

Poll Cragreagh, Co. Clare, Eire

By

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(Map ref. I.O.S. 6 in. to 1 mile, Clare Sheet 4, E. 35·2 in., N. 2·9 in. from south-west corner of sheet.)

SUMMARY

Poll Cragreagh is on the south-east side of Slieve Elva and was so named, after the townland in which it lies, by Coleman and Dunnington (1944). "Cragreagh" means "grey crag" which is a description of the appearance of Slieve Elva in that part. The main cave was first entered by members of the Burnley Caving Club in July, 1954, and more fully explored in 1957 and 1958. The Spelæological Society explored and surveyed the cave in 1959 and 1960. The stream passage is 1440 ft. long and descends to a depth of 120 ft. below the entrance. Its general trend is southerly and its waters rise at Killeany.

HISTORY

The first known mention of the cave is by Coleman and Dunnington (1944). They describe it as "an 18 ft. pothole into which a stream from the shales plunges underground. Unlike many other boundary swallets this pot is open and it is possible to climb down to the bottom. Unfortunately in a very short distance the stream runs into a low horizontal fissure under a mass of collapsed clay and stones." They were unable to get any farther, because at that time the stream passage was choked. The cave is marked as number 8 on *Fig. 1*, page 108, in their publication.*

The main cave was discovered by members of the Burnley Caving Club between July 2nd and 13th, 1954. They originally called it Pollnamichael but subsequently in a letter to Coleman admitted the prior discovery and naming by Coleman and Dunnington. The Burnley explorers penetrated a 10-in. high bedding plane passage and after about 30 ft. dropped 2 ft. into the streamway where they saw daylight through the roof 20 ft. or so above. This is the alternative entrance which lies in the small paddock adjoining the farmhouse. The original explorers were much delighted by the beauty of the formations in the cave, particularly the "rimstone pool formations

* This is E.12 on U.B.S.S. map, 1956, *Proceedings*, Vol. 7, No. 3, *Plate 6*.

containing innumerable cave pearls". It is not known how far they got in 1954 but there is a smoke inscription dated 1957 at the head of the second pitch.

The stream was tested with fluorescein by this Society in 1954 and 20 hours after putting in the dye at the swallet the rising at Killeany was coloured green, on the west side. It is not known how long the colour had been showing before it was observed. The waters must mix with the Pollnagollum waters underground upstream from the rising. The small subsidiary rising a few yards downstream, on the west side, from the main rising was not coloured. The exploration and a line survey of the cave were made by this Society in July, 1959, and in July, 1960, passage detail was studied and sections were drawn.

DESCRIPTION OF THE CAVE

(*Fig. 37*)

The cave is of the typical Co. Clare pattern, a winding canyon passage with complicated meanders, but it descends more steeply than many. It may be said to start where the stream flowing off the Upper Limestone Shales of Slieve Elva drops 12 ft. into a partly unroofed canyon passage 4 ft. wide. This is partly choked at its lower end near the road by boulders, and the stream disappears along a low bedding plane passage to the right. This was the entrance penetrated by the Burnley Caving Club in 1954. The easier entrance is through a hole in the field to the south. This opening is covered by a large slab of stone near a swallet. Presumably this was the original point of engulfment, which has now retreated upstream. The passage from the swallet itself is choked but joins the main streamway half-way down the ladder pitch. This pitch is easily reached from the entrance over a false floor of boulders jammed over the lower continuation of the main streamway (AA'). For a belay point an iron bar over a smaller hole immediately over the ladder pitch was used. The free length of the belaying rope was 20 ft. and the ladder below 20 ft. also. On the descent from the entrance to the streamway five distinct beds of limestone can be made out. It is the base of the fifth of these that forms the roof of the cave passage for over half its length to JJ'.

The first one-third of the cave passage descends very gently. The height of the passage gradually decreases by about 3 ft. between AA' and DD', due to the floor slope being less than the dip of the roof bed. It should be noted that the geological map records horizontal bedding about $\frac{1}{2}$ mile away on the north, south and east of the cave. Checks made in 1960 in an adjacent area did not disclose any errors in the dips recorded on the geological maps. So presumably there is at Poll Cragreagh a small area with an unrecorded dip of about 2° to the south. Beyond DD' to as far as NN' the cave passage has three levels and there are alternative routes. The levels are an Upper Level, a Gour Level and a Stream Level. All three levels may

POLL CRAGREAGH

U.B.S.S. SURVEY. 1959-60

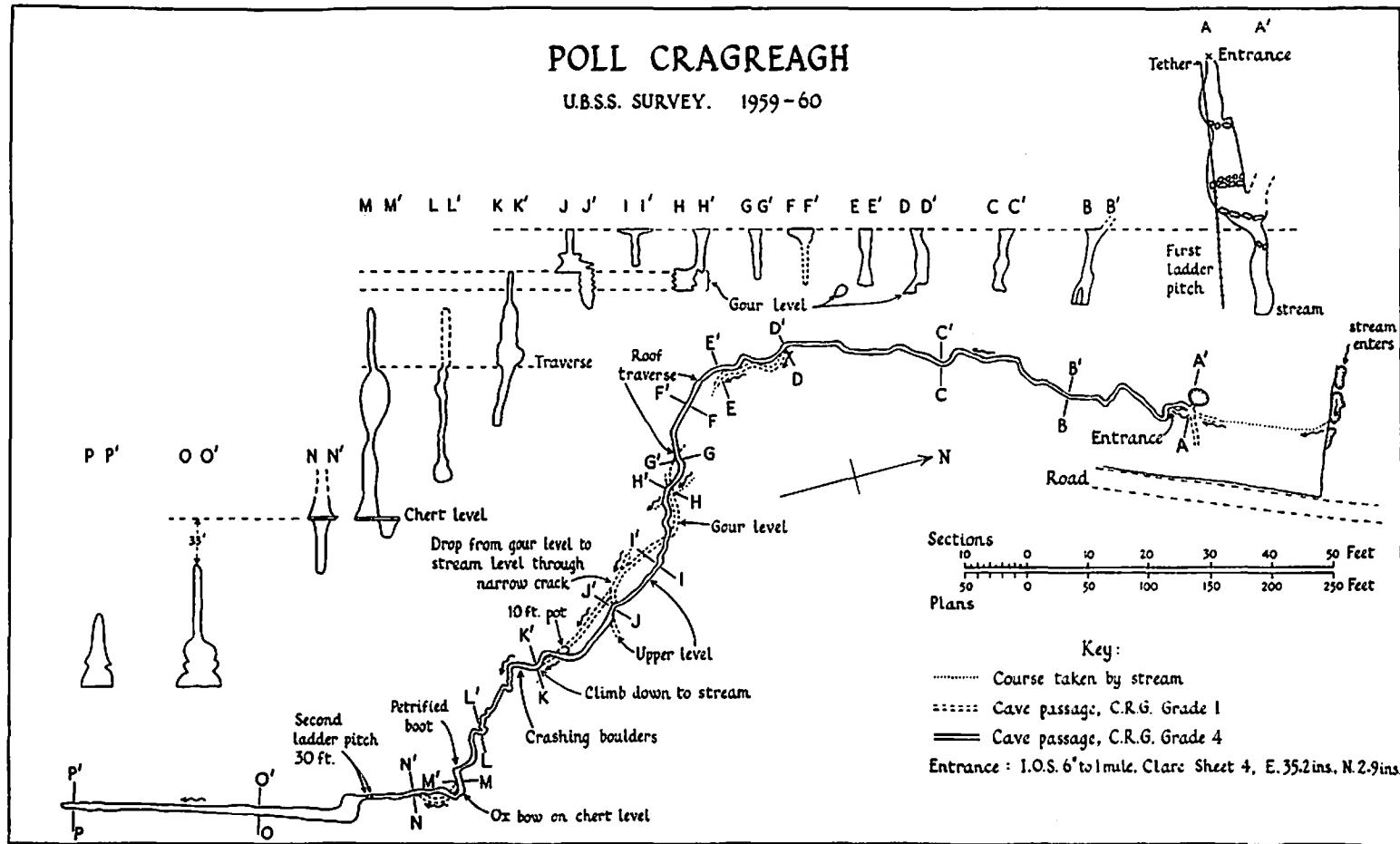


Fig. 37.

be separate but often two and sometimes all three form part of a single meandering canyon passage. At DD' there is a climb of a few feet out of the stream, which goes off left, and is only seen occasionally till close to JJ'. There are further climbs upwards to the Upper Level at GG' and at HH', but each is only a few feet. Where there was a choice of two routes the Upper Level was the one surveyed (to C.R.G. grade 4). This rejoins the Gour Level but just beyond JJ' turns off east and was not followed.

The Upper Level is narrow and not easy to get along. For some distance, e.g., at FF', one has to traverse in the roof. The walls are covered with crystals and the floor is soft mud. It is of course the oldest of the meanders and has been longest deserted by the stream. At JJ' one has to pass through quite a formidable squeeze at floor level before dropping down into the Gour Level. The Upper Level here goes off to the east. The Gour Level was followed on our first exploration. It had not been entered before. It leads over a series of beautiful dry gour pools lined with crystals in a passage only 1.5 ft. high, but after about 80 ft. a narrow crack appears in the floor, down through which one can drop to a lower level of meanders. This leads through a narrow passage to a 10 ft. pitch where the main stream is rejoined. It is, however, not necessary to go through the narrow crack as the Gour Level may be followed to JJ', where it rejoins the Upper Level. From JJ' to just short of KK' the Gour Level was followed. The walls here are composed of thin limestone shelves with sharp edges. Then the floor drops quickly 20 ft. to KK' and the upper part of the Gour Level decreases in width to become a mere crack (KK' top portion). At 30 ft. downstream from KK' there were two boulders jammed across the passage. They had been trodden on by several parties but on July 13th, 1959, they gave way and fell into the streamway within 3 ft. of one of the surveyors. Below KK' the stream has made a series of tight meanders generally from 1 ft. to 3 ft. wide, from which the roof of the highest meanders can sometimes be discerned some 20-30 ft. above. This upper traverse was followed as far as MM' at the level shown as "Traverse" in the sections. In places there was a floor for some yards but most of the way there was an open connection to the streamway below. At MM' the traverse is 24 ft. above the floor in a rift 1 ft. wide and about 10 ft. high, with sharp-edged limestone shelves sticking out from the walls. After MM' the upper part of the passage as well as the lower part become too wide to traverse at the higher level. It might be possible to climb up to this level beyond NN' where the passage becomes narrow again.

At 28 ft. upstream from MM' is a heavy drip from the roof on the left side. Flowstone is being precipitated here quickly as on the chert floor there is a hobnailed boot firmly fixed to the flowstone. The chert forms an obvious level at MM' and becomes the floor of the Oxbow just beyond. The stream meanders away below the chert level and rejoins the passage just before NN'.

The chert floor is perforated in a number of places where the stream runs under it. Even so it is much easier to walk on this floor than in the narrow streamway below until a point about 35 ft. short of the Second Ladder Pitch is reached. From the top of this pitch it is possible to see up as high as the traverse level but not further.

The Second Ladder Pitch is a double cascade of 30 ft. with a horizontal displacement of 7 ft. The first cascade is 20 ft. to a slight ledge followed by the second cascade. There are several chert bollards to serve as belay points and a short tether and a 30-ft. ladder only are needed. The chamber at the foot of the pitch is a large one for Clare. It is 32 ft. long by 15 ft. wide and perhaps 70 ft. high. It has dark fluted walls and a floor of shale gravel. Beyond it is a long, straight rift passage with no roof meanders. It is about 4 ft. wide and has chert shelves along the sides. These eventually approach each other and finally join and it is necessary to crawl under them. The section as at PP' is an inverted "V" which becomes narrower and closes altogether at the end of the cave. Here there is a gravel choke, through which the water soaks away. Under ordinary water conditions there is no sump but in wet weather a considerable length of the rift passage is filled to the roof with water as straws in the roof show. At OO' there is mud on the upper chert ledges. This has dripped down on to the lower ones to form false mud stalagmites up to 9 in. in height. A vertical section of one of these shows that there is no central hole as there is in a true mud stalagmite (Malott and Shrock, 1933).

THE CAVE IN RELATION TO ITS SURROUNDINGS

The total length of passage surveyed to C.R.G. grade 4 is about 1440 ft. (horizontal equivalent). The straight distance from the entrance to the end is about 900 ft. in a direction almost due south. The vertical descent from the top of the entrance pitch to the bottom of the cave is 120 ft. As far as JJ' the same bed forms the roof of the cave. This bed is 27 ft. below the surface at AA' and, as there is a slight slope down on the surface, the cave roof at JJ' cannot be much more than 15 ft. below the surface. The top of the entrance pitch is about 605 ft. above I.O.D. The floor of the cave is thus at the end 485 ft. above I.O.D. At Killeany the normal rising is about 450 ft. and perhaps as high as 460 ft. Thus there is only a difference in level of not more than 35 ft. between the end of the cave and the normal rising. Under flood conditions the waters at Killeany rise through the valley floor at levels up to 490-500 ft. above I.O.D. This rise in level must affect the water-level in adjacent caves and the flooding noted in the terminal part of Poll Cragreagh is the natural concomitant of this. But it is interesting to note that this damming effect extends so far as the end of the cave, which is about 600 yards north-west of the rising.

The cave at FF' is about 100 ft. east of Poll Cahir Cloggaun East.* This is a 10-ft. deep, rock-sided, collapse feature with several small trickles of water. A fluorescein test has shown that these trickles join the Pollnagollum waters and rise at Killeany in exactly the same manner as those from Poll Cragreagh. The cave roof at FF' is about 15 ft. lower than the bottom of this pot but no tributary was noted in Poll Cragreagh so presumably the water takes an independent course to Killeany unless it crosses the roof of the cave to form the copious drips noted near MM' on the left side.

SURVEYING AND PLOTTING

The survey was made with a metal-reinforced linen tape and a hand bearing prismatic compass. Distances were measured to the nearest inch and bearings to the nearest degree. The magnetic bearings were converted to true bearings before any calculations were made. All measurements were either horizontal or vertical and no clinometer was used. The co-ordinates of each survey station were calculated and from these co-ordinates the survey was drawn. The position of the entrance is given in the form of eastings and northings from the south-west corner of the I.O.S. map, which neither bears latitude, nor longitude, nor a national grid. In 1960 when the sections were drawn 47 of the 123 survey stations marked in 1959 were identified and this was quite enough to tie in the sections with the other parts of the survey. The tape was used for measuring some sections, others were estimated to the nearest foot in height and to the nearest six inches in width. In the survey all the sections are drawn looking downstream. In the plan the passage width has been exaggerated in order to clarify detail. The sections give the actual size at these points and are drawn to 5 times the scale of the plan.

We are grateful to Mr. John Droncy of Cragreagh for permission to visit the cave.

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* E.13 on map, 1956, *Proceedings*, Vol. 7, No. 3, Plate 6.