



SOUTH WALES CAVING CLUB

CLWB OGOFEYDD DEHEUDIR CYMRU

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South Wales Caving Club

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Contents

2

Farewell to Colin
by Bob Saunders

5

**Some Points for
Cave Rescue Team
Members to
Consider**
by Alan Wood

7

**Conservation in
Ogof Ffynnon Ddu**
by Julian Carter

10

**Rope Washer Design
- Some New
Thoughts**
by Paul Meredith

12

Remote Sensing
by Paul Thornton

16

**Excuse Me, Mr.
Sheep...**
by Brian Bowell

18

Rupt Du Puits
by Paul Tarrant

23

Cavers' Fair 1995
by Jopo

28

First Impressions
by Ow Harvey

30

**Daren Cilau:
Memoirs of a
Support Diver**
by Joel Corrigan

34

**The Great Penwyllt
Bang Gang**
by Steve Thomas

39

**Picos '95: Sistema
Sara**
*by Joel Corrigan,
Neil Weymouth,
Dominic Wade, Julian
Carter and Pat Hall*

50

Memoria in extremis
by Pat Hall

52

Letters to the Editor

Front Cover photo:
Julian Carter in Top
Entrance, Ogof
Ffynnon Ddu II, by
the late Giles
Barker. (See article
on p.7)

Back Cover photos:
Views of the Picos
de Europa, taken
by Dominic Wade
during the Sistema
Sara expedition,
Easter 1995. (See
article on page 39)

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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

From the editor's point of view, the best thing about putting this edition of the Newsletter together has been the sheer variety of the material. There really is something for everyone, I think, in this one - I hope you enjoy it. I'm especially pleased that so much of the material has come from people who have not written before, or have done so only infrequently. At least one contributor is not yet a full member, and another has become one only recently, so I'm hoping this will encourage a few others to put pen to paper. I'm prepared to accept contributions on any subject that may be of interest to members and other readers.

By the time you read this, the summer trip to the Pierre St. Martin will have taken place. (In fact, as soon as I've finished writing this, I'm off to pack the car...) It's my intention to make the next Newsletter a "special edition" on the PSM in similar vein to no.113, the Gouffre Berger edition. So if you were there, this is a reminder to get on and write something. As part of that, I'd like to include a special "equipment and techniques" section, with ideas that were tried and tested in the PSM that might be of use to other cavers. This could be anything: lighting, clothing, SRT gear, underground food and drink, whatever you like. And you don't need to have been to the PSM to contribute - if you feel you could write a few words about a piece of gear or method that you've been using, let me know. Of course, the fact that much of Newsletter no.117 will be about the PSM doesn't mean that other articles aren't welcome as always.

Sharp-eyed readers will have noticed, on scanning the contents page that precedes this one, that there are no articles this time by that most regular contributor, Mel Davies. Mel has, sadly, been unwell following a serious operation earlier this year, and his road to recovery has been a slow one. He has written to me recently to tell me that he is making progress, and is now managing short walks around Swansea Marina where he lives. Mel tells me that he is happy to see visitors from the club (some of whom have accompanied him on his walks), and I'm sure all members will join with me in wishing him a speedy return to full health.

My rather terse editorial in the last Newsletter had, at least in part, the desired effect: several people rang me within a couple of weeks of publication to offer articles and ideas for the 50th anniversary publication. I've also received some photographs and some interesting historical artefacts from the club's history. This is a start, at least, but much more is needed if the thing is going to be the completist work many of you are expecting. I cannot emphasise how important it is that you start writing NOW, if you are able to offer a contribution. This means you, if you have been involved in any significant club activity over the last fifty years. I need to start work in earnest on the project in the near future, so please ring me or write if you're planning something (or you know of someone else who could contribute).

Farewell to Colin

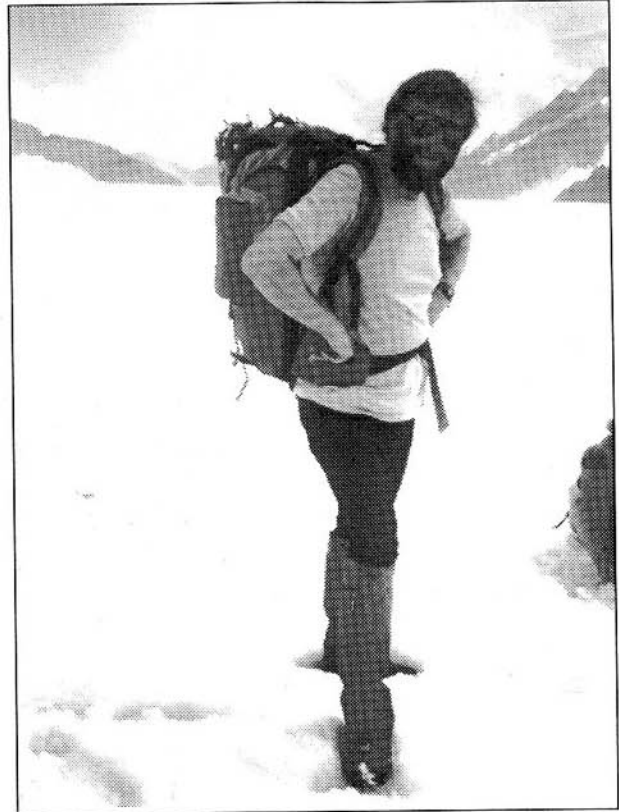
by Bob Saunders

My first recollection is a windswept Penwyllt and a man wearing neoprene socks, shorts and a very muddy, greasy woollen jumper with more holes than fabric. His reddened cheeks were glowing after a cold, wet walk from the cave, maintaining a serious expression whilst thawing out and dripping in front of the then fireplace in the main kitchen area.

Introductions were made, but it was many weeks before this new boy accompanied those in the know at HQ on any underground event. Ogof Ffynnon Ddu was in the process of giving up its secrets at Cwm Dwr, Maypole Inlet and onwards to III: there was a great deal going on, and after suitable initiations and slow absorption into one of the caving circles, Colin Fairbairn and I became regular caving partners and, in time, close friends.

A postgraduate Physics student at Swansea, Colin joined SWCC via the university club and for a number of years in the 1960s was part of the successful teams that pushed OFD and Dan-yr-Ogof to their current limits. He left South Wales for Libya and other exotic places at around the same time that many others of the then active groups were exporting themselves, and later returned to work in London, where he met his wife, Marion.

In all aspects of his life Colin was, in a sense, a high achiever with all the benefits that accrue and the inherent problems that can be created. In his professional life, he rose to the top at the then NCB Geophysical department and was deeply involved in work for the nuclear industry at Sellafield. When not travelling the countless miles required for his work, Colin found peace and quiet in a splendidly-set home near Doncaster with his wife, his garden and his pet geese.



Colin bagged, so to speak, many firsts - although that was not his driving force, he believed above all in getting the best out of himself and in pushing himself to the limits, and in the process dragging others along to find their own parameters. He left his mark in the caving world - for instance, he was the first to scale the Maypole Inlet and push upwards into the dry cave beyond. He was with the Swansea University team when Pete Ogden first passed the Long Crawl in DYO, months before it is generally known or agreed that it was conquered.

With Terry Moon and partners he passed The Rising to discover DYO III, and with Terry Moon and Dick Arculus he dived to "The Bridge" in the Mazeways sumps, not far compared to today's cave dives but in 4mm ripped wetsuits, with 40cu.ft. bottles, a "Snark" valve, and Nife cell lighting it was setting the standards of the



Photos of Colin by Bob Saunders



day, right at the cutting edge of the sport. He also led the dive to pass sumps 5 and 6 in Hospital Cave, with Mike Coburn and myself.

With Dick Arculus and myself the first round trip in OFD, from resurgence to Smith's Armoury and back via Dip Sump was completed.

A substantial part of the OFD II and III survey completed in the 1960s was due to Colin's work, and his ability to coerce others to hold the tape measure and run around for hours on end up passages you knew didn't go anywhere (but sometimes did!).

As a keen walker and man of the mountains he achieved much, to his own satisfaction, whether by a Yorkshire stream or bivouacking on an Alpine peak, and in later years he became a

proficient offshore yachtsman. A man of many interests and talents: possibly only those who yearn for and seek out the kind of adventures we know can appreciate the extent of those talents, and understand why one does it.

It has been my privilege to share so many experiences, the odd chocolate bar in some obscure hole, or a dish of Libyan stew in a freezing tent whilst "putting the world to rights". I mourn his passing and on behalf of the club, his friends and acquaintances pass on our sincere sympathies to his widow Marion, who worked so hard with and for Colin, and to his father. His is a tragic loss and he will be missed but not forgotten.

"We are such stuff as dreams are made on and our little life is rounded with a sleep"

Some Points for Cave Rescue Team Members to Consider

by Alan Wood

Mike Fanning, of the Lake District Search & Mountain Rescue Association recently produced some comments regarding liability of team members over possible claims of negligence whilst conducting rescues, together with other matters that he felt ought to be brought to the attention of their members. As the remarks made are just as relevant to members of cave rescue teams, the WBCRT Executive thought it a useful exercise to bring the information to the attention of the members of the various clubs who form the WBCRT, whose members could be called on to assist in a rescue, either in our own area, or in another area where they may be caving or live.

Some of the following comments have been taken verbatim from Mike's notes, or adapted to suit the purposes of this article.

Negligence

The difficulty with giving any specific guidance with regard to the question of negligence is that the subject is largely a theoretical area, and until tested in court will remain so. There would appear to be no reason in law why an action against members of a cave rescue team should not succeed. In the case of a registered charity, such as WBCRT any action would be brought against the trustees, and cannot be defended without the permission of the Charity Commission.

Given that the success of such an action would deal a devastating blow to voluntary mountain and cave rescue teams in this country, it is to be hoped that any court considering such an action would dismiss the action on the grounds that to allow it to succeed would be contrary to public interest.

However, although this would at the current time appear the likely scenario, it should not encourage complacency. Any caver asked to assist in a cave rescue should ensure that they are adequately trained to carry out any task or treatment they are contemplating.

It should be realised how important that the first action in any rescue incident is to follow the correct procedure for contacting the police, as only then will cover on the police insurance policy take effect. Without carrying out this procedure, it could be argued that any action was being undertaken outside the auspices of the team by a group of individuals and any liability held by the persons concerned. WBCRT is currently looking at the question of public liability insurance over and above the insurance that is obtained from the police.

Bearing the above points in mind, it would perhaps be useful to outline the principles of the law of negligence and how it would affect a cave rescue team and its members.

Negligence is proved where a court is satisfied:

1. That the injured party was owed a duty of care by the defendant;
2. That the defendant has failed to discharge that duty;
3. That the defendant's failure has caused a loss or injury to the injured party that can be attributed to the defendant's failure.

All three elements must be proved to establish the defendant's negligence. The standard of proof is on the balance of probabilities - i.e. was

it more probable than not that the defendant was at fault. Dealing with each question in turn:

a. Duty of care?

There is no duty upon a cave rescue team to undertake the rescue of any person. However, the moment a team accepts a call for assistance the duty of care will be established. There is still no obligation for a rescuer to place his life in peril whatever the circumstances. A recent court decision concerning a delayed rescue undertaken by the Coastguard service lends weight to this decision.

b. Failed to discharge duty?

In practice, an injured party will allege medical malpractice on the part of his rescuer, or a failure in the mechanics of the rescue itself.

To answer whether such a failure has occurred, the court must establish a standard against which to judge the actions of the rescuer. The relevant standard may be any of the following, when placed in the same situation as the rescuer:

- i) The ordinary reasonable man;
- ii) The ordinary competent caver;
- iii) The ordinary, skilful, careful and competent cave rescue team member;
- iv) The ordinary skilled man exercising and professing to have that special skill.

At the present time no decision exists directly affecting cave or mountain rescue. It would be prudent to assume the standard as being that set out in iii) above. However, the more specialised the techniques used by the rescuer then the more likely it is that the relevant standard will be that of iv).

c. Loss or injury?

The injured party can only succeed with his action if he or she can demonstrate that they have suffered loss or injury as a result of an action, or inaction, on the part of the defendant. Their condition must deteriorate as a direct result of the defendant's intervention. This will always be a simple question of fact.

As stated at the beginning, until such time as a

case is brought to court it is difficult to know what the outcome of any action would be. It is better to be aware of the potential and plan for it, rather than stumble along hoping we would not be the test case.

Personal Matters Affecting Cave Rescuers

1. Wills

Every person in the UK should have a will. Cave rescue can be inherently dangerous and the family of a Team member killed in the course of duty, so to speak, will receive a not inconsiderable sum via the various insurers involved. Suffice it to say that the current intestacy laws would be woefully inadequate in this situation. This, in turn, will cause further - avoidable - heartache for the family involved. The cost is not too great; a couple should be able to obtain wills for less than £60 + VAT.

2. Endowment/Life Insurance/Accident/Medical Policies

A great many Team members, certainly those with mortgages, will have one or the other such policy. Failure to notify the insurer of that member's involvement in cave rescue, or failure to pay any increased premium will void the policy should the member be injured/killed whilst on a rescue. This would cause horrendous problems to a member who is unable to work, or to his surviving family in the event of his death. The advice to the insurance company should be specific of rescue work over and above pure caving activity. It would be wise to get confirmation that you are covered in these situations in writing, in order that there could be no way the insurance company could deny having been told at a later date.

3. Individual Vehicle Insurance.

Those Team members who may travel in their own vehicle to the scene of a callout should notify their insurer of that fact or run the risk of finding their cover limited to 3rd party only in the event of an accident.

Alan Wood is Hon. Treasurer of the West Brecon Cave Rescue Team

Conservation in Ogof Ffynnon Ddu

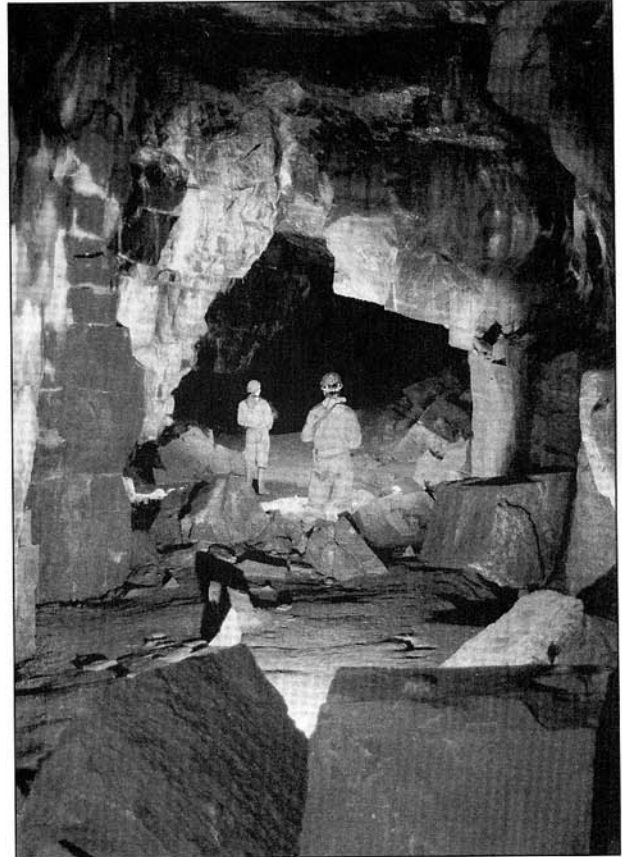
by Julian Carter

Being part of the caving fraternity we are all aware of the importance of OFD in our caving heritage. The cave has, luckily, seen a high regard for its conservation ever since it was discovered and this owes much to the insight of the original discoverers who made attempts to conserve the cave almost from the beginning. These original attempts could well be considered to be ahead of their time, and at one time even controversial. Politics aside, when one considers the level of usage OFD receives it has survived remarkably well.

However the pressures the system is under from a continuous string of visitors is starting to take its toll, especially in the area of Top Entrance. I do not think one could have anticipated the level of usage the cave now receives, especially back in the 40s and 50s.

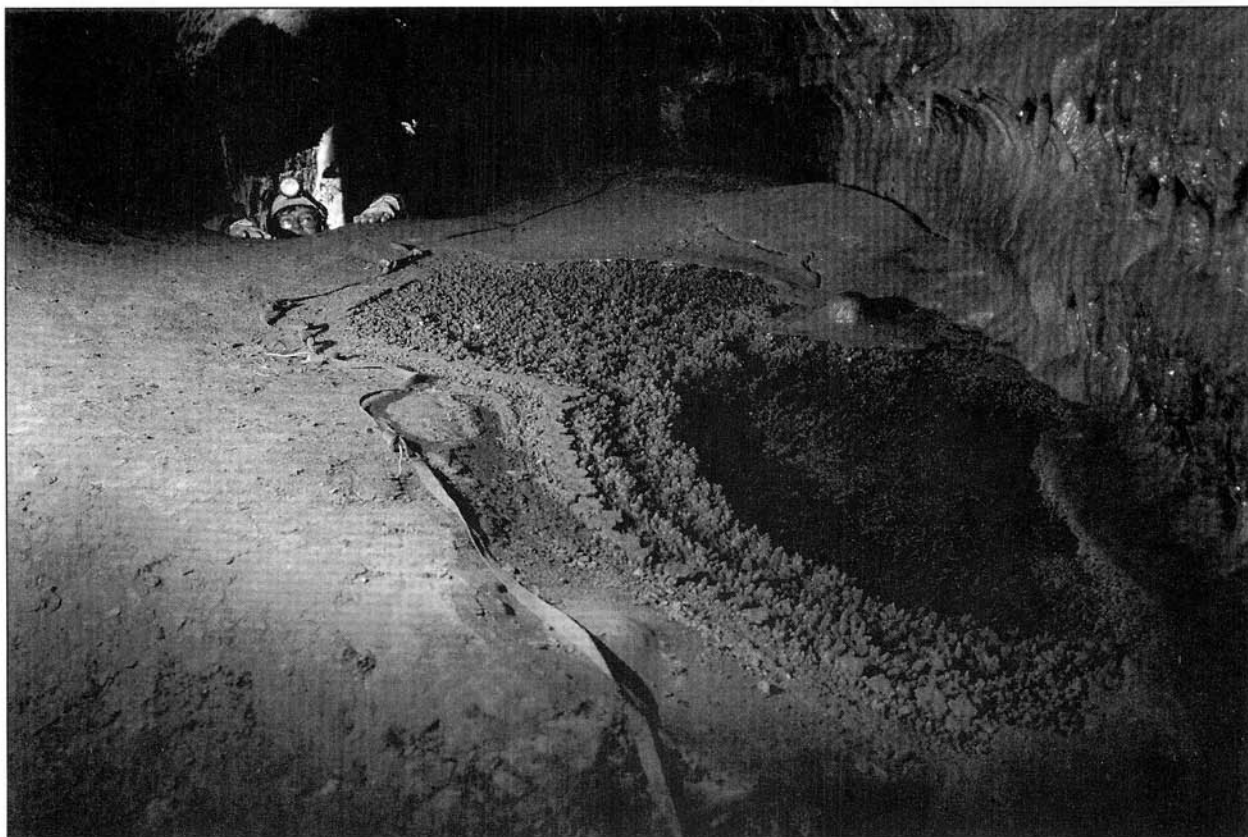
The cave now needs a fresh look at its status and condition, both in the underground and surface environments. The question is how does one approach the issues? The problem is within the areas of heavy usage in the cave, especially around the more open entrances of Top and Cwm Dwr, and the trade routes from these entrances. The level of polishing on the rocks bears testimony to this, and the degree of erosion on open mud floors is very noticeable. The very act of us entering the cave will cause damage, but closing the cave is not the answer. We are cavers and we enjoy the sport, and thus must find a balance between the damage we cause by usage with the overall preservation of the cave for all future generations.

The area needing most attention is Top Entrance. I think many people consider the floor and features which have never been taped off already



Jason Tyler and Julian Carter in Top Entrance, by Giles Barker

trashed and therefore not worth conserving. However, if you look carefully there are areas of undisturbed sediment, even around Top Entrance, and much of the trampled flowstone is still active. Fresh tape and cleaning will enable many of these features to recover. Thus it is now time to look seriously into carrying out a taping and cleaning exercise to contain the level of damage by creating specific sacrificial areas, particular in regions of the cave suffering very heavy usage, for example, the Labyrinth. Such projects must take care not to become over-zealous and create a feeling of being guided or barred in by "fences" of tape, yet must achieve the aim of extreme long-term conservation. This concept will horrify some: not more awful orange tape



A crystal pool near Edwards' Short Cut, OFD II. Here, the tape needs cleaning and lifting from the floor. Photo by Giles Barker

littering the cave (maybe we should try floral pink?). The best example which demonstrates the benefit of taping and access control policies is to compare OFD with Easegill - those who know Easegill will understand! Taping works - it is cheap and effective, and in conjunction to preserving features it can also bring features to people's attention as they whizz through the cave at a hundred miles an hour. It can thus have an educational role. I consider this a small price to pay, especially when we must be considering not just the next ten or twenty years, but the next century or so at least. Blame my training as a museum conservator!

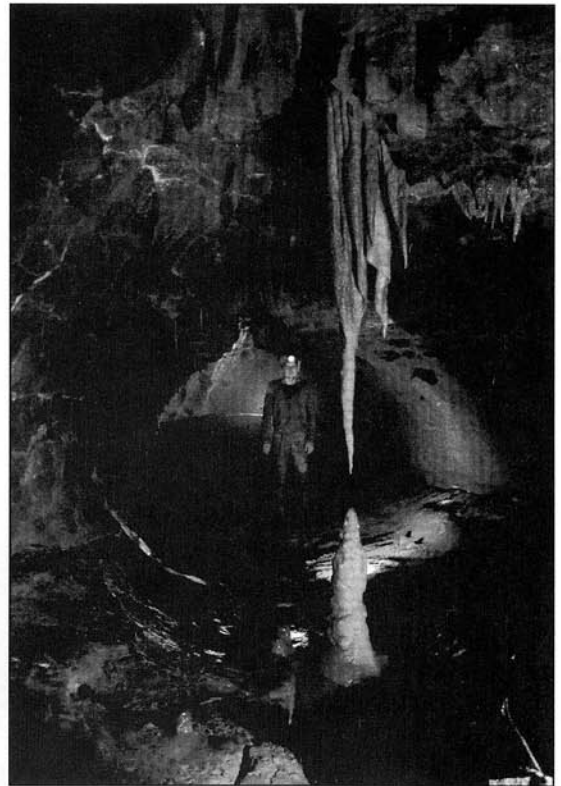
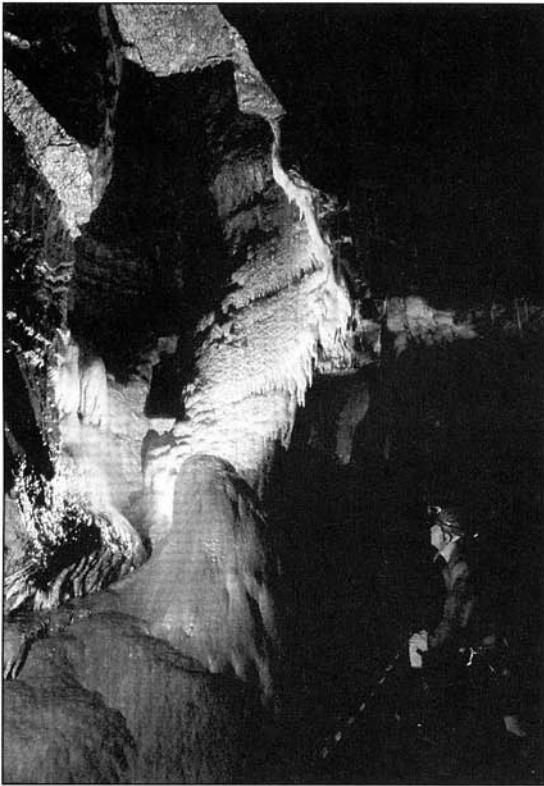
This is where the club as a whole comes in. As Conservation Officer I need your views, comments, beliefs and above all help (I get the abuse already). Vast tracts of OFD need copious amounts of love and attention, and they need it now rather than later otherwise it will be like caving on Mendip! This needs to account for the protection of a whole host of features in the cave, many not immediately obvious, for example:

- Calcite formations

- Sediments
- Mud formations
- Geological sites
- Biological sites
- "Recovery" sites

The taping of calcite formations is an obvious point since these are what most people can relate to, often being very pretty and easy to recognise, but just as important are the sediments which hold a vast amount of information on the stages in the development of OFD, and relate to the history of that piece of passage. Walking on the sediments erodes the top layers and removes the scientific value.

The term "geological sites" has been used above to relate to areas which have features important to aspects of geomorphology and geology such as fossil bands, erosion markings, lithology exposures and so on. Such features have been overlooked, basically because they require a



Left: Nick Barcock at The Judge, OFD II, by Julian Carter.

Right: Jason Tyler in Northern Lights, OFD II, by Giles Barker.

geologist to point them out and educate you into what they stand for, so don't ask me! Also overlooked, simply due to the fact that few people know about them, are sites of biological interest. As cave beasts tend to be a bit small and very elusive their habitat is not very obvious. This particularly relates to parts of OFD I such as the Toast Rack and Pluto's Bath. As biology is more my area, here is where I make a personal plea: please stay out of the Loopways pools and Pluto's Bath as they hold much biota and stomping cavers aren't beneficial to their health, especially kitted-up cave divers!

"Recovery sites" are areas I define as damaged, but can potentially recover if left alone, for example, calcite formations and stream floors. This will involve introducing "traffic control" in such areas. It will be important to select key sites and to start a monitoring programme to assess the results, though this will take a few years. Many such sites are currently considered lost causes - this they are not.

The last major key to conserving OFD is education. Why is that pool important? What does that sediment tell us about the cave? What

does that fossil band relate to? - the questions are endless. The truth is that many of us know very little about the cave environment. Features which are important to the geologist or biologist are not to most people. A proposal here is to possibly put information/display boards up in the club, based around the area of the key cupboard or changing rooms, areas where people will probably have to hang around for a bit waiting for gear or keys, and will actually look around and maybe take in some of the information on offer. This is only a very brief overview, so comments or questions please.

So if you have a favourite bit of passage which you regularly visit, and every time you've been there you think "that really needs some taping" or cleaning, then go and do it! I intend to make supplies of tape available in the Duty Officer's cupboard for such projects. If you do tape an area or carry out some form of conservation then please make a note of it and pass the information on to me. I hope to put a sheet on the notice board for such notes. Maybe you'll get mentioned in dispatches!

Happy caving, and remember to tread carefully.

Rope Washer Design - Some New Thoughts

by Paul Meredith

Background and Problem

I think it is fair to say that whilst cavers may have long appreciated the virtues of washing and generally looking after their ropes, it is only since the advent of synthetic, kernmantle ropes and SRT that they have really taken the matter seriously.

To assist them in looking after their ropes, and in particular in the much undervalued pastime of rope washing, cavers have festooned the outsides of caving club huts with various rope washing devices. These all seem to be based on a standard design, essentially comprising a supply of ice-chilled water, scrubbing brushes (or, more recently, AstroTurf) and a set of pulleys, all set in some sort of sad-looking, hinged, wooded box.

Although variable in their effectiveness these rope washers generally suffer from at least one of the following faults: inadequate design, poor material selection, poor construction, lack of maintenance, or poor installation.

When I wanted to build a ropewasher I therefore gave some thought not only as to how these problems could be overcome, but also to possible improvements in the fundamental design concept.

The Solution

Having sketched out a number of ideas the final design was based on the basic principle used by the Lizard-type expedition rope washers, i.e. to run the rope through a cleaning tube packed with AstroTurf.

In this case the cleaning tube comprised a piece of 40 mm diameter plastic, domestic water wastepipe approximately 300mm long coupled to a matching Y-fitting, 90 deg. elbow and three bulkhead fittings, all set vertically in a fabricated aluminium housing and screwed to a wall. Multi-swivel, marine quality, pulleys were fixed into eye bolts set directly above and below the washer to redirect the rope and generally make operation easier.

In operation, the dirty rope is drawn either up or down through the cleaning tube whilst cleaning water is fed, from an outside tap via a garden hose, in through the remaining branch of the Y, and allowed to gravitate out of the bottom of the cleaning tube.

Loading is effected by pushing a piece of bull-nosed doweling, with a draw cord secured to its rear end, up through the cleaning tube. The dirty rope is then threaded through the bottom pulley, attached to the draw cord using a clove hitch, and pulled up through the cleaning tube and over the top pulley.



In operation, recontamination of the rope with mud and grit is avoided by the use of plastic bread trays into which the rope is piled after each cleaning pass.

Conclusion

Construction, installation and operation are easy and straightforward and the bits and pieces readily available. Loading is arguably fiddly but with practice becomes straightforward, always assuming that you can tie a clove hitch or similar. There are no nasty wooden bits to swell up, jam or rot; no carbon steel parts to rust; the pulleys are sound and well secured; and, other than occasional replacement of the Astro turf, I do not envisage any maintenance. On the debit side the operator still gets slightly damp, largely as a result of handling wet rope. It is also recognised

that some provision may have to be made to protect, and channel water away from, the wall and associated foundations if excessive use was planned.

The capital cost depends on how good you are at getting others to donate bits and pieces and finding somebody to fabricate and weld the aluminium housing, in this case Gary Nevitt did a superb job at the sort of price that any caver could afford. Operating costs are dominated by the cost of the water and are largely dependant on whether your water is metered or not.

Overall, I think the washer is an improvement over existing designs and should provide many years of hassle-free ropewashing service.

The Discovery of New Cave Using Remote Sensing

Speculation on the Usefulness of Remote Sensing to the Caver

by Paul Thornton

Introduction

As the title states, this project takes a speculative approach to the subject matter. The subject area is little explored, there is virtually no literature on this subject and the ideas presented are based on theory and have not been tested. It is hoped this project will stimulate cavers and scientists into thinking about this subject.

The Greensites project was conceived in 1989; at an informal gathering cavers discussed methods of cave detection. This was named Project Greensites and funding was obtained to assist research. Earth sciences (resistivity), dowsing and biological methods have all been explored. In particular, the use of resistivity has provided some good results. At the meeting in December 1989, Robert Drayton (UWCC) introduced (the use of) "Remote Sensing, GIS and DTMs for Cave Studies" (SWCC Newsletter no.108, pp13-15, 1990). Unfortunately the high cost of obtaining remotely-sensed data meant that these ideas were not considered any further by the Greensites project.

Some explanation of the nature of caves (and cavers' motivations) is needed prior to the introduction of remote sensing.

The Nature of Caves

Caves are geological features of limestone. The limestone was laid down in beds, intersected by joints. Water exploits these weaknesses in order to produce the underground cavities speleologists explore. The presence of faults and disturbances influence cave formation, as does the terrain overlaying the limestone.

Caves have a stable air temperature. The ambient temperature of a cave is less than the mean annual temperature for the region in which the cave lies (Cullingford, 1962). Cave temperatures vary with altitude but are stable within a region. In Britain, temperatures average around 8 to 10 degrees Centigrade.

Few other details about subterranean cavities need to be explained. Further detail will be explained together with the explanation of the use of remote sensing.

Why Caves are Considered Important

Caves are a legacy of past events, their formation depends upon floods, ice ages, geological conditions, faulting and so on. Caves also contain a wide variety of unique flora and fauna, and also beautiful calcite and crystal formations. Caves are a unique environment and are protected worldwide. Within the upper Swansea Valley, Ogof Ffynnon Ddu (a system of cave passages extending over 50km) is protected by strict access arrangements and is included as a subterranean part of the Brecon Beacons National Park, as an SSSI and as a nature reserve. It is for reasons such as the above that people are motivated to find caves.

Caving is a sport pursued by many people for different reasons. One of the main interests of the active caver is "digging" - searching for new cave. It is the diggers who would make use of the remotely-sensed data. The application of the remote sensing techniques which are about to be explained would be of assistance in suggesting promising sites on the ground surface. There may also be commercial applications for such

techniques such as searching for sealed mine entrances, drainage pipes and so on.

This report may regularly draw examples from South Wales. Remote sensing techniques could well be applied here to good effect. South Wales is used for examples because there is extensive knowledge about the area already and it is familiar to the author.

The Platform

The collection of digital information about the Earth's surface can be done by scanning instruments which are airborne or spaceborne.

Spaceborne: There are various orbiting satellites in space. These are in orbit at altitudes between 900km and 3500km altitude above the Earth's surface. The lower satellites have a higher resolution and would be the ones of use in cave studies (Drayton, 1990). These satellites pass over the same point on the Earth many times in a year and have the capability to cover most of the Earth's landmasses. The frequent occurrence of cloud and haze, however, reduces the number of useful images considerably. (This would be significant in Britain and also in countries with a similar climate, and also in China where haze is particularly prominent.)

The images used to study cave systems and their associated surface features would need to be of very fine spatial resolution. This would require use of the finest resolution scanners which are carried on SPOT and Landsat 5 (Drayton, 1990). The Landsat Thematic Mapper is quoted as having a spatial resolution of 30m, the SPOT High Resolution Visible Sensor a spatial resolution of 20m. Spatial resolution is commonly described by pixel size which is a function of the instantaneous field of view of the sensor (Harris, 1987). There are, however, other factors affecting spatial resolution. It is greatly influenced by the contents of the scene. In karst areas exposed limestone is often prominent, where rock is not

exposed the areas are often well vegetated. In cave studies the image analysis of scanned images would be looking for minute changes in, for example vegetation type or water content of the soils. Therefore a very fine resolution image which is not obscured by haze or fog is important.

The use of a satellite as a platform for collecting remotely-sensed data for cave studies is a possibility, the constraints mentioned above must, however, be considered.

The alternative to a spaceborne platform is the use of airborne sensors.

Airborne: Imagery can be acquired from sensors carried in aircraft. These give a much finer definition of the surface features of the Earth. This is not aerial photography, instead scanners similar to those carried on satellites are used to produce digitally-processed imagery. Use could be made of photographic techniques, these would, however not have the advantages. The use of airborne sensors for cave studies would seem the better option (over a spaceborne system) due to its higher resolution. For cave studies a higher resolution would be considered preferable as minute differences in ground features will be the focus of the analysis of the imagery obtained.

Processing

The simplest method of extracting information from a satellite image is usually to interpret a photographic product. It is, however, far more advantageous if the image is processed digitally (Drayton, 1990). This is carried out on a computer called the image processor, which enhances the image to bring out features of interest. This needs to be done by a processing expert, not a caver. (Exploring the types of scanner to be used for obtaining the data and the type of image processing to be done is beyond the scope of this article and is best left to texts such as *Principles of Remote Sensing* by P. Curran, 1985.)

Using numerical techniques it is possible to distinguish, for example, very subtle changes in vegetation species, soil conditions, areas of wet or dry ground, geology and so on. These can then be combined with conventional maps to produce a tailor-made "caver's product".

Use of Remote Sensing

Remote sensing cannot be used to find cave, it would be used to give strong hints as to where promising digging sites may be. What follows is all speculative - it could be used and should, in theory, all be workable.

- The area above a cavity (probably the entrance) will have different physical appearance to the areas elsewhere. The presence of a cave will affect the water drainage patterns and therefore the vegetation species. The area around a cave entrance will be drier due to drainage into the cave. The vegetation differences and soil moisture content would be visible on a remotely-sensed image. Drier soil reflects more than moist soil, and this could give suggestions as to where a cave nears the surface.

- Remote sensing can be used to identify geological areas. Caves develop in limestone, and often developed prior to the last glaciation of an area. Where this has occurred cavities will be filled with glacial drift, and the caver has little interest in digging such sites. Vegetation cover on drift is very different to that on other sites, and this would be detectable by remote sensing. Use of aerial photographs may indicate depressions (which suggest cave presence) but will not show that the soil is drift, as remote sensing may.

The next idea could possibly be the most important use of remote sensing to find cave; it does, however, require some opening to the surface from the cavity.

- As was explained earlier the temperature

underground is relatively stable. This means that caves draught as the air circulates. In a closed cave system (one entrance) then in winter the warm air circulates and rises to the entrance. If a cave has two or more entrances and the cave air is colder than outside (i.e. in summer) then the air will flow down from the upper to the lower entrance. An example of this is Ogof Ffynnon Ddu in South Wales (Cullingford, 1962). For use of remote sensing techniques, however, the first scenario is desirable. It would be favourable for the outside air to be very cold, or tending towards snow, so that warm air rises out of the caves.

The use of a thermal infrared linescanner (now often incorporated into multispectral scanners (Curran, 1985)), would allow detection of this warm air rising out of the caves. These wavebands are best used at night to eliminate the effect of solar radiation (Curran, 1985) which would also mean, as nocturnal temperatures are often lower, the warm air would be easier to detect and clearer on the imagery.

Caution must be applied when using this technique due to the presence of animals, as these too give off a detectable warmth. Several passes may be needed followed by close analysis of the images in order to discover which "warm spots" had moved and which were static - those that do not move are more likely to be cave entrances.

Ferns, liverwort and a number of moss species grow around entrances to draughting cavities due to the warmer, moister air (Woods, 1990). They exist here rather than elsewhere because they are susceptible to frosts and are protected here by the warmer air. It is unlikely that the spatial resolution of remotely-sensed imagery would allow recognition of these. They are, however, a useful indicator once the site has been located.

- Other ideas to be investigated are the use of remote sensing techniques to detect faults in the geological structure and also different beds of rock. For example, in South Wales caves develop primarily in the cylinerton limestone beds close to the honeycomb sandstone beds. Use of remote sensing could detect the limestone/sandstone interface and could therefore assist in focusing the search for new cave in a particular area. The caves here also tend to form along geological faults which could be traced by remote sensing.

Use of this method is limited, however. In "unknown" areas it is not likely to be of any use because cave development will have different characteristics and cave will form in different limestone beds. In known areas such as South Wales, the information can be obtained from geological maps.

- One final idea (which was researched but no information could be found) related to the fact that caves most easily develop in limestone beds containing high levels of sulphur, due to a micro-organism which digests the rock creating sulphuric acid which then creates the first tiny capillary tubes. Information could not be found on whether remote sensing techniques could identify these beds or if surface vegetation differs on these beds which could then be seen on the imagery.

Suggestions on using remote sensing techniques for cave studies: The use of an airborne remote sensor would be of more use when conducting cave studies than a satellite-borne scanner. This is because flights could be made at times when the results would be best (i.e. low haze levels, no cloud, at night). The flights could also be directed over specific areas, thus giving images with a high spatial resolution which are of great use.

Multispectral scanners work in the visible to thermal infra-red wavebands (0.3 - 14µm)

(Curran, 1985). The use of these would be applicable to cave studies. These have the advantages of a high radiometric resolution in narrow and simultaneously recorded wavebands: there is a broad range of wavebands available, and data can be stored in digital form for quantitative analysis (Curran, 1985).

The use of remote sensing for cave studies is possible and there are many advantages over traditional methods of searching for new cave. The problems exist, however, of the high cost of remote sensing and the definite need for further research. For these reasons, it is likely to be a long time before remote sensing is used to find new digging site.

Acknowledgement: Thanks must go to Clive Jones for providing the initial motivation for this project.

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Excuse Me, Mr. Sheep...

... is this the way to Ogof Ffynnon?

by *Brian Bowell*

"Dragon Mobile, Dragon Mobile, Dragon Mobile - this is Dragon 23, come in please..."

"Dragon 23, this is Dragon Mobile - go ahead."

"Dragon Mobile, we've arrived at an entrance but we're not sure which one - Ogof Shar Wlad, Dan y Rhedyn or Theoretical Pot, please advise".

Three WBCRT wardens in a field on a damp Saturday in October, with an O.S. map and a cave site reference, and we still couldn't find it!

Last autumn Malcolm Herbert organised a practice for the team which took us to an area perhaps less frequented by SWCC members. The area above Ystradfellte, the edge of Pant Mawr and the Little Neath river area. The objective was to locate some of many cave entrances in the area. In this way our overall knowledge of the area would be raised. Some of these sites are now active digs and attract more attention from cavers. What happened was revealing. We confused our Gwynion with our Y Gwal and our Ogof Igam Ogom with our Pwll Pindar, so to speak. Clearly something needed to be done.

There is also another problem that I'd been considering for a while, namely the difficulty of locating cave entrances in bad weather or at night. During a call-out rescuers will need to get to a cave quickly with the minimum of navigation skills. Some caves in the area are quite remote and others are not easy to find even in daylight. Not all cavers have a Mountain Leadership Certificate nor, in a call out, are they necessarily familiar with the route to a cave. These factors, combined with the results of Malcolm's treasure hunt prompted me to turn thought into deed.

I'd read descriptions of routes to caves in the field guides and seen the equivalent accounts for hill walking excursions, Wainwright etc. The most accessible seemed to use permanent features of the landscape, illustrations and the minimum of map and compass work. It seemed to me that such an approach might work well with cave sites. So I've set out to produce single sided, laminated route cards. Each card contains the name, NGR reference together with

a description of the route to the entrance described in terms of permanent features of the landscape - walls, gates, cairns etc. Included are notes on how close a 4WD or car can be got. The description is accompanied by colour photographs. These descriptions all begin at an easily accessible point on or near a road. The entrance itself is described and pictured. Distances between landmarks are given and any compass bearings are simply dialled into a compass and followed.

At this stage I'm concentrating on the Ystradfellte, Pant Mawr and Penderyn areas. The field work is interesting. Grid references and approach descriptions in the popular guides cannot be relied upon. Forestry and deforestation have changed the landscape. I still can't get to Ogof Igam Ogom without swimming or climbing. Prototype cards are being field tested and, on one day recently, two wardens were to be seen rambling over Ystradfellte Common oblivious to each other in their search for Dan Yr Rhedyn and Theoretical Pot.

Another idea being developed is that of chopping the 1:25000 sheets of the caving area up into laminated cards. Two panels of a sheet, with the grid numbers included will fit onto one A4 sheet. These could be stored in rescue together with the route cards. In the event of a callout teams would be issued with a route card and the appropriate map card from a pack. Laminating makes them weather proof and they can be annotated.

The work is on-going. When these areas are completed I'd like to cover the Black Mountain area. Some help in compiling the data or field testing the cards would be appreciated. Some of these walks would be ideal excursions for children. They are not too long and could become something of a treasure hunt.

When enough cards are completed WBCRT will organise an exercise similar to the one Malcolm arranged, to give them a proper airing. There will probably be something of a competition (speleo-orienteeing?) and to make it interesting perhaps we will do it at night.

West Brecon Cave Rescue Team - Cave Site Route Card

Name	NGR	Area
Ogof Shar Wlad	9165 1440	Ystradfellte

Approach

On foot or by 4WD. On the Ystradfellte - Heol Senni road at 926 154, is a white road (PHOTO 1).

Follow this road. Cross an iron gate. The road bears right and continues uphill between stone walls and through a second iron gate to open moorland. At the second gate continue along track by the wall RHS.

N.B. In dry weather the road as far as the second gate is passable in a car.

After 700m is a wooden gate and stile 10m from a junction of three walls.

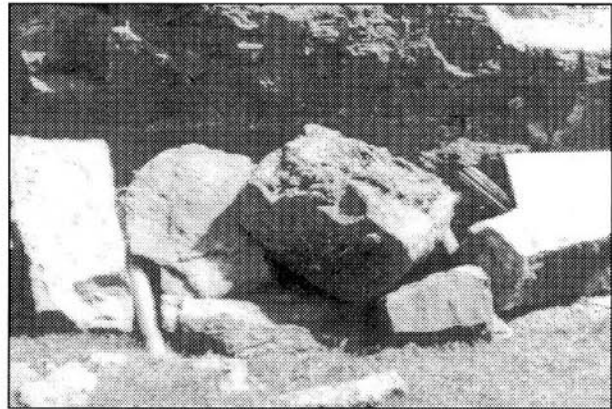
Facing away from the stile looking SSE (158°), a saw tooth ridge is visible at 150m (PHOTO 2). Walk to the ridge, the entrance is at the extreme RH end.



1



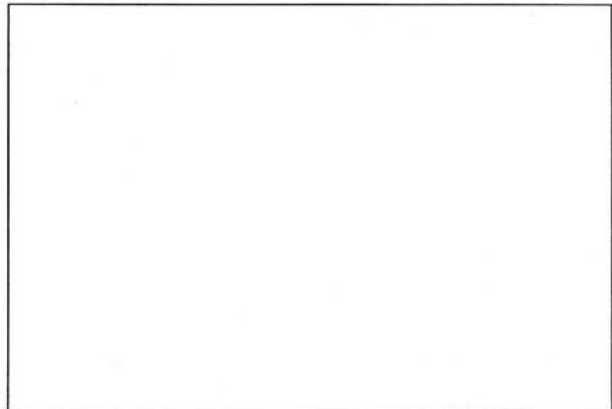
2



3

Entrance

At the base of a low rock wall the entrance is outlined with scaffold poles painted yellow, and covered with rocks (PHOTO 3).



Rupt Du Puits

by Paul Tarrant

I have for some time been interested in a cave system called the Rupt du Puits. It is situated in the Forêt de Trois Fontaines (Forest of the Three Fountains), just south west of the town of Bar-le-Duc, in the Meuse area of French Lorraine.

I tracked down good literature which indicated a fascinating system of some 16km length. Descriptions of a superb 1.75km long streamway, cave life in the shape of cave salamanders, and relative proximity to my previous home in Luxembourg had me pencilling this cave in as a definite "must do".

A prior trip to the area revealed a fascinating region of woodland karst. The area is on the extreme south-east edge of the Paris Basin, a geological phenomena where the existence of several lengthy chalk caves has been known for a long time. The Forêt de Trois Fontaines is a woodland area pitted with dozens of deep dolines and active sinkholes. They are numerous and some reach similar proportions to those found above Dan-yr-Ogof. The relatively gentle dip of the Portland limestone beds has led to the formation of a large central streamway in the Rupt du Puits.

There are several caves longer than 2 km in the surrounding countryside: some are entered by shafts giving access to streamways. The nearby underground quarries at Savonnières de Perthois are 30 km in length and these have, in several places breached large natural cavities. La Sonnette is one such cave which boasts a magnificent 30 metre deep elliptical shaft. The Abime de

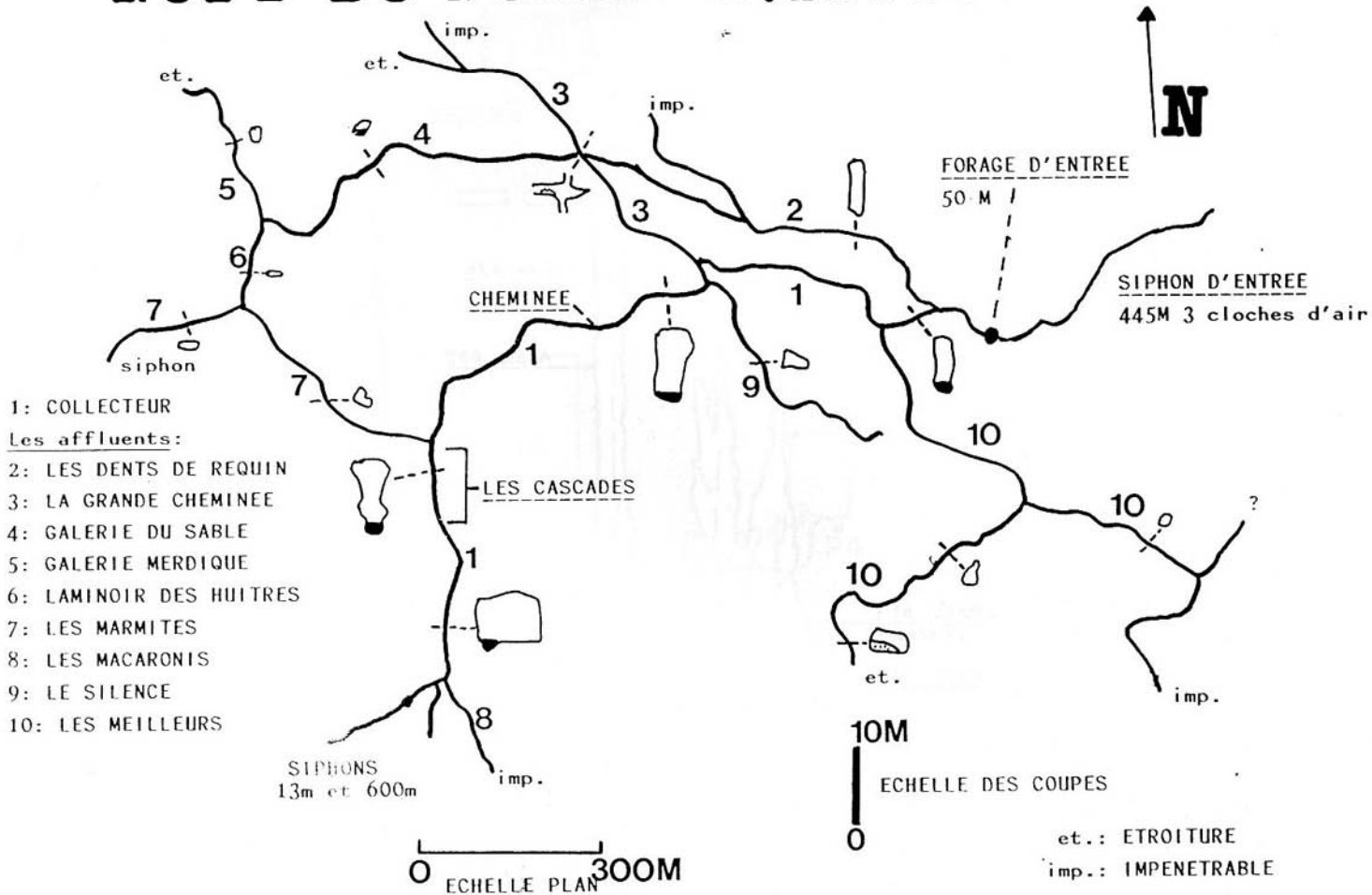
Savonniere, also situated within the underground quarries, once contained a 60-metre shaft, but unfortunately it is now lost since the quarry men used it to dispose of waste rock. French cavers apparently explore these caves by driving their vehicles underground into the quarries and then bivvying next to the cave entrances. This they do in fine style and relative luxury since they can carry the very best Bordeaux or Chateau Neuf du Pape wine without fear of breakages, and of course the wine is maintained at ideal cellar temperatures!

I had been fortunate to find the local French caving contact, and arrangement was made to pick up the key one Saturday morning. I was joined by my friend Kevin Chadwick from Rotherham Caving Club.

The drive over took us past the First World War battlefield of Verdun and southwards along the "Voie Sacree" road which snakes through beautiful green wooded scenery towards Bar-le-Duc. This road was the resupply line for the French army, along which flowed the necessary lifeblood to maintain the frontline of what was possibly the most bloody and hideous battle of the war. Over one million French and German soldiers became casualties in a battle lasting a whole year. It was the cause of the equally wasteful Somme offensive which cost the British army dear, and was launched to relieve pressure on the French army at Verdun.

A further historical aside: just north west of Verdun, in the Argonne region lies a blighted

RUPT DU PUIITS D:12000



place called Vauquouis. It was a small village on the top of a hill which the Germans and French fought over for the duration of the war. It was strategically important to both sides, so much so that they dug deep mines to carry on their war. Both sides extensively mined the hill and huge craters bear witness to where great caches of explosives were detonated in an attempt to destroy each other's tunnels. Needless to say the village was wiped from the map, but the German mines still exist to the extent that there are 20 km of galleries in a very small area of hill.

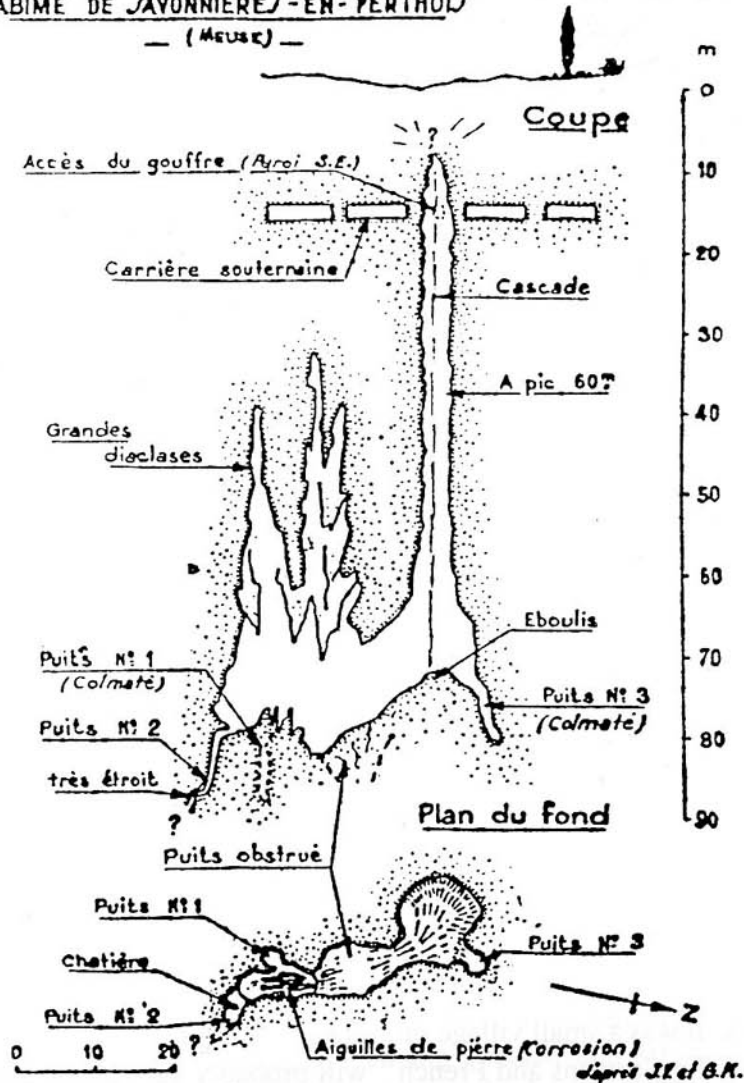
Some of the tunnels are flooded and need caving gear to explore. They also contain cave salamanders. There exist piles of unexploded ordnance and other interesting relics. The whole surface area is littered with the debris of war from over eighty years ago. I personally saw the fins of what looked like a trench mortar shell sticking out of the ground. The site is at present being restored by a local society with a view to opening it up to the public. I wouldn't advocate any

clandestine trips underground here since this will probably get you cheap accommodation at the local Gendarmerie! My informant on this site confirmed he was escorted from the premises after he made an interesting underground sortie. I have contented myself with surface site visits and found the place fascinating.

Kev and I continued the journey along the "Voie Sacre". At each kilometre there is a small stone marking the route, surmounted by the same French soldier's helmet, the type Casteret used to go caving in. There are several reminders of the terrible waste and futility of that war, but you can understand fully why the French made such terrible sacrifices to defend such a beautiful region of "La Patrie".

We reached the village of Robert D' Espagne and made contact with the key holder. My enquiry as to whether we were the first Brits to visit the RDP brought forth one of those bloody ubiquitous "BEC get everywhere" stickers, but

A.S.E. SECTION DE YESOUL
 ABIME DE JAVONNIERES-EN-PERTHOLS
 — (Meuse) —



I noticed the names of said club members were all Dutch. The use of foreign mercenaries therefore doesn't count!

We were trusted with the key and off we sped to find the entrance, a sort of wishing-well type affair, just five minutes from the roadside. The entrance already sported several ropes belonging to the Belgians whose cars we saw parked nearby. The entrance pitch was contrived after the late Bernard Leger dived in to the system from the resurgence. The resultant survey showed the correct place to drive a shaft in from the surface and this is 47 metres deep and drops sheer into the streamway. The top 15 metres are steel-lined before giving onto solid rock.

Where the shaft breaches the streamway, a fixed

ladder drops the last six metres. Whilst de-kitting from SRT gear, we noted the Guinness-type froth of the downstream sump. About six salamanders, two toads and lots of baby frogs were sitting on a mud bank. Apparently they are always in this one spot, never straying from it unless they dip into the streamway to go out through the resurgence.

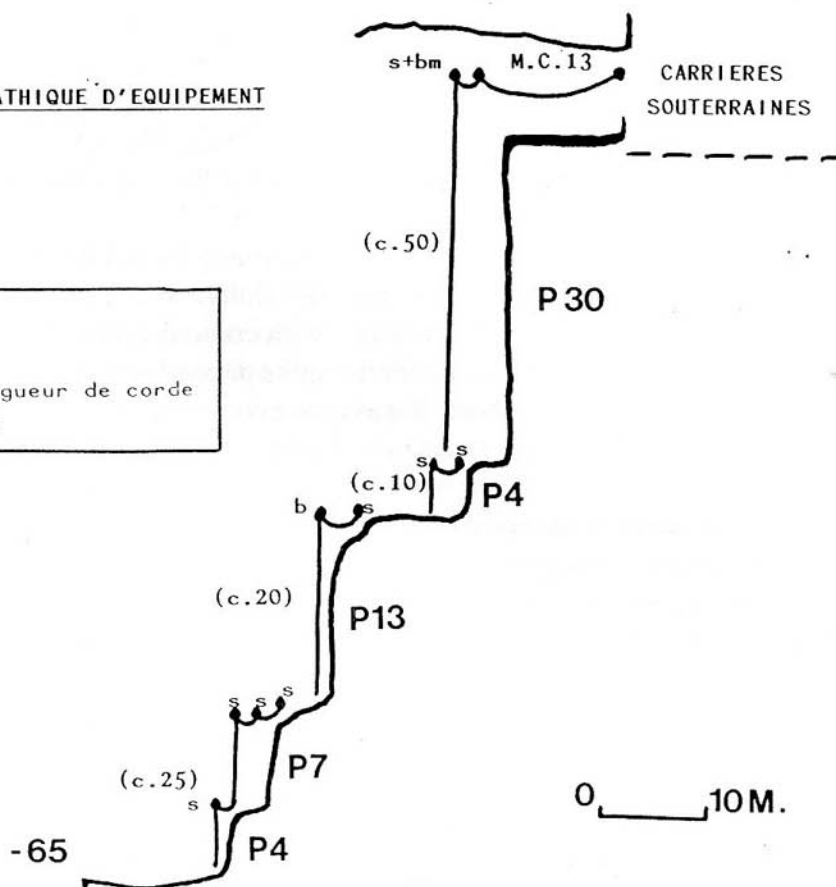
We took off upstream, wading through knee deep water which filled a canyon stream passage 4 metres wide by 15 metres high. At first this was extremely pleasant, with progress being easily made against the fast-flowing water, which had left recent evidence of being one-and-a-half metres higher than normal. We passed several small inlets all of which were contributing to the streamway.

LA SONNETTE

-65

FICHE SCHEMATIQUE D'EQUIPEMENT

LEGENDE:
s: spits
(c.1): Longueur de corde
b: broches



At one point we could hear the distant roar of water over a cascade, or did we? We progressed upstream and noted a sudden crescendo in the noise the stream was making. We stopped to listen. It was raining when we descended, but surely not that much? The stream noise increased in volume and tales of recently witnessed OFD I flood stories swept through my mind. Kevin's confirmation of imminent flooding sent both of us climbing up into a small, miserable inlet some three metres above the streamway.

Still the noise increased, but where was the blast of air one expects a moving mass of flood water to push, piston-like, before it? We were at this point making the sort of noises one would expect from chaps suffering a surfeit of nervous energy and then Kev cut my "Ooh er Missus, is this it?"

comment with something like "Eh, what's that effing light in the distance?". We quickly dropped from our perch just as the flood pulse generated by ten swiftly-moving Belgian cavers hit us.

We instantly changed from blithering prat mode to apparently calm Brit caver mode and quizzed these people on how they had enjoyed the cave. After they left us Kev and I collapsed with nervous giggles of grateful relief. Such a moving body of people had created a small tidal wave of water in advance of them and the roaring noise had drowned out any hint of their voices...

We again set off upstream, noting that our concerns about flooding were somewhat confirmed since black mud lined the walls of the next section to such an extent that lights were

almost ineffectual. Here and there an inlet would break in or a superb aven would pierce the roof.

The going was easy and in parts, very reminiscent of Agen Allwedd's lower main stream passage and parts of Agent Bloreng Streamway in Ogot Draenen, except there were no boulders to trip up on in this streamway. In short, it was a delight.

A distant roar saw us advance cautiously but the survey indicated cascades. These turned out to be superb. A roof bypass passage we saw was partially rigged with a traverse line for more aquatic times of the year. We chose to follow the water and were treated to a good soaking. The rock at this point was a light milky colour interspersed with grey shale bands. This section was clean-washed and progress was made difficult by the severely potholed floor and the full flow of the streamway. This was all rather sporting.

We noticed from hereabouts that the passage shape turned from vadose canyon to phreatic tube. This spot is indicated on the survey as "Limite Erosion Regressive". The passage continues lower, wider and quite uniform until it reaches the sump after a total of 1.75 kms. The sump almost connects with the Grotte de Beva which is a collecteur, three kilometres long and accessed by a natural 40-metre shaft. We got quite wet following the passage to the sump.

Going downstream, we encountered the Galerie des Macaronnis and this we followed until it changed from pleasant going to digging face. Further retreat downstream was punctuated by diversionary quick looks up the "Affluent des Marmites" and the "Affluent des Dents" which we lastly explored when we found an incoming party of novices on the entrance pitch. The survey seems to indicate the possibility of round trips leading off from the northern side of the

streamway, but we didn't push any passage to prove if this were the case.

Returning the key to Eric Henri was fraught with difficulty. We were invited in and then plied with copious amounts of wine and beer. I felt quite pleased with myself that I was able to carry on a conversation in French for two hours. I was sold a brilliant journal, *L'Echo des Cavernes Meusiennes*, which is essential reading for the caves of this region.

We left feeling rather mellow, through, not only the drink, but also the overt friendliness of Eric and Chantelle. They really are smashing folk.

SWCC members would most definitely enjoy a diversion here of a day or two off the crowded motorway heading to the more warmer, southern parts of France. The scenery is very reminiscent of the Cotswolds with the green, rolling hills and stone villages. It has lots of potential for good holiday caving and walking and it is not terribly far from the Cote D'Or and that region's associated caves. There is plenty of sightseeing, with nearby cities like Strasbourg, Metz, Nancy and Luxembourg and if it rains, the underground quarries would seem to be a good, dry, refuge for a few days.

Footnote: The surveys included here are reproduced with due acknowledgement to Groupe D'Etudes et de Recherches Speleologiques Meusien. The key to Rupt de Puits can be obtained from Eric Henri, 9, Rue de la Mouchere, Robert Espagne, 55000 Bar Le Duc, Tel [010 33] 29 75 44 76.

Cavers' Fair 1995

by Jopo

From all accounts this was a success, with just over 150 people attending. I must admit that if I had known that I would be starting a new business I would not have offered to organise the 1995 event, but in the very best tradition of the club certain members pulled it through. I must admit to doing a lot of "on-the-fly" sorting out on Saturday.

I would like to break with tradition and name those who helped. I apologise to any I have missed.

Les Cardy and Heather spent most of the previous week preparing food and we should thank Kev and Little Les (who is now elevated to Soup Dragon apprentice) for the use of the Coach House kitchens. Jude and Marge supplemented their efforts during the event and Dai Bancroft may well be in line for a badge as well. Phil Buckberry and Chris Pepper did a grand job screwing money out of people and John Harvey provided a suitably certificated SRT tower at reduced rates. Clipjoint did his usual, he never stops. At 9.30pm on Sunday I was knackered after sorting out gear and ready to go home. There was Brian still rolling up the cable from the quarry.

Elsie sorted the caving trips, which went down well and John Lister and Nick Williams organised the explosives sessions and the paramedic crew on standby was not required. Malcolm and Helen ran the surveying, (honest Malc you did say you would), at very short notice and John Cliffe organised the SRT training/practice, and unwittingly gave Dominic the opportunity to be the source of much amusement and ribald comments with his somewhat crude antics during

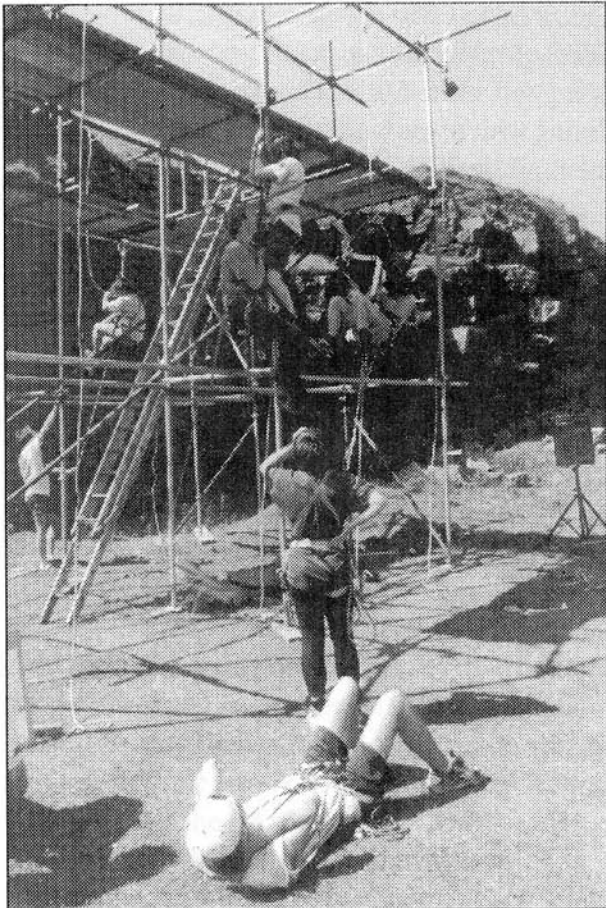
the snatch rescue session, Emma lands a smart wallop eh Dom! (Rumour has it that one of the pair of pink bums seen cementing a relationship in the quarry on Saturday night was Dominic's. We know who the other belonged to, as it had a light shining out of it, complete with price tag.)

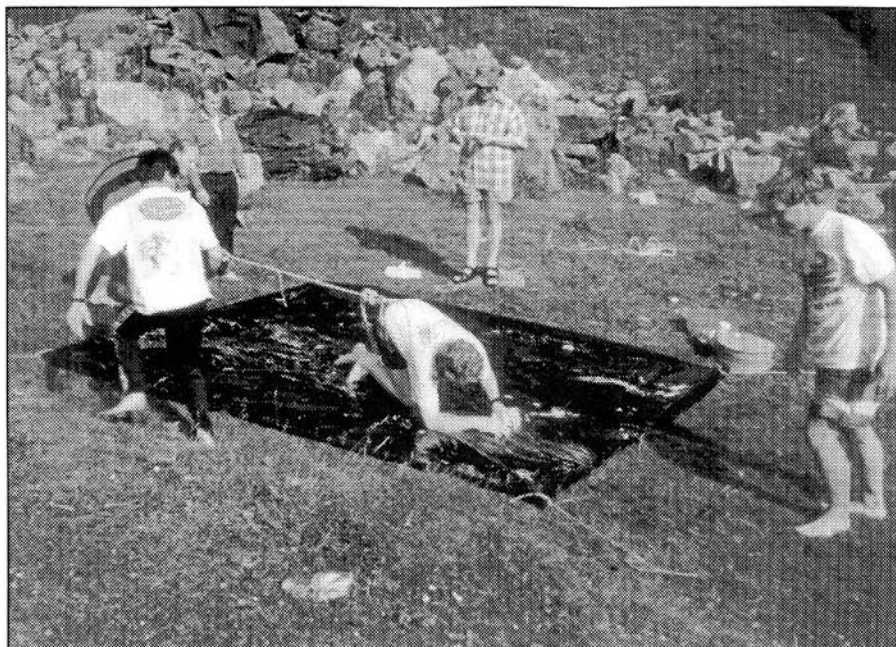
Tony Baker ran the photography session and Clive Jones the Greensites. There was a bit of a cock-up over timing with Andy Kendall's geology session, for which I apologise, but Andy was good enough to return on Sunday and repeat it. There was a good water tracing session by Bill Gascoine but I'm not sure that letting too many people look at our tap water under a microscope is a good idea. Steve Thomas and Joel ran the diving which was well attended, and they brought them all back!

We tried to cover a good range of subjects and I think we did well, in spite of several people not turning up, having offered previously to run sessions (which is why I had to do the programme on the fly).

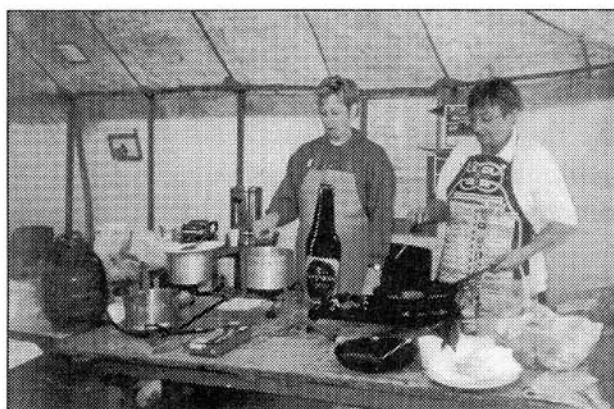
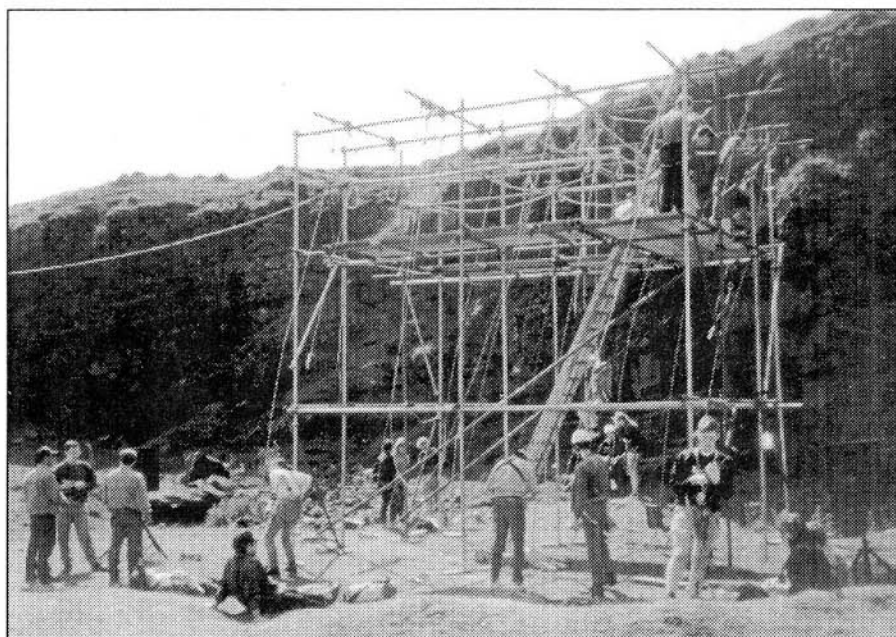
The caving trips went very well, thanks are due to the leaders. A complete breakdown in communications led to us almost not having any marquees but we managed to get it sorted on Thursday. The smaller tent was provided by the Powys Voluntary Service at a very low cost, something we must remember in future. Liam arranged the loan of the Abercraf scout minibus, at very short notice.

The Squirts provided the music at the bash and Jerry Wooldridge showed his Mulu and Patagonia A-Vs. How does Jerry remember when to change
(continued on page 26)





**Photographs from
the 1995 Cavers'
Fair, held at
Penwyllt on the
24th/25th June, by
Tony Baker**
(except the one of the
SWCC team in the
Pentathlon which I think
was taken by Pete
Cardy)



slides? He tells me that he made a slight cock-up but I think he was being modest.

Gavin was best man at Jo and Tom's wedding but not only did he trust me to show his China, *Caves of the Dragon A-V*, he took time off from writing his speech at 8.00 on Friday morning to teach me how to do it. Thanks for the trust Gav. The A-V was shown in the brickworks quarry and unfortunately it did not get dark enough till after eleven. But it really was well worth it! Ian Cardy provided the sound.

The Mendip drinking machine was notable by its absence but as we ran out of beer, twice, it is probably as well that they could not make it. The Irish lads tried hard to emulate the MDM so it really was better that we did run out. For those interested in statistics we just failed to equal the night of a thousand pints, but only just and I don't count lager and cider.

Dr. Lisa "your life in my hands" Williams thought it was a fancy dress do. Good job there wasn't a call-out.

The pentathlon was won by the SWCC - no cheating, honest - and they congratulated themselves so much that I will let them remain anonymous. Next time the course will be a lot more technical. The WBCRT quiz, set by Huw, had five joint winners, all from the club, all with perfect scores, (sorry Huw you got three wrong) but a lad from Stafford was a very close second so I awarded him the first prize. Chris Pepper won the draw for second prize.

As usual the success depends as much on the extra-curricular activities as the program. From what I saw and from feedback it seems that a good time was had by all.

I don't know if the last Cavers' Fair in Yorkshire had put cavers off but there was a certain amount of trepidation immediately before the event, fortunately unfounded. I was quite disappointed by the low numbers of club members, but it was, most definitely, their loss.

Without doubt the fair owed its success to holding it in an area that has good access to caves and the willingness of the SWCC to allow full use of its facilities and tackle which kept the costs down. I think that in future it should be held along similar lines. A problem in the past has been the number of "free places" supported. We kept these to a absolute minimum, with those running modules only paying for the food and entertainment.

The BCRA has decided, because of past losses, to reduce its support to the Cavers' Fair. The support was Keith Plumb organizing the pentathlon and Pete Cousins the advanced booking. Due to my being given the wrong deadline I was not able to get a flyer into *Caves and Caving* and the one in *Descent* only seemed to be in a fairly low percentage of copies, in fact the copies at Dragon didn't seem to include one with a flyer.

SpeleoScene put out a flyer and some may have noticed the wrong dates, goddamn those bloody automatic inserts in wordprocessors.

What did we miss? I was asked about basic first aid training and think that it should have been included. It would have been better to have thought out the programme more carefully and in some cases combined compatible modules. The advertising could have been better and possibly out earlier. The lack of traders was disappointing, in spite of them being invited for



Dominic gets to grips with SRT on the tower.
Photo by Tony Baker

free. This, I admit, was a ploy because the deal was that they would have to look after themselves, but they can't have it both ways.

There was certainly scope to allow for activities on the Friday and perhaps Monday for those who had travelled a distance.

The SRT tower is a must at any Cavers' Fair and was well worth the cost of having it erected professionally. I don't think that between ten and five, both days, there was a moment when it was not in use.

We are fortunate that we were allowed use of the gritstone quarries for the explosive modules, even if John had to "import" limestone to blow apart. John was probably correct when he commented that "Some future geologist will make their name publishing a paper on the limestone erratics in the Penwyllt grit quarries".

Penwyllt must be unique in having almost everything in walking distance, and you don't have to drive when pissed. When the shaft is dropped from the lawn, or Gents' Dig goes, it will all be closer still.

Thanks to the CCW, Bill Toye for the use of the quarries, John Barrows for access to OFD I, WBCRT for the A-V kit and Land Rover, Paul for the bar (what was Janice on?) but most of all to last year's committee for agreeing to the use of the club's facilities, and this year's for the continuing support.

Many thanks to all who helped or attended.

On a sad note I am sorry to report that some of the gear we loaned from Paul was burnt, by persons unknown, before it could be collected from the brickworks quarry.

This year, the Cavers' Fair can show a profit. The NCA, SWCC, and the WBCRT all benefit to the tune of about £300 each. The SWCC share has been added to the fund for next years biggie, the SWCC 50th anniversary. Watch this space.

Finally, I would like to air a pet subject here. I think that there are too many events in the caving calendar. Would it be feasible to have the Cavers' Fair and the BCRA Conference on alternate years? It seems to me that it would make more sense to increase the scope of each and concentrate scarce resources rather than to dilute in order to run both each year.

Editor's Footnote: Jopo's legendary modesty leads his report to touch only briefly on his own efforts: he really was the driving force behind the whole thing, without him it wouldn't have happened. I asked those who took part in the photography session on Sunday what they thought of the event as a whole and "fantastic" was the unanimous response. On behalf of all those who were there, thanks Jopo.

First Impressions

by Ow Harvey

I can't really remember my first contact with cave divers. Because it was probably at a party, at a secret location near Merthyr Tydfil, when I was very young and impressionable, and when one of the cave diving Gods of the time was seeing a nice lady from Dowlais Top. The atmosphere was very thick (I believe now that the correct term was probably "a zero visibility party") and this, apart from being compulsory, definitely helped raise these people to a God-like status in my eyes. How could I help it with stories of four-hour unrigged Ffynnon Ddu I-III-I trips and minus 70m dives in Wookey Hole flying around? Cave diving, I thought, was reserved for the realms of fantasy. For the next ten years I largely managed to avoid cave divers (as short term exposure to them is apparently cumulative and quite bad for your mental well-being) except for a few lapses in concentration when I accidentally carried large diving cylinders to the bottom of places like Daren Cilau. Everything was OK, until late 1993 when a visit to Penwyllt ended in a carry into Ogof Ffynnon Ddu I, where I caught my first lethal dose of Steve "Git" Thomas. Several carries later with Steve, the Swansea University posse, and a few diving legends, I found myself with a full-time job and a day in, day out description of various sumps around the world from Steve. Much to my horror I found myself getting quite curious, actually asking technical questions like "How do you manage to keep your head together?", and other matters like "Why do people call cave divers w**kers?". By August 1994 I had no excuse for not buying some gear since it is quite hard to keep your boss from giving you wages. I bought my first semi-dry wetsuit and some bits and pieces. It made me think how many blissful hangovers two hundred pounds could buy me. I was hooked from that point on. As it turns out, all that Steve should have done was to tell me the quote from Tom Brown, the Northern diver. He said, "Girls think that cave divers are something different, and they're bloody right".

My first dive was on September 24th 1994, at Ogof Ffynnon Ddu I resurgence. I wasn't nervous at all, right up to the point where the dive seemed inevitable. Even at a time thirty seconds before going under I didn't think I would be going into a cave underwater, it still seemed like something other people did, and something I would never do. This was probably my way of dealing with the stress that was welling up inside all 14mm of my shiny new buoyancy aid that was also my wetsuit. After going through the routine of flooding/clearing my mask, working out my buoyancy and valve arrangement, I strapped on enough lead to sink Anglesey and followed Steve a short way into the sump. His powerful lights forced the murky passage to yield its entire cross-section perfectly, and from behind it looked like some obscene way of accurately reproducing those cross-sections you see within the cave surveys on the wall of the long common room. What I was experiencing was so far removed from anything I had done before that this was just a way of rationalising what was going on. My face was cold and, as all of the air left my wetsuit through the seals at my ankles, it felt like the massage of an angry woman as it travelled down the length of my body. The suit then flooded with that temperature of cave water that we all know so well, and I shivered quite violently. This was thirty seconds into the dive and I wondered how Steve could deal with fifty minutes in the submerged back end of Ffynnon Ddu I at a depth greater than the minus two metres I was at, with a suit that was as much hole as neoprene. Prior to the dive I had been worried about being cold. I'd realised that I would be, many times before, whilst watching others kitting up waist deep in water, then shivering in my soggy furry suit during the entire time that they were gone and then being cold for the first few minutes of the carry out.

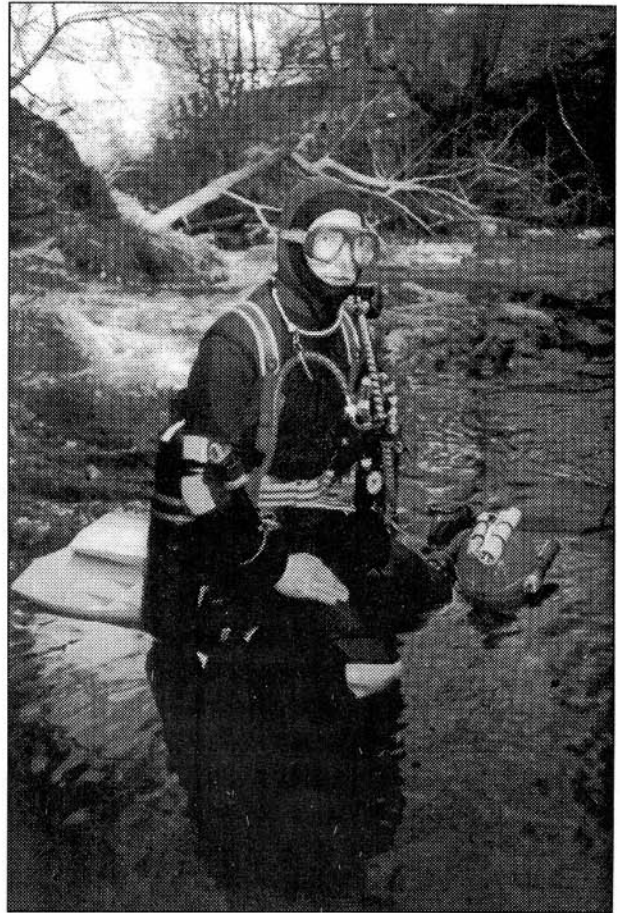
I reached Steve at about ten metres into the sump at the bottom of the boulder pile that leads up through a tight squeeze to an air bell. He gave me the

Right: Ow Harvey at the Pwll-y-Cwm resurgence. Photo by Pat Hall.

inquisitive "OK?" sign, and I returned the appropriate gesture which also happened to be the "OK" sign. He then pointed to me and then the way out, and I understood. I was probably blinding him with my lights at the time by looking directly at him, but I didn't know any different. I was at the start of a very long and steep learning curve and will probably be no further than the middle of it for the rest of my life. All of this became evident during my own personal debriefing that evening, for at the time I was concentrating so hard on not letting go of the line or my self-control, and on not breathing as fast as I wanted to, that the whole experience was quite sterile emotionally. Fear didn't really come into it, there wasn't really much time for it, I was concentrating too hard. I know that fear will come later and in a big way, when I start doubting myself, and when I can't rely on the novelty of the whole experience to keep me together in blissful ignorance. The only benefit of panic in any situation is if you can sense that it is there before it takes hold. Let's see what happens when (not if) I feel it underwater for real.

It took a while for me to realise what I had done. In the grand cave diving scheme of things I was and still am in the Sahara Dessert looking at a drop of camel pee, but it was a big deal for me. I didn't feel any pressure at all from the outside to do it again, even though three of my four parents had done the original Dip Sump dive into the (then) divers-only Ffynnon Ddu II. It was just something I wanted to do again, if only to get more than one dive out of my new wetsuit. It just seemed that it was the natural progression from sherpa-ing. I couldn't remember any specific emotion from the first time, so I figured that no news was good news and dived again.

So, my personal philosophy of "never doing that cave-diving thing" continued with a carry into Ogof Ffynnon Ddu I. Steve and Gavin were going for a big push to the far end of One-and-a-Half and the rumour was that I may be able to have a dive on their gear if there was enough air left. This was probably a ploy to get some gear carried up the streamway but I took a risk, and as it happened, Gavin had used over-pumped cylinders. There were enough breaths left after Gavin had returned that I strapped on his gear



willingly and asked how far I could go. It was decided that Adrian Parsons and I would dive through Hush Sump and Pot Sump, up to Dip Sump Base. I was extremely nervous and Gav's gear was completely alien to me, hi-tech and equipped with a 100-watt light. Adrian told me to take it slow, and Steve threatened to kill him if he let me die. This was my first real dive and I couldn't see anything. The mega-light was just reflecting off all of the stuff that Steve and Gavin's dive had stirred up, and I think I saw Adrian once. I surfaced at Dip Sump base a few minutes later, having breathed out all of the way up from the -7m at the line junction, extremely light-headed. I must have been doing something wrong and the pain in my right ear and the blood in my mask weren't helping any. Too excited to do anything about it, we dived back together and Steve was at water level like one of those bugs that skate on water (and just as hairy) to greet us as we surfaced. That was it, I was (and still am) hooked. As I have discovered in my vast experience (eleven dives to date) that is where any similarity to fishing ends. If you have a lot of money to throw away and a small brain that you don't mind flooding with ice cold water when your ear-drum blows inwards (a very cheap high!) then cave diving maybe your thang.

Daren Cilau: Memoirs of a Support Diver

by Joel Corrigan

Sunday morning, the 30th of April, was no different to any other Sunday really, except that for Rick Stanton and myself it was an important day. For Rick, it was a chance to connect two of the most extensive caves in Wales - Agen Allwedd and Daren Cilau. For me, it was to be a major learning experience in multiple sump diving. The San Agustin Way, beyond the Gloom Room in Daren Cilau, had been visited by only two people at this time, so in terms of remoteness it scored very highly on the "Joel Scale".

The swim through the Terminal Sump was uneventful, if a little tedious. My first time through this 630m long sump, some six months earlier, had been a little unnerving but now it had become more or less routine. Even so, wearing twin 12-litre cylinders, and carrying a high-pressure 7-litre bottle, wetsuit, boots, food, caving lamp and emergency kit, all in a family-size tackle bag, made it more entertaining. We surfaced after a forty minute dive.

At the end of the Kings Road, we changed into something more comfortable - NOT! Cold wetsuits, after the pleasures of warm drysuits, are not to be recommended, but are necessary for such a trip. Leaving our large cylinders behind, we carried on towards St. David's Sump, each with a tackle bag and bottles.

This sump is only forty metres long, but is still quite a serious dive in that it involves getting cold and wet! We dived through this on single sets, bringing the rest of the kit along in the tackle bags. More time was spent de-kitting on the other side. From now on, I was in unfamiliar territory.

Psychatronic Strangeways deserves its name. Much of it is large, impressive passage, but it has an atmosphere all of its own. Quite unlike anywhere else in the cave, and certainly worth a visit if you're ever at a loose end. As for the Gloom Room... what a miserable place to put a sump. I've been to some

oppressive sites in my time, but this one takes the biscuit. And worse still, I was expected to get in the water. We kitted up at the top of the mudbank, and slid into the pool. Rick was kind enough to warn me about the ten-year-old pile of killer line that was all over the place, and then he was gone. I gave him a couple of minutes head start (in a vain attempt to allow the visibility to return) and then I followed.

If anyone were to ask me what this sump was like, then my answer would probably be a little bit vague. All I know is that it is about 240 metres long, 15 metres deep and rather wet. Visibility was almost nil, and I never did see the coils of loose line that I'd been warned about.

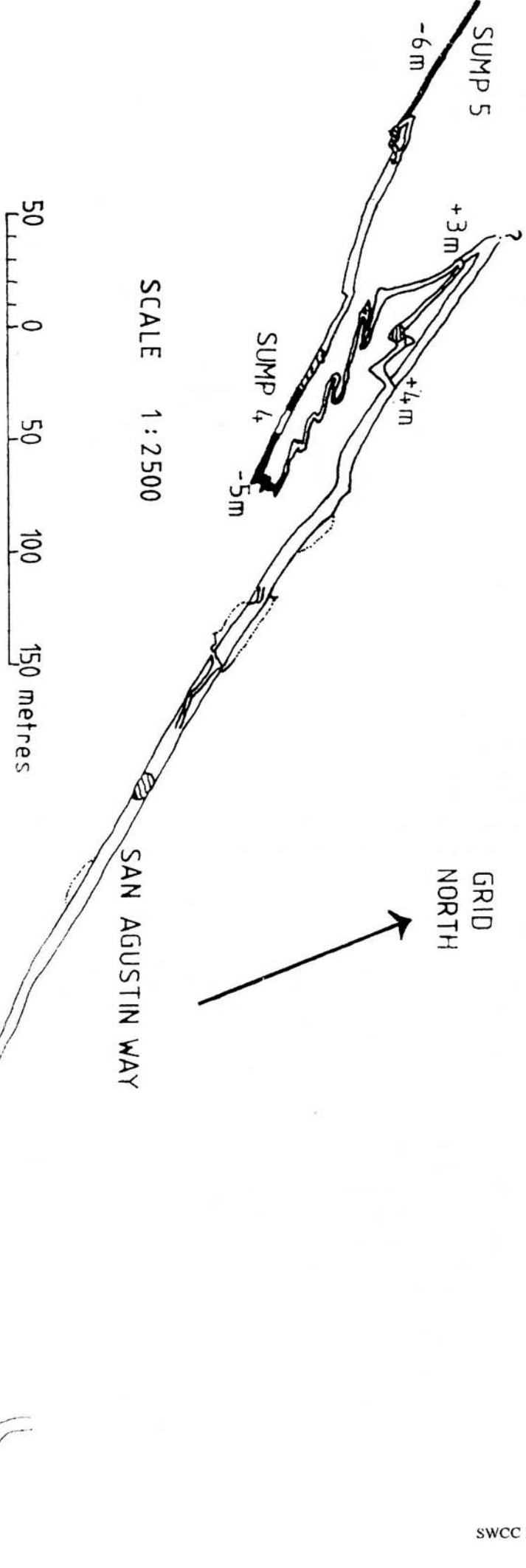
Once on the other side, the pressure was off (for me), but Rick still had a lot on his plate. At this stage, I left my diving gear behind, as I wouldn't be needing it until the return journey - I was merely the support diver for Rick's push. Carrying the tackle bag and one of the seven-litre bottles, I followed Rick into the Huatla series, named in honour of Ian Rolland, who died in Mexico last year. Ian had been one of the major explorers in Daren, so it was a fitting tribute to him.

The San Agustin Way begins in style: huge keyhole-shaped passage reminiscent of the Grand Canyon in Dan-yr-Ogof. It is like this for 400 metres, but in typical Daren fashion this inevitably de-generates into something less pleasant. Much of the series consists of high, narrow, cherty rift passage, half-full of water. I imagine that during flood conditions *The Poseidon Adventure* would appear tame in comparison. Due to the fragility of the limestone, we had no choice but to stay low here, and avoid traversing the numerous deep pools. A fall could have had dire consequences.

Eventually we arrived at the sump. Rick kitted up yet again, instructing me to give him two hours for the

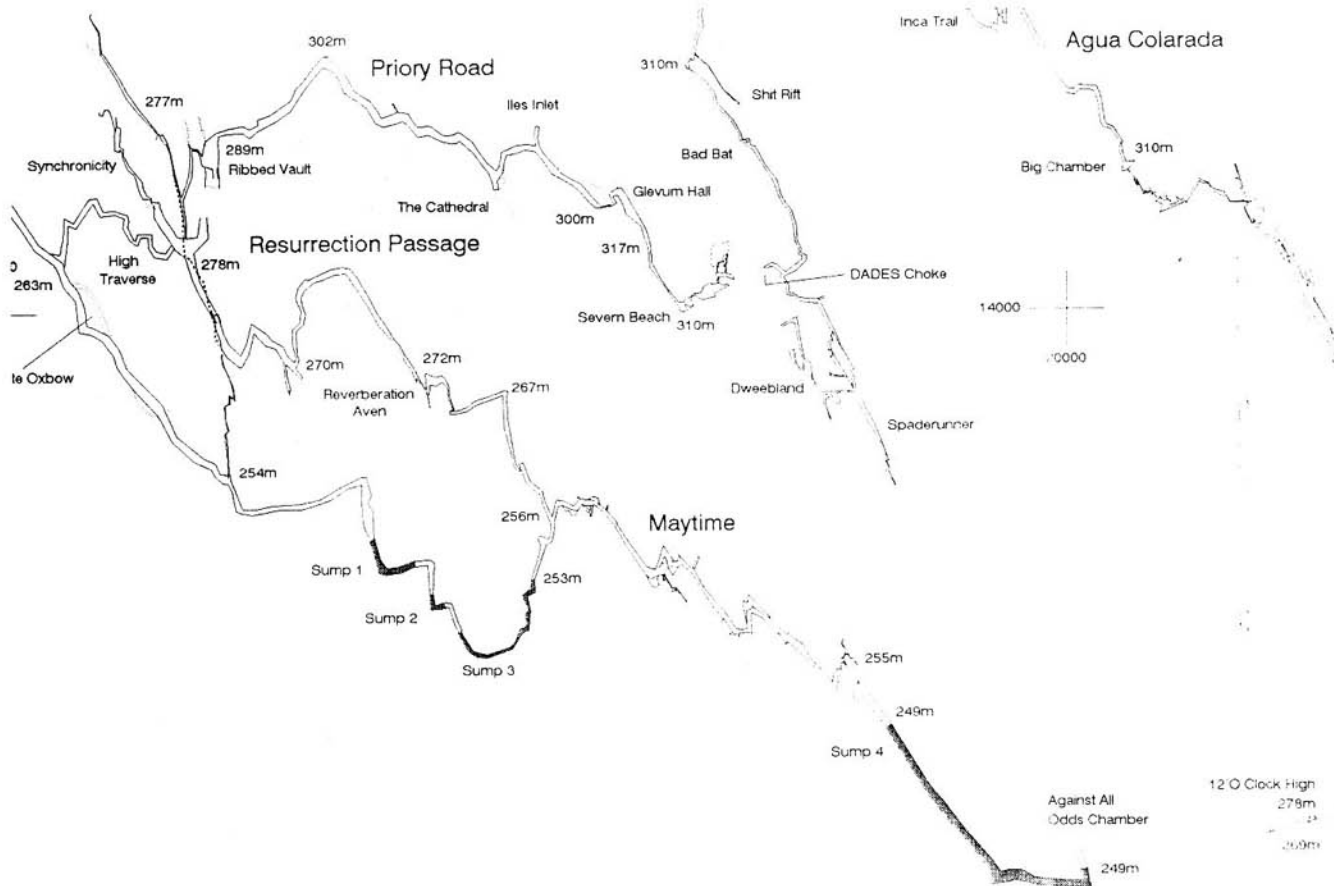
DAREN CILAU

GRID NORTH



SCALE 1:2500

BCRA. GRADE 2
surveyed and drawn by RWS August 1994



The Agen Allwedd side of the potential connection...

push. He had a short (40 metre) sump to pass, followed by another section of dry passage to the final sump. He had dived this for some 50 metres in August 1994 before reaching his air safety margins. His final instructions were that if he hadn't returned after three hours I was to make my own way out. Great...

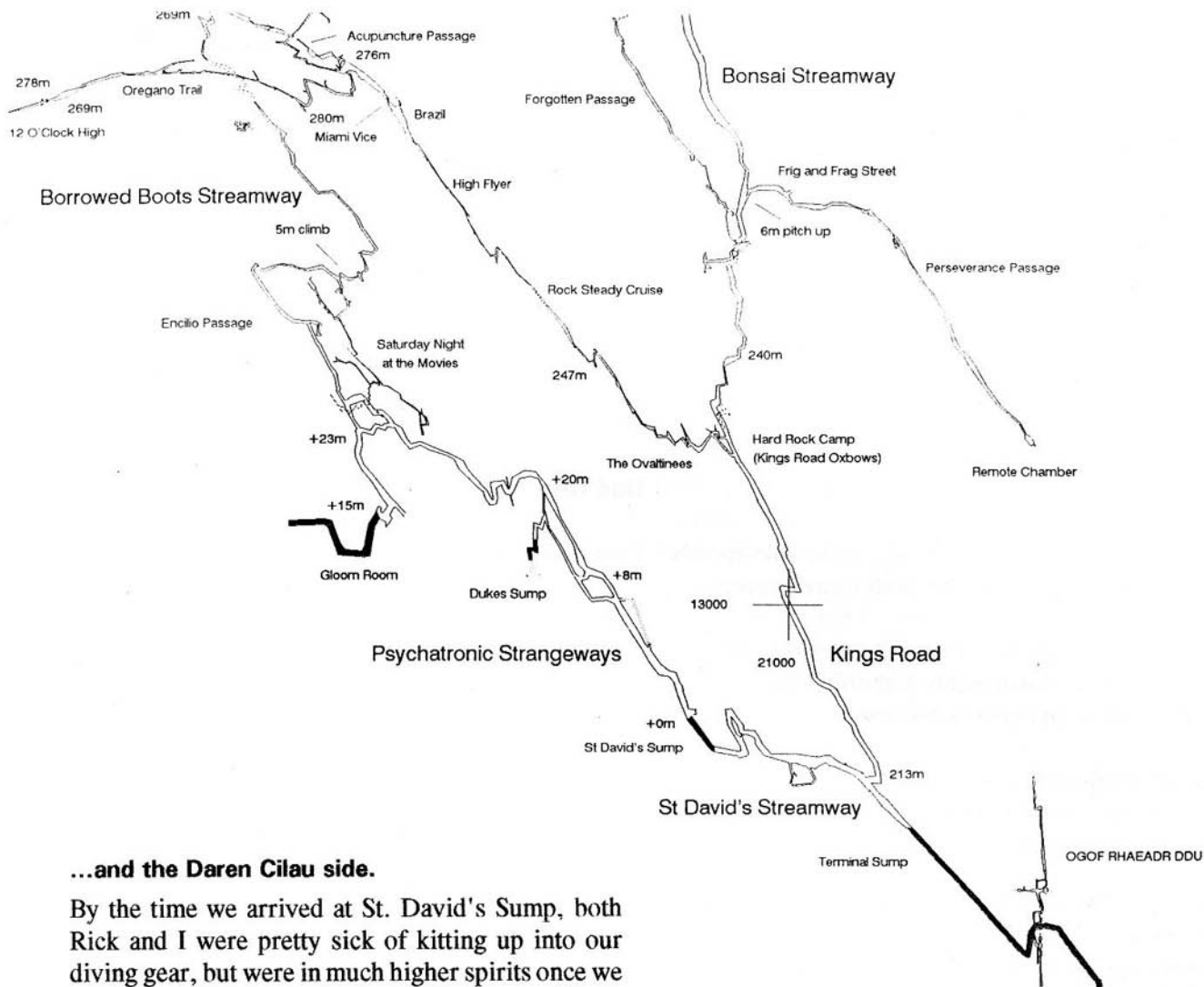
As I watched his bubbles disappearing, I heard a strange voice: I was talking to myself. I really must have been feeling lonely. In an attempt to remind myself that this was just another routine caving trip, I did what sherpas have always done - I urinated in the sump. It's amazing what rituals can do for your morale.

I had dragged my favourite crowbar through the cave, as I had been told beforehand of a suitable dig site. I took a leisurely stroll back to this point, while trying to spot areas of potential for future climbing projects. The dig site in question was at the end of a high-level oxbow a couple of hundred metres back from the sump. It involved a straightforward climb out of the stream, into a large boulder-strewn passage. The dig itself was a sand-filled bedding, with lots of crystal development. In theory, this is a good sign as it indicates a moist, draughting area, but there were to be no breakthroughs today. For two-and-a-half hours, we (the crowbar and I) sweated it out, but all to no avail. Still, at least I didn't get cold.

Rick was just starting to dekit by the time I arrived back at the sump: the art of timing is not dead! "I've been conned" were his first words. It seems that he had laid another ten metres of line and surfaced. Not long afterwards, he arrived at a big boy's boulder choke. He had spent a long time trying to find a way through, but finally concluded that it was a long-term project. It would appear that he had arrived at Agen Allwedd after all, but on the wrong side of the Against All Odds boulder choke at the end of Sump 4. Ho hum...

The carry back to the Gloom Room sump seemed to go much quicker than on the way in, but the dive itself was pretty miserable. I found myself getting pretty chilled, and the lack of visibility didn't do much for my morale. It was a very relieved Joel that surfaced a few minutes later. The climb up the mud bank was almost as entertaining as the dive itself, though, and would have proved great fun if I hadn't had my faithful ice axe/crowbar at the ready.

I slipped in Psychatronic Strangeways, taking the entire weight of two cylinders and assorted junk on my left knee. For several moments I was convinced that I'd done myself a serious injury, but I was forced to stop rolling around in agony when I realised that I was all alone! This little incident served to remind me that a beyond-sump accident was not a very appealing proposition.



...and the Daren Cilau side.

By the time we arrived at St. David's Sump, both Rick and I were pretty sick of kitting up into our diving gear, but were in much higher spirits once we had dived through. In a few minutes we could get back into our drysuits. Yippee! What could be better than dry kit and a nice swim out of the cave?

I very nearly had to exit Daren the long way, as I lost my tackle bag in St. David's Lake: this place has an almost supernatural ability to cause people grief. It is long, wide, deep and cold and should really be treated as a dive (if you're carrying really heavy tackle bags, that is). Many a caver has lived to tell nightmare stories about this innocent-looking pool! I caught up with Rick and borrowed his diving gear: I found the bag without any further problems, but it taught me a valuable lesson.

The dive out almost went according to plan, but not quite; Rick set off first (he gets bored with waiting for me to kit up), and I followed soon after. I was carrying as much kit now as I was on the way in, so not surprisingly I was hauling myself along the floor. The tackle bag was strapped across my front, and when I pushed the inflator button on my drysuit it remained in the "on" position. Almost in slow-motion, the suit was inflating and I saw the line disappearing before me. I was pinned to the ceiling! It would have been comical in other circumstances, but I wasn't laughing much, because my valve was

also providing me with a moist mix at that moment. Try as I did, I couldn't stop the suit inflating so I disconnected it. As I dumped all the air from the suit, I had this vague notion that minor problems always happen in threes, so I was very relieved to see the line appear below me. I discovered later that grit was stuck in the inflator button on the suit, causing it to stay open. Still, I only had 600 metres of sump to go, at alternating depths, so it wasn't that bad!

At the "Corner" I saw Rick's lights, so I knew that I was virtually out. I removed my tackle bag to get through the boulder squeeze in Pwll-y-Cwm, and spent a few cold and wet minutes decompressing in the shaft (the suit had been leaking through the inflator). It was another relieved Joel who broke surface at midnight, after a thirteen-hour trip.

The two of us had come to a not-so-new conclusion during our trip, and it was this: cave diving really has got very little to offer. It can be a miserable form of cave exploration, with nothing going for it. Rick had swum a total of two kilometres that day (only 1.8 for me), with not much new cave to show for it. However, that was then and this is now: time dulls the memory, and mine is particularly bad!

The Great Penwyllt Bang Gang

by Steve Thomas

Starring:

Billy-Joel Corrugated - A cave diver who spends much of his time falling out with retired cavers.

Liam Caves-Keenly - Favourite pastimes include hanging upside down eighty feet off the floor with a Bosch drill in an outstretched arm.

Ian Altered-man - A circumcised member with a circumcised member. Very proud of it and will show it to anybody on request (or not).

Tubby - A popular guy with a dog.

Scrounger - A popular dog with an owner.

Stuart Kerbcrawler - A man with lots of volts and a dog.

Neil Bournemouth - A cave diver who owns the most knackered kit in the universe.

Ian Middlebum - A nice guy with a hyper-active tongue.

Pete Francisnextoswitzerland - A well established member who looks after the young females of the club.

Brain Coupling - A very intelligent man who had managed to invent a Descender. Also involved with rescue and dentistry. (Also known as Copo.)

Butter Coupling - Married to Brain, specialising in catering and funerals.

Clive Northpuddle - A man who successfully combines the talents of teaching, cave diving, photography, mountaineering and giving orders. What a guy.

Paul Quimm - A likeable chap with a partiality to girls and fags.

Dud Gear - Runs the local caving shop.

Bent Gear - Dud's son.

Martyn Longway - A hard caver who writes books.

Sophie - A Labrador.

It all began in a parallel universe in about a week's time. On a small, mainly ocean covered planet called Soil, in an insignificant country known as Wails, the rest home for retired cavers was preparing for its annual how-to-use-your-commode-more-efficiently training weekend. All was going well and the attendance was promising to be the best yet, with at least 5% of the membership intending to turn up.

Saturday, 9.17 am: the kitchen was in its usual state of pandemonium. Those people who were lucky enough to find that the dogs hadn't scavenged their entire stock of food happily fried their cholesterol breakfasts to ashes while the others moaned and shouted at each other about how somebody should do something about those bloody dogs. Ian Altered-man, blissfully unaware of what was being said nearby, laughed and joked with Scrounger the dog whilst playfully feeding him the contents of the bin. Stuart Kerbcrawler had been talking intently about the virtues of the 6-volt lighting system to a visitor and after two hours of banter earned himself the sale of one 80 pence bulb. All was normal... until out of the blue Billy-Joel Corrugated shuffled in, moaned to somebody that wasn't listening about how bad his hangover was, and mumbled something about going caving. Everything stopped. Jaws hung wide. The silence was broken only by the death throes of charred bacon. Caving? Was he serious? It was well known that there were a small number of maverick members in the club that actually performed this deed, but the unspoken rule was that so long as nobody caught you doing it and you kept your mouth shut about it, then a blind eye would be turned.

Gradually the silence was broken as one by one silent mutterings became audible as people whispered to each other in disbelief. Billy-Joel, who hadn't managed to raise his eyes much above floor level so far, slowly lifted his head and looked about him. "Oh shit", he thought to himself, "that's done it."

The odd thing about the cosmos is the word Penwyllt. On the planet Bigdonger in the Scrotumb nebular is a cave-filling club called Penwyllt. The planet is so hollow that most of the population have taken up the hobby of cave-filling. In one year alone, the magazine Dissent stated that over 150 miles of new cave had been filled in.

On Earth in the late 20th. century, a cave club also had its headquarters in a place called Penwyllt. Some deep thinkers have spent their entire lives studying this cosmic coincidence, discovering in the process the generally accepted translation of - "to drink lots of tea".

"What's up, Billy-Joel?" enquired an enthusiastic sheep. Billy-Joel was painting the car park with gravel coloured paint. "Oh, I just opened my mouth before I woke up this morning and got this job as a reward" he replied. Stopping only to arrange another date with his old friend Bowlegs, Billy-Joel worked as hard and fast as he could to finish the job. All he could think of was that boulder choke that had stopped him six days previously. "Two sticks of boulder-shifter and I reckon she'll go" he kept muttering under his breath.

He had had enough. "I know it's weird, but I want to find a new cave" Neil thought to himself. "If I tell anyone they might punish me like Billy-Joel, but if I don't, I think I'll go mad." Neil Bournemouth was a lovely chap who worked flat out at his job. In his spare time he would design computer programs for electrically locating caves, go digging and cave diving. He felt drawn to Billy-Joel and found himself casually strolling up to him one cold evening. Billy-

Joel was pointing the inside of one of the cottage chimneys as punishment for asking for a key to the tackle store. "First time I've ever seen anyone casually stroll up the inside of a chimney" said Billy-Joel to Neil. "Didn't want to arouse suspicion" came the reply. They got talking and soon realised their common aims. "I reckon there's more people than you think that are into this caving lark" said Billy-Joel, "if we have something to offer them we might be able to form a breakaway club or something." Plans were laid and the next 48 hours were spent going undercover and recruiting the rebels.

Monday, 5.30 am. For the first time in his life Billy-Joel experienced 5.30 am sober. He was not enjoying it. The breakfast room was half-full of semi-conscious life forms drinking tea. "Okay guys, this is it" he said. "Today we take over the Dump". The Dump is a small cottage near to Penwyllt that nearly fell down a hole into the cave system below it. Nobody was ever too sure what to do with it so it seemed like the perfect headquarters for the newly formed U.B.S.S. (Unpopular Bastards Speleology Society) or "the rebels" as the more macho ones preferred to call themselves. Billy-Joel was the top man in this new club as everybody else had more credibility to lose than him. Under his instructions, a dozen shadowy figures snuck across the hillside between the two cottages and awaited the command to go. It came and the whole thing was over in a minute. As the door burst off its hinges the rebels were confronted with no resistance, just a man tied to a chair with a bin liner over his head. After throwing him out, the Dump was quickly fortified and a few surveys were stuck up on the wall. Neil Bournemouth, as the newly-appointed Equipment and Maintenance Officer, quickly established the stores. This turned out to be a four-foot length of 17mm rope and a broken karabiner. Ian Middlebum (Conversation Officer) took to his new role and chatted merrily amongst the group. This was it. They had done it. Now they could go and find their new cave without the worry of revenge.

Tuesday, 11.59 am. The crack of noon and people started to appear from their smelly sleeping bags. Tea was brewed and plans made. Since the takeover of the Dump over 24 hours earlier, there had been no sign of activity from Penwyllt. In fact, the only person outside the rebels that actually knew anything about it was the man with the bin liner and he wasn't about to say anything. He was still outside tied to his chair and bagged. A sheep casually strolled up and urinated on him. A muffled voice whimpered: "Vote Tory." Penwyllt also knew nothing about the takeover. The rebels just assumed that Penwyllt were using delaying tactics and were in fact at war. Leaving Tubby and Scrounger on guard, the rebels got ready and set off on their first club trip. Pete Francisnextoswitzerland had noticed a small hole that was resurging dark brown water. It was near to Penwyllt but behind the bingo hut and out of sight. "I reckon it's a goer" he stated, "at least a couple of miles of dry stuff." The operation began. Liam Caves-Keenly got his drill out and enlarged the entrance to reveal a small tunnel. This led for 90 feet to a sump. Taking ten minutes to work out some hypothetical decompression times, Billy-Joel kitted up and dived into the tunnel. He found the constricted passage difficult wearing twin side-mounted bottles but pushed on in zero visibility. "If only they could see me now" he chuckled to himself, having found a virgin cave on the first trip with the new club. After only three feet the passage took an abrupt 90-degree upwards turn, snaked for a couple of feet and surfaced. This had been a determined push by Billy-Joel in a very constricted passage. With his arms stuck by his sides, he managed to get one eye out of the water. At last able to see something, he was taken aback to see that the walls were smooth and white, if muddy. What's more, he could see daylight. And a toilet roll holder. And a small child looking at him. "Mummy, Mummy, Billy-Joel's in the toilet" cried the youngster.

Tuesday, 2.45 pm. Billy-Joel was painting the trees outside the cottage with bark coloured paint. In the distance he could see a muddy group of rebels slouching their way back to the Dump. "I bet he's found miles of stuff, the lucky sod" Paul Quimm said to Ian Middlebum. Then they bump-started Paul's car and went to the pub.

Wednesday, 1.02 am. Billy-Joel was locked into the cottage and his diving gear had been confiscated. Knowing that his men needed him, he was determined to escape. The windows were too rotten to open and the outside door had no inside handle. This was a desperate moment that required desperate actions. Summoning all his concentration and taking a deep breath, Billy-Joel free-dived out through the toilet.

Wednesday, 1.24 am. "What's that smell?" enquired Clive Northpuddle. He had been drawn from a dream involving Blue Holes and marking homework, by something akin to smelling salts. Billy-Joel was standing in the middle of the room looking like the creature from the swamp. "Hi Billy-Joel, did you have a good trip?"

Wednesday, 11.59 am. The crack of noon and people started to appear from their smelly sleeping bags. Scrounger had been sick in the middle of the floor and all the food boxes were empty. "Right, today's the day" said Billy-Joel. "I've got this great little dig in Dan-yr-Ogof that will probably go on the next trip" Billy-Joel's enthusiasm for cave exploration overflowed as usual, but he soon became aware of an air of awkwardness in the group. "What's up guys?" he asked. One of the group stood up and looked at Billy-Joel sheepishly. Billy-Joel liked things that looked sheepish. "Some of us want to go our own way" said the lad. "When you didn't come back yesterday, we got talking and decided that we want to be a tourist caver club". The broken furniture was cleared away and the last of the teeth picked up. The remaining non-tourist members stood about chatting whilst bandaging their knuckles.

Thursday, 8.58 am. For the second time in his life Billy-Joel experienced 8.58 am sober. He felt good. The hard core of the rebels was all that remained but that was all that he needed. All of the members over at Penwyllt were deeply engrossed in the final leg of extending married quarters into the whole of the rest of the buildings, so there was no need to leave anybody on guard at The Dump. All the team would be able to get underground together. Nine cavers and associated gear climbed into Paul Quimm's car. With bottomed-out suspension, a blue cloud of smoke

marked their departure. A large boulder marked their immediate stopping. The walk over to Dan-yr-Ogof was kept quite light-hearted and most of the time was spent deciding on a new name for themselves. Twenty-five minutes later, the Bang Gang arrived at the cave. They decided that if enough female members could be recruited soon, they would change their name to the Gang Bang Gang. They walked past the queue of people waiting to get in to the show cave and gave a friendly wave to the owner who had done so much to assist them with earlier explorations. Shortly, they passed the cave manager feeding a small baby into a dinosaur's mouth, to be rescued by a dog when the T.V. cameras arrived. Everybody was happy. Suddenly, out of nowhere came a high-pitched whining and a warm breeze picked up. Rooted to the spot with terror, everybody looked up to see a huge multi-coloured flying saucer come in to hover directly above them. Without warning, a hatch opened and out came half a dozen lengths of Bluewater rope. Six aliens abseiled down to meet the Bang Gang. Resembling an oriental coal miner, the biggest of the aliens walked up to Billy-Joel. "Got a fag?" it asked. "That's Paul Quimm's department" Billy-Joel replied. The creature walked over to Paul and after a minute ended up giving him a fag. "Cheers mate" said Paul.

After being conned into carrying some tackle bags, the aliens went underground with the lads. "We're from the the planet Bigdonger" said Dave, the secretary of the Bigdonger Subterranean Pluggers. "We've filled in most of our caves now but have turned the planet smooth. Got any rocks that you can spare?"

"Follow me" said Billy-Joel. The party of nine and six aliens made their way noisily through Dan-yr-Ogof. Whilst Liam Caves-Keenly loaded another battery clip into his holster-mounted drill, Dud Gear, the local cave shop man, sold the aliens some oversuits, wellies and various books that would be collected from his son, Bent, at the shop when they surfaced. After three and a half hours, the party arrived at Billy-Joel's little dig. "This is the Far North Choke, isn't it?" said Paul Quimm after bumming another fag off Dave the alien. "Well yes, said Billy-Joel, "but if these Bigdongers want the rocks then it's up to them to shift 'em." After five

minutes of talking into a little black box, Dave the alien looked up and reported that their ship was overhead and would be performing a molecular transfer shortly. "A case of beam me up Scotty, huh?" said Billy-Joel.

"Smart-arse" said Dave.

Five minutes later, what was the Far North Choke was a wide open passage leading into the distance.

"That was an easy dig" said Ian Altered-man. "Have you ever been to Herbert's Quarry, Dave?"

"Sod that shit-hole!" came the reply.

The aliens said their goodbyes and disappeared back down the Great North Road. Billy-Joel, trembling with excitement, led his band of explorers into virgin territory. However, after only 200 yards, the passage disappeared over a lip into a huge pot. After peering over the edge, all eyes turned to Brain Coupling who only weeks previously had invented a new type of descender. "Bear in mind that it hasn't been tested underground yet" said Copo as Billy-Joel vanished into the darkness two minutes later. "The trouble is" whispered Copo to Tubby, "we're not sure, but there may be a reaction between the new materials used in the pulley wheel of the descender and nylon when exposed to heat. It could weaken the rope!"

"It seems to be running very smoothly" said Billy-Joel, followed by a snapping noise and a squawk.

Billy-Joel hit the floor 30 feet later. "I think this old Berger rope's a bit past it" stated Copo nervously, as he pulled up the rope and looked at a frayed end.

"I agree" shouted up Billy-Joel. He got up and was disappointed to see that the way on was through a sump and, having no diving gear with him, was impassable. "Help!" called Billy-Joel. Everybody eventually stopped laughing and started to come up with suggestions. "Why don't we throw him a rope?" asked Ian Middlebum.

"Good idea" replied Paul Quimm. "Quick, give me a rope." Having no rope left was proving to be a bit of a problem. After much discussion, the team disappeared to get help, leaving Martyn Longway with Billy-Joel.

Thursday, 3.50 pm. Martyn Longway was deeply engrossed in the 15th. update of his book, *The Darkness is Horrendous*. Having interviewed Billy-

Joel by shouting, he surveyed the new discovery and disappeared up a side passage discovering miles of new cave. "This'll have to wait for the 16th. update" he muttered to himself as he happily explored.

Thursday, 4.00 pm. Sophie the dog was having a walk on the mountain above Dan-yr-Ogof. She enjoyed her walks and knew all the sheep by name. She also knew all the holes in the area...except the one that she found herself falling into. "Hmm, this is new" she thought. With a large splash she landed in a sump pool and sank to the bottom. With a struggle she got to an air surface and a bedraggled caver. "Hello Billy-Joel" she said.

"Sorry, I don't speak Dog" replied Billy-Joel. Sophie wandered over to Billy-Joel's tackle bag, ate his rations and fell asleep.

Thursday, 5.30 pm. The idea was complete. Billy-Joel had called on powers of invention he didn't even know he had. There was Sophie, snoring happily, covered in bits of rope salvaged from the abseil line. Dangling on a piece of string in front of her eyes was an old Mars bar wrapper, and tied to her tail was a karabiner. Billy-Joel clipped himself into the ropes and her tail. He moved her so that she was facing the sump pool and called: "Sophie... din-dins!" An eye opened, a nose twitched and she was gone. With a splash she was in the sump pool and galloping towards the Mars bar wrapper that wasn't getting any closer. Being smashed into the roof and walls of the sump was unnerving Billy-Joel but he pretended he was on an Aquazapp scooter and tried to relax. Seconds later they surfaced in the shakehole and Billy-Joel unclipped and rolled off as Sophie disappeared up the wall and over the top. With a sigh, Billy-Joel started to climb out.

Brecon High Street, Thursday, 7.49 pm. Cedric and Hilda Bowels were out for their usual evening stroll. They had been doing it for 57 years and loved it. "It's so peaceful" said Hilda as she lovingly squeezed Cedric's hand. "Yes Dear" he replied, "no traffic, no kids and no dogs." Without warning, they were knocked to the floor and trampled. Cedric sat up and looked at Hilda. "I could have sworn that was a dog with a Mars bar on its head" he said.

Thursday, 7.51 pm. Having made only four wrong turns, the Bang Gang emerged from the cave. "Hello Billy-Joel" said Paul Quimm. "Got a fag?" Billy-Joel

was leaning against the wall looking very annoyed. "I was about to come and rescue you guys" he said, "but they've lost Sophie the rescue dog. It's all very embarrassing."

Three months later, 11.50 am. Billy-Joel was enjoying the culinary delights of Butter Coupling. He was happy. He was being fed by the wife of a great inventor, he had established a through-trip in Dan-yr-Ogof and almost had a good reputation. The rest of the club were out doing interviews about how hard they were and how severe the trip that extended Dan-yr-Ogof had been. Then a sudden thought made Billy-Joel freeze to the spot. How could he have forgotten? How could he have been so irresponsible. Martyn Longway was still in the cave! "Oh God, he'll never credit me with the discovery in his book now" thought Billy-Joel. Suddenly the phone rang. "Hello Billy-Joel, it's Martyn Longway here. I've just popped up in Swildon's Hole and need a lift back to Wails." Billy-Joel had to be in a committee meeting shortly so he suggested Martyn go to Prat Products in Wells and get a lift from someone there.

Eighteen years later, 3.15 pm. Billy-Joel sat in front of the fire. The Dump had become very homely during his time as leader of the Bang Gang. They still weren't called the Gang Bang Gang and none of them had actually managed to do any banging, since they were now celebrity cavers and had no need to go caving any more. The kitchen area was now capable of having 23 people cooking simultaneously, the showers were hot, the car parking area could hold 1,153 cars, and all other areas were the married quarters.

The next day, 9.17 am. The Dump's kitchen was in its usual state of pandemonium. People and dogs were everywhere and the din was unbearable. Billy-Joel jnr. shuffled in and moaned to somebody that wasn't listening about how bad his hangover was. He also mentioned something about going caving.

2.03 pm. Billy-Joel jnr. was painting the rescue Land Rover's blue light blue whilst listening to a radio newflash about a dog found frantically swimming the Red Sea with a Mars bar wrapper tied to its head. "It could never happen here" he thought.

Picos '95: Sistema Sara

*by Joel Corrigan, Neil Weymouth, Dominic Wade,
Julian ("Jules") Carter and Pat Hall*

(JOEL) "If you're looking for sumps to dive, then I know a place with some of the best potential anywhere. It's at the bottom of this fabulous 600m deep cave, and it's never been looked at. Get a team together, and I'll come along. We can rig the place in a day, have two days set aside for exploration, de-rig, and then spend the rest of the holiday on the beach. Right?" Wrong...

Tim Nichols is nothing if not enthusiastic. After many years of exploring the caves of the Picos de Europa, he appears to have become rather blasé about mere half-a-kilometre deep systems. Before last Easter, though, I didn't actually know this.

As per Tim's instructions, I managed to scrape a motley crew together, doing my best to keep the true nature of the cave a secret. For weeks, several people didn't realise that one of the pitches was 230 metres deep - over twice as deep as anything in Britain. Oh well...

The departure date was drawing closer, and our Picos guide (Tim) let it be known that he could no longer come with us. I assumed that he had some perfectly understandable reason for not coming: family problems, financial restrictions, Butlins reservations, and so on. But the truth of the matter was somewhat alarming, and if I'd only thought about the implications a little harder, then things might have turned out differently - Tim was going on an expedition to the Picos, only not with us.

The slides that he showed us of this cave were rather select. The LUSS expedition of 1987 had managed to re-survey the entire cave, push several promising leads, place plenty of 8mm spits, and still manage to find the time to sunbathe. What they hadn't managed to do, though, was to take any photographs of the middle section of Sara. We thought nothing of it at the time, but we now know the reason why. Parts of this cave are rather sordid, and the big pitch - mainly due to the vast selection of rub-points - is a real laxative.

The brave bunch who volunteered to put their lives on the line were: Jules Carter, Joel Corrigan, Damian Grindley (CSS), Pat Hall, Huw Jones (MCC), Adrian Parsons, Dominic Wade and Neil Weymouth. Anyway, this is the story of what happened when "Eight Went Mad in Spain".

GOOD FRIDAY, 14th APRIL: 20.00 Hrs

(JOEL) "Alright then, one more cup of tea and then we'll get on with it. Okay? Oh, what the hell; we might as well eat the pasta".

Both Pat and I were pretty tired by this stage of the trip, and we were still outside the entrance! The truth of the matter is that we'd been travelling since Wednesday, had not had a decent sleep for several days, and had been dragging heavy packs all over the mountains for the last six hours looking for the entrance to Sara. The last thing we wanted to do was to go caving. Unfortunately, though, the expedition was on a very tight time schedule, so we had no choice but to get on with it.

Squeezing past the remains of the snow plug, we had to dig our way into the mined passage. This is stooping height, and after a couple of minutes we found ourselves at the head of the first pitch. My eagle eyes quickly detected a gigantic plate hanger ('70s vintage) and the rigging had begun...

Pitches of 13m and 20m were the first to be encountered, each with a very straightforward take off - NOT! Most of us were to discover that the entrance series was child's play, except at the end of a long, hard trip. The heads of these short pitches were slightly tighter on the way out than they were on the way in!

Military tacticians would have been proud of me that night. My efforts to delay the inevitable were quite superb (according to Pat), and the two of us must have consumed pints of lemon tea at the head of the big pitch.



The Sara Depression.
Photo by Pat Hall

The pendulum lived up to its reputation - Tim had warned me about it. Swinging wildly from a single, knackered bolt, I eventually managed to get a loop of rope onto a flake and haul myself up. Phew, what a palaver, and I hadn't sworn once (or twice, or even three times for that matter).

Several more dodgy bolts later, and we'd had enough. This really was not the sort of thing to be doing at midnight. The two of us made an uneventful exit, to be greeted by a magnificent sight - full moon on the Picos. With many patches of snow still surviving the Spanish heatwave, it really looked like a lunar landscape, and I should know! We were so impressed that we even increased our half-hour walk back to camp by contouring around the twin peaks of Mancondiu, adding at least another hour onto our journey. What a way to begin an expedition...

RIGGING HEINOUS SHAFT, SATURDAY 14th APRIL

(NEIL) I "battled" for the honour of rigging Heinous Shaft amidst complete apathy from the "young guns" on the trip. Maybe it had sunk into them that this pitch was twice the height of Gaping Gill... Anyway, we had hoped to go into the cave directly after Joel and Pat had rigged the entrance series and the pendulum pitch at the top of Heinous. Due to slight navigational errors the day before (we'd been looking in the wrong valley for the entrance), they didn't enter the cave until 18.00. Therefore, we decided to go in the next morning. Jules, Huw and I had packed the gear, and by 11.00 had set off for the cave. Joel and Pat were still dead to the world, having got to bed at 03.00.

We negotiated the entrance series with the three large tackle bags, and I started down the first pitch in

Heinous that Joel had thrown the rope down. This rope had landed in a small chamber with a window into the main shaft. The entire area was covered with sharp limestone. I clambered out of the window with two heavy tackle bags swinging below me, and the rope twanging off all the projections above me. Not a nice place, especially as there was no sign of a re-belay anywhere. I decided to prussik back up and reconsider the situation. On the way up, I spotted the spit 2m to the left, and began rigging (28m below the last re-belay).

The 33m pitch stayed close to the wall and landed on a small ledge. From here, a short traverse led to the next belay point. At this point we started to discover the more interesting spits. Over the years, the lower half of these 8mm diameter holes had retained moisture. As a result there were no threads left! We discovered that the trick to rigging here was to place the bolts in and tighten them up as much as possible, hoping that the threads left in the top half of the spits would hold the bolts in!

The next section of the pitch was a 35m free hang. This part of the shaft was misty, which heightened the feeling of remoteness. It was not helped by being able to see the carbide lamps of the others some 80m above. I was still 110m above the floor.

I landed on a (relatively) large ledge, covered in loose rocks. I spent some time throwing most of these off and listening to the crashes coming up four seconds later. I abseiled down yet again, descending against a smooth, fluted wall for 20m. After placing a re-belay, I dropped the rest of the 88m and touched down onto a boulder floor.

On the far side of this "chamber" (in fact it is merely a boulder blockage in the pitch) was a hole in the floor. This was the start of a fine 52m pitch. After the initial 10m of squalor, it opens up into a beautiful free hang, landing in the stream. When we were all together, Jules, Huw and I followed the stream down and soon reached an entertaining traverse leading to a 12m dry-ish hang. After negotiating some awkward passage - muddy bouldery stuff - we arrived at the head of the next 24m pitch. We called it a day here.

At 300m depth, the cave had proven itself to be cold, damp and pretty miserable. We had a brew and something to eat in preparation for the pleasures of the long climb out. Dominic and Adrian caught up with us here, and carried on rigging the next section.

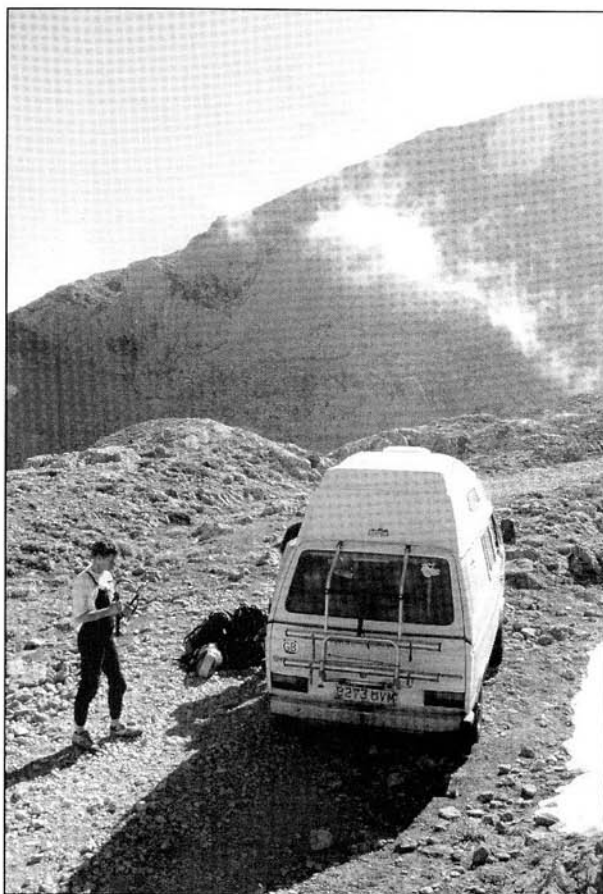
I was using a rope-walking system for the exit. This worked extremely well for the first 15m or so of each pitch, allowing rapid progress. Beyond this, though, I didn't have the strength to lift my body weight using each leg in turn. Rope walking has a distinct disadvantage if you haven't got the legs of a cyclist.

At the top of the first 88m section, I was most impressed to see the others at the base of the shaft far below, slowly making their way up through the layer of mist. Carrying on up, I made a point to check for any abrasion on the ropes. The spits were, on the whole, well placed, although there had been a "twang" or two on the lower section. Back up at the pendulum, there was a rub-point at the back of the knot which had cut through the sheath. Joel had spotted this after he had rigged it, but admitted that he couldn't be arsed to re-rig it at the time, deciding to leave it for me!

We all decided that a pitch of this height (230m in total, including the 52m) was extremely daunting, although second time around its horrors had been reduced somewhat. Had I been fit enough to use rope-walking continuously, then the size of the pitch would not really have been a major obstacle. From now on, though, Gaping Gill will never seem quite the same.

SEARCHING FOR THE WAY ON, SATURDAY 14th APRIL

(DOMINIC) Adrian, Damian and I left "base camp" by mid-afternoon. We were in no particular rush, as the others had left to rig as far as the 24m pitch only three hours earlier. The plan was to meet them on their return, hopefully below the big pitch. It was a slow walk up the mountain towards the entrance, laden as we were with a ridiculous amount of



The Volkswagen on the track to the White House. Photo by Dominic Wade

equipment. The weather was far too good to be going underground, and the snow-capped peaks surrounding us were much more inviting than the prospect of a cold miserable cave.

As Damian struggled to work out the complexities of an SRT rig, I enjoyed the simple pleasure of having my final pre-cave shit in such an awesome arena as the Sara Depression. We soon decided that it was too hot to kit up outside, so we made our way inside the mine entrance to complete our preparations.

This was it: we had the cave survey, plenty of Mars bars, and more rope than you could wrap a dog in. All we had to do was to find the others, and then follow the big holes to the bottom. Easy!

An ominous black crack splitting the ledge below us (at the beginning of Heinous Shaft) gave rise to an odd feeling in my bowels. There was an air of mixed apprehension and excitement as we wondered quite what a 180m pitch was going to entail. After checking that no-one was below us on the rope, Damian and I volunteered Adrian for the honour of assessing the rub points! Damian followed Adie down the pitch, whilst I checked and re-checked my kit. I had a good

Sistema Sara

Andara, Picos De Europa, Northern Spain

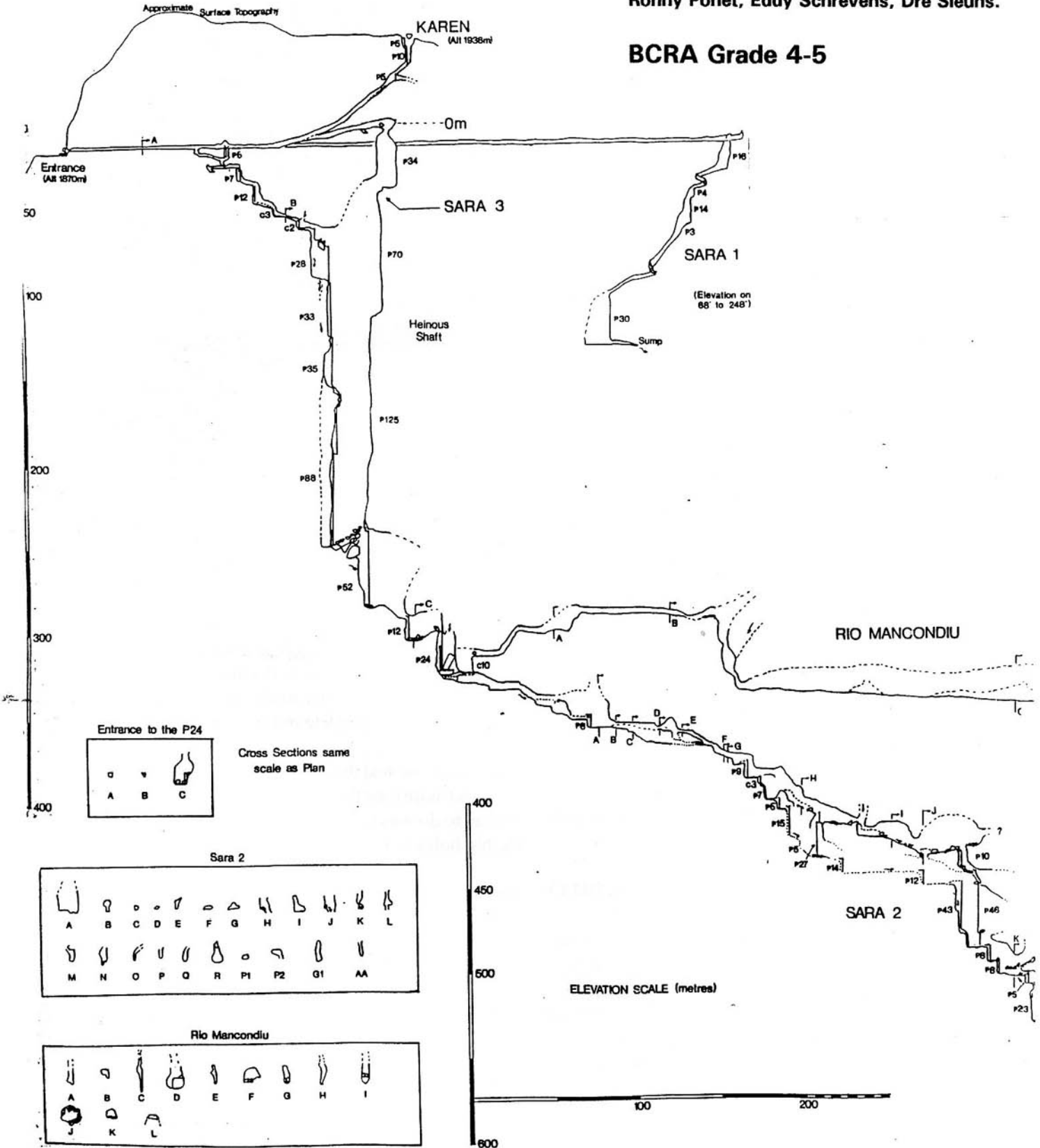
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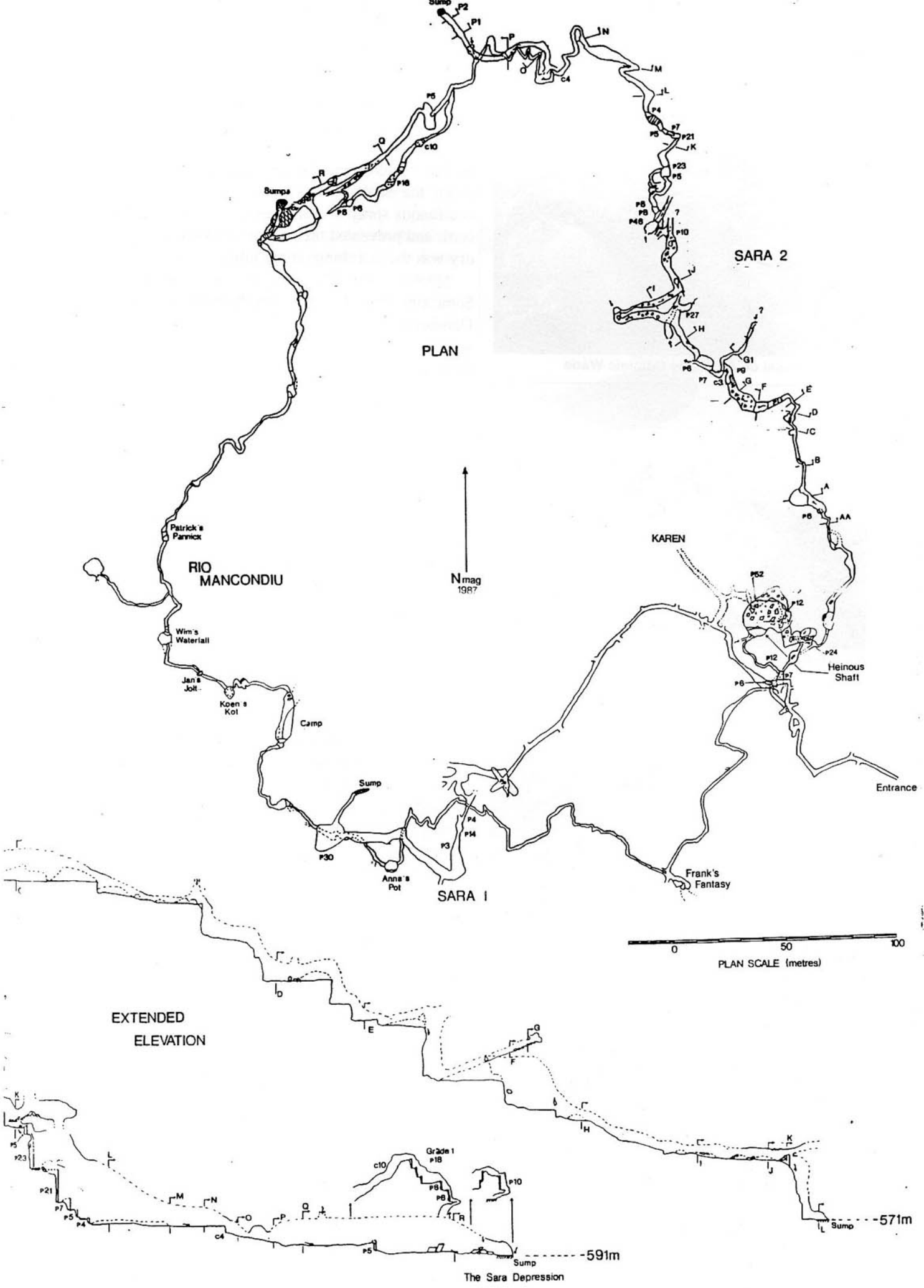
Sara 1- Tresviso '77.

Sara 2 - Tresviso '78, Tresviso '87.

Rio Mancondiu - Jos Beyens, Patrick Blommaert, Wim Coyvers, Frank de Clerck, Jan Diels, Rik Keunan, Koen Mandonx, Jan Masschelein, Ronny Ponet, Eddy Schrevens, Dre Sleuns.

BCRA Grade 4-5







Pozo de Grajal de Abajo, by Dominic Wade



View N from Castillo del Grajal, by Dominic Wade



The White House in mist, by Dominic Wade



Pat coming out of the collapsed mine entrance

on the pendulum pitch. Damian clipped his cows' tails in not a moment too soon, as with a sudden yelp his descender popped off the rope and he fell...

At last I could see lights below me: I was half way down the shaft. I was actually grateful for the continuous spray of water, as it kept my descender cool, and prevented the rope from melting. Staying dry was the last thing on my mind.

Some time later I reached the bottom. Adrian and Damian were sheltered under an overhang, sipping soup from the stove. There was still no sign of Jules, Huw, or Neil. Damian was a little shaken up by his near-death incident at the top of the shaft, and the seriousness of the cave was becoming apparent. Cold was going to be our worst enemy, so we all agreed to keep moving.

We descended the 52m pitch (the continuation of Heinous Shaft) to be greeted by three friendly faces waiting at the bottom. They had achieved their aim of rigging as far as the 24m pitch, and seemed relieved to be on their way out. Damian, suffering psychologically, wisely decided to exist the cave with the others. We said our goodbyes, and heroically set off down the passage, with as much gear as we could carry between us.

After a thorough soaking on the 12m pitch, we climbed down to the top of the 24m and started our descent into "new" territory. This was another fine free-hang, landing in a large chamber with a lake to one side. The way on was far from obvious. The survey was not a great deal of use at this point, and we spent the best part of an hour crawling around under the boulders before we found anything even remotely resembling the description. The stream passage was now constricted and awkward, more closely resembling sections of Eastwater than a classic Spanish pothole. The "fine cascades in black rock" were not fully appreciated as I slipped over, and the momentum of my generously-proportioned tackle bag pulled me to the bottom of a climb. We were both wet, tired and pissed off at having made so little progress. We plodded on, trying to find the next 6m pitch. It could have been down any one of several likely-looking holes that we stepped over, but none looked too promising. Finally we rigged a rope down what seemed to be the most suitable candidate for the term "pitch" and dropped into a small chamber. This definitely had the wrong feel about it, as the only way to follow the water was through a tight, aqueous tube.

We felt that we had given the cave our best effort, but

we were becoming careless and knew that we still had a hard trip out. It was a relief to make the decision to turn around.

Midnight came and went as we started to lay a cairn path through the awkward section below the 23m, as we wanted the next party to find the tackle bags that we'd left for them. I was very grateful for the brew kit that we almost hadn't brought with us, as I was suffering badly from the cold and lack of energy. Whilst Adrian headed up the pitch, it dawned on me that I hadn't prussiked for over one-and-a-half years...Whoops!

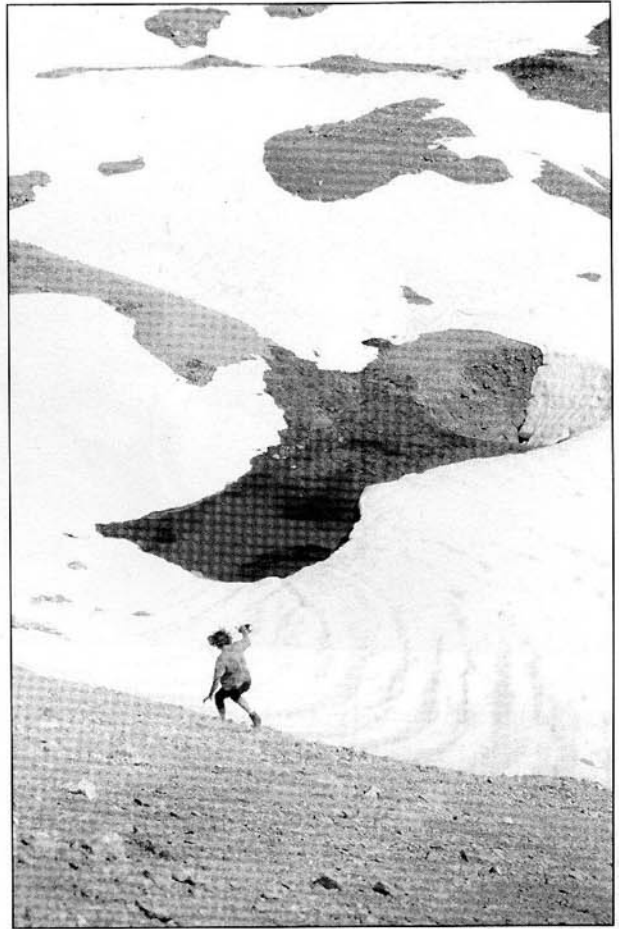
PUSHING AT-400m, SUNDAY 15th APRIL

(JOEL) By now, it had become clear that the sump push was out of the question, and even getting to the bottom was highly unlikely in the time available. We made the decision to try and push some of the more interesting looking areas that were left unexplored by the previous expeditions to the cave.

The last few days had been pretty intense, and by this stage everyone had done more than their fair share of hard trips underground. With this in mind therefore, Pat and I were very surprised when Huw decided that he wanted to come with us: he had barely recovered from an epic trip with Neil and Jules! Some people will do anything to find new cave...

Leaving the comfort of the White House (that we had adopted as our own) by mid-afternoon, we made swift progress to the bottom of the 24m pitch as were travelling light. Sure enough we were confronted by the unappealing section of the cave that Dom and Adrian had warned us about. Following their cairns, we stumbled upon the huge pile of tackle bags that they had left for us. As our plans had changed, we no longer needed all of this rope. We emptied the bags and sorted through the contents, discarding as much of the furry 11mm Black Marlow as we could. We ended up with only a couple of tackle bags that they had left for us.

The rope that the others had left in situ was in the wrong place - we had been warned beforehand. It took us the best part of an hour to discover the correct way on. This was down an unlikely-looking rift, eventually opening up onto a traverse with a 6m drop into a sizeable chamber. All three of us were rather disappointed to find that one of the previous trips here had left a large amount of rubbish in this chamber, as it had been a temporary camp site in the distant past. We were then even less impressed when we were forced to do finger-tip press-ups to avoid a



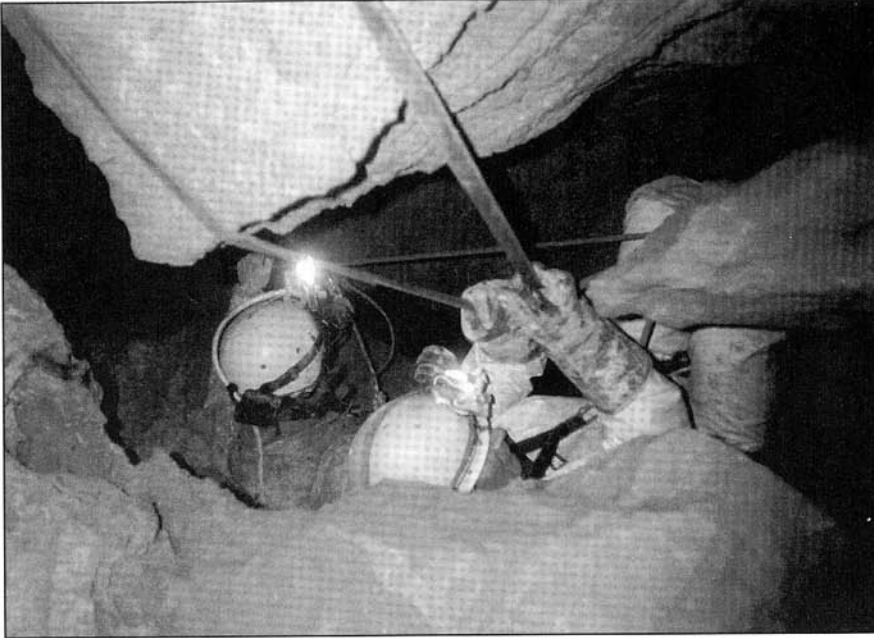
Adrian descending into the Sara basin, by Dominic Wade

monster poo that had been left in the next section of crawly rifts!

The going was not getting any easier, and due to the shortage of large patches, the tackle bags were not getting any lighter. We had enough kit to rig as far as -430 with lots in reserve for several sizeable virgin drops. Over one of our many brew stops, we had a bit of a re-think, and decided to try and push the next large inlet passage, as opposed to the area that we'd originally planned. This passage proved to be far larger than we'd imagined, with the limit of exploration being a 6m waterfall. The LUSS team had called it quits here, as it was a treacherous-looking climb up. More to the point, it would probably have involved a thorough soaking...

After some thought, Huw set about using that age-old artificial climbing device: the lasso! The 11mm hemp-type rope really came into its own here, as we wouldn't have attempted this technique with the decent SRT stuff. There were several prominent (and dubious) flakes to aim for, but none of us had much joy. Finally, though, in a dazzling display of sheer luck, I managed to snare one of the offending flakes. With hindsight, I'm not certain that it was the one that

The 2m climb at the head of Heinous Shaft, by Dominic Wade



I was aiming for! The only drawback with performing like Roy Rogers was that I was given the honour of testing out the strength of the belay. Very carefully, I prussiked up the rope, and clambered over the top. The passage was still large, disappearing around a right hand bend a few metres ahead. After re-rigging the rope, Pat and Huw climbed up to join me. Our exploration fever soon faded into a mild form of discovery flu, as just around the corner the passage narrowed into a tight rift. Huw and I managed to climb up here, finding a way through into the larger stuff again. Pat was pretending to have a rest, but I'm sure that he had a secret food stash...

For the first time, both of us had almost forgotten our fatigue. This is what we'd travelled halfway through Europe for. We had found a way into a large impressive passage, and all of the grief had been worthwhile (for us). Huw wriggled through what appeared to be a pretty terminate boulder choke, and we soon re-joined the stream.

Several black cascades later, we entered a large chamber. The water flow was coming from two points: a large waterfall, and a huge aven. Neither of us could even be seen to see the top of this, and our impressions were that we had entered an inlet system that carried at least as much water as Sara itself.

This was the end of the road for the dynamic duo, as we hadn't brought the bolting kit this far. Unfortunately, yours truly had also neglected to bring the compass and clino, so we had to use the highly accurate method of cutting up a sling for our survey. We surveyed a grand total of 100m of

passage, but didn't bother with anything other than the streamway. We dropped back down to where Pat was still waiting, and had something to eat.

The three of us were pretty knackered, but still in good spirits. We had achieved one of the things that we had set out to do, and felt that we could look forward to a good night's sleep. There was just the minor inconvenience of getting out of the cave, and the long walk back to the hut.

After what seemed to be a very long time, we arrived back at the bottom of the 52m. The prospect of merely having to climb up ropes was almost comforting: it was the caving in between that was unappealing. After a final brew, Pat started his ascent. I drew the short straw and was left until the end.

The cold, as always, was the real enemy. The things that I did to stay warm cannot go down in print! I even stripped my carbide headset down to pass the time, and to keep my fingers working. Unfortunately through, I couldn't get it back together again...

Finally it was my turn. The others had long since gone (the call of nature had almost deafened me, and when you're wearing a harness these things take time!) and I headed on up, prussiking on autopilot. Way above me, I occasionally caught sight of Huw's light, reminding me of the sheer size of this hole. At the 12m pitch, I met Neil and Adrian who were coming into get the rest of the de-rig underway. They were less than amused to discover that we hadn't attached the tackle bags onto the rope at the bottom of the 52m!

I met up with Pat and Huw at the entrance. The weather was not quite up to its usual standard, but we weren't really bothered. We'd been caving for twenty hours, so we wouldn't have noticed if we'd exited in the South Pole.

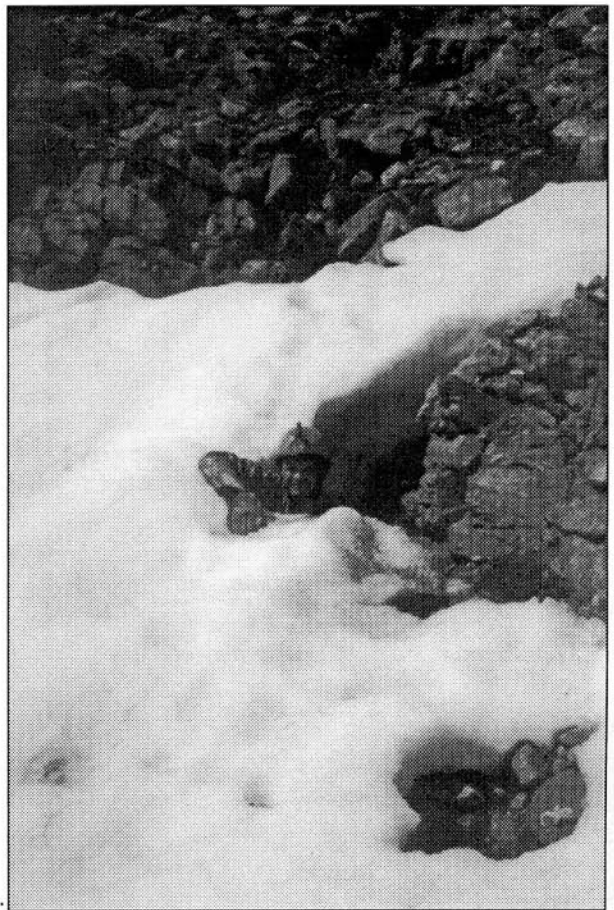
THE GREAT DE-RIGGING SESSION, MONDAY 16th APRIL

(JULES) The situation so far: there were four tackle bags at the bottom of the 52m pitch at the base of the Heinous Shaft. Neil and Adrian had entered the cave about an hour before us, with the intention of getting the de-rig underway. Dom, Damian and I followed on behind.

We waited at the top of the main shaft for over an hour, as we had not been able to hear Neil's instructions clearly, and didn't want to go down unnecessarily! To combat the cold, we developed a system of "cave aerobics", so watch out Mr. Motivator! This served to keep us chilled rather than frozen. Eventually, Adrian appeared from below tailing a rope. This rope was joined to a couple more ropes which went from the top to the very bottom of Heinous Shaft, with five very stuffed tackle bags attached to the end. The plan was to haul the whole lot up in one go! Neil was walking at the top of the 90m section way below us, with the intention of keeping the rope clear of ledges. Adrian set up a Z-rig hauling system (pulleys and ascenders/descenders) which we started on the far side of the pendulum pitch. This was a very cramped set of ledges, and progress was painfully slow.

Sometime later Neil appeared, looking cold and wet. He had had enough. Things were re-assessed and we changed the system, moving it to the top of the pendulum. In the larger area, we could all haul on the rope together. Progress improved...

One of the runner pulleys that we'd left in place to keep the rope clear of ledges. Someone had to go down and unclip these runners. The question was raised, the fool was me! Back across the pendulum that we'd all come to know so well, and down the other side of the bridge to the next set of drops. On my way down I unclipped the runners as I went past. I came to a stop next to the final runner. Here I was to remain for the next couple of hours, perched on a loose ledge in the void of the Heinous Shaft, in a constant spray of drizzle and surrounded by an impenetrable mist. Above me was an occasional glimpse of a carbide lamp, and below was a taut rope disappearing into the pit...! All I had for company was the occasional whistle blast from above, and a huge box of sweeties. Having plenty of nosh is a



Pat in the entrance to Sara

major plus point with this caving lark.

I was there for what seemed to be a very long time, and finally I'd had enough. Just as I was sorting my gear out for the upward journey, a tackle bag rose out of the mist. This was followed in quick succession by the other four, clipped onto the end of the hauling rope. So up I went, following the bags, de-snagging them as I went. The team work continued in earnest, and against all our expectations the ropes were at the top of the shaft. The haul had worked! Dragging the bags up the entrance pitches (even with their tighter take-offs) was child's play.

At the first (or last) pitch I proceeded to give Damian some grief - I was right at the back de-rigging the last few bolts when the smell of hot Bird's Apeel came wafting down the passage. Neil was brewing up in the entrance, and I was the last in line!

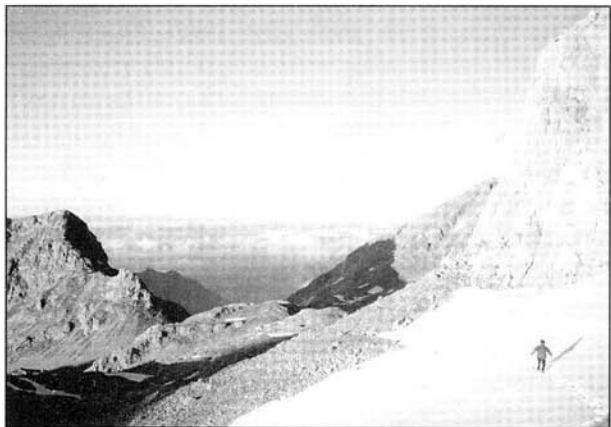
We left the tackle bags in the adit entrance and headed back to base. It was early in the morning, the sky was clear, and it was cold. We made the long walk back to the refuge, feeling very satisfied with ourselves, and amazed that it had all worked out so well. Back at the White House we ate a frugal meal, and drank



Adrian in the entrance, by Dominic Wade



The Volkswagen on the track, by Dominic Wade



View NE, on the icefield, by Dominic Wade



The team at the end of the trip, by Jules Carter

and amazed that it had all worked out so well. Back at the White House we ate a frugal meal, and drank a couple of beers...

FINANCE AND LOGISTICS

(PAT) This trip was conceived and executed completely on the cheap. The idea was to beg or borrow any gear that the eight of us did not already own ourselves, which came down to rope, lots of rope. Thanks to the generosity of the SWCC, Red Rose, Dragon Caving Gear and the former Poly of Wales Club (former Poly and former Club) we ended up with far more than we could possibly have used in four or five days without having to touch the stuff lent by Tim Nichols, much. We had plenty of hangers, which was in sharp contrast to the paucity of good bolts in the cave, and we had at least one bolting kit.

Having scrounged the gear, the biggest expense was transport. If money had been no object the Santander or Bilbao Ferries would have beckoned, but that would have cost around £122 each, plus rip-off food prices for the 24 hours each way. There are not many crossings on the long routes, so travelling when we wanted would have been difficult. Four to a vehicle, it cost us £48 each for the Portsmouth-Cherbourg crossing, including AA 5-Star cover, and in Adrian's car about £39 each for petrol and tolls.

Personal insurance was £22 each from BCRA (£17.50 for members). Communal food and gas was only about £12, mostly because we hadn't got that bit properly sorted, and we spent 5000 ptas on hut fees at the White House. All in all, apart from personal gear, the cost came to around £125 each, but we did have to drive for a day and a half on the way down, and two days on the way back.

The development of the White House meant that we had to camp most of the time, somewhat short of tents. Without the benefit of the Weymouth campervan and Neil's willingness and ability to get it as high up the track as any 4WD, it would have been very squalid up there. The space afforded by the van also made conveying all the gear the 900-odd miles and back possible, while affording some comfort to us passengers. Two ordinary cars for eight people, as originally planned, would have been hell.

In conclusion, when planning a short caving trip abroad on the cheap, check that you have the following essentials:

1. More food than you need.
2. More time than you have allowed.

3. More rope than you can really use, as long as it's someone else's.
4. More up-to-date local information than we had.
5. Neil Weymouth.

HINDSIGHT IS A WONDERFUL THING!

(JOEL) Before we went to the Picos, the usual array of lounge-lizards were constantly telling me that we'd never get to the bottom of the cave, let alone dive the sump. As soon as we returned, the same bunch could be seen chuckling away to themselves, having been proved correct once again. For these people though, the truth will never be fully appreciated.

It was all Tim's fault. He planted the seed, realising that I had never caved in the Picos de Europa before, and seeing me for the gung-ho plonker that I really was! The nearer we came to departure date, the more unrealistic the sump push appeared to be. Only at the last minute did I even try to sort out my altitude decompression tables: this would have been done weeks earlier if I'd really thought that it was at all feasible.

However, I learned a long time ago that without a fixed aim these trips tend to take on the air of a holiday. We were not going on a pub crawl, it was an expedition - honest!

I used to think that the main difference between a holiday and an expo was in the remoteness of the area. Looking back, I now know that this is not entirely true. You can have a holiday to Everest, or an expedition to Ben Nevis. The difference between the two is down to how they are run. Climbing the Ben with flippers is quite possibly more of an epic than going up Everest with all of the best gear! Five days, with only eight people, with two tents and two bivi-bags between those eight, with one stove and three bags of "Beanfeast" for the entire trip, and no pubs or restaurants within walking distance, really deserves the title of "expedition".

Diving the sump would be possible - of course it would. To stand any real chance, though, we all felt that we would have needed another week, and possibly another car-load of people. Then, with some good weather the chances of entering the master cave proper would be there. At the end of the day though, all eight of us performed far beyond our individual expectations. Each and everyone of us achieved personal ambitions, including depth, length of caving trips, longest prussiks, and simply caving abroad. As a team, when the chips were down, we all seemed to perform. We managed to explore new cave in a

pretty unforgiving (and unfamiliar) region, with enormous time and logistics pressure. On top of this, though, it should be remembered that this new cave passage was found at depths greater than anything in Britain. Had this been a Mendip discovery...

In the future I'm sure that I'll do things differently, but I shall always remember my first expedition to the Picos with a certain fondness - it really was a "Big Boys' Caving Trip"!

Appendix: ROPE TESTS

(JOEL) Sometime before we went to Spain, two of the major rope manufacturers brought out what they hoped would be real contenders in the static rope market. Dudley Thorpe (the Dragon Man) was kind enough to lend us a couple of 50m samples for the expedition, in the hope that we'd be able to give them some abuse.

CAIRNGORM 10.5MM SUPERCATCH

We rigged this rope near the top of Heinous Shaft, under the assumption that it would get a fair amount of use over the week. The reports coming back were not favourable:

"Like shit off a shovel"

"That's pretty bouncy for a static rope"

We were rather disappointed with the performance as all of us want to see a British company doing well in this field.

MARLOW 10MM

This length was placed on the 24m pitch at 300m depth. As such, it didn't receive as much traffic as the Cairngorm but had become pretty mucky by the time it was finally dragged out (lots of mud in that area). When questioned as to its performance, the replies were usually along the lines of:

"Oh sorry, I didn't notice it".

This is probably as good a recommendation as your average caver is prepared to give a rope!

Memoria In Extremis

by Pat Hall

It is one o'clock on Easter Monday morning, 1995, and I am sitting it out at what I hope is the more attractive end of an inlet passage 400-odd metres underground. I'm cold and tired and I wish Huw and Joel would get a move on. I've already spent as long as I want to in the Mendipesque mid-section of this cave. I am worried that I won't be able to do my bit in the de-rig. To be honest, I am just a bit concerned that a thousand feet of prusiking in the next few hours (to say nothing of the slog back up the thrutchy stream passage to the bottom of the pitches) is more of a test of endurance than I should put myself through. My mind starts to wander and I am thinking of my first few years of caving. Julian Smith was a bloody fine caver, one of several I seemed to spend every weekend with in the Dales, either with a busload from the University, or just a car full. None of us students had cars, but the relatively aged Stan Brown had moved to Brum from Manchester, and he had an old Renault estate - perfect for carting three or four of us up the M6 every weekend.

I remember a trip into Meregill with Julian. As usual he was at the front and rigged all of the pitches. I suppose he was still learning the subtleties of rigging, but suffice to say staying dry did not appear to be one of his priorities. Coming out last I found at one point that every time I raised my arms to push up my top jammer, icy cold water poured into my sleeves collecting as a reservoir in my old Petzl suit above the harness. Each time this happened I had to rip open the Velcro front and eject the water. When I stood up in my foot-loops the suit was pulled shut again, the Velcro sealing up ready for the next time I raised my arms, and so on. After a few cycles of this misery I noticed a flake a few feet away to the left, just far enough to be clear of the waterfall. Swinging across, I was able to grab it and so I hung there bitterly cold, and not really shivering.

"Hmm, this is better," I had thought to myself, "if I just hang about here for a few minutes my strength will return and my ascent to safety will be a breeze".

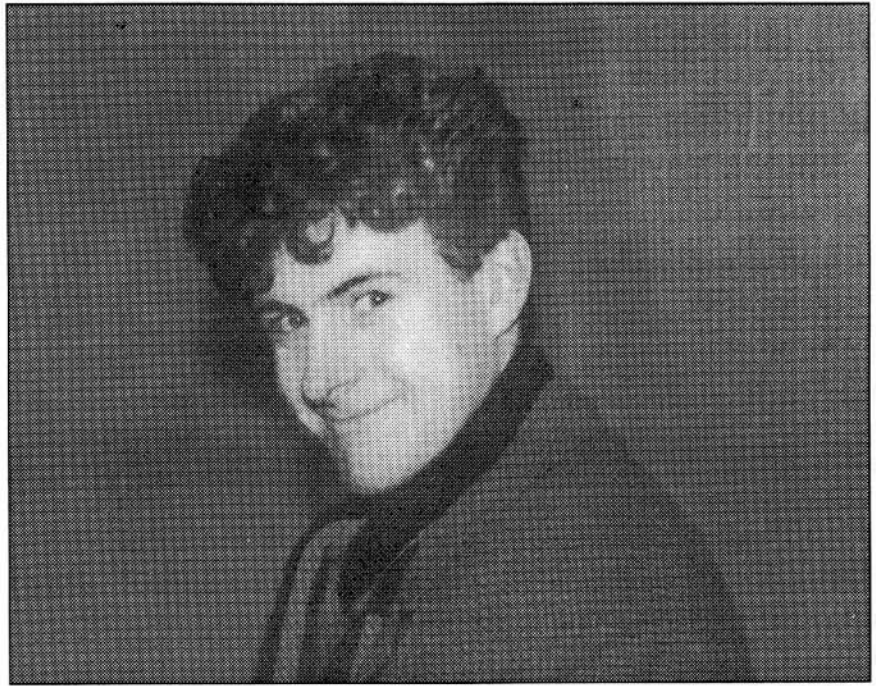
"Come on Pat, I'm jolly well freezing my extremities off up here", or words to that effect. Julian had yet to re-invent himself as Veg the Lancastrian Yorkshireman, and his native Lichfield accent was only slightly tainted by compulsive mimicry of the Brummies. "Slime and peas and a pint at the Creifer!"

That was enough. Hanging out of the water on a small flake was not a good idea, so I swung back under the torrent and went for it furiously.

I overcame the cold and the apprehension then, so I can do it now. As soon as the other two get back from finding their token virgin passage (they're welcome to it) we'll shoot on up to that small chamber where Joel left his brew kit. Ah, here they are now. Twenty lengths of a sixteen-foot tape, what's that in metres? About a hundred, so let's push off out of here. We had about 100 metres of tight passage ending in a chamber with the inlet water flowing in from about six metres up. Whoopee, I am sorry I didn't follow you, not! Could one of you stand on my head please, I can't seem to be able to make any progress down the black rope, even with minimum friction.

The 9-metre pitch... brew kit not far away now... lemon tea, delicious... onwards again upstream. Why the hell did we bring so much rope this far into the cave?... past the old camp and up the 6-metre pitch to the "awkward section" above it... jeez this bag is heavy... the 24-metre - this is hard work, and still the big shaft to go. At the bottom I found a bag of dried fruit. Dried fruit is good stuff, so I'll eat it all myself, and not tell the others. I need the energy... now the 12-metre with its crap rigging... I'm at the bottom of the 52-metre lower section of the big shaft

Julian Smith, photographed at Bull Pot Farm in 1983 by Pat Hall.



now. I've refilled my carbide and munched my prunes and apricots and a big bag of peanuts. Julian went on to train as a teacher, but spent long periods just caving. He was always braver than me. While I was falling at the first fence of the rat race, he just did what he wanted, living on nothing and caving all the time, in the UK and in Spain, France, Austria and Mexico. He moved north and became absorbed into the Ingleborough scene, working in Inglesport. He was one of the fittest and most capable cavers I have known. In 1991 Julian drowned in Cueto-Coventosa. This is my first foreign caving trip, and Julian died not far from here.

Joel and Huw are here now, and the brew kit has been put to good use again. I'm off now. I want to be out of here. It's a long way, but I just have to take it very steady.

The 52-metre. This is hard work. Slow down and cut out the anaerobics. Up now to the boulder floor and the base of the big shaft proper. The rope up is invisible in the mist, but I know it is over there somewhere.

The 90-metre. The only re-belay is a single bolt 25 metres from the ledge, and the bounce is exhausting, but it soon declines and I am making progress. After the bolt there is a distinct twang with each movement. I just hope that the rope protector has stayed in the right place (it has).

The 35-metre. The opposite wall is out of sight as I

swing round on the rope, some way now from the nearest bit of rock. Thanks to the freeze on Sunday we had had a good view of the shaft on our delirious descent. Abseiling endlessly in this glorious void was exhilarating beyond belief. Now it appeared to be raining heavily in the cave, the inlet of snowmelt swollen by a warm Monday morning. Oh good, that means sunshine on the surface.

The 30-metre. The penultimate pitch of the Heinous Shaft. Stop for a while to botch a repair to the mini delta Maillon holding my chest harness to my ascender, which has come undone and buckled.

The 24-metre. The final big length of rope ends at last and the pendulum is completed. A deep gulp of cold water at the inlet before the final effort of the entrance series. Adrian and Neil are at the top of the last, 7-metre, pitch - as pleased to see me as I am to make contact with the rest of the team. We haven't done our agreed bit of the de-rig, sorry boys.

I make the surface and crawl out into the sunshine carrying my personal gear. It's eleven o'clock, 19 hours after going in, and I just want to get back to the White House for a wash and a sleep. Jules is at the entrance and he walks down with me before heading back inside with Dom and Damian for the epic final trip.

Julian is buried in the churchyard opposite the Marton Arms.

Letters to the Editor

Dear Editor,

maybe I am being a tad unreasonable here, but I never expected that writing an article for SWCC Newsletter would generate such personal, sneering insults and total character assassination as shown in Steve Thomas' letter in Newsletter 115. This letter, together with Liam Kealy's article was seemingly sparked off by my account of a trip to Ogof Dan Y Lleud Wen with Nig Rogers.

Any SWCC member is entitled to write for the pages of the club newsletter, articles which its readership may find interesting and of some relevance, surely, to caving. My article in the newsletter, (I've got to say it, it is a club newsletter and not a magazine as stated by Steve, and as such, is written by club members for club members) described, what was for me, an interesting trip down a relatively new cave in an infrequently-visited region of Mynydd Ddu, and in writing it, I tried to describe what a trip to the cave can involve. I thought this might be of interest to SWCC members who may not have visited the area before.

Steve and Liam seemingly take exception to my article because the trip involved Nig Rogers. They have an axe to grind with him personally, because of a "poaching" episode which took place some weeks before the trip I described. At the time of the trip and at the time of writing the article, I had no real knowledge of the circumstances that Liam describes in his article and which cites me as a conspiratorial key player in the plot to poach his dig. The description of my involvement in so-called 'phone calls to Nig, and the suggestion that I was prepared to take time off work to poach Liam's dig, are fantasy and not representative of my recollection of the truth.

I can only reiterate that the trip with Nig was done on the understanding that Liam was not at all interested in further pursuing the passage in question. That was my understanding.

To finalise, in my article I tried to tell it how it really happened and that I believe I have done. I make no apology if the article was lacking in the sort of rampant machismo Steve desires in an article, but then again I wouldn't try to portray that sort of attitude, unlike some who go around with diver's gags in their mouths.

Paul Tarrant

Correspondence on this matter is now closed - Ed.

