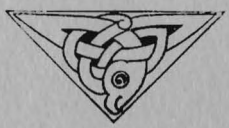
THE DESMOND CAVE
AT MITCHELSTOWN

by

D. J. GARGAN, B.A., B.A.I.



THE DESMOND CAVE
AT MITCHELSTOWN

by

D. J. GARGAN, B.A., B.A.I.

AT THE SIGN OF THE THREE CANDLES
FLEET STREET, DUBLIN
1939

MITCHELSTOWN CAVES

THOUGH PUBLIC INTEREST in the wonderful natural phenomena known as the " Mitchelstown Caves " has never really died out, it has nevertheless flagged to a certain extent, particularly among explorers as opposed to mere sightseers, and it is in the hope of reviving real interest in them that this little work has been undertaken. There can be no doubt that, if the existence of the caves was better known and if their ramifications and mysteries were more generally explored, a far greater number would be tempted to visit them for the scientific interests they hold and the natural wonder they undoubtedly are, in addition to tourists who simply want to say they have been " down the caves."

Location

Sandwiched between two great Sandstone Ranges of the Galtee and Knockmealdown Mountains is a narrow strip of carboniferous limestone. This belt is a part of the limestone which forms the great Central Plain of Ireland, and connects the latter with the valley of the Blackwater. Approximately central in this belt are two low hills having an elevation above sea level of about 400 feet, and it is under these two hills, seperated by less than a quarter of a mile, that the two " Mitchelstown Caves " are situated. The actual location is about two miles from the Cahir-Mitchelstown road, in the townland of Coolnagarranroe. It must be clearly understood that there are two distinct caves, known locally as the "New" and the "Old," and they occupy positions, respectively about half way up the northern side of each of the two small hills already mentioned. These two caves are quite distinct, and, at any rate up to the time of writing, no underground connection between them has been discovered. The New Cave is in the hands of a regular keeper, who acts as guide, and is the only one who has any interest in it; whilst the man under whose land the " Old Cave " is situated takes no interest in it whatever.

The "Old" and the "New"

The two caves differ in many respects; the New Cave is entered directly through a stout wooden door, while the Old requires careful manipulation of a twenty-foot ladder. As the New Cave has been very completely explored and surveyed by Messrs. Hill, Brodrick, Rule, Praeger, Baker, etc., of the Yorkshire Ramblers' Club, and as their findings have been made available in published form, I do not intend going into an extensive description of it. The Old Cave is my chief concern, and a visit to it is of far greater interest to the genuine caveman and explorer—firstly, because of its historic connections; secondly, because of the formidable way in which it guards its hidden treasures and seems to repulse the visitor; thirdly, because unquestionably it is not yet "known" in the true sense.

There are, however, some features common to both which it will be well to examine before proceeding to an individual account. Caves such as these are fairly common in limestone districts; there are numerous fine ones in County Clare and South County Galway, and in other parts of Ireland, as well as the more generally known Potholes of Yorkshire and other caves in the Mendip region of England. These have been extensively explored, and anyone interested in accounts of cave exploration is recommended to invest in a book by Dr. E. A. Baker, entitled *Caving*, which gives details of numerous adventures and exploits in the "underworld," and which deals with caves all over Europe. A very interesting chapter is devoted to Irish Caves, in which our friends, the subjects of these notes, get particular mention, and very favourable comment from this well-known caveman.

The Mitchelstown Caves also get a show in another book by the same author—the *Netherworld of Mendip*.

For the most part, limestone caves are formed by the erosive action of running water and, to a certain extent, by the corrosive action of the chemicals in suspension in it. The stalactites which depend from the ceiling or roof of the caves are also due to water which, in the cave, filters through cracks overhead.

For the benefit of those chemically minded or otherwise interested, the formation of stalactite or dripstone is briefly as follows: Limestone is impure calcium carbonate ($CaCO_3$),

which material is insoluble in pure water, but will dissolve readily in water containing carbon dioxide (CO_2), giving soluble bicarbonate of calcium, a salt which is unstable in air. Now, rain water normally contains a considerable quantity of carbon dioxide, and hence, as it percolates through limestone, it becomes highly charged with calcium bicarbonate in solution. Such water drips from the cave roof into the atmosphere of the cave, when evaporation occurs, and this causes the concentration of the solution, which leads to the escape of carbon dioxide and the breakdown of the bicarbonate, leaving insoluble calcium carbonate, which is deposited, in crystaline form, as stalactites, etc. Chemically, the process is what is known as a reversible reaction, and can be represented by an equation in which the direction of the reaction is determined by the addition or subtraction of carbon dioxide and water. Equation : $CaCO_3+CO_2+H_2O=Ca(HCO_3)_2$.

In some places the drops, falling on the floor of the caves, deposit further calcareous material, and a stalagmite is formed. The stalactite, therefore, grows downwards and the stalagmite upwards, and there are countless instances where these two have met, forming pillars of surprising beauty of outline and texture.

Another form of this dripstone deposit seen to great advantage in the caves under discussion is observed when the material occurs in the shape of thin curtains, seldom as much as one inch in thickness, and exhibiting folds and lines bearing a striking resemblance to drapery. On holding a good light behind these all kinds of "veins and arteries" are seen in the material, which form many patterns and have tones of great beauty. There is yet another form of calcareous deposit which we call "cauliflower," from its obvious resemblance to that vegetable, and this is caused by the water which deposits it splashing over the edges of some pool or stream. It is difficult, however, to enumerate the countless different effects produced by this truly natural process, and to be properly appreciated they must be seen in situ.

The Old or Desmond Cave

The existence of this cave has been known for hundreds of years, and it has been actually connected with historical events on a couple of occasions. The earliest reference to it is as a

cave near the Galtee Mountains, which in 1601 formed the hiding place of one of the Earls of Desmond, known as the "Sugan Earl" (Sugan pronounced "Sugawn," meaning a straw rope, such as is used for securing hay-cocks, etc.). The unfortunate Earl was enticed out of its safe depths by his kinsman, the White Knight, who handed him over to the authorities and received the sum of £1,000 for his not very nepotic services. It is also reputed to have been used as a place of refuge by contestants in the '98 Rebellion, and even in more modern times during the recent "troubles." It is interesting to note in connection with these historical references that on the walls of the main passage, amongst the hundreds of names and dates scraped in the stone, are the dates "1601," and "I.R.A. 1918," but no 1798 inscription. The signature coupled with the date 1601 is unfortunately indecipherable. This rather significant date has not been noticed by anyone else. The signature of Arthur Young is also in this passage, as is this descriptive piece of work :

"Charles Burton, Captain in 4th Brigade of Light Dragoons, March 4th, 1767."

However, it has a certain claim to historic fame if only from the well authenticated story of the Sugan Earl, and it is by virtue of this incident that it came to be known as the Desmond Cave. Prior to this it was called Oonacaragreisha—the "Cave of the Grey Sheep"—after a local legend in which a sheep was said to have suddenly appeared from nowhere on the lands of a nearby farmer and to have disappeared under equally mysterious circumstances, presumably into the cave, on the killing of one of her offspring by the farmer. This, however, is legend, and we must return to fact.

The cave was first brought to the public notice by a visit from Arthur Young, who incorporated a short account of is in his well-known book *A Tour in Ireland*. It seems obvious that Young made a pretty good examination of it, as his name, together with the date 1778, appears at the end of one of the lesser known galleries. It seems that this was the only visit of note until the early years of this century, when exploration of its secrets was undertaken in a more or less determined manner. At any rate no record of visits, or of

accounts in writing, have been turned up in a pretty extensive search. During the potato famine in Ireland, however, in the middle of the nineteenth century, it was undoubtedly visited by the despoiler in the persons of the starving peasantry, who denuded it of all the stalactites of note in the more accessible places and sold them to buy food. Several of these magnificent specimens can still be seen in the grounds of Mitchelstown Castle, and their sawn-off stumps can be seen in many places in the caves. From the point of view of serious exploration, the first attempt may be said to have been that of Messrs. Brodrick, Hill and Rule in September 1908. These men were experienced cavemen and members of the well-known Yorkshire Ramblers' Club, and they produced a very good map of the main passages and galleries visited by them. They also produced a monograph on the caves and gave a complete account of their findings, together with their work in the New Cave. They seem to have spent the majority of their time in the latter, and made a very complete survey of it, with the result that they never really explored the Old Cave thoroughly.

Following on this came two (or more) visits of exploration by the late Mr. R. W. Evans of Doneraile—the first in December, 1909, and the second in September, 1910. Evans had been down with Brodrick's party in 1908, and had evidently been convinced of the existence of certain great fissures and openings which apparently had not been spotted by Brodrick's party. It was with a view to making sure of these that Evans made his visits, and on each succeeded in breaking new ground. In 1909 the party, consisting of Messrs. Evans, Cole-Bowen and Webber, found a passage, opening from the boulder slope, just inside the arched entry, to the main passage, and running in a northerly direction, and this, because of its position and direction, they took to be the gallery mentioned by Arthur Young. (This conjecture was wrong, as was afterwards proved conclusively by Evans). They also satisfied themselves as to the existence of a great fissure running from about the centre of the clay slope in the Great Eastern Chamber, but were deterred from following up the discovery by the treacherous nature of the bed and lack of tackle. Alongside of this fissure they also noted a lesser one, and seemed satisfied that there were others that would bear

investigation. They then proceeded to the Great Western Chamber, where it seems obvious they discovered no new openings, and it was not until they were returning through the main passage that they hit upon the passage running north, already alluded to.

In the 1910 visit Evans was accompanied by Messrs. W. Percival and J. W. Puttrell—their idea being to confirm the discoveries of the previous December, and this they succeeded in doing. Evans was quite satisfied about their discoveries, and has left rough maps in which the passages have been pencilled on plans already known. In addition to exploring several minor fissures opening from the Great East Chamber, they proceeded " about 110 yards " along a passage running north from the latter, and on the wall at the end found the signature of A. Young, together with the date 1778, as already noted.

Evans had doubts about this signature, but succeeded in unearthing a facsimile from a lady who had a collection of the works of Arthur Young, and the result on comparison was conclusive. This, then, is the gallery mentioned in *A Tour in Ireland*, and will henceforth be referred to as Young's Gallery. The party also found an amazing stalactitic formation, to which they gave the name the " Stone Shawl." Evans refers to this as " probably the most remarkable formation of stalactite known in the world." There will be more of this later in my own account, but Evans and party were the first to locate it, and must get the credit of the discovery. It is situated in a passage beyond the G.W. Chamber, of which more anon.

That was the extent of these two parties' explorations, and at the end of his notes Evans, who undoubtedly knew the cave better than any man then living, said : " The cave is yet far from being thoroughly explored." This was in 1910, and though he made several subsequent visits, in one of which he mentions briefly a south-western passage from the Great Western Chamber, he apparently made no startling new discoveries. I was in touch with him by letter shortly before he died, and we were to explore together, but unfortunately his death robbed me of the chance of visiting the cave in his company and profiting by his knowledge, which would have made my own subsequent visits far easier.

Evans took a genuine interest in this cave, and consistently sought to bring it to the notice of an unappreciative public, and it seems only right that some part of the magnificent ramifications should bear his name. This has been assured, and to the fissure containing the wonderful " Stone Shawl," which he discovered, I will henceforth refer as Evans' Gallery.

Since writing the above I have been in touch with Mr. H. Brodrick, and have received from him a copy of his plan of 1910, when he again visited the cave. This plan includes the North Passage up to the point at which we broke through to the Gong Cave in November 1937. Two other members of the Yorkshire Ramblers' Club visited the cave in 1911, viz. Messrs. E. A. Baker and H. E. Kentish. Contrary to the usual procedure, they entered the cave by means of a single rope. The descent was not so bad, but the ascent must have been a very difficult proposition, Kentish being at that time new to cave work. Baker, however, seems to have made short work of the climb, single handed, and was able from the top to help his partner up. This expedition was undertaken for purposes of photography, and some of the photographs reproduced in Baker's book, *Caving*, are masterpieces of underground camera work. Baker also alludes to a series of sloping corridors beyond and parallel to the end wall of the Great Eastern Chamber, but reported that none of these seemed to lead very far.

It was with a view to rediscovering the various openings referred to by Evans, and as far as possible accurately measuring their lengths and plotting their positions, that my own journeys to the cave were made. Young's Gallery and several of the passages off the Great Western Chamber had not been previously surveyed.

My first two visits were in 1932 and 1934, each with the primary object of visiting and becoming acquainted with the main passages and chambers. On each occasion I was more or less tied for time, and, beyond taking some photographs and a few of the main bearings, made no further progress. On these two visits I was unaided by a knowledge of Evans's works and discoveries, but, together with a friend who completed the party, succeeded in finding the passage running north from the bottom of the boulder stope near the entrance.

Our second visit also was characterised by a rather unsavoury incident which had the unfortunate effect of considerably dampening our exploratory ardour. We arrived at the cave on a pouring wet day, having transported our impedimenta, including a twenty-foot wooden ladder, across three dripping fields, only to find the entrance to the cave effectively blocked by the hind quarters of a horse—the remainder of the animal was suspended head downwards inside the cave, and the corpse, for corpse it undoubtedly was, seemed well and truly jammed in position. We had driven from Dublin for the expedition, and, furthermore, had got very wet crossing those fields, and somehow felt disinclined to turn round and go back without even having reached our objective. Entry, on the other hand, was quite impossible while the animal was there, and thus we found ourselves faced with only two courses—one, to pull the horse out, and, two, to push the horse in! The latter seemed the most likely expedient, so, using the ladder as a species of battering-ram and the natural slope of the ground to give impetus to its purpose, we charged the animal and succeeded in scoring a direct hit first time. He " folded up " and fell to the boulder-strewn slope twenty feet below with a sickening thud and clatter. We then placed our ladder in position, lowered our gear and followed him down. It is perhaps as well to " draw the veil " over the sight below. Suffice it to say that we went down that ladder through incredible numbers of " bluebottles " and that we found the base of the ladder safely planted in what was left of the horse. He was very dead—subsequent investigation unearthing the information that he had been so for over two months, his owner thinking it easier to push him into the cave than dig him a decent grave. Surely the name "Horses' Cave " should be added to the many others by which this famous spot has been known! At any rate, the incident cast a slight gloom over our explorations. The great chambers, the clear water and the wonderful stalactites, in turn, seemed pervaded with an aura of dead horse, and I think that, on that day at any rate, we were glad to come up in the evening and have a quiet smoke before returning to Dublin.

My first serious visit of exploration was in October, 1938, when I visited the cave with a friend and an assistant, who

rendered yeoman service in the matter of transporting ladders, baggage, etc. We spent five and a half hours on a Saturday, and six and a half hours on the following Sunday, in examining the cave in general and in exploring the galleries and passages mentioned by Evans. We also made a detailed survey of the north passage and its position relative to the entrance fissure, with a view to future mapping. This and subsequent visits managed to complete the survey of the whole cave, and the map as frontispiece is the result of our labours. It must be understood that underground mapping is a difficult job to do with any accuracy when time is limited ; but, in spite of the fact that our visits, for various reasons, were confined to alternate week-ends at the worst time of the year, this map, particularly regarding positions and bearings of passages, is very exact, and has been checked time and again and where possible compared with Brodrick's survey. Many of the boundaries of the large chambers are inaccessible in places, and have to be interpolated, but in no instance are they at fault by more than a few feet. Mapping in the eastern chamber was a trying piece of work owing to the treacherous nature of the clay surface, and some of the smaller loop-ways or by-passages are only accurate as to their entrances and exits to main passages and chambers. It is quite impossible to follow all these with instruments and tapes owing to their size, and, unless they were of importance, they were only measured approximately. In the next pages it will help the reader to better understand the direction taken, etc., if the plan is referred to on and off.

The Entrance Fissure

The entrance is situated roughly half up a main joint fissure. This fissure is very narrow—it varies almost throughout from about two feet at the entrance to ten feet near its southern extremity. On the surface of the hill this fissure widens out in a northern direction, and is surrounded by low bushes. For getting into the cave it is necessary to have a ladder twenty feet long, preferably a wooden one, as there is a vertical drop of this amount from the entry to the floor of the fissure. Getting this ladder in position and making the first few descents is the most tricky part of the undertaking, but, after a few visits, becomes quite an easy matter. On arriving at the base

of the ladder, the floor of the cave is found to be covered with loose boulders and to slope downwards at 30-35 degrees. A glance at the section will show that this slope continues for about 60 feet, and then rises again for a few feet, until there is a vertical drop of 14 feet; fifty feet further on is the end of this fissure. In proceeding from the ladder along the cave two openings will be noticed on the eastern wall—one at 35 feet, the other 105 feet from the starting point. The first is easiest located—a low arch rises about 3 feet from the boulders, and is the usual entrance to the main passage; the other also leads to the main passage, but is more difficult to find, as well as being more difficult of access. Apart from these, the entrance fissure is uninteresting, except perhaps for its immense height. This is variable, of course, but must be quite 80 feet at the highest points. Passing through the low arch, mentioned above, one is situated on the apex of a cone of boulders exactly the same as those in the entrance cave—straight ahead the bottom of the cone is formed by the eastern wall of the cave—about 12 feet away; the left-hand of northern side of the cone slopes down to a narrow triangular opening which is 3 feet high and 18 inches wide at the bottom. This is the entrance to the north passage, which we will proceed to examine first. It is an uninteresting cave, from the point of view of stalactitic formations, which are conspicuous by their absence —most of its windings and all its large chambers are composed of boulders; some of enormous size, weighing up to two or three hundred tons; many of them balanced in the most precarious way, and seemingly ready to topple over at a touch. It is quite obvious to the observant that this part of the cave system has suffered collapse. Its roof has fallen in, and its original form can only be guessed at.

The North Passage

Passing through the low triangular entrance, the passage runs in the usual north and south direction for about 60 feet, where it ends. To get to the main north passage, one turns to the left, half way along this, and a long parallel passage is found. This is a continuation of the main joint fissure, which forms the entrance to the cave, as will be obvious from the plans. It will be seen that the base of the ladder

is actually situated over the cave in which we are now standing. We can proceed along this passage for 70 feet on a level bottom, and then the first and largest of the northern chambers is reached. This chamber has four main exits, apart from the one we have come along, but two of these have been blocked by falls of stone. The main passage is in the north-west corner, and there is another exit in the north-east corner which, however, only leads to a difficult loop-line back to the main passage. This again can best be seen on the plan. From this chamber onwards there is nothing of interest until the end is reached : we arrive at a point where further progress is impeded by fallen blocks ; the cave undoubtedly goes further ; this can be seen by directing the beam of a good torch through an opening when a passage can be discerned running north. A very slight man could perhaps squeeze through, but would run the risk of being unable to get back ; we decided to see what a couple of crowbars could do towards opening it up, as it would be certainly new ground. There is nothing else of much interest to the visitor in the north passage.

Since writing the above, we have succeeded in making an entry beyond the point mentioned as the furthest reached in the north passage. New ground it undoubtedly was, but it did not fulfil the promise of our first view of it by torch, while it was apparently inaccessible. We had decided we would find a really new cave running an enormous distance and with magnificent stalactites. In actual fact the distance travelled after leaving the previous " end " of the north passage only totals 40 feet, and there is only one stalactite of note. This is in the form of a small curtain depending from the sloping roof, its end making contact with a small pillar about 12 in. high. This curtain gives a beautiful gong-like note when struck with a piece of stone (or, more usually, the human head), and because of this we called this small extension the " Gong Cave." The opening we made is about six feet over the level of the end of the north passage, and, on getting through this cave, runs west for nine or ten feet, when it opens out a little and the main run becomes north—only for a short distance, however, for at the end of this small cave the ground slopes up steeply in the form of a chimney, and at the point where it is blocked is only about six feet

beneath the surface of the field overhead. There is a small vertical opening in this chimney, and a stone dropped into it could be heard crashing downwards for about 15 or 20 feet. No human entry, however, was possible. The southern and western branches of this cave are short and difficult, and apparently offer no particular attraction to the explorer. So much then for the northern passage, which surely comes to an end at the chimney in the " Gong Cave." The top of this chimney comes out under the level field at the base of the hill in which the cave is situated, and this point is 46 feet below the level of the bottom of the ladder, and only 6 feet under the surface of the field.

NOTE.—*These levels are only correct to the nearest foot or so. Really accurate levelling is not possible in this cave without special instruments.*

The Main Passage

We will work back to the boulder cone and proceed towards the main cave leading to the great Eastern and Western Chambers. On passing through the triangular opening, there is a passage on the left which forms the loop-line to the main passage. It is of no particular interest, and connects with the main passage further south, as can be seen from the plan. Arriving on top of the boulder cone, a large exit can be seen to the south-east, and this is our route. This is the longest side of the cone, and for about 40 feet we have rough going on the boulders, which are loose and inclined to roll down the slope. On reaching the bottom, the cave opens out a little, and is piled with enormous blocks of stone very similar to those in the chamber in the north passage. These continue for a distance of about 45 feet, when we find ourselves in the main passage. This is the only piece of really easy going in the whole Desmond Cave. The floor is formed of compact clay, and runs practically level for its full length of 260 feet. The arched roof is very similar to a church aisle. There are a few loop-lines off this main passage, some of which are quite interesting, but very difficult to travel. One of these is on the right side of our route, about 10 feet down from the top of the boulder slope. It is quite short, very winding, and has to be wriggled through on the stomach for most

of its length, but the walls are a beautiful white colour, and several of its small swellings are perfect little grottoes. This loop eventually joins the main passage again 35 feet further on. There are literally dozens of these small winding passages at all parts of the cave. I have not shown them on the map, as they would make it unnecessarily complicated, and in any case are not likely to prove very entertaining to the average visitor, but an explorer, should he feel inclined, can have quite good fun trying them out. There is one other branch or loopway near the end of the main passage which perhaps deserves mention. It opens on the east side of the passage, just at the place where the latter widens out to form a spacious chamber, and connects with the passage to the East Chamber. Its chief course is shown on the plan. It is a muddy and dirty place for the most part, and very tricky going owing to numerous vertical "burrows" of 15 to 25 feet in depth, but it widens out near its exit into a perfect little grotto, white inside and draped all over with dripstone curtains. One of these, which had apparently been broken away by previous explorers, appears to have quite closed the passage at one time. This loop is best entered from the end next the East Chamber. To get back again to our examination of the main passage: as mentioned above, about 15 feet beyond this entry to the loop, the cave widens out into a lofty chamber perhaps fifty to sixty feet in height, the floor covered with huge angular lumps of rock and the walls showing signs of having once contained very fine stalactites now only stumps. High up in the south-west corner a small opening will be seen, and this leads to the West Chamber. It is difficult of access from this side, but can be approached from the West Chamber, and is worth it, because of the impressive bird's eye view one can get from its lofty position of the chamber we are in at present. Continuing along the run of the main passage, another fifty feet brings us to a muddy bank topped by a very fine three-tier pillar, exactly like a huge wedding cake, and this pillar forms the end for mapping purposes of the main passage. Up to the right is a rocky slope leading directly into the West Chamber; down the incline to the left is the tunnel-like lead to the East Chamber. At this point also the mud, which is with us to the end of the East Chamber, may be said to start. It is dry

and compact, making easy going in good weather, but in wet weather is treacherous stuff and horribly tenacious, sticking in vast quantities to boots, clothes, ropes and every item of gear in the most determined way. We will proceed first down this muddy tunnel to the East Chamber, returning subsequently to the West. After twenty feet or so there are turns to the left and right. The right-hand one leads eventually to the West Chamber, our course being along the left. A little further on there is another right-angled turn (to the right), and seventy feet further on yet another turn—this time to left—and we are in the Great East Chamber.

The Great East Chamber

This must be, without question, one of the most remarkable underground chambers in the British Isles—fully three-quarters of an acre of sloping roof overhangs it without any central support whatever. When one considers the enormous enormous volume of rock and earth composing this roof and forming the hill outside, one cannot but wonder how it is that the whole lot does not come tumbling down. Moreover, this roof is not a plain slab of hard rock, but is pierced in many places with large fissures, which fact makes its stability still more uncertain. Perhaps a better conception of its size can be gained from the knowledge that if its floor were considered as level instead of sloping at about 35°, more than enough room would be available for fourteen (14) " doubles " tennis courts.

The main run of the cave is east and west, and, in addition, as one proceeds towards the east and along a central line, the ground throughout slopes downwards from left to right at an angle of between 30 and 35 degrees. Incidentally, this angle recurs at all parts of the Mitchelstown Caves, and is the bedding angle or dip of the local limestone strata. In the East Cave it is this angle, in combination with the sticky nature of the surface that makes the going so treacherous. Just inside the entrance of the cave are two large pillars, the bases of which form suitable (and safe) " stands " from which to get a first view of this awe-inspiring place ; throw the beam of your light up the slope, and a tumbled mass of rock mounts up to the top of the chamber, over seventy feet away. Throw the beam down the slope, and the muddy

incline is seen leading to the bottom of the cave, another fifty feet away, and a weird and awesome pool of water reflects back the light of your torch with an unbelievable blue colour —the only spot of colour ever seen in these caves apart from the eternal greys and browns, and, of course, the whites of stalactitic deposits.

The safest line of procedure is to work upwards and to keep at the upper end of the slope as far as possible. In this way one avoids the clay and has the more congenial rock to deal with ; so we will work up to the left, where the first item of interest is a huge mass of stalactite—reaching up to the roof of the cave and forming a wall of this material about twenty feet in length. Opening off this north-west wall are four short passages well worth a visit if time permits— but we will move now to the east towards the " Port Holes " and Young's Gallery. The former are two circular openings in a dripstone wall, and are the shortest cut to Young's Gallery. They are six feet up, however, and are only eighteen inches in diameter. Moreover, the ground inside is level with the bottom of the holes, and there are usually little pools of water inside waiting to make it uncomfortable for the visitor, so we will dodge this method of entry by working down a fissure on the left side. This fissure goes north for 112 feet and opens out inside to a width of between 30 and 40 feet. In passing, it may be noticed that this corner of the East Chamber is very complicated, the fissure under discussion running in under another, the entry to which is higher up the slope. In fact, there is one spot here where there are no less than three passages, one above the other ; but for this journey we will leave these out (they are for the explorer rather than the visitor), and turn to the right twelve feet down the fissure ; here we turn back up a parallel fissure which leads to the back of the port holes. Up the boulder slope to the left is the great arched entry to Young's Gallery. This gallery is not particularly interesting, except perhaps for its connection with Arthur Young, after whom it has been named by Evans. The passage runs for a total length of 250 feet, and is practically dead straight for the full distance. Its width and height vary a lot : the former from fifteen to twenty feet at the beginning to as little as two in places, the latter from three to fifty or more. At the end of the passage

there are numerous signatures and dates—that of "A. YOUNG 1778" is undoubtedly there, inscribed on a square block of stone to the north of the final widening; also the names of Evans's party of 1910, with the inscription "Young's Gallery, rediscovered 1910 by Evans, etc." Most of the other names present are connected with years towards the end of the eighteenth and beginning of the nineteenth centuries, when the Desmond Cave enjoyed its greatest popularity prior to the discovery of the New Cave. Many names found here recur also at the end—or what was then the end of the north passage. In the latter there is also the name of an "Eliza" Somebody or other—about 1809, if I remember rightly. One cannot help wondering if this was really a woman, and what the feminine caving outfit was like in those days! A crinoline would be a somewhat difficult item of apparel in that rocky passage!

Working back along Young's Gallery, and surmounting the barrage of rocks across the entrance, we will continue along the East Chamber to its end; but from now on we proceed along the clay slope, and it gets more and more muddy as we go. The clay at this part is mostly in the form of small hummocks, bewildering in their number and very difficult of explanation, but closely resembling mole hills, with which everyone is familiar. There is a magnificent pillar almost two and a half feet in diameter, half way along, and opposite this in the roof, and running south, is the great fissure mentioned by Evans. We will, if possible, have a closer look at this when we are returning along the bottom of the cave. It is as well perhaps to note here that in traversing this clay slope it is very advisable to keep a rope handy, and to use it frequently in rounding difficult spots. A slip on this slope would be a particularly nasty experience, as I mentioned before, and it is unlikely, once one began to slip, that there would be any chance of arresting one's progress downwards until brought forcibly against the rocks at the bottom, or, worse still, plunged into one of the deep and ice-cold pools at the bottom. Actually between this point and the end of the East Chamber there is little to attract notice, and one simply cannot avoid getting well plastered with mud. Keeping as far up the slope as possible, we proceed carefully along for a distance of 120 feet from the large pillar, already

mentioned, and are eventually brought to a stop by a wall of solid rock, which is virtually the end of the chamber. This rock is actually a huge piece of fallen roof, and by climbing on top of it a further 15 or 20 feet brings us to the ultimate wall. Up to the north, 40 feet or so away, is the northern boundary of the chamber; there are also a few passages up in the corner, but they lead no great distance. Working down to the south of the slope, a few tunnels will be found in the clay—two of these which I followed for some fifteen feet eventually became too steep and narrow to pass, and led to deep pools of water. If any connection exists between the "New" and the "Old" Caves, it is at this spot, but, as far as I could discover, no such connection does exist. It is interesting, however, to note that the nature of the two caves—that is, the slope of the ground, type of surface, etc.—is exactly similar in the west of the "New" and the east of the "Old" Caves. On the journey back towards the west, if one is foolish enough to keep down near the bottom of the chamber, a rope is absolutely necessary, and there is nothing to make it worth while. It is possible, however, that during a dry summer season one might work into one or two of the south fissures, but during my visits I never found the water level low enough to make this practicable, and I have noticed differences in the water level of as much as twelve feet. This water in winter forms a continuous sheet along the whole bottom of the East Chamber, with the exception of two places where the cave narrows. This can be seen on the plan, which was made during the winter months. During the five months of summer and autumn the water level drops, and the bottom of the cave then shows only deep pools at a few spots, and it is hoped during the coming summer to make further visits in the hope of getting into the fissures along the bottom.

We will get back then to the junction of the East and West Chambers, and will explore the latter. A glance at the plan will make it obvious that there are three direct entries to the Great West Chamber from the main passage and what I have referred to as the Junction Cave. In fact, this Junction Cave and the West Cave can really be looked upon as one Great Cave, as the "walls" separating them are, for the most part, fallen roof and boulders covered with stalagmite. In addition

to these entries, there is another by means of a south passage from the Junction Cave, but this is essentially a " back door," and a muddy one. The normal entry is the arch to the west of the " Wedding Cake," and to get the best "first impression" we will take this entry. Surmounting a large rock at the entrance, we are at once in the chamber. It is a large cave, much more inviting than the east—the floor a mass of huge boulders and the roof and walls plastered almost everywhere with dripstone deposits. In addition, the cave is much more lofty than the east, and the roof must be quite 70 to 80 feet high in places ; the general slope of the ground is the same—about 30° average. The passages opening off this cave are of no great length. It has nothing, for instance, to compare with Young's Gallery in the " East," though the two main off-shoots—viz., Evans's Gallery and the south-west passage—are in some ways more interesting than Young's. Proceeding then, as in the " East," along the top of the slope, the only item of interest is a low tunnel which leads to the main passage (we have noticed this already from the latter), and on working through on the stomach for about ten feet, we reach the end of the tunnel, which is high up on the wall of the main passage, and from here we get a very good impression of the only lofty chamber in this passage.

About half way along the Great West Chamber there is a very fine stalactitic pillar, and at this point the chamber appears at first to narrow very considerably, but this is not so, as what appear to be the sides of the cave are really only very low roof and large rocks—the cave proper extending considerably both to the north and south. Having passed this pillar, the cave widens, and becomes very lofty also, reaching its greatest north and south measurement at this end ; the west wall exhibits some wonderful displays of dripstone fancy work.

Roughly central in the western boundary is an immense boulder. Apparently once part of the roof, and on getting under this an opening leading to Evans's Gallery is found in the west wall ; while in the south-west corner of the cave another similar boulder hides the entry to the south-west passage, it is possible to get around this boulder on either side, and, on reaching a fairly level bed underneath it, the cave is found to run east and west—the western branch is

really the one known as the south-west passage. This latter is unlikely to attract visitors, so I shall simply describe our transit of it. We proceeded for about thirty feet along a muddy passage, which then widened out and branched to right and left—the left-hand passages proved of no importance—the right-hand passage ran for about twenty feet, where it ended, but, about half way along it another passage, opened towards the west, with its floor 4½ feet higher; this, after ten feet or so, opened out into a muddy chamber having two exits—one to the south and one to the west. The southern was simply a burrow about twenty feet long, sloping at 30° and leading ultimately to water. The west led to a vertical drop of 17 feet—this western opening being simply a hole in the vertical side of a fissure, which ran at right angles to it. It was necessary to employ a rope ladder to negotiate this drop, and the fissure in which we then found ourselves ran in all about 50 feet from end to end. Near its northern end there was a passage to the west which led into a parallel fissure occupied by a pool of water about ten feet wide and of fearsome depth. This then is the end of the south-west passage as at present known, though it is possible that in drier seasons one might get further. Reference to the plan will give a better idea of the run of this passage.

To return to the Great West Chamber: we are still in the south-west corner, and can either return up the slope or proceed along the muddy bedding slope forming the southern boundary of the cave. The latter is not interesting, and, as we have yet to visit Evans's Gallery, it is best to take the former, and to work up the western wall to the opening of "Evans's"; this also is a bedding fissure for the first part of its run—a distance of twenty-five feet—after which a vertical drop of about eight feet is encountered; a difficult spot, but one that can be negotiated without ropes or other equipment. Arriving at the bottom, the passage is found to widen out, forming a chamber about fifteen feet wide, and perhaps in all about fifty-five feet long; its run is almost due north and south along its longest axis, and its floor slopes upward at 40 degrees towards its northern end. This floor consists of a thick coating of stalagmite deposit, and is presumably what Evans referred to as the Stone Shawl. At the top of the slope is a group of very beautiful dripstone

pillars of a wonderful pearly white colour, but beyond them the passage ends in two short parallel fissures, and there is nothing further of interest. The only other expansion of Evans's Gallery is in the south-west corner of the above chamber, where a low arch gives an entry to a small rocky compartment, which is, however, of no great extent, and has no stalactites, or further outlets ; it measures about fifteen feet by ten. We can, therefore, retrace our steps to the Great West Chamber, and hence back to the open air.

Thus we have finished our survey, and have seen all that is at present known of the " Desmond Cave." It is safe, however, to say that some other passages would undoubtedly be uncovered if, after a very dry summer period, the water level fell low enough to make possible an entry into the southern fissures of the Great East Chamber. I think, however, that it is unlikely that much of interest would be uncovered, as one would certainly be brought up against water at these low levels, no matter how dry the season ; though it is true one cannot entirely overlook the chance of a passage, at present submerged, which would lead when dry to higher levels, perhaps a whole further series, beyond. One other possibility which I have not gone so far as to test is the chance of some of the fissures in the roofs of both the East and West Caves leading to interesting passages ; these would be tricky work, and would require special tackle, but they would have, at any rate, possibilities as regards new discoveries. Lastly, there is one other place—viz., at a point about sixty feet along the main passage—where there is a distinctly " hollow " sound, indicating a chamber of some kind underneath. The " floor " at this point seems to be hardly more than a foot or so in thickness : here again is a chance of further exploration. Hence it would appear that I can finish these notes in no better way than by endorsing the view expressed by all who have so far written about this cave—viz. : " The ' Old Cave ' at Mitchelstown is still far from being thoroughly explored."

THE DESMOND CAVE

NEAR

MITCHELSTOWN