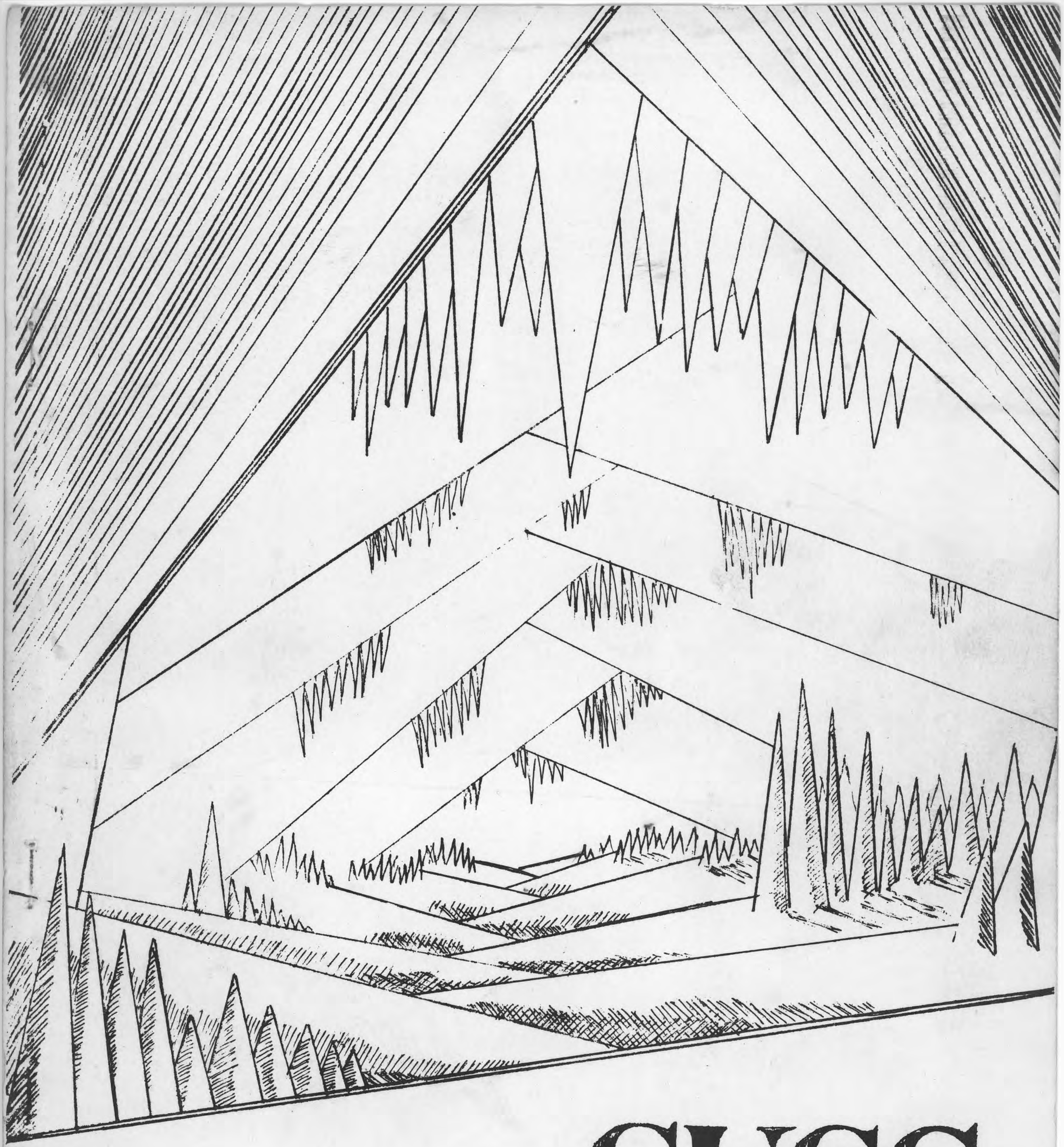


CUCC

MARCH 1969

JOURNAL
of the
CAMBRIDGE UNIVERSITY CAVING CLUB

Volume I, No. 4
March 1969

CONTENTS :-

Produced by :

Cambridge University Caving Club
c/o The Wherry Library
St. John's College
CAMBRIDGE.

EDITORIAL

The journal this year is only 5 months late, "only" because this may mark a trend back to the yearly periodicity which was the original aim. The activity so far this year has been such that sufficient articles may be forthcoming in time for next year. The long vac. trip to Eire appears to be turning into a regular event, and it is to be hoped that expeditions abroad will continue in the future, though not necessarily to Eire. Finance is, of course, a perennial problem for such expeditions, but, this can sometimes be overcome by appeals to paticular firms for money for "scientific purposes" - and who could deny the essentially scientific basis of speleology?

The 9 members of the Eire expedition undertook a considerable amount of digging with some immediate success and the prospect of more in the coming summer. Two surveys were produced, which are printed in the journal. The log of the Eire trips for 1967 and 1968 is kept in the library and is available to anyone who wants to read it. This remarkable document contains amongst other literary masterpieces the poem, "The Cambridge Caver", of which the second verse runs:

"I took from my pocket a cheque book so bright
The treasurer's eyes opened wide with delight
With pleasure we'll greet you, as one of our rank,
As soon as your cheque has been cleared by the bank".

...which leads on to the question of finance generally. The club remains solvent, and received the sum of £15 from the Societies Syndicate to purchase tackle etc.. But none of this solves the problem of the high cost to members of caving trips, largely because of high transport costs. With Mike Ferraro a member of the Societies Syndicate for this year, there are grounds for hope that some kind of University transport pool will be seriously considered. The caving and moutaineering clubs in particular should be able to put forward a strong case.

There have been in the past year three "incidents" underground involving C.U.C.C. cavers, two of which resulted in injury of one sort or another. It is probably appropriate to point to the need for the club to have its own first aid kit, which should be taken down each meet, and not solely to rely on individual members as it does at present. Incidents of this sort, however minor they may seem, are worth serios consideration.

Finally, the C.U.C.C. library is considerably under used, and in future it may be possible to locate it somewhere more accessible; perhaps in the place where future caving club W.O.W. lunches are to be held. There is available a full list of publications owned by the club.

My thanks must go to Phil and Ann who have done infinitely more work on this journal than the editor (soi disant) himself.

Guy Wilkinson

PRESIDENTIAL.

I naturally expected that an account of a year's caving, disorganised by the Foot & Mouth epidemic, would be very much shorter than the account of two and a half years caving included in the last journal; but in fact there are 46 trips recorded in the logbook over the past year, whereas only 62 trips are written up in the last journal. This is some measure of the remarkable activity of the year.

The year started with a highly successful P8 for which no less than 27 names are inscribed in the logbook. Of the 20 non-members a remarkable proportion of 70% later joined the club. This beginning set the pattern for large parties at the term-time meets. Three weeks later in Yorkshire, nature launched the first attack of many to our winter's caving. Due to high waters, the projected trip to Magnetometer Pot had to be replaced by Alum Pot for nine hards (including one, Phil Shuttleworth, without a wetsuit), and Sell Gill for Clive Westlake and the eight new members. The Alum Pot party ,having paddled in foot and mouth disinfectant, were forced to watch a very spectacular flood from the edge of the pot. Sell Gill also had high water, and was found rather exciting by several members of the party. A Lost John's trip was abandoned due to foot and mouth (natures second attack) and the floods ranging over most of Yorkshire, but Clive, in one of his madder moments, agreed to return to Sell Gill with Noël Williams and Mike Ferraro. They found, however, that the water had subsided, and only a few drips were met on the pitch. Another symptom of the club's keenness (newly found) was seen next morning, when no less than fifteen people rose to investigate the glories of Kingsdale Master Cave (via the valley entrance), and a further two climbed Pen-y-ghent. Attempts to drown Noël in the canals failed miserably. By the time the Mendip meet had arrived, foot and mouth had its grip on the country, but, hearing that the Burrington caves were still accessible, we departed from Cambridge, only to hear on arrival that they too had fallen victem to the epidemic. A good weekend's festering was enjoyed by all, particularly the Christmas Nosh once again cooked by Kate and her helpers. A trip to the newly discovered W.L. Series of Balch cave was arranged for the Sunday, and ten members thoroughly investigated it.

Foot and mouth now swept the country, and except for Ken Gove and Jeff Parkinson's investigation of Baker's Pit and Bickington in Devon, Cambridge Caving was dead until February 25th 1968. On this date fourteen cavers descended Lost John's (via Dome Junction) and found their limitations after three month's idleness - we spent eleven and a half hours in the place! Meanwhile Steve Smith led Mike Jenkins, Ken Gove and Mike Nelson through Calf Holes / Browgill and then down Birkwith. The following day Jeff Parkinson, Mike Nelson, Ken Gove and Mike Jenkins were still fit enough to do battle with twenty boy scouts in Sell Gill. Three weeks later the President (Mike Richards) "led" the heroic seven to do battle with floods in Pen-y-ghent, which ended by proving the remarkable efficiency of the CRO callout procedure. (see a full account on Pen-y-ghent. Ed.)

During the Easter Vacation Jeff and Ken again visited Bakers Pit. Then a return to Penwyllt led by Gareth Jones, Joe Duxbery and Noël Williams (the intrepid trio of Pen-y-ghent fame). This was perhaps another recognition of the fact that our caving standards have soared

high above those of our predecessors who put S.W.C.C. to so much trouble a few years ago. However, our three heroes couldn't face the thought of caving together and so climbed one of the local mountains the first day. On the morrow they arose early and descended to O.F.D. 2 via a devious route through the Cwm Dwr boulder chokes. Noël left about midday and Pete Bowler joined the party later in the afternoon. The following day, after helping with the Penwyllt sanitary arrangements, they set off for the new entrance to the Clay Series of O.F.D.2 armed with a few notes on a piece of paper. The through trip was eventually completed in seven hours. The following week Mike Ferraro joined Pete on Mendip to investigate Enema Rift in Swildons 6 as a possible digging site for the summer. They later discovered that Mike Jean-Mere was still digging from the 7 side. During the trip they managed to leave the key to the Shepton Mallet Club hut on a mudbank near Sump 4, so whilst conducting Mike Richards and a couple of friends round the Double Trouble round trip a couple of days later, Pete informed them that they had to visit Sump 4 so that he could collect it. This time he lost his helmet in an abortive attempt to show them how easy Sump 4 really is - the journey back was very painful at times!

The pre-tripos meet saw fifteen people thundering up to Derbyshire to do Knotlow Mine, which was very successful despite the presence of some sewerage. A fortnight later Pete Bowler joined Clive Westlake leading some boys from Leys School on the Swildons Round Trip. Pete managed at last to enter Swildons 3 without interferance from Little Bell. The post-tripos meet must rate as one of the most successful Cambridge meets ever,in which eleven members took part. Five major pots were bottomed, and three other minor caves were also investigated. The first day Pete Bowler, Clive Westlake, Noël Williams, Joe Duxbury, Phil Shields,Gareth Jones, Steve Smith, Colin Mann , Phil Shuttleworth and Ken Gove descended Ireby Fell Cavern in two parties. Pete was suffering from a dose of Presidentitis and arrived with little more than his caving rags and helmet. The water wasvery low all week ,in contrast to some of our experiences in Yorkshire during the winter. The following day the same group without Steve was joined by Mike Ferraro and descended Meregill again in two parties. Despite investigating this fully several people were not satisfied, and Clive, Noël, both Phils and Colin did Middle Washfold / Great Douk Cave through trip, while Mike and Pete crawled a total of four hundred feet in Hallam Moss under the impression that it was the entrance crawl to Black Shiver. Everyone set off hopefully for Stream Passage Pot the following day , but an unfortunate accident to the first party rather messed up the caving for the day. Phil Shields was testing his belay by climbing on it (which was suggested by Gareth - very "sick") when it slipped off. As it was really a short pitch (20 ft.)he was not on a lifeline and so fell 12 ft., to the floor. Even this short fall can do remarkable damage and he broke his left forearm and cut his face rather badly. Luckily Gareth, a trainee doctor, was on the scene and soon had him patched up and out of the cave. Noël went to phone for an ambulance while Gareth, Steve and Pete helped Phil down Trowgill. After the chaos cleared Clive, Joe, Phil Shuttleworth and Ken had a successful trip to Gaping Gill Main Chamber while Mike spent his 21st birthday at the head of the second pitch, without a light. Although this accident was very alarming it is comforting to be able to report

that we extricated ourselves and in fact Phil had arrived at Clapham by the time the ambulance had arrived. A further incident in the village meant that Noël had to drive back to Brackenbottom with a sprained ankle. The cause of the day's troubles? - it was later found that Colin's porridge had failed to thicken. The Saturday was spent visiting Phil in the local hospital, and in noshing at Phil Shuttleworth's "country cottage". On the Sunday Pete, Gareth, Joe, Ken and Clive ventured forth in Washfold (led by Noël, from an armchair). This was an extremely successful trip and our time of five hours indicates that organisation had improved beyond recognition since the Lost John's fiasco. Phil Shuttleworth and Mike spent three hours investigating every confined space near Douk Gill Resurgance. Monday was spent in Swinsto Hole by Ken, Clive, Gareth, Mike Pete and Phil on another very successful trip in low water conditions. This finished the first volume of the logbook which covers three years (June '65 to June '68) and will now reside in the club library.

The following weekend Jeff Parkinson and Ken Gove made an abortive attempt to reach the new extension of Baker's Pit. They then visited Owlcombe / Stormdown and Great Rock Mines. A week later they visited Golden Dagger Mine (See p10. Ed.). The following day they were joined by Bronwen Woodford and descended Baker's Pit and Pridhamleigh. Meanwhile Mike Ferraro and Pete Bowler had decided to claim Sidcot Passage, Swildons as a club dig. Soon afterwards contact was made with a Wessex Cave Club group intending to dig it also, so we agreed to make it a joint dig. As far as I know W.C.C. have not yet dug it. On 21st June the pair mentioned above held an overnight digging trip there, when forty bucketfuls were removed, finally retiring to bed at 4-00am Saturday. Two weeks later they were joined by Steve Smith and Mike Nelson and another forty bucketfuls were removed before visiting Shatter Series and Sump 1. Chaos enveloped a projected North-West Stream Passage (Swildons) trip the following day. Pete Bowler, Steve Smith, Mike Ferraro, Charles Turner, Jeff Parkinson and two blokes from Axbridge Caving Group finally entered the cave. Charles was unable to get through Sump 1, so Mike went out with him, while the rest proceeded to the pot. Chaos, which resulted from Pete reaching the BOTTOM of the pitch with the belays, was finally cleared and as time ran out they retreated. On the Monday Charles, Jeff, Steve and the two Mikes visited the ladder dig extensions to GB and were impressed by the decorations and instability of the area. Tuesday saw the same party without Charles and Mike Nelson doing the Swildons Round Trip in very low water. However, when Mike Ferraro came to go down Stoke 2 with Clive a day later it was quite a different story. Water was already high when they entered, and after doing battle with failing lights and only moderate route finding they found the water rising rapidly on the way out. A couple of hours later the "Great Flood of Mendip" - which must be easily the highest flood for several hundred years - began. The following weekend Pete joined Clive to observe and try to alter some of the effects of the flood on Swildons. (See p17. for a full description of the flood. Ed.) A quick trip to Lamb Leer on the Sunday was enjoyed before Clive returned to Derbyshire.

Possibly for the first time ever there were sufficient cavers in Cambridge for the Long Vac Term to organise meets. These started with an epic Derbyshire trip. Clive Westlake led Phil Shuttleworth, Mike Nelson, Jeff, Steve, Ken and Noël (as wellas a few other parties!) through an

Oxlow/Gaints double link. Time for the trip varied from 7 hrs. to 10 hrs. Jeff's nife gave trouble, causing him to walk off a drop. Luckily he landed safely 10ft below in a foot of water. The link passage caused great suffering, especially when Jeff fixed himself to it almost permanently with his trousers. Mike Nelson failed to get through the link and to be content to wander round Oxlow with a couple of Shepton people. The following day Ken and Phil joined Clive's surveying trip in Knotlow and found it rather more pleasant as the sewer smell had disappered. The following week Mike Ferraro joined Clive and several other Eldon men surveying in Water Icicle Close Cavern. Meanwhile the "Long Vac Termers" were in Yorkshire going down Notts Pot. Noël, Ken, Jeff and Phil Shuttlworth descended via the left-hand series in very dry conditions. Phil Sheilds accompanied them but as his arm wasn't completely recoved he spent his time walking on the surface. After this the same party enjoyed a quick trip down Marble Steps Pot. A week later, on Mendip, Mike Ferraro and Clive Westlake displayed their aquatic tendencies on a trip to Sump II in Swildons. Sump I was dived about 6 times, Duck I and Duck II were also dived, as was Creep II. The year was rounded off by another very successful Ireland expedition. (P. 12)

This has been a very active year for the club, and despite a few mishaps, a very successful one. The club both as individuals and as an organisation has leant much about the solution of our particular caving problems. It is good to know that, although invaded by a large number of beginners and inexperienced people, none have been taken on a trip too hard for them and the vast majority are now competent cavers. It appears that a reliable, working method has been found of training novices up to a good standard.

Pete Bowler.

PENYGHENT POT, MARCH 16-17, 1968.

Even before the trip had started, things had gone wrong, culminating in the failure of Bill Morris' Nife cell-but who takes any notice of omens? So, after about half-an-hour while he ran back to get my spare, we tottered along at a steady rate until we reached the 3rd pitch, where Roger Coates and Pete Hayward were in attendance. At the top of 4 we found Noël lifelining Mike Richards down 20 ft., then up for the same. Bill, Philip and I arrived at the wet and windy bottom of the pitch (after much twitting) decided we were unlikely to reach the bottom and deserted a couple of ladders and a rope. We met Gareth at the bottom of the 7th. He had just come from Boulder Chamber to see what was keeping us. We met Noël somewhere after the 9th. Coming to the chamber, we rapidly devoured immense quantities of eats.

Gareth and Noël were the only brave souls to descend the 10th. pitch, up to which I accompanied them, returning to Phil and Bill, the deadly twins, to await their retreat. We didn't have long to wait as the streamway had sumped near the bottom of the 10th., so they could get no further. Philip and Bill loaded up with tackle and set off out - - the 3 left followed at a suitable interval.

Several comments were made as to the increase of water as we progressed, not only at the cascades between 6 and 7 where it churned up an immense froth, but also at the 5th, where we realised it was very wet. Gareth voiced the opinion that this was as far as we were likely to get, but undaunted, our brave hero ascertained that this was in fact very easy to climb, from behind the fall. Upon reaching the foot of the fourth, Gareth and I were just in time to see Bill Morris starting his climb. Well, 'see' is a rather extravagant word for the chamber was full of flying, lashing spray, and the noise was deafening. Getting colder and colder we waited in the mouth of the stream passage, straining our eyes for the sight of the lifeline. After what seemed an age, and having stumbled a few times across to the ladder to bfind no rope, we retreated to the top of the fifth pitch. Having noticed the level of the water with respect to a small rock on the floor, we settled down to wait for a little while. It was then about 19.30.

We talked for a time, expressing the hope that Phil Shields and Bill Morris had been able to climb both big pitches and had either found somewhere sheltered to rest, or managed to get out of the pot completely. But then we fell quiet and tried to get as comfortable as possible in our cramped position. Arranging ourselves in such a spot was not altogether satisfactory, but even so, I managed to sleep a little in short snatches of maybe five minutes. This was a most peculiar sensation, listening to the rush and thunder of the water, and then suddenly being in a totally different dream world, which was no less real to me. Then with a jerk, returning to the cold and damp of Penyghent.

I must admit that at first I was worried, never having been in such a predicament before, but this feeling wore off as time passed. We were in darkness most of the time, conserving our lights for later, and only used them to check on the water level, (which rose a little) to indulge in a little exercise (namely pressing against the wall) or to find the time by Gareth's watch. Unfortunately, we had disposed of most of our nosh in Boulder Chamber, but we had one (wet) dried banana and half a bar of chocolate between the three of us! So rationing was introducedin the form of one square of choc. per man per two hours. (The banana went inthe first hour)

So we sat and slept and leapt about a bit and jabbered and had a few larfs, notably when Gareth uttered his proposed (but unused) greeting to the C.R.O.; "I say, I thought we had booked this cave for the weekend!" We also had a moments alarm when Noel started dribbling and looking rather off, but it was only a touch of gut rot.

Eventually, about 01.30 on Sunday, we saw that the water level had returned to near its original state, so Gareth made a recce. to the fourth pitch and came back with the news that the lifeline had appeared and the water coming down was about as bad as it was when we had lastbeen there. So we all made our way back, picking up the tackle which we had left on a conveniently dry ledge. Again yours truly was the first to make that daring ascent, and from then on it was plain sailing. Once Noel and the tackle and Gareth had been hauled up, we proceeded rapidly, welcoming the chompf that the other two worthies had left at the top of the third.

Our idea was to get all the tackle to the top of the first pitch, and take out only as much as we could manage, returning either in the afternoon or immediately for the remainder, depending upon howshattered we were after the dreaded canals. But when we reached the first we saw lights above. At first I thought it was our lotcome back, but it then dawned that it must be the heroic C.R.O.. Gareth disappeared up the ladder like

lightning, and then the ladder vanished! After a frustrating delay it reappeared three feet above our heads. Further cursing and screaming produced a full complement of rungs, so up we went, to be greeted by beards and strange Northern accents. G.H.J. swears that there was a strong smell of ale too, but this I didn't notice. After some twits had unsuccessfully tried to get me to take out five ladders,me, of course, being half dead from exposure, we entered the canals and got a move on.

And what a sight to greet us! Hordes of grots,flasks of soup and coffee,sandwiches and the crackle of a walkie-talkie.After partaking of a little of this feast(there wasn't all that much,for remember, G.H.J. had gone out first!) I set off with him and Phil Shuttleworth,who had decided that a nice way to spend Sunday morning was standing about on a wet and windy moor.It looked as if a travelling circus had arrived at the shooting hut, such was the profusion of lights and vehicles.Most embarassing! Mike Richards who had also been at the pot entrance,came down with Noel and after a very welcome cup of hot soup we drove off down the hillside,away from the sleet and wind toward the "comfort" of Brackenbottom.

AND if anyone wants to know how to go 17 hours without sleep underground, and then hitch from Yorkshire to South Wales ask Noel!

J. Duxbury.

PENYGHENT RESCUE- from the surface.

My presence at the rescue was a result of arranging to help the party to deladder the top three pitches. While driving to Brackenbottom I ran into such a heavy storm that it had made the leads in the engine wet, reducing engine power considerably. Surprisingly the heaviness of the storm did not worry me otherwise.

I arrived at Brackenbottom to find no-one there,so I whatted to a local farmer,who told me how to get to the Pot.He thought it inadvisable to take a car up Hull Pot Lane, and as I drove up the first section of the track I began to think that he might be right;however, I met a few sodden hikers who told me that there were a few cars at the shooting hut, so I pressed on. Having arrived,and changed into caving gear,I walked over to the Pot,and met Pete and Roger,who had just emerged after laddering into the third pitch. They kindly informed me that it was not the kind of pot that you came out of,if you intend to deladder it;so I went back to the car with them, intending to go down to the third pitch a few hours later.

After about half an hour, a shaggy,bearded figure came across the moors. Mike had not felt quite up to the trip,so he had decided to come out rather than hold up the rest of the party. As he did not think that they would be out before midnight,I decided I could not stay so long and so, after driving Mike down to Brackenbottom and changing,we went to the pub. We stayed there after the time I had intended to leave,as the car was neatly boxed in by another.

About half an hour later,at about 10.00,some chap came in with the news that he had alerted the C.R.O. because Douk Gill resurgence was up three feet(it is normally dry). One of the two local C.R.O. members tried to phone Settle police station,and having explained the situation to them,the policeman decided there was nothing he could do about it since he was infact no policeman but a farmer. When we eventually got through we asked the police to do nothing until we had seen what state the pot was in.

As we drove up the track we met Bill and Phil who had only just managed to get out. The water had risen so quickly that the rest

had had to stay behind at the bottom of the big pitch. When they came out of the entrance it had a stream pouring into it, whereas normally it is dry. I stopped the car at the rock which had dented the car previously and the other two went on to the pot. They returned rather faster than they had left and urged me to get back to Horton as quickly and safely as possible, because the entrance was flooding badly.

We arrived in Horton at midnight and phoned C.R.O., who told us there were two other call outs owing to late returning. We were given least priority because of the size of the passages in Penyghent Pot. As we hung around the phone box Penyghent, silhouetted in the moonlight with a dark cloud above it, looked really evil-yet another victory for the pot?

I spent the next two hours staring at the fire, smoking an excessive number of cigarettes and driving to and from Horton so that we would know if anything happened. At two o'clock the rescue team arrived so we went up to the pot. When we arrived there were already about thirty people there and the advance party were going down. Some of us filled sacks with oozing mud to dam the streem in case it flooded again.

An hour or so later Gareth poked his head out of the entrance at about the same time as sandwiches and hot soup arrived. The unfortunate people who had brought masses of gear over, including a large tent, from the jeeps started to take it all back. After about half an hour Noel, Joe and the rescue team emerged with all the tackle.

After a little difficulty in trying to get their names and addresses to central contrl by radio it started hailing, so Gareth gave up trying to get his name right and became temporarily known as "Kenneth". By the time we got back to the vehicles the track was covered with slush and after the first jeep had turned round it became a quagmire, which made it difficlt for all the other vehicles. We got back to Brackenbottom at about six in the morning and I set out for home feeling shattered yet relieved, at about seven.

Mike and I were very relieved when the rescue team eventually arrived and the rescue started because sitting about for two hours unable to do anything when people aretrapped by floods was a horrible, drawn out experience.

P. G. Shuttleworth.

THE FIRST THROUGH TRIP IN OGOF FFYNNON DDU.

Although some of my caving is done with the C.U.C.C., much more is with the Eldon Pothole Club and this is what happened to us on a trip last September. We set of one Saturday morning down the Cwm Dwr, then arrived intent upon a social trip to the further reaches of the system, but events did not turn out that way. We hurried through the dry, boudery passages of Cwm Dwr, then arrived at the main O.F.D.II streamway. A mile or so upstream we had fallen in with a party of four members of the South Wales Caving Club (who own the cave). They were going to Grome Passage in the Clay Semis with radio-location equipment to try and establish contact with another team on the surface. Most of the passages in the cave are big, which was especially pleasing as we were carrying the radio, so we were at the end of Brome passage four hours after entering. Here the Welshmen who understood the radio set up their equipment and were soon talking to their friends on the Moor above.

As it seemed we were very close together the Eldon cavers started digging upwards through the choke, while the Welsh open-cast party attacked what started off as a wholly innocent patch of grass way out in the moors, and the subterraneous Welsh went off to perform some more electronics nearby. Unfortunately we from Derbyshire had brought no digging tools on our social trip, only food and gelignite. The latter was very useful, but otherwise we had to dig with our hands. It wasn't long before we could talk to the people on the surface, though they had a worrying time, because our clawings undermined their excavations which promptly collapsed underneath them and on top of us. We soon became quite used to these falls, which made progress much faster than by digging. We had been digging for about four hours when there was an especially big collapse, and daylight and cheering flooded through.

The surface team had passed through the shovels and picks, this proved to be much better than fingers to haul out the rubble. It was not long before the hole out to the surface was quite large and the first caver to do the trip through was Henry Manes, who was also the first person to go from Oxlow to Giant's Hole, the previous deepest cave in Britain. The vertical range of Ogof Ffynnon Ddu is now about 900 feet and the distance from entrance to entrance is about 3 miles. That night the South Wales Light Engineering Corporation worked continuously to make the top entrance safe, but we had only come for social caving so we went off down Dan-Yr-Ogof. Our luck seemed to be out that week end, because we found ourselves doing a Grade Six Survey of Hangor Passage!

Clive Westlake.

DISUSED MINES IN DEVON AND CORNWALL.

During the past twenty years or so there has been a rapid increase in interest both in caving and industrial archaeology and it is therefore rather surprising that so little attention has been paid to the underground exploration of disused mine workings.

With the early industrialisation of this country there are now a great many disused mine workings; far more than there are natural caves. The principal metalliferous mining areas were Derbyshire and the Pennines most of Wales, the Lake District, South-west Scotland and of course Devon and Cornwall which was the world's richest mining region in the first half of the last century. In Devon and Cornwall there are now records of about two thousand disused mines and there are three that remain working, South Crofty and Geevor in Cornwall producing tin, and Great Rock in Devon producing; micaceous haemitite. With the price of tin now at £1300 per ton much effort is now being expended on prospecting the region once again. One million pounds have been spent on repairing and pumping dry the Levant mine.

Of the disused mines probably about 30% can be entered, a further 15% could be entered by digging and the remainder have either collapsed or have been wantonly filled in.

The metalliferous ore usually occurs in flat seams or lodes, typically five feet thick. The lodes can be in any orientation although for some obscure reason, most of the lodes in Devon and Cornwall are inclined at about 70 degrees to the horizontal and lie in a direction E 15 N to W 15 S. The process of removing ore from the lodes is known as stoping. Occasionally the ore occurs in large masses of arbitary shape in which case it is mined by the method known as caving.

The mine is entered either by shafts (which can be vertical or follow the angle of inclination of the lode) or by horizontal passage ways known as adits driven into a hillside ,or usually by both. When the mine is abandoned and pumping ceases the water level will of course rise to the level of the lowest adit. Fortunately, to save pumping costs drainage adits were situated as low as possible, often being driven distances of over a mile to emerge in a valley at a lower level than the mine. Adits often collapse where they come to the surface but it is quite easy to dig away the loose soil and gain entrance. The top-soil also tends to fall down the shafts making the top funnel shaped. Before attempting a descent, all loose boulders and rubbish should be removed from around the shaft collar. It is a good idea to determine the depth of the shaft with a weighted rope to avoid climbing down say 150 feet only to find that there is insufficient ladder and nowhere to step off. The life line should be passed down over the ladder so that it does not dislodge any loose material on the collar. It is a very difficult operation to arrange an efficient double life line on a deep shaft that does not dislodge loose material. Most shafts in Cornwall went down to more than 1000 feet, the deepest being 3200 feet at Dolcoath mine, but the water level in flooded workings is typically between 100 and 400 feet from the surface.

Adits, especially when driven in granite are reasonably safe but care should be taken if there are loose boulders on the roof. On the other hand, worked out lodes or stopes can be far from safe The two walls are often sufficiently strong enough to be self-supporting but pit props are sometimes used. Waste rock is also used to keep the walls apart being held in a wooden frame. When the wood rots this rock will not usually support itself and will fall perhaps several hundred feet to the bottom of the slope. Horizontal passageways (or levels) with tramlines cross the slope at a vertical seperation of usually 60 or 120 feet for the purpose of removing the ore and then are built on pit props wedged between the two walls. Again these become unsafe as the wood rots. It is advisable to walk on the tramways rather than the floorboards in order to spread the weight and a life line can be advantageous on tricky sections. When laddering between levels in an unstable stope the ladder should be belayed to more than one point.

If there is a quarry near the disused mine, it is inadvisable to be underground when blasting is in progress. Foul gasses are not a great problem in metalliferous mines (except where rubbish or dead animals have been thrown down) although they have been the cause of death in abandoned coal mines.

It is evident from this article that although extra precautions are necessary to mantain the usual standard of safety in caving, the mines of South West England provide a vast opportunity for caving activities. Every effort should be made to prevent the wanton filling in of those workings that remain open.

Ken Gove..

ST. BRENDAN'S DIG.

Last year's effort

The small band of intrepid spelios who visited Ireland last year were somewhat excited at the discovery of a shakehole on the hillside, just off the dry, bare limestone river-bed leading down to St. Brendan's Well. The deep roar and strong draught emanating from the hole suggested at least a few miles of master cave and/or caverns measureless to man. A lot of effort, with pathetic digging equipment, suceeded in opening a hole into a bedding plane. The only one present, small enough to enter, was thrust below and returned to report a guestimated 50feet of bedding plane before the passage split into several directions. The call of Guinness stopped further ventures that night.

On returning to the dig we found that the entrance had collapsed and further digging only caused a larger collapse, nearly burying our President. Poor digging irons and a million gnats prevented the re-opening of the hole.

Round Two

So it was still with great expectations that we returned to the dig this year, properly equipped. A concentrated effort by Joe, Mike R. and Noel got us down to bed-rock in a day, whilst the rest of the party gonked down Coolagh River. The next day it was the turn of the Coolagh River mob to sweat a bitand an entrance was soon reopened to the bedding plane. Mister Explorer 1968, complete with tweed jacket, soon disappeared below. He returned to report a 20 foot pitch to a rifty streamway not far beyond the point he had stopped last year. Some time was then spent making the entrance more safe, and despite many attampts by Mike R. to bring it down again, it soon looked as safe as ....well, houses.

A three man exploration team then set off with twenty foot of ladder, deciding to try and do without the dinghy for a while. The pitch was descended to the stream, there being a perfect belay just at the pitch head. Upstream a sump was reached after about fifty feet and downstream after seventy-five feet. So ended the saga of the St. Brendan's Dig. Visions of sloshing along master caves disintegrated. Despite much thrutching and swimming no further passages could be found.

Flooding

Not long after the explorationof the dig, there was a very heavy rainfall during the night. On our way to a Doolin-St. Cath's trip the following afternoon (did we ever get underground before noon?) we were surprised to find a huge lake by the road to Lisdoonvarna, where the Owenterbolea sometimes flows. Moving on towards Upper St. Brendan's we found the road there impassable.

Later on, approaching St. Brendan's Well ~~from the town~~, we were amazed to see a raging torrent pouring down the ~~"dry river valley" from~~ Upper St. Brendan's. From the flattened grass near ~~the dig it was~~ apparent that water had been pouring out of it at one stage. Caving was abandoned for the day and our other dig, near Ballynalackan School was visited.

ST. BRENDAN'S DIG

POLL-NA-PSTOFF

N.W. CLARE EIRE

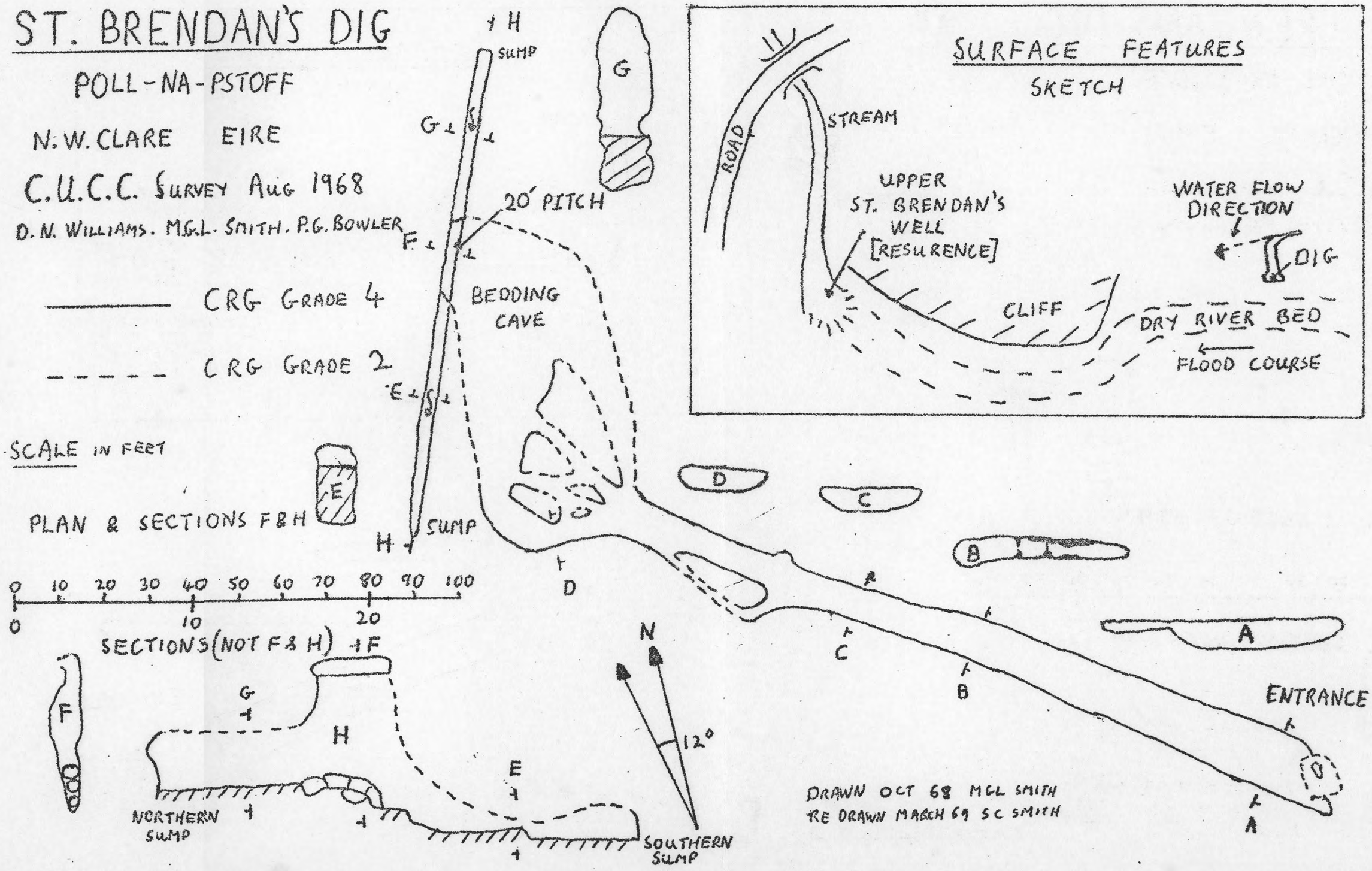
C.U.C.C. SURVEY AUG 1968

D. N. WILLIAMS. M.G.L. SMITH. P.G. BOWLER

——— CRG GRADE 4

- - - - - CRG GRADE 2

SCALE IN FEET



Surveying

For some fool reason it was decided that we should survey our "master cave". This was done with unnecessary accuracy by Noel, Martin (scribe) and Pete (general stooge) using Noel's originally immaculate geological gear. Although the inordinate time spent surveying such a small cave can to some extent be explained by Martin's leaving the cave half way through, for a sch-you know what, the number of inches surveyed per minute still works out absurdly small.

From surveying it was found that the level of the water at the bottom of the streamway is about the same as that at the resurgence at St. Brendan's Well. It was also found that last year's guestimated 50' of bedding plane was in fact over 200'. Diving upstream would be the only hope for discoveries. Dye testing the Poultalloon water might prove interesting. The volume of water in the St. Brendan's dig is small compared with the resurging water at St, Brendan's Well (about one tenth) It is possible that the systems feeding St. Brendans Well remain separate rather than forming the master cave we had hoped for.

Noel Williams

POLL CLOGHAUN

Coolagh River Cave is undoubtedly one of the finest caves in Clare and has become a favourite of the club. It is also of interest for two reasons: 1) It floods very easily and 2) it has no known resurgence. Our expedition this year decided to go in search of the Ballynalackan Master Cave.

A search was first made in the dry valley on the surface above the end of the known Coolagh River Cave. Besides a rift that became too tight the only readily pushable dig we found was the one that became known as Poll Cloghaun. We decided to dig here because of the loud roar that could be heard from the original small opening - but we had been misled by roars before!

Noel Williams

Excavation

The excavation of the site started on 17th August. The hole which had been first discovered was quite tight and led into a narrow columnar rift which was blocked with boulders. Digging in this restricted space was difficult and as it did not seem very safe it was decided to dig a larger shaft from the surface.

The dig was at the point of intersection of two joints and this had given rise to a vertical, man-sized, fluted chimney. The thirty feet near the surface was full of jammed boulders and these were lifted out in a bucket or, in the case of the larger rocks, by ropes alone. The more stubborn boulders were persuaded to move by liberal applications of explosive.

It was rather disturbing on visiting the dig after the night of exceptional rain, to find that the dry valley containing the dig had had water flowing down it and that water was present only ten feet below the surface in the dig. The water level fell rapidly though, and we were able to resume digging the same day.

Breakthrough was achieved seven days after the start of the dig and this was heralded by Joe Duxbury throwing the crowbar into a hole

which appeared in the floor. To the delight of all concerned this was heard to fall for several seconds before hitting the bottom. When a man-sized hole had been made all the ladder was joined together and Pete Bowler descended. The ladder was unfortunately twenty feet too short so the cave could not be explored until the next day.

Exploration

On returning the next day the entrance pitch was found to be exactly eighty feet. The initial exploration of the cave was carried out by two parties; the first one going down stream and then the second one going up.

The downstream party found 200' of well formed streamway which ended in a sump (sections A-E) There was also an auxiliary sump (right sump) which took water when the level was high. This first exploration took place immediately after a period of heavy rain and flooding and as a result the water level was high. The air-bells shown on the survey were inaccessible at this time and were discovered later.

Having found little of interest, the downstream party amused themselves on the mud slide (section D). Then the upstream party was allowed to descend and only 50' upstream of the entrance came upon a large chamber filled with a boulder choke (section G) and this was at first, discouraging. However, after some digging entrance was made into a well developed phreatic tube about 5' high and 6' above the level of the stream (section H). This phreatic tube was crossed by another after 50', and turning left at this junction led after a further 50' into a second, and larger, boulder choke. This choke was so large and complicated that it took some 10 man-hours to discover that it went nowhere.

It was found that the water passed through the choke (as shown on the survey) coming out of a low bedding plane on the east side. Later the survey showed both boulder chokes to be precisely underneath a large shakehole on the surface. The shakehole is 50' in diameter and 30' deep and this suggests that the two boulder chokes are parts of one large collapse.

Surveying

Soon after the discovery the cave was surveyed by three members of the party (Martin Smith, Noël Williams, Steve Smith). During the survey Pete Bowler, who was looking round the cave, discovered the 'C' passage extension. The short tight passage to the right at the junction leading to the second boulder choke had been found already but the 20' climb into the narrow, awkward, extension had been overlooked. The extension looked promising but was frustrating as it became just too tight at the end, when a larger passage could be seen crossing it.

When the survey was drawn up an interesting fact came to light. The cave was formed by erosion along joints which were regularly orientated at approximately 12° & 78°. A closer look at the survey of the Coolagh River Cave (UBSS proceedings) showed a similar pattern in the lower reaches. A surface survey was carried out to relate the two caves and the joint developement can be easily seen on this (INSET).

POLL CLOGHAUN

N.W. Co. CLARE EIRE

TRUE N

CUCC SURVEY. AUGUST 1968.

DN WILLIAMS. MGL SMITH SC SMITH

—— CRG GRADE 4

- - - CRG GRADE 2

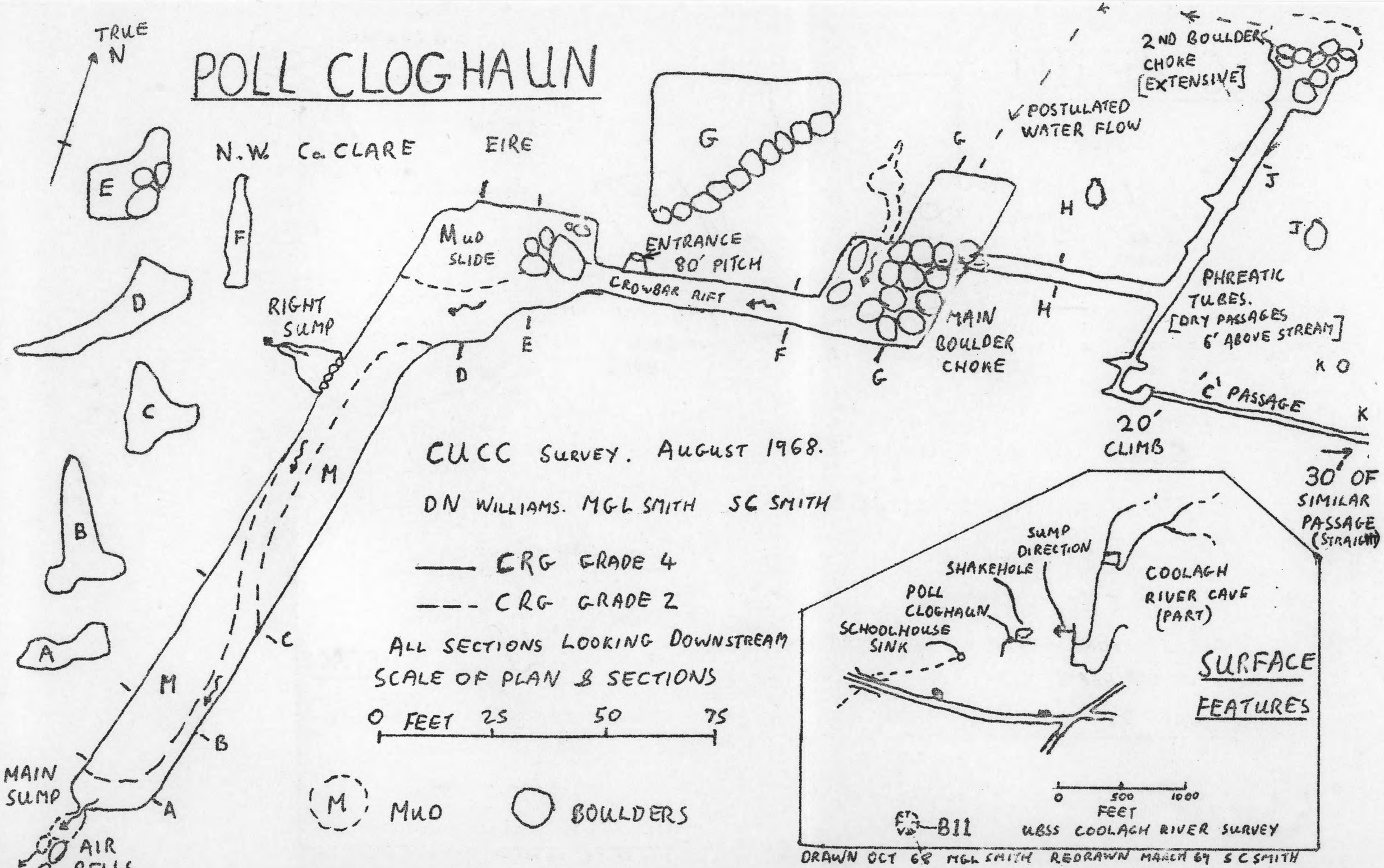
ALL SECTIONS LOOKING DOWNSTREAM

SCALE OF PLAN & SECTIONS

0 FEET 25 50 75

M MUD

BOULDERS



Further Extensions

From this point of view the cave does not hold much promise. The upstream end is the most likely but the most this could produce would be a link to Coolagh River Cave which is only 100 yds. away. There are two avens to be climbed and it might somehow be possible to get into the passage which cuts across at the end of the 'C' passage extension.

Downstream, the right hand sump is probably too tight but the main sump may be divable. Unfortunately, as was apparent during the digging, the obstruction which causes Coolagh River Cave to flood is still downstream of Poll Cloghaun. The master cave must be sought further down the valley towards Ballynalackan Castle.

Martin Smith

CAVING IN THE LONG VAC TERM

The Long Vac Term promised to be a very lazy one from the caving point of view as well as from the work. During the first week, however, I was pressed into arranging some meets by Jeff and Steve. On checking I discovered that Noel, Ken and Mike Nelson were also up and eager to do a trip. Our only sources of information were Gemmel & Myers and Pennine Underground, so we decided, quite rightly, that we ought to go to Yorkshire. Notts Pot stood out from the rest of those in G&M so we planned a meet for 27th-28th July. However, Noël remembered that he had already agreed to do Giants-Oxlow with Clive that weekend so, since we had missed this trip during the Easter Term, we decided to scrap our original plans and go to Derbyshire instead. Mike and Noël hitched to Clive's on the Friday night and the rest of us went in Ken's car. On our arrival we met Mike but not Noël. The next morning when we got up we found Noël fast asleep on the concrete outside the unlocked back door.

Undaunted by only two hours sleep he set off with us for Oxlow Mine. After being delayed by the farmer for an hour, we set off down the mine at about 11am. After enticing Noël away from East Chamber we went on to the 1000' hands and knees crawl. About half way along we were caught up by Clive with a party from Shepton Mallet C.C. After noshing in Rainbow Aven Clive pushed on and cleared the link. I followed and then there was a long wait while Mike and "Butch" (a Mendip type caver) managed to get stuck and unstuck. After two Shepton chaps had joined us we set off along the 700' flat out crawl with the tackle for Giants. The first half is a rather boring section with a pebbled floor, unlike the second half which is very sporting. As if taking a rope through this section isn't bad enough, I suffered in the ducks. I can only close my left eye independently of the right - not vice versa, so when I came to the middle duck, which invites you to put your head facing the left, I got an eye full of muddy water. We congregated and noshed near Sardine Chamber. To our suprise the first person in the next party was Butch who had almost stripped to get through the link. The trip to the bottom of Giants is quite complicated and part of the passageway is reminiscent of Yorkshire streamway. In one such passage Jeff, nife cell 90% clapped out, walked over a 10' drop, apparently without damage. After a quick swim in the Canal we started out. On leaving the Giant's stream we made a long detour up a steep side passage. On retracing our steps we soon found the correct route and met Clive at Sardine Chamber. Going out through the flat out crawl was

very tiring,though fortunately I didn't have any tackle. The link gave no trouble, but the 1000' hands and knees crawl was a long plod and the fixed ladders and boulder piles in Oxlow were very energy absorbing. After seven hours I reached the surface to be greeted by Mike , who had gone out after getting stuck in the link. Three hours later Ken, Jeff ,Noël and others appeared. They had been held up in the ducks by Jeff's light clapping out at the same time as his trousers decided to fall off. Also Noël thought he had lost a ladder in the ducks so the valiant Jeff went back and forth through the ducks until Noël somehow discovered the ladder under his feet. Ken just made his usual comments about crawling.

The next day Ken and I joined Clive and a surveying party down Knotlow Mine. After extinguishing a fire in the engine we had a speedy and pleasant trip in all the passages in the lower section of the now pongless mine.

The following weekend Jeff, Noël and I hitched to Yorkshire. After meeting each other at various places en route we met Phil Shields at Brackenbottom. Much later Ken arrived in his car with the gear and the nosh. On the Saturday we went down Notts Pot by the left hand series. After some difficulty in finding it and then in finding the new entrance we had a very efficient trip. The collapsed entrance which you pass under looked most unsafe so we negotiated that section very quickly. (The entrance has collapsed further since that time). After Three Ways Chamber there follow several pitches with very little horizontal passage between them. On the last big pitch my wetsuit trousers started to tear so I refrained from jumping in the final sump. We could not have done this Pot had not B.P.C.. kindly lent us some ropes and belays (Pete Bowler had taken half of ours ready for the trip to Ireland).

After noshing we went out and over the fell to the Marble steps which is a fairly dull pot unlike the entrance which is quite impressive. However, it is worth doing for the entrance and the 90 foot pitches. We got back to the car at about 1.am. and cooked "dinner" at Brackenbottom at about 3.am..

On the Sunday Noel,Jeff and Phil Shields started hitching back to Cambridge while Ken and I investigated some shake holes on Pen-y-ghent We met Noel and Jeff about two miles down the dale,so we gave them a lift to Settle where the traffic was slightly more frequent.

The reaction to the Giants-Oxlow double trip was a mixture of a sense of achievement,utter exhaustion and of a strong lack of desire to do it again. Ken,Steve,Noel and I have since returned on a very successful trip to the pot finding it much more enjoyable in the crawls than on the previous occasion. The standard of caving was high owing to the fact that the trips were all very interesting(especially Notts pot) and quite hard. Also we were fairly efficient in rigging the pitches,something which hasn't occured since!!

Philip Shuttleworth

ALUM POT (LONG CHURN),11th November,1967

Looking back through nearly a year, you must forgive me if the facts are not too straight. As it is,I can only recall the interesting part, namely from when we reached the main shaft till when we left it again.

After we had recovered from our initial exertions and the stupendous sight across the chasm,we made our way down over the bridge

to the 60' pitch, which was occasionally spattered by the main waterfall. Phil Shuttleworth stayed at the top of the rift because he thought that there was too much water below for someone without a wetsuit. When I got to the bottom of the pitch, the way on was not immediately obvious, so I took the easy way merely by sitting in the stream - and found myself hurtling over a 10' cascade! Fortunately the ledge was wide and I missed the one big rock, so I was able to continue down the 25' final pitch into the rift, with the water thundering underfoot. Further descent to the sump was obviously impossible, and having twitted about a bit, including heaving a rotten sheep's carcase down to the sump, we huddled under the 60' because it was suddenly conspicuous that the noise and volume of the water had increased just a little! The ladder was now enveloped in a heavy spray, and as the number of huddlers slowly dropped, so we got wetter and colder.

The top of the pitch was now being battered by the irregularities of what had become a Niagara, so Pete Bowler, the last up, got more than his share of "encouragements"! After a desperate de-rig we returned as fast as possible to the chamber that looks out to the main shaft, only to find that the last 50' pitch was unclimable due to the overbearing weight of water coming down - We had not left a d/l. Gareth did have a try, and we were rewarded by the sight of him falling 6' or so inside a column of spray.

So we just sat around and waited either for the other party (who had gone to Sell Gill) to find us and rig the Big Pitch or for the water to drop. Two of us sat against Phil Shuttleworth who was feeling fairly cold in his sodden woollens. The only outstanding memories of that 2-hour gonk are the singing heartily and the off-putting arrival of the farmer's wife who gestured vaguely from the top of the cliff. Our predicament was finally resolved by Noël climbing valiantly through the flood to the top, and after an absolutely incredible amount of complete spasticity regarding the hauling of the tackle via a dry by-pass, we all reached the upper passage and had an uneventful journey back. Another victory for Yorkshire weather!

Joe Duxbury.

THE "GREAT FLOOD OF MENDIP" AND ITS EFFECTS ON SWILDONS

As was widely reported in the press very heavy rain fell on and around Mendip between midday Wednesday 10th July and Thursday 11th. This ranged from 3" in the south to over 7" at some places near Bath. (This is normally 1-2 month's rain!) Widespread flooding resulted and several bridges collapsed, including one in Pensford and one in Keynsham. On Mendip Charterhouse appears to have come off worst, followed by Priddy. There are reports of a ten foot wide, three foot deep stream in Longwood Valley, with six foot of water in Lower Farm. There was also a large stream in Velvet Bottom which removed several yards of the Priddy-Charterhouse road. These joined together and caused havoc in Cheddar Gorge. Several people were forced to abandon there cars and climb the cliffs for safety. One of the quarries near the gorge was badly distorted by water pressure causing the rock face to collapse. A very large stream flowed out of the show caves and it is reported that a hole large enough to lose two double-decker buses in was scoured out near the road. Work has been going on for several months, but as far as I know the road through Cheddar is still

closed (article written October '68). Priddy Green became a lake and the water even got into Priddy Stores.

It is fortunate that the deluge occurred midweek and no-one was underground at the time as many caves (including Swildons) were virtually filled with water. In fact there was a party in Swildons around Wednesday lunchtime but Mr. Maine refused to let another party down later on. There was also a Cambridge party in Stoke Lane in the morning. There were of course quite startling effects in several caves, the most famous being the new by-pass to Swildons forty. A quick summery is given below:

Longwood/August - Both routes down were originally closed by boulders, but the way into Longwood has now been re-opened and August can be entered via Christmas Crawl. The wet chimney in August is still blocked.

G.B. - The sump backed up to fill most of Main Chamber, and flooding the ladder dig. Only the Devil's Elbow route appears to be open (but nothing has been heard of the ooze). The entrance is badly damaged and scouring in the Main Chamber has made the Chain and Ladder pitch 15' foot deeper while the climb to the ladder dig has been shortened by the same amount.

Goatchurch - much silt was deposited in the drainpipe.

St. Cuthberts - Some temporary static sumps appeared. About 5 tons of earth was removed from the spoil heap of the Dining Room dig and some of this ended up by filling Barry Lane's underwater dig in the sump. However, I believe he has started again.

Priddy 9 Borrows - Earth around the entrance collapsed, but this has since been cleared.

Coopers Hole - Almost filled by mud and rubble.

New caves:

Hawthorn Hole - On North Mendip. It was visited by S.M.C.C. but found to be only 25' deep with little chance of extension.

Manor Farm Dig - A new shaft has opened up alongside the U.B.S.S. dig.

East Twin Valley - Another small entrance has appeared and this is being dug by the B.E.C.

Tynings Farm - 300' cave heading towards G.B. 100' deep, including 25'pitch. It was examined by A.C.G. but the entrance has since been filled in by the uncooperative farmer.

The Effects On Swildons

I went down Swildons on the following Saturday with Clive Westlake and was able to note the many changes before they were distorted. The effects were obvious as soon as we reached the depression where hay was caught in the tops of the trees, and there was a new entrance. We had intended to do the figure of eight, but although this had to be abandoned

we had a very interesting trip. The new entrance is a 10' high rift which is more comfortable than the old one, (it is situated to the left of the old one, under a tree) but gating is a rather difficult problem which has not been solved as yet. The boulder that you had to crawl over has disappeared somewhere downstream.

The "signpost", a large rock which used to lie under the showerbath, was washed downstream to just below Kenney's dig, a distance of about 60'. This used to provide a usefull foothold when coming up the streamway, and, as happened elsewhere, we found ourselves trying to balance on empty space where familiar holds had disappeared. Two boulders have appeared on the chockstone just below the showerbath making this more awkward than before. A large piece of the old stal. flow at the top of the 12' pot has broken off and jammed across the passage, so that you have to crawl over the top for the traverse and underneath for the direct climb. Where the passage from the Old Grotto enters the Water Chamber, the floor has been scoured out leaving a 4 foot pool. The Swildons stream flows through hay fields before it sinks, and although most of the hay had been gathered, a remarkable amount was swept into the cave during the flood. This gives a good guide to the water levels produced by the flood. The sink was festooned with it and so was most of the upper series. The Old Grotto was a very spectacular sight. It seems that almost all the upper series was submerged, the only parts not having evidence of stream flow being the higher Boulder Chambers in the Pretty Way. The highest level of the entrance water appears to have been about 8ft. above the stream bed, some of the hay being blown into the trees by the very strong winds. Backing up being caused minly by the small entrance passages and the Water Rift just before the 40. A lot of mud and gravel was deposited in the streamway and Kenney's dig. Most of the dammage was probably done by the "pulse" of water produced by the entrance giving way.

A similar effect probably caused most of the damage" in the Lower Series, the pulse being produced when the water pressure pushed out the rocks which had collected under the Water Rift forming a "new passage" by passing the pitch. At the end of the Water Chamber the floor now drops about 10' into a sloping passage. This is easiest to reach by traversing over a couple of blocks and climbing down. The same rift is followed down until a hole on the left gives access to the ledge 8' up the "forty" pot on the east side. A S.M.C.C. rescue practice the following weekend showed that this hole was very awkward to bring a stretcher up and so some of them later enlarged it by blasting, which caused some controversy later on. However, it was done very neatly and doesn't really affect the passage at all. Most of the rift is still floored by loose boulders, so its depth is still not known. There is a lot of stal. flow on the side of the rift and the area above the last ten feet is completely filled, giving a short piece of floor before the keyhole. The old pitch can still be reached by traversing along the top of the rift. The final climb overhangs slightly, and is rather difficult in high water conditions. A rope belayed on the other side of the hole is useful, but not as good as a couple of very good handholds, which unfortunately a bit of time to find the first time. It is best to take a short rope if any inexperienced people are going down the climb for the first time. The characteristics of the area under flood are not known yet, but laddering the pitch if floodingiis possible is a sensible precaution.

The first effect of this new pulse was to break off part of the

stal. barrier on the corner 100' downstream. This was broken up and travelled about 50' before coming to rest. Then the 20 filled right to the roof (decorating it with hay) nearly 40' above the foot of the pitch. The increased flow was enough to send a stream, which was probably bigger than the normal stream, through Barnes' Loop, where hay can again be found. It seems to have come some way up the climb to Tratman's Temple as the stal. flow in the pool just downstream has been pocketed apparently by small stones and pebbles. A remarkable amount of material has been deposited at several places, mostly in the pools. The Double Pots is now only about a foot deep. Sump I backed up about 30' vertically, over 100' horizontally, leaving hay on the roof upstream of the Priddy Pool Inlet and depositing a layer of mud on the boulders upstream. This made them very slippery at first, but has gradually disappeared since, presumably attached to various cavers. We had a look at St. Pauls on the way down and again there is evidence of large stream activity. One flowed from just after St. Pauls' Grotto and disappeared in the first mud sump and the second went into the mud sump, filling it right up. Alan Butcher (S.M.C.C.) and myself started bailing this on the Tuesday and the work was finished by an unknown party the following week-end. Several gravel banks had shifted and some new pools had formed.

The large flow through sump I moved several rocks in the floor of the sump, making the pool several feet deeper and jamming the guide wire. It had also backed up because of new mud banks downstream, especially the one just after duck I, and the top of the spike was only just showing. On my trip with Clive we managed to lower the level (it's now less than a foot above its previous level) and then freed the line. We turned our attention to duck I which had sumped and hadn't been passed since the flood. I soon got through the 8' sump and we set about the gravel bank holding it. The floor had been scoured out and the diving opperation had to take place in 8' of water, using waistlines as a safety line. When we returned it had gone down enough to see through and with further work by ourselves and then Bob Craig (S.M.C.C.) it is now back to a comfortable duck, but still in deep water. Creep I has been scoured out in a similar fashion and is now just a wade. The streamway in II is again very silted up, especially the pots. At the Landing a mud bank had appeared right across the stream, which had been diverted under the wall, via the Muddy Sump. Creep II was also bigger but was a very nasty, if short, duck -1" airspace. The swim in the canal beyond was very enjoyable, but we soon came to a stop at duck II. Deciding we'd done enough for one day we returned after 4 hours underground.

Duck II turned out to be two 8' sumps, which has now been lowered to its original level. The diving weights stored by II were strewn all over the place, but most have been found, I believe. Sumps II and III are at least a foot deeper than before, so that the duck between Great Bell and St. John's Bell has sumped and the rawlbolt is underwater. These sumps are definitely NOT safe for free-divers at the moment. Sump IV is still divable, but there have been varying reports of the state of Swildons V. The U-tube squeeze at the start of Shatter series filled up with a particularly revolting brand of liquid mud. This has so far been attacked by two parties, one from S.M.C.C., the other from A.C.G., and should be clear soon. As far as I know all other passages are the same as before the flood.

A few weeks later a rather novel effect of the flood was noticed-

grass was growing from the hay. Three sites have been marked and the rate of growth of the grass is being watched. It is very yellow (due to the lack of light) but seems to be growing quite well, some blades having reached about 6" by mid-September. It will presumably die as soon as its food supply (the hay) runs out, so thoughts of cultivating a lawn in Swildons are a little too hopeful.

This flood should give us a healthy regard for the power of moving water. Some of the larger boulders moved were probably several tons. It also indicated the best "safe" places to watch future floods if you happen to get caught. In the Upper Series, the only really safe places are the highest boulder chambers in the Pretty Way, but presumably the Old Grotto would be safe for most floods, and if the water did rise to such proportions , a retreat could be made up the Pretty Way. Barnes Loop would seem safe enough, especially downstream of the large stal. barrier. Tratman's Temple is also very safe, as would be the mud slopes before sump I (one could retreat to the higher levels of the slope in a really severe flood). Between the 40 and the 20 the climb into the roof seems best, but as far upstream as possible because of the large backing up due to the constricted passages below the 20.

The extensive changes in the system will obviously change the severity of several of the trips. In general the 40 has become easier (and of course, the need to queue has disappeared), but I hope that the standard rescue call-out caused by inexperienced people being unable to climb the 40 ladder will not become a standard call-out caused by the same being unable to climb the ledge! Swildons II is still rather wetter than before and shouldn't be done without some sort of protection from exposure. But it does make caving so much more interesting if the caves change every now and then! (See page 25 for ammendments to this article Ed.)

Pete Bowler.

A JUSTIFICATION OF THE ST. CUTHBERTS LEADERSHIP SYSTEM.

Grumbles occur every so often about the difficulty of entering certain caves because one has to have a qualified leader; indeed, once upon a time, I myself was occasionally frustrated by this. However, I now fully realise that in the case of St. Cuthberts (on Mendip) the system is vitally necessary. The B.E.C. proved this to me in a very cunning way. It happened like this:

I belong to S.M.C.C., which has joined the B.E.C. in digging in the "Dining Room"(near the bottom of the cave), and a few weeks ago I was persaded to go with them on their Tuesday evening jaunt. This time there were, I think, thirteen people in the cave. For six of these it was a beginners trip; Dave Irwin and two others were conducting an experiment for Dr. Ford, and taking survey notes; the rest of us were digging. Having reached the dig despite several delays, I foolishly volenteered to follow Dave Irwin down to collect a pick-axe from the sump. We went via Rabbit Warren Extention just to add to my confusion. Having retrieved the pick-axe, I got instructions from Dave, who was now working in Gour Hall, on how to return to the Dining Room. I eventually got there, having examined five or six side passages. But by now the diggers had decided that they had done enough for the evening, and had left. I carefully returned to Gour Hall (without any wrong turnings), expecting to go out with the surveyers, but they had gone, later admitting that they had hidden at my approach; their

excuse was that I sounded like a novice party arriving, indicating that it was time to leave, and they wanted to examine this particular passage before they had to go.

A bit of logical deduction provided the useless information that I was in a mess as I didn't know the way out through the complexities of Cuthbert's. The most obvious course was to follow the stream. I had access to two bits of streamway, one near the sump and the other by the Dining Room. I followed each as far as I could, but each closed down fairly quickly, so I attempted to follow our route in. I managed to find my way to Everest (a large, well-known boulder), but soon after that I wasn't quite sure of the way until I spotted a red and black wire, which I assumed to be the telephone wire laid nine days before during a rescue practice. This led me all the way to the entrance-probably one of the few times that a rescue practice has helped a caver in difficulty.

When I reached the entrance rift it was obvious that I had been abandoned as the ladder was missing and water was coming down. The climb was a lot easier than I expected and I was soon sitting under the LOCKED entrance, singing. An attempt to dismantle the lid failed by one bolt, but about half an hour later Dave Turner arrived to release me. Back at the Belfry I found several people changing into wet clothes to come and look for me. The digging team had changed and gone to the Hunters Lodge Inn for the customary pint before the surveyors had got out. Each thought that I was with the other party until their highly amusing meeting in the bar, when Dave Irwin asked where I was as he wanted to buy me a pint. As it was still a quarter of an hour to closing time they decided that I could wait -they even failed to bring a bottle. SUch incidents as being left alone in a complex cave without knowledge of the route out, removing of ladders and releasing the dam so that water flows down the pitch are useful as a test of caving ability; but to go to such lengths to stop me drinking is inexcusable. The whole trip lasted only about three hours, but it seemed much longer.

Route finding in caves always seems very easy when you're following some one else, but when you have to decide between several similar passages yourself its very different and easy to lose your way (When the leader says "I'm lost," its all part of caving). My conclusion from the evening described above, and from times when Cuthbert's leaders have got lost is that the Cuthbert's leadership system really is necessary.

I wonder if I could find my way out of Dan-yr-Ogof....

Pete Bowler.

W.L. SERIES, BALCH CAVE.

Balch Cave was one of many found at Fairy Cave Quarry, by quarrying. These seem to represent different levels of a system formed by the stream now running through Hilliers Cave. Balch originally contained some extremely good formations, but in 1965, the owning company decided to work in that part of the quarry, and so Balch was doomed to disappear. A rescue programme was launched by Cerberus Speleological Society, and most of the smaller formations were removed (I believe that they are now in Wells Museum).

In June 1967, the company stopped working this corner, and whilst clearing the remaining boulders they noticed several small holes in the rock face. Two of these gave access to the remains of the original cave, now only about a hundred feet of bare passage. A shaft in the floor of the

quarry was gated by C.S.S. in the interests of safety, by cementing an oildrum into it; unfortunately they were then unable to enter it at all, and nothing further has been heard of it.

In the corner of the quarry, a small hole was dug out, by Whittacker and Lawer, exposing the 250' of passage known as M.L. series (August 1967). This again contains some of the best formations on Mendip. The entrance is now four feet square, and the only awkward part of the main route is the climb just after the entrance. However, the cave is not completely clean, and it is not advisable to go down in ordinary clothes. A waist-high false floor, supporting a very decorative grotto, enforces a short crawl at one point in the main passage. This is normally ten feet high and three feet wide, terminating in a steep chamber. The climb can be ascended to an inlet passage, which ends in a constricted sump, almost certainly connected to the Maypole Series in the old cave. On the left of the chamber is another small inlet, and to the right at the bottom Pink Pool Chamber can be entered; this has the best formations of the cave. On the left, just before the main chamber, is a rift formation ending in a static sump. There is also a grotto in the roof.

Formations vary from the delicate straws in the roof grotto, to the flow which almost fills the main passage in one place. There are a lot of very large calcite crystals, normally in the pools. The Pink Pool consists of stal. flow of a very delicate pink, enclosing a very pretty pool. The best formations have been taped and boards have been placed on the floor of the roof grotto. Entra nce is strictly controlled by Cerberus, and one of their leaders is normally needed for a visit.

I first saw the cave on the 7th September, on a tourist trip with a friend. Two days later I was back on a working party, which included Alan Butcher, Bob Whittacker and Jack Hill. The gate, constructed in the Cerberus tradition of indestructibility, is now set in concrete, and it would be virtually impossible to force an entry. Another hole was investi investigated, but this consisted of only 40 ft. of passage, of which 20ft. were almost vertical and required a ladder. This ended in an extremely messy, impassable mud choke. Having retrieved the ladder from the choke, Alan Butcher and myself went to investigate the rift on the left of the main passage (see sketch section). An awkward climb/traverse leads to a tube in the floor, which comes out over a large open rift. Due to a lack of belays my waist length was used, tied round a solid piece of wall. The space at the top of the pitch is very limited, and Alan, who is rather larger than myself, tangled the ladder. We discovered an easy way of descending this extremely awkward rift; to keep oneself in the wiber parts of the rift, it is necessary to descend the first eight feet at an angle of 45%. However the walls are too smooth to chimney, so, to stop oneslf from sliding, it is best to climb down the ladder using friction. Unfortunately we had only 20ft. of ladder, 15ft. too short. I did, however, see a pool and a possible way on.

Three weeks later, on the 30th September, we returned with more ladder. I again did the exploring, and tried an ascending mudbank first, but this closed down quickly. At the other end of the pool, which itself was five feet deep. It later appeared that it was possible to dive under the bank, but my first attempt was over the top. It was too high and slippery to climb, so I traversed onto a small ledge at water level, and dug at it with my hands. Having red uced it to half its former size, I was able to climb over it, and look at the continuation of the pool. I hung the ladder down into the pool, as the climb looked impossible, and desceended into 7ft. of water. Unfortunately, the rift ends 12ft. further on, though there does seem to be

a way on underwater. Furthermore, looking back towadds the head of the pitch, there is a six foot tube keeping the line of the original tube. It was rumoured that Dave Drew was going to dive the sump, but this never came to anything. The rift is very muddy, and returning down the main passage it is very difficult to keep clear of the formations.

I have visited the cave twice since; on the first occasion I conducted C.U.C.C. around it as a compensation for the cancellation of all other trips due to the foot and mouth epidemic. I believe Gareth Jones and Phil Shields took some photographs. The second occasion was on December 16th when we had a good look around for places to dig. We also visited the remains of the original Balch Cave. The gradual spoiling of the formations, is of course occuring, and I would ask that anyone visiting W.L. Series in the future take as much care as possible.

Pete Bowler.

(Ed.'s note; There is actually no sketch accompanying this article.)

QANAT CAVING IN IRAN

Qanats are actually artifical tunnels, and as such, might not be considered as being worthy of any self-respecting speleologist. It is true that in some respects they lack the variety of most natural caves, though they have a distinct similarity to Southern Stream Passage, but what they lack in this, they make up for in other ways.

First, what are qanats? Basically, they are artificial tunnels with a slope of not more than two percent, which are dug into sloping ground to tap the water table, thereby to provide a continuous flow of cool fresh water, protected from evaporation. The origin of qanats is uncertain, though the idea is definitely of considerable antiquity. It is very probable that they were used in almost exactly the same form as today by 200 B.C. when Polybius mentioned similar phenomena in his "Histories". They are today extremely widespread, in Iran particularly, but also in neighbouring contries; they are also found all along the North African Coast, in Peru, in China, and an example has even been found recently in Bavaria.

Construction is carried out by digging a series of vertical shafts, and from there developing the linear horizontal tunnels. The vertical shafts are used to remove the excavated material, and to provide access and ventilation for later maintenaace work. All the constuction work is, even today, done by hand, with no machinery powered from the surface whatever; therefore, all that is to be seen is a long straight line of holes, each surrounded by a crater of excavated material. The tunnels, when built, are in an ideal section, about 3'6" high by 2' wide, although through time they develop into much larger sizes by roof collapse, and erosion generally. Some of the older ones in the area where we were staying were up to 15' high, and several yards wide. There is usually 6" to 8" of water flowing at the bottom. The vertical shafts usually have about a 2' diameter, and are commonly unlined.

Perhaps the most interesting feature of these qanats is the depth of the vertical shafts, and the total length of some of them. In our area, about 200 miles east of Teheran, the longest qanat was about seven miles long, and the deepest shaft was getting on towards 250'. Compared with some, though, these are small. In the area around Yazd in central Southern

Iran, which is often considered the home area of the qanat diggers (moghanis), qanats of 25 miles are reported, with deepest shafts going down to 1000'. It is for these sort of reasons that qanats can provide an interesting subject for exploration for cavers of the most orthodox genre. A further attraction is that qanats are commonly not found in a straight forward linear fashion, but may consist of several branches, some dry, some containing water, which have been developed through the years; for, when one particular branch goes dry, perhaps due to a roof collapse, or to a falling water table, other branches are dug to maintain the water supply upon which many villages may absolutely depend. Consequently, all is not straightforward underground, since the various branches can be confusing even though there are vertical shafts as signposts.

Our party was totally unequipped for the exploration of qanats, possessing only a few hundred feet of ¾" rope. Nevertheless, nothing daunted, the auther constructed a helmet out of an old plastic water can (the danger from falling rubble is considerable), used the Landrover as a belaying point, and lowered himself down the nearest shaft (which happened to be about 70' deep). I then crawled downstream, only to be confronted by an extremely dead sheep. Having retrieved the hand torch, I carried on exploring upstream. Climbing back up the vertical shaft using a safety rope and an improvised chimneying technique was no mean task. A rather different qanat was also explored, one which at our point of entry, was much shallower, (only of the order of 20' to 30'), but was in many ways a more difficult one. Entry was easy, but since the qanat was old, it was of extremely large dimensions, and conical in shape to boot. Consequently, when the time came to depart, the difficulties of climbing a ¾" rope without the use of the side walls were clearly brought home.

Any caver who travels through South West Asia particularly, should find qanats of considerable interest, and with a limited amount of normal caving gear, primarily ladder and helmet and light source, much enjoyment can be had.

Guy Wilkinson.

AMENDMENT TO THE ARTICLE ON THE "GREAT FLOOD OF MENDIP."

As the original article was written in October, and it is now March and the journal still hasn't appeared, a few changes seem necessary.

The road through Cheddar Gorge has of course been reopened, but nothing seems to have happened about the missing bit of road in Vevet Bottom. This means that Longwood and G.B. can't be approached from the South. Both routes down Longwood/August are open, and very little change to the rest of the cave has taken place. (N.B. The entrance is again gated and keys should be held by member clubs of C.C.C.). I have also heard that Contour Cavern was also closed for a time, but the entrance has now been dug out.

Swildons still hasn't settled down, and something changes during most minor floods. The floor of the Water Chamber just upstream of the Water Rift is being cut back, and the original 10' drop is now a gentle slope, making the traverse unnecessary. The Double Pots especially, and otherpools as well, seem to be reverting to their former depth. Presumably they were originally filled up by the large amount of material from the Water Rift. This is now gradually working its way downstream, leaving the pools etc. as they were before the flood. Duck II was lowered at one stage.

but in the New Year it flooded again. The water when I saw it was about 6" lower than after the Great Flood, and a desperately small airspace can be followed for at least 4' (at which point I tried to drown myself and so retreated). The U-tube in Shatter Passage has been re-opened, and I've heard of no other change in the series. It will be interesting to watch any further developments that occur in the next few months.

Pete Bowler.