elephas primigenius</i>)	+	+			+	+						+	+
Elephant (<i>Elephas meridionalis</i>)				+									
Rhinoceros (<i>R. tichorhinus</i>)	+	+			+	+						+	+
„ (<i>R. leptorhinus</i>)					+								
Horse (<i>Equus caballus</i>)			+		+	+						+	+
„ (<i>E. fossilis</i> ?)					+								
Hippopotamus (<i>H. major</i>)					+							+	
Wild Boar (<i>Sus scrofa</i>)			+		+	+							
Reindeer (<i>Cervus terandus</i>)		+	+		+				+			+	
Bison (<i>B. priscus</i>)			+		+				+			+	+
Irish Elk (<i>Cervus megaceros</i>)					+								
Red Deer (<i>C. elephus</i>)			+		+	+			+	+	+	+	+
Roe Deer (<i>C. capreolus</i>)			+						+				

I have deliberately omitted *Machairodies latideus*, because of the impossibility of its really belonging to the Creswell fauna, as stated by Prof. B. Dawkins,* since the reasons there adduced have been sufficient to justify Dr. Geikie in omitting it from his work, *Prehistoric Europe*.

* Heath's *Creswell Bone Caves*, and *Creswell v. Prof. B. Dawkins*.