

SOUTH WALES CAVING CLUB

NEWSLETTER



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NUMBER 67.

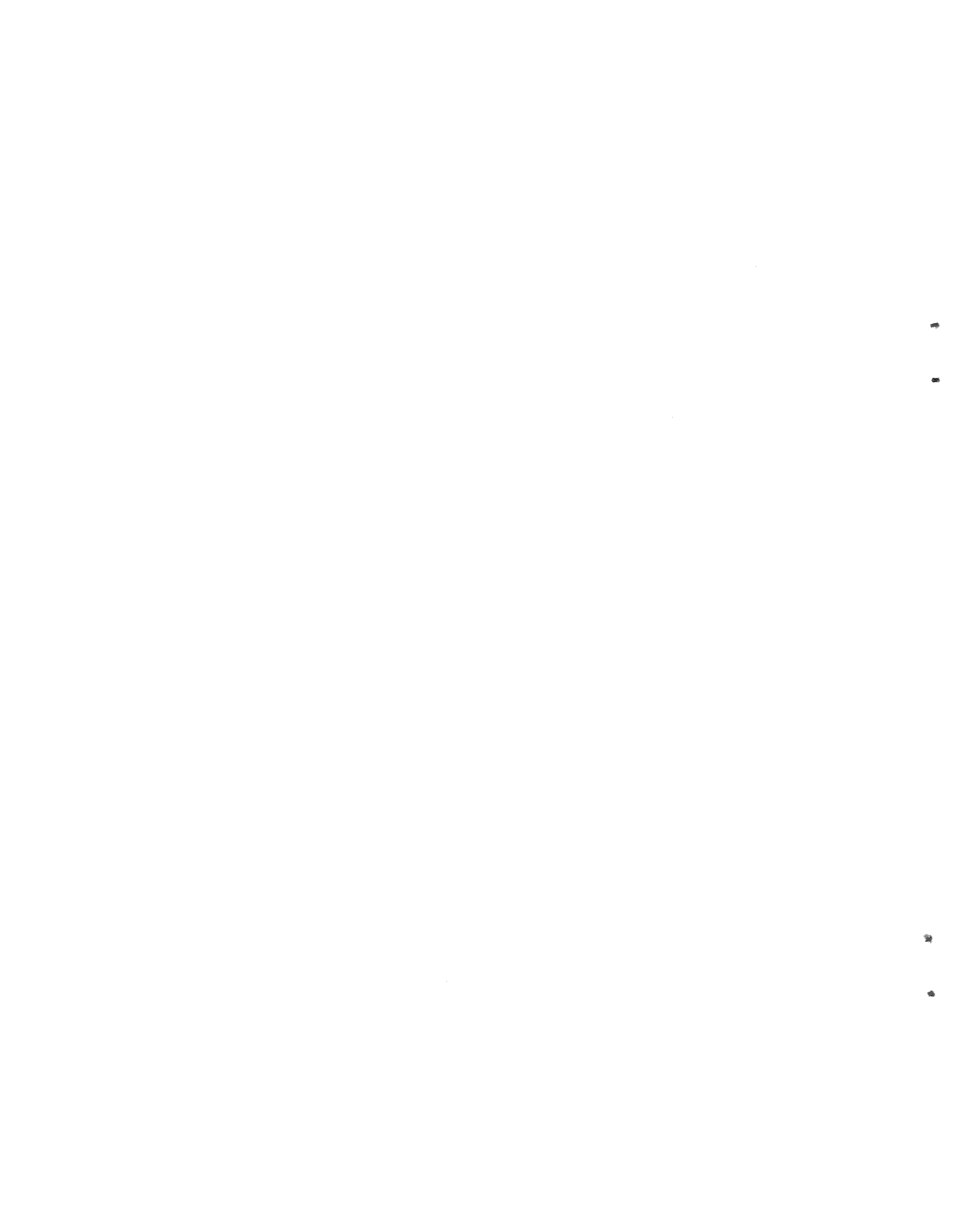
OCTOBER 1970

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Newsletter free to members, 4/- outside subscription.

Cover Photograph The Cascades Dan Yr Ogof Alan Coase



CAVE RESCUE OFFICER'S REPORT 1969/70.

During the year there have been three caving incidents in which the Cave Rescue Organisation has been involved.

1. A severe laceration of the hand of a caver occurred in Mazeways, Dan yr Ogof. Some first aid equipment was taken into the cave but the victim made his own way out with some assistance.
2. A fractured ankle was sustained in Big Shacks, Cwm Dwr. Again the victim came out under his own steam, but was in a state of shock on emerging.
3. A party of cavers was thought to be trapped by floodwater in Little Neath River Cave and a full rescue turn out was put into motion. Attempts were made by a diver to find them without success. Damming the stream and further attempts found them unharmed, rather wondering at the fuss because they had been in a safe place.

The lessons to be drawn from these incidents are:-

1. Although lacerations are not commonly severe enough (perhaps in relation to other injuries) to cause much trouble, simple small personal first aid packs would help prevent much pain and blood loss earlier than could be done through a rescue kit which has to be carried in from outside.
2. Falls are common causes of injury - of persons and rock.
3. Flooding is a major cause of trouble and occurs readily in Little Neath River Cave and therefore, some preparation may be necessary for that site. Various schemes are under discussion.

There was one sheep rescue reported during the year.

Apart from these incidents the year has been fairly busy in other ways.

An examination of the Organisation lists showed that only approximately 30 of the names were of people who could still be considered active or available in South Wales.

In view of this all clubs known to be busy in South Wales were contacted and meetings held with their representatives.

Wardens meetings were held to discuss callout techniques and organisation. Finance was also discussed.

As a result of these meetings it was agreed (1) that the Cave Rescue Organisation finances should be separated from the South Wales Caving Club funds so that a clear picture could be seen. It was also generally accepted that other clubs would contribute not only time and personnel but also cash if there was a call for this. (2) A number of members were appointed to undertake specialist tasks:-

General Equipment	W.H. Little
Catering	Eileen Inson
Telephones	R. Stewart
Tackle	F. Baguley
Training	C. Jones
Transport	L. Galpin
Personnel Lists	R. Smith & W. Harris

Equipment.

The equipment in use was inspected and in the main found satisfactory though much of the food stuffs and some first aid equipment had exceeded its safe shelf life and should be replaced.

Two new Neil Robertson Stretchers were acquired, together with 420 feet of Polypropylene rope, 100 feet of Ulstron, one mile of telephone wire, inflatable splints and sundry other items.

A new type stretcher is being developed by Clive Jones, while modifications have been made to one of the new Neil Robertson stretchers to make it more suitable for caving accidents.

New cave telephones are under manufacture.

A shortage of divers has necessitated putting the sump rescue equipment into mothballs, a temporary situation I hope.

With the advance of alterations to the Headquarters, we have regained a store room and so equipment not for immediate use is now stored away from the stock in the trailer.

We are awaiting help to finish renovating the Land Rover Ambulance Conversion.

Two practices have been held at Penwyllt and a demonstration. Another practice has been held at Ogof Fael Fawr, mainly for Swansea cavers. Advantage has been made of these practices to test new techniques e.g. 'floating' stretchers, which has added greatly to the benefit gained by those who attended. Numbers of cavers attending practices however, are still disappointing. Remember it could be you carried by an inexperienced team some day - perhaps they will knot your stretcher incorrectly over a fall and drop you into the stream!

Finally, you will have received notice of future practices - please make every effort to attend. Surplus stocks of food from rescue stores can be bought and money thus obtained in the next few weeks.

R.M. Williams.

LOCKED CAVES

Some members, particularly the newer ones, may not be aware of the methods of gaining access to locked caves. Brief details are given below. These notes are for members only, notes for others may be obtained from the Secretary.

Tooth Cave - A key for the use of members is available from Mr. Barrows at present, but it is likely that one will be available at the headquarters shortly.

Llethrid Swallet - A key for the use of members is available at the headquarters.

Tunnel Cave - Top entrance - not locked at present.
Bottom entrance - a key for the use of members is available at the headquarters. When using either entrance a permit card, signed by any Committee Member, is required. This should be given to Mr. Lewis at the Show Cave, or posted into his office if it is locked. If members intend to come out after the Show Cave has been closed then cars should not be parked in the Show Cave grounds.

Dan y Ogorf - During the open season of the Show Cave entrance is normally via the Show Cave. A permit card is required as above and in addition the leader should be known to Mr. Lewis. The rules of access are displayed at the headquarters and should be noted before going to the cave. For entry before the Show Cave is open, or for exit after the Show Cave is closed the river entrance may be used. This also applies to winter access. The key for this is available at the headquarters.

Ogorf Ffynnon Ddu I - Entry with an approved leader only. The key is available from Y Grithig and the book there should be signed. In the absence of Mr. & Mrs. Barrows a key is available from the headquarters and a note should be put through their letter box giving the date of entry and the names of the people in the party. Rules of access are displayed at the headquarters.

Ogorf Ffynnon Ddu II - Upper entrance - a key is available at the headquarters.

Agen Allwedd - A key for the use of members is available at the headquarters.

INCIDENT AT AGEN ALLWEDD

1st June 1970

This account has been prepared from written reports submitted by Mel Davies and Frank Baguley, together with first hand verbal comments by others. There may be errors and omissions for which I present my apologies but in the main it should be full enough to draw any necessary conclusions.

At 10.15 a.m. Saturday, 30th May, two experienced cavers from Birmingham, one a member of Cave and Crag, entered Agen Allwedd having entered 'Turkey Pool' as their destination in the Visitors Book. They were equipped with Nife cells, slings, karabiners, dressed in wet suits and carried chocolate, with a view to a six hour trip.

Somewhere in the Turkey Pool region they lost their way and by Saturday evening they decided to sit it out and wait for Sunday visitors.

Unfortunately, there were no visitors to the cave on Sunday and they then made efforts to find their own way out. By Monday only one light was still functioning and this on the 'dip' bulb, only meant they had found their way to Keyhole Chamber.

Relatives (only on Monday morning) contacted Birmingham Police who in turn contacted Dyfed Powys Constabulary. A call was then made to Penwyllt at about 11.00 a.m. and as a result wardens Frank Baguley and M. Davies were contacted. I was at home at this time and was also informed.

Mel and Frank met at Brynmawr Police Station and found that although the men had been reported missing it still was not certain that they were in fact underground, not until a visit was made to the cave entrance at 1.00 p.m. was this confirmed.

Meanwhile, all available cavers in South Wales had been alerted together with the Mendip Cave Rescue Organisation and the Birmingham Cave and Crag Club.

On confirmation that the cavers were underground, Frank Baguley entered for a preliminary rescue while the Gwent Cave Rescue Organisation team was sent for (Brynmawr & Cwmbran Caving Club). At the same time, in view of the alarm felt, now it appeared that the cavers were overdue by two days, other teams were sent for from Swansea, Barry and Cardiff and arrangements were made for the transfer of equipment from Penwyllt. Dr. Matthews was contacted at Cardiff Royal Infirmary and he was on his way independently within a short time. In all six teams were activated from 1.00 p.m. onwards. A plan was also in being to alert and call out other rescue groups in rotation.

The Gwent team arrived before 2.00 p.m. and the more distant ones started to arrive from 4.00 p.m. onwards, the trailer appearing about 4.45 p.m.

Frank meanwhile had reached the second boulder choke, which had been his destination, by 2.40 p.m. and seen no sign of the missing cavers. He then returned and met the first party at the Main Chamber where it was decided they would push on while he examined the Main Chamber as far as the Cliffs of Dover before returning to the surface. As he returned he was overtaken by a messenger bearing the news that the cavers had been found in the Keyhole Chamber and that they would be coming out having had fresh lights and food.

Outside the cave, supplies of explosives, fresh cells, and first aid equipment had been organised. The message that the cavers were well arrived by 5.05 p.m. and teams stood down where possible. The victims finally reached base by 6.30 p.m.

Callout - Lessons.

An earlier initial callout could have prevented a tragic outcome. Beside the length of time the cavers were overdue it is a lengthy procedure to activate teams on a Monday when they are at this time at their different activities, probably miles from their homes and possibly with lighting equipment discharged after the weekend. Perhaps there should be a routine check of the registers on Sunday nights or perhaps the police should be notified by cavers of their intentions.

Communications.

1. At previous incidents telephones have saved much time. A permanent line should be seriously considered in Agen Allwedd.
2. Radio sounds grand but at one time there was a 'queue' of messages and therefore, if used it could well be doubled up on, possibly by the Cave Rescue Organisation itself using Mountain Rescue frequencies.
3. The advantages of snowball alert, controlled by a person remote from the scene are great. The controller had a clear picture of progress except when (2) above was jammed.

Surface Control.

The early presence of an experienced warden at the surface is of enormous help. It is only too easy for this person to be tempted to go underground leaving less experienced members to make what can be far reaching decisions on the surface.

The Victims.

A caving rule was broken in that only two persons made up the party. This however is a fault we all have been guilty of. Their equipment and preparation was first class vide their survival. Their actions were sensible under the circumstances. Less experienced cavers may well not have come off so well.

In all five hours elapsed following the telephone call by a worried mother and the time when the missing cavers were established to be still in Agen Allwedd. F. Baguley entered twenty minutes later (as he confesses also breaking the rule but under the circumstances it was a considered risk.)

The first aid party entered 35 minutes later still, while support parties took another 2½ hours to reach the site. The victims had eventually been in the cave 55½ hours.

Organisations involved in addition to the Cave Rescue Organisation were the Police, Fire Brigade (for floodlights) National Coal Board and Blackrock Quarry. These have been thanked.

Thanks should also go to employers who apparently so readily released their staff to attend the rescue.

A donation of £5.10.0d. was sent to Brynmawr for the Cave Rescue Organisations funds.

R.M. Williams.

REVIEW

Porth yr Ogof, Breconshire.

P.A. Standing & O.C. Lloyd M.D.

This well produced survey includes a 22 page booklet with seven black and white plates, a geological map of the immediate area and a report on the Geomorphology of the Cave by M.D. Newson, B.Sc.

The survey itself to C.R.G. Grade 4C shows the sections explored by the Cave Diving Group. The whole - an extract from the proceedings of the University of Bristol Speleological Society Vol. 12 No. 2 is well worth the 5/- asked.

Also from the proceeding is the extract "Water-Tracing of the Severn Tunnel Great Spring."

This 10 page booklet, which is of more specialised interest, provides very interesting reading, but seems a little expensive at 5/-. Perhaps a cover could have been included at this price?

R.M.R.

DARGANFYDDIAD YN LLYGAD LLWCHWR.

(Discovery in Ogof Llygad Lluchwr)

A large group with very mixed interests converged on Ogof Llygad Lluchwr on Sunday, 26th April. All were witnesses to John Parker's successful attempt to pass the '10 year old' terminal sump.

In a cave well-explored as far back as 1841 (Ref.1.) the terminal sump received nothing but awestruck glances until 1960 when George and de Graaf plunged into it (Ref.2.) They retired defeated after 320 feet and later divers failed to get much further.

Helping John on this occasion were Bill Wilkes and Scott Stevens (Cwmbran Caving Club), two novices from Cwmbran, David Davies of the West Wales Naturalists Trust who had designs on the white fish, Dick Keen of the Pembroke County Museum who is training for adit diving in old mines, and me.

In order to keep track of the weather I camped at the cave the night before and found that heavy overnight showers had produced flood conditions in the cave, the level in the weir being $2\frac{1}{2}$ feet up which corresponds to 10.5 million gallons per day according to my calculations.

Two air bottles were taken in and dumped in River Chamber 4 (using Cullingford's terminology in "Exploring Caves") with over 800 feet of line. John kitted up, taking both bottles, but requested a third bottle, so one of the novices and I went back outside the cave to fetch one. He then dived in and did not re-appear for 90 minutes.

As expected, the water was very turbid, and no white fish could be seen (a warning here: these fish should not be taken out of caves; our intention was to examine a specimen briefly, and return it to the water.) David therefore amused himself by collecting a dead beetle and bat guano, and searching for micro-fauna. Dick and Bill continued the perennial sand dig in the River Chamber 4 alcove and got down a further four feet while Scott stood by on a line.

John finally returned with his usual tale of lengthy passages better decorated but not so big as Inner Wookey, and another sump. Nowhere was the sump depth more than 20 feet but the current in the two slots was fairly rapid. The curtains were up to the standard of those hidden away in upper regions of the outer cave. The dive length was 470 feet and new, dry passage quickly covered totalled some 400 feet. The streamway cannot be followed without diving the other sump, and plans are afoot to do this over the 'Spring' holiday.

Finally, an encouraging note to diggers who, like me, think that 470 feet is a bit far underwater, John found a piece of wood measuring 18" by 1" wedged near the end of the dived sump. It seemed to be a branch that had got washed into the stream. On the next trip it is hoped to bring a piece out for David to identify, the point being that Ash trees are common in fissured, dry swallets 300 yards from the cave entrance, and Hawthorn on the hillside above for a distance of half a mile. Is there a wide-open

pot which leads directly into the stream passage waiting to be discovered? For my part I can say that I have already started once again, to comb the hillside between 300 yards and one mile from the cave.

Now, you may ask, what was the third bottle for? Well, John is nothing if not thorough. There was a possibility of a dry way starting from the unknown, sumped region between River Chambers 3 and 4. So John dived that sump as well!

It was rather a nasty one as it turned out, 90 feet long and very constricted in parts. John was, of course, going downstream and there was a danger of being carried into the narrowing bedding planes. He managed it successfully and reported an unbroken sump. I went round to River Chamber 3 the easy way and lowered a ladder for him to climb out on. He said he'd leave the other two interchamber sumps for other divers. Incidentally, he also discovered that the sump from River Chamber 1 to daylight is too constricted for divers.

References.

1. South Wales Caving Club Newsletter No. 49, March 1965.
2. South Wales Caving Club Newsletter No. 33, August, 1960.

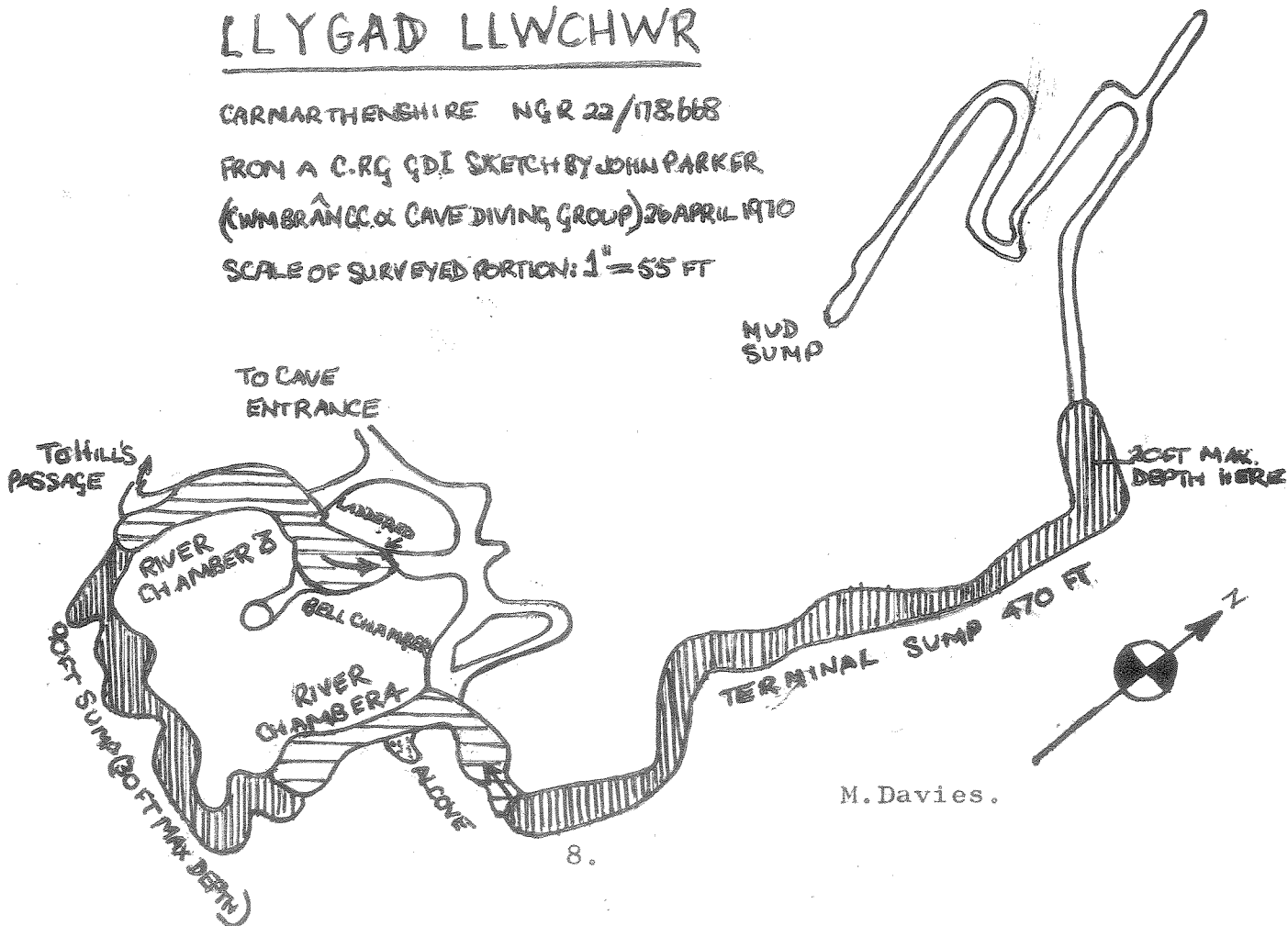
LLYGAD LLWCHWR

CARNARTHENSHIRE NGR 22/178668

FROM A C.R.G. G.D.I. SKETCH BY JOHN PARKER

(CWMBRÂNŶC & CAVE DIVING GROUP) 26 APRIL 1970

SCALE OF SURVEYED PORTION: 1" = 55 FT



DAN YR OGOF.

THE ASCENT OF THE SOUTH WALL OF THE ROTTENSTONE AVENS.

The twin vertical sided avens passed beneath en-route for the Rising, and all points North in Dan yr Ogof, have long been a source of great speculation and curiosity in the minds of all those who regularly pass that way. Discovered in the big Easter 1966 breakthrough and christened "Rottenstone" because of the apparent likeness of large fallen blocks on the floor beneath to the beds of rottenstone which have been opencasted on the surface nearby.

Late June this year, Edwards and Judson made the first serious attempt to climb the South aven. Here the foot of the climb is at the top of a twenty feet scree slope, giving a wall climb of 60 feet, instead of 80 feet in the North aven. After dangling from a succession of increasingly more doubtful pitons, Edwards managed to lasso a fragile needle of rock, about 30 feet from the floor. Above him was a clean vertical face - not a crack in sight! To the right, the direct and obvious chimney route was blocked by two precariously perched and loosely jammed boulders about 18 inches across. Clearly we needed bolts.

Saturday, 30th August, saw a stronger and better equipped party back on the face. It was largely Edwards assisted by Judson, but this time backed by a large number of morale boosters and lifeliners ensconced at the foot. More pegs and another bolt brought us to within five feet of the top. These turned out to be the thinnest five feet of all. Most of the belays used on this final section would be best described as transient; small stals growing on large slabs overhanging a mud bank - and worse. However, they held out, somehow! Edwards rounded the top, after a total of some 16 hours climbing, to find that the large black space observed from below was in reality a 40° mud slope. He achieved a safe belay, surrounded by perched blocks, fixed 70 feet of ladder and brought up the rest of the party.

Sunday, 24th August; a more determined effort was put in by Edwards and Harper, backed by Lomas, Whalley and others, fresh from explorations in Italy and the Gouffre Berger. A bolt was put in above the first jammed boulder and another 15 feet gained, but it was Sunday and time just ran out on them.

At the top the scenery was crazy. Basically one large chamber, with a mass of straws and small carrots on the roof, but it was a chamber with a difference; most of the floor was non-existent; four connected shafts, 60 to 90 feet deep, separated by narrow bridges of jammed blocks, and surrounded by steep mud slopes littered with masses of tottering boulders. The three main shafts are in one line on a bearing approximately 40° and a fault crosses the chamber on a bearing almost due North. The two axis meet at the extreme south end of the chamber. To the East of the fault the roof is flat and well endowed with straws, to the West it climbs at about 20° to the North-west, culminating at its highest point in two small alcoves about 15 feet across, shaped just like shake-holes, with perfectly flat roofs. This would be odd enough, but the roofs of the two alcoves were adorned with the most incredible concretions of gypsum.

Mainly brilliant white, but with a slight fluorescence of green; there were some of the weirdest shapes imaginable. Two small streams entered; one from a three foot square passage completely inaccessible above the sheer wall of the North aven, the other from something less than a respectable rabbit's hole.

Well we know that there are no vast passages linking with the Giedd System; at the top of these avens, but nevertheless we did have a very interesting day's exploration. Coase went up the following day and recorded some photographic images, and it is intended to leave a rawl bolt and line insitu so that further geomorphological investigations can be carried out.

D.M. Judson.

EDITOR'S MESSAGE

1. This edition of the Newsletter is being printed from stencils - a further experiment to reduce costs. This has unfortunately meant that Letrasetting of the headings (as in the last Newsletter) has been impossible for this issue.
2. I am having great difficulty in collecting sufficient articles for the Newsletter. Have you written anything for the Newsletter in the last year or so? If every member wrote one article a year, there would be too many articles and I would be able to select the best ones. Please help to flood the supply of articles by sending yours in now to 10, Brynfield Road, Newton, Mumbles, Swansea.

R.M. Radcliffe.

EXPEDITION 1970 TO THE GROTTA DI MONTE CUCCO

The second British Expedition to this, the second deepest cave system in Italy. Its objectives were to complete the explorations carried out last year, to photograph, and to make a complete survey of the whole system old and new. Members totalled 20, including four wives and one girl friend. South Wales Caving Club members were: A.C. & J. Coase, H.A. Lomas and D.M. Judson.

The cave was known in the 1890's, as a 70 feet inclined entrance shaft giving access to two large, high galleries totalling about a third of a mile in length. In 1967 a party of the local caving group, Club Alpino Italiano - G.S. Perugia, passed a small perched pool in a side passage and descended a series of pitches, (30 - 95 feet), which brought them into another large cavern, Salone Saracco, at about 600 feet below the surface. They continued from Salone Saracco the following year whence, within a horizontal distance of no more than a few hundred feet they descended three shafts and a mud slope, totalling 1,500 feet deep. The pitches being; 585 feet, 405 feet, 360 feet; the last two being free-hangers! This took them to -784 m. (2,570 feet), making it the second deepest system in Italy.

This was the state of things until last August, when Day and Judson made a short wall climb in the Salone Saracco and entered a series of large horizontal passages. On the last two days of the expedition a 25° ramped passage was entered, which descended 500 feet vertically, and entered a phreatic maze of vertical joint passages, and sloping bedding plane passages etched out along the strike. Exploration ended in a large cavern, of Gaping Gill dimensions, the Salone di Luna, and at the top of a deep wet pitch.

This year we had no intention of descending the "Grande Pozzos" which lay below the Salone Saracco. We headed direct to Salone di Luna to finish off last year's work. The Wet Pitch turned out to be 330 feet deep and somewhat more moist than expected. There were a series of low muddy crawls at the 280 feet level and below that the shaft narrowed and the water disappeared down an impenetrable fissure. Beyond the Wet Pitch, the Fault Passage continued for another 400 feet; there were a number of dry holes in the floor, and large windows at various heights in the North wall. Most of these were found to interconnect, and in total a further half a mile of passage was entered, most of which had not been entered by the Italians. This was rather surprising since they had had a large two week camp at the foot of the ramp during April and May this year.

The new passages were surveyed, and the whole system except for the deep shafts below Salone Saracco, was surveyed outwards, giving us a fairly comprehensive survey of the entire system, with only minor omissions. John Whalley (Craven Pothole Club) tackled the black and white photography and Alan Coase the colour. It is hoped that the survey, to C.R.G. grade 5b, will be published in the Craven Pothole Club Journal later this year.

Tackle was loaned by many individuals and clubs, but I would particularly like to thank the South Wales Caving Club Committee for the loan of 700 feet of ladder - which I must say came in very useful indeed!

D.M. Judson - Expedition Leader.

WARDEN'S MESSAGE

The new look kitchen is now in operation and I think you will agree it is an improvement. At the date of writing the only things still to do there are to put lino on the rest of the food shelves and put some shelves under the cooking slabs for your food boxes.

Please note: All the gas taps on the actual burners are tightened in the 'on' position and only those on the wall should be used.

Please also note: The cooking surface should be cleaned with a cloth and liquid soap only. Do not use Vim or scouring pads.

May I here thank all those who gave a hand on that job and hope they think their efforts made something of which they can be proud.

The new laboratory is showing quite a lot of progress. It will be able to be used as a darkroom for Photography but it must be understood that any chemical work must take priority over photography at all times. A lot of the equipment is only on loan, and George Bray has provided a lot of chemicals. Both equipment and chemicals may be used by members on condition that the quantities of all chemicals used and all breakages are notified to the warden. This is so that, for instance, George can come down and know exactly what he needs to bring with him, and not be short of something he expects to find there.

The next job of any size planned is the repair of the roof lintels above No. 10. The pointing of that end wall is well underway and this is the fore-runner of improvements in the bedrooms at that end.

Many thanks to all those who have spent time on the headquarters especially to those who are getting on with any particular job without being coaxed. How about thinking of a job you can do and then getting on with it? See me and I'll be only too willing to give advice and get you materials.

Thanks again.

L.S. Galpin.

A NEW EXPLANATION FOR THE SOFT CALCITE IN OGOF FFYNNON-DDU.

In Newsletter 65, February 1970, Bob Picknett advances an explanation for the soft calcite found in Ogof Ffynnon Ddu based on bacterial action. It seems unlikely that bacterial action could account for the large, stratified deposits found by my party in the "Nyth Bran" Series on 17th September, 1967 (Ref.1.) In many places the deposits show every appearance of having been carried into the cave under the action of water (Ref.2.) yet similar deposits have never, until recently, been found anywhere on the surface of the earth. This is not surprising as the calcite is soft and would be easily removed by erosion.

A recent surface occurrence of similar material was noted by Ford, Fuller and Drake (Ref.3.) in Canada. They describe deposits of calcite precipitate on the surfaces of limestone benches recently overrun by glaciers. They postulate deposition from water bodies no more than a few centimetres in depth in the form of calcite with up to 45% of dolomite, and some ultra fine-grained foreign rock particles. The colour is white to dark brown or grey. The deposits are regular laminae up to 1mm in thickness, and in aggregate amount to 2 cm. Ford, Fuller and Drake then go on to suggest that precipitation results from super-saturation consequent on reduction or release of hydrostatic pressure at the soles of glaciers.

In my own analysis of the Ogof Ffynnon Ddu deposit I found the calcite and the foreign rock particles in the form of finely-divided clay which was insoluble in dilute hydrochloric acid. The dolomite is probably absent. The laminae can be made out in the cave deposits, but the total thickness, at over 10 cm. is well in excess of the Canadian sample due to the highly favourable conditions for preservation in the cave. My theory requires that most of Ogof Ffynnon Ddu II was in existence before the Weichselian Ice Age, or at least the final cold period in it, and that some of the passages had direct connection with the surface. It is interesting to note that where the deposit occurs in an active stream passage, it is being eroded away due to the invasion of that passage by vadose water long after the Ice Age.

Ogof Ffynnon Ddu is in a favourable position to receive such influent precipitates because it has large, old passages at high altitude, in immediate proximity to such glaciated peaks as Fan Gihirych and the limestone pavements which would have carried glaciers lower down. We should look for similar deposits in the higher parts of Dan yr Ogof and Ogof Pwll Swnd. Such unique evidence of the effects of glaciation on caves makes it more important than ever that Ogof Ffynnon Ddu should be preserved in its entirety as a living, geological museum.

References

1. Cwmbran Caving Club Journal Vol.1. Dec. 1967, p.18.
2. Newsletter 65 South Wales Caving Club, February, 1970, p.11-12.
3. "Calcite Precipitates at the Soles of Temperate Glaciers" by D.C. Ford, P.G.Fuller and J.J. Drake, Nature Vol.226, May 2, 1970, p.441-442

M. Davies.

CAVING IN KENYA.

A study of the Geological map for Kenya reveals the first disappointment for the caver. Although sedimentary rocks, even limestone, exist they are for the most part overlain with lavas and volcanic tuffs of recent origin. Limestone in fact only outcrops near the coast north of Mombasa, on the coast near the Tanzanian border and a small metamorphosed outcrop in an inaccessible part of Tsavo Park. These outcrops are dramatically eroded and caves exist but usually blocked with debris.

The second problem is access. The wild terrain and undeveloped country render access difficult even to four wheel drive vehicles, and information awkward to get.

However, there exists here the Cave Exploration Group of East Africa who have given themselves the task to record the caves that do exist here. The common development of a find follows a casual conversation heard of "holes" and often an aerial survey of likely areas. From this it has been found that caves in fact abound due to a set of circumstances which allow caves whilst limiting extent. The reason is the overlying lava flows which are of basaltic lavas which are very fluid originally. Thus several types of cave exist.

1. The true lava cave formed by flowing lava beneath a hardened crust when the flow ceased the viscous lava drained out of the lower exits leaving tunnels just below the surface, but often blocked at their lower ends by solidified lava.
2. Water eroded tunnels in volcanic tuffs or consolidated ash. These are enlarged during each rainy season when they carry powerful streams which quickly erode the soft "rock". They tend to be very dusty and shallow.
3. The coastal regions provide an alternative to the lava caves where coral reefs form the coast. Here caverns exist in thick bush which are at least in limestone of a type.

Thus the caving club here has scope even with this limited potential. In fact a study of any of the volcanic regions yields caves ranging from gas bubbles in the rock to caves over half a mile long.

Mount Suswa (Ol Doinys Nyukie) for instance lies in the bottom of the Rift Valley rising to 7,732 feet, it has a dramatic appearance, best seen from the air. It has a double cauldron, the outer crater is some seven miles across, the inner crater over a mile with a tilted plug across its base. The wild inner cone has been visited by only seventeen white men. The area is still steaming gently especially after rain. About its outer rim however are caves in plenty. The area was first located by air and a route forced for vehicles. The caves, located in

remote thorn bush country, are used by baboon and leopard and, during the troubles, by the Mau Mau. Their exploration involves little ladder work as they consist of tunnels in hard rock covered with short sharp stals of solidified lava. Although dry and dusty they have interesting features in their vadose features coupled with new phenomena such as rope lava lying like giant hawsers along the passage, developed from molten lava rolling off the walls as the flow subsided. Stone implements and Mau Mau encampments add interest as do the game tracks above and inside the caves.

To the Masai the mountain is important as it offers good grazing within the crater walls and it seems common for the wandering herdsmen to down tools and join in the days explorations. Indeed it was one of the more impressive sights on one trip to look back at a Masai standing under a beam of light from a hole, spear glinting in the sun looking after us. On another occasion two Masai were so confident they were off ahead, only to drop back when warned that holes opened in the floor ahead.

So far these lava caves have proved the most interesting as both coral and caves in ash proved short as well as remote so that recent news of deep holes in a new area did not attract much attention. However Bob Davies (ex Imperial) and myself set off from Nakuru to a farm some ten miles north to see what existed and found an odd caving area. Across a rolling plain wound a small river gorge and offset by a quarter of a mile as a series of depressions in soft rock formed from volcanic tuffs. During our preliminary explorations we found some 16 holes along a three quarters of a mile line and learnt of a similar development on the other bank.

On a short weekend we could only start explorations and descended two holes, ruled out many others as blocked and tried to decide how the holes had formed. One of the two, in the middle of the chain of depressions, proved to be deep and narrow and at 90 feet odd we entered (by means of an exceptionally narrow rift) a stream passage, the first "proper" one seen. This appears to have exploited a fault and has cut a passage some 2-3 feet wide which could be followed some 160 yards to an area of collapse. This was pushed at floor level to a squeeze which was passed by climbing some 50 feet over boulders for a little further before leaving at another blockage 30 feet on. We returned after pushing the depth to some 130-140 feet which already makes it the deepest in Kenya. Our future plans are to tackle the last open hole in the line of depressions as the blockage coincided with the next surface collapse. Other holes in the area, described by the farmer sound equally interesting so that mid-May should see a stronger party at the scene.

Our lifelining on the trip, done by a lady member of the group, was interrupted at one point by a retreat to the car when a leopard was heard in the area. Caving here adds something to the cavers interest in what lies around the next corner!

J.V. Osborne.

WAUN FIGNEN FELEN 1970.

When scientific excuses for continuing digging ran out Waun Fignen Felen was still a likely spot and a fine piece of engineering.

This year the theories of Keith Ball on the relationship between cave formation and specific beds of limestone prompted support for another attack, the idea being to dig off the shaft some feet from the bottom in what should be a particularly speleogenic bed.

A week for the assault was fixed and some preparation work done in the preceding month repairing the track up and overhauling the old winch. On 1st August several Land Rovers took up the camping gear and expedition generator together with a crowd of enthusiastic diggers. Work soon got underway, slowly at first, but by Monday real progress was being made boosted by the decision to tip spoil into the lower part of the old shaft. Monday's last bang got us ten feet. By Tuesday lunchtime the first sign of natural passages appeared. This passage, a tight crawl over calcite fill, was pushed to an impossible bend. After a sequence of drilling and blasting over several days "Kan-go Passage" was born; giving access to another small chamber round the bend which remains as a squeeze. Further blasting enlarged this until a loose boulder choke was reached on the Saturday. A space of some size was noticed, but the instability precluded further investigation that day.

The following Saturday after a few hours of timbering and boulder heaving a safe entry to the space was made only to find it a closed chamber similar to Collapse Chamber in Dip Sump Series in Ogof Ffynnon Ddu. No obvious way on could be found, so after a few hours disultory scrabbling, we left, hopeful, but less enthusiastic than before.

Anon & Others.

OGOF O'FLAEN Y WAUN.

About half a mile East of Pant Mawr Pot there is a small sink which, until recently, has not raised much interest in the club.

However, in the country of the blind the one eyed man is king, and our royal geologist had surveyed the area and had pronounced - "THIS SINK IS IN THE RIGHT BEDS" .

Hordes headed for the spot and several weekends of feverish activity yielded a tunnel and a shaft, but no cave.

Mutterings about a bonfire of geology textbooks, a new king maybe? put out the other eye.

Then, one member of the cave starved crew, who had crept to a convenient crevice to contemplate, collapsed into an almost open hole. A ten feet drop led to a crawl passage in solid rock which went 100 feet before ending in a grit filled bedding plane. A few weekends of digging and the bedding plane was passed and several bends and squeezes negotiated before - wait for it - a passage big enough to allow the intrepid explorer to stand upright. Well, only the very thin explorer.

Unfortunately, it got lower as it got wider. We had discovered an enormously wide passage.

The following conclusions were drawn from the excavation:-

1. There is a lot which can be said about the theory of speleogenic beds.
2. Caves in this area have a constant cross sectional area no matter what shape the passage takes.
3. This site is worth further effort as what appears to have been discovered is very similar to the upper reaches of Pant Mawr Pot.

Nathaniel Crudy.

DIG THIS

(Or a Child's Guide to Digging)

Far too much time has been recently spent in abortive digging. All too often have digs, which were masterpieces of creative ingenuity been forced to end up ignominiously as they reached a cave passage. An example of this sort of bad luck occurred recently in the Pant Mawr area, a dig in a nice sheltered suntrap was started. Everybody looked forward to several months of happy digging, with luck years of productive effort could be envisaged. Then what happened? Within an hour or two a cave passage was broken into, albeit very small and although some digging of loose fill under damped conditions was possible, it did not reach the same state of ecstasy to be expected in digging the solid rock. With a little forethought the recognition of the place as a poor site could have been made. The position of the lowermost part of the S-2 limestone and the presence of a former stream channel, now with a misfit stream, should have been sufficient to have indicated the high statistical probability of the presence of a cave. Moving the dig about 100 yards to either side of the unsuccessful dig could have resulted in a great deal of pleasure for all concerned without the necessity of wasting time exploring caves found in the vicinity.

The purpose of this article is therefore to help one in getting the best out of one's dig. It is hoped to point out the best places for digging with the least chance of intersecting a cave passage. For what can be more aesthetically pleasing than a passage carved out of the living rock by your own right arm, unless of course it has been done by somebody else's left arm. If by some small way the art or even science (for it will come eventually) of digging can be advanced in some small way then one's efforts have not been in vain.

Classification of Digs.

The great Engelbrecht as early as 1930 classified digs according to their position in space. In fact he used reciprocal space but in order to make it easier for these poor people who cannot think inside out, we will use space. He used two end members of a continuous series of the form $v = m d$ where v is the vertical and d the horizontal component of the dig and m the slope. In order to make the situation more complicated and increase its speleo value we will increase the number of terms by introducing another axis 's' at right angles to the other two. This axis will be in the strike direction and we will bend the horizontal (d) around a bit so that it is along the dip. V which was originally vertical now becomes normal to the bedding planes. If cross or false bedding is present, especially if curved, the complications assume aspects of mathematical obscurity which are a joy to behold. The dig can

therefore be expressed in terms of a line with Cartesian co-ordinates (Descartes must have been a great early digger for a foreigner). For the basis of subsequent discussion we will consider the v-dig, the d-dig and the s-dig.

Dig Ethics.

The only sort of dig to be considered by gentlemen is the linear dig. Digs based on the hyperbola or parabola might be worth considering by experts in the field, but there is nothing to beat the linear dig for its qualities of intellectual achievement. I have talked to a large number of great diggers in my time including those that have deviated from the straight and narrow path but they have all returned to the $y = mx+c$ formula eventually. Kinky digs are out. Circular digs are infra dig.

The Stratigraphy of Digging.

A composite stratigraphical column is given in the adjoining table for the North Crop. The main cave bearing horizons given in the column starting from the base upwards are:-

The Lower Limestone - This contains two small incredibly unpleasant caves (even for cavers) in the Blaen Crawnan area West of Trefil but otherwise a recommended series of beds.

The Lower Limestone Shales - No caves. Highly recommended for beginners.

The Oolite Group - This contains most of the caves from Penderyn to Brynmawr and is probably the toughest opposition for the digger. The challenge however is great. Careful estimation of techniques must be made. The d-dig is probably the best hope. Some of the higher beds in the Oolite Group appear to be cavefree and so the beginner might like to cut his teeth on these. However collapse has exposed some of the higher beds in caves, especially Agen Allwedd, so beware. The lower beds are a great challenge to the expert.

The Calcite - Mudstone Group - Is generally a sequence of marls and marly limestone. Little challenge for digging but highly recommended for the beginner. The ease of digging through this sort of ground makes it rather unattractive to the expert. A good series to get your digging hours increased but a penalty clause should be introduced. I'm not aware of any caves in this group.

Fortunately the Oolite Group is not found in any appreciable thickness West of Penderyn, but its position in relationship to the Lower Limestone Shales is taken by the lower beds to S-2 zone. A very good marker horizon here is a coral bed (known as a biostrome in the geology trade) and this should be avoided like the plague. These beds crop up in the Nedd/Tawe area. It forms the top of the waterfall in Pant Mawr Pot, outcrops in

another cave nearby, Nant Newydd in Ogof Ffynnon Ddu, Dan yr Ogof and Pwll Dwfn and near the bottom of the dig at Waun Fignen Felen. But beware, this particular coral is a wily beast. Its development is often intermittent; it often lurks hidden in out of the way crannies to emerge to waylay the poor digger. The lack of coral should not lull the digger into a false sense of security. Careful examination should produce signs of colonisation of the right beds. The placing of the dig about 50 - 100 feet higher up the succession should provide ground fit for diggers to dwell in. But not in the Llynfell/Dan yr Ogof area, where rejuvenation has resulted in most of the beds in the lower half of S-2 supporting the Pleistocene termites that ate out the cave.

The next sequence of beds to avoid is stuck squarely in the middle of the S-2 zone. There is no easily recognizable marker band for this, so those interested in avoiding the zone should survey from the marker bands at the top or bottom of the zone. Personally, I don't care whether you survey in from the base of the Old Red. Most of Ogof Ffynnon Ddu is located in these beds especially the Entrance Series, Railton-Wilde Series, Waterfall Series, most of Cwm Dwr, the lower parts of the Clay Series, Tunnel Cave, Upper Series in Dan yr Ogof I and II, a large number of fortunately scattered caves further West e.g. Ogof Fael Fawr and Pal y Cwrt.

A large number of caves are scattered around in the superceding 150 feet or so of limestone up to the top of the zone, but the chances of making a successful dig are greatest if one avoids the beds about 30 feet and 80 feet beneath the Honeycombed Sandstone. The -80 feet does not seem to be so important elsewhere than in the Penwyllt area. However, the Rawl Series, Clay Series etc., the Hepste Resurgence Caves, Hepste Pots, Pwll Swnd and Ogof Cil Sauws are all in these beds.

Apart from the development of caves in the lowermost beds of the Light Oolite in the Mellite-Nedd Fechan area e.g. Porth yr Ogof, the Cwm Pwll y Rhyd caves etc., this series should be the mecca of the digger. Some 60 feet thick of hard compact Oolite has great scope. Large chambers have collapsed up to this competent horizon so that the otherwise successful v-digger might well come out in the roof of some gigantic chamber e.g. Starlight Chamber, the large chamber next the Entrance or even the misnamed Rottenstone Avens.

The dark cherty limestone above contains a few small caves but with the exception of Sink y Giedd where some misguided people are actually digging. Otherwise good digging ground.

The next problem which confronts us is the effect of the Millstone Grit contact. West of the Byfre, the Millstone Grit Quartzite (Basal Grit) rests on so called calcareous shales which usually weather to such an extent that they produce an easily worked material called Rottenstone. A sort of easy dig for the ladies. Further East the Basal Grit rests on limestone and small caves frequently form at the contact.

Another feature of cave surveys published in recent years has shown the statistical preponderance of passages along joint directions which are sub-parallel to the dip, a smaller maximum is usually apparent in passage rise diagrams sub-parallel to the strike. The digger should avoid the s-dig since the chances of meeting a cave passage is greater if one digs at right angles to the trend.

In any serious article like this one it would be unfortunate to finish without mentioning some of the major challenges to the art of digging and to mention some of the problems envisaged, as likely to beset the new breed of super digger that will emerge.

1. A dig from the Millstone Grit contact through to the Lower Limestone Shales without touching a cave. If you are a believer in starting from the bottom and working up, you could do the dig in reverse.
2. A d-dig from the North Crop through to the South Crop would involve a distance of some 30 miles and a depth in excess of 5,000 feet.
3. The above all assumes that one sticks to limestone. As an example of what may be achieved and as a salutary lesson to others who may follow let us examine the case of the so called 'dig' at Waun Ffynnon Felen. Here a shaft of about 100 feet was dug without much trouble. They had fifteen feet or so to go to be completely clear of the limestone. The world was at their feet. About 30 feet of Lower Limestone Shale and the several thousand feet of Old Red Sandstone was waiting but this noble band were seduced from the straight path, by the appearance of the coral band at a depth of about 70 feet down the shaft. The beautifully executed v-dig turned into a d-dig at this point and went along a small cave passage. Apart from proving that those involved were not gentlemen they would have been the first people to achieve everlasting glory by digging for caves in the Old Red Sandstone.
4. But why stop at the Old Red Sandstone, the Mohoroviciv discontinuity is only about 10 Km. down.

Conclusion.

The science of digging to quote a recently unsuccessful politician must be "forged in the white heat of the technological revolution". It behoves us therefore to do our utmost to avoid like the plague all those features which would spoil a dig. We must pull our boulders out. We must not be in a position of having 23 wasted years as a result of a dig which gave an entrance into Ogof Ffynnon Ddu. The dedicated few have kept their little candles aglow in the night of cave exploration, but the tide is turning, and the return swing of the pendulum will herald a new dawn of such pure enjoyment that ... cliches fail me.

<u>Zone</u>	<u>Series</u>	<u>Thickness</u>	<u>Notes</u>
D-3	Upper Limestone Shales	0-25 feet	Not found East of Pont Nedd Fechan.
D-2	Medium to Dark Grey Limestone often Cherty	0-150 feet	Thin corals and clay bands found near Penderyn.
D-1	Light Oolite Honeycombed Sandstone	0-60 feet -10 feet	Disappears East of Merthyr.
S-2	Medium to Dark Grey Standard Limestone. Oolite towards top.	0-350 feet	Thins out East of Brynmawr.
S-1	Calcite Mudstone Group	0-50 feet	Not found West of Nant y Moch
Z	Oolite Group	0-150 feet	Not found West of Penderyn. Thickest at Brynmawr.
K	Lower Limestone Shales		The lower beds are limestone near Merthyr and Brynmawr.

— K. Ball

The following letter has been received by the Committee.
Comments please.

"As you may be aware there is a large number of pregnant persons (mostly women) in the club at present. There are also several people who have recently acquired new additions to their families - to enumerate a few: Don Thompson and wife, Alan Coase, Mike Coburn, Terry Moon and Pete Cardy have had new kids, while the Days, Harveys, Woolfs and ourselves will be adding to the lists in the foreseeable future. No doubt Peter Harvey will rub his hands with glee at the prospect of possible expansion to his sausage factory, but the matter is a little more serious than that. As most of the married women are in full scale production it is likely that even more of the regular married ones will join the ranks - BUT HOW IS THE HEADQUARTERS GEARED TO COPE WITH THIS ENORMOUS BABY BULGE?

Can you not see the state of affairs on one weekend with eight or nine newly born smelly bawling brats crammed into the now totally inadequate married quarters, and overflowing into the now hardly used womens quarters. The mind boggles at the thought of Laurie coming up and yelling "Shaddup! it's past midnight you know!" Mums and Dads will get no sleep, cavers will be awoken to hear the tramp tramp of bleary-eyed parents trying to soothe their persistent offspring. Visitors will be dissuaded, (certainly single women) (and what would Bill do then?), Cottage takings will drop and fees will have to increase again - a totally unexpected state of affairs for our new Treasurer.

Not only that - what about the sudden increase of unmentionable matter into our septic tank - ugh - and all those disposable nappies - they will block the drains much more effectively than tea leaves etc. The consumption of gas must inevitably rise with heating babies bottles etc., etc.

I think I have outlined the problems enough for the Committee to get a glimpse of the scale of changes likely to occur and I would like to make the following suggestions which might help to alleviate the situation.

It will be necessary to make adequate provision, not only for the pregnant wives, but also for the new families - this will mean the adaptation of some of the present facilities in order to have a Labour Ward and a Nursery.

The former will be necessary for the ladies to do their various exercises etc., and the latter essential for the kiddies once they are born - no need to stress that it must be (a) hygenic, (b) warm, (c) dry, (d) soundproof. (Laurie and Frank should be able to work out the necessary items to ensure all of these). Of course the nursery will have to be equipped with cradles, cots etc., toys and playthings. Provision for

the older child is necessary so a separate room may be necessary for this. Part of our annual expenditure on equipment will have to go on Teddy Bears, Dolls and Toy Guns etc. - this will mean a drop on caving equipment expenses, but then we only spent £11.12.8d. on that last year. Perhaps the £234.18.11d. spent on materials could be cut down.

In order to assist with the smooth running of things I think the Duty Officer should have to spend his spare time in the Nursery thus allowing Mums and Dads to go off for the day, secure in the knowledge that baby is safe. This would be but a small addition to his duties and would add variety to the usual chores of deciding whether one can have hard or soft bog paper etc.....

I would therefore like the Committee to give their consideration to the following scheme:

Turning downstairs No. 1 into a Nursery (Small babies)

Turning downstairs No. 3 into a Playschool (Older children).

Turning upstairs No. 3 into a Labour Ward.

Converting all the womens quarters into married quarters (extra to present married quarters).

Turn large common room and downstairs No. 10 into ladies quarters.

Turn Laboratory into Clinic.

Turn upstairs No. 1 or 2 into Laundry and Utility Room.

This would naturally require a little bit of modification to our existing facilities and I would suggest:

Turning the Small Common Room into a store cum changing room - engineering workshop.

The Rescue Room could remain.

Also the Cottage No. 4 - the future changing and washing complex. The expedition stuff may have to be stuffed somewhere appropriate.

I enclose a sketch of the modified plan of the cottages for your benefit and I would appreciate your comments.

NURSERY	RESLUE	PLAY ROOMS	CHANGING ROOMS	MARRIED QUARTERS	PASSAGE	KITCHEN	DINING ROOM	STORE CHARGER WORKSHOP	LADIES BEDS	LADIES WASH AND CHANGE
							FOYER			

LAUNDRY AND UTILITY ROOM	STORE AND CLINIC	LABOUR WARD	CHANGING ROOMS	MARRIED QUARTERS	ADDITIONAL MARRIED QUARTERS	MENS BEDS	MENS BEDS	MENS BED	MENS WASH AND CHANGE
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This is only a preliminary series of suggestions and I am putting it to the Committee for their discussion. No doubt there will be some comments from Frank and Laurie and others but I shall be quite pleased to discuss all my proposals and I'll hold myself available for the meeting if necessary. I will draw up more definite proposals at a later date and let you have them then.

Yours sincerely,

Paddy O'Reilly."

REVIEW

British Regional Geology: South Wales (3rd. Edition) T.N. George.

Institute of Geological Science. H.M.S.O. 8s. (40p.)

It is probably inevitable in any subject which is partly a sport and partly an -ology that we tend to get out of touch with developments in disciplines which impinge on our interests. Advances in the various branches of natural sciences takes several years to filter through and be accepted by people involved in the study of caves, where a large part of the recent very important developments in cave studies have been the result of careful and painstaking work carried out by people without formal (expensive) education in those branches of natural science beyond an intelligent interest in their surroundings.

It is all to the good therefore when a publication which deals with our area of interest and is also up to date, makes its appearance. The memoir was first published in 1937 and written by Pringle and George. The current edition has been largely re-written by Professor George and is divided into 14 chapters. The geological systems exposed in the area are described in turn and there are chapters near the end dealing with the evolution of the major land forms and what may be regarded as superficial deposits. Of the rocks that concern us the Old Red Sandstone, Carboniferous Limestone and the Millstone Grit each have chapters of their own, presumably a reflection of the great amount of work that has been done on the coalfield and its borders in the past twenty years. The present state of knowledge of the Carboniferous Limestone is summarised. Each zone is described in a general manner and the lateral changes indicated as the beds are followed from the thick and complete sequence of the southern outcrops to the thinner incomplete sequences of the North Crop. Sections dealing with conditions of deposition and the unconformities which occur within the limestone are included. The chapter dealing with the Millstone Grit starts off with a discussion of the Sub-Namurian unconformity and passes on to a section on lithology and succession.

A further chapter (10) deals with the Palaeozoic Earth-movements and their effects on the depositional history of the area. The chapter (12) dealing with the Tertiary Era considers the development of the major land forms and river systems. It is of special interest in that it demolishes the idea that the present river system was superimposed on the rocks of the area following an initial development upon a Cretaceous (Chalk) cover which has since been eroded away. This hypothesis was initially proposed at the turn of the century and has undergone a great amount of "attrition" as new evidence was brought to light.

The final chapter (13) describes the Pleistocene and Recent deposits, the major features of the Pleistocene glaciation and mentions some of the coastal cave deposits.

While it can hardly be expected that a publication of this size can deal fully with all aspects, some of the major discussions are developed rather unevenly. However a comprehensive bibliography is given at the end of each chapter. The author does not assume that the reader requires a certain basic knowledge of geology so that the memoir may be easily read.

The illustrations are up to the usual standard of such publications. The front colour pictures show the north face of Pen y Fan and the Careg Cennen outlier, while several other photographs are included which did not appear in the earlier editions.

This memoir is well worth the 8/- asked for and it is a pity that memoirs of other areas are not of this standard.

FROM THE LOGBOOK

Sink y Giedd

The cave has now been re-entered since it collapsed at Easter. Several digging trips have been made and some further small passages found.

Dan yr Ogof

A great deal of hard pushing has not revealed a way on. It has, however, yielded odd bits of passage, some fine green tinted straws and a new diving site. Details in article elsewhere.

Ogof Ffynnon Ddu.

Several digging trips have been made to Shrimp Series in an attempt to dig through to Ogof Ffynnon Ddu I. A telephone line has been laid through Dip Sump enabling parties on both sides to carry out sound tests. It would appear that the dig should come into Ogof Ffynnon Ddu I at the bottom of the aven at the end of the boulder series. Further work has been postponed until radio tests show exact distance remaining to be dug.

Several hundreds of feet of passage have been found in the Clay Series near Moonlight Chamber and also off Great Oxbow Series.

A further 600 feet has been found high up in Ogof Ffynnon Ddu III. Access is by climbing and maypoling.

There is a large passage waiting to be "bagged" at a height of +25 feet (slippery walls slightly overhanging). Attempts to get maypoles to the spot have been unsuccessful.

Two rescue comfort boxes have been placed in Ogof Ffynnon Ddu III. One at the top of the boulder slope after the Crevasse Ladder pitch and the other at the first series of cascades awaiting transit to Smiths Amoury.

Tunnel Cave

About 350 feet of passage has been found off the first cascade.

Ogof Dai Gi

Work abandoned at depth of 30 feet due to considerable narrowing of shaft.

Gower

A hole that apparently swallowed a tractor has been examined. The site - opposite the school at Llauridian, turned out to be a collapse of earth and sand although the ~~limestone~~ limestone cannot be far down.

SINK Y GIEDD

Work was interrupted on the dig during the summer but we have managed to keep going intermittently. Despite several heavy rainstorms the new concreted entrance has remained open and in fact it has become stabilised. Inside the effects of flooding are easily apparent - stones and boulders get washed into and out of passages, changing their aspect almost monthly. Evidence too, in the form of froth marks all over the cave, indicate that it is no place to be in bad weather - even diverting water away from the entrance is of little use as it will still find its way into the known cave, so there is little hope for trapped cavers in a severe flood.

After our holidays we returned to continue digging. Our early efforts were directed at the bedding plane at the end, but the draughty cleft nearby attracted our attention and it was enlarged - access was gained to a lower bedding plane - this too was filled with gravel and required clearing out. A hole was seen with a black space beyond, but our attention was again diverted to a nearby slit with a very strong draught. Blasting widened this sufficiently to pass through and we found ourselves in a new passage. It was very small and narrow and led off to the left and right. Going right we found the passage that descended got too small but another one doubled back and ran uphill through two blind avens about 20 feet high to terminate in a chamber with no very obvious way on. The strong draught appeared to be lost altogether, although there seemed to be a slight one from a very tight rift off the passage leading to the chamber.

The left hand fork led shortly to an uphill sloping bedding plane beyond which a tight draughty passage led on - it was too narrow to pass through but it appeared to carry the main draught. The next day the newly discovered passages (about 150 feet in all) were impassable because of flooding - even a small trickle of water causes sumping in the low parts.

The problem now is the usual one of deciding where to go - the draught is very positive, as are the flood markings indicating uphill water flow, but these passages go in the opposite direction to the one we want to go. The best prospects seem to lie with excavating the main bedding plane in an attempt to get into the passages that are known to exist beyond, or to following the nearby narrow cleft that takes the occasional stream - both are likely to be fairly long jobs however, but they will undoubtedly repay the effort.

P. O'Reilly. S.E. O'Reilly
R.P. Ogden.

CLUB NEWS.

1. We welcome the following new members:

Lesley Cardy, 111 Roedean Avenue, Enfield, Middlesex.

Nigel R. Ellis, Digsweil Corner, 70 Blakemere Road,
Welwyn Garden City, Herts.

Peter Francis, 64 Capel Isaf Road, Llanelli, Carmarthenshire.

Rex. A. Hendricksen, 55 Pembroke Road, Canton, Cardiff, CF5 1GQ

Brian C. Jones, 'Gynol' Gwilym Road, Cwmllynfell, Swansea.

Elfed Jones, 76 Ynyswen, Pen y Cae, Swansea.

John D. Kingdom, 31 Rockingham Terrace, Briton Ferry, Neath.

V. Peter Williams, 202 Cathedral Road, Pontcanna, Cardiff.

J. Gerry Wolff, 22 Cwmdonkin Terrace, Uplands, Swansea.

2. The following members have been elected onto the Ogof Ffynnon Ddu I leaders list:

Pete Cardy, Glyn Jones, Peter Linforth, Clive Perrett.

3. On July 3rd many members took a party from the Aberdare branch of the British Polio Fellowship into the Dan yr Ogof Show Cave. The people taken in have asked that their thanks be expressed to the members concerned.

4. For the time being, until the next A.G.M., Peter Harvey, who was elected as Equipment Officer at the last A.G.M., will be responsible primarily for the caving tackle and its ancillaries. He will be referred to as the Tackle Officer. Frank Baguley has been asked to be responsible for the workshops and their ancillaries, he will be referred to as the Equipment Officer.

5. The British Speleological Association will be holding its Annual Conference at the Applied Science Building, University of Nottingham, from Friday evening, September 11th to Sunday evening, September 13th. Full details are posted on the Notice Board at the Headquarters.

6. Dan yr Ogof: The wire ladder which had previously been left in beyond the Rising has had to be removed for safety reasons. Until a further ladder is taken in to be left there, members are advised to take their own ladder.

7. Does anyone know where the chain^{SAW} is? It was first noticed to be missing from the Expedition Stores in May. Any member of the Committee would be pleased to know where it is now.

8. It has been agreed that edited copies of the Minutes of the Committee Meetings shall be placed on the Notice Board at the Headquarters. Any member requiring to see the unedited Minutes should ask the Secretary for a sight of them.

9. Fluorescene is available for water tracing, from the Tackle Officer. Members are asked to submit a short report on their project after its completion, suitable for inclusion in the Newsletter. If any materials are needed for digs then requests for such materials should be made in advance to the Tackle Officer, e.g. nails, cement etc.

10. The kitchen has now been renovated. Will members please note that the working surface should be cleaned with soap and water, not an abrasive material such as Vim.
11. Upstairs front in No.2 is now ready to be equipped as a laboratory. Provision is also to be made for its use as a dark room. Work on this is not yet completed.
12. A coil of copper pipe is missing. This was in the workshop in No. 1 and had been labelled as for use in the kitchen. This loss meant that a further supply had to be bought.
13. We were pleased to hear that Paddy O'Reilly has received a Kodak Award to the value of £445 for photography in Ogof Ffynnon Ddu. Kodak Limited provide a number of these awards annually to encourage the various applications of photography and the award has been made in order to create a permanent library of colour photographs of Ogof Ffynnon Ddu - thereby establishing the first collection of its type for reference and educational purposes and to assist with the evaluation of the site as a possible nature reserve. The money will be used to hire photographic equipment and to purchase films and bulbs and have the processing done. Paddy hopes to do the work in the coming months and would welcome help (in the form of willing models) from any club members. The importance of building up a library of photographs cannot be stressed too greatly particularly from the preservation aspect.
14. The Ogof Ffynnon Ddu Survey has been a complete sell-out. Members who have not bought copies are now too late to do so. There are a few copies of the 21st Anniversary Publication left (30/-)
15. Congratulations are due to John and Clare Harvey on the recent birth of their son.

Congratulations are also due to Glyn Jones for falling well and truly into the third pot.

16. The next Rescue Practice will be held on Saturday, 24th October, 1970. Please do your best to attend.

17. Address Changes.

Mr. & Mrs. J.D. Aldridge, 20 Beech Hill, Northland Wood,
Estate, Haywoods Heath, Sussex.

H.J. Ball, 18 Cairnaqueen Gardens, Aberdeen.

Mr. & Mrs. J. Harvey, Ty Mawr, Penwyllt, Pen y Cae, Swansea
Valley.

Mr. & Mrs. Gwyn Thomas, Kingswood Villa, Meinciau Road,
Mynydd y Carreg, Kidwelly, Carmarthenshire.

J.O. Myers, "Suncroft", Austwick, via Lancaster.

Mr. & Mrs. J.J. Rowland, 100 Daisy Bank Road, Manchester 14.

B. Foster, Regional Surveyor, P.O. Box 85 Mzuzu, Malawi.
(From Mid November)

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