



SOUTH WALES CAVING CLUB

CLWB OGOFEYDD DEHEUDIR CYMRU

Newsletter

No. 115

1995



South Wales Caving Club

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Letters to the Editor

Front Cover photo: Pat Hall in the Mucky Ducks, Peak Cavern. Taken on the club Derbyshire weekend, February 1995 by Tony Baker.

Back Cover photo: A caver on the exit pitch of Xio Zhai Tien Ken, Sichuan, China, by Richard Bartrop. (See article on pages 41-47)

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

Editorial

by *Tony Baker*

The club's 50th anniversary is fast approaching. I have offered to take on at least the initial co-ordination of the 50th anniversary publication, and last year put a plea in the Newsheet for members to let me know what form they thought this should take. As a result, several members have spoken to me on the subject, and it is clear that expectations are high: the 50th anniversary publication should be a thick volume, filled with well-illustrated articles covering the whole history of the club and of exploration in our area. Former members should be tracked down and asked to write up or recount their involvement in significant episodes from that history, and current members who were responsible for discoveries but didn't write them up at the time should do so now. Long-forgotten photographs should be rooted out, printed up and published. An up-to-date, glossier version of the 21st anniversary publication would seem to sum up most peoples ideas. All of which sounds great to me, but...

I don't want to sound too negative a note about this, but my concern is: where is all this material suddenly going to appear from? My experience of editing this Newsletter over the last four years is that it is unbelievably difficult to extract material from people. Those who have been caving in some far-flung country, or who have been involved in something significant closer to home, will readily agree to write it up for the Newsletter when asked, but somehow the article never arrives, no matter how often you politely enquire if they've managed to get anywhere with it. The maximum amount I seem to be able to acquire fills two Newsletters per year, and much of this comes from a few reliable sources. Now to produce the 50th anniversary publication that a club like ours should be able to - and that members seem to want - this inertia has to be overcome, and quickly. If somebody didn't write something up twenty or more years ago,

what's going to make them do it now? How are we going to track down all these long-lost members and encourage them to write about experiences from a long time ago?

I've been around for a mere ten of those fifty years - a short enough time that some of you still say I'm "a new member". I know very little of who did what, and when. I've never even seen some of the people whose names have been mentioned as potential sources of material. While I'm prepared to co-ordinate the whole thing and to put together the finished product, I need the help of a lot of other people if the 50th anniversary publication is going to happen. There is only just over a year before the thing should be published, and so far I've had just ONE firm offer of an article. A year is no time at all, given how long it takes for members to write for the regular Newsletters.

Take a look at the oft-mentioned 21st anniversary publication, and you'll see what I mean: there were *150 pages* of text and photos about the Balinka Pit, as well as comprehensive histories of Ogof Ffynnon Ddu (48 pages) and Dan-yr-Ogof (30 pages). To produce something even vaguely similar requires a lot of work from a lot of people. This means you. If you can provide something for the 50th anniversary publication, or you know of someone who can, please let me know NOW. Once I have a rough idea of the material I can expect, I can try and source other stuff to fill the gaps.

I can't stress enough how important it is that everyone works towards producing this publication: if it's left to "other people" it simply won't happen.

Rod Stewart - An Appreciation

by John "Oz" Osborne

On a bright autumn day in October 1994 many of Rod's caving friends gathered to commemorate his life and to pay our respects. Each of us present had personal recollections and appreciations which, I am sure, were quite varied.

These are my own; just one variation of many.

Above all Rod had many facets, and was obsessively isolated, such that one had to accept what was offered. He seemed to be overwhelmed when his caving friends refused to allow him to withdraw into a shell, even though on occasions he would try hard to escape! Even after thirty years acquaintances kept in touch and, I am sure, will continue to remember him with affection.

I shared some ten intense years with Rod. Our common interest was in mining (caving was a bonus) and to try harder than anyone we knew to extract the most from any opportunity. Rod always seemed to have experience in techniques, the strength to carry them out and the drive to succeed. My years added just one element to a complex, but full, life.

I learnt that Rod met the club in 1964 during trials for Balinka but we came together after the first expedition and began a wild time exploring mines, mainly in North Wales, but also in the Forest of Dean, Shropshire, and elsewhere. We had an abiding confidence in our calculated approach which, we assumed, would ensure our safety and in this regard we were lucky enough to be right.

For a mere five years we cut a rather private path of achievement which included the last (?) climb up 300ft ladders (the top being free to the moor above), discovery of a nitro-glycerine plant, riding collapsing ladders down mines, a seven-mile drainage level and many shafts which drained the club of ladders, all of which added to our own private collection of experiences. Some of the latter required radios to maintain contact with the surface! Many of the log-book entries (and Newsletter articles) from the "Miners", "Divers" and "Anon" recorded these exploits.

Rod joined in the diving sagas, mainly in Ogof Ffynnon Ddu, but not forgetting Llygad Llŵchwr and the Hepste valley amongst others. Whilst not his best subject (water-skiing provided a memorable exposition, "proving" that stomach-surfing is actually the hardest feat), Rod showed that this was also an expertise gained elsewhere. In caving, Rod contributed to the exploration of Ogof Ffynnon Ddu II and III, including those mega-trips prior to finding Top Entrance, and of Dan-yr-Ogof (which others are better qualified to record). His interests elsewhere were not always shared with me and others will remember him for these (Gloucester SS, as well as those in the Forest of Dean, Cornwall, Kent, Surrey and the North).

For myself, I appreciate my times with a great companion.

A Fresh Examination of the Ogof Ffynnon Ddu Bones

by Mel Davies

The human skeleton discovered in August 1946 some 160 yards in from what was then the lowest entrance to Ogof Ffynnon Ddu has suffered some vicissitudes over the years, and for a time even went missing! No detailed anatomical description has ever been published but, now that the bones are safely ensconced in the Archaeology Department of the National Museum of Wales, it has proved possible to re-examine them.

The first full report on the circumstances of the discovery was by the late Edmund J Mason in 1950 and this included an anatomical summary by Professor C M West of the University College, Cardiff. The report was republished in the Newsletter of the South Wales Caving Club in 1972, and this led me in October 1975 to examine and photograph the chamber in Ogof Ffynnon Ddu where the bones had been found. I determined to examine the bones themselves, but my letter to Dr Savory of the Archaeology Department of the National Museum of Wales only produced the following response:

"...As to the bones...it seems that they were handed over by the SWCC to Professor West, who reported on them and retained them in his Department...there is no trace of them here."

Dr Savory kindly provided me with a copy of his photograph of the bones taken within hours of the discovery, and I was struck by the great age suggested by the condition and layout of the remains when compared with human remains I had found in several other caves. The result was my article in SWCC Newsletter No.92 in 1980

where I suggested that the skeleton represented a deliberate burial introduced through what is now a boulder collapse at one end of the bone chamber. I was still unable to locate the bones themselves and there the matter rested until my request in 1994 to the National Museum of Wales to examine the animal bones found inside "Top Entrance" of Ogof Ffynnon Ddu in 1967. Not surprisingly these were not to be found, but Miss E A Walker of the Archaeology Department wrote:

"... We do, however, have some human bones from the site but there is no other information about them beyond that which says that they were found in 1946 by Mr E J Mason."

These had to be the intriguing remains I had been chasing for 20 years. In the meantime E J Mason had published his own photograph of the bones in his excellent 1977 book "Caves and Caving in Britain" so I had two reference points to work from. As far as I know Savory's and Mason's were the only in-situ views ever taken; I have checked them against Professor West's identifications, and now against my own, and the following is a full description of the 1946 Ogof Ffynnon Ddu human skeleton:

Skull fragment 72mm long, thin bone, possibly an occipital;

Teeth: a total of five molars all with their roots broken off due to years of exposure to air in the cave; the two first molars are worn down until almost flat, but a third molar has only one wear facet on a single cusp. Two premolars also another premolar still set in a fragment of



Skeleton Chamber, Ogof Ffynnon Ddu, 11th October 1975. View of the terminal boulder choke (through which the skeleton was originally introduced), with Keith Griffiths of the North Wales CC.

mandible. Four canines, one medial maxillary incisor which is worn into a horizontal flat and three other incisors.

Lumbar vertebra fragment; Two humerus bones, one a distal fragment in two portions totalling 205mm, the other a proximal articulation of 50mm.

Two radius fragments, left and right proximal ends 84 and 98mm.

Ulna proximal fragment 122mm; Metacarpal II right 70mm.

Pelvis fragment; Femur, right side proximal fragment in three pieces glued together totalling 245mm; the end is seamed and cracked indicating erosion due to cave exposure.

Patella, right side 43mm wide and 45mm high.

Tibia, right side distal fragment 225mm.

Fibula, two distal bones, 270mm and 90mm; the longer one exhibits very little curvature.

Assembled right foot - these bones mostly have spots of glue on them indicating an attempt by someone to assemble the right foot from bones which were in good condition: Calcaneus, astragalus,

cuboid, metatarsus I, II, III, V, and two other tarsal bones.

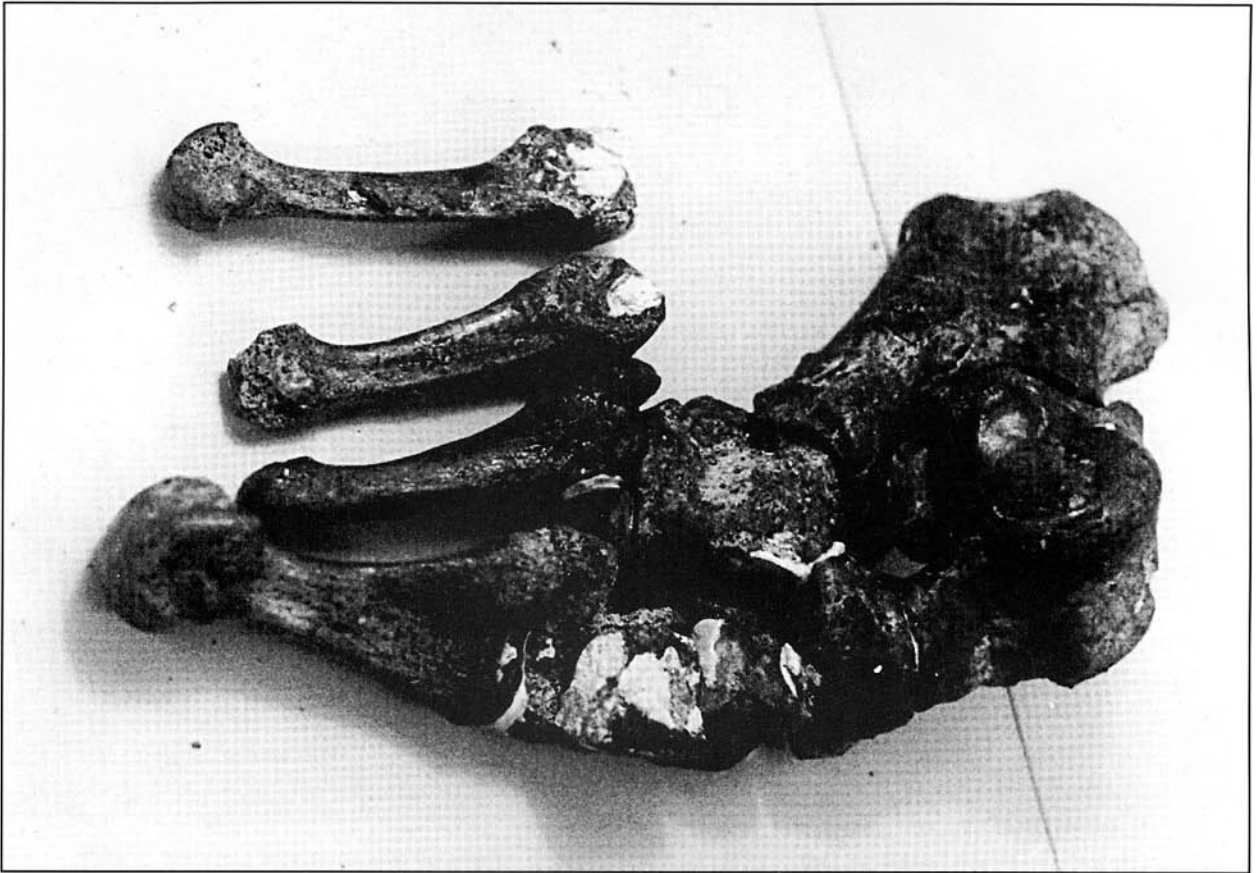
Also present are left metatarsus I of 62mm and V of 68mm length.

Calcaneus, left side in two fragments 65mm and 62mm in length;

Astragalus, left side, 58mm height complete and undamaged.

Many other fragments of bone are present which could be partly identified with much more work, but missing are hand bones, phalanges, and other vertebra. My identification of a clavicle in 1980 from the Savory photograph cannot be confirmed so must have been mistaken. Only traces of stalagmite are present which in itself is a good preservative for cave bones. It is known that considerable care was employed in collecting the remains so time for disintegration must be allowed for in ageing the skeleton.

I would now agree with Professor West's interpretation that the bones are those of a young person between 20 and 25 years of age. West thought they were male but I have not seen



The human foot bones assembled.

sufficient pelvic bones to be sure. What I can add is that the disappearance of some of the bones after inhumation, and erosion of those that survive suggests a Bronze Age to Neolithic date. This is supported by the peculiar, uneven wear of the teeth attesting to some oral activity resulting in severe grinding down of the medial incisors. Wear on the first and second molars suggests consumption of "gritty" food which is not seen in modern times.

With regard to the age of the skeleton, I approached the Countryside Council for Wales for a grant in order to carry out either a radiocarbon dating or an AMS dating. A grant was agreed but it was then found that the bones had been soaked in a varnish or preservative which prevents any such dating. Unless further fragments of this skeleton are found, perhaps in the boulder choke at the upper end of Skeleton Chamber, we shall never be able to determine its age.

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To Dig With Nig, or Not

by *Liam Kealy*

I remember feeling anxious as I listened to his phone ring. I'd agonised about this call for two days and I guess I had anticipated what the reaction was going to be, although it seemed worse than I expected. But I was also concerned that the scenario I envisaged should not become a self-fulfilling prophecy in which my feelings served to exacerbate what might be.

Still, the phone was answered fairly quickly.

"Hello"

My heart leapt a little.

"Oh hi Nig, it's Liam here"

"Oh"

"Erm, are you going to Ogor Dan y Lleud Wen at all this week?"

"Probably, the weather forecast is quite good and I've got some things to do there. Why?"

"Well... erm... we...er found about 250ft. of passage the other day and didn't finish pushing it. I was going to ask you if you would keep away from it until we get back next week."

The atmosphere got a little tense here.

"What! Where is it?"

"Underneath the boulders at the foot of the pitch. It's very obvious, which is why I rang you."

"What's it like?"

"Well, a hole amongst the boulders drops into a largish rift. You have to climb down to the foot of a slope of boulders and then follow another rift to the right, which leads into another passage. Then a climb up over a tight bit goes to a descending tube to a small chamber, which leads to a tight rift. Adrian pushed the rift for a short distance, but it was quite awkward so we left it and decided to return with head torches and a lump hammer in order to make things easier."

"Does it draught?"

"Yeah, there's a strong draught throughout the extension"

"Well I'm glad you told me about this Liam. I would have probably looked underneath the boulders and seen the extension and then gone along it. Of course I wouldn't have known where you finished and might have pushed the end of it. But I don't think that you can deny me going there."

"I'm not trying to deny you going there, I'm just asking if you would hold off until after we have finished exploring it."

"You're beginning to sound like the Carno boys. It could lead to a major system and you're trying to stop me going there." (The conversation was getting hostile now.)

"No, all I'm doing is asking you to hold off until we have pushed the rift. I didn't even have to tell you about this. I could have just taken the chance that you weren't going to go there before we got back and then you would have been none the wiser."

"I suppose that's true. When are you going back?"

"Next Friday, it's the first time we can all get off work."

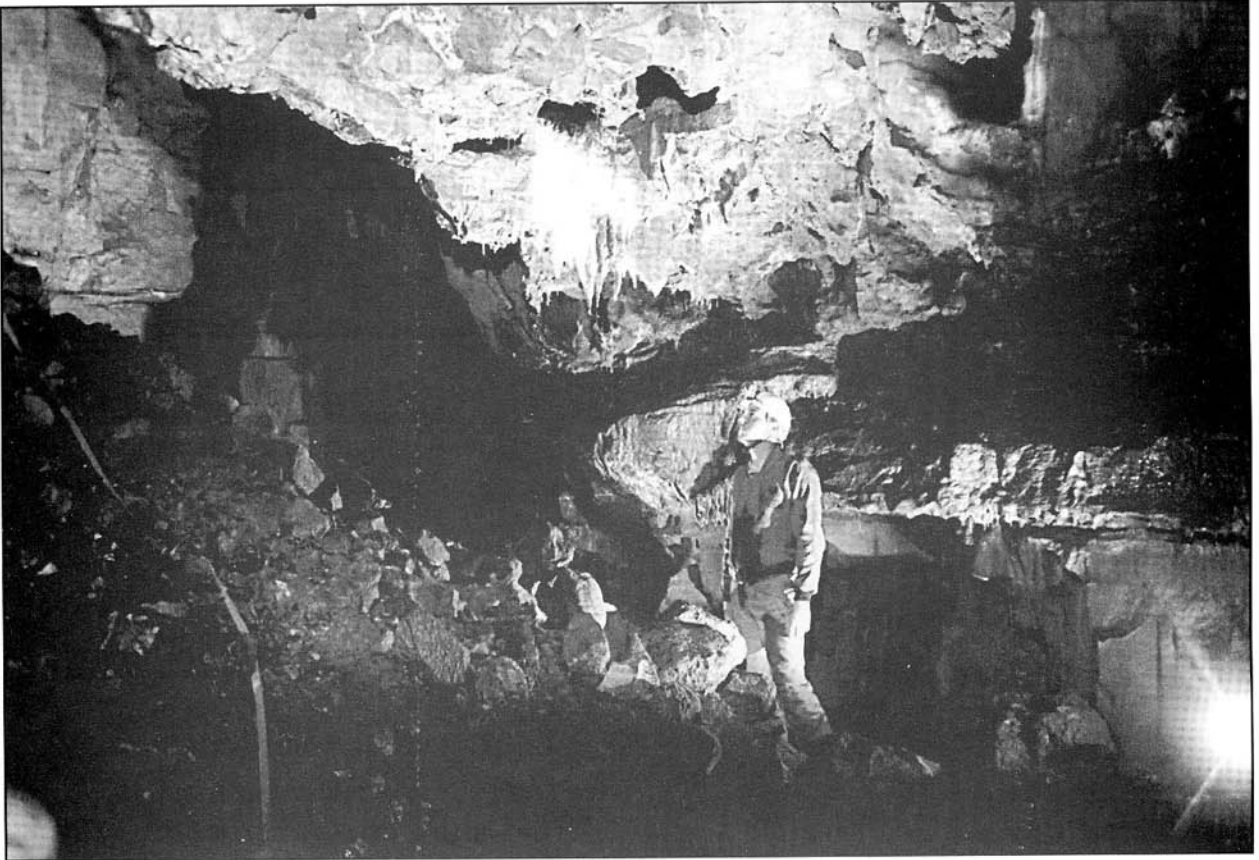
"Why can't we come with you?"

"Well, we want to push the rift."

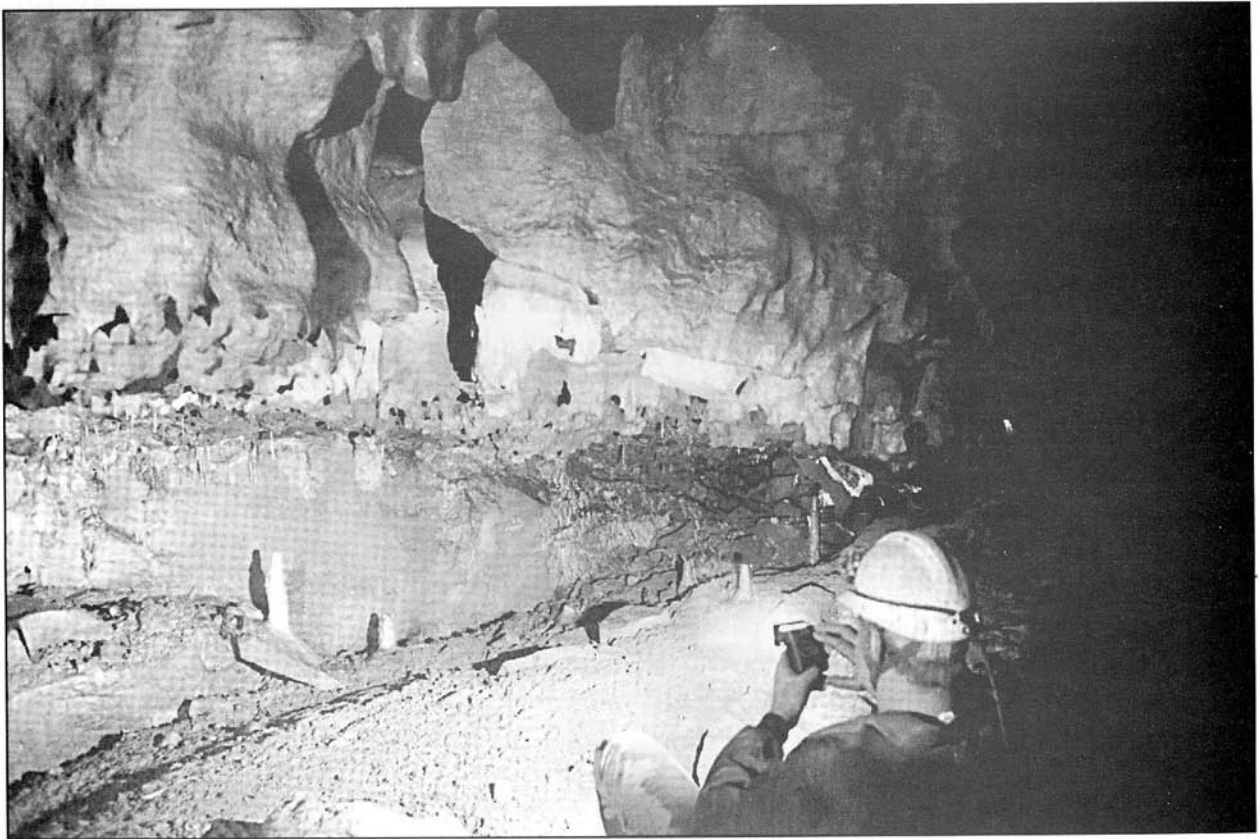
"Well, what if we follow you in?"

At this point I could see that I had done the wrong thing here, and so agreed that Nig and the Garimpeiros digging in the cave should follow us, Amman Valley, on the next stage of exploration. The 'phone call ended fairly amicably with an arrangement to sort out times nearer the date. But my 'phone rang later that night.

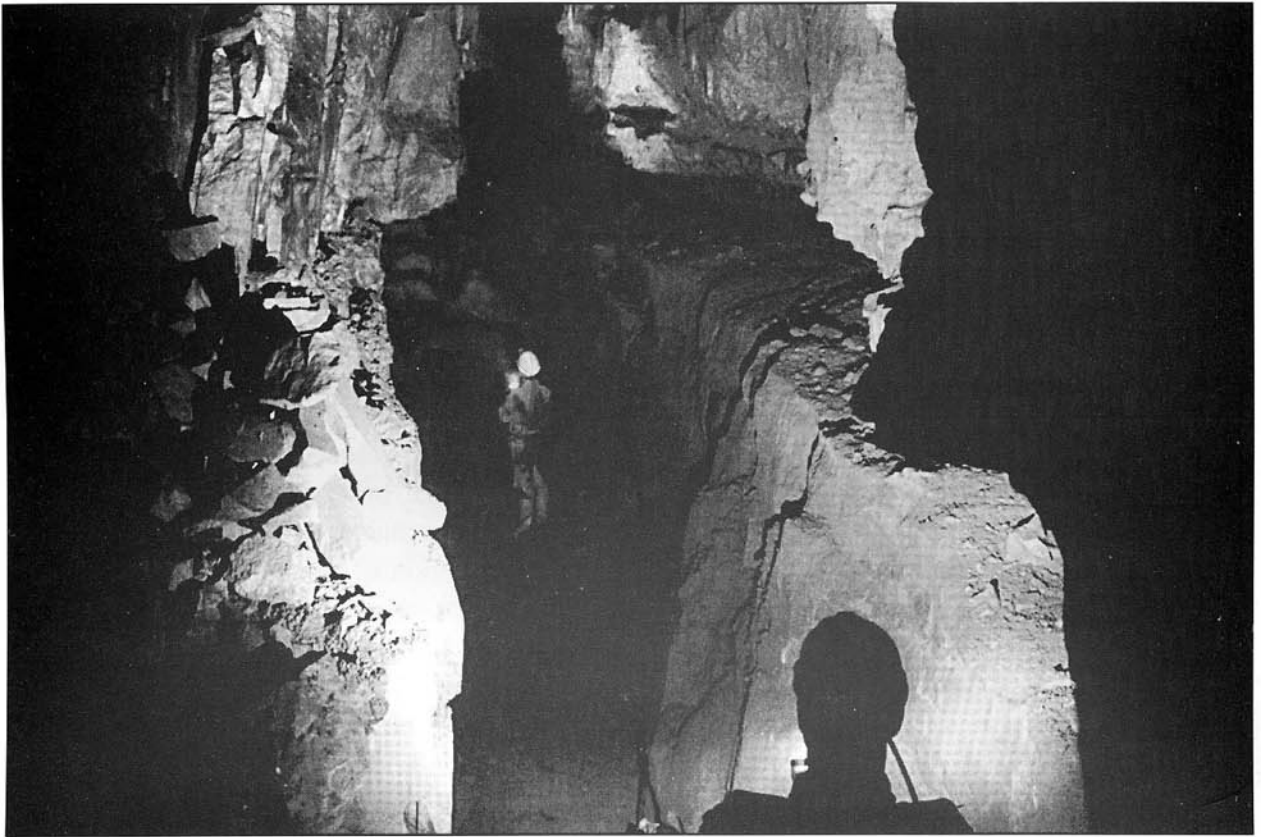
"Liam, it's Nig here. I've just been speaking to Paul Tarrant and we think that we should go and look at the extension in two days time."



The Main Chamber, Upper Series, Ogof Dan y Lleud Wen



The Main Chamber, Upper Series, Ogof Dan y Lleud Wen. All photos by Liam Kealy



The Canyon, Ogof Dan y Lleud Wen

"But I thought we agreed that you would follow us down on the next trip!"

"Ah yes, but Paul reminded me that you looked at one of our digs before we got back to it"

"But I told you about it, and if it had gone I wouldn't have pushed it."

"Well then Liam, how about if we go and look at your extension, but don't push the rift at the end?"

"Is that a promise?"

"Yes."

"Well, I suppose that will be alright then"

"I'll ring you after and let you know what I think"

I remember feeling unhappy about this but I felt that they would have gone anyway. The 'phone rang next on the evening after their trip.

"Hello Liam it's Nig. I went to the cave today. Paul didn't come in the end, he couldn't get the time off work. Mary came with me. She hasn't been caving for four years, she did very well. Call me a bastard if you want but I pushed the rift. I went along it a little bit but I couldn't turn around so I had to keep going. What happens

is... It doesn't seem as if it will go anywhere without serious blasting."

And so the story ends. Paul Tarrant's article in the previous Newsletter implies that I positively gave approval to him to dig with Nig in Ogof Dan y Lleud Wen. The truth is that that myself and my co-discoverers didn't really feel like going there after this episode. It seemed pointless and, anyway, previous experience of tunnelling had not only been unenthralling, but damaged the cave to unacceptable levels.

The rift following the initial breakthrough was called Lon Drury and the small chamber at the start of the tight rift is Siambra Cwmamman.

The extension seems to follow a pattern in Ogof Dan y Lleud Wen. Once a certain depth is reached then the cave goes into narrow passages which require major enlargement in order to progress. Of course, we don't know how far this particular feature extends for.

(For more on this subject, see "Letters to the Editor" on page 56 - Ed.)

The Caves of Assynt

by Ron and Barbara Thompson

The Assynt caves are found in Sutherland in north-west Scotland, around the south and east end of Loch Assynt. There are three main areas:

The Achmore-Traligill outcrops near Inchnadamph

The Allt nan Uamh valley

The Knockan Basin

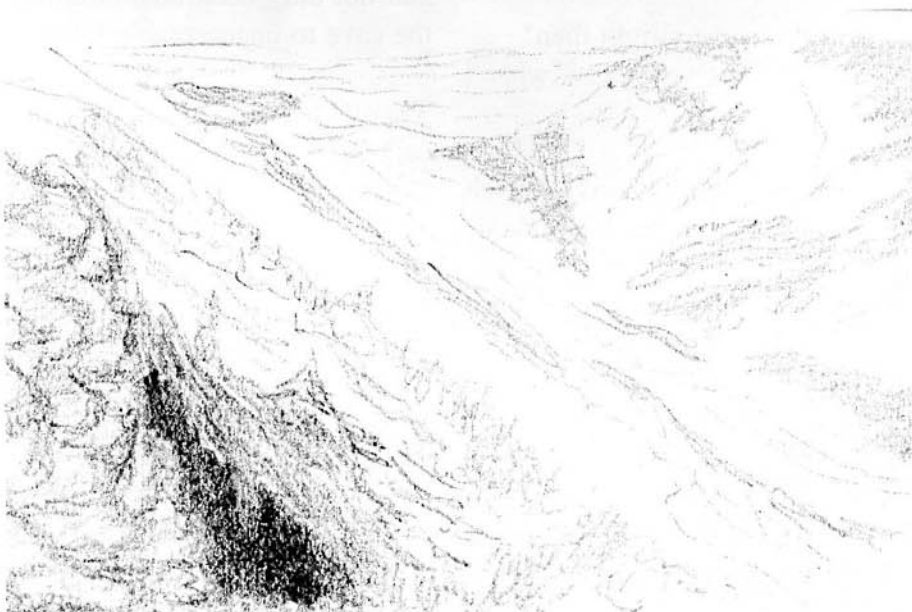
The caves are formed in an outcrop of magnesium limestone and are not extensive. However they are described as "sporting caves" and there are small decorated grottoes in several of them.

The largest cave is Uamh an Claonaite, with a length of 1800m and a depth of 58m. The entrance is in a sink hole below a 5m cliff and is composed of unstable rocks. In wet weather the entrance is a collection point for run-off water which cascades down into the cave, and as this part of Scotland gets more than its fair share of wet weather, we have yet to explore this cave.

Of the caves we have visited, there are two particular favourites. The Allt na Uamh stream

cave is on the left-hand side of the stream as you walk up the Allt na Uamh valley, and packs within its small area 900m of passage forming a complex maze. A squeeze down through the narrow entrance brings you into some fairly lofty passages, and not far from the entrance there's a junction of passages on three levels. There are a number of digs taking place within the cave, particularly near the junction of Oxford Street and Private Deane's Chamber. There are no decorated grottoes in this cave.

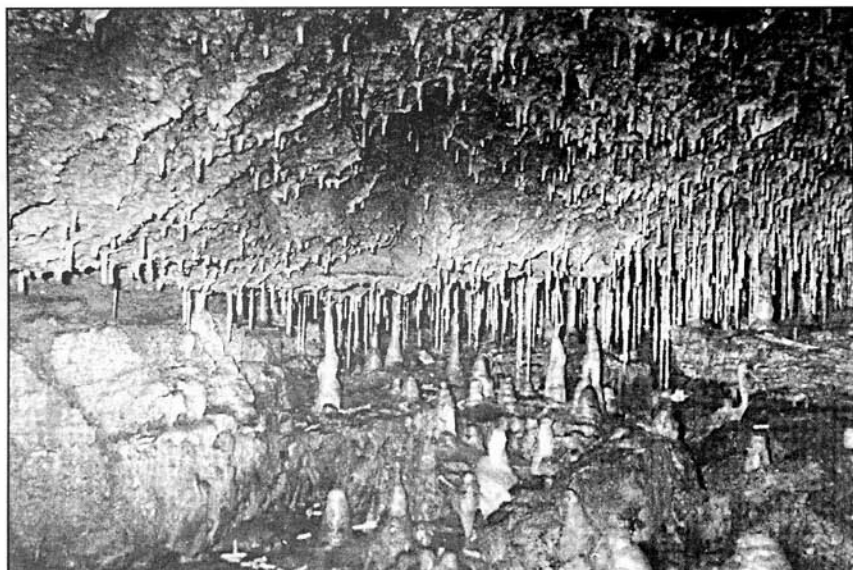
The Cnoc nam Uamh system consists of three entrances into an underground stretch of the Allt ai Bhealaich alongside the path up the Traligill valley. The first entrance you see as you walk up the valley is the Uamh an Uisge - "cave of water". On the left-hand side of the cave the underground stream, entering from the right, forms a waterslide that can be explored for a short distance before ending in a sump. The right-hand branch at the entrance takes you into a small chamber below the pothole entrance where the stream also enters as a waterfall. The best entrance to this stream passage is via the

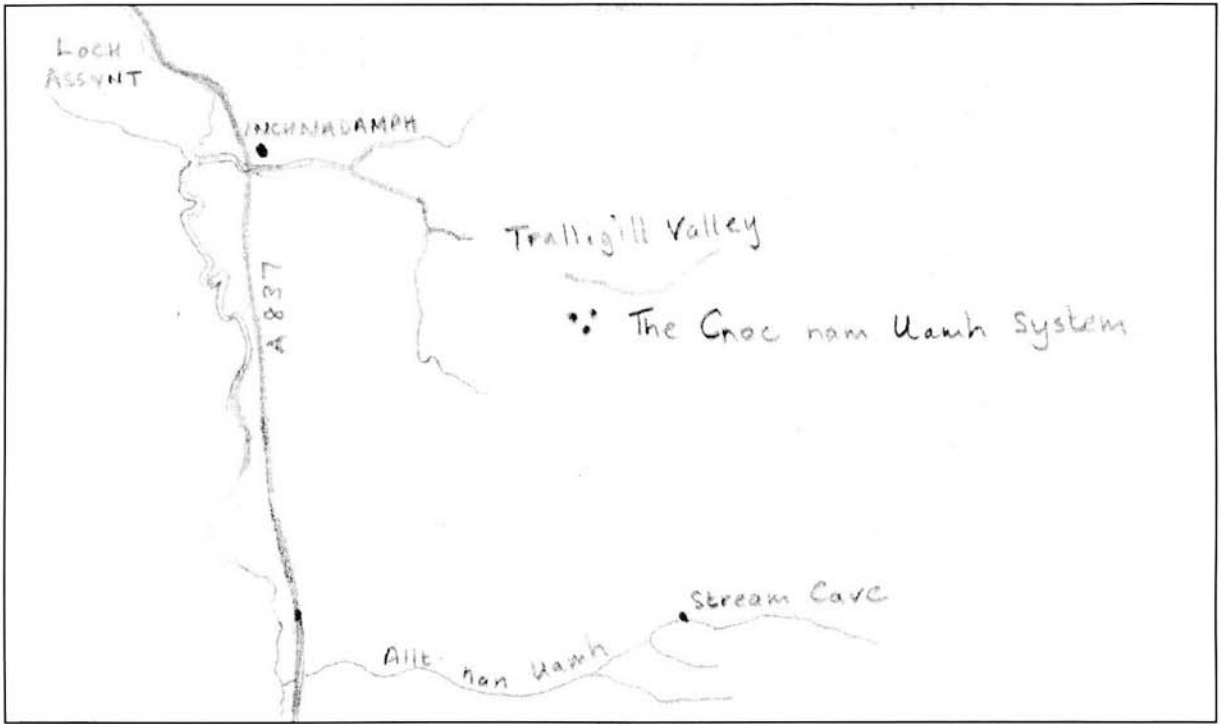




Entrance to the Cnoc nam Uamh system.
All photos by Ron and Barbara Thompson.

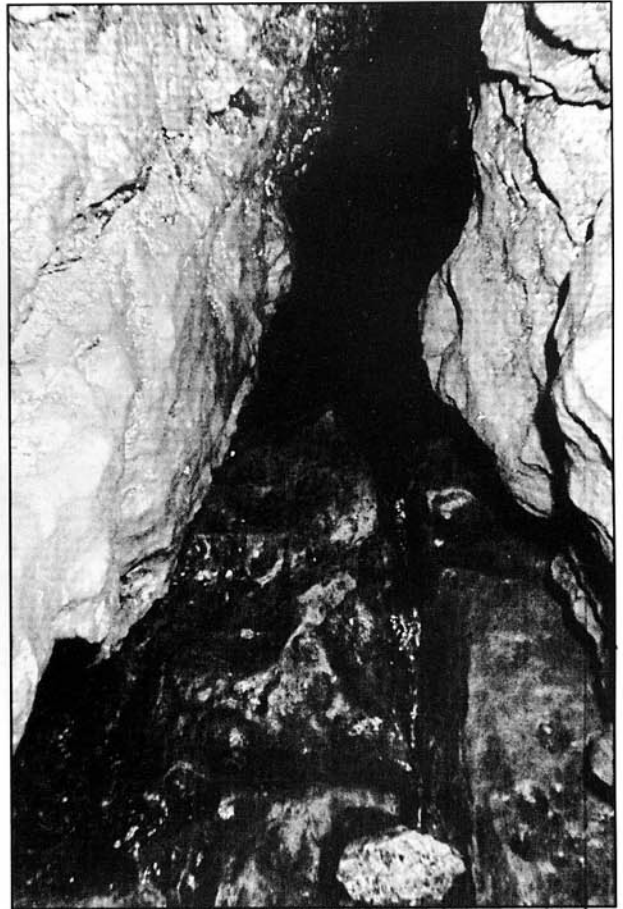
Right and below: inside the Cnoc nam Uamh system.





apparently dry cave Uamh an Tartair ("cave of the roaring"). The entrance is deceptive: it appears to be a small open cavern but at the back a small hole is visible above a rectangular block of limestone, and this is the entrance to the stream chamber. The stream flows from left to right, and a wet and adventurous crawl to the right leads to the pothole chamber. The main part of the system leads upstream to a series of sumps alongside small waterfalls and pools. Near the entrance, a number of passages enter the grotto and a pretty, decorated chamber is well worth a visit.

The length of the system is only 1400m with a vertical range of 83m, but provides a pleasant afternoon's caving. Unfortunately modern "cave painting" has recently been added to the attractions of this cave, and there has been damage to straw stalactites in the grotto, with many having been broken off and left lying on the floor. Sadly, this is one of the disadvantages of having caves which are open and unprotected.



Allt na Uamh River Cave

Access to the Countryside: the Official View

by Mel Davies

After the 1995 AGM of the North Wales Caving Club I was prompted by Secretary Tony King to find out how cavers are affected by the CRIMINAL JUSTICE AND PUBLIC ORDER ACT. As this is a matter which could interfere with the activities of all clubs I asked the Cambrian Caving Council to take it up and Secretary Frank Baguley duly contacted Dr Huw G Jones, Director, Policy Planning, Sports Council for Wales. Frank is also Chairman of the Outdoor Pursuits Group of the Welsh Sports Association so can also speak for ramblers and climbers. Both of these activities are interlocked with caving either prior to a trip, finding a cave, or climbing to a cave. Dr Jones wrote to Mr D M Rolph, Culture and Recreation Division, Welsh Office, as follows:

"You may have seen in the press that there has been significant concern expressed by sports bodies (and in particular the Ramblers) regarding the offence of aggravated trespass which is contained within the above Act. Ministers have consistently commented that the clauses in the Bill (Clauses 68 and 69) were introduced in order to take criminal action against hunt saboteurs and similar groups. The intention was not to restrict access to land by sports bodies or to prosecute ramblers for aggravated trespass. I would be grateful if you could confirm whether it is the Government's intention to clarify the situation in guidance or circulars. We believe that this would be helpful in order to allay the fears of the sports groups."

Mr Rolph replied at length on 5 December 1994 and the following is an extract from his letter:

"...those who are peacefully enjoying the countryside or engaging in legitimate peaceful protest should not be caught by the new offence of aggravated trespass. The Government is satisfied...that the scope of the new offence is clear. It is not thought that ramblers, hillwalkers, or other people who are peacefully enjoying the countryside have anything to fear from the offence. The offence of aggravated trespass is clearly worded and it applies only where someone is both a trespasser and is intentionally obstructing, disrupting or intimidating, or seeking to obstruct, disrupt or to intimidate, others who are engaging in a lawful activity on land in the open air. While it is possible to commit the offence on footpaths and bridleways, a person will only be affected if his or her actions make them trespassers and if there is an intention to disrupt. The concept of intention is a crucial element of the new offence and it is something with which the police and the courts are very familiar. Problems of interpretation should not arise. In addition, it is not expected that the police become involved in disputes over access or rights of way, which are primarily matters for the civil law."

In my view none of this covers actual entry to and exploration of a cave, merely access to it. If a caver is "peacefully enjoying the countryside" he cannot be accused of aggravated trespass.

Equipment Review:

Canon Sureshot A-1

by *Tony Baker*

It would be natural to assume that a waterproof camera would be an ideal tool for cave photography. Until fairly recently, "waterproof camera" meant "Nikonos", Nikon's underwater camera. Leaving aside the fact that purchase of a Nikonos requires the sort of funds usually only available to National Lottery winners or the chairmen of newly-privatised utilities, the main disadvantage of the camera is its limited flash compatibility. Nikon make an underwater flash (again, lottery jackpots useful) which is big and bulky and connects to the camera via a thick cable and a specially-designed plug not compatible with any other flash. While this is no doubt ideal for close-ups of fish or sea anemones, it's not really practicable either to transport underground or to use for creative caving pics.

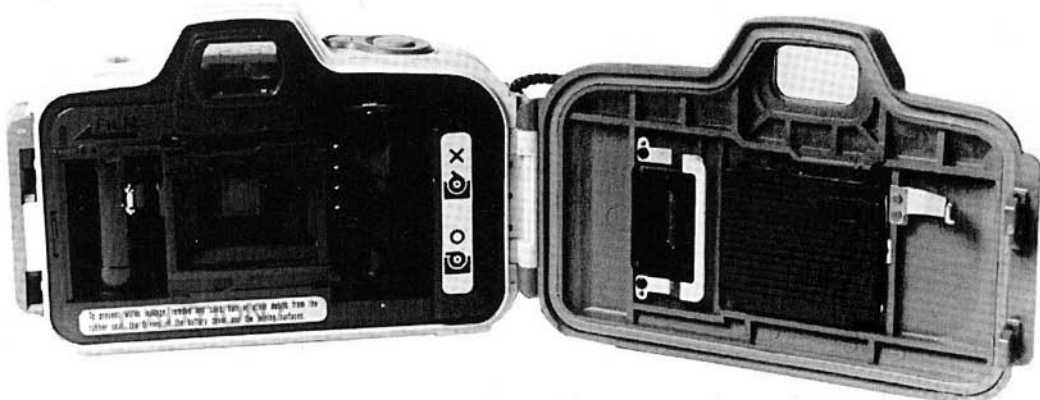
While there have been other waterproof or, more usually, "weatherproof" cameras made (notably the Minolta 110 Weathermatic, which some

cavers bought because of its robustness and compact dimensions, only to find that the tiny 110 negative is useless for anything other than "happy snaps") most cave photographers choose either to use an SLR and take great care of it, or buy a cheap secondhand compact and treat it as expendable.

In 1994 Canon launched the Sureshot A-1, claimed to be waterproof to five metres and aimed specifically at the "outdoor" and "sporty" customer. This seemed to me to be just the thing for shooting some good caving action shots, so I bought one and after several trips underground, I rate it very highly indeed.

Autofocus

Until I owned this camera, my experience of autofocus cameras was limited, although I do have a small autofocus compact (which I won in a competition) that gets used mostly for taking





snapshots at parties and so on. I was intending, though, to use the Sureshot A-1 for some serious cave photography, where having no manual control of the focus might prove to be a problem. Most automatic focusing systems require a good deal of contrast in the subject to focus accurately, and I was concerned that in the dark surroundings underground this might be a problem. I shot a test film in the partially-darkened lounge at home, and all the pictures were sharp, so first indications were good. Half-a-dozen underground films later, I've only had one or two pics that weren't quite pin-sharp, and even these were certainly useable. The technique I've adopted is to point the small circle in the centre of the viewfinder (which corresponds to the point the camera will focus on) at the lamp of the caver in my photograph, apply a half-pressure to the shutter button (which locks the focus) then re-compose the shot and fully depress the shutter. I don't know by which method the Sureshot A-1 focuses, but it works underground!

Exposure

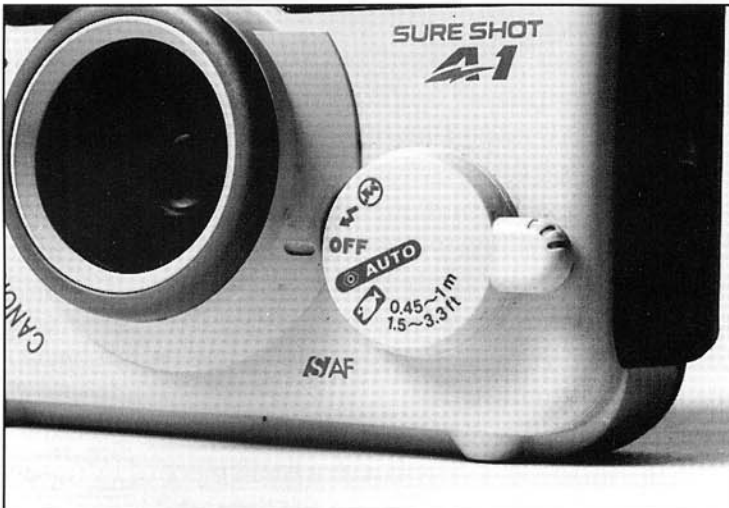
The Sureshot A-1 has a small built-in flash close to the lens, which as any fule kno is the very worst place for it. This is especially so in cave photography, where flat frontal lighting is useless

for anything remotely resembling creative work, and is also likely to pick up all the condensation in the damp atmosphere, giving an effect similar to driving in fog with headlamps on full beam. The built-in flash is, however, ideal as a "trigger" for infra-red slave units with remote flashes attached. Cover it with a small piece of infra-red filter and it emits no visible light while triggering such flashes, and you have complete control over your lighting. (Tip: a small piece of unexposed but processed transparency film, such as the black bit from the beginning or end of a roll, works as an-infra-red filter for this purpose. Don't ask me why, it just does.) All of this happens at the speed of light, so you don't need a tripod or a "B" setting or any of that nonsense.

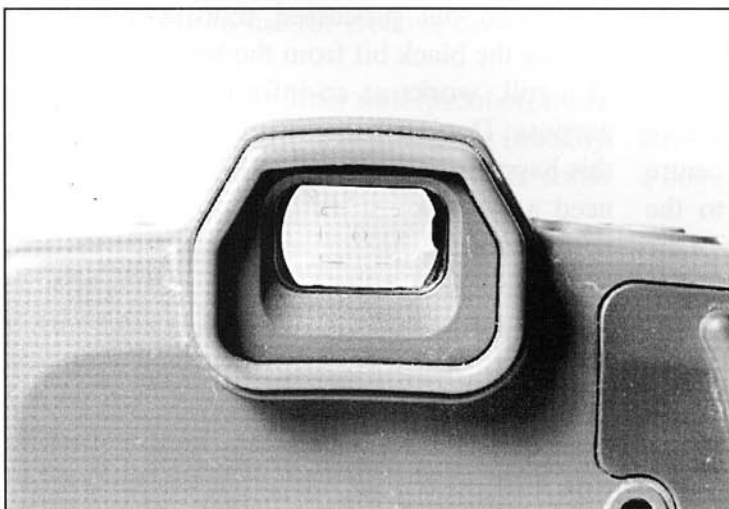
The other advantage of doing things this way is that you can use remote flashes that are considerably more powerful than the weedy built-in one, giving you a much better chance of, for example, getting a correctly-exposed pic in a big passage. The camera has, however, no facility for manual control of exposure settings, so using remote flashes requires some trial-and-error to establish the best settings to use. So far, I have only used negative (print) film in the



Big, easy-to-use shutter button and self-timer switch



On/Off switch with various exposure options



Big, bright viewfinder - much clearer than that on an SLR

Opposite: Ian Middleton abseils from the end of Swamp Creek, Ogof Ffynnon Ddu

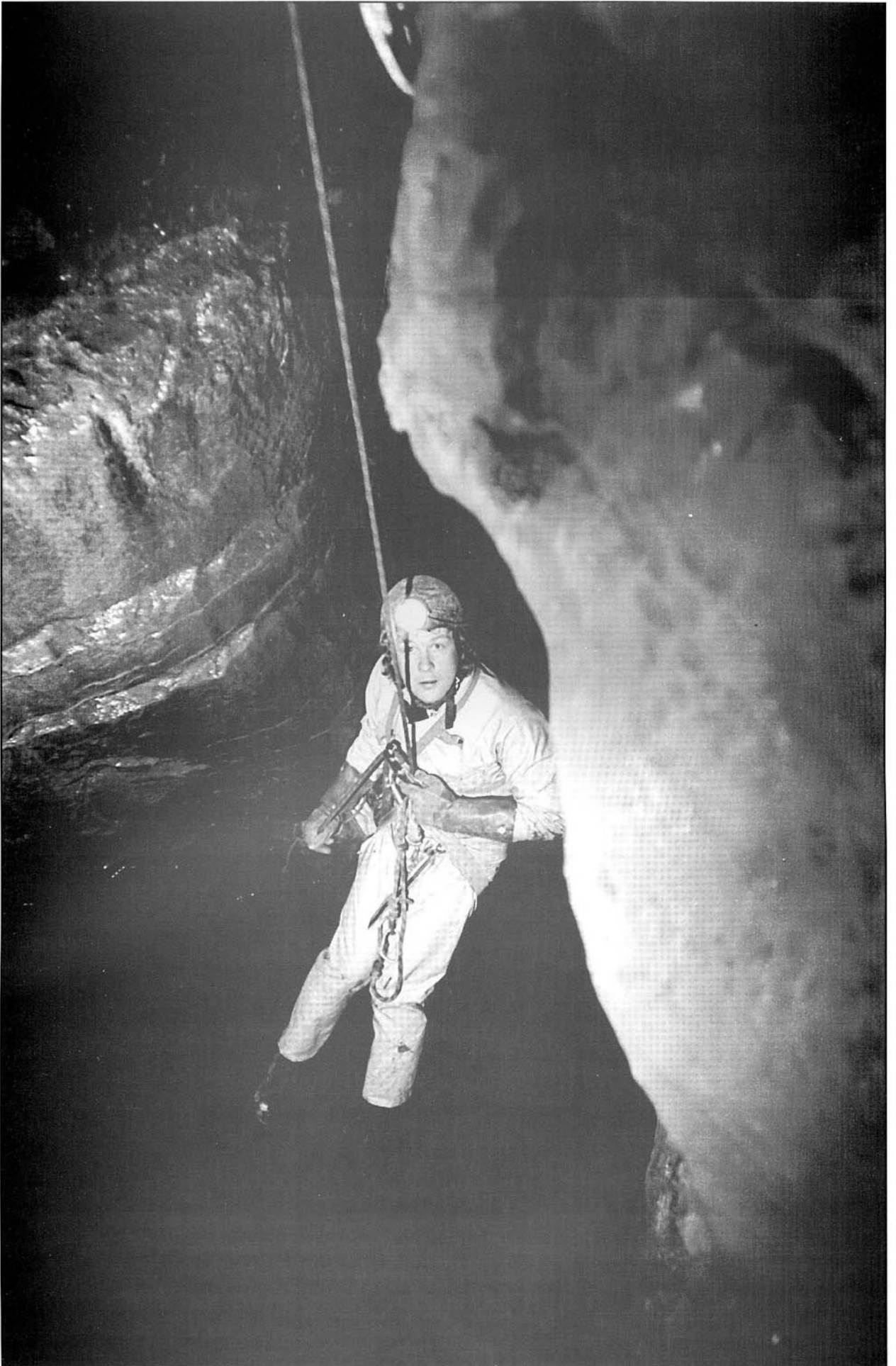
camera, which has a far greater exposure latitude than slide film. I bracket exposures by using different auto settings on my Vivitar 283 and 285 flashguns. Most negatives have been printable, but most of the black-and-white pictures have been shot on Ilford's XP2 film, which has an exceptionally wide exposure latitude so I can't yet draw any firm conclusions about the best means of ensuring accurate control over exposure. I'd certainly try some more experiments before using transparency film.

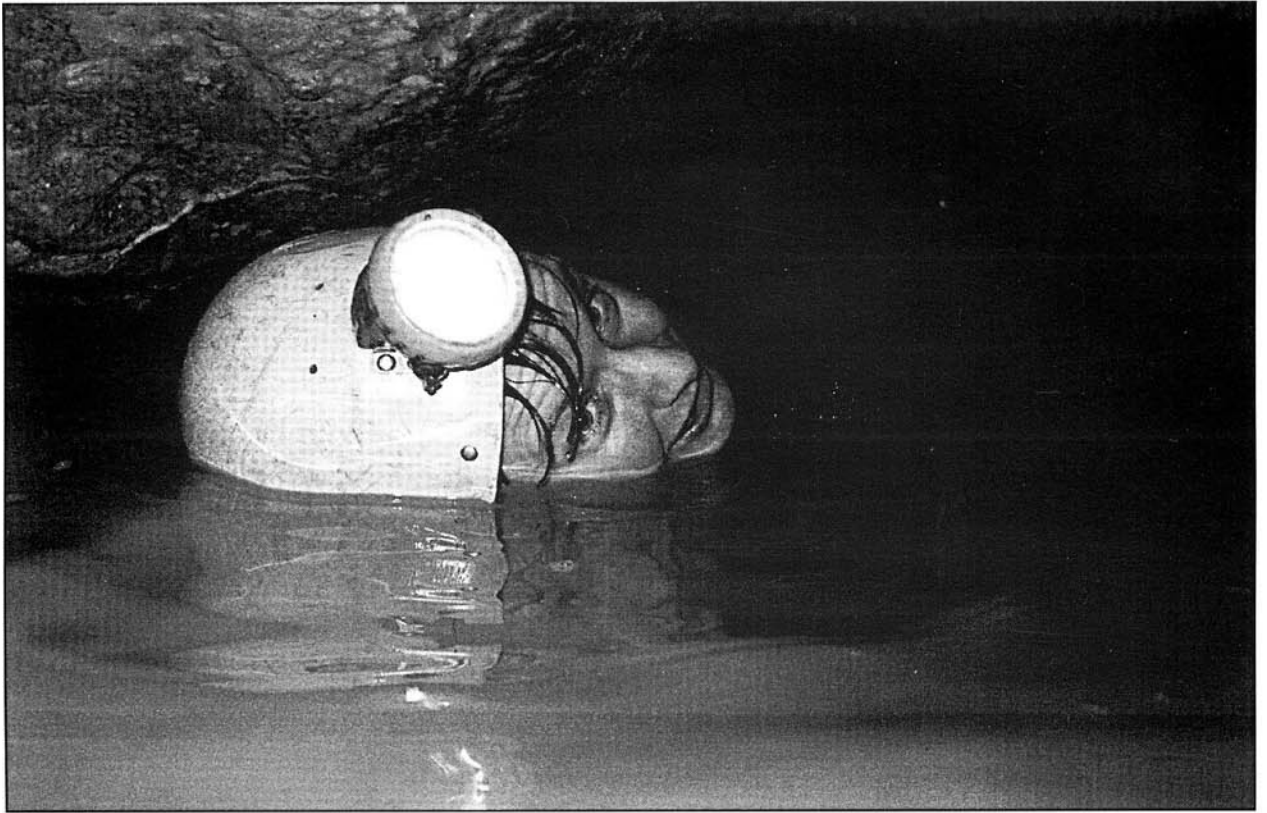
The lens focal length is 32mm, a wide-angle view that's useful in caves and gives good depth-of-field as well. The lens quality appears to be high, too, judging from the sharpness of some of the black-and-white prints I've made.

Handling

Canon's own advertising emphasises how easy the Sureshot A-1 is to use in extreme circumstances. "The large function dial has been designed with cold, wet fingers in mind..." proclaims a press ad, and it is certainly true that the camera is ideal for caving in this respect. The function dial and the shutter button are chunky enough to be used with gloves on. The viewfinder is big and bright, making composing your shots far easier than with an SLR. In common with most compact cameras, loading the Sureshot is dead easy - fit the cassette, pull the film leader out across to the mark, close the back and the camera winds on to the first frame. This can be done even with muddy hands if you're careful, although you have to make sure that the O-ring seal stays clean.

(Incidentally, ever wondered what that pattern of black-and-white





Sue Mabbett on a Short Round Trip in Swildon's Hole, Mendip



Idris Williams on the ladder pitch just inside St. Cuthbert's Swallet, Mendip

squares on the side of a 35mm film cassette is? That's DX coding, which tells cameras which film speed to set - yet another auto feature which makes cameras like the Sureshot virtually idiot-proof.)

The function dial offers a choice of settings: AUTO (fully automatic) where the camera decides whether or not it needs flash; Flash On, which uses the flash every time (ideal for "fill-in" on sunny days outside); and Flash Off, useful for moody low-light shots (the camera will give an exposure of up to two seconds in such circumstances). The dial also has a fixed-focus setting (designated by a fish symbol) that sets the focus at the correct distance for close-ups underwater, where the autofocus won't function.

From my point of view, the big advantage of the camera is that you can use it in wet, muddy, sordid, horrible places with impunity. And then just wash it off. On the Mendip weekend in November 1994, I took it on a Short Round Trip in Swildon's Hole, with the intention of getting some action shots in places like the Double Troubles (flat-out ducks in muddy water, for those who haven't been there). I was able to lay in the pools, with the lens an inch from the water, as my companions gamely posed for me up to their eyeballs in it. By the end of the trip, every

one of my flashguns had packed up due to getting wet, and any ordinary camera would probably have been rendered useless.

(On the same weekend, I also tried to take some pictures of Pat Hall with a waterfall crashing onto his head; they didn't work because again the flash got wet, and Pat still hasn't forgiven me...)

I carry the camera, along with flashguns, slaves, spare film, and a cloth for wiping my hands in

a Daren drum inside a tackle bag. The Sureshot comes with a rather fetching red zip pouch, which I thought would soon get ruined underground, so I bought a padded lens pouch from Jessops (around £5) into which the camera fits perfectly, and which provides some extra protection for it when I fling the tackle bag around.

Conclusion

At around £170, the Sureshot A-1 isn't cheap. But it is a great camera for caving, and would be ideal for all sorts of other situations: sailing, snorkelling,

mountaineering, on the beach and so on. I haven't found its lack of manual control to be a disadvantage, and I've taken a few pictures with it that I'm exceptionally pleased with. I've got loads of ideas for other shots, too. So if you're at a loose end one Sunday and fancy posing in the Green Canal, or the Long Crawl, or Dim Dwr, or...



Angela Astbury in the Ogof Ffynnon Ddu II streamway.
All photos by Tony Baker

The Freshwater Crustacea of Ogof Ffynnon Ddu

by *Julian Carter*

Introduction

The cave fauna of the British Isles is a somewhat limited affair and certainly lacks the vast bat colonies, giant cockroaches, salamanders and fire-breathing dragons found in other countries. Nevertheless the British cave fauna is worthy of interest. Caves represent a very particular ecological niche. Trogllobites - true cave dwellers who complete their whole life cycle only within the cave environment - will show specific adaptations to the environment they live in. Many of these animals have been displaced by competition pressures from other animals, others are refuge species from past glaciations. As a result, populations can become isolated and specific to the geological region. However the extent to which isolation has affected the evolution of cave populations from a taxonomic viewpoint is under much discussion, presenting a complex and specialist subject.

The Fauna

British cave fauna is limited to animals from the invertebrates, apart from a few species of bats. Most of the animals are further confined to representatives from the arthropods which covers the collembola, mites, spiders, flies and crustaceans that can be found in cave systems. (For a complete list of Welsh cave fauna see Jefferson, who also gives a good account of aspects of the cave environment).

Within Ogof Ffynnon Ddu can be found a large number of the cave-dwelling species of Britain. Of particular interest are the freshwater crustacea to be found in the cave. Overall the crustacea represent a vast and diverse group with the

classification being divided into many hierarchies. The freshwater crustacea represent a much smaller selection of this group, with cave dwelling forms being even fewer. Within OFD members of several classes can be found:

Ostracoda
Copepoda
Malacostraca

The first two groups become difficult to deal with due to the small size and difficulty in distinguishing taxonomic features for species identification. Also it is difficult to ascertain whether the animals are cave-dwellers or accidental visitors washed into the system. However, four species which are either capable of cave life (a troglophile) or are specific to the cave environment (a troglodite) are found in the remaining group listed. These are part of the superorder known as the Pericardia and are:

Order AMPHIPODA
family CRANGONYCTIDAE
Crangonyx subterraneus
family NIPHARGIDAE
Niphargus fontanus
family GAMMARIDAE
Gammarus pulex
Order ISOPODA
family ASELLIDAE
Proasellus cavaticus

Distribution and Ecology within OFD

These animals are found in many parts of the cave, some well away from active watercourses, though the greatest abundance appears to be in

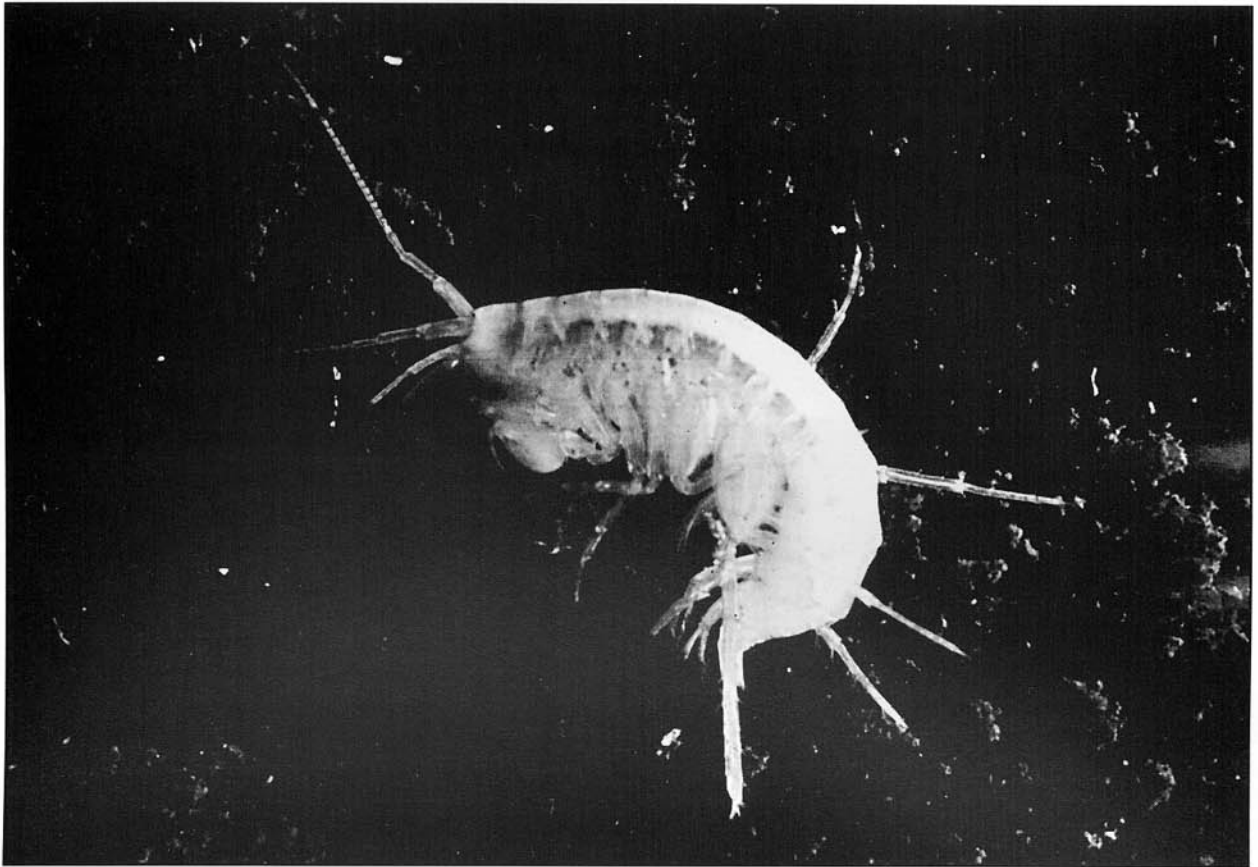


Photo 1: *Niphargus fontanus* (Bate), length 10-15mm

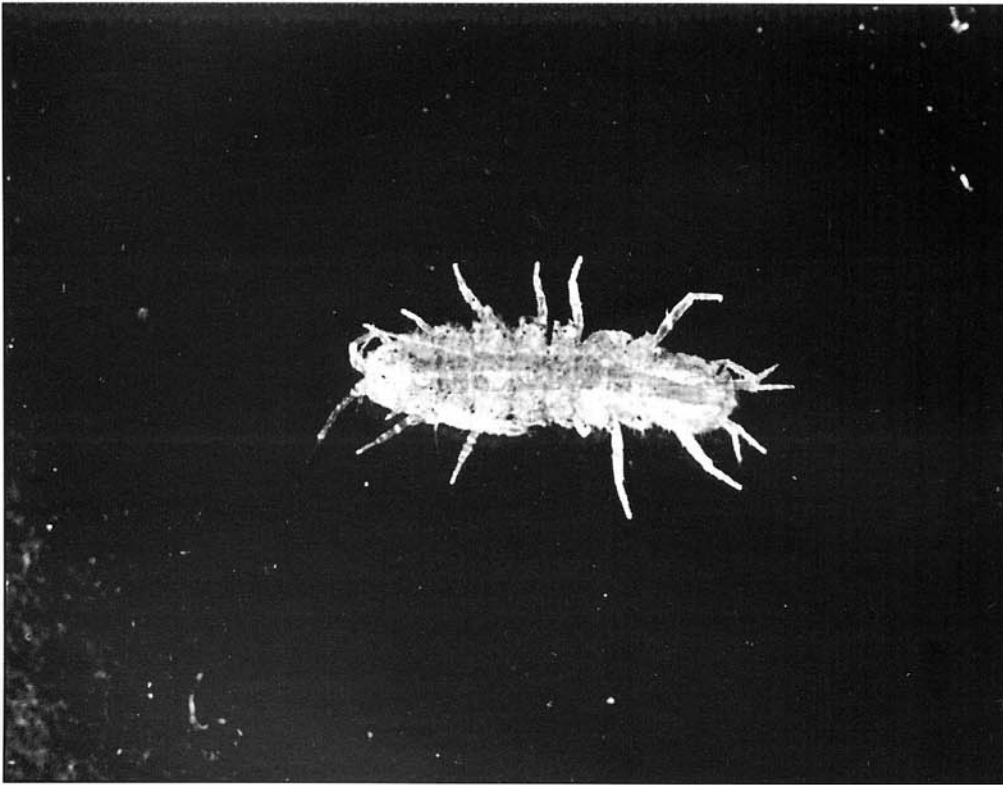
OFD1. *Gammarus pulex* (fig. 2) is the troglophile of the group and is common in watercourses through out the country. The animal has only been recorded in OFD1 and has probably migrated up the active watercourse from the resurgence. *Gammarus* is usually uniform in colour, but can be found unpigmented in underground populations, demonstrating its ability to complete an underground lifestyle. One of the striking features of *Gammarus* is to be found during the breeding season when numerous tightly coupled pairs become evident with the male guarding the female until she moults and lays her eggs, which he then fertilises before moving off to find another receptive female. *Gammarus* is omnivorous but principally feeds on decomposing plant matter and algae and is itself a food source for further carnivores, being an important host for a number of parasites of both fish and wildfowl.

The other three species are much more specific to the cave environment and phreatic waters, demonstrating classic changes in morphology such as eyes being absent, a lack of pigmentation

in the body, and prolonged low energy lifestyles.

Of these *Crangonyx subterraneus* appears to be the rarest with only a single record from Ogof Pant Canol which is part of the OFD1 system, and indeed only a couple of records for the whole country. Little is known of the ecology of *C. subterraneus*, but it is a representative of an ancient group of freshwater amphipods with the characteristics closely associated with a subterranean (interstitial) species, appearing to demonstrate typical K selected characteristics (K=carrying capacity of a environment which is both predictable and stable): small population size, low reproductive rates, late maturity, fewer and larger eggs, and increased longevity. This a very rare species in Britain and warrants further research.

Both *Niphargus fontanus* (photo 1) and *Proasellus cavaticus* (photo 2) have a much wider distribution and can be found in OFD1, Cwm Dwr, OFD2 and quite possibly as far as OFD3. *P. cavaticus* has been recorded less than 100 times



**Photo 2: *Proasellus cavaticus* (Linnaeus), length 10-20mm.
Photos from the Jefferson Collection, National Museum of Wales.**

in the UK. Little is known of the ecology of this animal, though it appears that the general life processes are much slower than surface dwelling forms of the genus. Adults can apparently live for up to 11 years with long intervals between moults to reach sexual maturity, lower egg numbers and longer development times for the eggs. Quite large populations have been found in pools and damp flowstone in OFD1 feeding on what is believed to be a floccular material present on stalagmite surfaces which seems to consist largely of filamentous chlamydo-bacteria, though the origins of the total amount of organic matter available remains unclear.

Niphargus fontanus is only known from karstic hydrological systems or phreatic tables. In Britain it is mainly distributed in the south, and is probably the most common of the troglobitic amphipods. Species found from caves are generally large and are considered to be generally saprophagous eating plant and animal detritus, but can be predaceous. *N. fontanus* has been found deep in OFD in pools fed only by seepage and may well survive by utilising the organic

content found in the silt.

Discussion

The features which are associated with adaptation to the cave environment are considered to have patterns (Culver, Barr) but are by no means universal; for example, not all troglobites are eyeless. Whether many of the associated features are a feature of regressive evolution as is commonly considered is still under much debate, though the use of modern techniques to separate the genetic make-up of many like species is aiding towards such debates. However the troglobitic crustacea of OFD do tend to demonstrate features associated with a cave dwelling lifestyle such as a lack of pigmentation, reduced or absent eyes, low metabolic rates with low reproduction rates that tend to consist of smaller numbers of eggs which are larger in size than "equivalent" epigeal (surface) forms of the animal. This is considered to be a response to the most fundamental limiting factor to subterranean life, food supply. Thus the reduction in "useless" features such as sight and the greater the development of other sensory features allow-

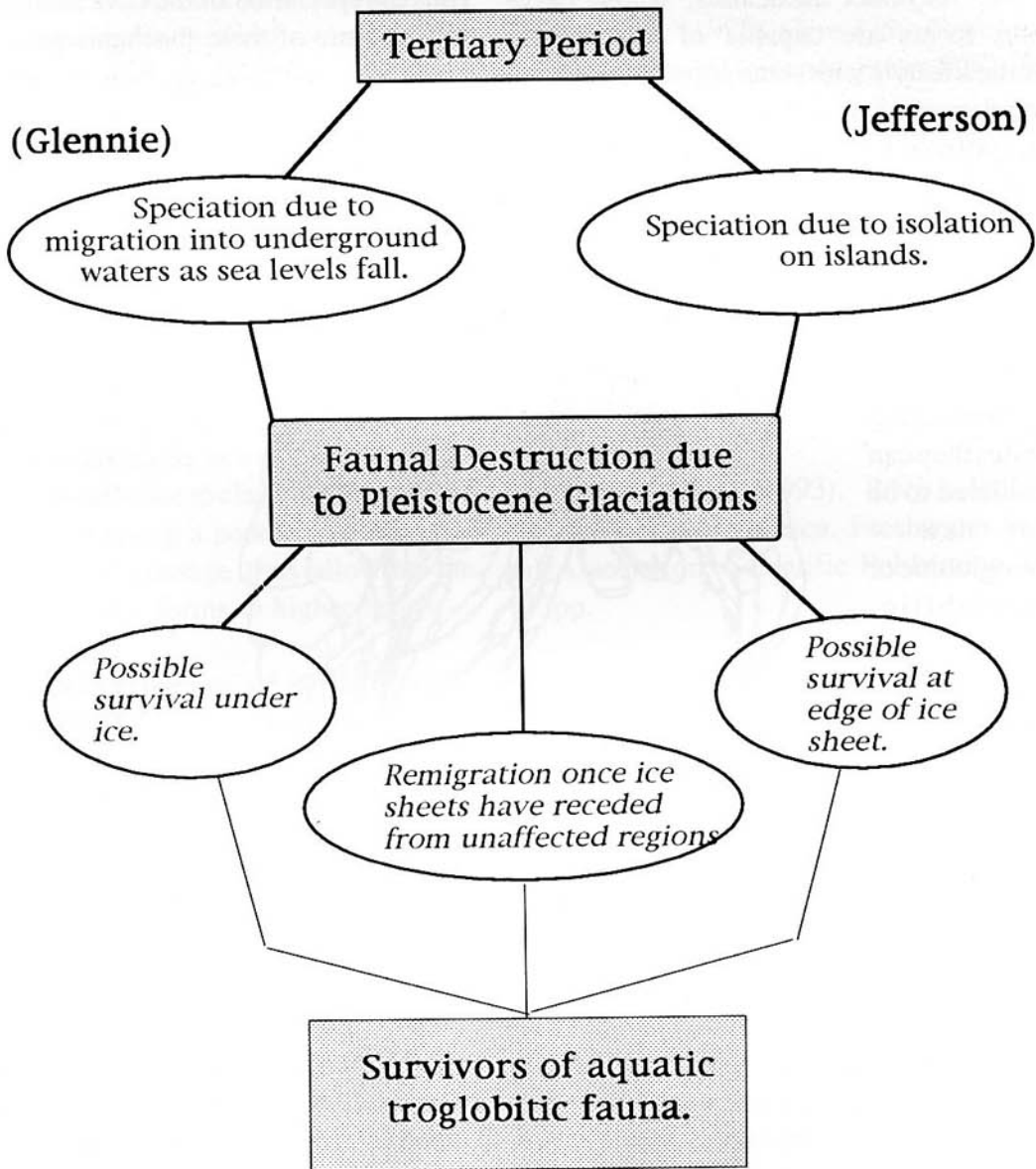


Fig. 1: Summary of possible development of today's aquatic troglobitic fauna

ing a more efficient use of the energy available. Cave forms tend to be incredibly resilient to starvation, and as a result tend to be long-lived with slow rates of reproduction.

Such changes do not necessarily result in a new species. A good example is a species of Mexican cave fish, *Astyanax mexicanus*, whose cave-dwelling forms are capable of a complete troglotic lifestyle with some populations showing complete eye loss causing resulting changes in the morphology of the skull. However cave populations can still reproduce with surface populations. They are thus not genetically isolated and are therefore still the same species.

When considering troglobites they can be considered to be old or new - palaeotroglobitic or neotroglobitic. Palaeotroglobites have long been established and tend to relics or survivors of more ancient groups. Certainly *Proasellus cavaticus* and the other aquatic troglotic malacostracans are considered to be palaeotroglobites and are considered to have gone underground during the Tertiary period. The more recent forms appear to have gone underground since the last retreat of the Pleistocene glaciers.

Thus it is probable that the aquatic malacostracans of OFD are survivors of an underground fauna that was established by the late Tertiary. At this stage there is much geological evidence to suggest that sea levels were some 200m higher than today. This would have divided the British Isles into a number of distinct islands. Jefferson states that this would have led to a differentiation of the fauna due to the influence of isolation.

When the islands eventually rejoined as sea levels fell the surface forms intermingled but the underground populations retain a measure of distinctness due to exceedingly low rates of dispersal. However Glennie (1967) suggests a migration into underground waters as sea levels fell in an attempt to avoid changing conditions. Thus the speciation of the cave fauna could well be a mixture of these mechanisms.

Overall the distribution of aquatic troglobites in Britain is notably southern, and this is usually explained by the destruction of fauna as a result of ice cover during the Pleistocene glaciations.

Once the ice sheets retreated surface forms could once again migrate northwards to recolonize, but leaving behind the underground forms. However South Wales has been repeatedly glaciated, and yet troglotic aquatic crustacea are probably most common here. This leads to a number of theories:

- Recolonisation since the last Ice

Age, probably from the Mendip region.

- Survival beneath the Ice cover.
- Survival up to and at the edge of the ice sheet.

There are problems to some of these ideas. Although Mendip and South Wales fauna are very similar there are differences which would require longer periods of isolation to explain. Also survival beneath the ice sheets would mean a species having to survive on endogenous food sources as there would be no input from the surface. Whether such endogenous supplies could last up to thousands of years is questionable. It is more probable that survival occurred only in places such as south Wales, near the edge of the

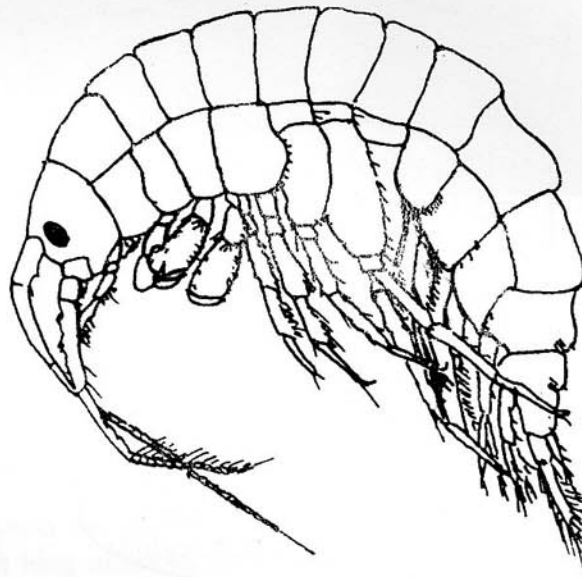


Fig.2: Gammarus pulex (Linnaeus), length 10-20mm

Ice Sheets and could explain the distribution of *Proasellus cavaticus* and *Niphargus fontanus* which appear to follow the limits of glaciation (Jefferson).

The question of distribution within the cave itself also needs explaining. Examples of these animals occurring in or near active streamway can be explained by migration along watercourses. However animals such as *Niphargus fontanus* exist well away from the streamway. The highest recorded example is from Pillar Chamber in OFD II, which is at a height of 274m, in a joint fed by a tiny trickle of water (Glennie). One theory for this movement to higher levels is as a result of "clay fill" regarded as a special phase in the development of cave systems and may have occurred regularly during the varying periods of the Ice Age. In OFD there is much evidence of current marks in an upward direction and this appears to be due to clay fill blocking the lower passages, causing a ponding-up of water to higher levels of passage thus allowing the movement of aquatic forms to higher levels.

Thus the aquatic malacostrican fauna of OFD represent important and ancient troglobitic animals which can almost be considered to be relic species. OFD has three species of aquatic malacostrican troglobite out of a possible seven that occur in the British Isles. It is important to preserve and respect these small but significant animals which are able to survive in such a limiting environment. Such animals may well be important in providing information into mechanisms of evolutionary change and population ecology due to the relatively straightforward population structures and interactions. Remember that their habitat is fragile so help preserve it .

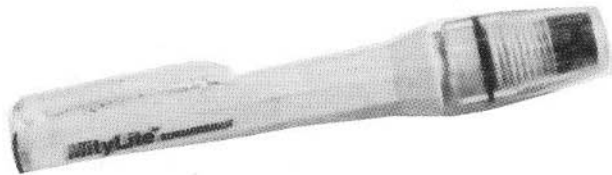
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- Endnote**
This article has come about from work I have carried out on the cave fauna collection of the late Dr G.T.Jefferson, which was donated to the National Museum of Wales in 1987. The museum has only now had the resources available to conserve and document the collection.
- Julian Carter is Conservation Officer in the Zoology Department, National Museum of Wales*

A Review of Personal Emergency Kits

by Paul Meredith

Do you carry any back-up light or other emergency kit when you go underground? Well, some cavers do and some don't, but for those new to the sport I thought it might be worth discussing the possible contents of such kits and the packaging options thereof.



Even those cavers whom do not habitually carry a formal emergency kit generally carry a spare light in the form of either a Petzl Zoom, or equivalent, or some sort of dry cell torch strapped onto their helmet using "snoopy loops" or cable ties. Spare lights fitted to the helmet do occasionally get in the way but they are readily available for use at all times and save valuable space in emergency pack containers for important items, such as Snickers bars etc.

In addition many cavers also carry a space blanket or a poly survival bag. Space blankets can easily be carried between the head cradle and outer shell of most caving helmets. Unfortunately it is now generally accepted that those nice shiny foil space blankets, so beloved by athletes, do not work terribly well in a caving environment and you are far better off using a poly survival bag. Unlike space blankets, these do not sit comfortably inside caving helmets which means that they have to be carried in something. Once you've accepted that you are going to have to carry something you may as well make it worthwhile and put in a few well-chosen extra bits and pieces as well.

Such extra bits may perhaps comprise: a balaclava helmet (under normal conditions some 40% of

body heat is lost through the head), a whistle, pencil and paper, ten pence piece, Swiss army knife or similar for committing *hara-kiri* and of course something to eat. Forget the F-plan diet or nouvelle cuisine, when the worst has happened you want something with a bit of bulk that has not deteriorated after it's been languishing in an emergency kit for a few trips. Snickers bars or some other semi-rigid bars are excellent.

A simple first aid kit could also be useful and might typically comprise: stout crepe bandage, gauze pads, pain-killing tablets, oil of cloves, triangular bandage, some cable ties, clean and unused plastic freezer or sandwich bags, a one-sided razor blade or other cutting device.



Now comes the tricky bit, trying to get all of the above into some sort of waterproof container. The traditional ammo box, although incredibly robust, is rather heavy, and for this reason has generally been supplanted for emergency kit use by either the BDH container or "Daren drum" - both ex-chemical industry - or, for the really affluent caver, the purpose manufactured WODI (Wet Outside Dry Inside) container.

Although cheap - prices vary depending on size and source! - and readily available, the plastic BDH container does suffer from some inherent design faults from a caving point of view. None of these are terribly serious and almost all can be overcome or mitigated with a little ingenuity.

Firstly the lid seal is not particularly watertight. This can be significantly improved by removing the waxed cardboard seal and glueing in a piece of car inner tube or similar.

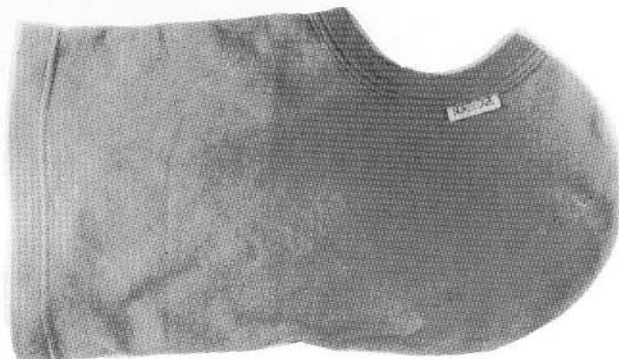


The lids also have a nasty habit of either coming undone or being impossibly tight to get off when you need to get inside. This problem can be solved by the application of some lubricant - silicone grease - to the threads and fitting an old inner tube sleeve over the outside of the lid/container interface to act as a securing device. Durability, never a strong point with BDH containers, has deteriorated significantly with the replacement of the older black plastic design and the introduction of the new translucent containers. However their life can be considerably extended by stretching a small car inner tube over the outside.

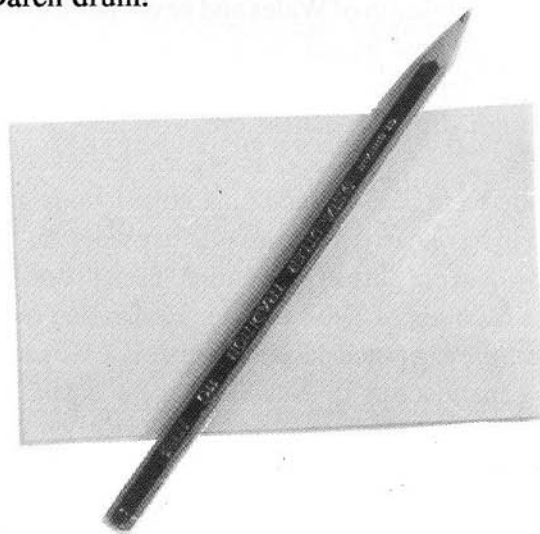


BDH containers do not have carrying handles or any handy lugs. Consequently a rope or tape cradle needs to be made up, possibly using cable ties to form the cradle around the BDH itself. Bigger, and more expensive, than the BDH, the white plastic red lidded Daren drum with its integral O-ring seal would seem to be ideal for caving. Unfortunately even the smallest Daren drum is really too large to be comfortably clipped to your belt. So unless you are going on a mega-trip, or are planning to put other equipment in the drum with your emergency kit, then the Daren drum is really too large. Also

Daren drums do not have any handles or useful lugs and unlike BDH containers it is very difficult to attach any sort of rope or tape cradle to them. Consequently Daren drums are generally carried in tackle sacks, which further adds to the cost, and bulk to be carried.



The WODI is the only purpose-designed rigid container available for caving to date. Perhaps a little large for personal emergency kits and rather heavy, the O-ringed, double entry, twin handled cylinder has a very respectable volume and is reportedly very comfortable to cave with. Although apparently expensive, the WODI does not need to be carried in a tackle sack which makes it roughly the same cost as the Daren drum option, assuming one has had to buy the Daren drum!



Conclusions? There aren't any really except to say that, on balance, it probably makes sense to carry some sort of emergency kit, but exactly what this comprises, and what it is carried in, must remain a matter of personal choice, common sense and correct application.

Happy caving and here's hoping you never have to use your emergency kit or your mates!

The Cantrill Discoveries

A New Assessment of the Cantrill Discoveries in the Cave under Carreg Cennen Castle, near Llandeilo

by Mel Davies

T C Cantrill was a geologist whose work in 1900 took him to the romantic and spectacular castle of Carreg Cennen. The castle is built on a faulted outlier of carboniferous limestone which forms an isolated, rocky peak rising 350ft above the Cennen valley three miles from Llandeilo in Dyfed. Under the castle, and only approachable from within its walls, is a cave 150ft long where Cantrill seems to have been the first to notice bones buried beneath a protective stalagmite layer. In a manuscript now retained in the National Museum of Wales and never published, he records how he cut away about half a cubic foot of deposits with a hammer and chisel. Although drawing a neat cross-section of the location (see figure) and noting the presence of human teeth and charcoal, Cantrill does not seem to have carried out any further work on his sample and only briefly mentions "human bones" in his Memoir of 1907 (ref.1). He handed over the sample to a noted palaeontologist, E T Newton, and a manuscript in Newton's hand dated 1st June 1915 lists the bones he found in the sample representing two adults and two children, a remarkable quantity for such a small sample. More important perhaps was the perforated incisor of horse also found and this was referred to by G M Roberts in his 1939 history of the Parish of Llandybie (ref.2). I visited and photographed the various caves in the Castle rock, which came to a total of nine, in 1970 and 1971 but did not come across the Cantrill manuscripts until 1973. At that time the bones found by Cantrill had not been located or accessed by the National Museum (ref.3) but I re-visited

the cave inside the castle in May 1980, satisfying myself that I had found the bone site described by Cantrill, and also finding three human teeth in the stalagmited cave wall. In the meantime Roesse (ref.4) published a general account of Cantrill's archaeological work but without adding anything further about his cave excavation. Still without seeing the bones, I published a description of the correct cave and my find of teeth in it in 1981 (ref.5.). While helping in another matter, the National Museum told me in 1994 (ref.6) that the bones and perforated tooth found by Cantrill almost a century earlier had now been accessed, and I was able to examine and photograph them on 11th November:

THE CANTRILL COLLECTION

Human remains found in 1900, NMW Accession No.31.384, (previously examined by E T Newton, 1915).

The bones are all very fragmentary but there is no evidence of attack by any acid which might conceivably have been used to extract them from the stalagmite. The obvious breakages occurred before they were covered by stalagmite but this may well have been part of a natural process; some of the fractures are fresh and must have occurred when the bones and teeth were removed from the stalagmite. The seaming, cracking and disintegration which occurs when bones are exposed to air without the protection of a stalagmite film is absent.



The site of Cantrill's 1900 excavation. Note the level of the old stalagmite floor, 0.8m off the modern floor, which was trenched in medieval times to provide access to the spring in the end chamber

Mandible fragment, 39mm long, with stalagmite, 2 incisors not fully erupted and 2 roots; 4 separate tooth fragments all incisors or canines; 2 crowns of molars of a child also the following child's teeth: 4 incisors, 2 canines and a molar. Adult teeth comprised one molar with stalagmite and a broken root, a premolar which is worn exposing one spot of dentine and another which is worn exposing 2 spots of dentine.

Fragments of vertebra and 2 of pelvis; Right ulna, 73mm with only a trace of stalagmite, distal end missing and a small part of the proximal end also missing; Radius fragment, 40mm, in stalagmite, and another radius, 25mm both of them only the proximal ends.

Bone which may be part of a tibia, 45mm long; Fibula fragment, 46mm, in stalagmite.

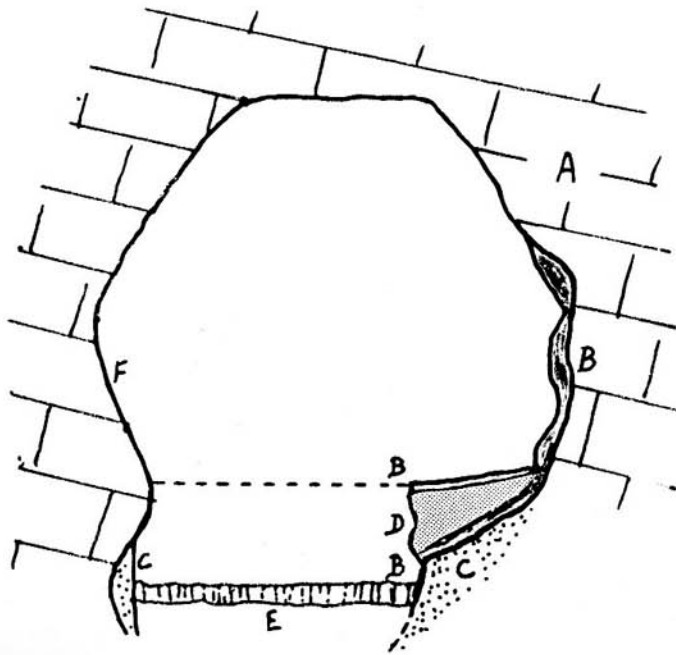
Metacarpus IV, left side proximal fragment 30mm long; Metatarsus fragment, 32mm, and a second phalange. Astragalus, possibly left, 45mm long with no stalagmite.

Also present with the bones is a quantity of dried clay and finely disseminated charcoal. There are

over 50 unidentified small fragments some of which could be identified with much more work.

Apart from the human remains there is an incisor of horse, 48mm long, probably from the upper jaw and perforated by boring near the root from both sides. It is broken along the axis of the hole and carries only a trace of stalagmite.

The human teeth found by me in 1980 comprised a mandibular molar, another molar possibly also mandibular, and a third so hidden in the stalagmite that it could not be placed. During a subsequent visit in March 1983 I noted a small alcove between the stalagmite and the ceiling which contained a loose, sandy deposit and further human remains as follows: a clavicle fragment 48mm long but as both articulations were missing its side could not be determined; a skull fragment 3mm thick and 37mm long, and a capitate bone from the left wrist, slightly damaged. All carried traces of stalagmite.



CARREG CENNEN CASTLE CAVE

SECTION LOOKING NORTH

1 inch = 2 feet

- A DARK LIMESTONE
- B STALAGMITE IN THIN LAYERS
- C STALAGMITE SOFT & CRUMBLING
- D BONE BED
- E FLOOR OF BROWN EARTH
AND LIMESTONE PIECES
- F SMOOTH WATER-WORN SIDE OF CAVE

after T. C. CANTRILL, 1900

M. DAVIES 22-11-94

While Newton seems confident in ascribing the human remains from 1900 to two adults and two children, even the addition of my own finds gives me no grounds for such confidence. The uses to which prehistoric peoples put their teeth were so varied and unlike modern usages that individual tooth wear is a poor guide to the number of individuals. Eruption of teeth in children can also be variable so I would only go so far as to claim one adult and one child with the possible addition of others.

We come now to an evaluation of the importance of the perforated horse tooth. Two other caves in Wales have yielded animal teeth treated in this way, but the sum total of teeth is only 17. Sieveking (ref.7) in 1971 described a collection of nine bovid and deer teeth perforated and decorated with transverse lines found at unrecorded levels about 1880 in Kendrick's Cave, Llandudno, and I found a similarly treated canine apparently of fox or badger in Upper Kendrick's Cave (possibly the same cave) from a depth of 2.3m (refs.8, 9) in 1978. Paviland Cave in Gower has yielded seven perforated teeth all canines of wolf or reindeer (ref.10). With regard to dating of all these specimens, there are only radiocarbon assessments of associated bones, some only loosely associated. Oakley (ref. 11) gave a date of 18,460 +/-340bp (BM-374) for the famous "Red Lady" skeleton from Paviland, but in his massive 1913 paper Sollas had made it clear that..."the implement bearing deposit...had evidently been much disturbed: nowhere was any trace of a definite industrial layer to be seen, the hearths had been broken up and their contents distributed pell

mell." Molleson (ref.12) considered that some of the stone tools belonged to an earlier occupation period than the date suggested by Oakley, so the burial was intrusive. She seemed to confirm her opinion with a radiocarbon dating on a bone of aurochs of 27,600 +/-1,300bp (BM-1367), but went on to say, wrongly, that Sollas had completely excavated Paviland Cave. My measurements inside the cave in 1991 (ref.13) after winter storms had redistributed some pebble deposits revealed about 1m of unexcavated, undisturbed cave earth and breccia. Further excavation here could at least settle the date of any bones found and, by association any flint industry.

While being unable to date any of the nine perforated teeth from Kendrick's Cave, Sieveking (ref.14) obtained a radiocarbon date of 10,000 +/-200bp (OxA-111) on a decorated horse mandible from the same cave. This was the first Palaeolithic artwork from Great Britain to be dated, but the circumstances of the 1880 find and the associated teeth are obscure. Also unfortunate is the mysterious loss of two perforated bear canines which had been found in the same cave.

To sum up there is evidence that deliberate perforation of animal teeth, inscribing them with transverse lines, and decorating horse bones with enigmatic patterns was a feature of Upper Palaeolithic life in Wales. The geological evidence for the Carreg Cennen perforated horse tooth proves it is of great age, being buried under thick stalagmite. Whether the tooth is really an Upper Palaeolithic artefact can only be proved either by a destructive radiocarbon dating, or by



**Perforated horse incisor found in 1900 in Carreg Cennen Castle Cave.
Photos by Mel Davies**

further excavation in an attempt to discover fresh artefacts. With this end in view I visited the cave yet again in November 1994 and took a sequence of 18 flash-aided photographs on both sides of Cantrill's original excavation. Naturally these have been examined minutely in a search for mural art, but none has been found. However there are large quantities of bone-bearing stalagmite, tufa and charcoal adhering to the walls and extending away into quite deep side-alcoves. All this is completely undisturbed and ready for excavation when, without doubt, further dateable objects would be discovered.

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Identification of Bones from Coygan Cave, held in Carmarthen Museum

by Mel Davies

Considerable interest has been aroused recently by the publication (ref.1) of a series of dates using the Oxford AMS system on bones and antlers from caves which have been carved or decorated. This human workmanship is in the form of cut marks, a series of cut marks, or an antler ringed and snapped, while from Paviland Cave in Gower there is a magnificent delicate bone "spatula". The dates range from about 31,000 years to 12,000 years before present and the Paviland object falls roughly in the middle at 23,000 years before present. In the hope that there may be bones residing in curated collections bearing evidence of human workmanship, a number of museum collections were examined while the opportunity was taken to re-identify individual specimens. In the case of Coygan Cave one wrong identification of no great importance was found; there were no signs of human workmanship on any of the bones and teeth, but the "four big bones...reduced to such a regular shape that one is forced to wonder whether they are the work of hyaena or of man" (ref.2) were not seen. Neither did the collection examined contain all the bones described by J Clegg in 1963, although those may have been on display in the public gallery. A full list of the remains identified is given below accompanied by Museum accession numbers:

A76.1221 Label reads "hyaena teeth, one embedded in jaw"; this is correct and the tooth is a mandibular Pm2.

A76.1272 Box D78 Label reads "Palaeolithic Elephant, *Elaphus primogenius* Femur fragment"; none of this could be confirmed and the scientific names are outdated.

A76.1273 Label reads "Palaeolithic Elk *Cervus megaceros* bone fragment"; this is a vertebra fragment but the species was not confirmed.

A76.2411 Box D147 Label reads "Palaeolithic Pleistocene Hyena lower jaw fragments"; this is accurate and the bone is a hyena mandible, left side, with 2I, C, Pm2 and Pm3 present.

A76.2412 Box D147 Label reads "Palaeolithic Pleistocene? teeth canines-wild boar"; this identification is incorrect as the bag contained no boar teeth. It actually contains a total of nine horse incisors.

A76.2413 Box D149 Label reads "On Display Palaeolithic Pleistocene 5 teeth. Woolly rhinoceros *Tichorhinus antiquitatis*"; the bag contained two rhinoceros mandibular teeth possibly the Woolly rhinoceros now named *Coelodonta*

antiquitatis. Without identified examples to hand it was not possible to say whether the teeth were from this species or from the very similar but earlier, warm-climate *Dicerorhinus hemitoechus*.

A76.2414 Box D147 Label reads "Palaeolithic Pleistocene horse incisor"; this is correct.

A76.2418 Box D147 Label reads "Palaeolithic Pleistocene Rhinoceros teeth upper jaw"; these are certainly rhinoceros maxillary teeth but the remarks for A76.2413 above apply here.

A76.2757 Box D147 Label reads "Palaeolithic Pleistocene rhino (woolly) teeth"; this is correct but the remarks for A76.2413 apply here as well.

A76.2759 Box D147 Label reads "Palaeolithic Pleistocene Hyena molars lower jaw"; this is correct as one bag contained 2 teeth, another had 2 teeth one of which exhibited wear on the crown, and a third had 2 more. The total of six teeth imply the presence of more than one individual hyena *Crocuta crocuta*.

A76.2761 Label reads "Palaeolithic Pleistocene hyena premolars"; two were checked and are correctly identified while the bag contained several more.

Absent from the Carmarthen collection are bones representing the following animals which were excavated by Clegg around 1963 (ref.2): Red deer, Wild boar, Fox, Reindeer and Bear.

Two dates have recently been published for animal remains excavated by Clegg from this cave (ref.1), but it should be remembered that these remains show no signs of human workmanship and the cave itself was destroyed by quarrying in 1971: Radius of Woolly rhinoceros OxA-2509 24,620 +/- 320 BP; Reindeer antler BM-499 38,684 +/- 2713/-2024 BP.

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Dan-yr-Ogof Exploration, 1993/4

by *Liam Kealy*

Following a small discovery at the Far North in 1991, the High and Mighty Series (see SWCC Newsletter No. 110), 1992 proved to be a quiet year for me due to my involvement in establishing Dragon Caving Gear. However, I wanted to be back with a bang in 1993.

After a few months of getting people together, a team was ready by May '93 to start work on leads in the High and Mighty series, and on an aven we had heard about in the Great Hall and was first noted by Paddy O'Reilly in the 1960s.

The 1993 Camp

Myself, Pete Munn, Dudley Thorpe, Joel Corrigan, Steve Thomas and Steve's mate Phil Short camped at the Far North over the weekend of the 29/30/31st May 1993. We were ably abetted by Phil Pope who had been press-ganged into carrying gear to the crawl for us. However, Phil fell off the climb up to Boulder Chamber and had to evacuate himself when a large rock fell on him as well.

Phil Pope lives near me and has been caving with me twice. On the first occasion he was stuck for a while in an awkward rift in Ogof Dan-y-Lleuad Wen, then on the second trip he fell off that climb. I have asked him to come caving since then but for some reason I don't get a positive response.

Anyway, helping Phil out of the cave slowed us down somewhat and we actually didn't get to start work until about six in the evening. Due to the amount of water in the cave we felt that it would be a bit wet in High and Mighty so started work on the aven in the Great Hall.

Twll y To Yn y Neuadd Fawr

The hole in the roof of the Great Hall would require a straightforward bolt climb of 10m up the wall and then a traverse across the roof for another 10m or so. By about 8.00pm on the Saturday we had got half-way up the wall and we completed this the next day. Pete Munn also put in three bolts across the roof.

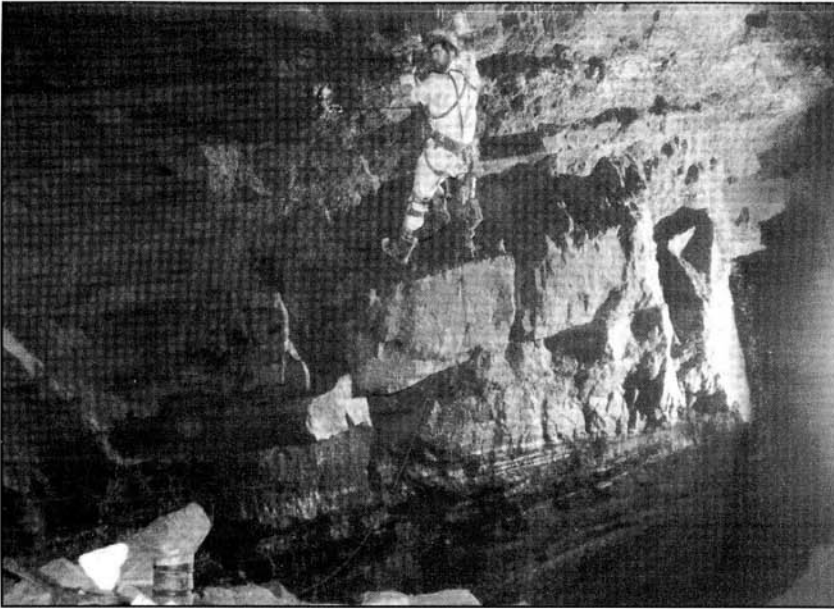
Dudley and others also looked in various other holes in walls, in and around the Left Hand Series, and we are satisfied that there is not much else that we would want to push in this part of the cave.

We were flooded in during the camp. What is normally a gentle meandering stream in the Left Hand Series had turned into a series of knee-deep lakes between boulder piles. However, the water levels had gone down sufficiently for us to exit safely on the Sunday.

Back to the Twll

The roof traverse was finished during two trips in June and September. Once in the rift, I was able to free climb the last section and explore 30m of passage to a large hole which dropped back into the Great Hall. Walking size passage could be seen continuing on the other side of the hole, but I was too scared to traverse around the hole without protection. A further climb found another 30m of ascending passage which led to a choked rift emitting a draught. Further exploration would have to wait, as Joel Corrigan was already late for his lift back to London.

Myself and Pete Munn went back at the end of October (Halloween), as high water had prevented



Bolting up to the Twll

us getting in at other weekends. Joel and Dudley were supposed to follow later. Dudley was later than expected, so Joel did a solo trip to the Far North, which included a classic abseil of the Birthday Passage pitch. Dudley also came up on his own later.

Myself, Pete and Joel fixed a traverse line around the hole and sauntered across into a rift 2.5m high and 1m wide. After 10m it degenerated into a very small tube. Joel forced himself into the tube but concluded that it would not go. Another hole provided an 25m abseil back into the Great Hall.

Me and Pete were a little pissed off about this. But Joel reminded us that what constituted a disappointing find in South Wales is major progress on Mendip, so he felt quite pleased with the find in the Twll. We called the find Trick or Treat due to it being Halloween.

But all was not lost, as we felt that the rift at the top of the other climb may go a bit further, with persuasion.

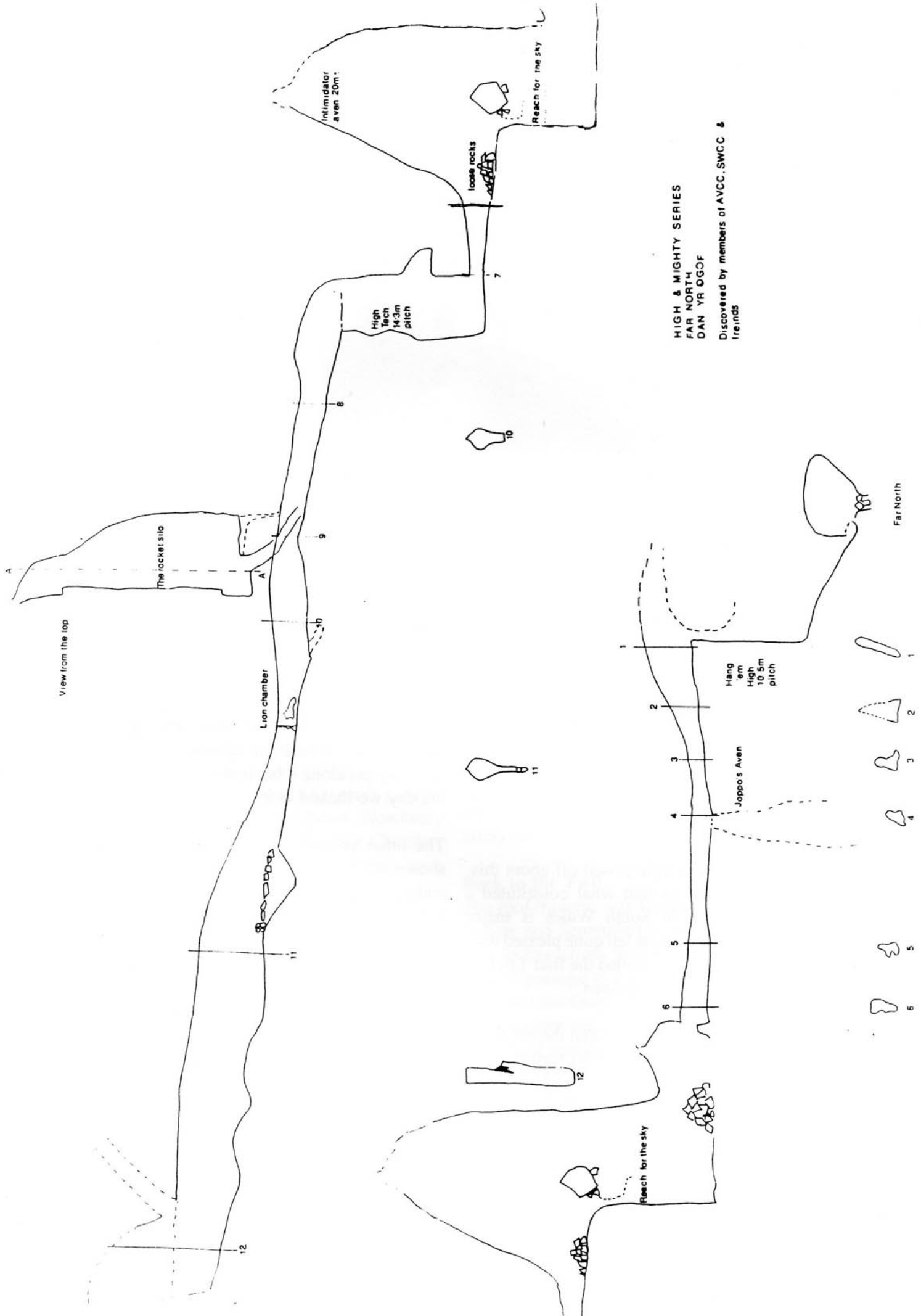
1937 Revisited

Having decided we had seen enough of the Far North for one season, myself and Pete Munn decided to have a look at some obscure passages in the 1937 series. We felt there were still some loose ends to chase up.

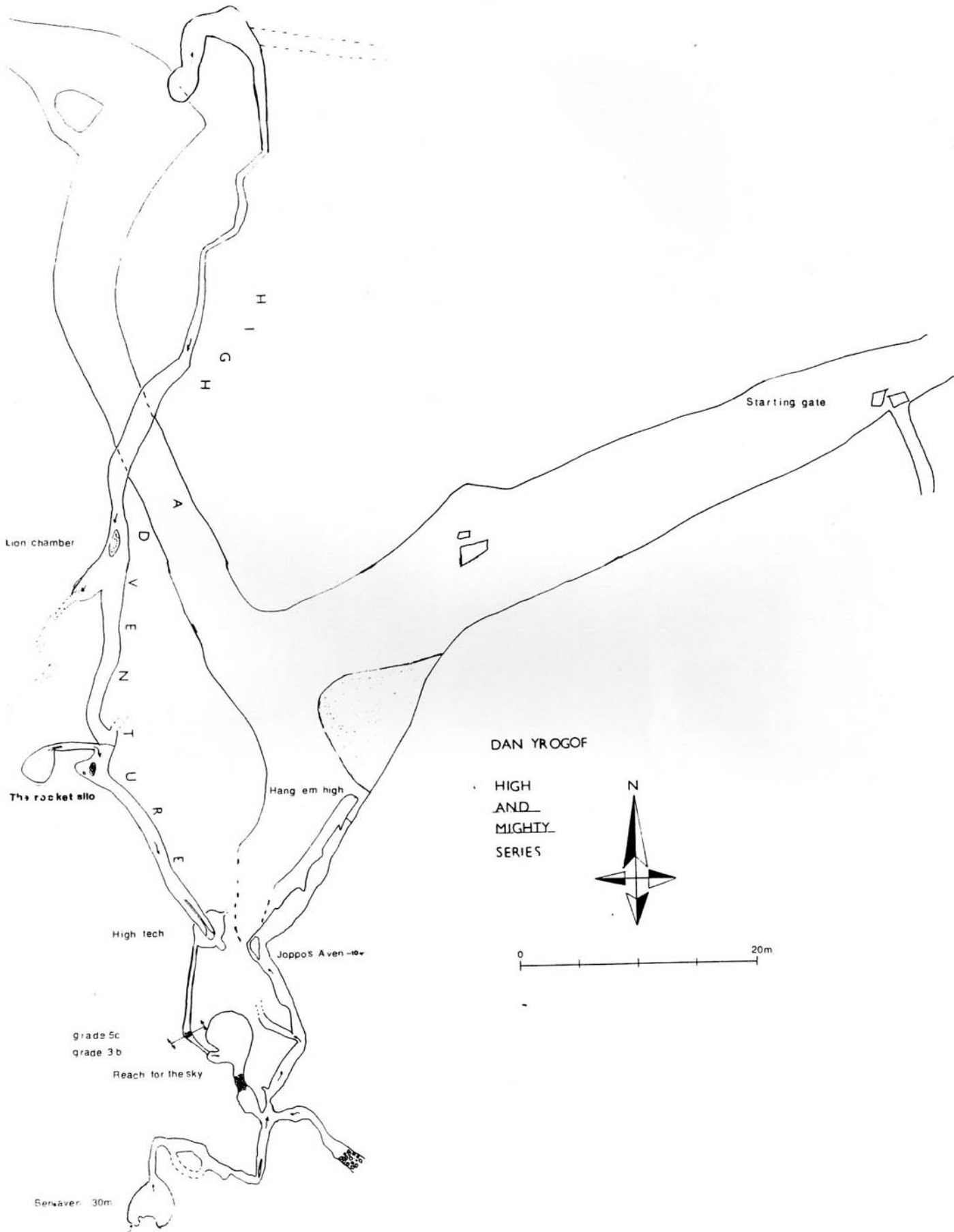
Two such possibilities were at the top of the slope leading from Boulder Chamber to the August Series. Two high-level passages beckoned to us, so with the help of etriers and a Fifi hook we set about tackling them. Pete climbed into the first passage after we had thrown a rope over a large thread and attached an etrier to it. A solid crawling-sized phreatic tube led to a chamber from which a tight awkward rift led off. Pete pushed it for 3m to a point where it became very tight for him. So he left it. Someone smaller than him may get along it but it wasn't draughting on the day we looked at it.

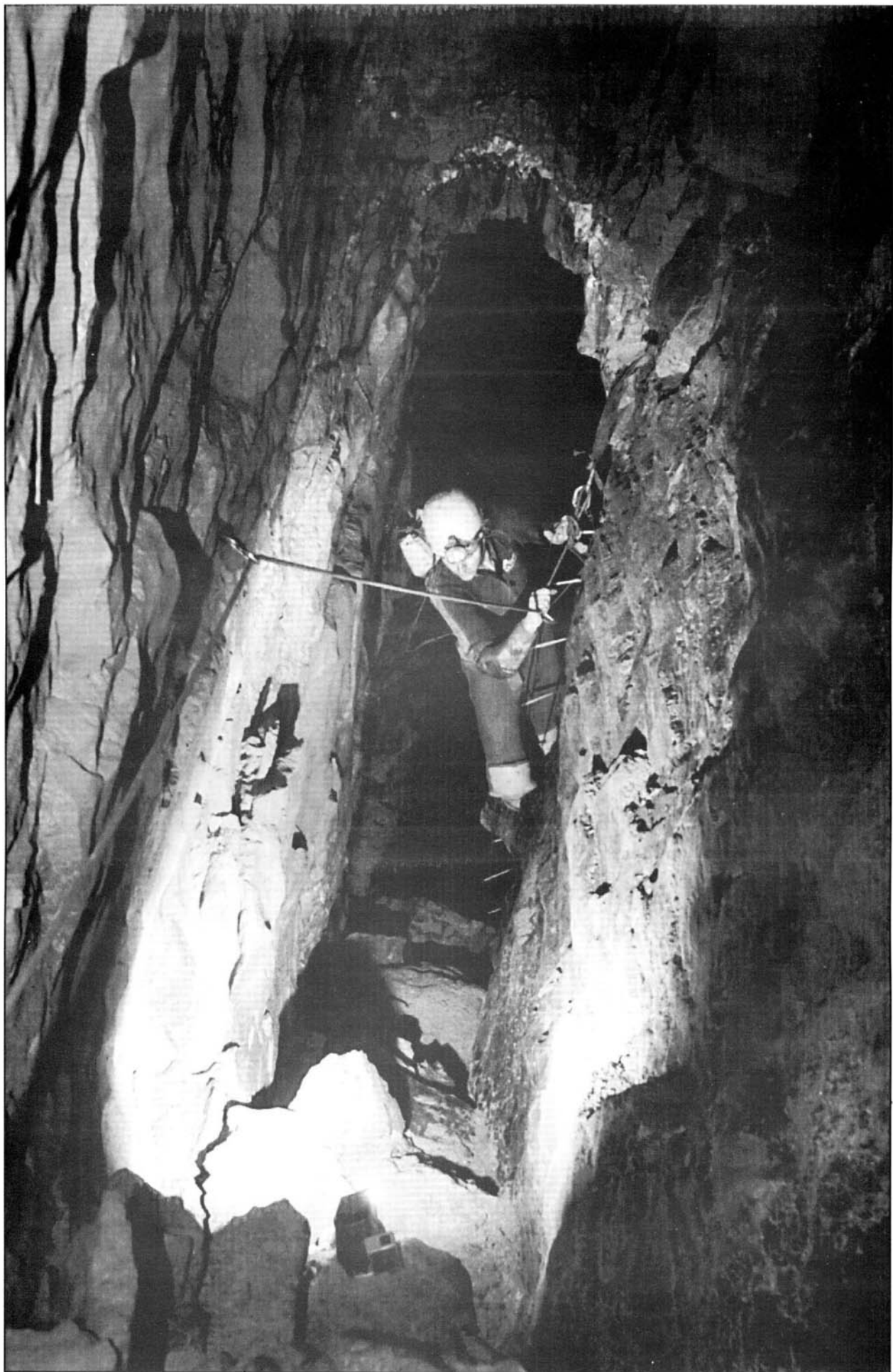
The other passage is directly opposite and is shown on the survey. It is called Pearl Passage and was entered by Alan Coase, Paddy O'Reilly, Eileen Davies and Derek Holt on the 14th August 1965. They maypoled into the passage which led via an attractive stream passage to a shattered boulder choke. Brian Jopling had mentioned to me that the choke may be worth looking at.

Pete Munn climbed into the passage using the etrier and I followed on a lifeline. We were pleasantly surprised at the nature of the passage which seemed to cross the DYO syncline at one point. Reaching the final choke, I concluded that it may go if we came back with a crowbar. Pete looked at it, moved a couple of rocks around and squirmed up into a large chamber. He then made



HIGH & MIGHTY SERIES
 FAR NORTH
 DAN YR OGGF
 Discovered by members of AYCC, SWCC & friends





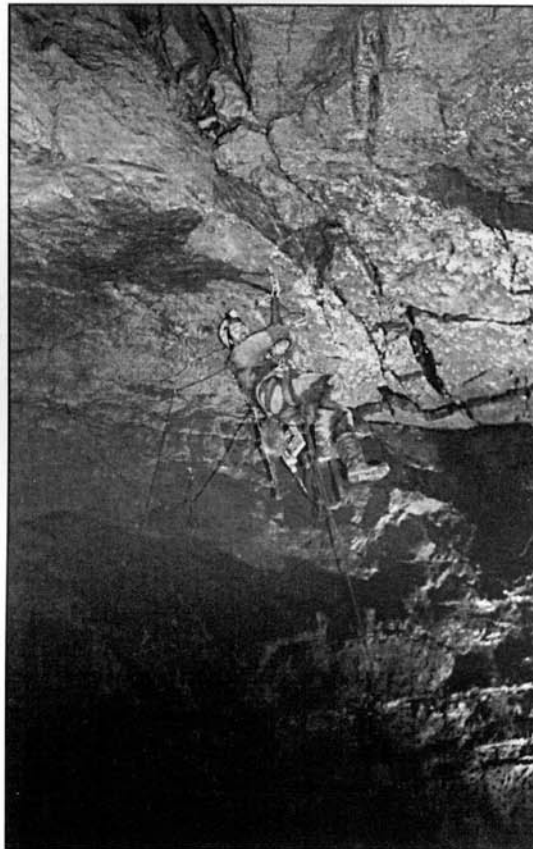
the route big enough for me to follow. Two minutes digging and we were through. (Thanks Jopo!)

The passage was formed on a rift which soared to 13m high. A short distance from the point of entry we had to climb up and through some dodgy boulders to the foot of a boulder pile. This led to a very short section of streamway which in turn led to a choke. We reckoned that we had found about 30m of large passage. The choke looked diggable and we also noted a climb up to a hole in the roof. Looking at the survey back at home we felt that the passage trended back towards Lake 5 and 6, which was very interesting. We named the passage Neuadd Tachwedd (November Hall) in keeping with the section of the cave it is in. The DYO syncline may also have influenced the passage's development.

The nice thing about caving with Pete is that we can both go caving in the week, between dropping kids off at school and picking them up after. Our "in-between" trips have been quite fruitful.

We went back to Neuadd Tachwedd a week later on another "in-between trip" and began digging at the choke. We didn't have very long as we had been unable to start until 11.00am and Pete's kids come out of school at 3.15pm. Still this

would have been long enough to get some work done on the choke.



Bolting the Twll.
Opposite page: Joel in the Twll

Digging went very well, and having cleared a way up through boulders by 2.00pm Pete was in a position where he could see up into a large chamber. But at this point rocks fell in behind him, and his lamp started to fail! I started to dig him out but was in a bit of a quandary as to whether I would have to leave him there, go and pick the kids up and then come back and dig him out later. However, by 2.45 he was out. Thinking that I had loads of light left in my super-duper FX5 we started to go out, and so did my FX5. We managed to get out on very poor pilot lights and Pete drove to the school in his wetsuit, just in time to get his kids.

The choke is now called Golau Mas Choke (Lights Out Choke).

Which is what it nearly did to us on the next trip. After two weeks of rain we went back and dug up into a small aven with no way on. On my way back through the choke it fell in again (despite our attempts at shoring), trapping me in the middle and Pete in the aven. So after digging myself out I had to dig Pete out yet again. But on this occasion we didn't have to fetch the children from school.

We have left Golau Mas to settle down as we probably need to go through it, rather than up.

We called the aven Afen Rhagfyr, as we found it in December. The climb in the roof has been left for another day in the not-too-distant future. So ended our 1993 exploits.

After this we went to Corbel's Chamber, to other digs Jopo told us about. One being an aven, which Alan Coase referred to as Craven Aven, (SWCC Newsletter No.52), as it was originally noted by the Craven Pothole Club in the 60s. Pete Munn climbed the aven on the 19th February 1994. The passage at the top is as Coase described it: a body sized tube leading via a tight squeeze to a chamber formed on a fault.

Return to the Far North

So, after caving elsewhere for a while, we went back to the Far North to climb the aven at the end of the High and Mighty Series. Myself, Joel Corrigan and Paul Quill carried all the gear up there on May 29th. We bolted about 10m that day, to a point where the aven seemed to open up on the left.

Myself and Joel returned on the 11th June and climbed up into 200m of mainly walking-sized passage. This contained some nice decorations and a number of possibilities for further extensions, including an inlet which seems to swing away from the known cave.

After a few caving trips elsewhere a party consisting of myself, Chris Vernon, Steve Thomas, Pete Munn and Paul Quill camped in

the cave on the weekend of the 22/23/24th July. We surveyed the new find, took plenty of photos and taped off sensitive areas. The section above the aven has been called High Adventure in

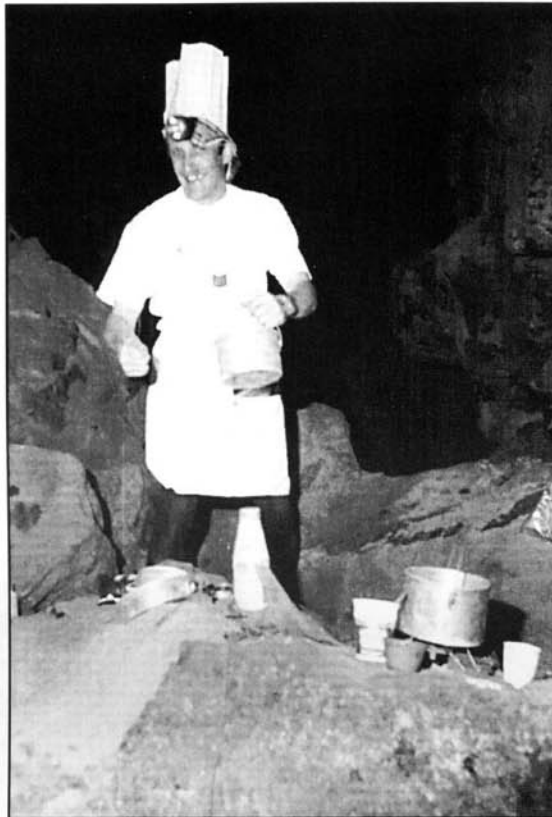
acknowledgement of the support given to us by the shop of the same name in Swansea.

During a trip on the 3rd September involving myself, Steve Thomas, Paul Quill and Alistair Garam from Morgannwg Caving Club an aven called the Rocket Silo was climbed for about 15m to a point where it closes in. The next section may be free-climbed by a thinner person than I.

The High and Mighty Series is now quite an important bit of cave and some work remains to be done there. We still have some surveying to do, we want to dye-test an inlet we found to discover its

relationship to the rest of the cave, and we also want to undertake some radio-location work to discover our whereabouts on the mountain. It is a 3-4 hour trip to the end of the cave involving three pitches up out of the Far North.

The High and Mighty series is located between two faults. If the inlet goes towards the fault that the Great Hall is formed on, then who knows what will happen?



Pete Munn serving dinner at the camp

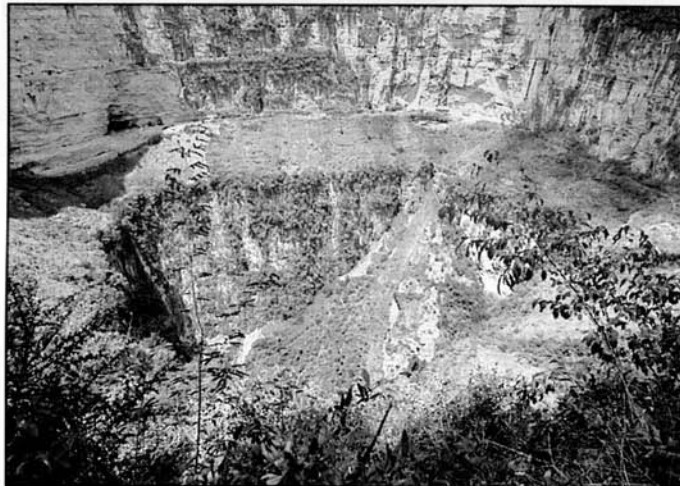
Xio Zhai Tien Ken - A Classic Through Trip

by **Tony Baker**

The atmosphere in the dining room was tense as Colin came back in with his blue SRT bag under his arm.

"Right" he announced, "there are five bits of paper in this bag. Two say 'T' on them - that means you do the through trip. Two more say 'D', that means you de-rig the entrance. The last one says 'GC', that's coming and helping me." Slowly the bag was passed around, and I was the last-but-one to reach in. I drew out the folded paper, hardly daring to look at it. There, on it, a big, bold T- I was doing the through-trip, along with Kev, who'd been the last to draw. "Yes!" We shook hands, ecstatic at the prospect.

Xinlong, Sichuan province, August 1994. One of the first sites we were shown on arrival in the area was a huge doline: 660m from the highest point on the perimeter to the floor, 500m across. An hour-and-a-half's walk down a difficult path, in uncomfortably sticky heat, led to the bottom, where a cave entrance a hundred metres high was enough to lift the spirits even of those still suffering from jet-lag. We were told that the doline was known as *Xio Zhai Tien Ken* - "Big Skyhole Behind the Small Village".

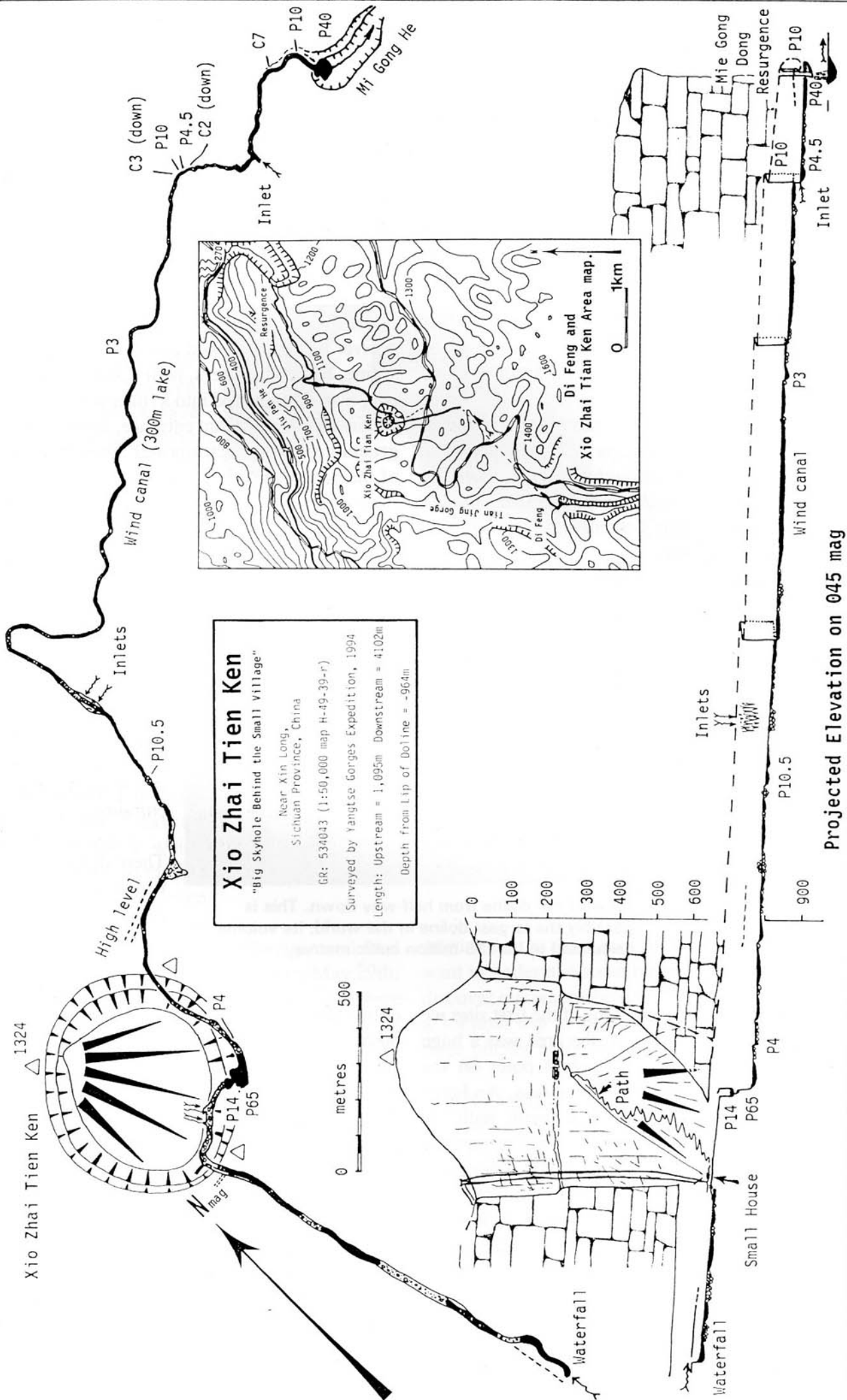


View of the doline from half-way down. This is possibly the largest doline in the world, its volume calculated to be 135 million cubic metres.

A river had once flowed across the base of the doline, but all its waters, in dry periods like this one, now disappeared into a (man-made) tunnel just inside the upstream entrance, to be used for generating hydro-electric power. Over the course of the next week, the upstream river cave was pushed for a kilometre, until the passage narrowed and the water surged out with such force that progress against it, in the inflated inner tubes necessary as swimming aids, was impossible. Meanwhile, Colin Boothroyd and Brian Judd had been pushing the downstream entrance.

Their dedication to the project was admirable. Basing themselves in the filthy, ramshackle hut at the base of the doline for three or four days at a time, they'd pushed further and further down the huge river cave, swimming the many long canals in inner tubes. Their last-but-one trip had been over eleven hours, pushing on and on through the chilly waters in the hope of exiting at the resurgence.

Then, in one last desperate push, when there was no turning back after Brian lost most of his SRT kit in a deep pool, they finally made it, abseiling out of the 40m pitch at the end with just 10m of



Xio Zhai Tian Ken
 "Big Skyhole Behind the Small Village"
 Near Xin Long,
 Sichuan Province, China
 GR: 534043 (1:50,000 map H-49-39-r)
 Surveyed by Yangtze Gorges Expedition, 1994
 Length: Upstream = 1,095m Downstream = 4102m
 Depth from Lip of Doline = -964m

Projected Elevation on 045 mag

rope to spare. Now, with two working days left in this area, two teams of two had descended the doline to be ready for an early morning start, to finish the survey. This meant the remaining five of us had to be spread among the three remaining tasks: two would get to do the last through trip, de-tackling on the way and retrieving a bag of rope left halfway through the cave. Two more - the job no-one wanted - would have to walk down the doline, de-rig the entrance pitches and then walk all the way back up again, while the fifth person would have a relatively easy day helping Colin de-rig another cave. We would have to draw lots.

The next day, Kev and I, plus the de-rigging team of Dave Checkley and Paul Seddon, set off early to walk down, struggling in the already-hot sun with our loads. Our spirits sank a little on our arrival at the base of the doline; predictably, the other teams had left us the two saddest-looking

inner tubes. Both were barely half-inflated, and the prospect of hours swimming in cold water, barely afloat on these pathetic specimens, didn't appeal. Still, we knew a pump had been left at the foot of the second pitch, so we could inject new life into them there, before the start of the canals.

We changed into our caving gear, Dave and Paul laughing and taking photographs as Kev inflated his ThermaRest camping mat with it stuffed into the top of his wetsuit long-john. From the hut at the bottom of the doline, there was a ten-minute scramble over slippery boulders to the head of the first pitch. This was ten metres down to an eerie green lake, rigged with a tension-traverse to keep you out of the water. Well nearly; you were guaranteed wet legs, at least. At the far end of the lake, the rope was tied off to a ledge which was also the head of the next pitch - 65 metres,

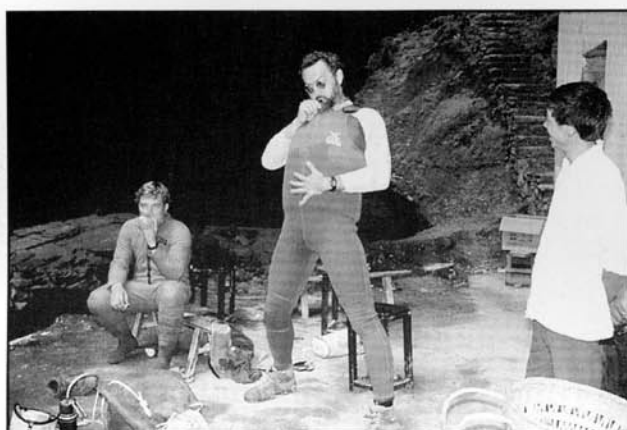
the last sixty free-hanging, down to another lake, five times the size of the one above. Illuminated by the soft even daylight filtering down from above, this was a forbidding place, with the smooth walls rising sheer out of the green water. At the bottom, the rope was belayed on a tiny ledge to one side, and this was where the pump had been left. Unfortunately quarter of an hour of struggling with the pump made no difference to either inner tube. As Kev had the wetsuit long-john, he offered to take the tube that barely had enough air in it to float itself, while the one I had did at least keep my upper body out of the water when I sat in it. For extra buoyancy

(and warmth) I had a Karrimat round my middle, under my oversuit.

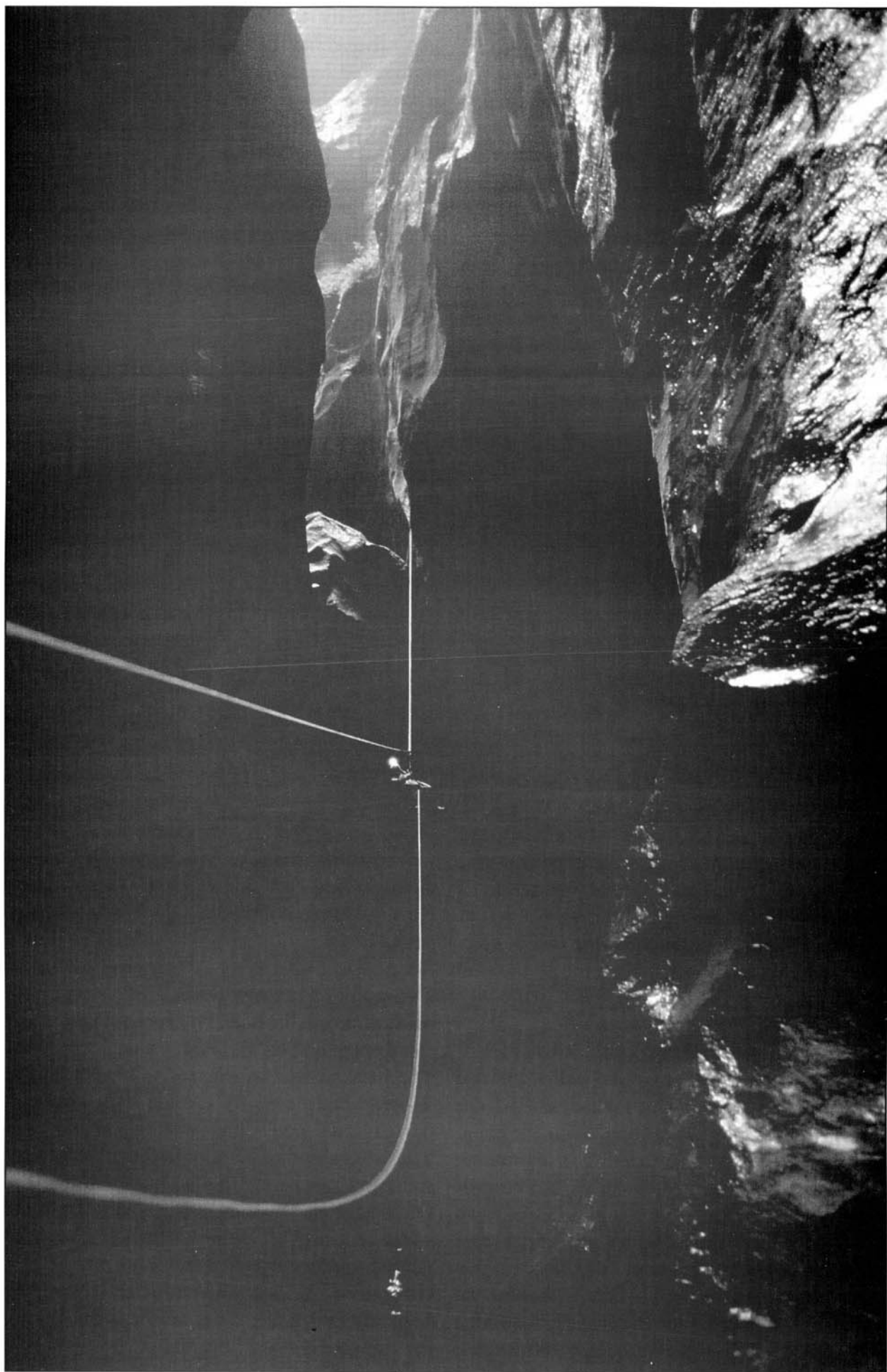
From the ledge, the SRT rope trailed across the lake to where it had been tied to a boulder at the start of the canals. We hauled ourselves across, feeling very vulnerable, barely afloat on the chilly water. Once across, we untied the rope,

yelled "rope free!" and watched as the end snaked across the lake and disappeared up the pitch, hauled from above by Dave and Paul. Now we were committed: there was no way back.

This really was a magnificent cave, though. I set off first. From the lake, we were straight into a canal, rigged with light line to pull through on. The passage was ten metres wide, possibly a hundred high, and my carbide light provided only a small pool of yellow light in the vast blackness ahead. The only sound was the soft splashing I made as I pulled myself along, the line emerging a few metres at a time from the water as I heaved. After a couple of hundred metres, the line was tied to a rock and I could climb out of the inner tube and scramble over the boulders, shivering. Kev, who'd been waiting for my shout, untied his end of the line and I



Kev causes amusement by inflating his ThermaRest with it stuffed down his wetsuit. Photo by Dave Checkley.



pulled him through, coiling the line as I did so. Part of our task today was to de-rig all these lines and carry them out, but even a few hundred metres didn't weigh much.

This was one of the few caves I've been in where the rock had a beauty all its own. The walls and the boulders were formed in dead-straight layers of beautiful pearl-grey limestone, interspersed with clean white stripes. Here and there were veins of green rock - "probably volcanic" pronounced Kev, who knows about these things. There wasn't a sharp edge to be seen, the boulders and walls sculpted into smooth shapes by the waters of innumerable floods.

Canal followed canal, each one divided by a short bouldery section which involved scrambling about, carrying the inner tubes, looking for the best route across, over and under the car-sized blocks that littered the passage. Some of the canals were hundreds of metres long, so that I had to shout at the top of my voice to let Kev know I was through. It was an eerie sight, the tiny pinprick of his light coming towards me from so far, barely illuminating the walls on either side of the dark, forbidding waters. The further we went, the fewer canals were lined. One in particular, far longer than any of the others, seemed to go on forever; paddling along was very strenuous, my arm and stomach muscles tense with the effort. My tackle bag, now full of line as well as my SRT gear, sat on my legs. Kev, his progress slower than mine due to his almost useless inner tube, could just be seen in the distance.

After four hours of this, we came to the bag. An orange one, bulging with 200m of wet rope. Colin and Brian had carried it this far, but left it

here on their final push, hoping they wouldn't need it. Immediately below us here were three short pitches, the first of half a dozen we had to de-rig. I went down first, then Kev de-rigged the rope, used the end of the 200m length from the bag to double through a sling, abseiling down and pulling it down behind him. By now, we had three tackle bags between us: the 200m rope bag, and two bags of line from the canals with our SRT kits. The original plan had been to cut the 200m rope in half and carry one length each, but if we'd done it this way Kev, with his inadequate flotation, would've sunk, so it was down to me. At each canal, the technique was: sit in the tube,

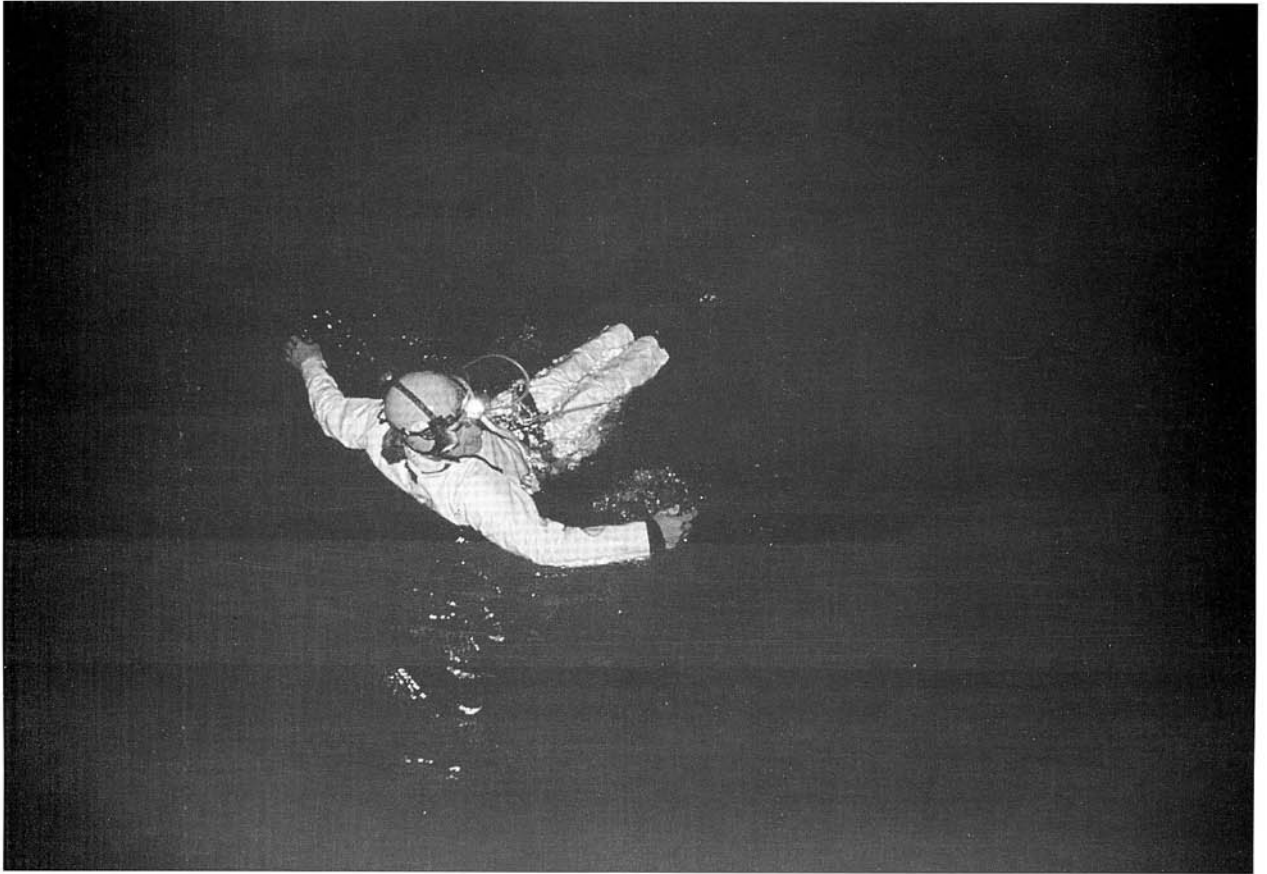


The hut at the base of the doline. The big black space at the top left of the picture is the entrance to the upstream section of the cave. Photo by Paul Seddon

pull the two bags onto my lap, and paddle. Heaving the bags off at the other end was a struggle, too. To make matters worse, the cave suddenly became very narrow. Every few metres there was a rock or a tree trunk wedged across the passage, which meant the getting in-and-out process

had to be repeated each time. The bags were incredibly heavy, full of water, and our progress was painfully slow. The bouldery sections were even harder - clambering around dragging two bags and the inner tube was hard work, and after six or seven hours in the cave my energy was fast draining away.

I don't know about Kev but I felt, at this point, very small and insignificant in this beautiful but wild cave. At one point, unbalanced by the bag, I slipped and crashed heavily to the floor. It was only later that it occurred to me how serious an accident here would have been: it was now eight o'clock in the evening. The resurgence was, how far? Once out of the cave it was an hour and a half's walk up a steep, wooded gorge to the nearest village, another hour and a half from there to the nearest road. You'd then be an hour's



The author reaches the far side of the lake after the trip. Photo by Brian Judd



**Dave Checkley on the tension-traverse across the lake at the bottom of the first pitch.
Photo by Tony Baker**

drive from our base in the village of Xinlong. If you had a car. We were both in soaking wet gear, in a very draughty cave. An accident? It didn't bear thinking about.

There were more short pitches, but by this time we couldn't be bothered to waste time and energy de-rigging short lengths of rope. We pushed on, tired, desperate to reach the resurgence. The only way to pass the pitches with pools at the bottom was for me to go down first, sit on my tube, and for Kev to lower the bags down to me. One of the pitches had a waterfall cascading down and I had to sit on my tube, my carbide light out and the water falling on my head while the bags came down. I put them on my lap, clipped them to my belt and paddled furiously across to the far side, gasping for air. It was only as I was heaving myself out of the water that I realised the rope bag wasn't properly clipped on. It sank, before my eyes, as the realisation dawned. I jumped back into the pool, up to my neck, and couldn't touch the bottom. Oh no! I went down again, the water over my nose, and could just feel the soft bag beneath my feet. Somehow I managed to find the strap, and dragged the bag out. A close one.

More canals, but progress was quicker in the water than out of it with the heavy bags. Another pitch, again with a waterfall crashing down on me while Kev lowered the bags. And then finally, nine hours after we started, we were almost out - complete blackness ahead of us slowly gave way to the soft glow of distant moonlight. Then the bolts at the top of the forty metre exit pitch appeared, and down in the distance beyond the lake below I could see two figures silhouetted by a small fire. I abseiled down the pitch first, then Kev came down on the

double rope and our relief when it pulled easily down was almost tangible. We paddled across the lake, exhausted but still buzzing with adrenalin from a magnificent caving trip. The two figures turned out to be Brian Judd and a Chinese lad, who'd waited all evening for us.

We still had a long walk, to where we'd spend the night in a mud-built Chinese farmhouse, pestered by mosquitoes in the sticky heat. But we'd done it - in terms of exposure, the most extreme caving trip I'd ever done. A through trip of more than four kilometres. The caving trip I'll probably remember long after any other. A caving trip that, so far, only eight people have ever done. (And how long will it be before anyone else does it, given its remote location?) An awesome, beautiful, yet frightening cave. Everything you could ever wish for in a cave, in one trip.

Further Reading:

"China Caves Project 1994" by Dick Willis, in *Caves and Caving* no. 67, Spring 1995

"Into Downstream Doline" by Brian Judd, in *Descent* no. 123, April/May 1995

"Caving in China" by Tony Baker, in *SWCC Newsletter* no. 114, 1994

See also "Caving on the Radio", on page 54 of this Newsletter.

Additionally, a full report on the 1994 Yangtze Gorges Caves expedition is due to be published sometime in 1995.

Castlemartin Caves Visit, November 1994

by Mel Davies

Date: Sunday 6th November 1994; Low tide of 0.61m at 1350hrs.

Cavers: R Atkins, K West, B Savidge and M Davies.

With permission from Lt.Col. Portman, kind weather and a key to the gate on the Castlemartin Range, four cavers and equipment were ferried in one car as far as Saddle Head. The map shows the area selected for intensive cave and pothole searches, scale 1:5,000 with our five main sites identified, as well as the well-known Ogof Gofan which was last visited in November two years ago.

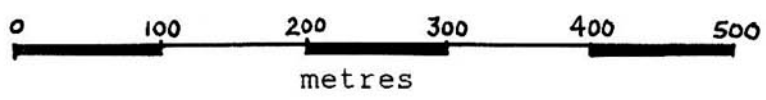
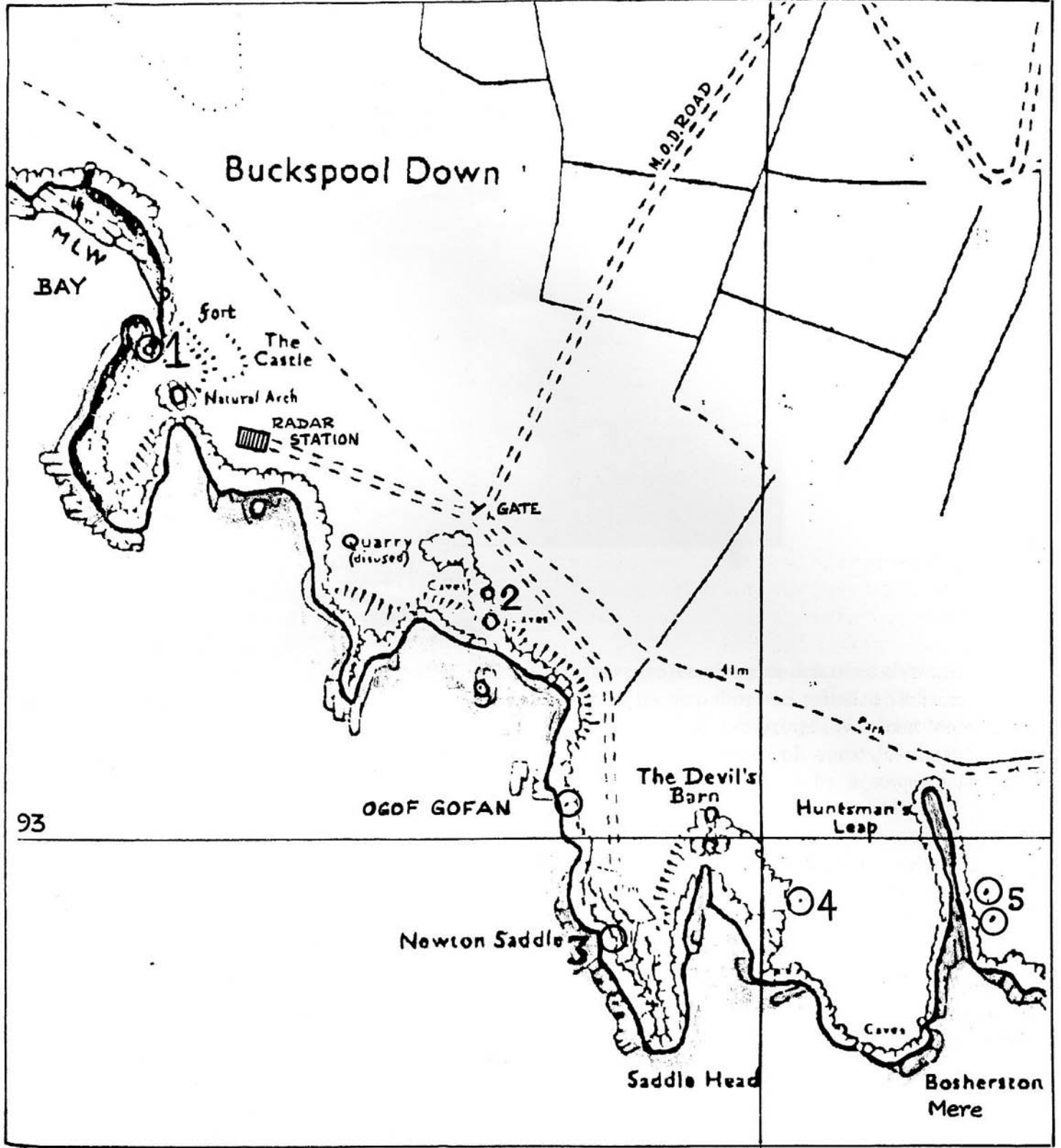
Site 1 is an impressive pothole some 10m across but with an apparent floor only 12m down. We seem to have descended into it on 1st October 1966, but it was not properly bottomed until 7th March 1970. Using various abseil methods Bob and I reached the first floor, then slid another 20m through a window which breaks out into a vertical cliff facing north. Holds are plentiful for the final 10m to the beach, dry at extreme low tide, and some 35m below cliff top. The route gives access to a beach 150m across facing SW from which many black holes seem to lead off. All are shallow sea caves, some decapitated by cliff collapse which is a still active process, but one cave lay 12m up at SR 9540 9355 facing west with one large entrance. Reached by an easy climb the cave had a single chamber 8m across containing 2m of red clay in a pocket at the back, stratified but not archaeological. A short passage connected with another entrance and faint daylight could be seen through a third, but there was no way on. The tide was still quite low so Bob and I walked under the huge arch marked on the map

as "Natural Arch". More sea caves were situated here, all disappointing, but running east and 4m off the beach was a nice phreatic tube almost big enough to stand in. Unfortunately we could not reach it at first but several timbers lay about abandoned by the retreating waves, so we selected three of them, jammed them across, and Bob was soon inside. The passage ran over 10m, getting smaller and blocked by pebbles. Bob dug some distance but rising tide prevented serious work and we beat a retreat. Interesting though to see a "proper" cave hidden in the shelter of the gigantic arch. Of course, it is only accessible for about two days either side of a good spring tide. These tend to fall in February to early April, and late August to early November. Remember that the first period largely clashes with bird nesting so autumn exploration is best.

Shown on the map is Site 2 but this could not be visited on this occasion. It is another natural arch entered via a sloping tunnel which we explored on 18 March 1984. Owen Clarke described some sea caves gained by using the tunnel to reach the beach at low tide. There was also one cave with stalactites but it was not pushed hard to avoid damage (see Cwmbran C C Silver Jubilee Journal, July 1992, page 89).

Site 3 is on the west side of Saddle Head where four caves were investigated by me on 18 September 1993. All were very short, some with stumpy stalagmite remnants, and none archaeological. Immediately north of it is Ogof Pen Cyfrwy - a large chamber and shaft to the sea which we have not visited for many years.

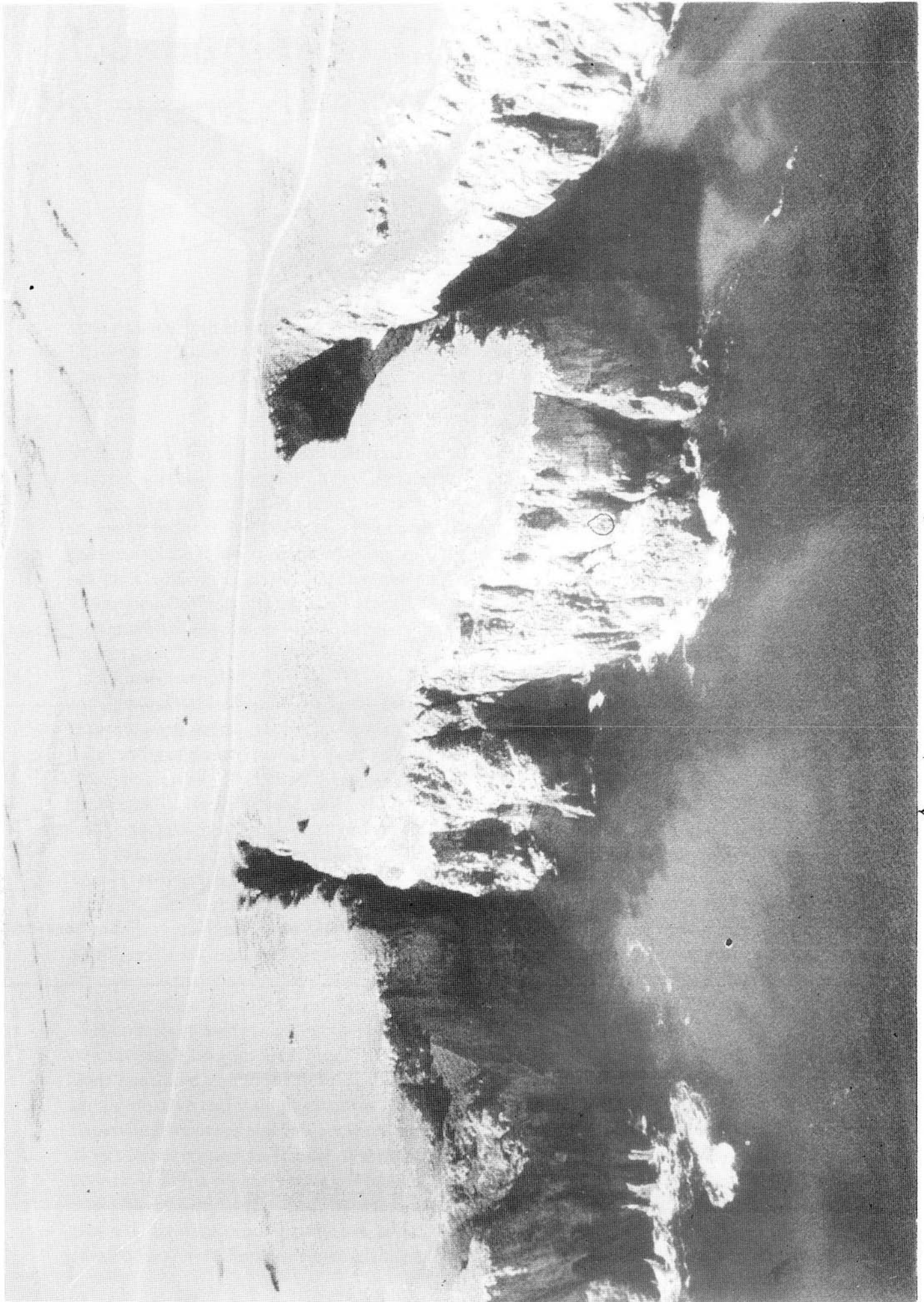
Site 4 is a pothole at SR 9604 9295 first attacked



CASTLEMARTIN CAVES

CAVES AND POTHOLES WEST OF ST.GOVAN'S CHAPEL

1994



SÖÖ, FÖÖDÖLLÖ

↑ Cgof Dim Dringo

HUNTSMAN'S LEAP & RAINING HOLE

POTHOLE





Huntsman's Pothole, SR 9621 9295, 6/11/94

by Dave Lewis on 15 December 1991. He descended 10m to a ledge where the pot opened out. Returning with Syd Yates on 21 August 1993, he used SRT to reach the floor of what proved to be a sea cave some 41m down. The noise of waves can be heard up on top except at very low tides.

Site 5 consists of two potholes on the east side of the narrow inlet known as Huntsman's Leap at SR 9621 9295 one of which emits weird noises. Choosing the southern one Bob Savidge donned his SRT gear and disappeared from view. The shaft was blocked at just over 10m so Bob came up and dropped into the noisy one some 20m to the north. At 30m he landed on a boulder pile and could hear the sea pounding under a continuation to the south. Nothing to be gained going that way, but to the north a passage led off which ended in a step of 6m in an opening into the great gully of Huntsman's Leap. If the fabled horseman ever did jump over the inlet he would have been a champion at Aintree. The tide was now fast coming in which stopped us linking the pothole with the sea cave the easy way. However we could at least tick off the cave in the series shown in the photographs of the cliffs we had taken from the Army Range Vessel in June 1993 and again in June 1994.

One other cave remains to be described although it is just off the map shown. Situated at SR 9629 9282 we call it Ogof Dim Dringo (Welsh for "No Climbing" Cave) for it is only some 7m above high water but is accessible by a somewhat exposed scramble down the cliff face. Although the entrance is impressive being 3m wide and 2m high, the cave only runs around a single corner to stop dead within 10m. On a ledge at the back an earthy deposit had survived winter waves and was found to contain merely three bird bones from at least two species of bird - so we had absolutely no archaeology to show for our day's work.

We know that there is yet another cave to be explored a little nearer to St Govan's Chapel to the east, and many more holes appear in the photographs away to the west, but for now the orbiting moon had pushed the Atlantic too close for comfort. Permission has already been obtained for another visit on 4th December, and we are quite, quite sure the caves will still be there.

O.F.D. I in Flood, Christmas 1994

by *Tony Baker*

"The stream can rapidly become impassable, particularly to novices, and leaders should avoid it when higher than six inches at The Step."

- from the OFD I access rules.

All night long, the rain lashed against the bedroom window of my wife's parents' house in Cowbridge, waking me several times. In the morning I drove up to Penwyllt, windscreen wipers on double speed as the wind tried to blow the car across the M4. As I turned off and drove up the valley towards Pontardawe, I was surrounded by lakes where usually there were fields. Rugby posts stood forlornly in the midst of vast pools, whose surfaces were whipped up by the wind.

I arrived at the club, to be told that the weather had been the same all over the Christmas break. I later learned that, between 10am on the 25th December and 9.30am on the 27th, more than four inches of rain fell in the valley*.

Since caving options were severely limited, Steve West and I later decided to go into OFD I and take a look at the water levels, and John Elliot and Nikki Adlam of the RFDCC, who'd been at the club over the Christmas break, came along too.

As soon as my head dipped below the level of the gate, I could hear an ominous roar. Inside the cave, water streamed in from every crack. There were streams flowing over what are normally dry floors, and the rumble of the main stream could be heard everywhere we went.

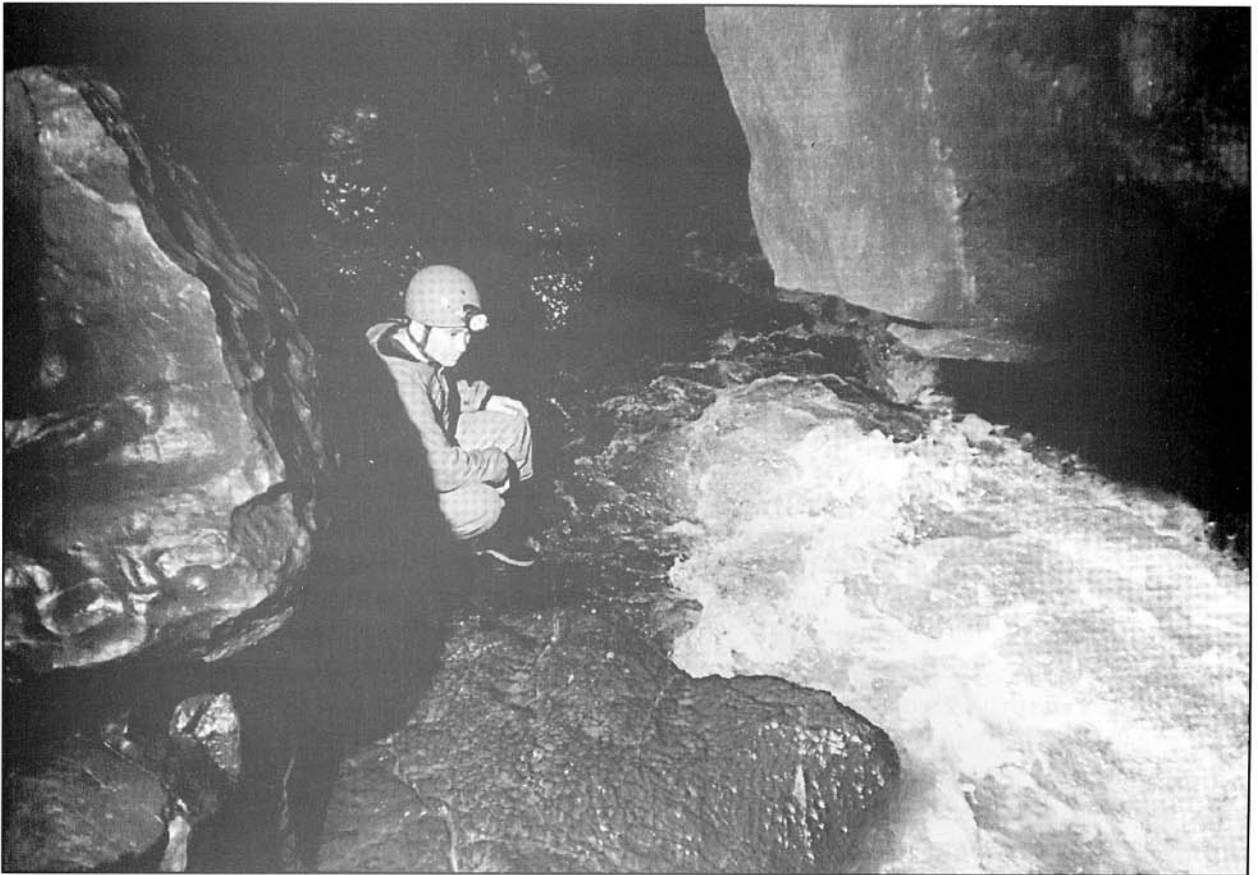
We went first to The Step. The water rushed past, somehow not as noisy as one would have

expected but very impressive: normally when you stand on The Step, the ledge you've just clambered down from is at about chest-height, today the water was lapping over that ledge. Like many others, I have in the past gone into OFD I in high water to play waterslides in the stream; sitting in the water and letting it whisk you quickly down the steep sections and climbing out at the slow bit by The Step. Today, even attempting to climb into the stream, you'd have been swept away instantly. While taking the photographs shown opposite we had to be very careful not to slip, as the consequences would have been dire.

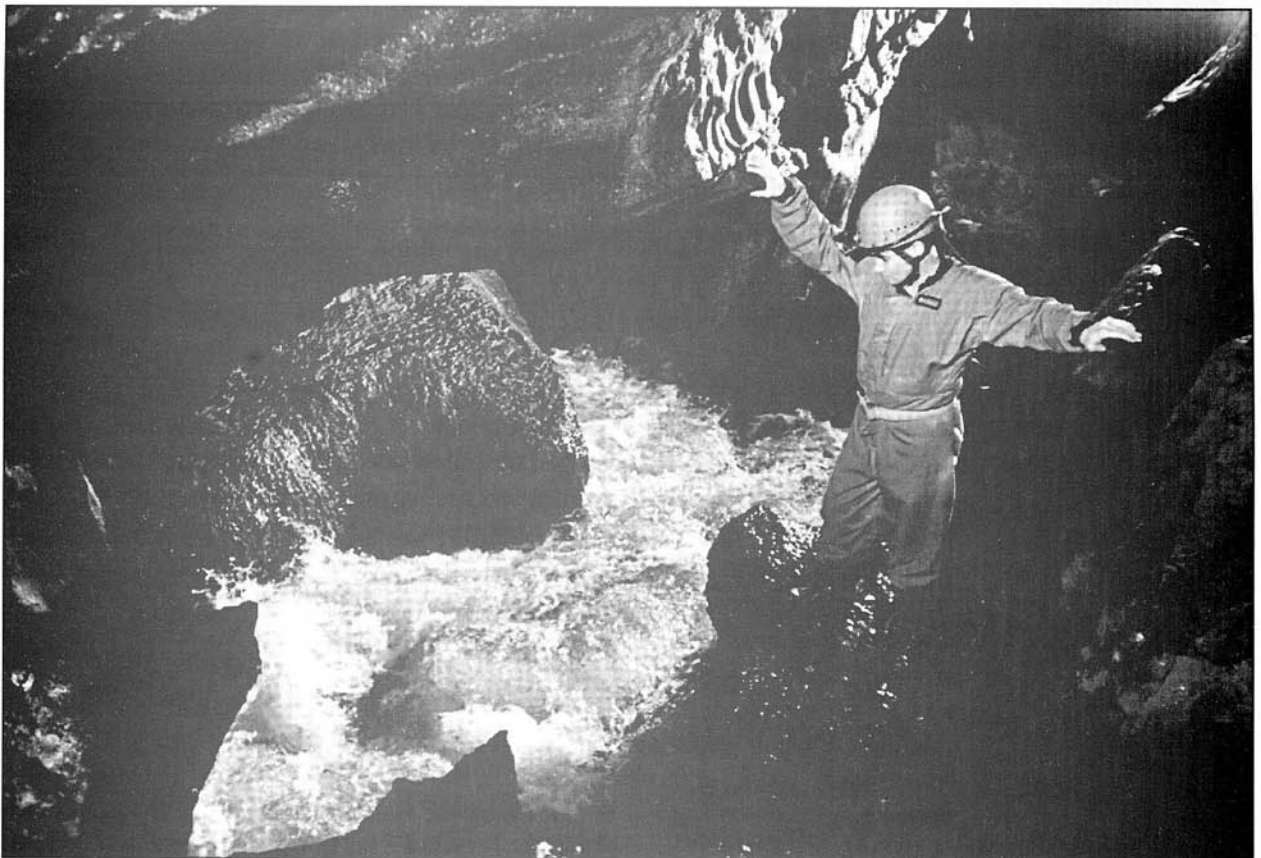
Once we'd taken our photographs, Stevie and I thought it was worth a quick trip over the Escape Route to Lowe's Chain. Here the stream was equally impressive, the chain at an angle of 45 degrees to the vertical and the water a brown, frothy torrent. Since two more inches of rain fell over the next twenty-four hours, the stream must have been even more spectacular the next day.

For those who've never seen it, OFD I in water levels this high is well worth a quick trip; it reinforces the respect one must pay to water underground, and gives an insight into the forces that must have been at play over many thousands of years to form the caves with which we are so familiar. Just be careful!

** Weather information kindly provided by Laurie and Mary Galpin. They recorded a total of 97.52 inches of rain during 1994 at their home weather station, of which 9.78 inches fell between Friday 23 December and Saturday 31 December.*



Steve West at The Step, taken looking downstream. The ledge at his feet is the one normally at chest height when standing in the stream at this point.



Looking upstream. Photos by Tony Baker

Caving on the Radio

by *Tony Baker*

Before 1994's expedition to the Yangtze Gorges area of southern China took place, we were contacted by Revolution Recordings, an independent radio production company. They were putting together a series of programmes under the title "Tales from the Back of Beyond", for BBC Radio Four, and wanted to include our trip in the series. To achieve this, they lent us two tape recorders (one a professional-style machine, the other a more portable "Walkman" type), gave us a pile of cassettes and some basic instruction, and let us get on with it.

The idea was that we would describe scenes and events as they happened, and record some sounds to be used as "background". The tapes would then be handed over to be edited into a half-hour programme, although we would have some editorial control over the finished product. In return, Revolution Recordings gave the expedition several hundred pounds.

Until you have to do it, it is hard to realise how difficult it is to describe a scene for an audience who are effectively blind - radio listeners. This is especially so with caving, since no knowledge at all of the subject being described can be assumed. We all took turns at using the machines, to describe not only what we were doing but also the scenes and situations that make travelling in China such an intense experience.

The tape recorders were taken on many caving trips, even some of the more extreme ones, but of course all of the really dramatic incidents occurred when they weren't present and had to be described later by those involved. In many ways this was an advantage, since it enabled the whole event to be summed up in a few sentences.

Inevitably, most of what we recorded wasn't used. To

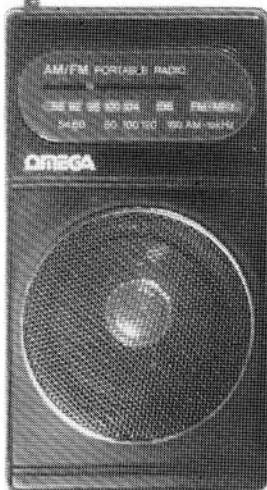
edit around twenty hours of cavers' mumblings down to a concise half-hour programme must have been a monumental task, and the finished item was an excellent representation of the expedition.

Most of the caving pieces used were those recorded at the beginning of the expedition, when we were exploring the "great doline", although some bits from later in the trip were cut in to include some of the more interesting occurrences. There was plenty about food and living conditions in China: we had realised when making the recordings that many people in the radio audience would find these aspects more interesting than the caving.

Cavers are very quick to criticise television or radio programmes about the sport for being too superficial or over-emphasising the risks, but it is important to realise that very few members of any audience for such programmes have the slightest idea what caving is all about, and need to have their attention grabbed and held. I feel that "Tales from the Back of Beyond" struck an excellent balance, giving a good insight into the realities of life on an expedition without making the audience think we must all be raving mad. Too often, this is the reaction to programmes made about caving by insensitive producers looking for the sensationalist approach.

Like any expedition, we had our share of thrills and spills, which all made for good radio: Steve Openshaw described how he managed to pull Phil Goodwin out of the water just as he was about to disappear into a raging torrent in the "Great Crack", and Dick Willis told, in typical self-deprecating fashion, how he was helped up after a fall underground by a young lady in high heels, who then took his bag and skipped merrily on up the boulder pile. Pete Francis could be heard eloquently comparing the risks one takes while caving in expedition circumstances with those taken in Britain. For my part, my reputation as an expedition caver will no doubt be enhanced by the fact that the only time my voice is heard in the whole half-hour is when I'm describing the scene in a karaoke bar!

"Tales from the Back of Beyond: China" was broadcast on Tuesday 21 March 1995 at 10am on BBC Radio Four, and repeated at 5pm the following Sunday.



The Bones from Dinas, Llandybie, at Carmarthen Museum

by *Mel Davies*

As part of a programme of identifying bones from caves held in museums, the Dinas collection held at Carmarthen Museum, The Old Palace, Abergwili was examined in November 1994. Dinas is a hill of carboniferous limestone at SN 612166 north of Llandybie, now largely quarried away but with a cave recorded on it in the 1963 edition of "Caves in Wales and the Marches". A local tradition existed in 1962 of "a cave large enough for cows to shelter in" but it had been lost even then, however a good description is given in Volume 15, 1946 of "The British Caver", and this is repeated with some variation in Volumes 28 and 29. Despite confusion in some publications, the Dinas cave is quite separate from Ogof Pant-y-Llyn and Ogof Cil-yr-Ychen although all lie within one speleologically-rich square mile north of Llandybie. Further confusion is caused by the alternative name Ogof Craig Derwyddon for Pant-y-Llyn, and the entirely separate cave of Kil-yr-Ychen of which no record survives after 1843.

The bones made available with the kind permission of Mr Gavin Evans at Carmarthen Museum were only traced after reference to a letter written on 24 December 1914 by G E Evans, secretary of the Carmarthenshire Antiquarian Society and Field Club, to Alan Stepney-Gulston which is now in the Carmarthen Records Office. They proved to form a very small collection the contents of which does not equate with the "Dinas" remains recorded by the Dyfed Archaeological Trust (Record numbers 4869, 7521 and 7522).

The bones identified on 16 November 1994 were as follows:

The Dinas, Llandybie, Acc.no.A75 1091 to 1096, dated 1910.

1091-left radius, proximal end, sheep/goat, 90mm long.

1092-left humerus, distal fragment, sheep/goat, 108mm.

1093-mandible fragment comprising left mandibular hinge, cow.

1094-left calcaneus, complete, 122mm, cow.

1095-phalange, 58mm, cow.

1096-metacarpal or metatarsal distal fragment, 128mm, cow.

The Bos species bones numbered 1093 to 1096 are from a small cow and none of the bones seen carry any stalagmite. They are thus unlikely to have come from a cave. In view of what has been recorded by DAT and the account of an excavation in 1910 on the summit of Dinas Hill published in 1917 by the Royal Commission on Ancient Monuments in Wales and Monmouthshire (page 104, No.297), the bones probably all originate from that excavation which seems to have been into a hill fort from the Iron age-Romano British period. However the publications also refer to horse bones, a hyena tooth, human bone and a human molar. None of these is present in the collection examined.

Letters to the Editor

Dear Sir,

I am not generally inspired to write letters responding to articles that have been written in magazines, but this has all changed since reading "To Dig with Nig" (*Newsletter no.114, 1994*). To state that the Black Mountain is not being prospected by people other than those mentioned is wrong. I know that quite a number of others are working the area, but their lack of desire to write about their exploits in a magazine doesn't make them irrelevant. They just get on with it and publicise the breakthroughs if and when they happen. I think all cavers involved in this work experience nightmares in boulder chokes and desperate digs, even if Nig happens to not be there. The article clearly expresses Paul's admiration of the sheer manliness of Mr. Rogers, which is fair enough, but two points need to be raised. Firstly, I think the title of the article should have been changed to "Nig, I Want to Have Your Babies", and secondly, it should have been a little more factual. I am mainly referring to the exploration of Ogof Dan Y Lleud Wen which was discovered by a member of my old club, ISCA C.C. The account of how the exploration of the rift passage was poached from Liam Kealy is not how it happened, to my knowledge. Liam is a good friend and caving partner to me, and knowing the guy well, it came as a surprise to read that "Liam gave Nig the nod" to carry on exploring where he had left off. Liam is not the sort of bloke to give up exploration easily. Giving Nig the nod can only mean one of two things to me; firstly that Liam invited Nig to finish off the push, or secondly, Liam nudded him. I don't think either of these things happened. Still, you know the old saying, "Never let the truth get in the way of a good story".

Steve Thomas.



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