

**SOUTH WALES  
CAVING CLUB**

# **NEWSLETTER**



S O U T H   W A L E S   C A V I N G   C L U B  
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## A NATIONAL BODY

('to agree or not to agree')

"Thus far into the bowels of the Land  
Have we marched on without impediment"

Shakespeare Henry VI Act V. Sc.2.

We must all now know of the contrast in opinions held by cavers across the country and even within our own Club. The Subject? Whether to organise caving more formally on a regional and national basis or not. Indeed, amongst the major caving areas Northern England, Derbyshire and the Mendips have already formed themselves into regional councils and many Clubs from the other regions, such as Scotland, Ireland and Wales have sought to be represented on such bodies.

The purpose of this article is to review the present developments and the organisation which exists, and in presenting a balance of the advantages and disadvantages I would hope to show why our Club, almost alone amongst the significant Clubs in the sport, has declined to be drawn on the subject, having been unable to accept the need for further administrative bodies to support and finance. However, in January the Cambrian Conference meets to debate a proposal that a Welsh Council be formed and this is a convenient time to review the Club's policy. After reading this article you may wish to express your opinions to the Committee; or at least a picture can be gained of the justification for the actions taken. Your Committee is not avoiding the issue but, as promised, a watching brief has resulted in this re-assessment. It is hoped that whichever way the decision is made members will recognise that a compromise has been made, but in the end any step must be in the interests of caving in general within the aims of the Club.

Over the years a case has been championed by certain organisations for the formation of a National Body which could act in the interests of all cavers. Its proposed powers varied widely and the early idea threatened so much direction of club affairs that no agreement could be reached.

However, some four years ago three regions developed councils speaking for Clubs in its area and the Northern Council achieved some success in re-opening Fountains Fell for its members. Similarly the Derbyshire contingent amalgamated to form the DCA who had ideas somewhat in harmony with the North.

About this time the BSA decided to state the case once more for a National Body and circulated Clubs with its opinions and ideas, which were not well received, being too ambitious and likely to interfere with existing clubs.

One product of this surge of enthusiasm was a fear amongst many Clubs that they would soon find themselves denied their own access arrangements, or being dictated to by outsiders. Rightly or wrongly this resulted in further support for the growing bodies and also in the formation of the Southern Council dedicated to act for its members in seeing that the Status Quo was maintained and the rights of cavers upheld.

In Wales a meeting was held on our instigation to see if the benefits of co-operation between Clubs could be achieved without a formal Council and this has now been the case for three years in the form of the Cambrian Conference. It was thought that Wales could stand apart from the nationalistic arguments yet still provide the benefits of improved relationships (access etc.), but in fact over the years most of its Members have drifted into membership of one or other of the existing councils.

During this period the ideas of the three regional councils of England had altered and common ground emerged. The plans of the Northerners were modified and compromised and this year enough common ground was thought to be proved to form an agreed National Body.

Accordingly, in November, the Councils met in Matlock to create the body, but lack of prior discussion limited the results of the meeting to an agreement that a National Body exists on paper and is to be called the "National Caving Association". Agreement as to its form and policy could not be reached other than on an elementary basis and the issue was deferred to next year. No representatives outside England were there but observers from the Club were allowed to attend.

At the Cambrian Conference in October the delegates discussed the above meeting but no change in the powers of the meeting could be adopted. A resolution was made however to call a meeting in January to decide whether to re-organise the Cambrian Conference or form a Welsh Council which could speak for Wales directly. This is planned for January 25th next.

This, then, is the existing organisation and stage of development. Perhaps we can now consider the arguments of those for and against such bodies, before we can consider whether our own policy ought to be changed.

A National Body representing caving has several important advantages appreciated by some areas more than another. Opinion is held that the Government, the CCPR, councils and education authorities will only recognise a similarly influential body. Negotiations can therefore be held to establish the cavers' position in their activities.



Grants can be studied and negotiated.

A responsible training programme recognised by all (on the lines of the Mountain Leadership certificate) and operated. International Conferences can be organised and we can be represented abroad.

A National Magazine can be sponsored.

Such a body would add dignity to the sport by its established corporative nature and it could discipline Clubs which threaten the name of the sport. Similarly it could pressurise outsiders against irresponsible acts.

It could negotiate, (from a position of power), access and cave conservation.

It could operate caving courses at Hostels centred on the caving areas.

Co-ordinate research.

It is thought that once established, the finances could be forthcoming from government sources and it would result in International recognition of the part we can play in the development of Speleology.

The arguments against such a body would appear at first to be excessively conservative or even petty but in fact they must be considered carefully. The questions must be asked and answered:-

Who can do the work?

Who can pay for the work?

Who will benefit from the work?

Before deciding we can look abroad to see what applies. In America caves are jealously guarded and access is sometimes only possible clandestinely or, alternatively, fantastic distances are travelled to get some decent caving done. In France caves are becoming increasingly controlled and organised. Have you tried to visit La Cigalere recently? Documents have to be authorised and prepared in advance. Also in Yugoslavia resident Clubs cannot cross internal boundaries to cave without official permission which is often refused.

All these countries have "National Councils" of some form or another which has not achieved one objective we would wish to see, i.e. easy access. In fact, control has moved away from local groups to formal bodies.

When it comes to policy and implementation a Club must find representatives to serve on increasing numbers of committees and there must be a tendency to become completely out of touch with the caver.

Who then can speak for the cavers, decide policy for the cavers, preferably be a caver and yet is not absorbed with private interests which must take priority?

Lastly, who will pay? Subsidised journals, Hostels and courses can be expensive particularly if no benefit is felt directly. The average member of the public would of course be better informed and served but are the existing facilities so bad?

There would be a risk that a co-ordinated public image would also provide a corpulant public target!

As anyone must know the issue need not be YES/NO and in fact the ideas of North and South have already modified over the years. Most representatives at Matlock agreed that the autonomy of Clubs should not be upset and that the National Council should not burden the finances and administration of Clubs.

However, there remain extreme factions holding opposite views and the development of the National Caving Association will depend on how these views are tempered with more moderate policies. Once agreed to, some safeguards should be arranged to prevent extremists gaining control.

Your Committee have discussed this issue regularly and have collected as many facts as they are able. They are prepared to decide Club Policy -

ARE YOU?

.....Hon. Secretary.

## MOULINS BY THE SEA

Three o'clock in the morning, an odd time for a caving expedition, except when dealing with hostile land owners. That was not our problem, the nearest human being was over two hundred miles away. The sun blazed low on the cloudless horizon, yes, at 3 a.m. We were in Arctic Greenland as part of a mountaineering expedition.

I had decided to investigate a moulin while the rest of the expedition caught up with us.

A moulin is the place at which the melt water pours down into the depths of the glacier.

On windless days the surface layer of ice or snow on the glaciers melts, and the water drains to the lower regions, where it forms trickles, streams, and even great uncrossable rivers, that flow swiftly over the surface of the ice.

As these streams are flowing at high speeds and contain lots of ice particles they have made deep polished channels in the ice. The streams rush along the surface of the glacier until they find a crevasse large enough to take the vast flow of water. The water then sinks down through the ice of the glacier and flows in on the rock floor of the valley out to the sea. That makes a sort of cave passage. The roof and walls are of ice and the floor of rock, with a super active icy stream flowing along the passage.

Most major moulins are more or less circular holes in the glacier, about 8-10 ft. in diameter with a stream roaring down one side.

The night temperature in our region was falling down to about  $-20^{\circ}\text{C}$  on still nights, despite the continuous twentyfour hours daylight. Now, of course, at  $-20^{\circ}\text{C}$  everything, yours truly, brass monkeys, and most important the surface water is frozen solid. Unfortunately the streams flowing towards the moulins do not freeze up solid. The upper six or seven inches of water freezes, and the stream continues to flow along underneath this layer. Of course, it is diminished considerably in flow as the amount of water flowing into the stream is greatly reduced.

That explains our 3 a.m. start. During the day the whole moulin tube is one mass of icy roaring waterfall, fascinating to watch, but absolutely fatal to fall into or even enter deliberately.

In the early morning, our moulin had a much reduced flow, the water going over the edge was about two to three inches deep and about two feet wide, and arching out over a gentle twelve to eighteen inch curve before cascading noisily into the depths.

We did not have any electron ladder, and the plan was for me to abseil down into the moulin, and to prussik out afterwards. The problem was to anchor the rope, with no handy trees, or boulder moraines available. We solved this problem by parking the sledge sideways on to the hole, and fixing it at each end with ice screws. Don't let anybody fool you into using ice screws for anchors in ice. If you apply a continuous load to an ice screw for any length of time, that is around two or three minutes, whatever its design, be it a renegade corkscrew or snapped off flute, it melts out.

I just did not happen to have my wet suit along with me, but I had my climbing helmet and my electric head lamp. For waterproofing I had an anorak and waterproof overtrousers. My hands, essential for the climb out, provided the major waterproofing problem. In the end it was solved quite easily, and the same method can be applied to boots. I wore a pair of silk gloves, a pair of woollen gloves, and then I dipped my windproof over gloves into the ice water, wrang them out, put them on, and waved my arms about until the gloves froze solid, hey presto, they were waterproof.

All the delaying tactics used up and firmly belayed on a separate rope by each of my two friends. I put on my crampons and set off down the hole.

The first twenty feet was fairly easy, the crampons stopped me sliding around on the wall, and there was not too much spray. The next forty feet were sheer hell, icy water everywhere and I was soaked to the skin. It did not take much to realise I had undertaken more than I had expected. A hasty return to the surface was demanded before I froze to death. I could not even take that proverbial quick look round, there was painful water everywhere.

I shook the water out of my whistle and gave the signal that I was climbing out.

I put on the prussiking clamps and set off upwards. The first ten feet went agonisingly slowly, I tore my gaiters, socks and windproof trousers with my flailing crampons in the struggle to get my feet into the prussik loops.

The next ten feet were easier, and just when it seemed that I was out of the water and home and safe, ice crystals began to grow on everything. The prussik slings became thick and unmanageable, and the ice coating the rope that I was trying to climb had increased the rope's diameter so much that the prussik clamps would not slide up the rope, and when they did, they just slid back down when loaded.

My mates, who could talk with me now, hauled like mad on the safety rope, but it just bit into the ice on the edge of the moulin. So I cut bucket steps in the side with my ice axe, and slowly gained a few feet. When I had only about fifteen feet to go to the surface and everything seemed absolutely impossible for me to continue, the rest of the party turned up. Using an ice axe on the edge of the hole to stop the rope biting into the ice, I was rapidly and without ceremony hauled to the surface, stripped naked and pushed into several sleeping bags.

The next few hours of thawing out agony gave me plenty of time to reflect how lucky I had been, and to wonder how I could organise an expedition of cavers to come and explore the fascinating systems that must exist beneath glaciers. I am sure we could always start by buying an old single decker 'bus.

Noel Dilly.

#### GLASS TREES

An article on glass in "Design and components in Engineering" (July 1st 1968) describes the fulgurite or "lightning tube" formed when lightning strikes a dry sandy bed of sand. The sand is fused locally into a tube of glass following the path of the spark through it. The famous "glass tree" forest in Uruguay was thus formed by lightning striking sand dunes near Roch, the dunes being subsequently blown inland, leaving 50 foot high trees of glass projecting above the surface.

R.S.

OGOF GOFAN - ARCHAEOLOGICAL REPORT

Since the publication of the first report on Ogof Gofan in Newsletter No.61, November 1968, progress has been made with the archaeological finds in the cave.

The dig is now under the direction of Mr. R. A. Kennedy, Curator of the Pembroke County Museum. He has collected all the bones strewn about the entrance passages and some of them have been identified. There were vertebrae of Ox and teeth of wild Boar.

Also on the surface of the entrance passage I found a fragment of pottery which has been identified as part of the rim of a round-bottomed bowl of late Neolithic date (ca. 2,000 B.C.), representing a late stage in the development of "Peterborough" ware, a tradition of coarse and crudely decorated ware which evolved mainly in lowland Britain, but has occurred occasionally in South Wales, notably in Daylight Rock, Caldey (see *Archaeologia Cambrensis*, 1961, 37f., fig. 5).

Despite a detailed search no further fragments of pottery have been found, but only near one hearth has the surface of the floor been disturbed as yet. Traces of hearths have been found near the two entrances of the cave, and it is likely that in Neolithic times both were accessible from the plain below. At present the sea washes the cliff below the entrances at all stages of the tide, and coastal erosion has reduced the size of the original cave system.

Some of the bones recovered had been split for the extraction of the marrow; good samples of charcoal have been taken from one of the hearths. Several pieces of worked pebble flint have been found on the cave floor, and one fragment of a flint flake found in the excavated hearth under a layer of stalagmite.

The deposits are 5 feet thick in places and a preliminary examination shows stratification comprising one, and possibly two layers of stalagmite, a layer of angular limestone fragments, and about 2 feet of brown clay containing bones. In inner reaches of the cave bird skeletons have been seen, and coprolites from fairly large animals.

The cave is under a tank firing range and access is only possible with permission from the local Camp Commandant who refers applicants to Mr. Kennedy. The latter asks explorers to keep away until the dig is completed. Conservation bodies such as the Nature Conservancy and the West Wales Naturalists' Trust have been fully acquainted with the position.

Melvyn Davies

Cwmbran, 13th November 1968.

## CAVE OF DEATH

Ulster Cave, about a mile south of the Sincia tourist caves, has a long history of exploration. The first recorded expedition was carried out by members of the 63rd Group B.S.A.C. and cavers from Jo'burg; in 1959, although, as the expedition proved, natives had been in the cave long before the first European.

The nature of the cave set up many problems for these cavers, who having negotiated the entrance passages, were presented with a shaft about 80 feet in depth. As there was no ladder to be had in Rhodesia at the time, the first descent was made by means of a rope and pulley system, with the lifting power being provided by strong arms.

This shaft led into a large chamber in which the cave's second line of defence against exploration was found; carbon dioxide gas.

The first people down spent only long enough in the cave to have a quick look round the chamber before being driven back up the shaft by the gas. During this time, however, it was found that the floor of the cave was covered with human remains. Broken bones and skulls were found in abundance, and it was recorded that they represented the remains of at least 12 people. How they came to be there no one knows. The idea that the cave was used for burial purposes has been put forward; but this does not agree with the normal type of indigenous custom. Samples of bones taken showed them all to be roughly a 100 years old but of artefacts, weapons, lights etc. not a trace could be found.

After the party had left the cave the final stroke against the people who had violated its depths took place, and several members of the party went down with 'Cave Disease', (Histoplasmosis).

Several parties went back, and with the added luxuries of ladders and diving air bottles, overcame the shaft and the CO<sub>2</sub> 'lake' but the 'bug' still claimed its victims. So the cave was left alone for 8 years until July 21st 1968, when, with two other members of the Mountain Club of Rhodesia, (Phil Murray and Tullis Buchan), Penny and I visited the cave.

The entrance to the cave consists of two 18" diameter holes side by side. Looking through one we could see down a drop of 10 feet in a small chamber with a sloping floor.

As we had been told the shaft was 'just round the corner' we fed the ladder down one hole, (an army of stick insects was marching into the other at the time), and belayed to a handy tree. On descending the ladder we found ourselves in a bedding chamber about 5 feet high and sloping down at about 45°. Going down about 50 feet the small mouth of a shaft opened before us. This turned out to be a small one of only 25 feet, but on reaching the bottom, in a small grotto, the big shaft opened before us. As there was nowhere to re-belay the ladder, both small and large pitches were tackled as one, using up 105 feet of ladder, and leaving a drop of about 5 feet off the end to the floor of the main chamber.

Because of the presence of histoplasmosis all members of the party were wearing special dust filter masks, which we hoped would stop 'the bug'. These had been worn since leaving the surface, but on the ladder and doing hard work breathing became difficult as the filters could hardly pass enough air to supply labouring lungs.

The chamber at the base of the ladder was about 70 feet high x 35 feet wide x 350 feet long, and contained some of the best formations found, so far, in Rhodesia. Among the boulders on the floor at the bottom of the pitch lay hundreds of fragments of human bone. We picked our way through the bones but were no nearer to finding the answer to the puzzle they presented than were the previous parties.

Leaving the bones behind, we walked along the chamber, which sloped down to a jumble of large boulders, and then up again on the other side so that it formed an enormous 'V'. As we walked into the bottom of the 'V' we became aware that something was wrong. Our breathing rates went up, and it became difficult to get enough air through the dust masks. Without being aware of the fact we had walked into the 'accumulated gas'. Carbon dioxide, being heavier than air, had gathered to the lowest point, the bottom of the 'V', where it lay in sufficient concentration as to extinguish a naked flame. Hurrying up the other side of the 'V' above the gas level we discovered that when a member of the party shone a light from the far side of the 'V', the gas could be seen like a faint milky cloud in the bottom.

Once across the 'gas lake' the chamber opened out and became bigger. The formations too became grander and more colourful. Long stalactite curtains hung from the roof; all the floor was covered with flowstone, and here and there small clumps of stalagmites added to the beauty.

Phil Murray went mad with his camera and dashed from one side of the chamber to the other, firing flashes in all directions. At last, as our lamps began to get dim, we re-crossed the 'gas lake' and made our way up the shaft and out of the cave.



It is of interest to note that no further way on was found during our trip. Several passages open out of the chamber, but all are at the bottom of the carbon dioxide zone. The mere fact that the gas is there is almost proof positive that there can be no way on down them, although the gas level was lower on our visit than previous parties found it. Maybe that digging in one of the boulder chokes at the ends of the big chamber would reward one, not only with more cave, but through flow of air that would sweep away the gas. Also, as this article is being written, the incubation period for histoplasmosis has passed without any member of the party being affected, so our party at least have escaped 'the bug'.

A. F. Salt

Rhodesia, 1968.

## DIVING IN THE SINOIA CAVES

The Sinoia caves are situated five miles from Sinoia and about 75 miles from Salisbury, on the main road between Salisbury and Lusaka (Zambia), and are Rhodesia's only tourist caves. Unlike most tourist caves, however, they are free and one is not accompanied by a guide.

The cave consists of a vast open shaft, 150 feet deep to the surface of a pool called the Sleeping Pool, and is about 200 feet long by 60 feet wide. There are two ways of reaching this pool, one by going down an inclined passage from the surface to the edge of the pool and through what is called The Dark Cave, (lamps attached to the walls every 25 feet!), which brings one out on to a balcony 40 feet above the pool at its far end. A third way, not open to the public, is down a lovely 90 feet shaft from the surface which brings one down to the opposite side of the pool to the public, after traversing a couple of hundred feet of cave.

The cave has been put to various uses over the centuries. Stone Age man is thought to have lived here, and because of the water supply so did natives up until the coming of the white man. In the 1830's the warring Angoni tribe surprised the natives living in the area and had a high old time throwing their captives down the 150 feet shaft into the pool, but since those times 'caving' accidents have been few and far between.

The most modern use the pool has been put to is that of a swimming pool where the three Rhodesian branches of the British Sub Aqua Club use the pool for diving practice. It is one of the few bits of water in Rhodesia that isn't crawling with bilharzia.

Penny and I made our acquaintance with the underside of the pool on the 26th of May when with kit borrowed from one of the diving groups we were taken on a conducted tour. The diving kit was all carried down through the cave to the water's edge by small native boys who seem to make a living out of the B.S.A.C. (They charge 6d. down and 1/- up).

Changing on the edge of the pool we stepped into the water only to find that the rubble slope underwater was at the angle of repose so one stepped into ankle deep water only to slide up to one's chest in seconds. On getting one's head underwater the first thing that hit one was the visibility. Other members of our diving party on the other side of the pool, 240 feet away, could be seen with ease. The water was as clear as gin, with just a faint green tinge to make one realise that one was viewing through a new medium and not air.

Swimming out towards the centre of the pool the floor angled down below us on three sides into darkness of a great flooded shaft. The wall on the one side angled back under so that one could see that the pool cut back under the hill at an angle going down to unknown depths. About two years previously a diving group from South Africa had dived straight down to 315 feet and had seen the floor of the pool sloping down into even greater depths. In this dive they had been assisted by the fact that the cave is over 6,000 feet above sea level so with the lighter atmospheric 'loading' on the pool they had been able to touch depths that would have been impossible at sea level on compressed air. Even so the effects of narcosis had been quite marked and two long decompression stops were needed on the way up; both hazards seldom encountered in British Cave diving.

But these great depths were fortunately not the object of our dive. Crossing the pool we went to a 'hole in the wall' at a depth of about 40 feet. This turned out to be phreatic solution along one of the minor joints and gave access to a small grotto full of solutional fret-work. There was no noticeable outlet and no current (there is none detectable at any point in the pool) and so we rapidly lost visibility down to about 20 feet using a powerful torch, so we made our way out to the main pool and the sunlight again.

Crossing the pool again we followed the undercut wall down to a depth of 70 feet to a point where one could look up a flooded rift into the darkness above. This rift could possibly be followed up if one's tanks were mounted on one's side and not, as we had, on our backs. But the chances of the rift doing anything more than tapering out is very remote.

On surfacing and leaving the pool we couldn't help but feel cheated the dive had been good but what a wicked waste of a 315 feet shaft; flooded!! As I paid my boy his 1/- to carry my kit up to the surface I couldn't help but reflect that at the same rate a chain of boys baling would cost a million, especially as it would mean baling a hole in the water table.

A. F. Salt

## LASCAUX'S PAINTINGS REINSTATED

(This article appeared in 'The Daily Telegraph' on 6 October, 1968, and we have been kindly allowed to reprint it by the author. In my opinion it is a very good example of how to write an interesting article. Many of our contributors would do well to note the simple concise style. - Editor).

The masterpieces of pre-historic art at Lascaux, in the Dordogne, have been saved. The great hall, galleries and frescoes have been cleared of the sinister green spots which threatened to obliterate the paintings. And the second leprous growth, the *maladie verte*, has been dispelled.

Last week, at the invitation of the French Ministry of Cultural Affairs, I was able to see the Lascaux paintings in the same dramatic clarity as greeted the first intruders for 20,000 years - the two young French boys who stumbled on the cave in September, 1940.

Eight years later the cave was opened to the public, and before long a million people had passed through. Some days the shuffling queue extended down the hill, along the makeshift road, to the edge of the little town of Montignac which had suddenly found itself famous.

The paintings they came to see are superb images, many life-size, of the animals which shared the hunters' world during the last Ice Age - bulls and bison, horses and ponies, ibex and aurochs - painted with a stylised naturalism which has the impact of genius. The artists used the shapes of the rock surface to accentuate the thrust of a shoulder or the tilt of a horn, and sometimes to throw a whole figure into vivid relief. Their colours, preserved under a calcite glaze, had remained as fresh as when the last men to visit the sanctuary performed their inscrutable rites there.

Then, in April, 1963, the cave was abruptly closed. A constant watch on the paintings had revealed that a few isolated green specks, first noted some months previously, had multiplied alarmingly. The intrusion of some 1,200 visitors a day was poisoning the cave.

It was not the first alert. Some years earlier, condensation had begun to appear on the walls when the cave was crowded - and the drops of moisture, it was noticed, were coloured from the pigments under their natural protective glaze. An air conditioning system was installed, and the threat receded.

But the green spots were a different proposition. Plunging the cave back into undisturbed darkness had no effect: within a few weeks of the gates closing, the growth had spread over a wide area. A scientific commission identified the specks as algae, and also detected a host of micro-organisms, brought in by the visitors, on

which the algae were evidently feeding. In the cave, the infestation was ten times as dense as outside.

The emergency called for drastic action. For 24 hours the cave was drenched in a spray of anti-biotics including penicillin and streptomycin. Nearly all the algae succumbed; but some - notably a minute mushroom growth - proved highly resistant. After careful tests, a chemical antiseptic was applied to the walls; and gradually the last resistance of the maladie verte was overcome.

The Academy of Sciences issued a cautiously hopeful bulletin. But almost at once a new danger appeared. This time it was a creeping film of calcium carbonate crystals of the kind which form stalactites and stalagmites - the maladie blanche. It was decided that nothing less than a complete return to the natural conditions of the cave would save the paintings.

This is the task that has occupied the scientific team for the past three years. They have been working on ways of neutralising carbon dioxide - breathed by visitors - and of controlling a natural supply of carbonic gas which, to their surprise, they discovered in the recesses of the cave. For thousands of years it had lain low, due to the natural balance of temperature and atmospheric pressure below ground. Opening the cave - and perhaps installing air conditioning - had disturbed this balance.

The source of the gas was the deep shaft at the bottom of which is the mysterious and disturbing scene of the bird-headed hunter, lying stiff in death before a mortally wounded bison. This shaft, known as the "crypt", is rarely shown to visitors.

A pipe now leads the noxious gas into the outer air; and in the main chamber a variety of instruments have been installed to keep temperature, humidity and pressure under exact control. The walls of the cave are plugged with instruments recording temperature change in the rock. The delicate equilibrium which miraculously preserved the paintings during eons of darkness has been re-created by the resources of modern science.

In these conditions the paintings can be preserved, perhaps indefinitely. But the presence of only a handful of people in the cave upsets this balance, which has to be restored by setting in motion a cycle of checks and corrections through the sensitive machinery which now stands guard. Re-opening the cave to the public would overwhelm the system and risk undoing all the work of five anxious years.

During that time, Lascaux has been a laboratory. But it is far more - a marvellous survival from the dawn of human spirituality. Standing silent in that softly-lighted and unearthly place, I sensed that - quite apart from the conservation aspect - what makes both authorities and technical advisers hesitate to throw it open again to tourists is the awed, almost religious regard they have for it.

Lascaux poses in an acute form the ironic conundrum of 20th-century tourism: how to conserve those places which, in our eagerness to see and admire, we inevitably ruin...There may well be no answer. But the French are still trying to find one.

Denis Thomas.

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CONFERENCE OF CAVE RESCUE ORGANISATIONS  
HELD AT CHELTENHAM - SEPTEMBER 1968

This was the second annual conference to be held to date and once again was seen to be fulfilling a valuable function.

Representatives of all the Cave Rescue Organisations in the country met and listened to a series of short lectures on topics pertaining to rescue. Following these a discussion circle was formed and items of common interest were discussed. The day's proceedings were terminated with an informal dinner. I took some notes during these lectures and present them in the hope that they may be of interest.....

A Readily Portable Resuscitator:

Mrs. Mitchell of Vitalograph demonstrated this device which she claimed is indestructible. It consisted of a robust rubber bulb about six inches in diameter, a face mask and face harness, extension tubes etc., and retailed at £9. 12s. The advantages claimed for the device were that it was easy to use and that a completely inexperienced person could be given charge of it. The extension tubes allowed resuscitation to be carried out whilst the victim was being carried in a stretcher. Mrs. Mitchell pointed out that while mouth to mouth resuscitation was excellent it could only be carried out for limited periods by one person and there was always the danger that the would-be helper would breathe against the victim and not in fact aid him (a distinct possibility with an inexperienced person).

The Automan:

This device is marketed by Siebe Gorman, and was demonstrated by their area representative. Basically, the device samples the exhaled breath of the patient and supplies - at the right time - an equivalent amount of oxygen for him to breathe. The device is completely automatic once the face mask is in position. The oxygen cylinder used in conjunction with the equipment is a small one and lasts for fourteen minutes. After that time a handle on the device enables the patient to be ventilated manually (if you will excuse the phrase!) In its present form, it seemed a bit large for a cave but many suggestions were put forward as to how to improve it for underground use. It costs £96 and is apparently widely used by ambulance services.

### The Immobilizer Stretcher:

Mr. Breach of Egerton Hospital Equipment Co. demonstrated a fascinating new type of stretcher. It consisted of a somewhat bulky PVC bag filled with small grains (2 mm. approx.) of expanded polystyrene. The injured person is placed on the bag which is then pummelled into shape around the body. Air is evacuated from the bag using a car type foot pump. The result is a lightweight rigid mould which supports the body and can be carried like a stretcher. This stretcher is claimed to be invaluable for carrying injured persons across rough countryside without fear of causing further injuries. An experiment in a nearby swimming pool showed that a patient could be floated in the stretcher with ease. The cost of the device is £27. 15s., and my only criticism is that it appears a little bulky for cave use.

### Safety Harness:

An Irving Safety Harness was demonstrated and it was interesting to note that nowadays if you are being lifted out of a sewer or of tank filled with noxious gases then it is recommended that you be raised feet first - it is argued that there is less danger of head injuries. One of the harnesses exhibited could be used for lifting either feet first or head first. The price was in the region of £9.

### Sump Rescue Equipment:

John Osborne gave a short account of the SWCRO sump rescue equipment. The beauty of this equipment is that it can be used to rescue a completely unconscious person. A demonstration took place in a nearby open air swimming pool with the aid of the SWCC divers, some of whom had not taken wet suits as they had expected a heated swimming pool. Borrowed equipment saved them from what would have been a chilling experience.

### Discussion Circle:

The North of England's Cave Rescue Secretary quoted some interesting accident statistics. Statistics showed that more cave accidents took place in October and November than other parts of the year. Most accidents took place in three caves, (Gaping Ghyll via Bar Pot, Alum Pot and Easegill). Over a number of years the number of callouts averaged 25 per annum and numbers were definitely increasing. An analysis of some 134 accidents indicated the main causes to be:



- i. Falling off ladders, traverses etc.
- ii. Flooding, high water etc.,
- iii. Parties overdue, tackle taken out in error on multiple trips etc.

The discussion then went on to cave rescue practises. Representatives considered these essential even in the North where they have so many callouts. The number of practises thought necessary was in the region of 3-4 per year (common approval).

Concerning ropes, an ideal rope was considered to be the polypropylene rope with flattened fibres. This was interesting since it is a cheap rope. The price quoted for formula S, Propylene rope (flattened fibres) was 30/- per 100 feet of one and a half inch circumference rope. One of the advantages of this type of rope was claimed to be the high abrasion resistance. Gloucestershire Cave Rescue have bought a five hundred feet three inch rope with a breaking strain of eight tons for £25. It is claimed to be the longest and strongest rope in Gloucester.

Other points of general interest were raised and discussed before the meeting closes.

#### Conclusion:

The annual conference of Cave Rescue Organisations is well worth attending merely for the interchange of ideas and opinions expressed by what are otherwise almost isolated groups of individuals with a common interest.

Roger Smith

## FROM THE LOGBOOK

There is little to report from the last few weeks, perhaps not because there is any dearth of activity at Penwyllt, but more because no startling discoveries have been made.

Ogof Ffynnon Ddu: The survey is progressing satisfactorily and we have covered the vast majority of passages now. There still remains a lot of interconnections to be finished off and with luck we will have done most of these by Easter. I hope to put a drawing of the survey to date on the wall in the new year so that people can avail themselves of the opportunity to indicate passages that we may have missed (it can happen!).

At the end of November we did a number of radio tests to check the accuracy of the survey. We marked out roughly on the surface where we thought that Smith's Armoury was and repeated the test there (for the fourth time). This time we were lucky and located it within 150 feet of our rough marker. It really is past the sink at Pwll Byfre, as the survey suggested and is on the edge of the peat bog to the south east of the gravel pit. Part of the reason that the previous tests had not been picked up was because the searchers on the surface did not look for a signal that far away from the Byfre. Near the surface location there is a large area of shakeholes probably corresponding to the huge collapses near the end of the cave. The depth of the fix precludes any hope of another entrance - it is nearly 200 feet below ground.

Another test was done in a passage in the Labyrinth and it was found to connect with the bottom of Engine House Dig. In fact, if Clive had carried on with his dig there on the day that the top entrance was dug it is likely that he would have got in first! C'est la vie!

There are several other points in the upper series that end in scree run-ins that are very close to the surface. In fact there are at least half a dozen potential entrances in close proximity to each other.

Another radio test in the Fault Chamber in the series above the First River Chamber was unsuccessful.

Activity on the other side of the valley has been somewhat curtailed because of the unsettled weather, and trips into Dan yr Ogof have been short. Hospital Cave has been attacked again (in mid November), and produced some extra cave.

The first attempt on the day came to an end before it really began, as two of the divers had trouble with their equipment at the first sump. Bruce's valve was leaking badly and Bob Saunders' was allowing grit into the gag. The kit was left in the cave and a second dive made after the committee meeting. This time John Osborne and Colin Fairbairn passed through to sump IV without trouble. The fourth sump was in fact a duck, and was followed quickly by three short sumps ranging from 25 to 10 feet in length, then a duck and another sump. The new passages are small and involve crawling most of the way. Above sump VII there is an aven with a small trickle of water entering and it was climbed for 30 feet but required maypoles to go farther. The two divers were cold by this stage and returned safely to base having added about 600 feet of passage to the length of the cave. Apparently it trends south-west to west for most of its distance. Another dive is planned for January.

The only digging project that is in progress at the moment is one by Clive Jones near Penderyn, but we have no report on its progress.

Editor.

## CLUB NEWS

### 1. Secretarial Note

#### 'A volunteer is worth ten pressed men!'

As you will all know the Club has, over the years, introduced many cavers to the sport and we have on occasions run short courses on the subject. These have been unsatisfactory in many ways but they have been generally well received and many novices have enjoyed their day's caving under expert guidance without the added risk of caving alone.

However, there are other aspects to the problem which complicate the issue and with the increase in interest in the sport the Club has reluctantly withdrawn its support for non-caving bodies, encouraging interested persons to approach and cave with an existing Club. (see 'Caving as an Adventure Activity'. Newsletter No.58).

We continue to assist visiting caving clubs and interested individuals wherever possible, and in this we are fully occupied.

However, we appreciate that the Club may be limited in the support we could offer in any case and individuals may feel that they could in fact assist further.

There are groups which ask for assistance who are neither cavers nor tourists 'on the cheap' and, while intending to incorporate the sport in their activities, wish to see that every precaution is taken and approach the Club for assistance. In these cases the Committee is often sympathetic but feels it unfair to require members to assist where time is insufficient for adequate training from the Club's point of view.

It is realised that some members will feel that further support can be offered other than officially, and should you be interested the Sec. would be very pleased to hear from you. Should any volunteers be forthcoming, they would be invited to assist these groups before we refuse any assistance to them outright.

Members who assist would be covered by the visiting group as far as liability would be concerned and the programme would be arranged privately. In this way an opportunity for interested members to practise their policies can be given and a further category of visitor can be introduced to the sport.

Parties would typically be interested novices from Colleges, Schools and Adventure Centres, for example.

Hon. Secretary

2. We would like to welcome the following new members who have joined since the last Newsletter went out:

Tony White, Robert Radcliffe, George Bray, Richard Arculus and Mr. and Mrs. Robert Picknett. Their addresses appear in the list of addresses later.

3. On a sadder note we were very sorry to hear that Dave Hume and Dave Judson were injured on their way home from the Club a few weekends ago. Their car apparently skidded on a patch of ice and both ended up in hospital. Although Dave Judson was not too badly hurt, Dave Hume has a fractured pelvis and will probably be confined to bed for a while yet. Cheer up, Dave, and let's hope it won't be too long before we see you down at Penwyllt again!

Glyn Genin was also involved in an accident on the same day but luckily he escaped uninjured.

4. The death occurred recently of Eileen Taylor, sister of Clague Taylor who did a lot of caving in the early days of the Club. We send our condolences to her relatives.

5. At the last committee meeting, Laurie and Mary Galpin were co-opted on to the committee as ordinary members. Several members have indicated that they will not be standing for the same positions in next year's committee. They are J. Osborne, R. Smith, C. Harvey, D. Hume, B. Foster, G. Clissold and P. O'Reilly. The latter four will not be available for other committee positions. This means that many offices will need to be filled in the AGM and now is the time to start thinking for suitable people.

6. There are three keys missing from the set that opens OFD 11 top entrance. Any member who can give any assistance regarding the whereabouts of these keys should get in touch with Frank Baguley or any committee member.

7. As you will no doubt have notice, we have brought back the old Club News section of the Newsletter. This follows the scrapping of the Newsheet by Blacks. It also means that members do not get news of what goes on quite as regularly as we had hoped for, but if we had more articles for the Newsletter we could publish it more often and overcome the difficulty this way. Many of you will have ideas stacked away that would not take two hours to write down and would make interesting reading, so why not get your pens busy...? Keep a lookout for articles of interest in other magazines too, perhaps we can print them and give our readers a varied diet. Another innovation has been the hard cover with a photograph on. With the advances in printing techniques this is not a fantastically expensive addition and it is hoped that we will be able to keep it up. To do this we need a constant supply of photos, so if there is one that you think would be suitable please let the Editor see it. The next Newsletter will see the final article of Gower Hydrology and will contain a few surveys of Gower caves on small scale. If any member has a survey that could be included I would appreciate if he sent it on. Finally, I have been asked to state that any comments I append in the Newsletter are not intended to give offence, and I must apologise if they have.

(Editor)

## BONES FOUND IN OFD II

Some bones including a horse's skull were found just inside the top entrance to OFD II not long after the entrance had been opened. These were taken to the National Museum of Wales and the report from the Keeper of Zoology (Mr. J. A. Bateman) is as follows:

- " 1) Skull: with premaxillary region broken away but accompanying; no mandible. Part fossilised and carrying calcareous encrustation. This is of Equus caballus (Modern Horse).
- 2) Right Tibia: with proximal region broken away and missing. This is of Cervus elaphus (Red Deer).
- 3) Right Metatarsal: entire. This is also of Cervus elaphus.

" The last two bones are of especial interest since Red Deer have not been extant in South Wales during modern times. They have been extinct in the whole of Wales in a wild state since the 18th century, but I think the specimens under discussion go back considerably beyond this and probably relate to the red deer found in prehistoric times as this was a considerably more larger form than those that have occurred more recently and this is consistent with the size of the bones received."

Mr. Bateman has told me that he is very interested in forming a record of all bones found in caves in Wales. Any member finding bones is advised to contact him concerning their whereabouts.

Roger Smith.

## REPAIRING STALAGMITES WITH ARALDITE

The following technical note was published by CIBA in July 1965 and is reproduced with their permission:

" Potholers from a club at Ingleton, Lancashire, have repaired with Araldite adhesive a stalagmite which had been broken in several pieces by vandals. The stalagmite which was fifteen feet long and five inches in diameter was part of a

unique formation of three columns stretching from floor to ceiling in Lancaster Hole, near Kirby Lonsdale.

" The repair necessitated sticking together six pieces weighing 20 to 56 lbs and a suitable Araldite formulation had to be chosen to suit the damp conditions and low temperature in the cave. Each piece, soiled by years of handling by visitors, was scrubbed clean and dried before applying the adhesive. The stalagmite is now once more an attraction for visiting potholers."

The Araldite used was: Araldite GY 260 100 parts by weight  
Hardner X83/144 30 parts by weight

The pot life is 10-15 mins at 20°C

Curing time 4-6 hours at 20°C (hard gelled in this time)

Materials are obtainable from CIBA (A.R.L.) Ltd., Duxford, Cambridge.

R. Smith.



LIST OF MEMBERS 1968/69

(HONORARY MEMBERS are denoted thus\*\*)

(VICE PRESIDENTS thus\*)

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Erratum:

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(If any of the above addresses are out of date please contact the Editor, Secretary or Treasurer immediately.)



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## WATER SAMPLING RESULTS

This section of the report contains a summary of some readings taken at various places in Gower and some comments on the sites where appropriate. The arrangement is similar to section (iii) and Gower is treated in the following subdivisions:

- (1) Bishopston Valley
- (2) Green Cwm
- (3) Caswell Valley
- (4) Other Sites

### A. Bishopston Valley

(i)	Site: NGR: Flow: Test: Detection: Result:	Barlands Quarry Sink SS576897 1000 gall/min Connection to Bishopston Valley Risings (q.v.) Fluorescein - visual Positive - 5 days
(ii)	Site: NGR: Flow: Test: Detection: Result:	Bishopston Sink SS576892 flood only In flood conditions connects with Dawpit (q.v.) - -
(iii)	Site: NGR: Flow: Test: Detection: Result:	Bishopston Valley Rising West SS574884, O.D. 40 ft., 1000 gall/min Positive connection with Barlands Quarry Sink - -

(iv)

Site:	Bishopston Valley Rising East
NGR:	SS574884
Flow:	800 gall/min
Test:	
Detection:	as for Bishopston Valley Rising West
Result:	

(v)

Site:	Widegate Rising
NGR:	SS567879 (O.D. 50)
Flow:	150 gall/min
Test:	-
Detection:	-
Result:	-
Note:	Rising active in flood conditions only. Sink unknown

B. Green Cwm

(i)

Site:	Llethrid Swallet
NGR:	SS531912 (O.D. 130')
Flow:	800 galls/min (average)
Test:	Connection to Tooth Cave Mainstream Passage
Detection:	Fluorescein with activated charcoal detectors
Result:	inconclusive because detectors left in site for too long

(ii)

Site:	Llethrid Swallet
Test:	Connection to Wellhead (q.v.)
Detection:	12 oz. fluorescein. Visual
Result:	Positive - 20 hours
Note:	Flow at Llethrid: 800 galls/min Flow at Wellhead: 3000 galls/min Two hundred galls. of highly concentrated fluorescein solution was dribbled into Llethrid stream during the 1940s by airmen based at Fairwood. Watch was kept at Wellhead but the dye was not seen. This test failed due to one or more of the following reasons: <ol style="list-style-type: none"><li>1. Not enough dye was used.</li><li>2. The rising wasn't kept under observation long enough.</li><li>3. The dye came out at night and was missed.</li></ol>

(iii)

Site:	Tooth Cave Main Stream
NGR:	SS531909
Flow:	only in flood
Test:	connection to Wellhead
Detection:	12 oz fluorescein - charcoal detectors
Result:	Positive
Notes:	Dye was placed on the floor of Main Stream passage in such a position that the next flood would dissolve it. After the first severe flood at Llethrid the detector was checked and found to be positive. (14 Oct. '66) I have estimated that the most probable conditions during which dye appeared was when 8000 galls/min were rising at Wellhead and the dye took 6 to 10 hours to appear.

(iv)

Site:	Decoy Pond Sink
NGR:	SS519909
Flow:	250 galls/min (normal)
Test:	connection to Llanrhidian Rising
Detection:	12 oz fluorescein - activated charcoal
Result:	Negative after 5 days
Note:	Flow at Llanrhidian Rising (SS496922) was 495 galls/min

(v)

Site:	Decoy Pond Sink
Test:	connection to Wellhead
Detection:	charcoal - 12 oz fluorescein
Result:	Simultaneously with the previous test detectors were placed in Wellhead and were positive after 4 days. (9 Jan. '67)
Note:	Flow at Wellhead 2,500 galls/min

(vi)

Site:	Wellhead												
NGR:	SS539897 (O.D. 45)												
Flow:	min: 482 galls/min max: 27,800 galls/min average: 2,500 galls/min												
Temperatures:	<table><thead><tr><th></th><th>water</th><th>air</th></tr></thead><tbody><tr><td>Llethrid</td><td>6.0°C</td><td>7.5°C</td></tr><tr><td>Decoy Pond</td><td>6.1°C</td><td>7.5°C</td></tr><tr><td>Wellhead</td><td>9.6°C</td><td>7.9°C</td></tr></tbody></table> (11 Jan. '67)		water	air	Llethrid	6.0°C	7.5°C	Decoy Pond	6.1°C	7.5°C	Wellhead	9.6°C	7.9°C
	water	air											
Llethrid	6.0°C	7.5°C											
Decoy Pond	6.1°C	7.5°C											
Wellhead	9.6°C	7.9°C											
Notes:	This is the largest rising on Gower. The known feeder sinks for it are 1. Lethrid Swellet. 2. Decoy Pond Sink. 3. Main Stream in Tooth Cave. Although the maximum flow rate is given as 27,800 galls/min., it should be noted that this occurs on very rare occasions, and even then this figure is not kept up for long periods, but it is not unusual for 7,000 galls/min to resurge for 24 hrs. during heavy rainfall.												

(vi) (contd)

Notes:	<p>When a flood occurs at Lethrid Swallet the water at Wellhead will begin to rise eight hours later.</p> <p>The Water Board has built a pumping station near the rising, which consists of several small and one large spring, all of which are silted up too much to enable divers to enter, and there are no possible places where one could dig to try to gain entry into the cave system that must lie beyond.</p>
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(vii)

Site:	Parc le Breos
NGR:	SS520894 (O.D. 250)
Note:	<p>To be found approx. 200 ft. south of Parc le Breos House; a dry valley, during times of heavy rainfall a stream flows down this valley to sink in a mud choked hole at the far end. The owner of the land informs me that years ago there used to be an open cave known as The Dungeon down which the water would sink. This rumour has been confirmed by several persons.</p>

(viii)

Site:	Kitchen Well
NGR:	SS539896 (O.D. 45)
Note:	<p>Situated near the Wellhead rising in Green Cwm, the water flows from rubble that was thrown in to enable the road to cross it. The flow rate of this well is more or less constant throughout the year, on rare occasions will the water turn murky due to flooding, on the other hand I have seen the rising dry on one occasion during the past five years.</p> <p>The origin of this water is uncertain; Parc Le Breos sink may have something to do with it, but for the best part of the year this sink is dry, it appears that the main volume of the water probably is due to drainage from the land above and south west of the rising.</p>

C. Caswell Valley

(i)	Site: NGR: Flow: Test: Detection: Result:	Murton Stream Sink SS589889 (O.D. 200) 150 galls/min Connection to Caswell Bay Rising SS594876 1 oz. fluorescein - activated charcoal Positive (5-6 days)
(ii)	Site: NGR: Flow: Test: Detection: Result:	Caswell Valley Sink SS597888 (O.D. 180) 150 galls/min Connection to Caswell Bay Rising SS594876 1 oz. fluorescein Positive (3 days)
(iii)	Site: NGR: Flow: Notes:	Caswell East Rising SS590876 560 galls/min The sink for this rising is unknown, but it has been seen muddy when all other risings are clear

D. Other Sites

(i)	<p>Site: NGR: Flows:  Test: Detection: Result: Note:</p>	<p>Llwyn-y-Bwch Swallets SS483915 (O.D. 150) No. 1 70 galls/min No. 2 40 galls/min No. 3 5 galls/min Connection to Leason Well (SS483928) Activated charcoal, 7½ oz. fluorescein Positive (4 days) Flow at Leason Well: 1120 galls/min  A rather interesting collection of swallet holes, No. 1 is the main sink and is capable of draining large quantities of water; this site is at present under excavation by some local cavers, who inform me that the dig is showing great promise. Sink No. 2 is in a similar swallet to the first, but instead of the stream vanishing down a definite hole, it flows in to a small pool from where it slowly drains away. Sink No. 3 was almost dry when I visited it, the swallet hole is far smaller than the other two and is filled with very liquid mud.</p>
(ii)	<p>Site: NGR: Notes:</p>	<p>Leason Well SS483928 (O.D. 20)  This rising is situated half a mile west of Weobley Castle at the base of the cliffs. The water comes out of a sumped passage, which isn't very large but may be worth looking at more closely. It is interesting to note that this rising has a fairly high flow rate of which only one tenth can be accounted for by known feeder sinks (Llwyn y Bwch Swallets), the remainder of the water probably comes from Cefn Bryn, although it could possibly be due to artesian flow from outside Gower as in the case of some of the water rising at Wellhead and Holywell. This rising was dived by T. Moon in Feb. '67</p>

(ii) (contd)

Notes:	His report on the dive is as follows: "I was able to squeeze through an opening between two massive boulders into a narrow rift. This went down for 6 - 7 ft. through hell of a squeeze - had to take diving gear off to get through. This went into a small chamber 10 ft. wide - 4 ft. high and 6 ft. across, sloping steeply away in one corner. The floor was small loose boulders which ran in when I touched them. The way on was through a tiny squeeze, which may have filled in if the boulders had run in. A small series of tubes went off on the right. This place could go if dug."
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(iii)

Site: NGR: Flow: Test: Detection: Result: Notes:	Stonyford Sink SS494915 (O.D. 160) 400 galls/min Connection to Llanrhidian Rising (SS496922) 4 oz. fluorescein - activated charcoal Positive (2 days) This is a somewhat uninteresting sink, the water drains off the northern slopes of Cefn Bryn and after crossing several fields it sinks in a large muddy pool. This pool has limited drainage capabilities, that are frequently exceeded, from where the stream will overflow to sink at the nearby Freedown sinks. The farmer on whose land the sink is situated states that he can remember the point years ago as flat land: now, however, there is a very large hollow some 30 ft. deep, at the bottom of which is the sink, there is no indication of any cave system or worthwhile digging spot existing in this area. The rising is situated next to the Llanrhidian Churchyard, and has unfortunately been used as a disposal dump for old flowers. The charcoal detectors placed here for the Decoy
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(iii) (contd)

Notes:	Pond test gave a very positive looking result, until viewed under U.V., it could then be seen that the colouration was in fact due to minute green particles that had been absorbed - probably from the decaying vegetation in the stream. Digging is impossible at this site, although access to the stream can be gained through nearby Llanrhidian Quarry Cave. (Also a local rubbish dump.)
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(iv)

Site:	Holywell
NGR:	SS497899 (O.D. 450)
Flow:	150 galls/min
Notes:	This rising is of particular interest, because it is a good example of artesian flow. The rising (which is fenced off), is located near the top of Cefn Bryn, and is used due to the consistency of its flow by the Water Board for distribution. The water rises at a height of 450 ft. on Cefn Bryn, the remaining 150 ft. of high ground above it being not only small in area, but mainly Old Red Sandstone, so where does the water come from? There is no suitable high ground in Gower so it must be coming by artesian flow from elsewhere, and the nearest possible place being the North Outcrop around the Ammanford area. After rising at this point the water flows down Cefn Bryn to sink at Moor Mills.

(v)

Site:	Moormills
NGR:	SS505912 (O.D. 210)
Flow:	200 galls/min
Test:	Connection to Llanrhidian Rising
Detection:	8 oz. fluorescein - activated charcoal
Result:	Positive (7 days)
Notes:	<p>This sink drains the Northern slopes of Cefn Bryn, two streams with similar flow rates drain into various small rifts at the bottom of a very large depression. These have been dug by club members, but they were found to narrow down to mere cracks after a short distance. There are, however, several other possible digs that are worth looking at.</p> <p>It is interesting to note that in Llanrhidian there is an old mill. Before we carried out this test we had a word with the owner who informed us that when the Mill was working they would divert the Moor Mills Stream down into the Stonyford sinks to give extra flow at Llanrhidian, and that by some method unknown, they had traced the Moor Mills Stream to Wellhead, so although the locals may be of great help in certain circumstances, I have very little faith in the water tracing methods they employ!</p>

(vi)

Site:	Burry Head Rising
NGR:	SS457903 (O.D. 110)
Flow:	900-1000 galls/min
Notes:	<p>This rising is situated on the Llanddewi to Burry Green road, the water comes out of several holes and bedding planes all of which are far too small to enter.</p> <p>Although I know of no definite feeder sinks for this rising, I have proved that a lot of the water originates from the streams that flow overland into Burry from Rhossili and Hardings Downs, these two streams lose considerable amounts of water, due to seepage through the stream bed in an area approximately half a mile upstream from the rising.</p>

(vi) (contd)

Notes:	<p>The stream can be seen in the nearby Burry Head Cave. (It has since been noticed that there are several small sinks on Hardings Down that also possibly feed this rising. To determine where the water for this rising sinks 3 ozs. of dye was put in the stream approximately half a mile upstream from the rising on the 17/1/67, the detectors were removed from the rising on the 20th, and were found to be visually positive, proving that some of the water rising must sink through the stream bed, although exactly where this occurs is unknown.</p>
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(vii)

Site: NGR: Notes:	<p>Nicholaston Swallets SS505885, SS515885 For the greater part of the year these are dry, and when active they drain considerable quantities of water from the southern slopes of Cefn Bryn. The risings are unknown but may be the springs at the bottom of the cliffs near Oxwich Marsh in Crawley Woods.</p>
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