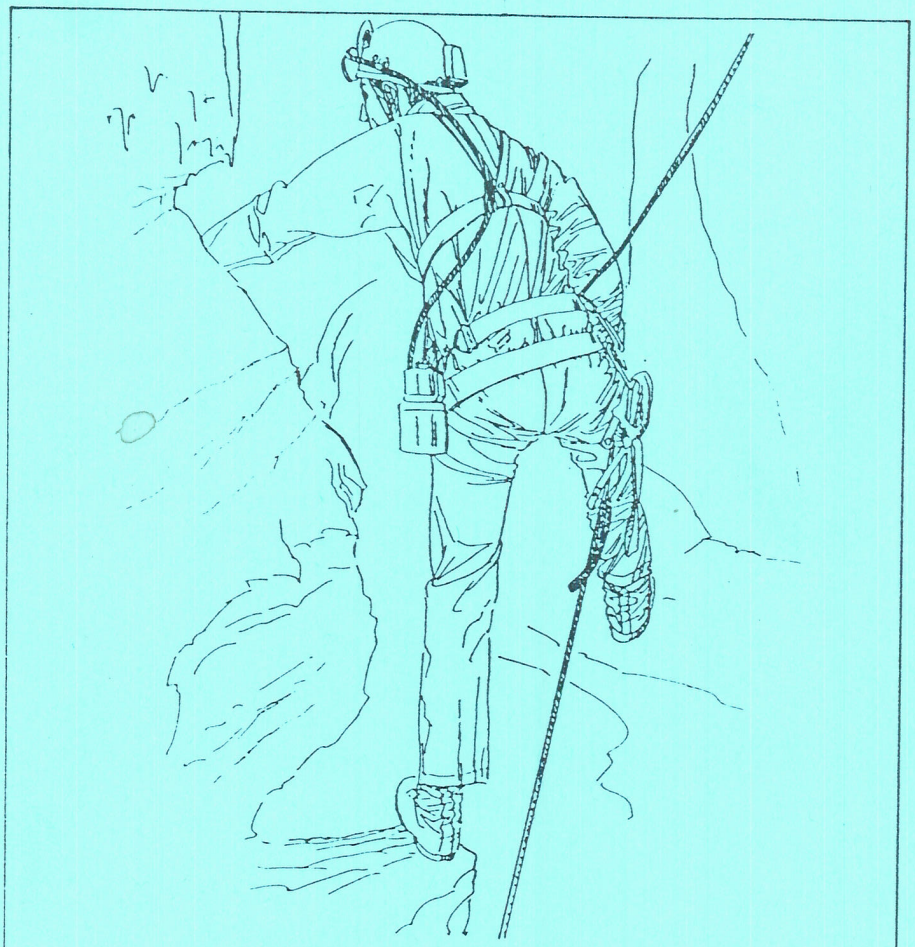
IMPERIAL COLLEGE CAVING CLUB



The cave is not a lifeless place, it is a living thing to which we have to give ourselves; a thing that can be gentle and also be a savage whose changes in temper can render it dangerous. And the harder it treats us, the happier we are to master it and make it ours.

Jean Cadoux

NEWSLETTER

Number 7
Nov 1986

IMPERIAL COLLEGE CAVING CLUB

The club meets weekly on Wednesday at 1pm in the Union snack bar, Union Building, Prince Consort Road, London SW7 2BB.
Telephone 01-589-5111

The committee members elected at the Dinner Meet in May are:

President	Simon Seward
Vice-President	Richard Collcott
Secretary	Sarah-Jane Hunt
Treasurer	Kath Bonnick
Tackle Officer	David Wilson

MEETS LIST 1986-1987

DATES		AREA	PERMITS	HUT
Oct	10-12	Yorkshire		B.P.C
	17-19	S. Wales	O.F.D, Tunnel top, Agen Allwedd	C.S.S
	31-1	Yorkshire		N.P.C
Nov	14-16	Derbyshire		O.C.C
	28-30	Yorkshire	Cow, Wretched Rabbit	N.P.C
Dec	12-19	Yorkshire	Lancaster, Link, Washfold Pen-y-Ghent, Hunt, Notts, Lost John's, Short Drop S.R.T course	N.P.C
Jan	16-18	Yorkshire	Dale Head, White Scar	N.P.C
	30-1	Yorkshire	Echo, Magnetometer	N.P.C
Feb	13-15	S. Wales	D.Y.O, O.F.D	W.S.G
	27-1	Yorkshire	Notts	N.P.C

CHRISTMAS DINNER: Following the success of the last two dinners held in the Golden Lion Hotel, Settle, on the last night of the Christmas tour, it seems likely that we will hold it here again this Christmas.

EASTER TOUR 1987: As the college has a five week holiday it has been suggested that we organise a tour to Ireland, counties Clare and Fermanagh in particular.
DINNER MEET: To be announced.

Any thoughts or ideas on the above matters would be gratefully appreciated

FROM THE EDITORS DESK

I must start by welcoming, on the behalf of ICCC, all the new members into the caving club and hope that they will retain their enthusiasm for the forthcoming caving trips.

This year has seen a lot of changes in the club and its policies. Firstly, there is no Mendip trip due to the closure of many caves and as a result a Derbyshire trip has been planned, and will hopefully go ahead. I think it will be a shame if people do not support this weekend, we should take the opportunity to cave in other areas even if it means lowering our expectations so as not to end up 'blinkered' cavers !, Remember, ICCC haven't made it to Derbyshire in 2 years.

Due to some unfortunate experiences last year when some cavers were caught in the wrong place at the wrong time, we have an 'improved' safety policy. It is up to the individual to make sure that they take down a survival bag from the clubs supply if they do not possess one, and adequate clothing and food (hint for freshers, cave with Dave !). It is, however, up to the trip leader to think seriously about the weather and corresponding cave conditions before going down, and also to watch out for members of the party who may be having an 'off day'. There is simply no point in hacking down to the bottom to get ego points and then finding that the journey out is a struggle, the cave will still be there next year.

I would like to see more clique trips this year not because I'm waiting to be asked, but because it helps keep up the standard and interest in caving. It also gives people a chance to do caves which are not possible on club weekends due to numbers and lack of adequate transport. In the meantime keep fit by using the climbing wall.

I have arranged a Single Rope Technique (SRT) course for December 15-16 1986 in Yorkshire, and interested people should see me for details. I will stress that those who want to attend should be competent in the basic SRT skills that the club teaches on Tuesday and Thursday evenings. There is simply no point in going on the course if you have not turned up to training. I know from experience that it wastes valuable time messing around learning from scratch and lowers the standard for your competent colleagues as well as preventing some time being devoted to pitch rigging.

I will be handing out an SRT manual to everyone and if you have not done any SRT before, just ask it is easy for someone to put a rope up and teach you.

Hopefully this year will continue to see the trips so well supported, and there will be a progressive clean-up of ICCCs image, so episodes like those of one Wednesday night session will soon become a rare occurrence only indulged in by the minority.

Articles, (lighthearted, technical or back-stabbing), letters and cartoons are always needed for the newsletter, contributions from anyone are gratefully received, the only thing is, it leads to more typing and having to collate and staple 1500 sheets of paper !. I hope you enjoy it as much as I have done compiling it.

Sarah

EXPEDITION EXTRAVAGANZA

The following section covers a number of expeditions which have taken place since July 1984 involving members of the club. It is hoped that this summer we will have a caving expedition to Italy, the probable alternative being Chartreuse or the Jura. Any interested people should see Harry or Sarah and advice to new members, keep up your caving, a summer abroad is a welcome goal!

PROPOSAL FOR A CAVING EXPEDITION IN ITALY SUMMER 1987 Harry Lock

MONTE CANIN 2587m

Julian Alps bordering the Yugoslavian frontier, a desolate and inhospitable area of barren spectacular karst plateaux, which has been penetrated by six systems over 500m deep. Serious exploration of this region is of fairly recent origin, and the potential for more discoveries is thought to be quite considerable.

ABISSO MICHELE GORTANI -920m

8km long, highly sporting, very deep, very severe, very difficult route to follow

ABISSO EMILIO COMICI -774m

350m of steeply descending pitches from the small entrance, then fine passageway to the end.

ABISSO ENRICO DAVANZO -737m

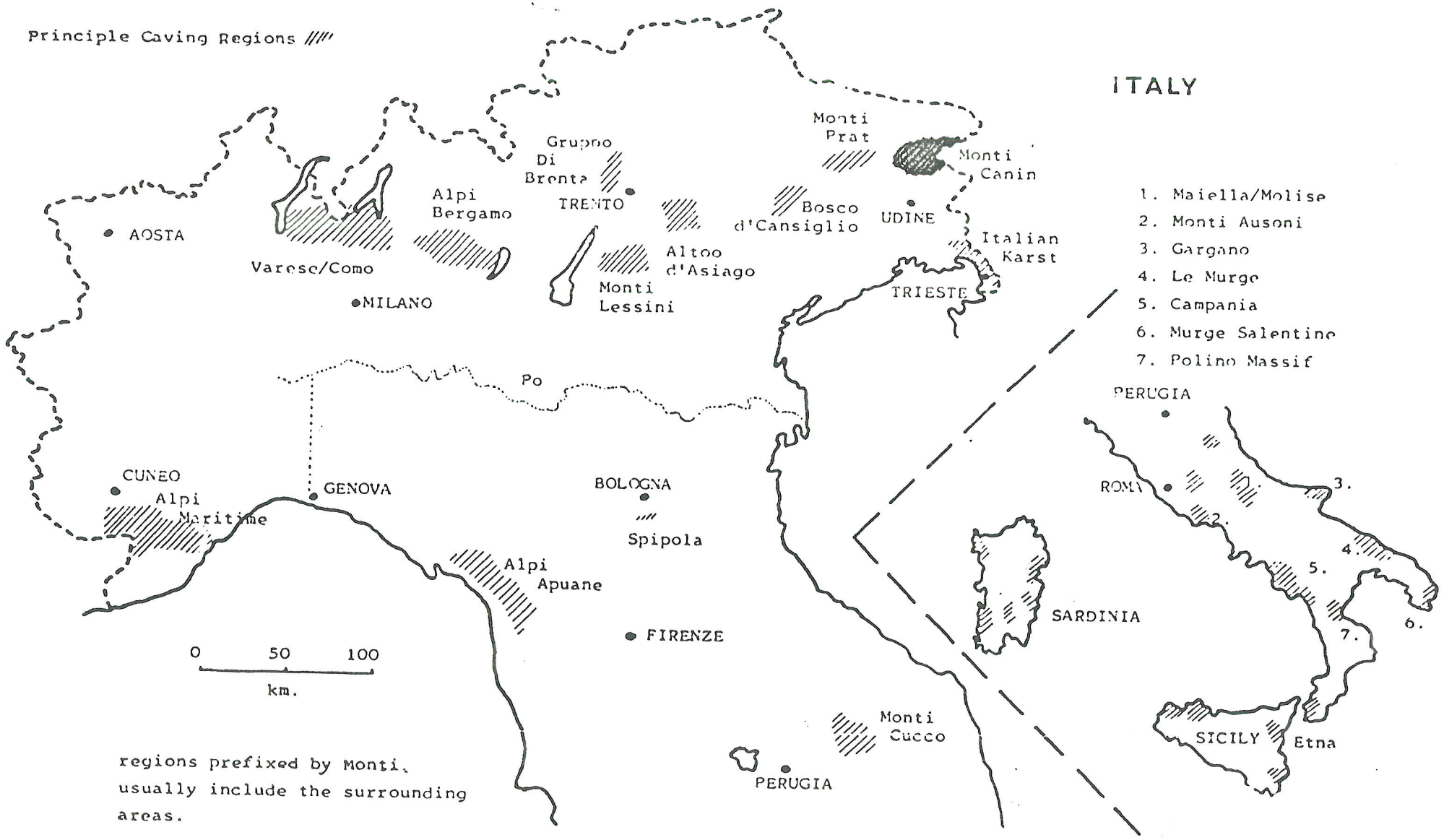
ABISSO CESEARE PREZ -654m

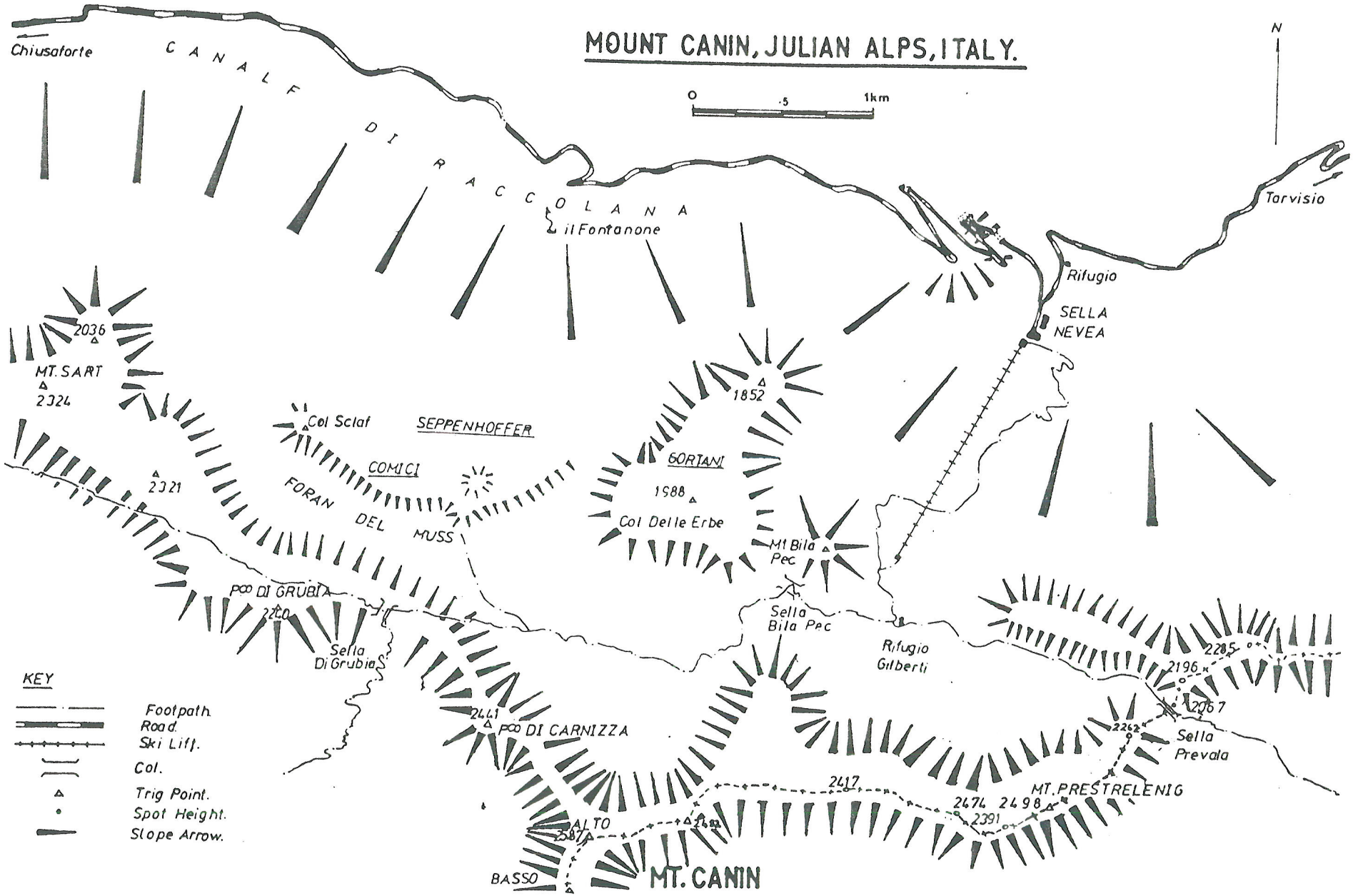
ABISSO EUGENIO-BOEGAN -624m

ABISSO PAOLA-PICCIOLA

and others.....

Gruppo Speleo 'L.V. Bertorelli' CAI Gorizia is the club to be contacted.


Principle Caving Regions ////
ITALY
Monti Prat
Monti Canin
Gruppo Di Brenta
TRENTO
Alpi Bergamo
Bosco d'Cansiglio
UDINE
Italian Karst
AOSTA
Varese/Como
Altoo d'Asiago
MILANO
Monti Lessini
TRIESTE
1. Maiella/Molise
2. Monti Ausoni
3. Gargano
4. Le Murge
5. Campania
6. Murge Salentino
7. Polino Massif
Po
PERUGIA
CUNEO
Alpi Maritime
GENOVA
BOLOGNA
ROMA
Spipola
Alpi Apuane
SARDINIA
FIRENZE
0 50 100
km.
Monti Cucco
PERUGIA
SICILY
Etna
regions prefixed by Monti, usually include the surrounding areas.


MOUNT CANIN, JULIAN ALPS, ITALY.
0 .5 1km
N
Chiusaforte
CANALE DI RACCOLANA
il Fontanone
Tarvisio
Rifugio
SELLA NEVEA
2036
MT. SART
2324
2321
Col Sclap
SEPPENHOFFER
COMICI
FORAN DEL MUSS
1852
GORTANI
1988
Col Delle Erbe
Mt Bila Pec
Sella Bila Pec
Rifugio Gilberti
PCO DI GRUBIA
2220
Sella Di Grubia
2441
PCO DI CARNIZZA
2417
2474
2498
2391
MT. PRESTRELENIG
2262
Sella Prevala
2196
2205
2067
ALTO
2587
BASSO
MT. CANIN
KEY
Footpath
Road
Ski Lift.
Col.
Trig Point.
Spot Height.
Slope Arrow.

P 10
P 50
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P 12
P 60
P 40
P 5
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P 80
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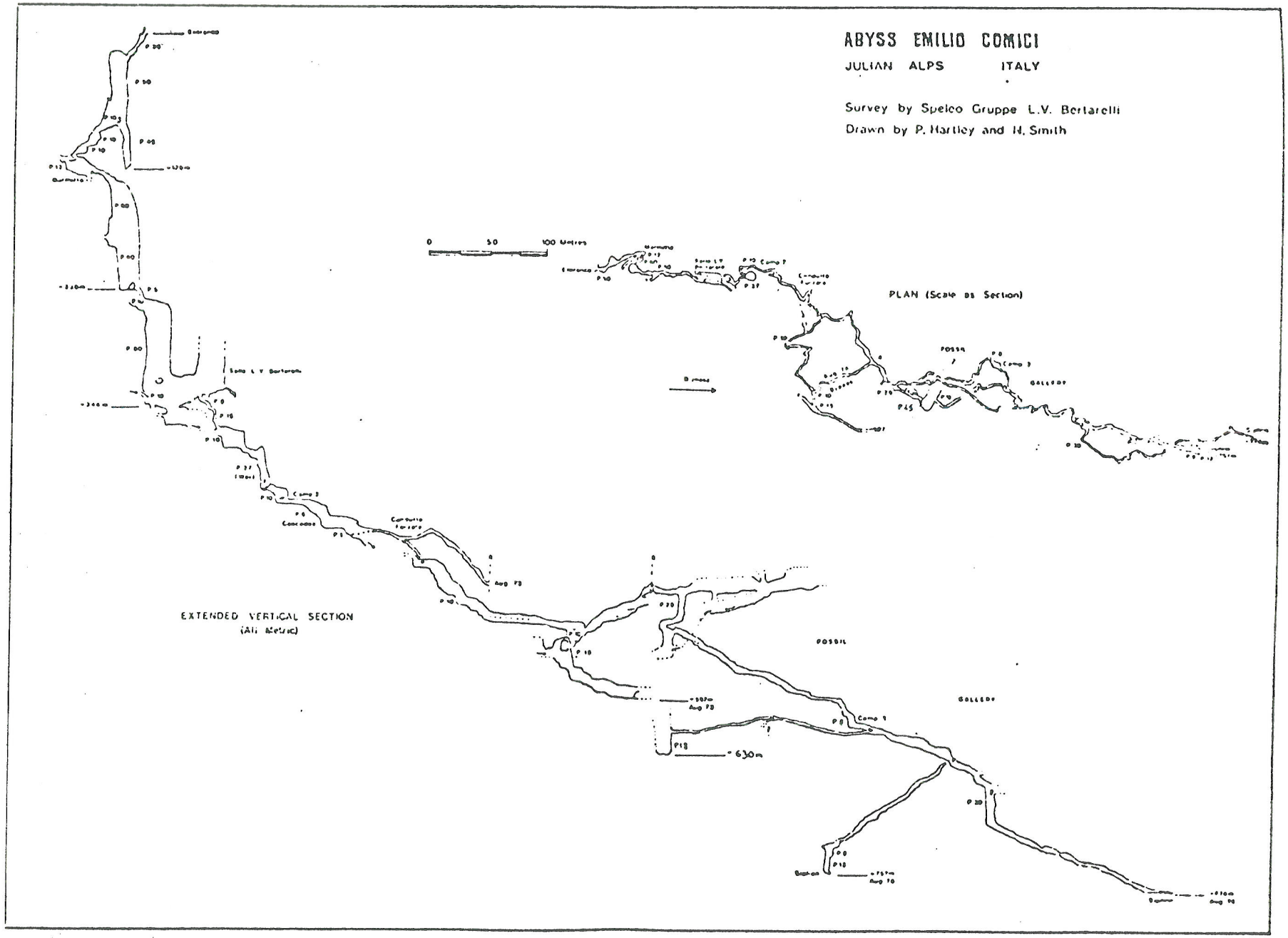
P 10
P 29
P 8
Camp 3
P 30



CANADA EXPEDITION 1986

Mark 'marine boy' Turnball

Every two years, during the summer vacation, members from the caving club go on an expedition. Recently visits have been made to Morocco, Greece, Peru and in 1986, the Canadian Rockies.

There are only two dozen serious cavers in Canada so it was not surprising that they were taken aback by our wellington boots and eight bright yellow oversuits. You wouldn't describe them as 'state of the art cavers' prefering boiler suits, wooly jumpers and hiking boots, though to see the tattered state of our oversuits now (not TSA of course) perhaps their pessimism was justified. They seemed very relaxed about caving, happy to spend years extending their particular pet cave or area (systems which wouldn't last days in say, Yorkshire) unlike we keen IC boys who would have had everything wrapped up if only we could have got our hands on some of their projects (though all Canadians seemed very friendly and hospitable, some of their caves were kept out of our reach).

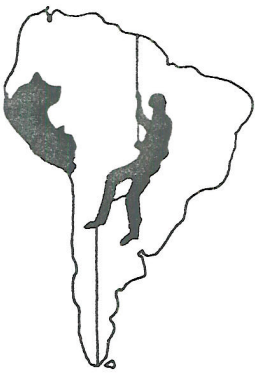
At the airport we met the ever optimistic Chaz Yonge, one of whose favourite phrases included 'this cave could really f**kin' go !', and invariably it didn't. Eventhough his enthusiasm was never ending he had a mental fear of underground water and fears surpassed only by the fear of his wife !. John Rawkins, 'mad dog' Dave, Ian Mackenzie, and Doug and Phil. Gould were amongst our other contacts and I don't think we would have got anywhere without them. Never, however, trust a Canadians timing, always use the conversion: one Canadian hour=two British hours.

Everyone remarked on how well the 8 of us got on together, and I think we did get on very well for 9½ weeks; maybe helped by our frequent changes of area which allowed a short time in civilisation for icecream and beer. Although the expedition was not without its hiccups, lost keys, lost tentpoles, magic trees (I wish someone had written this up-Ed), the occasional mutiny, death threats, blah, blah !.....Obviously we didn't all have the same aims for the expedition but I think on the whole we all enjoyed our time in Canada, though from a caving point of view we would have all liked to have found some more exciting caves (we blame the weather). Fortunately the scenery and wildlife including greedy squirrels, chipmonks, porcupines, bald eagles, tasty salmon, even hermit crabs ! etc..... and of course bears (a great topic of conversation for some with the 'tourists' we met), helped make up for it.

Canada is definitely worth visiting; the people are fantastic and there are a lot of excellent caves there, even if they are a long walk from the road.

Believe me, there is nothing quite like stepping into a new cave system where no one has ever been before. The only advice I can give to a keen caver who is thinking of taking part in a future expedition is.. GO FOR IT

UPDATE ON PERU



Since production of the report (May 1985) the details of several other expeditions have been obtained. It is interesting that virtually all foreign expeditions have been from Europe, the Yanks seemingly content to remain in the US or Central America. The lists of expeditions since 1969, and of the longest and deepest caves are now as detailed below:-

(A) Caving Expeditions in Peru (locations in parentheses: depts. in capitals).

1. 1969 A Peruvian group led by Cesar Morales, director of andinism at the Peruvian Sports Institute, Lima. (Palcamayo, TARMA).

2. 1972 Klub Wysokorgski, Warszawa, Poland.
(Livitica, CUSCO ; Cusco, CUSCO).

3. 1972 Imperial College Caving Club, London, UK.
(Palcamayo, JUNIN ; Tingo Maria, HUANUCO).

4. 1973 Grupo de Exploraciones Subterraneas de Club Montanes, Barcelones, Spain. (Tingo Maria, HUANUCO ; Palcamayo, JUNIN ; Ninabamaba & Cutervo, CAJAMARCA).

5. 1976 Centre Excursionista de Catalunya, Spain.
(Cutervo, CAJAMARCA).

6. 1976 Cavers from Wroclav, Poland.
(Palcamayo, JUNIN).

7. 1976 Club Aixois d´Expeditions Speleologiques, France.
(La Oroya, JUNIN ; Tarmatambo, JUNIN).

8. 1977 Cavers from several clubs in Southern France.
(LIBERTAD ; APURIMAC).

9. 1977 Centre Excursionista de Catalunya, Spain.
(Ninabamba, CAJAMARCA ; Cutervo, CAJAMARCA).

10. 1979 Groupe Speleo de Bagnols Marcoule, France.
(Comulca, CAJAMARCA ; Huararucra, CAJAMARCA ; Cutervo, CAJAMARCA ; Palcamayo, JUNIN).

11. 1979 A group of Italian cavers.
(Nasca, ICA).

12. 1982 Club Bagnolais d´Investigations Souterraines, France.
(Janjui, SAN MARTIN ; Cutervo, CAJAMARCA).

13. 1982 Southampton University Exploration Society, UK.
(Palcamayo, JUNIN ; Tingo Maria, HUANUCO).

14. 1984 Imperial College Caving Club, London, UK.
(Ninabamba, CAJAMARCA).

15. 1984 Three cavers from Kentucky, USA.
(Huanuco, HUANUCO).

(B) LONGEST CAVES (Relevant expeditions numerated in parentheses).

1. Cueva de Uchkupisjo - Ninabamba, CAJAMARCA. 2350 m
(4, 9, 14).

2. Sima de Racas Marca - Palcamayo, JUNIN. 2141
Also known as Sima de Milpo, Milpo de Kaukirian, (1, 3).

3. Cueva de Huagapo - Palcamayo, JUNIN. 1920
(1, 2, 3, 7).

4. Sima de Iraca - Ninabamba, CAJAMARCA. 1540
(14).

5. Cueva Mayor del Rio Churos - Huicungo, SAN MARTIN. 1447
(13).

6. Cueva de San Andres - Parque Nacional Cutervo, CAJAMARCA. 1145
(5).

7. Cueva de Pacu Hayen - San Pedro de Cajas, JUNIN. 800
(10).

8. Tragadero de San Andres - Parque Nacional Cutervo, CAJAMARCA. 765
(9, 10).

9. P.2 - Ninabamba, CAJAMARCA. 710
(14).

10. Cueva de Cunchuvillo - Janjui, SAN MARTIN. 562
(12).

(C) DEEPEST CAVES (Relevant expeditions numerated in parentheses).

1. Sima de Racas Marca - Palcamayo, JUNIN. 407 m
(See B2: 1, 13). (-402,+5)

2. Tragadero de San Andres - Parque Nacional Cutervo, CAJARMARCA. -334
(See B8: 9, 10).

3. Cueva de San Andres - Parque Nacional Cutervo, CAJAMARACA. -145
(See B6: 5).

4. Red de las Grutas - Parque Nacional Cutervo, CAJAMARCA. 94
(See B11: 9). (-65,+29)

5. Cueva de Uchkupisjo - Ninabamba, CAJAMARCA. -90
(See B1: 4, 9, 14).

6. Sima de Iraca - Ninabamba, CAJAMARCA. -76
(See B4: 14).

7. Gruta del Equus - Huacraruco, CAJAMARCA -75
(10).

8. Cueva de Madre Mia - Parque Nacional Cutervo, CAJAMARCA. -67
(10).

9. Sima Maximo - Palcamayo, JUNIN. -65
(6).

10. Tragadero de la Purla - Comulca, CAJAMARCA. -65
(9).

OPERATION RALEIGH PHASE 4B SOUTHERN CHILE

A PERSONAL REPORT BY U.K. VENTURER DEBBIE ARMSTRONG

The Chile 4B Phase of Operation Raleigh began with the U.K. and some overseas Venturers meeting at Operation Raleigh's Central Headquarters in London on 1st January, 1986, and travelling as a group to Santiago, the Capital city of Chile. Here the rest of the expedition members joined the group, making a total of 165 Venturers and staff from 11 different countries, including 33 Chileans. The journey south to the expedition area proved to be quite an adventure in itself entailing a 26 hour train ride to Puerto Montt, followed by a 36 hour ferry ride to Chacabuco and a 2 hour drive to Coyhaique, principal town of the XI Region (Aysen) of Chile and headquarters for the 4B expedition.

While in Puerto Montt we had a welcoming party on board Operation Raleigh's flagship 'Sir Walter Raleigh' which is currently being refitted in readiness for the Pacific crossing, due to start in May, 1986.

In Coyhaique various briefings took place and Venturers were allocated to one of 6 expedition sites (Chile Chico, Laguna San Rafael, La Tapera, Melinka, Puerto Cisnes or Quelat). Mainly due to my science background I was chosen, along with 35 other Venturers, to go to the Laguna San Rafael site where most of the science work was to be conducted. The several days spent in Coyhaique gave us an insight into the pioneering spirit of the settlers who live in this beautiful but harsh and remote area of mountains, glaciers, lakes, forests and fjords. In between organizing stores, etc., for transport to the San Rafael site there was the opportunity to do a day's walking to the top of one of the impressive volcanic hills surrounding the town.

A Chilean army bus (which as usual broke down!), transported the San Rafael Group back to Chacabuco and from there a second 12 hour ferry ride took us southwards through the coastal fjords and islands to the Laguna San Rafael. The Laguna is entered from the Golfo Elephantes fjord via a narrow 300m wide tidal channel called the Rio Tempanos. Nothing could have prepared us for the majestic sight of the 6km wide San Rafael glacier spilling into the Laguna, which contained many huge blue icebergs. Every few minutes, with a sound like a crack of thunder, another huge block of ice would crash down into the Laguna from the 60m high wall of ice forming the glacier's snout.

Our base in the Laguna was the San Rafael Hotel. Do not be deceived by names! The hotel was a shell of a building, built in the 1930's but never

completed due to lack of money and subsequently damaged by a fire. However, it did provide a roof over our heads and a refuge from the harsh weather conditions. The climate of the area is cool and wet, with rain falling on most days. Average annual precipitation is approx. 4,000mm, making it one of the wettest places in the world. Average July (winter) temperatures are 5-6°C; average January (summer) temperatures are 13°C; with summer and autumn being wettest. The predominant vegetation is temperate rain forest.

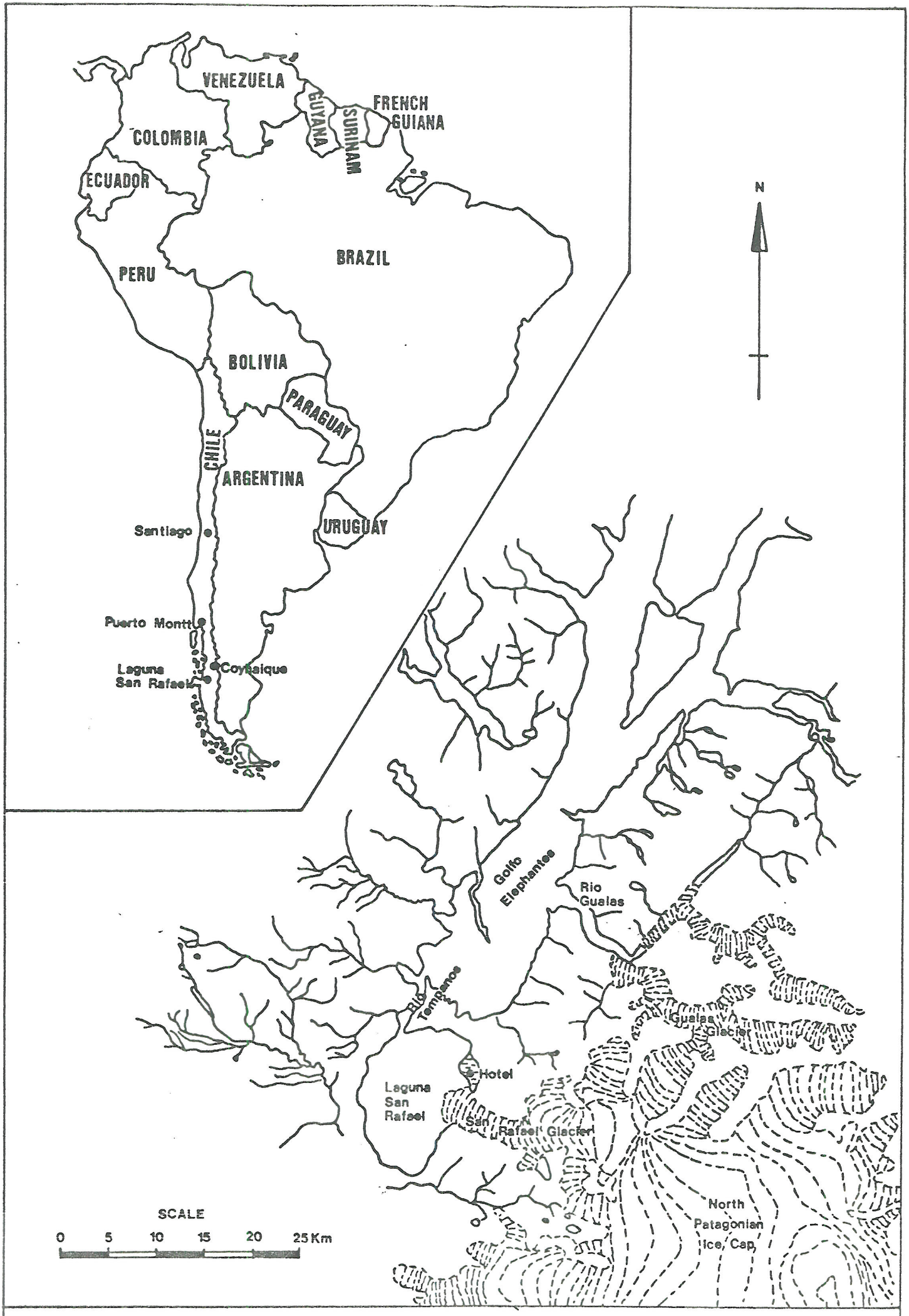
While resident in the 'hotel' we cooked on an old, wood burning, Chilean stove and our diet mainly consisted of dehydrated 'Raven' food and tinned Chilean army compo rations. Fresh bread was baked daily as a supplement but the quality depended on the cooks of the day!

The scientific projects being conducted in the area were designed to investigate the patterns of environmental change over the past 10,000 years and earth movements in this very active area. Work on these subjects has been completed in nearly every other part of the world but very little is known about southern South America. This work involved Venturers making numerous trips over difficult terrain in support of the scientists who accompanied the expedition. The forests were almost impenetrable with extremely dense undergrowth and the only form of transport was small, army style, assault boats, proving to be very hazardous in the iceberg filled Laguna. This gave us all an opportunity to develop small boat handling skills in a very challenging environment.

I became heavily involved with the Rio Gualas project and together with another Venturer, Mick Bennett, ended up running the project after the scientist had returned to the U.K. The Rio Gualas project was set up in order for Dr. Jim Best (University of Hull, U.K.) to undertake a study of heavy mineral (magnetite) accumulations within braided river systems to allow documentation of preferred sites of concentration. It was discovered during the course of this work that the Rio Gualas is fed by two glaciers at the head of the valley also making it a suitable site for Dr. David Collins (University of Manchester, U.K.) to set up a station monitoring sediment transport in glacier fed rivers.

The Rio Gualas drains westwards from the Andean Cordilleras (a rich source of heavy minerals) into the Golfo Elephantes fjord about 30 miles north of the Operation Raleigh base at the Hotel San Rafael.

The reconnaissance party, led by BM' Keith Reyes (U.S. Navy) and including myself, made two recces to the Rio Gualas, using a CONAF (Forestry Commission) fishing boat and Operation Raleigh assault craft, in order to establish the feasibility of the project both from a scientific and logistical point of view. It was quickly discovered that the river was too fast flowing



LOCATION MAP OF THE SAN RAFAEL AREA, SOUTHERN CHILE.

and variable in depth for use of the assault craft and any movements up the valley would have to be by foot. Through sheer determination on the second recce we managed to land on the southern side of the valley and locate a site suitable for a field camp by pushing our way through extremely dense vegetation and wading (often waist to neck deep) up the very fast flowing and cold (temperature 1.5°C) waters of the Rio Gualas!

Two days after the second recce a party of 9 left San Rafael and set up camp on an abandoned sand bar in the Rio Gualas valley. Thus the infamous Rocky II (alias 'Campo de Compo') was established. We were very isolated, our only contact with the outside world being by radio to San Rafael. Scientific work mainly involved surveying ancient and modern sand bars and taking sediment samples for later analysis, in order to use the Rio Gualas as a case study of how heavy minerals (often economic) accumulate in this type of river. During the 8 days spent on site a vast amount of data and samples were collected, despite the very poor weather conditions (ie. it rained 90% of the time). We all found plenty of adventure in just day to day survival here.

At the same time it was realised that there remained potential for conducting more work further up the valley closer to the glaciers. Also a visit to the glaciers seemed highly desirable to us! Many attempts were made to continue up the valley by foot but, due to the steepness of the valley sides and denseness of vegetation, it became obvious that the only way to get further upstream would be by crossing the river. After attempting to swim across and building a wooden raft (which promptly sank due to the wood density), it was decided that a crossing would only be possible with a rubber raft.

In the light of the river situation a rubber raft was sent down to San Rafael from HQ (in Coyhaique) and a second visit to the Rio Gualas was planned, both to continue with Jim Best's work in his absence and to set up a monitoring station for David Collins.

Upon return to Rocky II the priority was to establish a river crossing. This was successfully achieved despite several expedition members getting rather wet in the process! This allowed us to complete Jim Best's project and to help David Collins conduct his experiment. Several groups made the trip up to the glaciers (a 7 mile hike over rough terrain) - it was an amazing feeling to finally get to the glaciers after looking at them from the camp for so long. On one occaision we carried the rubber raft up enabling 3 of us (including myself) to paddle around the icebergs in the pro-glacial lake and another 3 to make a safe boat trip back down to the camp.

Again throughout the stay weather conditions were extreme. One night the

river rose by 0.5m during a storm nearly washing away some very expensive water sampling and computer equipment being used. However, we managed to successfully rebuild the experiment site and continue with the work.

In addition to the science work, adventure training was provided in the form of ice climbing on the San Rafael glacier. Most Venturers were able to have at least an overnight stay on the ice. I was fortunate, along with 3 others, to get the opportunity of going into an ice cave. The cave was located on the edge of the glacier, between it and the valley side, and was entered by abseilling down a rope. The roof of the cave was beautiful scalloped blue ice while the floor was composed of solid rock. We estimated that we managed to reach a depth of about 250ft below the surface of the glacier before the cave became too narrow for us to continue.

Although the majority of the community and construction work was carried out at other sites (Chile Chico, La Tapera, Melinka, Puerto Cisnes and Quelat), we carried out some construction work in the San Rafael National Park for CONAF, the Chilean forest and parks organization. In particular I helped to build a path (mainly involving pushing wheelbarrows full of gravel around!) and had the dubious honour of being involved in the construction of a new outside earth toilet (aptly named 'the Thunderbox') for the residents of the hotel!

Towards the end of the expedition, along with 3 other Venturers and 2 staff members, I left the San Rafael area ahead of the main party and travelled back to Puerto Montt with the majority of stores and equipment. We travelled northwards for 4 days on 'The Calbuco' ferry, which serves as a life-line for all the small villages in the region. It was very cramped on board and had a typically South American flavour. At each stop we thought they couldn't possibly fit more people on, but still they did along with the cows, horses, (not to mention the fleas), etc!

While in Puerto Montt I lived aboard the 'Sir Walter Raleigh' for 2 weeks and was kept busy helping clean and return equipment (stoves, axes, etc) to the ship's stores, organizing the return of the science equipment to the U.K. and helping with the setting up of the next Operation Raleigh expedition to Chile (Phase 5C). Everyone else arrived back in Puerto Montt from the field sites on 15th March and we had a big farewell party on board the ship. Everyone was sad that the expedition was coming to a close.

We then travelled north to Santiago by train and after a few days there returned home to our various countries.

In conclusion, the expedition was on outstanding success, enjoyed by all who participated. We completed some very worthwhile science and community projects in Chile, which I hope will benefit many of the people there. Also all the Venturers benefitted from the experience and learnt many new skills which they can now apply at home.

CAVERS ECHOES

REPTILE Dodgi-Guides Ltd; A Holiday with a difference!

Harry Lock, with acknowledgements to Clive Orrock and Dave Wilson

Information

Operating from a small secondhand caravan at Beezley's farm, near Ingleton, we have aimed to create a National Centre of excellence run by cavers, for cavers. Our experienced and qualified staff are on hand to provide expert instruction, often with an instructor:student ratio of 3:1.
A standard weekend costs just £35, (excluding food, accommodation, and transport), whilst the 5 day course costs £110. A private guiding service is available, at a reasonable rate, £40 per day per person. You may pay that little bit extra at Reptile, but we think you'll agree it's worthwhile.
We can arrange courses to suit your needs, write or phone for details. Or why not stop by for a brew in a friendly and enjoyable atmosphere?.

"A nice little earner" The Manager

PROGRAMME

8mm Bolting Weekend

Going up and down ropes is only part of the story, a career in sport caving must involve a full commitment to bolting up caves. Our experienced instructors will equip you with the wherewithal for a lifetimes rewarding and effective bolting. Course participants will be expected to spend some time removing wooden beams, angle iron, dishcloths and rusty bedsteads from the caves visited.

"I started my own bolting programme" A. Wally

Rawlbolt Weekend

This course is directed by "one of Britain's most expert devotees of SRT", S. Fosdyke, recently the recipient of a BCRA Rawlbolt mandate, and will involve your instructor pompously expounding on "How to do SRT, Lesson 1", while bolting up Notts Pot (a wholly typical Dales cave, honest); But keep a wary eye on your instructor, for this man can exit from any cave in 0-60 seconds.

"That self-appointed god of SRT" A. Caver

Cave Photography

Ever thought that the results of the BCRA Photo Salon were a foregone conclusion?, Well, your suspicions will be confirmed as instructors C. Weslaich and C. Hau take you off to wild Wales for an informative weekend aimed at the complete beginner. Course participants will visit Bridge Cave, OFD II, Bridge Cave, OFD II, Bridge Cave and OFD II during the weekend, culminating with a trip into Daren Cilau, possibly "Britain's most serious undertaking". The "Ogofbus" leaves Ingleton for Penwyllt at 6pm on the Friday, returning as soon as possible.

"More interesting than Jingling Pot " J. Woolybeard
"Regionally biased" Descent

Classic Caving

Back to the late 19th Century for a nonsense look at caving as it was 100 years ago, and still is today. Aimed at the amateur and run in association with most caving clubs.
YOU BRING wetsuit, steel toe-capped boots, Premier carbide, other period costume.
WE PROVIDE as much ladder as you can carry, and more, sturdy hemp rope, and industrial safety helmets. Bring sandwiches, survey, walkman etc. in the largest ammo box you can find. After an initial session "in the trees", Yorkshire is your oyster, as long as it's Bar Pot. Participants may be transferred to course C6. Bring plenty of money for booze and greasy chips. A course for roughie-toughie cavers only.

"Most British cavers couldn't find their arse with both hands" T.H.E. Truth
"At the forefront of equipment technology" Caving Supplies

Cave Science Weekend

Bluff your way into this expanding field with the help of your course director, Europe's leading freelance karst geologist and bullshitter Dr. A.C "There are no caves in the Himalayas" Walltherm, who also wrote the course notes "Caves Formation made too simple".

"Who?" Society of Professional Geologists

Remedial Caving

Caving has-been? Receding hairline? Wondering what that rusty hat is up in the loft? Perhaps at the forefront of exploration in the 60's, and now finding it difficult to climb the stairs?, this intensive 5 day refresher course may well be what you need to avoid those embarrassing scenes in front of younger club members. 3 instructors to 1 student for maximum individual attention.

"Improved our personal performance" The Brothers

SUMMER EXPEDITIONS

Reptile Guides hope to be able to offer attractive package deals for your holiday in the sun.

The Picos

A long running annual favourite, you join a small team of 40+ for several weeks of totally original exploration in Northern Spain. Book early to avoid disappointment, these are the best value expeditions going, and are therefore very popular.

"25th great year" GPF Foundation
"These kids couldn't run a bath, let alone an....." Mr. Disgruntled

Exotic Mega Expedition

Unfortunately, applications for this have just closed, but you can be sure that the S.E. Asia gang will be paving the way for future expeditions. By the way did you know that 590.....

"We'll send you a postcard" S.E. Asia Ltd

REPTILE GUIDES

UIAGS ABCG approved Sports Council for Craven

Tel: Ingleton 355408

Perhaps it was a subsidiary company of REPTILE Dodgi-Guides Ltd who dropped Clive a line.....
Through my letterbox recently tumbled, "Exodus Expeditions Trekking and Adventure '86 Catalogue", in which I read of a new twek to PNG which, "concentrates on the largest and most beautiful river caves in the world, which only a handful of people have visited". The blurb goes on to say how, "you will be led by one of the world's leading exponents of river cave exploration, who was a member of the recent Untamed River Expedition.....however, the twek will not require any specialist equipment or experience of caving".
Price, about £1800 for just 19 days.

Well that's one way to raise cash for an expedition-it even solves the problem of bearers !.
Nice one Dave.

Clive Orrock

(Point for reflection ?- Ed)

Rummaging through some past copies of "Caves and Caving" my attention was drawn to an article (in No. 4 1979) on the subject of; "Fixed aids in caves". The author, clearly concerned by the growing problem of bolt proliferation made the point that, "one or two large, well-placed anchors are an aid to conservation (and safety) in popular caves, whereas lots of small, badly-placed ones are definitely not". He suggested that a code of practice might well be applicable to the installation and use of fixed aids, such as along the lines of:-
"A. Installation of fixed aids should only be considered when no safe natural belays are available.

B. When fixed aids are used at an abortive dig or somesuch, they should be either safely maintained or removed- never abandoned.

C. Use of a fixed aid should never be considered for the sake of convenience, but only as an aid to negotiating a particular problem in a cave after all other reasonable alternatives have been exhausted."

Considering the current bolt controversy, these proposals appear very sound indeed, but what caused me a wry smile, particularly after re-reading points A. and C. was the author's name....Dave Elliot !.

A HISTORY OF UNDERGROUND LIGHTING

Because of the total and permanent darkness underground, portable, artificial light is a pre-requisite for cave exploration. In the words of Ben Lyon,"You can "streak" through a cave with a light, but even superbly clothed you will not get far in the dark". This then continues the history of caving, by considering the quest for illumination.....

The discovery of fire, about 500,001 years ago was a major milestone in the ascent of mankind, or rather descent, since it allowed him to go CAVING! Cavemen,now worthy of the name,could go exploring the dark bits at the back of the family cave, if for no better reason than to make sure they weren't camped in something else's doorway.

Inevitably the urge to go caving naturally took hold and neolithic cavers set off into the unknown armed with bundles of twigs dipped in animal fat.....and often got a surprisingly long way. In Mammoth Cave, Kentucky, one intrepid prehistoric spelunker got about 3Km from the entrance before his light (and his torch) were snuffed out by a falling six ton limestone block. Squashed spelunker and torch remain there to this day.

Throughout the ancient world miners probed deep underground using various oil-lamps and dripping rushlights. However the trouble with these lights was that the oil tended to spew out if they weren't kept horizontal and so they tended to be a bit awkward on free-climbs.....hence the term, a greasy climb.

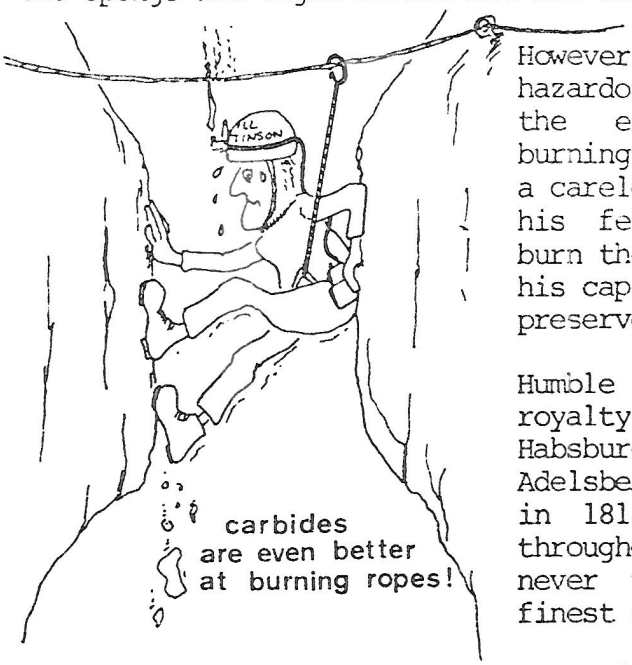
Candles, introduced in the first century BC were much better, and they remained the standard form of illumination for most of the early pioneer cave explorers.

Much romantic nonsense has been written about the virtues of candlelight, someone even going so far as to suggest that they can be eaten in emergency. This might be OK with the old tallow candles, but considering the laxative effect of modern paraffin wax, I think they'd probably cause more distress than comfort to the beleaugured caver.

The great Mendip caver Herbert Balch regarded the candle to be the most dependable form of light casting, "no treacherous shadows", probably because it cast no bloody light.

In view of this absence of powerful illumination early cave explorers tried various novel methods to carry light to the remote parts of the cave. Joseph Nagel used a pair of geese to help him survey a murky, water-filled cavern in Moravia in 1748. A board rigged with a torch was tied to each bird; when pelted with stones, the frantic geese towed the floating torches in all directions so lighting up the cave.

The father of speleology, Martel, always carried a few strips of magnesium ribbon to drop down shafts, and also invented an ingenious device for investigating high avens. After tying a length of light silk twine to a small paper ballon, he would suspend a sponge beneath it, pour alcohol onto the sponge and light it. The hot air ballon then rose to the highest ceiling.



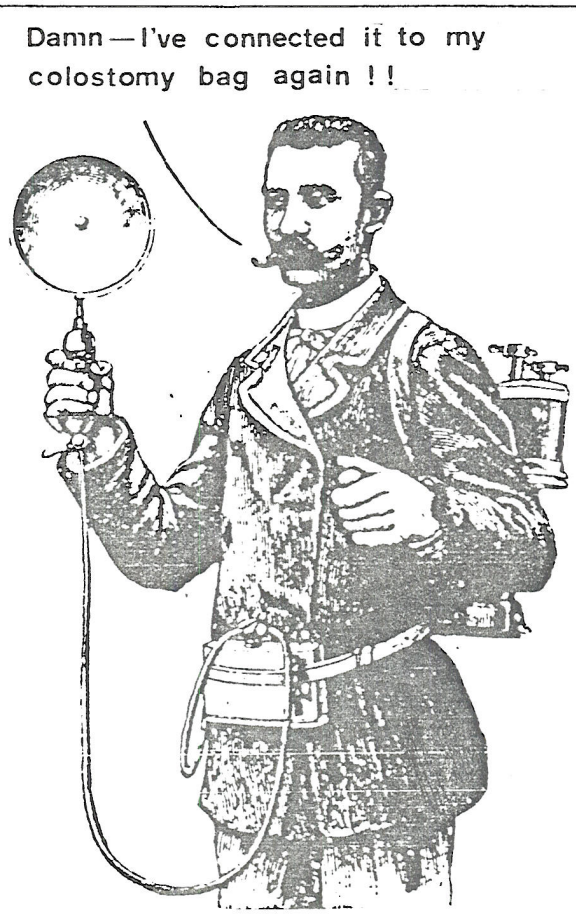
However, all these naked flames could be hazardous. Once while he was being lowered on the end of a 100m rope, Martel smelled burning and noticed that his head felt warm; a carelessly strapped on candle had ignited his felt hat, and the flame was starting to burn the rope. As he dangled, Martel doffed his cap, knocked out the fire - and carefully preserved the charred headpiece as a memento.

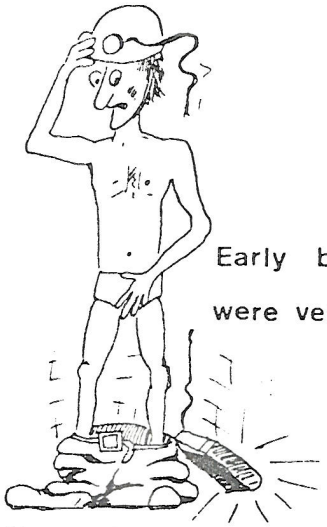
Humble candles were OK for most cavers but royalty expected better. For the visit of the Habsburg Emperor Francis I of Austria to the Adelsberg Cave (now known as Postojna Jama) in 1818, fine chandeliers were erected throughout the cave. As it was, the emperor never turned up, but the cave became the finest show cave in Europe.

Hazardous as they were to cavers, in mines, with the ever present risk of firedamp explosions, candles were positively lethal, but nothing else was available. That's not to say that no-one had tried - one early trick was to use the phosphorescent glimmer given off by rotting fish - but it wasn't popular!

The first serious attempt at a safe light was invented by Carlisle Spedding in 1750. Spedding's mill consisted of a spinning steel wheel rubbing on a piece of flint to produce a stream of sparks. Spedding insisted that his invention was safe because the energy in each spark was insufficient to ignite the methane - until he was killed five years later by just such an explosion, ignited by one of his devices. The advent of the Davy lamp made things in coal mines considerably safer - but I digress.....

In 1862 calcium carbide was made for the first time, by a German chemist, although it took a further 30 years for a cheap commercial production method to be invented. Now, effective caplamps could be made, although in mines the emphasis remained on hand lamps.....some of which weighed up to a staggering 52 Kg. Despite such monster lamps, carbides remained popular until well after the advent of the electric lamp.





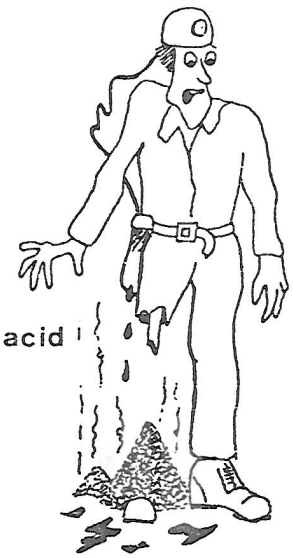
Early batteries were very heavy....

The first battery powered mining lamp was manufactured in 1861 in France but produced a very dim red light and it was not popular with the miners.

In 1915 Edison finally perfected a nickel-iron rechargeable battery which was small enough to be carried on a miner's belt without the need for a surgical support. At about the same time a method of drawing tungsten wire was developed and so the troublesome carbon-filament bulbs could be abandoned. The electric miners' lamp remains basically the same today.

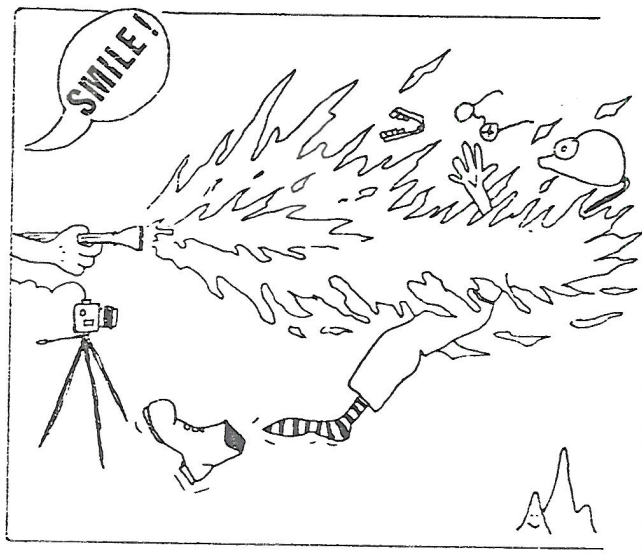
With Edison's improvements in the incandescent filament lamp, the world finally had a practical light source which did not consume a fuel.

Although Edison lamps were widely used in homes and industry, their general use underground was delayed because of technical difficulties. Not the least of these problems being the batteries which tended to be very cumbersome, heavy and continually leaked corrosive acids.



....& leaked acid!

In the caving world various other ideas have been tried:-



To give enough light to photograph the massive caverns under the Nullabor Plain, Australian cavers developed a dramatic form of lighting using propane gas and powdered magnesium - an early rocket fuel. The resultant flame-thrower, called a Diprotodon after Australia's largest (extinct) marsupial can be a bit tricky in confined places.

On a more modest scale, Descent magazine once carried the plans of a butane gas-mantle caplamp, but I shudder to think what would happen should the belt mounted cylinder rupture in a fall.

Of other forms of light, the modern descendents of that medieval chemical light, the rotting haddock, are the currently available range of light-sticks. Here perhaps lies the clue to the future. What is wanted is some chemical which radiates light on reacting with water. Then all we need to do is shovel the stuff into the streamway as we go in and, like the selenites in HG Wells' "The First Men in the Moon", follow the stream of liquid light. It would of course also give a simple dye test, but that, as they say, is another story.....

CAVERNS MEASURELESS TO MAN

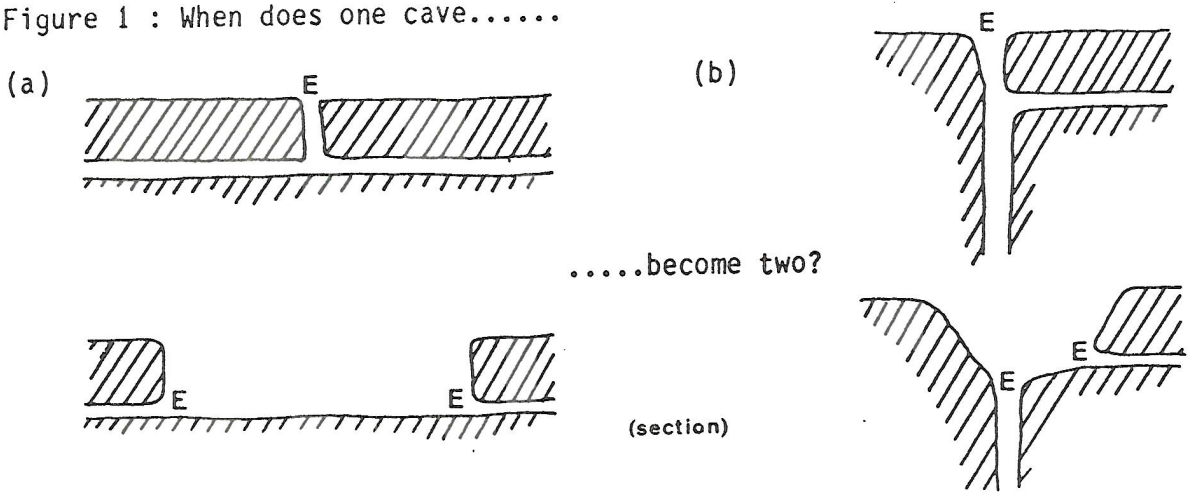
Clive Orrock

In all human endeavours there are those whose particular pre-occupation is the making and breaking of records. Caving is no exception, particularly since no-one knows which are the world's longest or deepest caves, only those found and surveyed to date. Consequently lists of depth/length statistics are always of interest. But how, from the survey, do we determine just how big a cave sysytem is, for comparison with other caves? This problem occurred repeatedly whilst attempting to calculate the length and depth of the discoveries in Peru. The following discussion fails to satisfactorily answer the question, and goes on to ask many more, but I hope raises several points for thought as well as sounding a note of caution when dealing with "absolute" cave statistics.

(1) When is a cave just one cave?

This is basically a feature of karst fensters (fig. 1a), or large dolines (fig. 1b) which segment underground systems.

Figure 1 : When does one cave.....



(2) Where does a cave start?

A cave entrance starts where the roof begins, but this is not always all that simple, consider the twin main entrance to the Uchkupisjo system, Peru:-

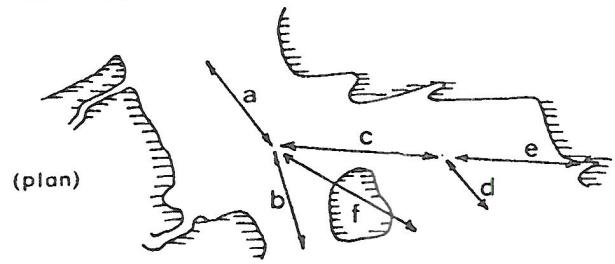


Figure 2 : The Uchkupisjo entrance.

It is generally accepted that a pillar locally divides a passage into two independent passages when its largest diameter (in plan) is greater than the greater of the two adjacent passages.

In figure 2, is the length: a + b + c + d
or: a + b + c + e
or just: a + f .....?

Similarly, where is the zero datum for determining the depth? The zero datum has been defined to occur at the highest closed contour of a depression, as shown in figure 3 :-

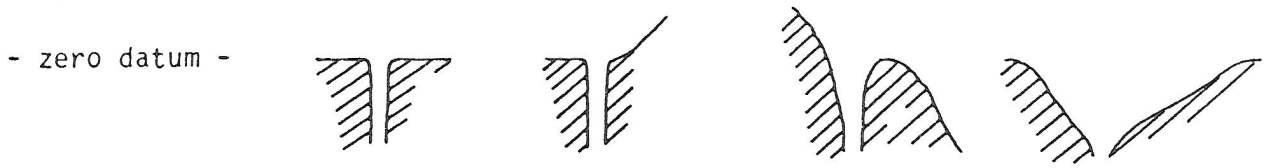


Figure 3 : Finding zero datum.

But there are problem cases eg. Faouar Dara, Lebanon (fig. 4a), or Uchkupisjo, Peru (fig. 4b).

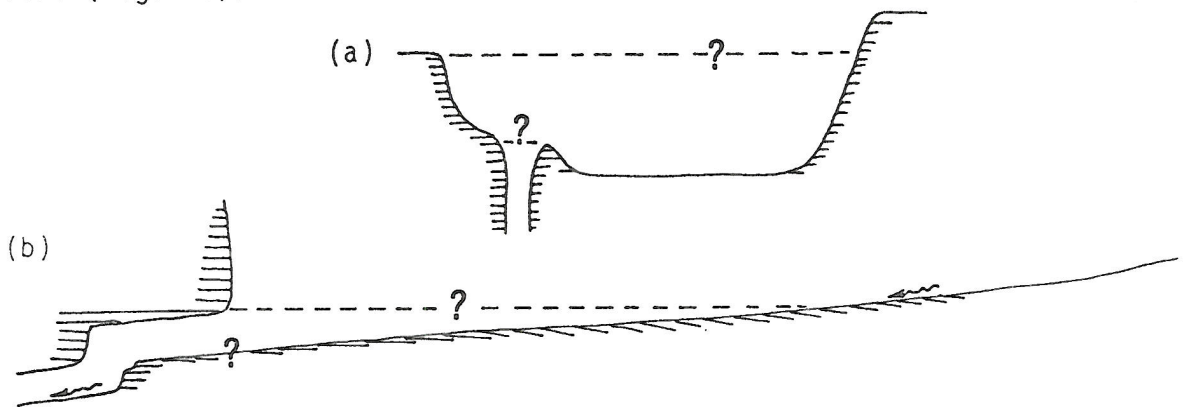


Figure 4 : Zero datum in problem cases.

In the case of figure 4b, the difference in taking the zero datum at the top of the entrance instead of the bottom would add over 10% to the total depth.

Might it be possible to define a ratio between the depths and lengths of a doline etc. or between the width and slope of its sides?

(3) Finding the length.

This subject is so complex that no-one has been able to successfully resolve it.

There are basically two principles in contention, (a) that of continuity, and (b) that of discontinuity. The following examples may serve to illustrate these principles.

(a) Continuity

(b) Discontinuity

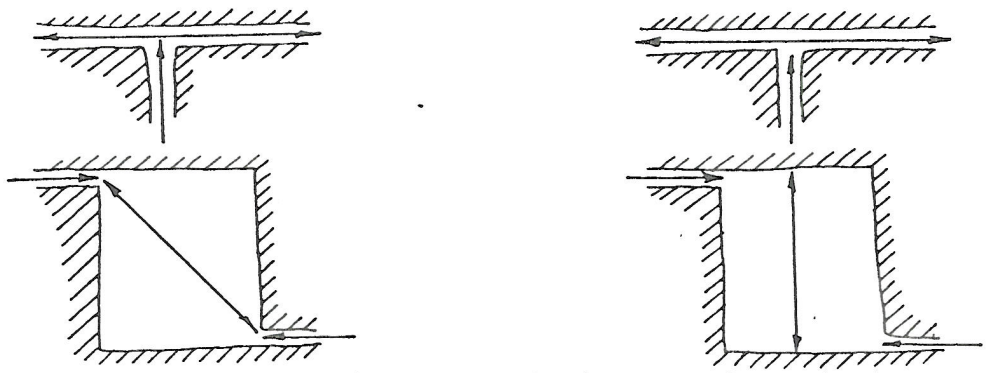
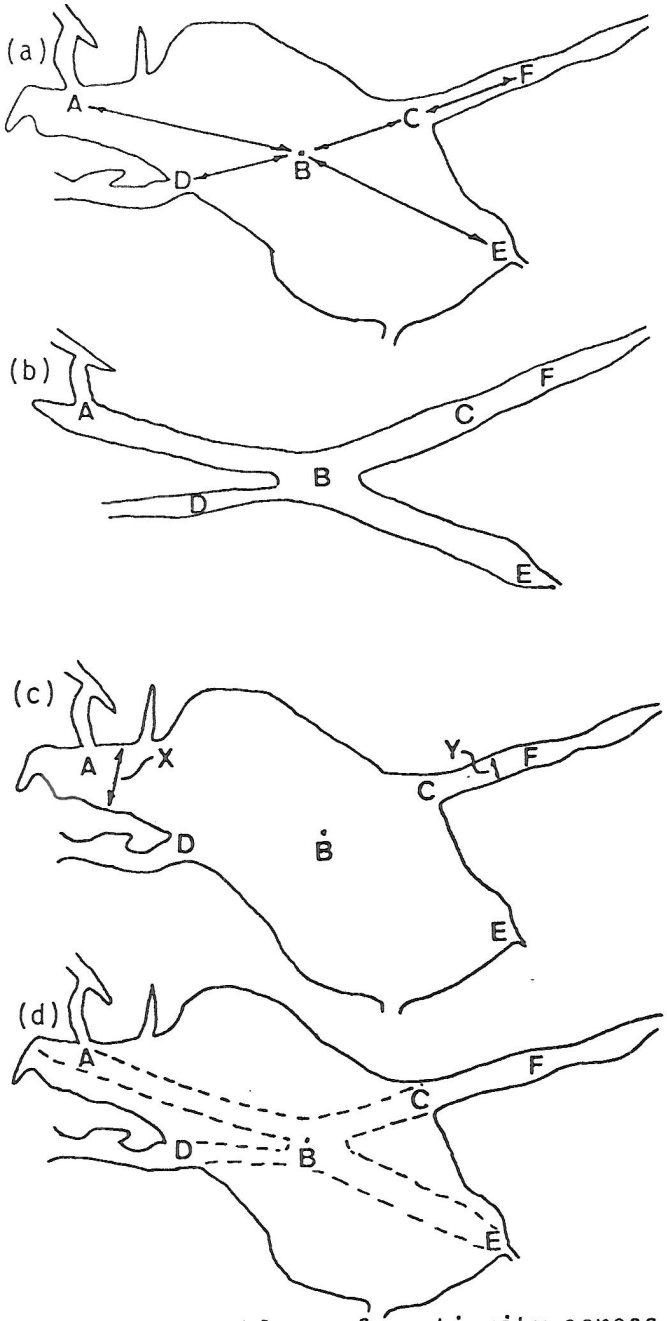


Figure 5 : The principles of continuity and discontinuity.

The principal problem areas are in large passages or chambers. Consider a chamber (in plan) such as the final chamber in La Sima de Iraca (P3), Peru, formed at the intersection of two joints.



Is the length

AB + BC + BD + BE (+ CF + ... etc)

or is it only

AB + BE .....?

But consider the original passage,

if its

AB + BC + BD + BE

then.....

..... x and y are also lengths

because.....

it would be illogical for a cave of small passage to be longer than a cave with a large room.

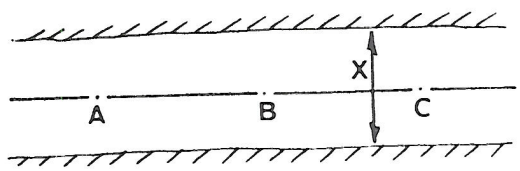
Figure 6 : Problems of continuity across chambers.

Now consider a wide passage:-

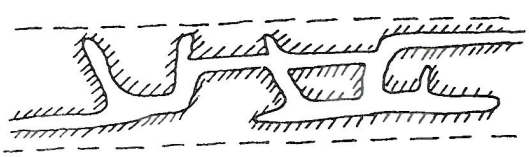
is the length

AB + BC + X ?

(a)



(b)



But again what about small passages that would fit into the wide passage - surely they cannot be longer?

But how often must we include widths?

Figure 7 : Discontinuity in passage.

One point that has generally been conceeded is the neccessity of including in the total length, the slope length of a cave's shafts and inclined passages, rather than the lengths as projected on the horizontal plane. Consequently, if large pits (in section) be treated as large rooms (in plan), then it would be necessary to include their diameters as parts of their total lengths.

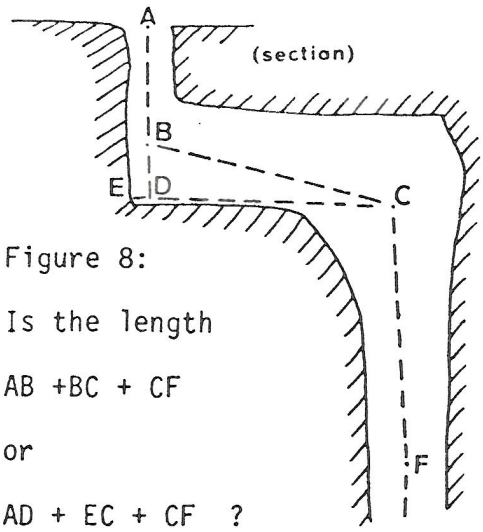


Figure 8:

Is the length

AB +BC + CF

or

AD + EC + CF ?

So, if we are including shaft diameters in the measure of total passage length then in all logic we would also have to include the depths of blind pits and the heights of large rooms (providing one is capable of climbing to the ceiling). If we do include the heights of chambers, then why not also the height of all passage?

Why not indeed? .....except that, having followed the arguement through to its "logical" conclusion we are left with a totally unuseable and meaningless state of affairs.

In conclusion then, any quoted cave statistics really need to be qualified by the inclusion of information on how the figure was calculated. Ultimately the only meaningful parameters are the difference in depth between the highest and lowest points (accessible by man), the volume in m^3 (!), and the total passage length provided one realises that this is not a measure of a cave's "size", and that it becomes increasingly ambiguous with more vertical systems, particularly those containing many pitches.

BACK-STABBING SECTION

SPELEO SPEAL — Sarah-Jane Hunt

Term used
What we really mean.....

Exceptionally good caver
Has not lost a fresher to date

Active socially
Drinks heavily

Character and integrity above reproach
Still one step ahead of the President

Quick thinker
Gives plausible excuses for being overdue

Takes pride in his/her(!) rigging
Conceited

Takes advantage of every opportunity to progress
Buys drinks for the President

Forceful and aggressive
Argumentative

Indifferent to Instruction
knows more than the President

Stern disciplinarian
A bastard

Tactful in dealing with the Exploration Board
knows when to keep his mouth shut

A keen analyst of caving techniques
Thoroughly confused

Expresses himself/herself well
Speaks with a Southern accent

Often spends extra hours with the ropes
Miserable time at the flat

Conscientious and careful caver
Terrified

Demonstrates qualities of leadership
Has a loud voice

Judgement is usually sound
Has not been killed yet !

Maintains professional attitude with R.C.C
A sucker

Keen sense of humour
Has vast repertoire of dirty caving songs

Strong adherence to Guru Elliot's rigging principles
Stubborn

A fine caver, of great value to the club
Turns up to pack the van

Announces to the World that She has narrowly escaped death
Wants hero points

CAVE WARS Richard Collcott

Back to the thrilling adventures of our intrepid heros. As you probably can't remember (or couldn't, as in the case of our newer members) Daft Raider, the evil one and OB1 Laneobe, Master of the Farce and silly walks have just joined battle after raider had cut down and slain poor old Captain Clorrock.

"So Raider you think you can now defeat your master, you foolish young idiot you will learn the errors of your ways", defiantly announced OB1.

"Ha Laneobe, you have no chance for I have uncovered an old and evil secret that will defeat you. For years you have practised the Slash, Rend and Thrust technique of wielding the light sabre, but now after much arcane research I have mastered an old and superior technique- the Leap and lunge- DIE FOOL." And without further ado the two arch enemies met for the last time. At first Raider's antiquated style of L&L seemed to be winning but gradually the tide of battle changed and OB1's S.R.T once more adapted to cope with this old threat, started to dominate.

"So Daft, looks like you lose again" gasped OB1 triumphantly and prepared to put in the killing bla when.....

Phutt, Splutter, Phutt Phutt Splutter Gasp
Incredulously (and for the sake of plot continuity) Laneobe's light sabre failed- it's Oldham battery faltering for the last time. (Should have used carbide- Ed.)

Meanwhile *back at the ranch*, the rest of our heros aren't in much better shape. NP30 and FX2 are trying to make their way back to KLO Falcon after deactivating the tractor beam and accidently saving the lives of Princess Sarah and her rescuers after a close call with a trash compactor.

"Oh gosh, my dress is all dirty and wet- Yuck" commented Sarah for only the twelfth time.

"Grrrrrr !" put in a rather wet and tangly Malcy.

"Well looks like I get us out of another tight spot through my heroic actions" boasted Simon.

"Oh shut up !" replied the others in unison.

"Ok so you don't appreciate my help, I'll let you all get crushed next time.

"Grrrrrrrrrrrr !!!" mentioned Malcy politely, though with slight menance.

"We'd better get back to KLO Falcon and get out of here" pleaded Harry who was getting fed up with the general stupidity and total disregard of the potentially lethal situation he saw that they were in.

Blam, Blast Blam Blam Zap Blam Blast

Round the corner came the hoards of the Cawthorne Elite Death Squad, managing to shoot everthing in the corridor except our heros.
Simon desperately tried to put up a fight but fortunately Harry and Malcy were on hand and managed to drag Simon out of harms reach.
Eventually NP30 and FX2 are found at the hanger bay arguing as usual.

"Ok rust bucket one more peep out of you and I'll fuse your capacitors" sneered NP30, uncharacteristically losing his cool with his irritating companion.

"Bee dup zap wait 'til my expedition woo weee clump"

"Shhhh" pleaded Harry, but it was too late, they had been noticed by yet more Cawthorne Elite Death Squad Troopers (they get everywhere- Ed)

Our intrepid heros bravely make their way towards KLO Falcon under a tremendous, if perhaps totally inaccurate blaze of blaster fire. Harry cooly picks off occasional troopers and Simon shoots the ceiling and floor a couple of times to show he's no fool.

However just as they reach KLO Falcon a blast door on the far side of the hanger where KLO Falcon rests, opens to reveal the final scenes of the fight between RAIDER and OB1.

"Nooo!" screams Harry, accurately blasting six troopers with three blasts, but it is in vain and Daft cuts down OB1 without mercy, though OB1's body disappears simultaneously.

Suddenly a voice speaks inside Harry's head (Jesus Elliot ?- Ed)
"You must escape now whilst you have the chance, do not grieve for me since I can still live on through you as part of your Farce."

Harry after a brief moment of grief and emotion (putting another five troopers to rest) leads our heros into the Falcon where Simon and Malcy take over and somehow against Simon's better judgement they evade the Imperial fighters and escape.....

LETTERS TO THE EDITOR

RETURN TO THE HARRISON VALUES ?

Dear Editor,

Where have all the piss-ups gone ?, those gallon-of-cider-Union-Bar-sessions ?, the Harrington-six-pints-of-Directors-and-a-kebab(with chilli sauce)-evenings?
Why isn't ICCC: peeing off Battersea Bridge- or even better, Embankment station; comatose at the NPC; or getting the tactical throws in at the Marton ?. Just a simple heave is a pretty rare event these days. This year can be summed up by people prefering to sit down caves on the Saturday of the dinner meet rather than getting the beers in.
Only on Dave's birthday did we see a faint glimmer of hope, or rather stomach lining. In a recent justification of caving to ICU we each claimed to spend upwards of £700 a year. Where is this money going ? certainly not in the right place- the proportion being thrown down the bogs at Greenclose is pitifully small.
I can only hope that with the election of a sponsored student as next years President we will see a return to our membership vomitting its way back from the Hill Inn; only occasionly interrupted by snatches of disgusting songs.

Yours hopefully
Simon Seward

Well Simon,

Do you really want a serious reply to the heap of tripe contained in your appalling letter ?. Quite honestly, the list of disgusting past 'club' activities seemed to be almost totally a list of YOUR disgusting activities. Let's hope that this year, as President, we don't see you lowering the club back into the cess-pit of it's earlier years and try continuing the current trend of cleaning up ICCC's image.

Not only would it be a good move to return to the quiet pint or two on Saturday night, but what about a more general clean up- I have personally disposed of the awful box of dirty magazines in stores ,so its now up to the rest of us to instigate a total ban on the singing of crude and disgusting songs underground and in the van.

Yours in anticipation
Sarah

A WORRIED CAVER WRITES

Dear Editor,

I am writing to express my concern over next year's exec. More to the point, I am worried that perhaps the content of the clubs leading officers may be, to put it mildly, poor compared with past officers such as the DYNAMIC Steve Lane, the MORAL John Harrison, the ANGELIC Harry Lock, the MASTERFUL Clive Orrock, the CARING Dave Wilson, the COMPASSIONATE Chris Birkhead, the CAUTIOUS Malcolm Barr, to name but a few. This year's exec seem a lowly bunch in comparison:-

SIMON 'Let's throw up so we can get more beers in' SEWARD
RICHARD 'Why not kill a few novices today' COLLCOTT

SARAH-JANE 'I'm really not a man-eater, honest !' HUNT
KATH 'I like to drink pints 'cause I get pissed' BONNICK
ANDREW 'Suicidal mania is one of my good points'PUGH

Quite honestly I can only see the club reaching it's lowest ebb for years with this horrific selection of incompetants at the helm.

Several potential remedies have come to mind, such as letting Mr. Pugh achieve his life-long ambition of terminal underground free-fall (perhaps with a slight helping push).

By a methodical approach to poisoning the college's beer store, the removal of both Seward and Bonnick could be achieved (killing two rats with one stone, though perhaps a few innocents would have to be martyred for this most worthy of causes).

To remove the threat of Mr. Collcott, the psychological tactic of asking him to check out his own lethal rigging attempts rather than use some poor novice as a guinea pig would hopefully be enough for him to retire from the caving scene (or, of course if he actually was fool enough to take up the suggestion, his remaining time on this World would be mercifully shortened).

As to solving the more delicate problem of young Sarah-Jane's high turnover rate of the opposite sex, the only solution that came readily to mind was a policy of mass transvestitism of the male proportion of the club (perhaps a drastic measure, but no more drastic than the original problem). (can't wait!- Ed)

To any new members of the club who manage to read this warning (before 'THEY' censore it), do not be fooled by THEIR pleasant natures, remember each one is a dangerous unstable power crazed maniac, who have gained control of this prestigious club to use it as a platform to further THEIR own personal fetishes. So beware, always be alert to the danger and consult only those of the club whom you think you can trust. But be careful for THEY are ever watchful and THEIR evil influence ever present !!!!!!.

Yours deeply concerned,
I A M DIONARAP

Dear I A M DIONARAP,

*****!!!*!!

What can I say, except that I refuse to reply to such venomous accusations and in future get your facts straight.

Yours exasperated,
Sarah

The following two problems take the form of what is known as an ACROSTIC. They provide clues, in verse form, for a number of words. Solve the clues correctly, and the first letter of each word spells out a further word or words for which a final clue is given in the last two lines.

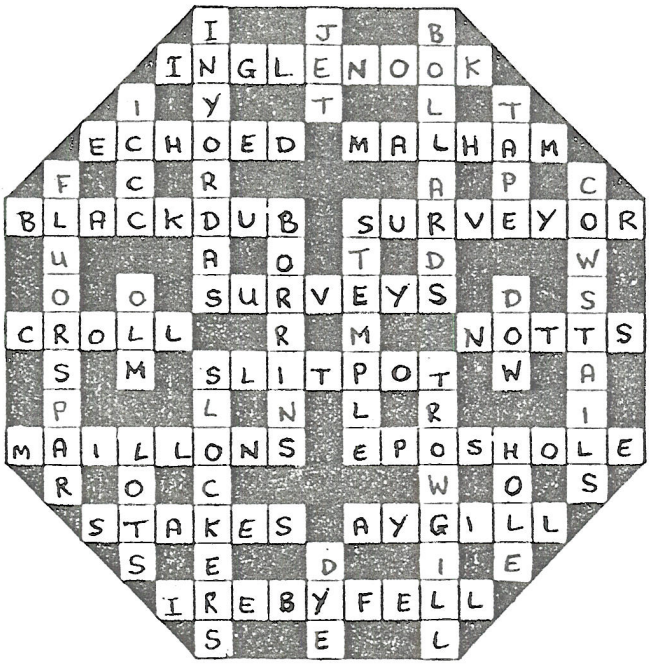
The two verses are separate. The first is fairly straight forward but the second is a bit more devious. The numbers in brackets refer to the length of each word.

(I)
My first's flooded passage - so careful don't drown! (4)
Second is a wife near the Hill. (6)
My third is the easiest way to climb down, (6)
Whilst my fourth joins Pip' to Easegill. (4)
My fifth is firmly drilled into the wall, (6)
Sixth in Lost Johns is a pitch. (9)
Seventh is somewhere to stuff rope, krabs an' all, (9)
And eighth is a lifelining hitch. (7)
To complete these clues my ninth makes a sling (4)
And my last is a rope very fine. (7)
Throughout the long years to the roof do I cling;
Please leave me un-muddied for all time.

.oo.

(II)
My first is a hollow in the vale of the Dee, (4)
My second's a cave name repeated (times three?). (4)
My third is a deep pot with a sting at the end, (6)
My fourth is a gorge with G.G. round the bend. (8)
My fifth's an unwelcome bird underground, (4)
My sixth is a cave part not easily found. (8)
My seventh's a French cave under Leck Fell, (8)
My eighth's on a ladder, or what's done to a bell. (4)
My ninth is an enlightening and ancient pig, (6)
My tenth's part of a system thats everso big. (9)
My eleventh's misplaced but belongs to John, (4)
My twelth is the spaniard in the hills near Buxton. (6)
My thirteenth and last is biggest of all, (7)
So roomy, in fact, you lose sight of the wall.
My whole's a toothed harness, but please don't despair,
I'm a system in France - don't you wish you were there?

.ooOoo.



Solution to Crossword puzzle in no. 6