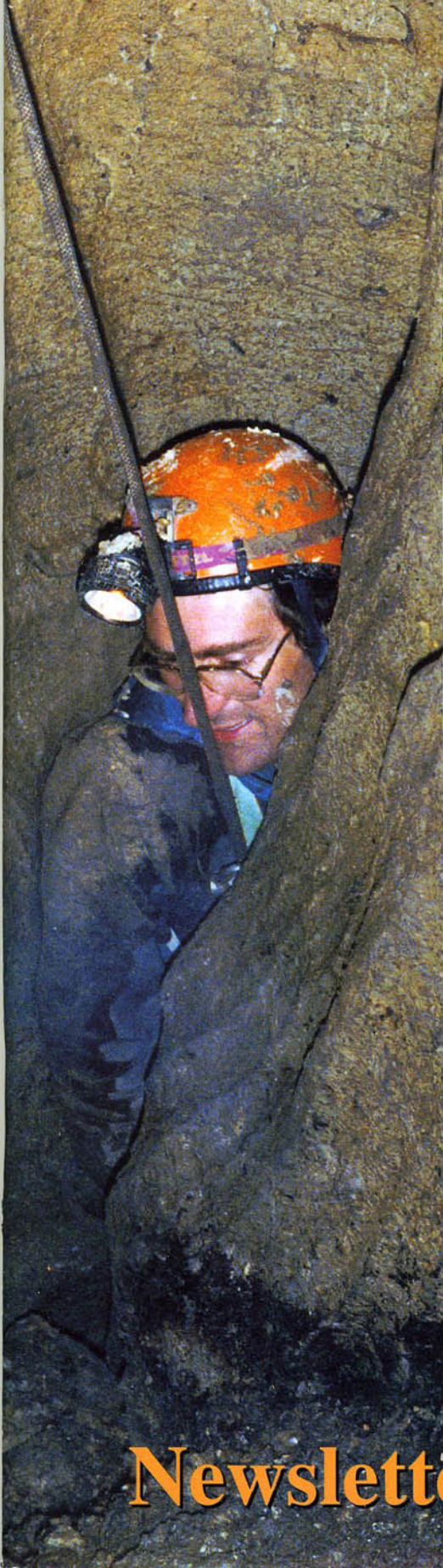


Clwb Ogofeydd Deheudir Cymru **South Wales Caving Club**



Newsletter 121 February 2000



South Wales Caving Club Clwb Ogofeydd Deheudir Cymru

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Front Cover: Andy Dobson in SVA34, by Dave Dobson; Tony Baker about to descend SVA16 by Dom Wade; Ian Middleton in SVA30 by Martin Hoff. Rear Cover: The Junction, Ogof Ffynnon Ddu 1. E.A.Glennie Collection.

Opinions expressed in this Newsletter are the contributor's own, and not necessarily those of the editor, or the South Wales Caving Club.

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Editorial

Ah that prerogative of the editor – the editorial. A chance to ramble on, about the state of caving and the world in general. Well first of all welcome to my second attempt at putting together a newsletter - no. 121. I had hoped to have this completed several months ago, but a few changes and adjustments slowed the production of this edition down. Once again the Newsletter focuses very heavily on the clubs continued visit to Cantabria in Northern Spain. This brings the expedition account a little bit more up to date, although the 1999 expedition now needs some writing up (hint to those who attend the 1999 expedition!). In addition there are a range of articles that are closer to home, some of which should amuse! I would like to thank all those who have contributed to this edition of the Newsletter.

The next edition(s) of the Newsletter now need planning and putting together, so get your keyboards out, or even pens, and get tapping or writing. I need ARTICLES. It would be nice to have some more write ups for our '101 Great Caving Trips' series. Also photos, cartoons and humorous stuff is always needed. So get that creative matter working and send the stuff to me. Remember we exchange our newsletter with many other groups and institutions, so more than the membership get to see it.

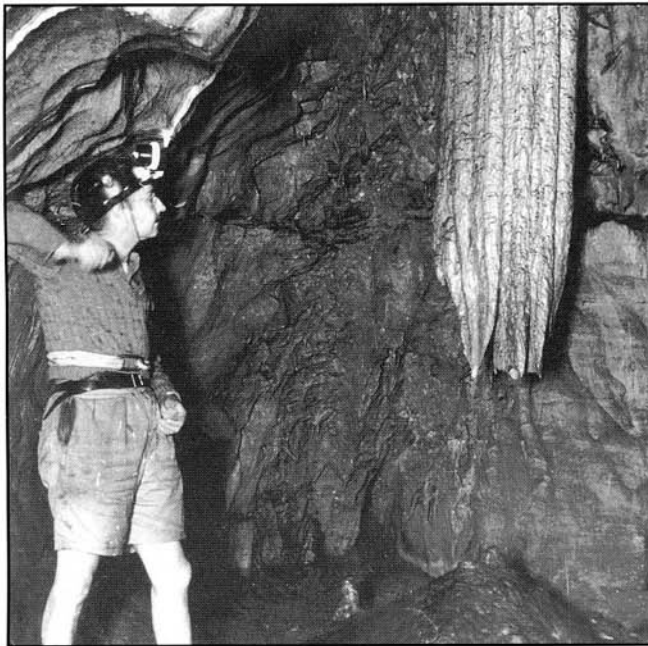
Now for the bit on the state of caving. Many people are worried about the decline of caving in the UK. The club has recognised the fact that fewer young people are entering the sport, and have been attempting to attract and assist University clubs to SWCC, especially as Athletic Unions make the pursuit of caving more difficult on safety grounds and training. Prior to the end of 1999 a whole string of University clubs visited SWCC. The results has been some busy weekends, the consumption of lots of beer and some good caving. An offshoot of all this is that one of the University clubs will be meeting up with the Cantabria 2000 expedition members. All in all very positive stuff. But what to the future of the sport? The reality is that caving is not very glamorous! Its not very easy to pose in the latest lycra wear when its plastered in mud and dark! In the day and age of 101 buzz sports then caving is very likely to decline. Maybe the whole event is a cycle and in a few years people will want to hide away in holes in the ground again, who knows. One thing is certain though is it is good for conservation. The numbers visiting Ogof Ffynnon Ddu have been falling over the last few years, reducing the pressure on the cave. The best aim may be to keep the sport of caving 'ticking over', with the SWCC using its resource, size and expertise to welcome and help those wishing to join in with the sport.

Well that's it. Happy reading, writing, caving, and a happy year 2000.

Jules

Norman Lloyd – a gentleman caver.

By Julian Carter



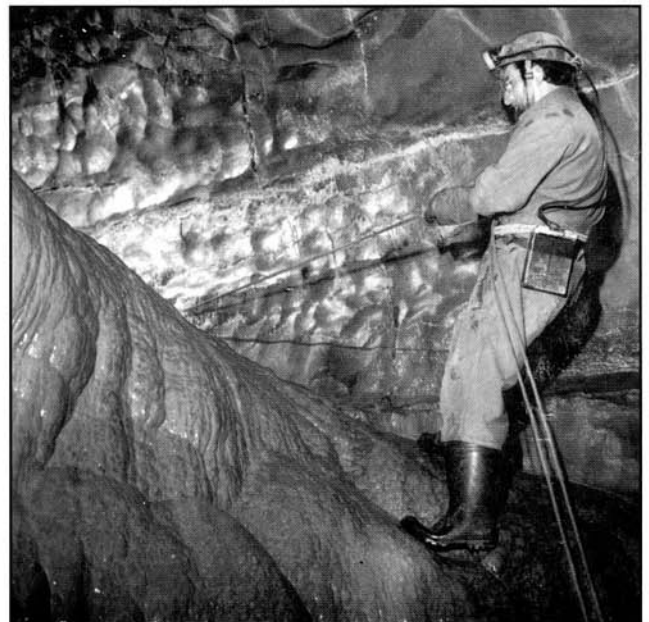
Norman Lloyd in classic SWCC caving attire.

Norman Lloyd was a long standing member of the South Wales Caving Club. He was born in 1923 in Welshpool, where the 'Lloyds' were a notable farming family. During his later school days Norman ended up in Oxford where he saw out his schooling prior to the start of World War 2. During the war Norman worked in metallurgic research, whilst his brother Frederick joined the army. Sadly Frederick was killed defusing a bomb in Coventry in 1941. After the war ended Norman moved to Swansea to work for the Wire and Cable Company, using his experience gained from his wartime research work. It was during his time in Swansea that his interest in caving developed, and his joining of the SWCC. In the 1960's his mother came and lived with him from Oxford, and this resulted in the buying of the beautiful Barland Cottage in the Bishopston Valley on the Gower. During this time Norman obtained a Diploma in photography, and pursued his love of music by playing the violin for the Swansea Orchestra.

However things were then to change. His mother had a fall down the stairs of the cottage, resulting in her becoming bed ridden. This re-

sulted in Norman spending most of his time looking after his mother, ultimately having to give up his job in 1970, aged 47. With much of his time now taken caring for his mother Norman attempted to maintain his interests and hobbies. Little time was available for caving, with Norman using his membership of the SWCC and acting as key holder for Llethrid swallet to maintain his contacts with the speleological world. Eventually, aged 92 his mother died in 1982. Norman remained at Barland Cottage for some time, but in the 1990's he sold up and moved to Beddau, a few miles outside Cardiff, where in 1997 he sadly died after a short illness. Norman was buried in the Bishopston Valley where he spent much of his life. His headstone is also marked in memory of his brother Frederick.

From talking to people who knew Norman I have the impression of a quite and reserved man, who had a passion for the underground world, that sadly he could not pursue to the extent that he would have liked. This Newsletter is dedicated to the memory of Norman, a gentleman caver.



Eric Inson in Ogof Ffynnon Ddu 1. N. Lloyd



Cantabria 1998.

Expedition report by Tony Baker

Introduction

In August 1998, twelve members of the South Wales Caving Club spent two weeks in Ramales de la Victoria, Cantabria, Northern Spain, to continue with cave exploration on the nearby area around Pico San Vicente. This project had been started on an expedition by the club in summer 1997, and further work had been done by a small team at Easter 1998.

Background

Before summer 1997, there was very little known cave of any significance on Pico San Vicente, despite its obvious potential and the presence of major cave systems under neighbouring hills. Following an initial reconnaissance and contact with the local caving club, *Agrupacion Espeleologica Ramaliega*, an SWCC expedition visited the area in July/August 1997 and as well as completing a successful traverse of the nearby Cueto-Coventosa system began exploration work on Pico San Vicente. Details of this can be found in SWCC Newsletter no.120.

The '97 expedition divided the hill into nine areas and began systematically searching each one for likely caves, using GPS (Global Positioning System) sets to record the position of each promising site. The establishment of a GPS base station at the campsite enabled a "differential GPS" system to be used, which significantly reduces the degree of error inherent in GPS data (caused by the deliberate scrambling of the information sent by satellites by the US authorities). (See also "DIY Differential GPS" by Iain Miller, SWCC N/L no. 120, p.12)

Much of the terrain on the hill is rugged karst

landscape, progress over it is slow and for this reason most of the work was concentrated in area "A", which was felt to have good potential. (Area A forms part of the Pena de Rozas, and includes the Pico de Hoyufresno, the highest point on the main ridge.) A total of 42 sites of speleological interest were logged, some of these were descended and showed that finding significant cave passage on San Vicente was a real possibility.

A small team from SWCC visited the area again at Easter 1998 for one week, and although activities were hampered by poor weather they managed to descend some of the sites previously noted as well as walking on Hornijo and undertaking some sporting caving.

The August 1998 Expedition

The expedition took place from 31st July to 14th August 1998, and we were fortunate enough to be allowed to camp again at the public park Gandasson-Cubillas in Ramales de la Victoria. The South Wales Caving Club would like to place on record its thanks to Ayuntamiento de Ramales de la Victoria, and to the town's mayor, for their kindness in allowing us to use this site again.

We would also like to thank Mr. Rafael Zorilla of nearby Riba, for his continued help, both with local liaison and for storing some of the team's equipment, and the *Agrupacion Espeleologica Ramaliega* for their continued support.

A GPS base antenna was again established at the campsite, which has proved an invaluable asset to the exploratory work. A generator provided power for a computer to be run on-site,

which allowed GPS data to be downloaded immediately and surveys to be plotted.

Objectives

The 1998 expedition set out with the following objectives:

- (i) to continue descending previously recorded sites of interest in San Vicente area "A", surveying each one as it was descended.
- (ii) to finish the surface sweep of area "A", recording sites with GPS as before.
- (iii) to continue the sweep of remaining areas of San Vicente.
- (iv) to search for possible resurgences in the river valleys to the north and east of San Vicente - the Ason and Gandara respectively - taking water temperature readings to try and establish the precise locations at which cave water from the mountain appears in the rivers.

These objectives will now be dealt with in turn:

- (i) to continue descending previously recorded sites of interest in San Vicente area "A", surveying each one as it was descended.**

This objective occupied most of the manpower for most of the time, due largely to the fact that some significant cave systems were discovered, some of which took several days to rig, explore and survey.

Members of the expedition tackled this work in groups of two or three, and soon realised that finding previously-recorded sites was seldom straightforward despite the red paint used to mark all the sites. The original plan - to work through the sites in numerical order - was soon abandoned in favour of descending sites as and when they were located, then comparing notes with other teams and returning to "tick off" any remaining sites at a later date. A spell of hot, sunny weather further complicated matters as although this meant that visibility was good, it made carrying ropes and equipment across the tough terrain hard work.

While all of the sites previously found had been logged using the GPS equipment, in many cases the set had only been "on station"

for a few minutes and for this reason most sites were re-logged to provide much greater accuracy. In some cases, the GPS sets were on station for several hours while the deeper shafts were explored.

Bosch 24-volt cordless drills were used to facilitate the placing of bolts for descent, and all teams agreed that this approach was worthwhile, both in terms of time and effort saved and increased safety. Also, so-called "stud anchors" were used in place of the more usual "spits". These have several advantages; the hole can be drilled to any depth (as long as it exceeds the minimum necessary), does not need finishing "by hand" with a bolt driver, and after use the outstanding bolt can be hammered back flush with the rock face, leaving little visual evidence of the caver's presence. While this renders the bolt useless for further trips this is of no consequence in shafts that don't "go".

The team's most significant finds were as follows:

SVA 30 Surveyed depth: 191m

This surface shaft in the upper amphitheatre was pushed by a team of three over several days. The immediate area around the red paint-marked "SVA 30" is peppered with shafts and after dropping stones down several of these the team opted for the one that sounded deepest. Initial exploration, in what was later named the "P.O.W. Series", indicated that the shaft bottomed out at around -65m but the team then found an alternative route which was pushed for several pitches to a slot at -80m, down which a good draught was blowing. The walls of some of these pitches were covered in a moonmilk-like substance, with which rope and equipment soon became caked, making exploration arduous.

Beyond the slot, the passage became a huge rift which descended more or less vertically to the final limit at -191m. However, no evidence was noted of the draught at this point and the two members of the team who took part in the final push could not establish where it goes. This does leave something of a question mark over this part of the cave but the two cavers

concerned searched the shaft extensively and could find no evidence of any other way on. However, one or two other possibilities remain to be investigated in the area around the slot, draughts enter the cave higher up and given the results in this cave the other surface shafts in the same immediate area deserve further, more thorough investigation. *A fuller report on SVA 30 appears elsewhere in this Newsletter.*

SVA 34 Surveyed depth: 126m

Another shaft in the upper amphitheatre, this site had been considered one of the most exciting found during the surface sweep in 1997 due to the great distance down which dropped stones could be heard to fall. It was descended at the end of the 1997 trip and a blockage reached at around -50m. A team of three revisited the site in 1998 and removed the blockage with a crowbar, encouraged by the presence of a cold draught. They continued exploring over several days, surveying as they went and eventually reached an impenetrable slot at -126m. It is worth noting that the slippery mud which made exploration difficult in SVA 30 was also present here. Two potential parallel shafts were later examined but both ended in tiny slots. This cave also had a good draught evident which could mean it is connected to a much larger system but the team concerned consider it unlikely that any further progress will be made at this site. *A fuller report on SVA 34 appears elsewhere in this Newsletter.*

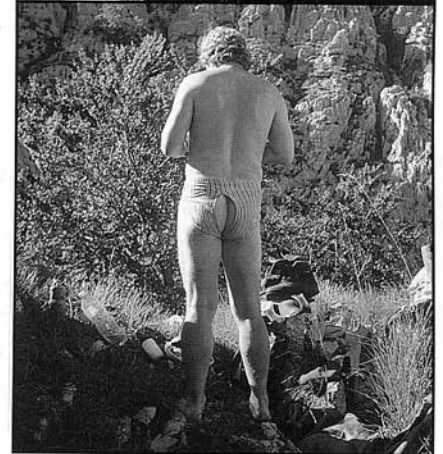
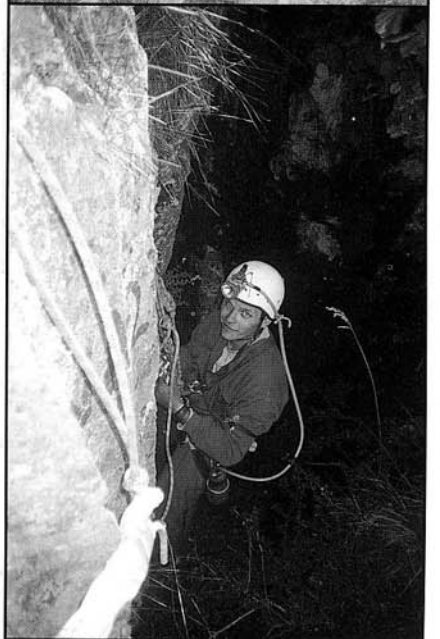
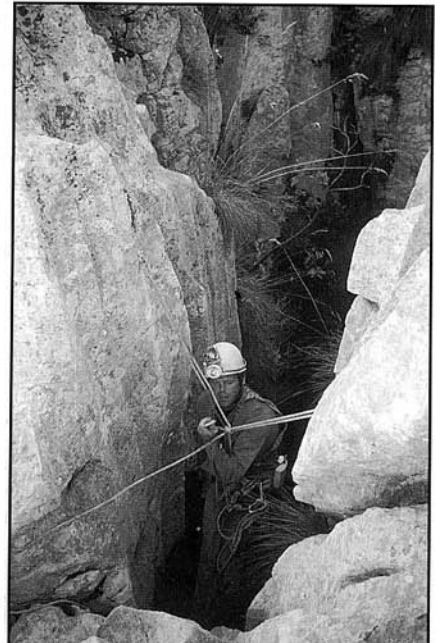
SVA 16 Surveyed depth: 90m

This is a big, obvious surface shaft on the NE rim of the upper amphitheatre which was descended on the first full day of the expedition. A descent of 20m was made to the gravel floor visible from the surface, from the far end of which a window up one wall was seen. A slippery climb gave access to this, from where dropped stones could be heard rattling for some distance. The rope was rigged some 8m to a tight slot, from where a 20m near-vertical hang landed on a big gravel ledge above a wide, deep rift. At this point a halt was called, due to running out of rope, and a return made next day.

Two cavers pushed the shaft while two others followed, surveying. The rift descended almost vertically for more than 40m to a gravel floor from which there was no way on. Some time and effort was spent investigating the possibility of a parallel shaft, to which it was considered access might be available from a large ledge of boulders. This proved inconclusive: while the caver stationed at the gravel floor thought that one or two of the stones dropped from above seemed to echo from "behind" the back wall, most landed at his feet. *A fuller report on SVA 16 appears elsewhere in this Newsletter.*

SVA 33 Approximate surveyed depth: 55m

Another shaft in the upper amphitheatre, this was initially descended for some 30m to a gravel floor. (The presence of a



Images of Spain. *Top: Iain goes caving. Middle: Pat plums the depths. Bottom: Local Wildlife. Tony Baker*

"spit", beside a ledge some 8m from the lip of the shaft, indicated that someone had previously examined this site.) Having ascertained that there was no way on from the bottom, a side route was examined which was found to connect to another nearby daylight shaft and this was bottomed at -55m. Despite the impressive scale of this shaft, no way on could be found.

SVA 23 Approximate surveyed depth: 46m

The most promising of the sites in the lower amphitheatre, this at first seemed to offer good potential but was found to end at -46m.

SVA 29 Approximate surveyed depth: 40m

This site in the lower amphitheatre was descended right at the end of the 1997 expedition, when a mud floor at -11m was reached from where a slot led into a long rift, down which stones echoed encouragingly. (See also SWCC Newsletter no.120.) A lack of time and rope forced a withdrawal at this point but the two cavers concerned revisited the site on the first day of the 1998 expedition, descending the rift to a depth of -40m where a gravel floor offered no way on. Some time was spent on the ascent investigating a possible parallel shaft beyond a window but this proved to be just a short sloping rift that closed down. *A fuller report on SVA 29 appears elsewhere in this Newsletter.*

(ii) to finish the surface sweep of area "A", recording sites with GPS as before.

With most of the team occupied in descending and surveying shafts, nothing was done in pursuance of this objective until the last full day of the expedition, when a team of seven took two GPS sets onto the hill. A total of twenty-five sites were recorded and logged using the GPS; some of these sites consisted of several promising shafts in close proximity to each other and these were generally given a single "SVA" number. The area swept was that to the east of the two amphitheatres previously examined. It forms the eastern flank of the Hoyufresno massif, and includes the pass between this massif and the Muesca Chica to the east. Two large dolines were investigated (one of

which forms, or is located within, the pass) both of which contained several very promising sites. Traversing the terrain here was considerably more difficult than that previously encountered, and for this reason while the upper doline was comprehensively surveyed, shortage of time meant that the lower was only cursorily examined and the eastern half of it hardly at all. It may be that some sites were missed as walking with the team in a line was impossible. Those present on the hill that day had no reference material to define the extent of Area A so it may be that we did not cover all of the terrain originally designated as Area A. All of those who took part in this exercise were convinced that the area covered offers great potential for finding cave and warrants further work.

(iii) to sweep remaining areas of San Vicente.

Little was done on this objective, although some sites previously recorded in area SVE were explored on the last day of the expedition. The sites noted in this area proved to be generally immature cave features, usually thin rifts which would require serious digging to produce any meaningful progress. One was found to consist of exceptionally rotten rock, several contained various animal skeletons (including a horse's skull!) but the final one dropped (SVE 3) was the best of the bunch. Some further progress may be expected at this site, but it is wet, muddy, very slippery and loose in places. It does, though, display some nice "flowmud". A hammer would be needed.

(iv) to search for possible resurgences in the river valleys to the north and east of San Vicente, taking water temperature readings to try and establish the precise locations at which cave water from the mountain appears in the rivers.

No work was done on this objective, although various members of the expedition made brief reconnaissance of the area previously identified as lying close to an underwater resurgence beside the Rio Gandara, where the AER are currently engaged in digging activities. Of the two rivers, the Gandara and Ason, the former

seems most promising on the basis of current information.

Other Activities

Eight members of the expedition, including the two geologists present, took part in a walk from La Gandara to Riba, via the huge doline (1km across) of Hoyo Masallo. While a day's walk was only able to cover a small proportion of the Hornijo massif, the area has clear potential as evidenced by the numerous shakeholes adjacent to the path. (The team were also impressed at finding a hole emitting a cold draught, near Hoyo Salzoso, just yards from the main path!)

The verdict of the geologists was that the areas of the mountain which consist of "reef" limestones were those most likely to repay serious investigation. It is clear that careful scrutiny of any area of Hornijo, and its subsequent speleological exploration, will occupy a great deal of time and manpower.

As well as the exploratory work, some managed to find time for other caving activities. Several "tourist" trips visited Cueva Coventosa, and those seeing it for the first time were impressed with the scale and sporting nature of the cave. Sadly, a rope placed on the vertical drop close to the cave entrance was removed by persons unknown some time between 2nd August and 12th August.

Three trips were made to Cueva Cañuela, with one party using large M22B flashbulbs to take photographs in the large entrance passage. However, the large passage at the end of the cave is not as easy to locate as the survey in *Grandes Travesias* would suggest and none of this summer's trips managed to find it.

Conclusions

Our initial investigations in 1997 led us to believe that significant cave passage exists under Pico San Vicente. The 1998 expedition proved that belief to be justified, with several deep caves found along with evidence of good draughts, which would seem to indicate the presence of major cave passage beyond present limits. Of the terrain scrutinised so far, the upper amphitheatre in Area A would seem to of-

fer the best hope of gaining access to a major cave system. In particular the site labelled SVA 30 and its associated shafts may warrant further investigation.

In the light of these discoveries, the remainder of Area A needs to be explored with the same methodical approach and thoroughness used so far, as do the other areas of San Vicente. This work will no doubt occupy members of future expeditions for considerable lengths of time.

The GPS equipment had already proved its usefulness in 1997 and this was underlined by the 1998 expedition. It is hoped that an accurate map of all the sites recorded will be available soon.

The use of Bosch drills and stud anchors proved to be an extremely fast and safe means of descending previously unexplored shafts and we would wholeheartedly recommend that future expeditions adopt this approach.

August 1998 Participants

Tony Baker, Keith Ball, Brian Bowell, Brian Clipstone, Andy Dobson, Dave Dobson, Clark Friend, Pat Hall, Martin Hoff, Ian Middleton, Iain Miller, Dominic Wade. (Joel Corrigan was present for the last few days.)

Future Work

At the time of writing (July 1999) an SWCC expedition is due to leave for Cantabria shortly. A small team visited at Easter 1999 but high water levels prevented them from attacking their prime objective, the resurgence described above under objective (iv). Some more of the SVA sites were descended but no major discoveries were made, and a visit was made to the end of Cueva Cañuela.

SVA29: The Conclusion

By Tony Baker

Regular readers will recall (from SWCC Newsletter no.120) my breathless account of the initial exploration of a hole called SVA 29, at the tail end of the club's 1997 expedition to Cantabria. I emphasised in that article that SVA 29 was partly responsible for my commitment to Cantabria '98 and you've no doubt been lying awake at nights wondering what happened when we returned to this marvellous-sounding prospect. And now I can tell you...

Having arrived in Spain a day or two before most of the others, Martin Hoff and I were the first up on the hill in August 1998. Thoughts of SVA 29, and conversations about it, had lightened many dark moments in Ogof Twyn Tal-Draenan over the previous year, and now we were finally here, slogging up the hill to go and explore it. In truth, it felt like walking up to Tal-Draenan as the drizzle soaked our clothes and the visibility closed in the higher we went. Despite being convinced that I could walk straight to the entrance, we spent a long time hunting for it, clambering about in the clag until Martin finally located it.

I rigged the rope and went down to the familiar mud bank, enlarged the hole and wedged myself into the rift to place a bolt. The Bosch drills hadn't yet arrived in Spain so we were using a bolting kit, the first time I'd done so for a while. It took me some time to get the bolt in but safe rigging dictated a Y-hang. Feeling guilty about keeping Martin waiting in the rain, I offered him the lead and headed

back to the surface.

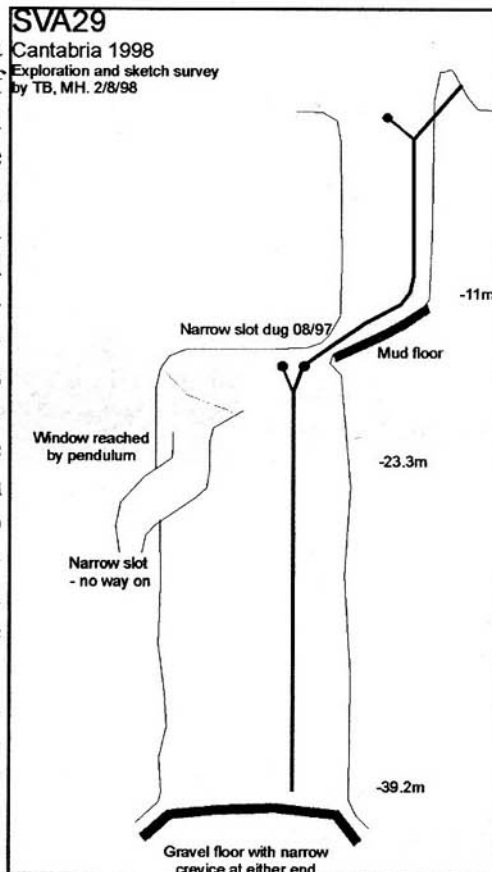
Martin's technique was rustier than mine. By the time he'd finished I was soaked, and freezing cold as I sat huddled against a rock. It was a relief to get back underground and I watched excitedly as Martin abseiled down the rift that had been the focus of so much anticipation. Forty metres from the surface he landed on a gravel floor, from which there was no way on. I followed him down and we

soon managed to collect almost all of the spits that had dropped out of my boiler suit pocket while I'd been placing the bolt.

While we were both disappointed that the cave had come to an end, we had to admit it wasn't a bad find: it was a beautiful shaft and if we'd found it on the Black Mountain we'd have been leaping for joy. There was one remaining possibility: about a third of the way down I'd noticed an alcove that might just be a side passage. After Martin had gone up I prussiked up and swung across. It was an awkward pendulum manoeuvre but eventually I managed to clamber over the edge, only to find that

after sloping away for a few metres the alcove closed down.

We walked off the hill as the rain continued. Our spirits remained undampened; what we'd found was at least a proper cave and this was only the first day of a two-week expedition. The next day the weather changed for the better. Was our luck going to do the same?



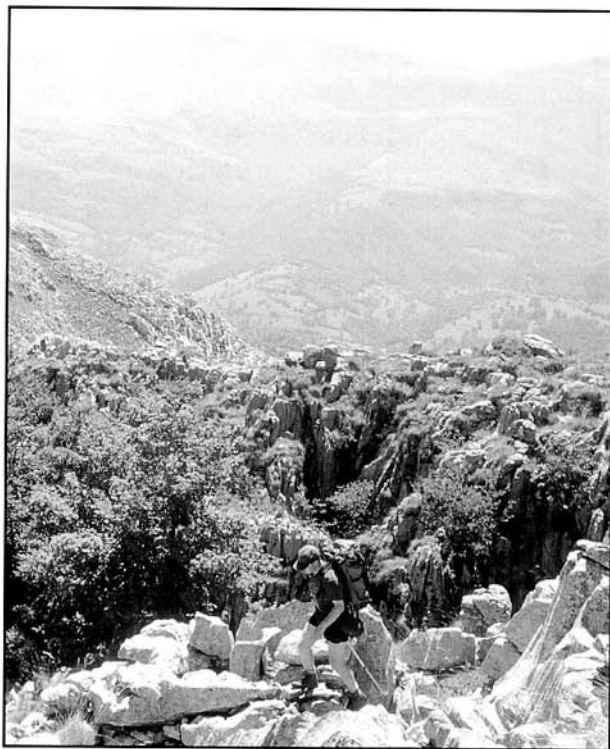
Blood, Sweat and Swear-words.

The Exploration of SVA16 by *Tony Baker*

It was the first full day of the Cantabria '98 expedition, the first day on which the masses had attacked The Hill (although Martin and I had been up the day before to attend to some unfinished business from 1997 - see report elsewhere). Setting a precedent that was to hold for almost every day of the next two weeks, it was hot and sunny. Lacking expedition fitness, we were all struggling and sweating under heavy packs as rope, drills, bolts, SRT gear and kitchen sinks were dragged up the steep, awkward terrain. Was it really this hard last year?

We regrouped almost at the top, and set about enforcing The Plan. Holes labelled SVA 1 to SVA 14 (and a few others) had been previously descended, either by the '97 trip or by the Easter bunnies who had exploited some rare breaks in the weather earlier in the year. So The Plan was to split into two groups, find

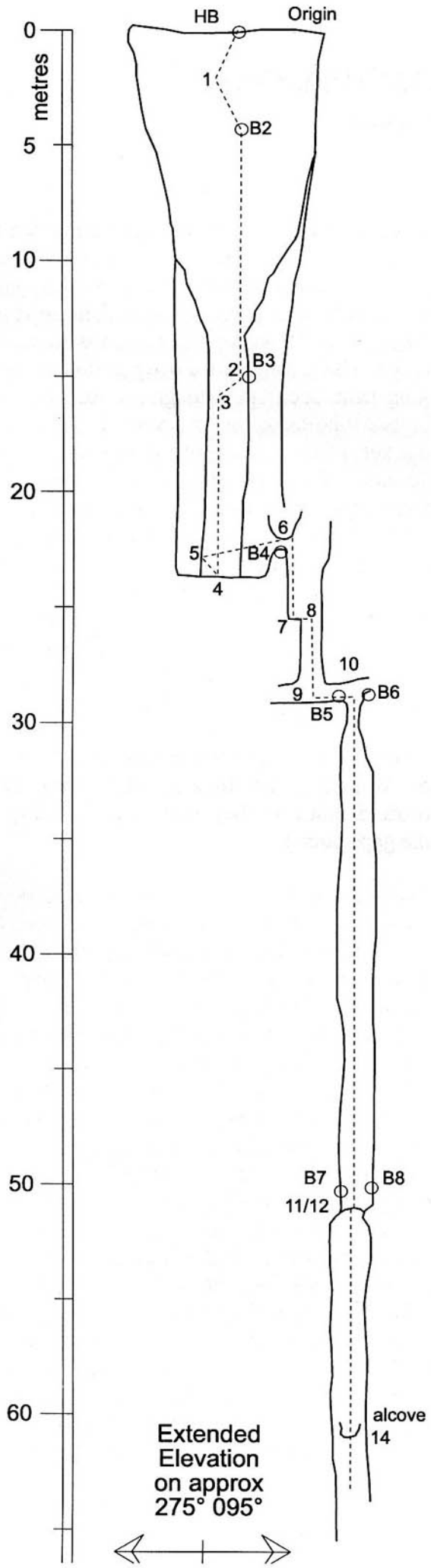
SVA 15 and then work upwards numerically, ticking them off the list as they were explored to a conclusion. It was at this point that theory and practice went their separate ways: SVA 15 wasn't where it was supposed to be. There followed a long period of hopping from rock spike to grassy tuft, looking in every hole for the elusive red spray paint marker. Meanwhile someone had found SVA 16 and Martin decided it was about time something was done. "You descend SVA 16, we'll carry on hunting for 15. According to the data it's supposed to be only a few metres from this one." (Actually it was only found later in the expedition, nowhere near SVA 16. In 1997 many sites were logged using only a few minutes with the GPS in situ, and episodes like this emphasised that this method didn't give an accurate fix. Finding specific holes was soon abandoned in favour of sweeping the hillside and descending marked holes as they were found, filling in the gaps later.)



Dom wade on the slog up to SVA16.
Tony Baker

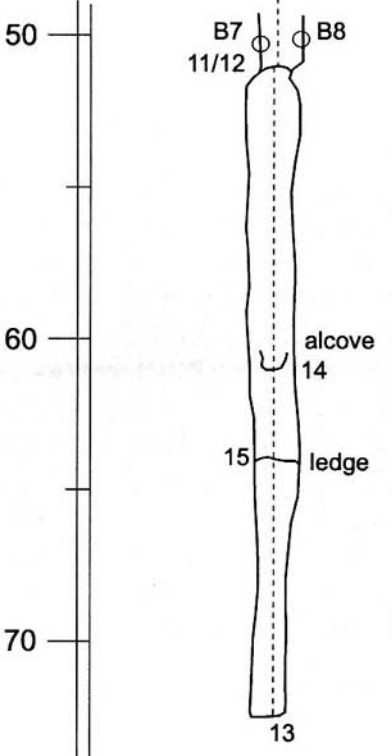
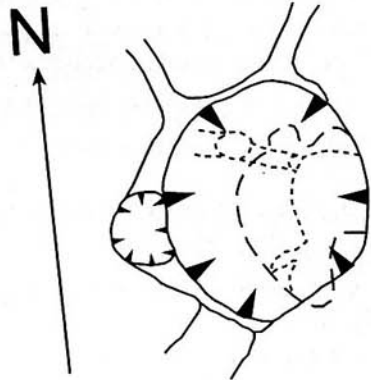
Somehow it fell to me to be the first down SVA 16. It's a big open shaft, five metres by seven metres at the top and dropping twenty metres or so to a boulder-strewn floor. I started by tying the rope to a huge flake at the top, carefully avoiding the numerous sharp edges, and then clambered over the edge and placed the first bolt. At this point it became clear why we'd dragged the Bosch drills up here: thirty seconds' drilling, tap the stud anchor in, attach the hanger and you have a safe hang. Dominic Wade and Brian Bowell were waiting at the top and I shouted at Dom to find my camera and take some pictures of me trying to look like an heroic cave explorer, although I was thrashing about a bit. The sweat was pouring off me - I was still in the sun's full glare - and with all the gear and the rope bag hanging off me I was making far harder work of the whole thing than was necessary. Eventually I found myself six metres

SWCC
 Cantabria Expeditions
 topology of
 SVA 16
 San Vicente - Cantabria
 SPAIN 1998



Extended
 Elevation
 on approx
 275° 095°

Plan



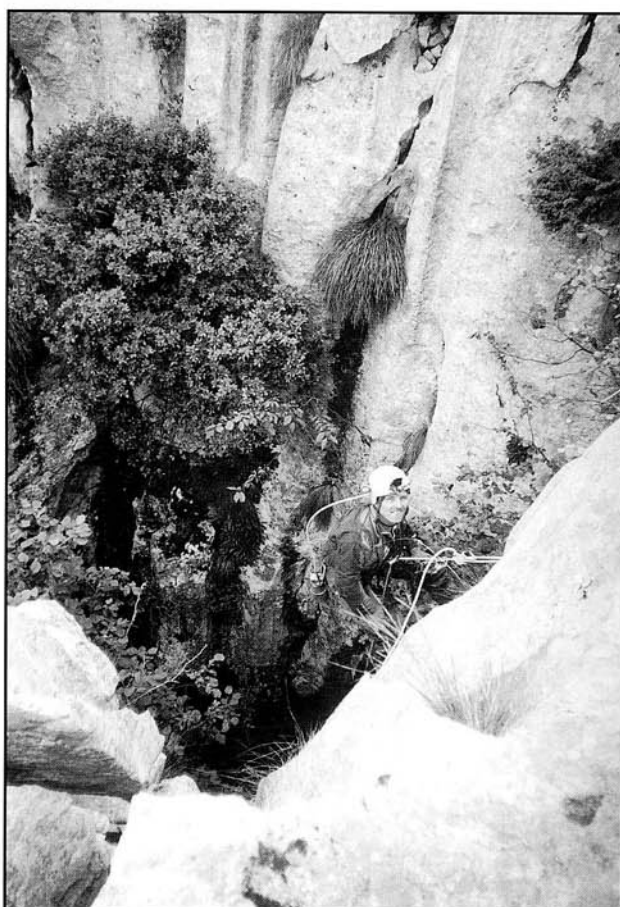
from the floor, at an overhang. Here I clearly needed to put in another bolt to descend safely but this was proving difficult: the rock was all either fractured or spongy and I was swinging from side to side, drenched in sweat, desperately trying to find a good placement. From here I could see the entire expanse of the floor, and it was clear that there was no way on. I was about to prussik back up and report that it didn't go, but stopped to get my breath back first. This was when the nagging doubts crept in. What if the tiny crevice on the far side of the floor was above a huge shaft? I swore - a technique of proven value when digging at Twyn Tal-Draenan - and walloped some more of the wall with the hammer until I found a patch that wouldn't peel off immediately I put my weight onto the bolt, and drilled another hole.

I staggered across the floor of the shaft, dragging the bag of rope behind me. I dropped a stone down the crevice and it fell all of ten centimetres. Oh well, at least I'd checked it. As I turned back toward the rope I noticed a window on one wall, three metres up and, curiously, not visible from any other angle or from the top of the shaft. I grabbed a handhold and heaved myself up, then cursed a lot more as it came away and I crashed to the floor in an undignified heap. I found a better hold and pulled myself up onto the lip, from where I could see five metres down to a boulder floor. With a hole at the far end.

I pulled another handhold off the wall and lobbed it down. Uncannily it found the hole first time and there followed several seconds of booming noises as it rattled off the walls of what was clearly a big shaft. "I heard that!" yelled Dominic from above. I shouted at him to come on down, then jumped back down from the window, grabbed the rope and the drill and clambered back up to place another bolt.

Five minutes later, Dom and I were standing throwing stones down the hole, getting more and more excited as each one made those lovely booming noises. I was feeling guilty about how much time the others had spent

waiting at the top, so I offered Dom the lead from this point but he declined and I wasn't going to ask twice! I rigged a Y-hang and set off. Two metres down was a tight slot, and I wasn't sure that I could squeeze through this. However, below it the rift was visibly wider so, with uncharacteristic bravado fuelled by exploration 'fever', I pulled some slack through my descender, locked it off and forced myself into the hole. I was most of the way through it when I got stuck. The problem was exacerbated by the fact that I hadn't pulled enough slack through and the rope had pulled tight. Stupidly I'd left my gloves on the ledge above and as I spent the next few minutes wriggling and sweating to unlock my Stop I grazed the backs of both hands badly, wounds which took the next week to heal properly. Eventually I unlocked the descender, fed some more rope through and forced myself down the slot. I hung there for a few seconds, gasping for breath and dripping blood and sweat but the rift below me beckoned and I soon grabbed the drill and



Tony Baker prepares to descend SVA16. *Dom Wade*

placed a rebelay.

I abseiled twenty metres down the rift, trying to savour the moment and the fact that no-one had been here before. Ever. This was what we'd come to Spain for and here it was, right at the start of the expedition, and already a better find than any of us could have hoped for. I landed gingerly on a gravel ledge that overlooked a wide shaft and threw down a stone. I'm not very good at guessing distances this way but the shaft was clearly deep, and wide all the way down. My excitement was tempered by two things: I didn't fancy my chances of getting back up through The Slot easily, and the few metres of rope I had left in the bag weren't even going to touch this shaft. I yelled at Dominic: "Ask Brian to go and find the others, and get their rope off them! And come on down, this is magic!"

A few minutes later the message came down that the other group were using their rope to descend something they'd found, so we couldn't have it. Dominic was clearly reluctant to tackle The Slot if we weren't going to get any further today, so I placed two more stud anchors, ready for another Y-hang tomorrow, and set off up. The Slot proved as awkward as I'd feared it might, but eventually I managed to heave myself out of it, hugely relieved to be on the right side of it.

The evening at the campsite was spent planning the next day's assault. In the circulars we'd sent out Martin and I had written that the rule was "survey as you explore" and yet we'd not surveyed any of what we'd found today; clearly that had to change. However, I wasn't sure that my vertical-surveying skills were up to doing a proper job on SVA 16, so Clark Friend was drafted into the team. Brian Howell gamely offered to help Clark, which meant that Dominic and I could continue pushing. I was also determined to get some sort of photographic record of the exploration of such a significant find, so I assembled a lightweight photo kit consisting of my Canon compact with a separate flashgun and infra-red slave. We packed a bag each with as

much rope as we could stuff in, charged the drill batteries and counted out huge numbers of stud anchors.

Next morning we were off early, partly to avoid the hot sun but mostly because we couldn't wait to return to the shaft. Back on the gravel ledge, I offered Dom the lead again and he didn't have to be asked twice. As he rigged the rope onto the Y-hang I'd put in the previous day, I took out my camera and cursed as the remote flash refused to trigger. Cursing some more, I took the infra-red filter off the camera's built-in flash so I could at least get some "snaps" to record the moment. The battery in a Canon Sureshot A-1 lasts for two or three years even with frequent use; mine chose that precise moment to die. So, aside from the shots Dom took of me the previous day, the only photo I have of SVA 16 is an out-of-focus, under-exposed shot of Dom's back which I took as I struggled to get the remote flash to work. Not even Tal-Draenan has echoed so many swear words from its walls. (Readers who don't know me will be surprised to learn at this point that I earn my living taking photographs!)

A few metres down, Dom placed a rebelay which meant that the rope hung free all the way to the floor. I waited for what seemed like ages as he made his way down. Eventually his voice came up from a long way below: "I'm on the floor, and there's no way on from here. But there are a couple of things off to the side part way down. I'll wait here, look at them as you come down."

I abseiled down slowly, casting around the walls for any sign of a side passage. Twenty metres down, I could see the alcove Dom had mentioned so I swung across: it didn't go. Further down still, I could see a big ledge formed of perched boulders. This looked more promising as the rift continued beyond it, but I was reluctant to land on it with Dom in what seemed like a very vulnerable position below me. After a shouted conversation, Dom assured me that he didn't think he was in the firing line so I swung across and very

carefully placed my feet on the ledge. It stayed where it was, much to my relief; I didn't think Dom had fully understood how precarious it looked. I tiptoed around, keeping the rope as tight as possible so that if the whole lot collapsed I wouldn't fall far. There were perched boulders, covered in gravel, everywhere and I was almost holding my breath as I crossed the ledge, trying where possible to use holds on the wall to keep my weight off the floor. On the far side I could see part way down a shaft, the walls of which were lined with hanging boulders, but a lot of shouting between Dom and I failed to establish whether this was the same one he was at the bottom of, or a parallel shaft. I threw down a small stone, and Dom's excited response was that he thought it had dropped behind the wall he had his back to. Every subsequent stone, however, fell at his feet. Given the risk involved in rigging this shaft and the very slim chance that it was anything other than the same one Dom was in, I tiptoed back across and swung my weight back on to the rope before continuing on down to join him. He was standing on a gravel floor that filled the entire width of the shaft, with no way on and nothing to dig at.

Reluctantly we accepted that this was the full extent of SVA 16. Meanwhile the surveying was progressing slowly; Clark had only just passed The Slot, an indication of the thorough job he and Brian were doing. Soon Dom and I were chilling off and we couldn't make out what stage things were at above us; eventually a shouted conversation with Clark established that it wasn't worth his coming to join us, if he sent down the end of the tape we'd have an accurate depth for the shaft and Dom and I could add the detail later. With this information relayed back up to Brian, he realised that he didn't need to take on The Slot and so we all headed upwards.

SVA 16 had a final trick up its sleeve. The previous day, ascending through The Slot, I'd taken my carbide generator off my belt and placed it on a ledge above me, which meant there was less to catch as I wriggled and pushed my way through the constriction.

Confident now that I could get back up, I did the same again, only to end up engaged in a mighty struggle. I spent several minutes fighting, sweating and swearing and at some point in the proceedings the generator fell off the ledge and wedged between my waist and the wall. With a mighty heave I pulled myself up, at which point the tube pulled off the top of the generator and it plummeted down the shaft. Where it remains to this day.

While it was disappointing that such a big shaft had come to an abrupt end, we were elated at what we'd found: a cave 90m deep, early in the expedition, and a clear indication that there really was some serious cave under this hill. SVA 16 is the most significant bit of cave (outside China) I've ever been involved with exploring, and all the more exciting because the whole Cantabria project was an SWCC enterprise, a small-scale expedition involving basically the same small group of club members who'd spent previous summers visiting some of Europe's classic systems and now wanted to find something new.

Two full days into the expedition, we'd learnt some valuable lessons already: that while the GPS is a useful tool, the data it provides is not really up to helping re-locate cave entrances on terrain like that on Pico San Vicente; that it's important to check every site out thoroughly, even to check out what looks like no more than a tiny crevice; that a spare camera battery is a worthwhile purchase. And one more was soon learned: that what looks like no more than a village hardware shop might just have carbide generators in stock, if you look carefully enough...

SVA 30 – so near and yet so far.....

By Martin Hoff

(If you ever wondered what happened to the [previous] Editor's motivation to get on and edit, then read on.....)

Day 1 If it's...

By four o'clock we were flagging a bit. We'd finally ticked off the elusive SVA 15, tried not give Ian Middleton a repeat of the Lonne Peyret experience (Footnote 1) at SVA 32, and there looked like being just enough time to cross this one off the list before heading back to camp. Clark Friend and Ian set about making the approach to this superb water-worn funnel safe, taking care not to drape the rope over the sharp edges. I clambered down, over, round and about to see what else was around, locating SVAs 31, 33 and 35 all within a short distance. SVA 33 in particular stood out, as dropping rocks the size of a small television produced exactly the required booming sounds.

There was time for a little reflection. We'd already learned a lot, about not trying to drop shafts in numerical order, about earlier starts to avoid being fried attempting to walk up that bastard of a hill in the overhead sun, about keeping a reasonable supply of water up on the hill... The team of Baker-Wade-Bowell had successfully bottomed SVA 16, and team Dobson-Clipjoint-Dobson were still fighting their way down SVA 34. By this point we were among the last people on the trip to get our teeth into something that went beyond a pitch or two - Brian C had already been involved in the start of work at SVA 34 before, and the SVA 16 team were put to work on that as a matter of urgency - the first opening on a day when half a dozen of us had already spent quite some time and energy on searching for SVA 15; whatever you may read elsewhere, this was a valid management decision with an eye on the global picture, not just a missed personal opportunity for some unfortunate individual. A distinction

which was to blur considerably over the coming days...

Making my way back up to where Clark waited on the surface I was surprised to find that Ian was still down the hole. This one might last more than twenty minutes then. Promising. With the vultures rising effortlessly on the thermals, and a clear view over to where Carlita's huge void appears not far beneath an entrance smaller than this, I thought about my colleagues stuck in an office a thousand miles away. And laughed quietly to myself. At long last the bearded fool appeared at the top of the rope, grinning. Not a pile of wank, then. (Footnote 2).

Day 2 ...not enough...

Equipped with more anchors, re-charged drill batteries and a bit more rope, Ian and I had another go, with Clark taking the sensible option of a day of rest cum guard dog duty. From the Y-hang which enabled us to drop through a window, the pitch dropped to another loose pile of shit. Another rebelay and Ian was down to the floor at about -68m. Choked, but still impressive, and the lovely large scale fluting on the walls confirmed there was more to this than the sort of inconsequential surface feature where I normally go looking for cave. I joined him, took a few snaps and we made our way back up to above the window. We checked everywhere else off to the sides on the way back up, and Ian headed out with my camera. Into the other window then, a few metres higher than the rebelay. With a half-arsed deviation in place I swung over and perched on the lip. Having steadied myself enough to get the drill out I set about placing a pair of bolts to give a decent swing down. Onwards and downwards, attempting to use a natural for another deviation, although I ended up placing a bolt anyway. Two passages could be seen to go off from the bottom, one clearly an inlet but the

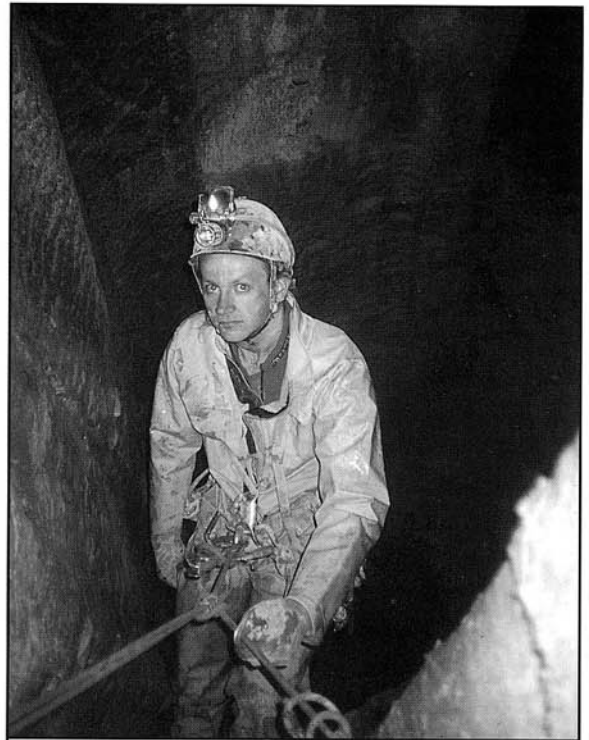
other..? Rocks could be lobbed into the right place to watch them disappear, and listen to the many crashes as they bounced. Another bolt to make the step over that first hole in the floor secure. Then the tricky bit, hanging out over Christ knows what, trying frantically to keep my weight off my harness to give me enough room to place the drill bit. One hole down, one to go. The other went in after a little effort, and having just about managed not to entangle myself and the drill in the rigging, I swung under the rope, and descended my first virgin shaft completely out of daylight. This was our last length of rope, and a tatty piece of 9mm anyway so I half hoped this wouldn't turn out to be another Juhue shaft. But only half. I landed on a nice platform overlooking another hole and tentatively launched a few rocks down it while Ian came down to join me. On the far side there was what looked a decidedly hairy free climb, with a big poised block sat at the top. We declined and went home.

Day 3 ...I gave my blood...

More rope, more water, more battery. Just me and Clark as it was Ian's turn to take a rest day. Replaced the rope on the final pitch, 11mm for 9mm, although by the end it was just as messy and quick. Another bolt before a wide stretch to a deviation and then on down. Down through a relatively tight slot, into some less fantastic immature passage. Walls friable and/or covered in loose enough white mud for this to be dubbed the Birdshit Series with good reason. We messed about quite a bit, and ended up not getting much further, down another couple of short pitches to a point from where we could throw rocks down the far wall and listen to them go some considerable distance. As we made our way out, a couple of hammer blows in the area above the slot opened the way into another small chamber, from the end of which rocks dropped straight down, a long way down. And then some. The draught was all right too.

Day 4 ...my sweat...

All three of us again, more water, more bolts, more hangers. More messing about getting covered in birdshit, with added attractions at



Martin about to descend into the depths.

Tony Baker

the next stance. We reached a narrow slot - well, the man known by the apt sobriquet 'Fat Boy' got through so it wasn't that tight - but the rest of the cave appeared to be directly below, which meant attempting to join him on the other side of the slot would achieve little more than showering him with loose rock and more of the aforementioned birdshit. As we found out when I attempted to go through and find out what was going on; there was little choice but to sit around in the draught and wait to see whether the Bosch or Ian ran out of energy first. Not great fun in damp cotton boilersuits, but it was still going, and he couldn't see the bottom. We headed for the valley in high spirits. With the growing coating of crud on the drill I decided it could do with a trip back to camp to be cleaned, and stuck it in my rucksack along with everything else.

Clark had just had a day off. Fat Boy had rested the previous day. I had now completed six out of seven days on the hill and had had enough. Sitting in the draught with Clark for a couple of hours had finished me off, and also proven that, as in Ogof Twyn Tal-Draenan, three people is sometimes too large

a party. It was with this in mind I got to thinking about the following day. Besides, as Expedition Leader I felt I ought to take a break from pursuing my own personal agenda and a greater interest in what else was going on. We'd put nearly 200m of rope into SVA 30 and as novice expeditioners (in the exploratory sense at least) we weren't exactly on familiar ground. Thus far, those who had had the breaks in getting a lucky shaft (insert your own Stevie West joke here) had been left to get on with it until such time as the group required assistance, with the proviso that work had to continue every day. We'd travelled too far, and had too short a visit to allow any chance of progress to be missed, even for one day.

It seemed clear that the three of us were approaching the limits of our capabilities and endurance, and that one way or another, some other members of the expedition were going to end up in SVA 30 in the next day or two. I was happy to concede this going lead to Clark and Ian as I trusted them to get on with the job. Equally it was important that someone who knew where they were going was on the next trip along with the people new to the cave. Even if they didn't get much further, Clark and Ian wouldn't be able to complete the de-rig on their own, and the next day's party would either combine taking some pictures of the expedition's by now most significant find while de-rigging, or continue the push into pastures new. A fairly obvious, if not foolproof solution.

With the now marginally cleaner Bosch drill on my conscience I opted to porter the drill and some more water up the hill but not to go down the cave, on the basis I was still making my contribution to the day's efforts but leaving myself a chance of some rest and recuperation before what might turn into another five days' unbroken effort in SVA 30 before heading back to Britain. I told CF and IM this as we discussed our time of departure immediately before retiring to our tents that evening. But somewhere, something obviously got lost in the translation.

Day 5 ...my tears...

More lovely sunshine, more lovely hill. Having delivered the Bosch and most of the water to the entrance of SVA 30 I stood and looked out once more across the valley. With the depth we'd already reached now well over the 100m mark, this had to be the last day the three of us retained any propriety over it. Even if it closed down in the next twenty feet, this would be a historic day, one way or another. I picked my way down to the lower part of the lower doline where I spent a while with Dom, Brian B and others who were attacking some of the last few sites on our list. Away from the focus of that one hole, I found I had more energy than expected - obviously all those days walking up that hill had done me some good. I returned to the campsite to read, relax and rest.

It was already dark when Clark's car reappeared. Our thinking had been leaning towards the cave still going, after all they'd have been back earlier if it had bottomed out. But all our plans for the next day rested on what they had to tell us. And then those familiar delicate Romford tones boomed out across the field.

"We got to the bottom and it wasn't going on, so we pulled the rope out"

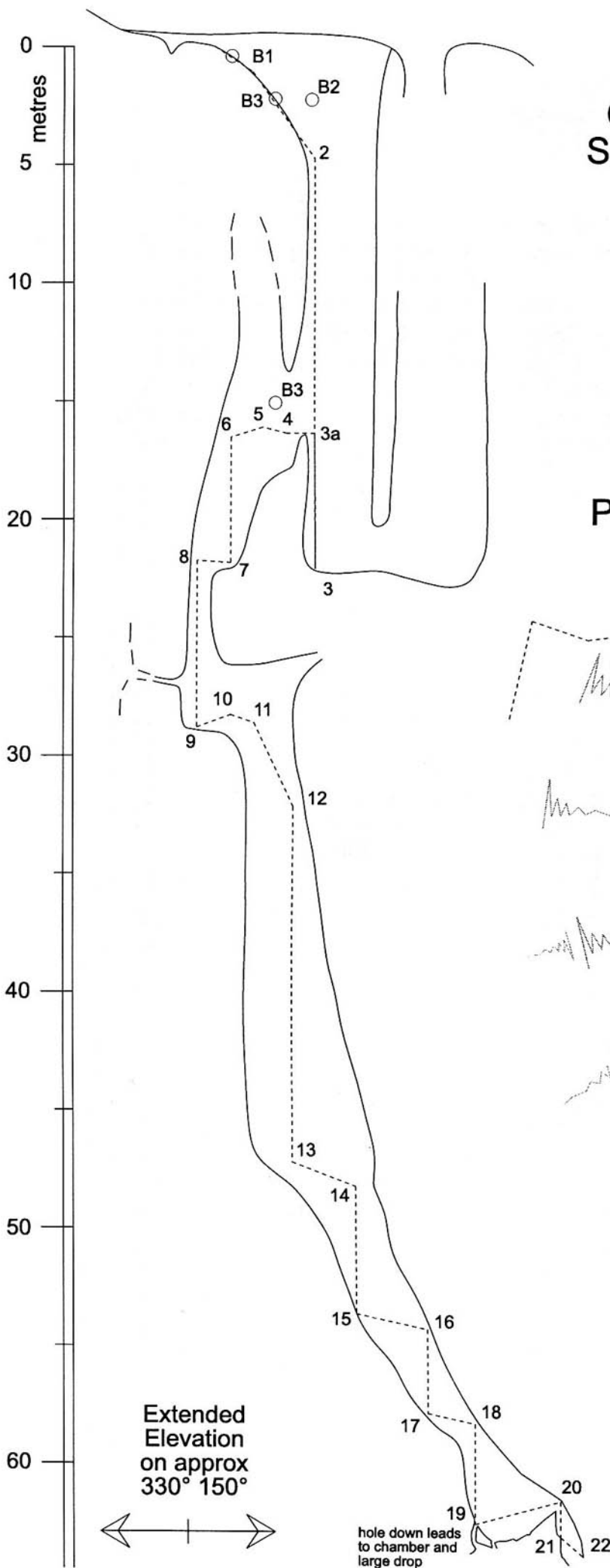
I headed for bed.

Day 6 ...and all I said I would.

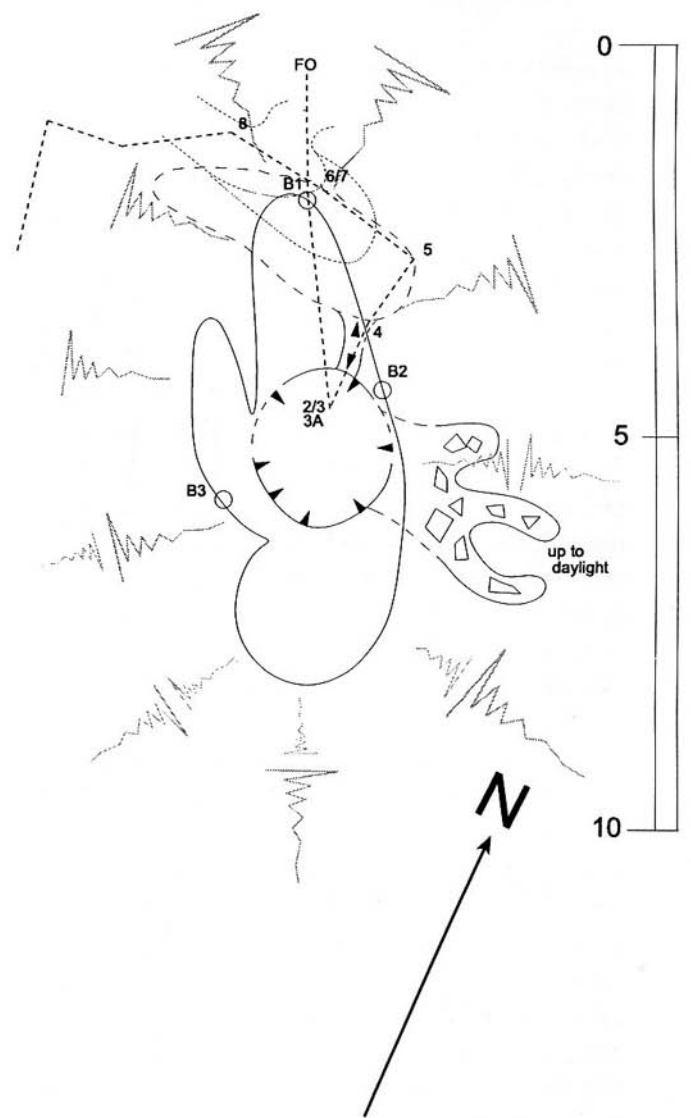
It turned out that far from pulling the rope out, what had actually happened was that the section below the slot had been de-rigged. "All the rope's there above the narrow slot". Tony and I slowly made our way up the slope, followed by the lardy laggard, Iain Miller.

When it looked like Miller wasn't going to come with us, the vocal prowess of Mr B sent the right words of encouragement echoing down the hill. After all, he too had been a prime mover in making sure this escapade took place. If anyone had a good claim on a look at our most significant find, it was these two.

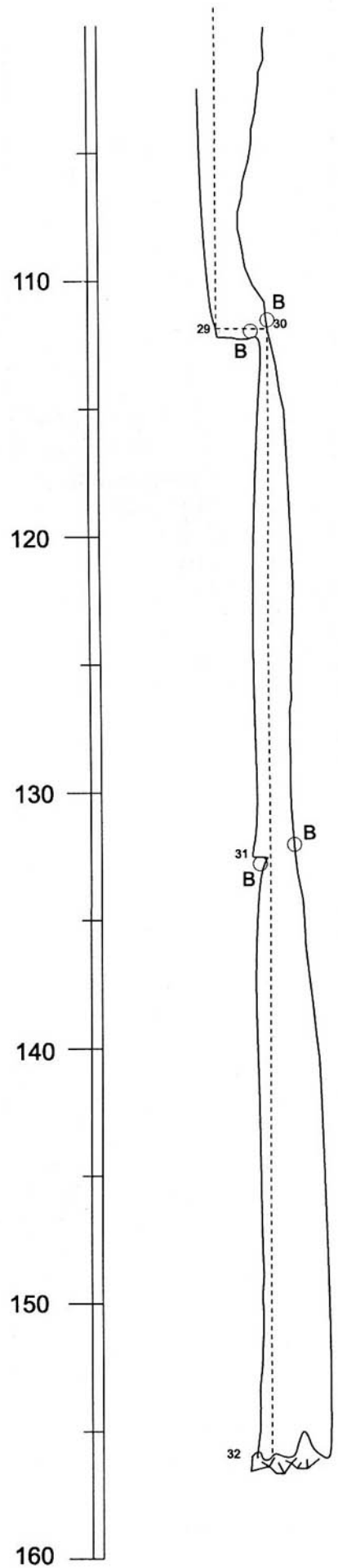
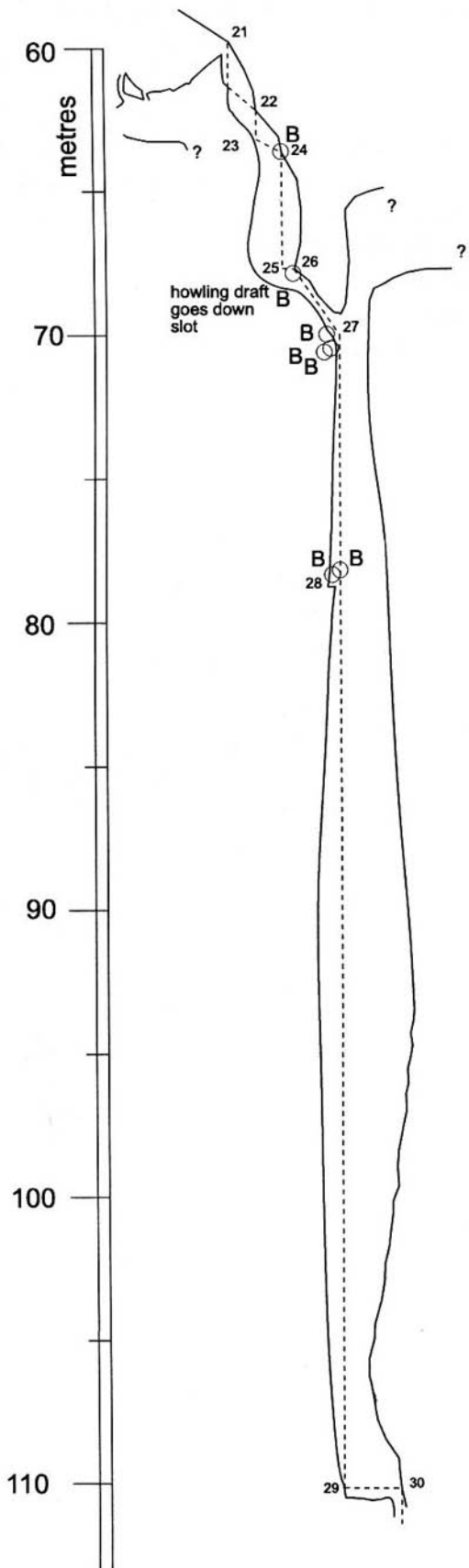
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 Cantabria Expeditions
 San Vicente - Cantabria
 SPAIN 1998
 topology of
 SVA 30



Plan to station 8



SVA 30 San Vicente - Cantabria SPAIN 1998



Another fun episode akin changing into caving gear in a sauna ensued, and off we went. Tony took a few shots of me smiling through gritted teeth so at least I would have something to show for my pains. The three of us halted on the stance above the narrow slot. A huge tangle of rope sat on the ledge. There was absolutely no chance of re-rigging with that, and the others looked a bit frustrated. The draught whistling down the slot was remarked upon, and a handy rock was launched into it to demonstrate what lay beyond. "I can see how frustrated you must be" said TB. I thought that was unlikely.

Performing a good likeness of an overloaded, clapped out estate car, Miller headed out with the drill and surplus rigging gear. Tony attempted to cram the mass of rope into our one available tackle sack, and I brought up the rear, derigging and hauling the growing mass of rope out as I went. With the best part of 100m of rope dangling round my feet, I reached the daylight some time later, very grateful that Lard *had* accompanied us. We would have really struggled to complete the de-rig with just the two of us.

With the benefits of hindsight, there's a few key points which emerge from all of this. The whole collective effort which led to the discovery and exploration of SVA30, SVA16 and SVA34 remains an impressive achievement, particularly for a small group of people albeit one operating relatively close to home; you don't get to nearly -200m on the strength of how loudly you can talk in the pub, and you don't need to go to Vietnam, Meghalaya or other far flung destinations to find meaningful cave.

As far as future expeditions go, there's little doubt that the validity of the famous line about "Tell them what you're going to tell them, tell them, and then tell them what you've told them" was reinforced. Although we attempted to hold regular meetings to ensure everyone knew what was happening and was involved in the decision-making process, this is an area where there was room for improvement. Any claims that the initial de-

rigging was done in case the rope was needed in another hole the following day ring a little hollow in response to questions as to how a tangled, knotted, dirty rope sat on a ledge at -90m was going to make it into a tackle sack at another site, ready to be rigged the following morning.

This summer I'll be back to find out for myself what goes on down the slot, and hopefully to establish where that draught goes. And if it's not there, then the rest of the hill and the area in general holds much potential; the overriding message is that the cave really is out there waiting for those prepared to stir off their collective arse and go looking for it. (Note to Alderman: you have to get your arse out of the car at the dig site, as well as out of the armchair).

Footnote 1 On the 1995 PSM expedition, I somehow managed to levitate rocks and drop them on Ian as he exited the final pitch of Lonne Peyret, causing superficial damage to his hand.

Footnote 2 'Pile of Wank' was the technical term in use for the duration of the expedition for those sites which turned out to close down within sight of daylight.

SVA34

By *Andy Dobson*

Background

Situated near the top of the back rim of the upper amphitheatre, not far off the top of the mountain, this was one of the most promising sites found during the 1997 surface searches. At the end of that expedition Gary Vaughan rigged the 8-metre entrance pitch, to be joined by Brian Clipstone (who had found a pitch-bypassing free climb) at the lip of a long pitch. Gary descended the big pitch to a boulder floor with a possible dig in the lower corner.

1998: Tuesday 4th August

Brian, Dave and I sweltered our way up the hill and headed for what turned out to be the wrong doline. The terrain was even worse than I remembered, progress was made even more difficult by the jumbo tackle bag on my back stuffed full of gear and what seemed like tons of rope, plus another bag of rope hand-carried. After sundry diversions Dave and Brian eventually located SVA34 - although I was only about ten metres away it



Brian placing spits the 'Bosch-less' way.
Dave Dobson

still took some minutes to catch up over the broken and hazardous terrain. After a break for water and lunch the cool of the cave was welcome. An awkward, slippery free climb led to a descending mud-floored passage, with a metre step underneath the original entrance pitch. Then the passage sloped more steeply, funnelling into a larger-than-body-sized hole in the back corner, down which rocks thrown made a satisfying boom. Lots of gardening was necessary but eventually the intrepid Clipjoint set off down the shaft, rigged with the longest rope we had. However what Brian remembered as a 40-metre pitch turned out to be 50 metres deep, fortunately the rope finished only a foot or so off the floor. After an initial assault with the crowbar Brian called for reinforcements.

Over the years I've done a fair bit of SRT and while treating every pitch with respect it no longer usually scares me. This was different - for some reason I was terrified, not helped by the exploratory nature of the rig: one bolt backed up to a natural rock spike. SVA34 was to remain a Bosch-free zone throughout exploration, so hand-bolting meant doing the minimum necessary, but I couldn't help wishing for a decent Y-hang. Practising my yoga breathing, I carefully squeezed onto the pitch head, hoping my heart pounding through my ribs wouldn't disturb any small pebbles to fall onto Brian. The nerves continued all the way down, Gary had put in a rebelay last year but we couldn't find it and there were several rub points on the walls, though these were cushioned by the slippery white mud that covered everything. Having joined Brian it was a relief to attack the dig, putting my nervous energy to practical use.

Between us we cleared a considerable amount of debris, finding a number of very old animal bones amongst the rocks and mud. It appeared to have been a sizeable creature,

possibly a horse, though it could not have fallen there through the present way in. Digging became progressively more awkward and squalid but a surprisingly cold draught beckoned us on. Eventually we were able to trundle rocks away underneath. By hanging upside-down through the developing hole it was possible to see the continuation of the shaft - we appeared to be on a poised rock floor, though this was several metres thick at the back and set like concrete. We needed more rope to continue as further digging required protection, but had established that the dig would go.

After Brian had cleared the pitch, I gingerly prussiked up, desperately trying to minimise the bounce, was relieved to locate the rebelay opposite but just below a small ledge and exited to a strange mix of emotions both scared and excited at the potential.

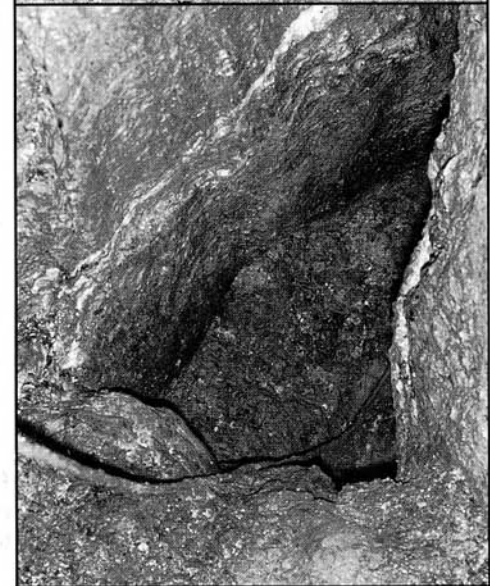
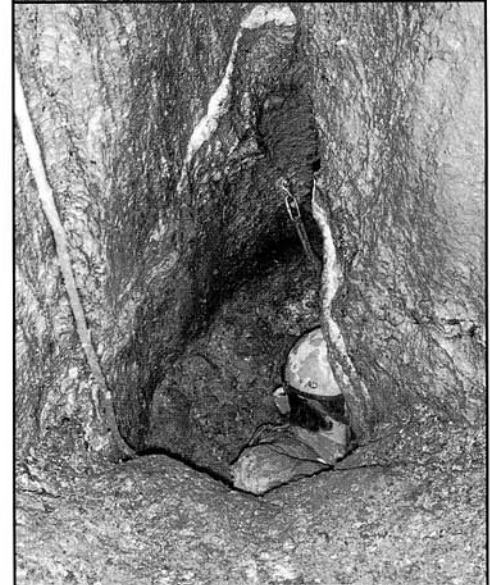
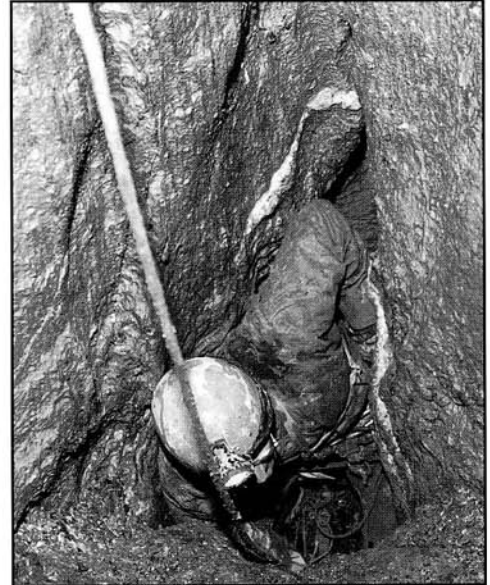
Thursday 6th August

An earlier start still left us sweating buckets on the walk up. I collected the 100-metre rope that Tony and Co. had used on SVA16 and we re-rigged from the original entrance y-hang so as to have some safety back up. Brian and Dave completed the dig through the blockage to create a squalid, backwards grovel down then a sideways thrutch in gritty mud. This came out straight over a 9-metre pitch, with every hold and surface again covered in the slimy mud. Eventually a rebelay was fixed on the opposite wall but like all the pitches in SVA34 the manoeuvre was of necessity awkward and bruising.

At the bottom of the pitch the continuation was a tight rift off to one side of the boulder floor (which was again strewn with animal bones). This body-sized angled rift provided much entertainment as it preferably required abseiling horizontally while lying on the floor, but some modification and a rebelay underneath eased matters, the short 6-metre pitch underneath it landing in a small alcove with persistent drips that could not be sheltered from. Ahead there was a further tight slot in the floor directly above another longer pitch. Another bolt and some desperate thrutching saw Brian disappear down a 25-metre pitch with a window halfway down into a parallel shaft. At the bottom of the main pitch Brian established that we still had a going lead, then we surveyed out to the surface, eager to continue the push tomorrow.

Friday 7th August

Despite our starts getting progressively earlier a blistering walk up meant we were all knackered before even



Going.....Going.....Gone! Andy Dobson negotiates one of the tight pitches.
Dave Dobson

starting the descent. There was the familiar juxtaposition of opposites as we sweatily kited up in sweltering heat, only to shiver in the freezing draught as soon as we entered the cave. Placing an additional bolt made the tight, angled rift slightly less difficult but safer, then we struggled through the jaws of the tight slot at the head of the fourth main pitch to push on downwards. Ironically, once through the slot the pitch opened out into a lovely shaft with some decorations as well as the obligatory white mud. At the bottom we met our first real horizontal development since the entrance passage, a chamber 8 metres long by 2-3 metres wide. At the far end there was some stal and again lots of bones, this time of various small creatures. The draught was particularly cold here and having unavoidably got damp and covered in mud on the way down it felt especially chilly.

Rigging the next pitch proved rather challenging - a hole in the floor off to the side of the chamber but with no good rock above it. Hours of fun ensued while we tried to find something other than crumbly calcite, fragile fractured rock and white mud from which to rig it. Eventually a three-way loading was set up with one good bolt in the opposite wall of the chamber, a dubious bolt in the crumbly stuff above the hole and a natural thread that we tried hard to convince ourselves was calcite rather than just compacted mud. At least the delay gave Dave plenty of time to take photos.

Brian again fearlessly took the lead, managing to put in a solid rebelay a few metres down. The shaft belled out into a double-barrel shape but with one bore ending about three quarters of the way down. I joined Brian at the bottom of the going shaft, landing on a series of small stepped ledges after 16 metres. The walls were at last clean, the cold draught and excitement running high - an exhilarating feeling that we were about to hit the big cave. I put in our last bolt and with a sling around a large flake set up a temporary rig to get Brian down an 8-metre drop in a strong draught. I heard him throwing stones down a further drop and could

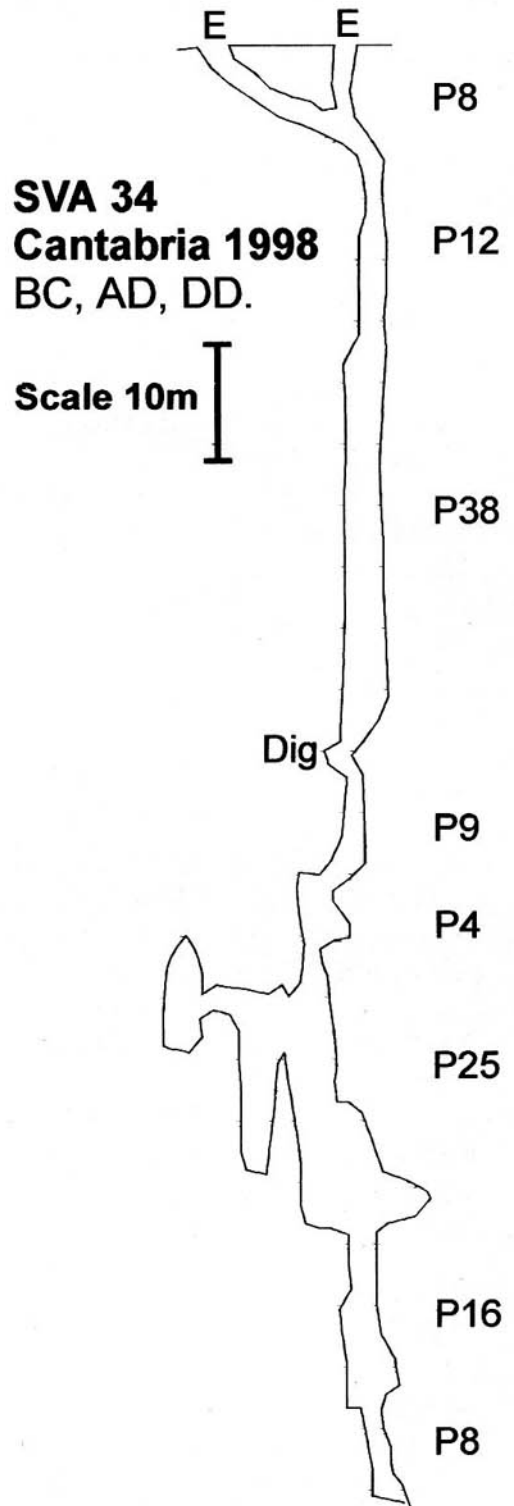
hear them rattle away then plunge 40 or 50 metres. Another big pitch - but only accessible to a mouse. The slot was 2-3 inches wide, opening out slightly but closing in again before apparently belling out - utterly impenetrable. Perched on the last ledge, I had to ask Brian to repeat it several times, unable to believe the cave had squeezed us out just when it felt so promising. Rather deflated, we surveyed the new findings (giving us a total depth of 126 metres) and derigged back to the fourth main pitch - there was at least still the parallel shaft to check out. We were very late on reaching the surface, it was already dusk and we hurriedly struggled across the broken karst in fast-fading light. All three of us were tired out and having difficulty making out our footings, the limestone still radiating heat. Fortunately it was a clear night and we were glad of the moonlight to see us wearily down the scrubby and grassy section of the mountain, everyone having stumbled and fallen at some point. It must have been a blistering day, even at 10.30pm it was still hot and humid.

Sunday 9th August

After a rest day to recuperate, we were up before dawn and made the walk up the mountain in a bearable haze. We descended with great care - despite extensive gardening of all the pitch heads it was still impossible not to dislodge some mud and pebbles, especially on the first two pitches and anyone below had nowhere to hide. The entrance slope was becoming more unstable and all the ropes were completely plastered in mud. It was clear that if we did find a continuation then re-rigging would be a necessity.

Again Brian took the lead on another very exploratory rig, requiring Dave's boot as a rope protector on the slot as he pendulumed to the window. With a bolt safely installed Brian dropped down the parallel shaft. Interestingly, Clark (who was in SVA30) was later to tell us he clearly heard the sound of hand bolting. After 18 metres the shaft landed on a boulder/calcite floor. There was a tiny hole in the floor but everything was solidly calcited. Brian tried moving a few rocks

but the hole was obviously hopeless. Part of the way up the shaft was a ledge/ramp. Checking this out Brian found it led to a 5-6cm square hole looking into another parallel shaft but with no prospect of getting into it. With all our leads exhausted we detackled everything back to the surface, the rope looking more like a pile of mud than anything else. It took a couple of sweaty hours to ferry the gear across the awkward terrain to the col. So we bid SVA34 farewell, disappointment mixed with a feeling of achievement, respect for the arduous nature of the cave, tinged with relief at not having to tackle those tight, muddy, unstable pitch heads again. It also inspired the impossible - Brian, Dave and I the first up before dawn. Must be exploration fever.



Cantabria 1998 – Site List.

Compiled by Iain Miller.

The following list constitutes the official exploration list for our trips to the Cantabria region of Spain to date (June 1999).

SVA1 (Brain's Folly) E = 459068N = 4786879 A = 902m ± 30m

One of only two horizontal caves logged during the expedition. Short, to say the least and of no further practicable interest. Needs a better fix.

Completed Summer 97.

SVA2 E = 459072N = 4787065 A = 970m ± 5m

10 Metre shaft to boulder floor and impenetrable slot. Removal of boulder floor may reveal some way on but unlikely.

Completed Summer 97.

SVA3 E = 459139N = 4787081 A = 970m ± 5m

5 Metre tight shaft on N/W wall of doline. Joint Controlled.

Completed April 98.

SVA4 E = 459149N = 4787082 A = 972 ± 5m

Three shafts all adjacent in the same doline. From E to W: SVA4a, SVA4b, and SVA4c.

SVA4a is a 7 Metre drop to a comfortable ledge, a stout thread rebelay drops a further 7 Metres to the floor. A to tight descending canyon could be opened out at floor level, but probably only leads into SVA4b.

SVA4b A 20m greasy but otherwise pleasant shaft to a rebelay and further 16m VERY nice shaft lands on a descending boulder slope. An immediate sharp bend leads to muddy soakaway. Of little further interest.

SVA4c is in the base of the doline and enters SVA4b part way down the first shaft.

All completed Summer 97.

SVA5 E = 459190N = 4787073 A = 962 ± 20m

Shaft. Approximately 25? metres deep.

Completed April 98.

SVA6 E = 459208N = 4787094 A = 974 ± 5m

Parallel narrow shafts (1m d), approximately 5 metres deep. Close to East Face of doline 3 of traverse.

Completed April 98.

SVA7 E = 4592084787084 A = 968 ± 5m

Very narrow shaft □ 5 metres deep. South of and a little lower than SVA6.

Completed April 98.

SVA8 E = 459298N = 4787099 A = 958 ± 15m

Very narrow shaft in jagged limestone. Formed along a joint, □ 15 metres deep.

Completed April 98.

SVA9 E = 459338N = 4787098 A = 940m ± 15m

Shaft formed on a North / South trending rift, 1 metre wide. Well Fluted.

Completed April 98.

SVA10 E = 459219N = 4787131 A = 987m ± 25m

10 to 12 metre shaft, blocked by boulders at -2 metres. Approx. 1.5m dia.

Completed April 98.

SVA11(Invisible Pot) E = 459222N = 4787255 A = 1007m ± 5m

On the line of a major fault. An open hole (2m dia) in a grassy area on first level ground adjacent to large doline south of peak? Drops 3 or 4 metres to boulder floor, a low digga

ble bedding to a further drop of >10m. Needs a crowbar.

Finished Summer 97 - Not Pushed?

SVA12 E = 459289N = 4787403 A = 1035m ± 5m

Upslope of major doline near peak? Joint controlled shaft 3m X 1m. 8m to boulders with a further tight drop of 2 m to choke.

Completed Summer 97.

SVA12a E = 459287N = 4787396 A = 1035m ± 5m

Small hole down which stones drop for 8 to 10 metres. On same joint as SVA12. Would probably need some enlargement to enter. A lump hammer would prove useful.

Completed April 98.

SVA13 E = 459296N = 4787410 A = 1033m ± 5m

In East / West aligned, joint controlled rift. A cross rift / shaft of about 10 metres depth. Bottom of shaft slopes steeply to the north to a choke. Possible dig.

Completed April 98.

SVA14 E = 459296N = 4787416 A = 1033m ± 5m

In same rift as SVA13. Narrow slot between large collapsed slab. Initial drop of 5m + 5m to a further fall estimated as totalling 25m. Good echo, but to tight.

To tight April 98.

SVA15 E = 459442N = 4787497 A = 1023m ± 50m

On N/E rim of upper amphitheatre. Joint controlled solution rift. Goes nowhere, 14 metres deep.

Completed Summer 98.

SVA16 E = 459525N = 4787473 A = 1012m ± 20m

The 5 X 7m entrance drops a clear 30 odd metres in similar dimensions to a boulder strewn floor, visible from the surface. The continuation has been pushed to a conclusion.

Completed Summer 98.

SVA17 E = 459361N = 4786971 A = 870m ± 15m

15 metre shaft. Blocked by boulders at the top. No previous entry.

SVA18 E = 459389N = 4786947 A = 853m ± 20m

Known site marked SV10 by AER. 2 - 3 m dia. Descending passage. 15 to 20 m long, with formations.

Completed Summer 97.

SVA19 E = 459512N = 4787172 A = 915m ± 25m

Doline / Shaft. 20 x 10m wide. Choked at 15.5m.

Completed Summer 98.

SVA20 N = 459464 N = 4787125 A = 894m ± 20m

Shaft, 3m wide by 8m long. Drops 8m to blockage/ choke?

SVA21 E = 459472N = 4787165 A = 905m ± 15m

Blocked shaft, 8mm deep. Short rift leads off, no way on.

Completed Summer 98.

SVA22 E = 459386N = 4787202 A = 935m ± 25m

Rift / Shaft, 30m long by 2m wide. Choked at 16m depth. A possible dig.

Completed Summer 98.

SVA23 E = 459384N = 4787215 A = 948m ± 15m

Open shaft 8m deep. At -5m small window to tight spiky horizontal passage 2m long. Followed by 4m shaft of similar characteristics. Leads to top of 36 m pitch, well fluted attractive shaft ends in mud water and stones.

Completed Summer 98.

SVA24 E = 459415N = 4787234 A = 928m ± 40m

Series of 3 Rifts / Shafts, all about 10m deep, by 1.5m wide. Main shaft descended to

choke at -14m, 10/09/98.

Completed Summer 98.

SVA25 E = 459354N = 4787171 A = 943m ± 20m

Two 8m deep, open rift systems, with no way on.

Completed Summer 98.

SVA26 E = 459322N = 4787015 A = 909m ± 15m

Large 15m joint controlled shaft. Choked at the bottom.

Completed Summer 98.

SVA27 E = 459345N = 4787159 A = 943m ± 5m

Shaft in floor of large shakehole. 2.5m X 5m. 7 m deep. Smaller subsidiary shafts enter from rim of shakehole. Another adjacent 10m shaft may be independent of main shaft but needs boulder moving.

SVA28 E = 459515N = 4787059 A = 852m ± 15m

1m square shaft to boulder blockage at -5m. Stones fall past to approx. 20m.

SVA29 E = 459577N = 4787066 A = 844m ± 40m

0.5 X 2m shaft. 8m drop to blockage or slope to a further fall of 20/25m.

Completed Summer 98.

SVA30 E = 459374N = 4787449 A = 1028m ± 20m

Major find of the expedition. Descends to nearly -160m. Ends in hopelessly choked shaft. Other shafts adjacent to main shaft may repay some attention.

SVA31 E = 459424N = 4787420 A = 991m ± 10m

Shaft, 4m square section, 15m deep with no way on.

Completed Summer 98.

SVA32 E = 459376N = 4787218 A = 944m ± 25m

Shaft, 0.5m X 2m section, 18m deep. No way on.

Completed Summer 98.

SVA33 E = 459434N = 4787386 A = 983m ± 20m

Shaft near SVA31. Descends to 50m. No way on.

Completed Summer 98.

SVA34 E = 459457N = 4787306 A = 977m ± 30m

Another major find. Descends to over 100m. Pushed to a minuscule (75mm) conclusion, details to follow.

Completed Summer 98.

SVA35 E = 459542N = 4787361 A = 977m ± 20m

A shaft of 3m square section, 24m deep. A rift development near the bottom leads no where.

Completed Summer 98.

SVA36 E = 459493N = 4787447 A = 987m ± 15m

Short (7m) shaft, 2m X 6m section, with rift passage leading off to the south.

SVA37 E = 459454N = 4787273 A = 929m ± 20m

Rift, 35m deep. Would be lowest point of doline. See newsletter120.

Completed Summer 97. Potential dig at bottom.

SVA38 E = 459440N = 4787449 A = 996m ± 20m

Doline / Rift. Investigated, but no way on found.

Completed Summer 98.

SVA39 E = 459403N = 4787492 A = 1033m ± 15m

8m Shaft to mud floor. Small half meter drop in side passage, too small to enter.

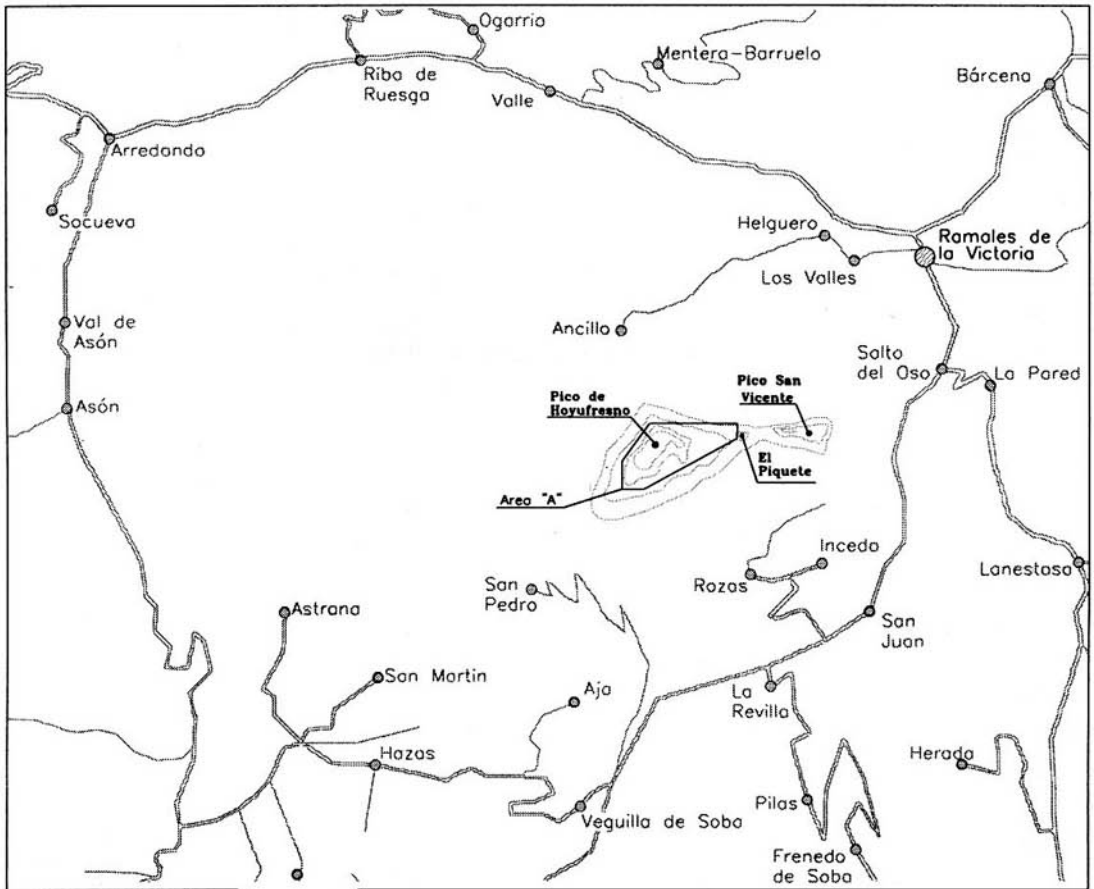
Completed Summer 98.

SVA40 E = 459428N = 4787136 A = 908m ± 30m









3m diameter shaft formed on a joint/ fault. 15m deep, possibly deeper through adjacent boulders.

SVA41	E = 459412N = 4787451	A = 1012m	±
	5.5m shaft to ledge and further shaft of 11m to a boulder floor. No way on.		
	Completed Summer 98.		
SVA42	E = 459384N = 4787208	A = 937m	± 50m
	Short shaft (5m) to impenetrable slot. Near to SVA23.		
	Completed Summer 97.		
SVA43	E =	N =	A = ±
	18m blind shaft.		
	Completed Summer 98, needs position.		
SVA44	E =	N =	A = ±
	5m shaft to floor. removal of large boulder gained further shaft of 10m to mud floor with no way on.		
	Completed Summer 98, needs position.		
SVA45	E =	N =	A = ±
	34m blind shaft.		
	Completed Summer 98, needs position.		
SVA46	E =	N =	A = ±
	Inadvertently marked SVA15. Goes nowhere. details to follow.		
	Completed Summer 98, needs position.		
SVA47	E =	N =	A = ±
	Unused point.		
SVA48	E =	N =	A = ±
	Unused point.		
SVA49	E =	N =	A = ±
	Unused point.		
SVA50	E = 459783N = 4787001	A = 760m	± 30m
	Sizeable shaft, approximately 30m deep.		
SVA51	E = 459588E = 4787365	A = 979m	± 30m
	Narrow rift/shaft close to dividing line between dolines. Approximately 30m deep.		
SVA52	E = 459613 N = 4787331	A = 972m	± 30m
	Shaft/rift in two separate sections slightly up-slope from SVA51.		
SVA53	E = 459760 N = 4787458	A = 929m	± 30m
	Series of shafts.		
SVA54	E = 459760 N = 4787458	A = 929m	± 30m
	Shaft close to SVA53.		
SVA55	E = 459767 N = 4787451	A = 929m	± 30m
	Shaft.		
SVA56	E = 459767 N = 4787451	A = 929m	± 30m
	20 - 30m shaft.		
SVA57	E = 459770 N = 4787400	A = 915m	± 30m
	10m Shaft with tree.		
SVA58	E = 459770 N = 4787390	A = 906m	± 30m
	Big open shaft with trees growing in it.		
SVA59	E = 459780 N = 4787400	A = 916m	± 30m
	30m Shaft.		
SVA60	E = 459711 N = 4787455	A = 943m	± 30m
	Shaft.		
SVA61	E = 459711 N = 4787460	A = 944m	± 30m
	Shaft.		
SVA62	E = 459729 N = 4787434	A = 935m	± 30m
	Shaft.		

LOCATION MAP



LEGEND

- FOOTPATHS..... 
- BUILDINGS..... 
- MAJOR (50M) CONTOURS.. 
- MINOR (10M) CONTOURS.. 
- SPOT HEIGHTS..... 
- CAVE (HORIZONTAL)..... 
- SHAFT (VERTICAL !)..... 
- RESURGENCE..... 



459000

Pico de ¹⁰⁴⁶
Hoyufresno

SW14
SW13
SW12
SW12a

1014

1036

SW11

SW10

SW2

SW3

SW4

SW5

SW6

SW7

SW8

SW9

SW25

SW17

SW1

project

Cantabria Expeditions (SWCC - CODC)

Title

Map of AREA SV (San Vicente)
CANTABRIA - SPAIN

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Original scale 1:5000

Version 1.00.1 a

Surveyed N/A—Interpolation date

Drawn IWJM

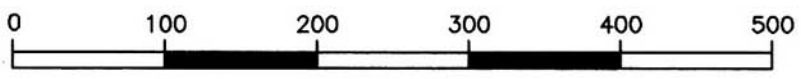
date 28th January 1999



El Piquete
886

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SCALE in METRES

SVA63	E= 459787 E= 4787496	A= 926m	± 30m
Shaft.			
SVA64	E= 459779 N= 4787496	A= 924m	± 30m
Shaft.			
SVA65	E= 459774 N= 4787506	A= 923m	± 30m
Shaft.			
SVA66	E= 459750 N= 4787349	A= 895m	± 30m
Large cave entrance in shakehole with huge tree growing in it. Descending rift, 2 - 3m wide 4m high at lip.			
SVA67	E= 459787 N= 4787311	A= 876m	± 30m
Large tree filled hole. 20/30m deep.			
SVA68	E= 459771 N= 4787268	A= 877m	± 30m
Rift with trees, towards SW corner of lower east doline.			
SVA69	E= 459787 N= 4787261	A= 873m	± 30m
Deep hole? with tree. 20 m from SVA71.			
SVA70	E= 459771 N= 4787298	A= 878m	± 30m
Narrow shaft, bells out below. Approximately 20m deep.			
SVA71	E= 459806 N= 4787282	A= 875m	± 30m
Shaft 30m to 40m. Tree lined.			
SVE1	E= 459923 N=4786812	A= 653m	± 30m
Joint controlled shaft. Approximately 20m deep, on eastern side of washed out depression.			
SVE2	E=459937 N=4786812	A= 649m	± 30m
Narrow joint controlled slot, 7m east of SVE1. Formed in rotten limestone. Easy climb down (9m) to floor of rocks. 5m passage contains dead goat. no way on.			
Completed Summer 98.			
SVE3	E = 459965N = 4786816	A= 646m	± 30m
Free climb - pitch (3 - 4m) in rift to floor. Then down smooth calcited rock (3m) to descending passage. Down slope ends in constriction, but seen to continue beyond. Worth digging.			
SVE4	E = 459691N = 4786813	A= 708m	± 30m
Rift - shaft across the strike. Drops to a possible dig.			
SVE5	E = 459873N = 4786837	A= 675m	± 30m
A possible dig site.			
SVE6	E = 459873N = 4786837	A= 675m	± 30m
Rift angled across dip - strike. Well worth digging.			
SVE7	E = 459740N = 4786858	A= 716m	± 30m
Rift across strike. 3 or 4m deep. Needs clearing of brambles.			
SVE8	E = 459852N = 4786914	A= 706m	± 30m
Large depression. Possible dig.			

Equipment review: Reliable electric backup lighting for expedition caving on carbide.

By Rhys Williams.

Having been let down by my lighting system on expedition in 1997 at a very inconvenient moment (see article in newsletter no. 120), I decided to rethink my kit for 1998.

The alternatives:

1: The Petzl Explorer system:

The Duo headset was at the time a fairly new release and I felt that it needed to prove itself as a robust piece of kit for underground use before I was prepared to spend the fortune required. Also, the batteries needed for this are 4xAA and replacing these in the dark would be extremely difficult.

2: Dive torch side mounted to the helmet:

This system (reviewed by Tony Baker see issue no.117) was the one that let me down in 1997. The rapid burning of batteries when forced to cave on this alone (e.g. in very wet shafts) was unacceptable. Alone in the dark, battery replacement was impossible with the Underwater Kinetics torch that I had.

3: The Petzl Lazer system: This was being phased out by the Explorer/Duo system. It was well known for being unreliable. Problems with a sticky switch in the headset or damage to the extremely thin wire to the rear mounted battery box were common. These are basically the same faults that make early Petzl Zoom torches hopeless for underground use.

4: Oldham headset/Petzl battery box:

I had seen a few people using this system the previous year. The battery box was the old Petzl Zoom plastic type bolted to the back of the helmet as used in the Lazer system (4.5V flatpack). The Oldham headset is an extremely well tried and tested piece of equipment. It is fairly waterproof and resistant to corrosion and the cable is of an extremely good quality which never breaks. The headset that I acquired would accept the Petzl Zoom type bulbs so I had a halogen for main

beam and standard for dip. With these fitted I could enjoy the quoted 6½ hours and 17 hours respectively from a Duracell. This seemed like the way forward, so with a scrounged headset and cable and a £7 battery box, throw in a couple of spade connectors and I was away.

I used the lamp in the Picos de Europa in 1998 and one battery lasted me a whole month of caving, including a four day camp at -800m. The Gouffre Berger was also tackled on this lamp and it never missed a beat.

P.S. I also carry a small mitylite (2xAAA) in my first aid kit these days to help out at awkward battery change moments.



Rhy's carbide / electric lighting setup.
Julian Carter

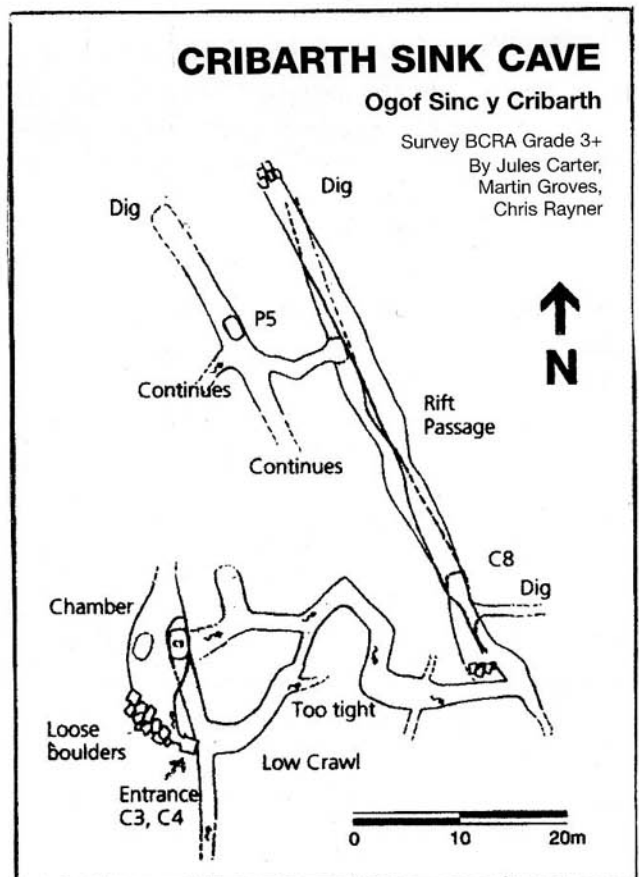
Cribarth Sink.

By Tony Donovan.



Having exhausted many of our digging projects in the Dan yr Ogorf catchment area, the team of Bernie Woodley, Martin Groves, Simon Ashton and Tony Donovan, turned attention onto the Cribarth Ridge. A few short caves in the region were quickly ruled out in favour of Cribarth Sink. This was dug in the past by Steve West and company, but the shaft fell in before any great depth could be achieved. The project was started on 21.2.98 by digging into a matrix of peat, gravel and larger stones. Scaffolding, reinforced with steel mesh, was used to prevent stones from being washed out from behind the shuttering, and soon we began to follow a nice limestone face and a good draft. The shuttering we had was quickly used up, so additional supplies of scaffolding and mesh were ferried up to Cribarth Sink midweek in preparation for the weekends digging activity. All went well until the Thursday evening, when we arrived at the carpark at 8.00pm. I carried 6 5ft poles and Simon carried 3 lengths of scaffolding. On reaching the top of the hill the fog was extremely bad and we ended up lost. We wandered around until 11.30pm, smiling to ourselves, imagining the mountain rescue trying to place us onto stretchers with two mad men still clinging to the scaffolding poles! Eventually we located Cribarth Sink and deposited the poles. Over the coming months we made rapid progress and on the 18-4-98, after just nine trips Clive Jones, Bernie and myself broke through at the bottom of the shaft which was seven meters deep. At the bottom a loose and dangerous scree slope led to a 3m climb down. A short length of walking passage with some long straws was followed to a flat out crawl to a choke. In total 35m of cave was found. Two follow up trips by Martin and Tony and the choke was passed. This led to a short length of passage to an 8m climb up, with much chert covering the walls. At the top, a fault developed passage was followed to yet another choke. A traverse above the choke gained a short length of passage with a slump in the floor. This we dug to reveal a

ladder pitch which would have to await a return trip. On the 2.7.98 the 10m pitch was bottomed. From this a short length of passage was followed back South to the previous choke, and I began to dig a bypass to the awkward ladder pitch, while Bernie dug a drafting hole below the ladder, and Martin followed the passage north to another choke. 3 hours later and Bernie and Martin exited through the pitch bypass with another 40m of passage under our belts. Two subsequent trips to Bernies dig and we entered another 120m of inlet passages, which all converged on a 5m clean washed pot. At this point we believe that the Limestone beds change from the Penwyllt limestone to the Penderyn oolite. The bottom of the shaft is choked but does draft, and it is here that we will concentrate future digging effort. The survey was carried out on the 12.10.98 by Martin, with assistance from Julian Carter and Chris Rayner. To date 210m has been surveyed and the depth is approx. 17m. On the 3-7-99 a dye trace was carried out by Roy Morgan under



very low water conditions, using about 0.5L of optical brightening agent. On the 10-7-99 the detectors in Hospital Cave were positive, whilst the Dan yr Ogof detectors remained negative. The distance from sink to resurgence is just over 1km with a depth of approx. 135m.

Many thanks must go to Keith Ball for the Geological information, to Roy Morgan for completing the dye trace. I would also like to thank the lads who completed the survey and everyone else who has taken part.

Geological notes , By Keith Ball

The bedrock geological succession has, at the base, the Lower Limestone Shales, a mixture of thin limestones and calcareous mudstones. This is overlain by the main (Carboniferous) limestone. This comprises of three basic units. At the base is the Dowlais Limestone; a dark limestone with a characteristic smell of rotten eggs

when hit with a hammer. This is about 120m thick and is overlain by a pure white weathering oolite, the Penderyn Oolite which is about 20m thick. Another rather different limestone in turn overlies this: the Penwyllt limestone. On the whole this is rather similar to the Dowlais limestone, but may be distinguished from that by the presence of chert. It is also about 20m thick. This is followed by the Upper Limestone Shales (0-3m thick). There are few decent exposures of the Upper Limestone Shales in the area but its presence may be inferred by the 'Rottenstone' workings which are abundant in the north of the area. In the southern portion of the area shown in Figure 1 the shales are replaced by a competent 'Grey Granular and Oolitic Limestone'. In places this is up to 5m thick. Where the two rock types occur together the Upper Limestone Shales are always underlain by the Grey Oolite.

Resting most conformably on the Upper Limestone Shales and its lateral equivalent is the

Figure 1: Geological Succession (not to scale).

Namurian Shales
Basal Grit
Grey oolite/U. Lst. Shales
Penwyllt Limestone
Penderyn Oolite
Dowlais Limestone
Lr. Lst. Shales

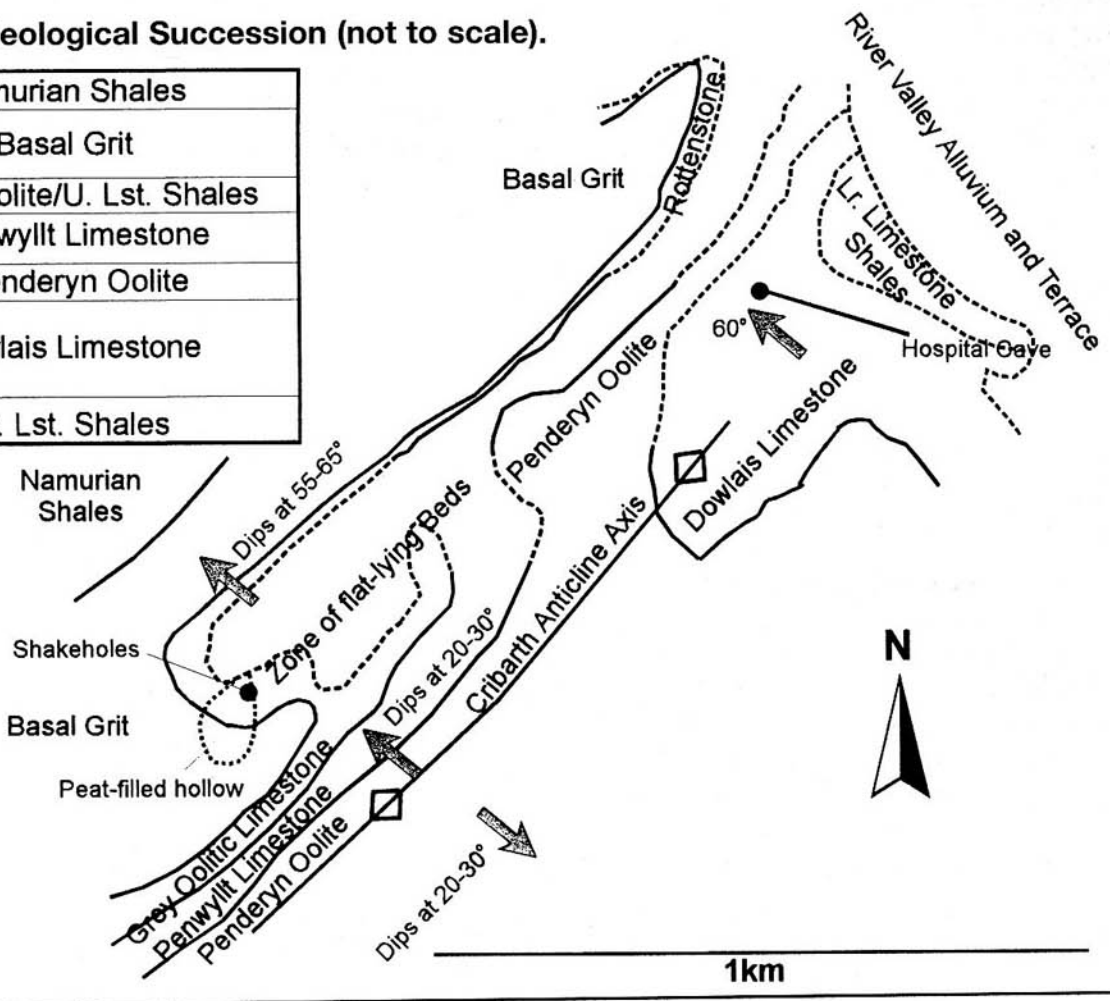
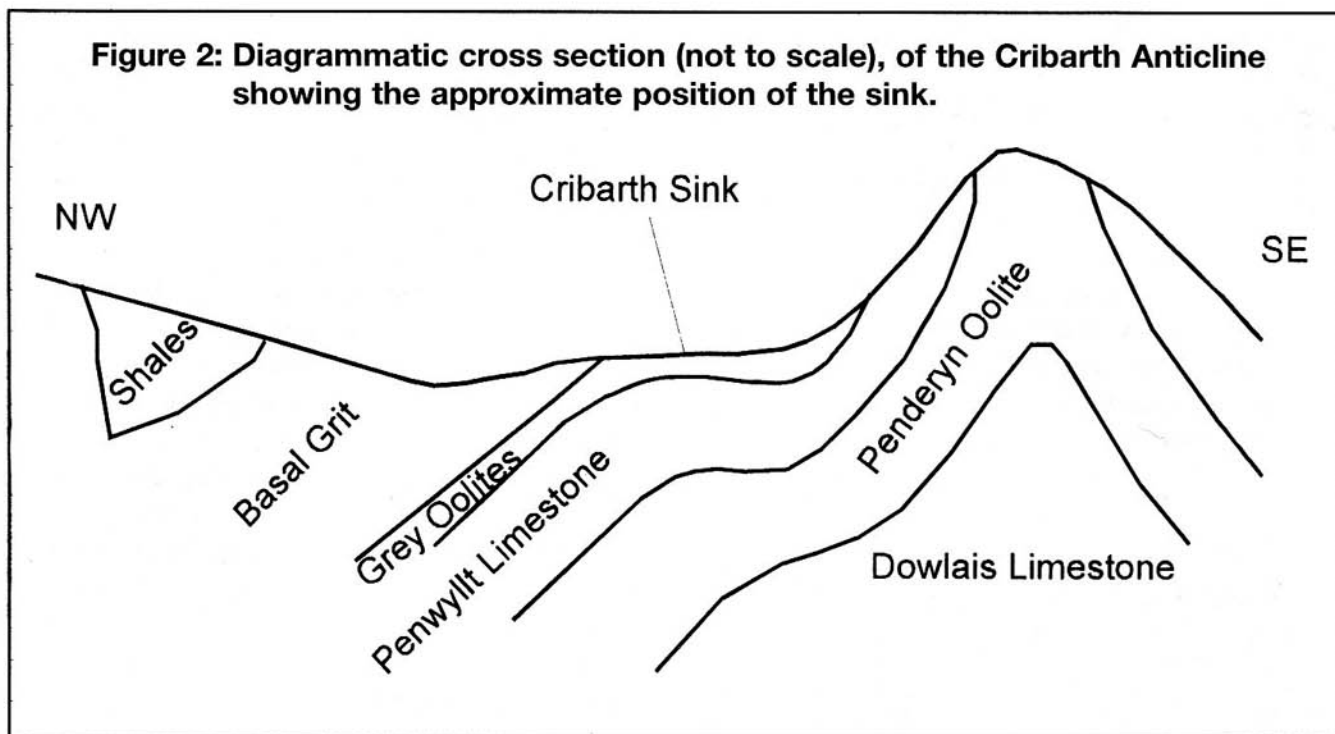


Figure 2: Diagrammatic cross section (not to scale), of the Cribarth Anticline showing the approximate position of the sink.



Basal Grit of the Millstone Grit Series. These gritstones are relatively pure white quartzites, often conglomeratic. In places there are relatively thin mudstones which become more common towards the top of the formation. In this area the gritstones are about 160m at their thickest. The quartzites are overlain by the so called Middle Shales: a thick (<120m) sequence of shales with interbedded quartzites.

The cave is found in a shakehole initiated in the lower part of the Grey Oolitic Limestone. The Penwyllt Limestone is then exposed in the walls and is recognisable with its characteristic chert bands. At the very bottom of the cave is a change in the appearance of the limestone. It becomes much lighter coloured and indicates the probable presence of the Penderyn Oolite. Figure 1 indicates the geological succession, and the surface geology.

Structure: The rocks have undergone severe folding. The main fold is the Cribarth Anticline, the crest of which extends in a SW-NE direction. A diagrammatic section, figure 2, shows the position of the cave entrance in relation to the major and subsidiary folds.

Hydro-geology: The hydrological gradient to the rising at Hospital Cave is steeper than that to the Llynfell rising at Dan yr Ogof. It is

therefore not surprising that this is the preferred route, especially since any possible flow through to the Dan yr Ogof system would also involve crossing several complex geological structures. The situation in response to a higher water-table in the past should however not rule out a possible fossil connection. The water flow to Hospital cave would be mostly along the strike. Hospital Cave itself is found just above the middle of the Dowlais Limestone.

Four and a half tons of water is ridiculous!

By Graham Christian

One thing that can be said for the Babysitters' winch is that it has enabled us to very rapidly produce a very exclusive swimming pool. When the shaft was less deep, any water that entered seemed to drain away, with the sessions little hampered by the need to bail. The August Bank Holiday 1998 weekend was, you may recall, more than a little wet, and when we were finally able to get up to Babysitters' Dig we had to remove 138 buckets of water before starting the real work of digging. The buckets were subsequently measured and found to have a volume of 34 litres absolute, more realistically getting 32 or 33 litres to the surface. On the following Saturday, a massive 180 buckets had to be hauled out. It is boring, tiring and unproductive.

.....*It needs to be pumped out: to begin with. There is no doubt whatever about that. This has been signed onto by the winchman, the loader, the unloader and the supervisor. Dave Edwards signed on to it: and Dave's name was good in the Club, for anything he chose to put his hand to. Bucketing it out is as dead as a door-nail.....*

Having utterly destroyed that famous bit of prose, it is time to weigh up the options. As with the winch, we have to first look at the facts to build the framework in which we are forced to operate. We have the objective:

To pump water up to a height of at least 15m in a remote location.

Each litre of water will weigh 1kg and occupies 1,000 cubic centimetres or 1,000,000 cubic millimetres. We will potentially need to shift 5,000 litres up a height of 15 metres after one week's average Penwyllt rainfall.

If we were to try to pump this amount out in a week (7 days), we would need to pump at a rate of about 30 litres an hour or 05 litres per minute. This translates as 0.5kg raised 15m in 60secs. The energy required to raise 0.5kg a distance of 15m is expressed as

mass x gravity x height = $0.5 \times 9.81 \times 15 =$

73.575 Joules

The power required to do this = work done ÷ time taken = $73.575 \div 60 = 1.23$ Watts

Therefore, if the dig was to be pumped continuously, only a small energy source would be needed. At best we can only consider this to be the extreme case at one end of the scale. Let us look at the other end of the scale, where we turn up and need to pump the whole lot out quickly.

$5000 \times 9.81 \times 15 = 735750$ Joules

The power to do this in one hour = $735750 \div 3600 = 204.375$ Watts

The following table shows the varying amounts of power that are required to pump out the dig in given amounts of time:

Time to pump	Power required
1 week	1.2 W
3 days	2.8 W
1 day	8.5 W
12 hours	17.0 W
2 hours	102.9 W
1 hour	204.4 W

It must not be forgotten, however, that there will be power losses in the pumping mechanism, so the source of power will have to be perhaps up to twice as big as the shown power, particularly for the lower powers. Given the way the rain chucks it down in Wales on occasion, it would be better to aim at a minimum rate of emptying in 3 days. This sort of rate is obviously going to be achieved with an unattended system employing a renewable source such as wind or solar power. There has been some suggestion that, as there seems to be no shortage of water, a waterwheel and flatrods running up from the lower Nant Byfre would be a solution. While I am sure that there are enough skills in the club to realise such a magnificent scheme, I have a niggling feeling that the mandarins of

Big Brother National Park would take a pretty dim view of it.

Solar Power

Sun at Penwyllt? Ha!

But before this option is dismissed out of hand, consider the following points. With the prevailing weather conditions at the site, it has to be admitted that the Beacons are not noted for being a sun trap. In order to gather enough power to do the job, it would probably take a solar panel that is rated at a minimum of 600 Watt hours per week, costing over £300, and it would be at its least effective when it is wanted most - when it is raining! A decent battery would be required to store any excess power, and both would be very 'nickable'. With the large number of odd characters that have walked past the dig while someone has been there, I would give any desirable parts less than a month before they also walked.

Wind Power

With a name meaning 'Windy Headland' or something similar, we all know that there is no shortage of wind in the area. There are three options with wind power.

1. A twin bladed turbine for generating electricity to power an electric pump. These are not cheap, although they are the most efficient at extracting power from wind. Although most of the fabrication could be done in 'house', some items like the alternator and blade would need to be bought. Again they



Fred Levett getting to grips with the powered winch system. *Chris Grimmatt*

are eminently nickable. They need a fairly high tower to gain a smooth airstream. The other consideration is that they need to be furled in very strong winds or they will disintegrate. Who will go up the hill on a wet and windy night to shut it down? You know the answer as well as I do! A wind turbine could be erected on a remote site for generating electricity for other purposes, say, on an expedition for powering radios, lighting and computers full of those miles of new cave data, but it would be fairly well attended.

2. A multi-bladed wind pump. This is the traditional farm pump as featured in all the best westerns and on sheep stations in the outback. Like the generator above they like a smooth air flow as they have to turn into the wind, thus a high tower, and similarly need to be furled in high winds to prevent self destruction. The high density fan does work better at low wind speeds than the aerogenerator above. Construction details are available for a 700mm diameter pump that is claimed to lift about 1000 litres per day with a head of 3 metres in a light wind. It would be small enough to be carried away by someone who really wanted one.

3. A Savonius rotor pump. This is the vertical axis two halves of an oil drum type pump. What it has going against it is that it is the least efficient of the three types, being a differential drag machine. It does, however, have a number of things in its favour. It can be made from an old oil drum, which when chopped in two and joined again with an offset, makes for a bulky, cheap and fairly undesirable item. It does not have to turn into the wind, so needs no tail fin or associated complicated engineering. As it works from wind hitting it from any direction it will withstand a more turbulent airstream. It is self regulating in a high wind: there is no need for anyone to tie the blades up. There are plans about, but availability is poor. Their rating seems to be about 7W in a 3 m/s wind, rising to 25W in a 6 m/s wind for ones constructed of one drum. I have now found a book called *Wind Power Plants Theory and Design*, which presents formulae, worked examples and actual results for various machines used for pumping. For simplicity,

cheapness, no high wind problem and lack of theft appeal, I rate this as the best option for a renewable power source.

Internal Combustion Engine

Various options exist for this as the primary power source. There should be enough power to drain the dig in less than an hour. It could either drive an electricity generator and subsequently an electric pump, or it could drive a pump directly. A generator would need to be taken up to the site every time it is required, as if it was left there it would be very susceptible to both theft and the all pervasive Penwyllt weather. Vehicular transport would be required every time it was to be



The bore hole pump being tested.

Chris Grimmer

used, but would not be available at all times due to key personnel not being there or the ground conditions forbidding access.

A direct drive engine would need to be sited on the surface to avoid the problems with fumes. If it could be securely fixed, it would still need to be weather-proofed. A gearbox of some sort would be required to reduce the speed of the engine to something useful for operating pump rods.

Pedal Power

What are the practicalities of using leg power to pump out the dig? How much power can be maintained for what length of time? Can a person put 200W into a pair of cranks? It may be possible that pedalling in relays for an hour would be sufficient to lift 5 tonnes of water up 15m. An attempt to find out some answers should be made.

Centrifugal Pump

This type of pump is normally electric and would certainly do the job if of the correct size. It would need to be taken to the dig with the powering generator, as it would be quite valuable. How would it handle muddy water? It would need to be immersed in the water.

Diaphragm Pump

These handle gritty water quite well, being commonly used in civil engineering works to pump out muddy trenches. They can be primed and would not need to be at the bottom of the dig. A pump to clear the water in a short time would be fairly heavy - see the one at Croydon CC's cottage. If powered directly by an IC engine there would be the fume problem, but if electric, the generator problem.

Piston Pump

Trials with a simple pump have shown that there should be no problem with the height. Reference to "Building a Domestic Wind-pump" by James Barr gives indication that a pump can usefully constructed with domestic waste pipe fittings. This has been attempted, although not following James Barr's plans exactly. A book in the library at Penwyllt contains diagrams of the pumps used in Cornish metal mines, and an adaptation of these was followed. Initial pumping trials have been successful, with a 13m head being pumped.

The Cornish pump should improve on a lift pump (as trialled at Penwyllt) in the following way. To fill the cylinder of the lift pump, the plunger was depressed. To raise the water, the plunger was lifted with the water. In the Cornish pump, the cylinder is filled by lifting the plunger, and the water raised by depressing the plunger. If one looks at these as simple hand operated pumps, there appears to be no great advantage, except that it

is easier to push down to pump the water up. It has far more significance when applied to a deep shaft.

It must be considered that the pump rod dropping down the shaft has considerable weight in itself. If it was a lift pump at the bottom, the engine would have to lift not only the column of water, but also the weight of the rod too. The weight of the rod would ensure that it dropped, refilling the cylinder at the bottom. The effect of this is no load on one half of the cycle, and the double load of water and rod on the other half. With the Cornish pump, when the rod is raised only the small amount of water to fill the cylinder is lifted with it. On the down stroke, the weight of the rod falling does all of the work in forcing the water up the pipe to the surface, or stage cisterns. This method allows the use of a far smaller engine, the whole system being far more efficient. While Babysitters' is not yet the same depth of some pumped mineshafts, this way of pumping would optimise any low powered energy source. If the pump rods are heavy enough to do the pumping by themselves, any excess weight can be countered by the use of balance bobs. Careful design, given the odd shape of the hole, could utilise any offsets required to make sure that the weighting is just right.

What now?

It will be obvious that the author is biased in his views as to what should be attempted by way of ridding ourselves of this unwanted water. While a modern, high tech, pumping system is perhaps the most simple, I feel that it would be less satisfying. Anyone can get an electric pump and clear a hole; but not everyone has the engineering skills to do it all mechanically and build everything themselves. I believe we have what it takes, and we will get a buzz out of it when it works, if we go down the 'green' path. What do you think?

Update

Since this was first drafted, a wonderful bore-hole pump has come our way. It will do the job, but requires the use of a generator to run it. It also came with electrical windings that shorted down to the case..... Neither of these items can be left unattended at the dig, so the

development of alternative methods will continue. An old 2-stroke engine has been found and a gearbox is being built to bring the revs down to piston pumping speed. Trials are being made with a Savonius rotor, to try to prove a concept, and there is plenty of water to play with. Those involved are determined that SWCC should still retain the nickname 'The Clockwork Caving Club'!



The Baby-sitters Dig crew. *Chris Grimmett.*

SWCC Entrance Exam

Anon.

Editors Note: readers are reminded that 'Opinions expressed in this Newsletter are the contributors own, and not necessarily those of the editor or the SWCC / CODC'! This article is full of 'in jokes' and is intended to amuse, rather than offend!!!

Candidates for Membership should attempt a minimum of 7 subjects. Extra marks may be awarded for originality of answers. The examiner's decision on pass or fail is final; this result may be determined by the candidate's generosity in The Copper Beech. Time allowed: 6 months

English Literature and Language

1. Discuss the emotions expressed when the club's Premier Dig is written about in the log book.
What is the Club's Premier Dig?
2. Where is the Cambrian Cave Register?

Mathematics

1. Which is the odd one out of:- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Why?
2. Two members get married on Midsummer's Day and have three children, one born after one, two and three years of marriage. They stay at the club only on Bank Holiday weekends. Calculate the cost of cottage fees to the parents from their marriage to the time the eldest child is 18 years old. (*Easter and Christmas count as 4 day holidays. Cottage fees are at current rates.*)

Physics

1. Explain how one person can simultaneously use 3 Bosch drills and 4 battery packs.
2. Pentaflex is either:-
 - (a) a Japanese camera
 - (b) a credit card
 - (c) a type of clothes line
 - (d) television aerial cable
 - (e) a specialised filler for all the holes made by the users of Bosch drills (see previous question)*Marks, and everything else within a 5 yard radius, will be removed if this question is answered wrongly.*
3. A dig is 13 metres deep with an average cross sectional area of 4 m^2 . It regularly fills with water to a depth of 4.2 metres. Estimate the required power of a pump to remove all of this water in 1 hour. Design a suitable wildlife filter to prevent the discharge of puréed amphibians.
4. If the standard voltage on a Pelican battery pack is 24V, what is its terminal voltage if it is dropped down an 8m pitch? ($g = 9.81 \text{ m/s}^2$ You may ignore air resistance.)

Chemistry

1. Describe the operation and benefits of a carbide lamp. What other uses are there for acetylene?
2. If the critical volume of methane in air is 4%, how long will it take for 4, 6 & 10 people respectively in N° 8 to render it dangerous?

Biology

1. Discuss the flora and fauna of two of the following:-
 - (a) No.8
 - (b) Sweep
 - (c) No.3 drain system (particularly the pubic hair mat on the gents' showers drain cover)
2. What is the probability that any two children at the Club are related?
3. State at least one alternative use for the drying room.

Geography

1. What is the average level of cloud cover over Penwyllt? Choose one.
(a) 8/8 (b) 9/8 (c) 10/8
2. A water tank is under flood conditions: how long will it take to fill with rocks and gravel?
Tank volume = 4m³
Flow rate = 0.25m³/sec
Bed load = 1.5kg/m³
Sedimentation rate = 20%

History

1. To whom is this quotation attributable? "This Club's finished if you ask me; you're just a load of bloody property owners". *Persons born on the wrong side of Offa's Dyke are not eligible to answer this question.*
2. Relate at least two short stories involving Roger The Bomb. Extra marks will be awarded for getting the accent just right.
3. What anniversary was SWCC celebrating during the Clwb 50 week?

Humanities

1. Analyse the likely overcrowding in Swansea prison should the photographs in the small common room ever come into the public domain.
2. What do the following have in common?
(a) Phil Buckberry (b) Les Cardy (c) Bob Radcliffe
3. Compare and contrast:-
(a) Helen Richardson and Allan Richardson
(b) any two Dobsons
(c) Bob Hall and Blob Hall (*do not confuse either with Pat Hall*)

Engineering Sciences

1. Describe in detail the procedures for the following:-
(a) starting the dumper truck
(b) immobilising a broken wrist
2. Name at least 30 uses around Penwyllt for Galpinite.
3. Draw a schematic diagram of the Penwyllt heating system, labelling as a minimum the North, South, East, West, Up, Down, Back and Front circuits. Design a simple thermostatic control device which cannot be set to temperatures above 10°C. *n.b. Only prospective members hoping to stand for future election to the post of Cottage Warden need answer this question.*
4. If it takes 10 people with 6 shovels, 3 pickaxes, 2 wheelbarrows and a crowbar a total of 3½ days to dig a hole 3 feet deep, when will the kitchen be finished? Estimate to the nearest 10 tonnes, the quantity of concrete required (and then double it).
5. Name all the safe parts of the lathe. Use no more than 5 words.
6. The manufacturer's recommended bead diameter for silicone mastic is 5mm. A tube contains 500ml. Estimate how many tubes are required to seal a kitchen containing 50 panels, each 2.0m tall. Apply a Clipstone Factor of 10%.

Domestic Science

1. The beer in a usual sized barrel of Courage Best is measured as being 8" from the top. How many pints are there left in the barrel and how long is it likely to last, assuming a Cardy-Williams Constant of 23?
2. Which of these are you least likely to see around Penwyllt?
(a) Ian Alderman's lamb korma (b) a shortage of washing up liquid
(c) The Duty Officer (d) all of these
3. If a pan of rice for 5 people takes 6 minutes to bring to the boil, how long would it take to bring rice to boil for the Thursday night balti during the Working Week?

Political Science

1. Produce a hazard analysis for three of the undermentioned and the politics involved:-
 - a) sitting next to Chas Jay chopping wood in the long common room
 - b) lighting the oven in Married
 - c) waking the cottage Warden before midday
 - d) turning up at 9-59 a.m. with four children for a Columns trip when it's the President's turn as Warden
 - e) upsetting a Soup Dragon.
2. Discuss the distribution of the classes across the membership of the club. Is there a bias towards any one profession?
3. Explain how three rolls of razor wire around the property boundary could increase the standing of the club in the eyes of the local community.

Foreign Languages

1. Which of the following is genuine Welsh?
 - (a) dim dwr
 - (b) dim sum
 - (c) dim light bulbs in the dining room, just like it was before it was rebuilt
2. Translate "Four beers, please!" into three foreign languages. (Yorkshire is not a language.)

Music

1. What is underneath Allouetta's furrerrrowed brow?
2. The song 'Woad' is sung to the tune of what patriotic song?
3. Estimate the sound pressure level generated in No. 9 front by Dark Side Of The Moon being played in the party quarry at 3 a.m. Is this loud enough?

Miscellaneous

1. Which leaks the most?
 - (a) the roof above the gents toilet
 - (b) the floor below the gents toilet
 - (c) Steve West's car
2. Where are you most likely to sustain a serious injury?
 - (a) Ogof Ffynnon Ddu
 - (b) the car park
 - (c) the long common room.
3. What major Land Rover part is it impossible to find in the workshop?
4. How many Land Rovers can you build, using only parts found in the workshop?

Anon.

Slow Fuse

By Pete Francis



After that first time, I vowed never to use a slow fuse again. O.K., Fair enough, mechanically their sound enough. You cut off a good long length, shove one end into the detonator, crimp, then, when ready, light the other end. But, that of course is when the trouble starts. You see, the trouble with a slow fuse is that it's so alarmingly fast!

Take for example that first time. We'd been toying for ages, poking around the border of the big blank square that's right in the middle of Ogof Ffynnon Ddu Two. The one that's got Pendulum Passage on one side, Chasm Passage on the other with Bawani Junction and Swamp Creek making up the other edges.

Done a massive climb in Pendulum to reach a misfit inlet coming in from the south. All only to find "Bucket" Tilbury's initials there before us and a streamway soon getting impossibly tight

Poked all along the high level Chasm stuff including some hairy virgin traverses before, finally, reluctantly, looking at Swamp Creek.

For a few trips we got vertically lost in an upwards maze of boulders and climbs. In fact we first reached the breakdown chamber by an epic overhanging mud climb after going off route and trying to follow the stream. At first we were not really impressed. We only sat there to get our breath back and steady our nerves after the mud trauma. The floor was really unstable, just one jumble of large blocks, some just waiting to pounce. I can't remember who noticed it first. It was nothing spectacular, just a trickle of water falling down one corner. Balancing carefully across boulders one could get a better view and almost see the passage it was probably coming from. But no possibility of a climb up there. But climbing back, along the wall to the far end of the chamber an ascending route revealed the possibility of a traverse and before long a couple of us were gingerly across. "Don't follow yet as it's a bit slippery and a long way up. We'll go and see what it does." Though not marked on the survey the passage went on like an arrow into the unknown space on the map. "It went on for a bit. Looks like a fault guided rift. But it ends in a miserable choke." And so it slept and should have

been forgotten. Except there I was again and this time with a lump of bang, a det, and that infamous slow fuse in my hand.

It had been Foster's idea. "Be good practice for you," he'd said, and with a girl in the party and me eager to impress, there I was at the sharp end whilst Foster, thoughtfully, was calming the same girl, well down the passage and safely round a corner. "The bang's a bit sweaty, been hanging around the house for a few months. Needs using up - should be all right," were his parting words.

The only place I could stick the slab was on the underside of the boulder, not an ideal spot. "Plaster lots of mud on to hold it there," I told myself, concentrating hard. The mud wasn't easy to find. I had to make repeated journeys back along the rift, gingerly cradling it to me over a small traverse and equally small but awkward climb.

I looked carefully at the length of slow fuse and carefully inserted it in the det. "Always crimp it with your teeth," I heard Clive Jones' voice echoing in my head. "That way, if it goes off you'll know nothing about it, rather than bleed to death looking at where your hand used to be., I bit hard; it hurt my teeth.

I removed the sharp stick from my pocket, brought especially for the occasion. Poked it adroitly through the mud into the sweating black pudding beyond and stood back to admire my work. Then, rather more gingerly, I inserted the fuse. One last pat of the mud to make sure it was all right and, now distinctly more nervously, I pulled out the box of matches. The first one fell to the floor; the second refused to light, so by the time it came to my third attempt there was a definite quiver in my fingertips as they held the now flaring match. You know the feeling you get when trying to light a firework. When you hold the match to the blue touch paper and wait for it to light. Knowing it will light - any second now - but still jumping when it does. Well, holding a match to a slow fuse is just like that, only worse, as the rocket your trying to help on it's way to the heavens only has a smattering of explosive propulsion carefully packed within it, whereas the other end of the slow fuse connects to a (potentially) bloody black mass

of boulder smashing elemental raw force.

"Fizz."

It lit and with a body jerking lunge I ran. Or at least tried to run.

With quickening heart beat I soon realised that although going through the physical movements I wasn't getting anywhere. My lamp cable was caught. With a desperate flailing arm motion I reached behind me, found the offending cable and with one firm yank was free.

And then it happened. Suddenly I found myself comprehensively and unequivocally in the dark. Well, apart from the sparkler like iridescence coming from the swiftly burning slow fuse, that is. You see this was early on in my caving career, way before the ever reliant FX2.'s, the unflumoxable Kidney pack with the array of pencil back up lights, adorning your helmet for added safety and piece of mind. These were the days of the "Nife" cell. Let me explain. The "Nife" cell was the one in the sparkly silver case with the light contacts set in the detachable top, usually held together with a split pin or piece of bent wire. Yes, that's right, the one that I'd lost earlier on in the trip whilst thrutching across the high traverse. Which was, of course, why it now chose to spring apart. Which was why I was now in the dark. Which was why I panicked.

I swung wildly around, arms akimbo, groping for my lead of light. The lead of light kept pace with my arms in their gyrating dance, exactly half way from both. My hand hit a wall. I yelped. The light case top hit my hand. I yelped again but with a now injured hand, failed hopelessly to grasp it as it spun past.

The slow fuse fizzed quietly and quickly to itself seemingly unaware of my plight. I momentarily thought of wrenching it from it's explosive bed to lessen that fatal bang but Clive Jones' words echoed in my head. "Bite it with your teeth, that way if anything goes wrong your merely dead". I flexed my injured hand. I didn't want it to hurt more than it already was.

The cell top, continuing it's circular journey, wound itself around my torso, enabling me to find it's end and quickly jam it back on the battery terminals. Blessed light again!

I galloped down the rift, each step taking me away from a certain cataclysmic end. I reached the small traverse, reached out a hand to steady myself, and found that hand - my good hand - and arm - my good arm - firmly enmeshed in the cable that

encircled my body, thereby missing the handhold; thereby missing the foothold; thereby falling abruptly downward, hitting both good hand and good arm in the process on the many ledges which should still have been supporting my feet.

Because all these events and sensations happened simultaneously, thereby surprising me and causing me to forget possible painful future occurrences, I let go of the lamp battery top that I had been holding onto with my other hand, so plunging myself, once more, into darkness.

Because I had managed to turn as I fell I could now see the slow fuse quickly proceeding to its destiny, now slightly behind me but definitely up hill. I therefore was quick to realise that although I now had a marginally

Better chance of escaping the blast injuries, the crush injuries caused by the ensuing hoard of falling boulders would be distinctly unpleasant.

By some miracle, the convulsive shaking of my body caused the intinerant battery top to clank loudly on the rock by my side, once more enabling me to create contact with it and similarly make contact between it and the battery terminals.

I ran. NO, I flew down the passage.

Being a fault controlled rift it went on for an awfully long way in a straight line. I finally reached the bend, dived around it to collapse, a sweat covered, panting wreck, before the girl I now felt I had the right to love and, hopefully, bed that night.

She gazed quickly, assessingly at me. "You've taken your time. What have you been running for? That slow fuse is plenty long enough" Bruce crooned in my ear as his eyes sparkled over my new found angel of soothing gentleness.

BOOM " went the bang. "Right then, that's that. We'd better be getting out if you and I are going out for that meal tonight."

Surprised, I looked up, but Bruce - and the girl - had already left.

Bill Weaver

By Peter Harvey

I was sorry to hear that Bill Weaver had died, especially as I did not hear in time to go to his funeral. Bill started caving before the second World War on Mendip. He caved mainly with the Mendip Exploration Society, but was also an active member of the Mendip Nature Research Committee, the UBSS and the Wessex Cave Club. Later on, when members of the Mendip clubs started to take an interest in South Wales, he became a member of the Dragon Group.

He was very active in the early exploration of Dan yr Ogof, and his name is immortalised by his climb up a rift near the beginning of the Long Crawl into the Weaver-Bowen Crawl. This has now been reached from the other end. He was also active in the rest of the area; the survey of Llygad Llwycher and entering a short distance into Ogof Fawr to

the East of Penderyn being but two of his projects. Numerous articles by him can be seen in some of the early British Cavers.

I first met Bill towards the end of the war while I was working at the Bristol Aeroplanes Company's works at Patchway where we were in different departments. Along with John Parkes, with whom I shared digs, we were doing a bit of digging on Wednesday nights. One was a dig in a sand filled tunnel called Plantation Hole somewhere near where the Bristol Exploration Clubs' Hut is now. Here we had to use electric lighting as the carbide light kept going out because the oxygen did not last long! Another dig was near the main chamber in Longwood Swallet where a small stream went down slot in the floor. We had to lie head down in the slot



Graham Balcombe greasing wrists prior to diving the Ogof Ffynnon Ddu resurgence. Peter Harvey is on the right, watching with Harold Davies. On the left are Bannaster and Bill

chisselling bits off the bottom with the water flowing down over us (No wetsuits). Bill and John were very enthusiastic diggers! However we did manage one small success on Mendip. Along with Leslie Millward, we entered a small cave North East of the Hunters Inn which we called Cuckoo Cleaves. This was a small swallet cave but was not very extensive.

It was Bill who introduced me to South Wales via an abortive trip to Pwll Swnd. We spent several hours walking up and down the mountain in heavy rain in the middle of winter. Eventually we gave up lookin for it, and finally finished up in Ogor Pasg at Herberts Quarry where we bumped into Eddie Morgan who informed us 'we were caving on his patch'! Later Bill showed me the small cliff face on Downey's Farm, at the bottom of Pant Canol which he thought would be a good place to enter the Ffynnon Ddu rising. Eventually we got permission to dig the site, and the day Ian (Nixon) and I were pulling out the final boulder, Bill arrived with a

rope. This helped us pull it out, and Bill joined us in on the first trip into Ogor Ffynnon Ddu.

In the nineteen fifties Bill started to take an interest in cave diving. When he finished his training he became the nucleus of the Welsh Section of The Cave Diving Group. Later when his work took him to Oxford he became more interested in the diving at Wookey Hole, and we did not see so much of him in Wales. However in 1996 Bill did manage to attend the club's 50th Anniversary dinner with his son.

Bill was a great person to be with, and would always be at the centre of any group of cavers telling tall stories about his exploits. I will always remember him as one of the early enthusiasts of the sport of caving in South Wales for which he did a great deal.

What's in a Name?

By Clive Jones

Once upon a time there was a cave called Ogor Ffynnon Ddu. When translated this means the cave of the black spring. However time passes and the cave became known as OFD and then this became too much for some cavers and they now refer to it as 1, 2 and 3. Soon we will progress to bleeps.

What a brave new world.

The other day upon the hill I met Daffydd Davies the retired headmaster of Pen y Cae school. He had been pondering over the name of the Byfre as it had no real meaning. He then saw that on the map of 1810, predating the Ordinance Survey, sorry OS, that the stream was called Afon y Dyfnderoedd. This translated means the 'River of the Depths'.

What a wonderful world.



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