

SYDNEY UNIVERSITY SPELEOLOGICAL SOCIETY

CALCITE

34



NEWSLETTER
OF THE
HIGHLAND CAVING GROUP
(Founded 1957)

PO Box 154, Liverpool, 2170

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The opinions expressed herein
are not necessarily those of HCG or the Editor

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EDITORIAL

This issue draws together a couple of trip reports from last year, as well as one for this year's Easter trip to Buchan, with the enjoyable company of Miles and Rocky Pierce. There have been other trips too, but no reports forthcoming. Several HCG members continue to be active in the Jenolan surveying project one weekend each month - most recently Michael O'Driscoll made one more.

A look at safety issues and the drawing up of HCG's Safety Guidelines, mostly by Ann McLaren, was given extra impetus by Mim's accident in Grille Cave, Bungonia in January. An earlier article on Cave Safety by Ann is also presented.

Mim's broken femur was the result of a moving rockpile and not of poor caving practice. Both Mim's own experience and that of the party probably contributed to the "success" of the eight-hour rescue. Sadly, other accounts of the rescue ignored the contribution of her own party to the rescue effort. The "definitive" Accident Report, edited by Ian Lutherborrow, appears herein.

After all this, only four members turned up to "Rescue 88".

Meanwhile, in late January, five HCG members attended ASF's annual Council meeting at Goulburn - some in different capacities. One of the big topics of discussion was Mt Etna - further developments are covered elsewhere in this issue.

The March AGM was a bit of a fiasco: no reports, almost no meeting (but lots of discussion of the draft Safety Guidelines), and a nice barbecue. About the only other business was the re-election of the Executive. Although we already have a Safety Officer, it was felt necessary to appoint a Training Officer as well. Neither of the training days so far this year have been very successful...

More recently we've seen an influx of several new members, all based in the Liverpool-Picton corridor. There is now talk of staging meetings in a hall at Liverpool. Lack of space in Ian's lounge room and the increased crowding haven't made for the most organised of meetings.

Ann has been doing a sterling job at Minute taking, despite a few recent criticisms. The Minutes have fulfilled a dual role: to record meetings, and to provide an informative news-sheet. Some people seem to overlook the effort this involves. Ann is also responsible for the production of "Calcite".

Issues 31 and 32 are not forgotten. Reports of any trips from the period 1980 onwards would help here. These "Calcites" should appear sometime in 1988.

Chris Dunne

INFORMAL REPORT ON THE ASF COUNCIL MEETING -

GOULBURN, 23-24 JANUARY, 1988

by Cathy Brown

As seems to be usual with ASF meetings, this was a jumble of written and verbal reports and general business. The (dis)order was designed to make maximum use of the time available.

We received written reports (mostly at the meeting) from the President, Secretary, Vice-Presidents, and Treasurer; Commissions on Administration, Awards, Bibliography, Documentation (Karst database), Cave Diving, Cave Safety and Cave Tourism and Management; and the Constitutional Review Enquiry, the NSW Speleological Council and the Codes and Guidelines ad hoc Committee.

We were given verbal reports on the Conservation Commission, the Newsletter, the Beginners Manual, the past three Conference proceedings, and additional information on several written reports, including the Jenolan Caves Plan of Management.

Discussion of these reports varied from minimal to long and convoluted - both extremes caused by delegates not having time to read the reports. The following comments are a mixture of points from the reports and matters discussed at the meeting:

The President, Lloyd Robinson, suggested that: Individual Membership needs more publicity; we should take an interest in the Australasian Cave Management Association and the Jenolan Caves Plan of Management. He, the Treasurer, Lloyd Mill, and the Secretary, Chris Dunne, also pointed out that if the ASF is to help worthy causes like Mt Etna, money needs to be paid **on time**.

Vice-President Kevin Mott concentrated on South Australian business, writing that CEGSA needs records of **all** trips to the Nullarbor to improve the database; Vice-President Chris Parr advertised "Tropicon", 27-31 December '88 - registration forms will be in "Australian Caver No. 117". There is non-commercial caving at Chillagoe.

The Treasurer reminded clubs that ASF should get capitations for **all** Full Members, including Life Members, from clubs. He also tried to resign, but was persuaded to continue until a replacement could be found (during 1988).

The 1988 capitations (set at the last meeting) are \$12 per member, with a \$1 discount per member if paid before 1 July, and a \$20 Late Fee if not received by 30 September 1988.

The meeting agreed to increase the allocation to the Conservation Account from \$200 to \$700, to help the Mt Etna Fight - the timing of this allocation depends upon when capitations are received.

A SUSS proposal to change the Constitution relating to Capitation Fees led to a long discussion on the amount and the timing of setting of fees (18 months before they are due), which degenerated into discussion of the system of representation and voting rights (to be considered by the Constitutional Review already underway). SUSS proposed changing the Constitution in two

ways: they wanted to change the 1988 fees at this meeting - this was not accepted; they also wanted to postpone setting the 1989 fees until the Tropicon meeting. This motion was lost by one vote (a two-thirds majority of member clubs is required to change the Constitution and several clubs were not represented!)

All members of ASF are invited to submit alternative fee structures to all ASF clubs by September 1988, for discussion at the Tropicon Council meeting.

The fee set for 1989 is \$12.50 per member.

Moving on to Administration, Miles Pierce (VSA) will be distributing the revised Constitution and other Admin. update this year. Awards Commissioner, Lloyd Robinson, called for deserving nominations and Bibliographer, Greg Middleton, needs more abstractors. He reported that SSS have produced an index to the 1973-75 editions of "Australian Speleo Abstracts" (available from Ross Ellis at \$4).

The report from Peter Matthews on the Documentation Commission generated some discussion (as usual).

Reminder: The Karst Index is available for \$25.

Peter's report included Karst Index sales figures; some interesting comparisons can be drawn between sales and club membership, eg. UNSWSS - 12 copies, 12 members; SUSS - 3 copies, 66 members; HCG - 5 copies, 21 members, etc. Peter also wants ideas on the form of the next published version of the database, eg. by state or by caving area? He reports that it could be issued by June 1989. Many Councillors were sceptical about the possibility of republishing so soon, and doubtful that the existing indexes would be sold by then.

The Karst database is being downloaded from a mainframe to a PC this year and also, lacking other viable offers, trials on state-based micro-computer use will be done in co-operation with VSA. As well as these projects, Peter is open to ideas on extra data fields that should be added to the database.

A separate proposal, related to the Karst database, was presented by Pat Larkin for Keir Vaughan-Taylor (SUSS). Keir wants to add a "maps" field to the database and has organized to do it as part of an MSc project, provided that ASF will give him a copy of the Karst database to work with. Pat Larkin offered to act as intermediary between ASF and Sydney Uni, to protect ASF's interests in the product. He impressed Councillors with a slide display of computer-generated maps of Tasmanian caves. The Council approved the proposal and directed the Documentation Commission to give Pat Larkin a copy of the database asap.

The Cave Diving report presented by Ron Allum was long and detailed. Affiliation between ASF and the Cave Diving Association of Australia was agreed upon and an ASF Cave Divers Code of Practice was ratified.

Terry O'Leary's Cave Safety report highlighted the dangers of laddering without a belay (two accidents), and loose or unstable rocks (four accidents). All reported accidents involved experienced cavers. We were reminded that **all** known accidents or incidents should be reported to the ASF Safety Officer, whether experienced or only heard about, club trips or otherwise. Terry has started compiling a database on cave accidents and needs more data before he can provide meaningful statistics to ASF. He provided all interested people with draft report forms at the meeting.

The possible updating of the 1972 Cave Safety Guidelines was discussed at some length. A few Councillors don't think ASF should have guidelines at all [!!] and the Safety Officer doesn't want to revise them until he has more statistics. It was agreed that the existing guidelines should be circulated for comment/updating and, presumably, the issue will be raised again at Tropicon.

The Beginners Manual (transferred to Peter Stewart at the last meeting) is reportedly progressing and Peter would like suggestions on caves/areas suitable for beginners.

The report on Cave Tourism and Management highlighted the success of the 7th Australasian Conference on Cave Tourism and Management; drew our attention to a special issue of the Australian Ranger Bulletin devoted to Cave Management; and explained ASF's involvement with the Jenolan Caves Plan of Management. This plan is likely to become a model for other areas.

The report also informed us of the formation of the Australasian Cave Management Association as a separate body outside ASF, but with many cross-memberships (including HCG). The formation of this association led to some discussion on the value of retaining the Commission within ASF. The vast majority agreed that ASF's point of view would be better represented by maintaining the Commission. John Dunkley agreed to become the new convenor.

The Conservation Commission's verbal report was mainly on Mt Etna and is too out of date now to bear repeating. [See 'Extracurricular' for update]. There was no report from Andy Spate on the Library. He is apparently still accumulating journals at home.

Verbal reports from the Newsletter Editor, Kerrie Bennett, and Manager, Ian Mann, requested more articles and **photos** and reminded us that capitation fees also pay for printing of the Newsletter, so if one is late the other will be too.

The Constitutional Review initiated at the Sydney meeting hasn't got very far yet because the Convenor was never given any guidelines about what to review! A list of broad topics and priorities were decided upon.

Evalt Crabb reported that ASF has some 87 pages of codes and guidelines (impractical for him to distribute). It was agreed that three codes and guidelines should be reviewed in 1988: Conservation, Safety and the Code of Ethics.

For bookworms, past Conference proceedings from Cave Convict are now available through VSA for \$13 a copy. Speleomania was reported "nearly ready" and Speleotec proceedings were published in "Helictite" during 1987. Also, John Dunkley may still have some books available on caving in Thailand, and Hills have probably reprinted the Glenrock Book by now.

Another way of spending money is to join the Rimstone Co-Op (contact Nick White, VSA), which is co-operating with the government [!] in the compulsory purchase of some land at Buchan to protect the karst.

The next Council meeting (after Tropicon) may be in Canberra (January 1990). The next conference (1991) will be in WA [we might have Tropicon paid off by then!]

Reports to the Tropicon Council meeting are to be with the ASF Secretary by 10 October 1988.

RESCUE REPORT - GRILL CAVE, BUNGONIA

Sunday, 10th January, 1988

On the weekend 9-10th January 1988, members of the Highland Caving Group visited Bungonia State Recreation Area for the purpose of recreational caving. The Saturday was spent practising vertical techniques in Acoustic Pot and showing a Flinders University (SA) group through B4-5.

The FUSS group and two members of HCG left on Sunday morning and the remaining members of the group decided to have an easier "tourist" trip through Grill - the members present were Elizabeth Humphries (accident victim), Ian Lutherborrow (trip leader), Neil Crabb, Lindsay Matheson, Craig Chung, Brian Race and Phil Fleming. All are experienced cavers; Elizabeth, Ian, Neil, Brian and Lindsay have all attended Cave Rescue Weekends. The aim of the trip was to have a look at the right-hand sump and push a passage 30m above it.

The cave was entered at approximately 1130 hrs. Members proceeded through the cave to the area just above "Safe From the Russians", an aven off to the right, where they had a look around but decided scaling poles would be needed to go any further. They came out on the downstream side of this passage into a rockpile area. This is where the accident occurred, at 1230 hrs.

Elizabeth stood on a rock near the top of the pile and the rockpile collapsed, tumbling down the sloping floor. (Later investigation showed that an earth bank below the rocks had partially given way causing the rocks to move.) Everybody was surprised and shocked and at first were not sure what was happening. When everything settled it was discovered that Elizabeth had her lower left leg pinned between two boulders and had another boulder on her shoulder, severely restricting her breathing - this was immediately removed. It was immediately apparent that her left femur was broken and a suspected tibia also, but fortunately there was no break in the skin. About 10 minutes were spent in an attempt to stabilise the rockpile, which proved pointless. It was realised that jacks and spreaders would be needed to shore up and part the rocks so the patient could be extricated. Ian Lutherborrow at this stage sent Neil Crabb, Phil Fleming and Lindsay Matheson out of the cave to raise the alarm, with instructions to call Cave Rescue Group, the Police Rescue Squad and an Ambulance, and to bring back sleeping bags, blankets, food, etc.

Craig Chung, who is a close friend of Elizabeth, was badly shaken and at about 1300 hrs Ian decided it would be best if he left the cave also - he was taken by Ian to the bottom of the 40 ft ladder and instructed to send back a notebook and pencil. Ian returned to the accident site, and with Brian Race, attempted to make the patient as comfortable as possible; Ian taking the weight of the patient with his own body for a time to keep the weight off her leg. Whilst waiting on aid, it was realised that jacks and spreaders would be needed to shore up the rocks so the patient could be extricated.

Meanwhile Neil had run to the Rangers office and raised the alarm while Lindsay and Phil, after having some trouble locating car keys and equipment, gathered the gear required and returned to the cave. The Police and Ambulance received the call at 1330 hrs and the Cave Rescue Group (CRG) at 1400 hrs. Craig stayed at the cave entrance to explain the situation to all who came.

Don Stoneman (Chief Ranger) and Dave (also a Ranger) arrived at the accident site with an extra sleeping bag and a car jack just after Neil and Phil had returned. The patient was hot at this stage, in a great deal of pain and very sleepy - all members made an effort to keep her awake by talking to her. It had been decided to leave her overalls on in an attempt to keep the swelling in her leg down as much as possible. The Police Rescue Squad and two Ambulancemen arrived at approx. 1445 hrs.

The patient was extricated at about 1515 hrs with the aid of a hydraulic jack and a set of spreaders, after first being checked for crush syndrome. The whole area was thought to be too unstable and Elizabeth too awkward to lift, so with a little support, a lot of courage, and a large dose of Entinox, she actually lifted herself out from between the boulders with her right leg, while she supported the left by gripping her overall leg. Meanwhile, Ian and Neil had headed back to pick up the Stokes Litter, left just above Crystal Palace, full of gas bottles, ropes, etc. (The Police had thought it impossible to bring the stretcher any further.) When the contents were removed they were able to manoeuvre it through to the patient. Whilst waiting for the stretcher, the Ambulancemen re-stabilised her and applied a full pelvic/leg splint (M.A.S.T suit), and then made her as comfortable as possible on some ropes with sleeping bags. Elizabeth was then supplied with a pair of glasses and placed in the stretcher in a sleeping bag, strapped in and started moving at 1600 hrs by Police, Dave the Ranger, Ambulance officers and the original members of the party (as above).

They managed to manhandle the stretcher back to the bottom of Crystal Palace, where they were met by two Paramedics. This took about one hour. The Paramedics inserted a synthetic plasma drip in the patient's arm, applied a heart monitor (which was later disconnected), and administered oxygen. A chest harness was also fitted to the patient in an attempt to stop her sliding down the stretcher whilst negotiating through the stream canyon below Crystal Palace. The patient, oxygen bottle, Entinox bottle and heart monitor were all securely strapped into the Stokes Litter with some two inch tapes and manhandled through the stream canyon with the aid of a rope attached to the head of the stretcher.

The decision was made to go the "top way", over and around the mudslide instead of through it, bringing the party out to just below the two short ladders. It was at this point that they were met by the first members of Cave Rescue Group and were informed by them that they would have to wait until the 40 ft pitch was rigged - about 30 minutes. (CRG had run a phone line down to this point.) They waited in the flat area between and behind the two short ladders and had a snack. A rope was then attached to the head of stretcher again to negotiate various bends and drops to finish at the bottom of the 40 ft ladder pitch. CRG had also run a phone down to this point.

There were now quite a number of people in the cave and some confusion ensued, partly due to these numbers. The pitch had been rigged for a vertical lift, but it was decided a horizontal lift would be more appropriate given the condition of the patient. The pitch was re-rigged, with a belay line and one hauling line, up the canyon side of the drop. A rope tail was tied to the stretcher to hold it off the wall but it was of

limited use. Problems occurred when, according to Police practice, one policemen and one ambulance officer attached themselves to the head of the stretcher and the haulers had to lift the combined weight of three people.

More problems occurred getting the stretcher into the canyon at the lip of the pitch and several people appeared to get into rather dangerous positions. By this time, HCG members were getting very tired. They also had to contend with TV cameramen and other media people (who were not experienced cavers) being brought into the cave. It was felt that these people hampered rescue operations and presented an extra danger. Everybody, possibly because the end was in sight and the media were present, now seemed to become a little frenzied and blase, and "it was all GO"!

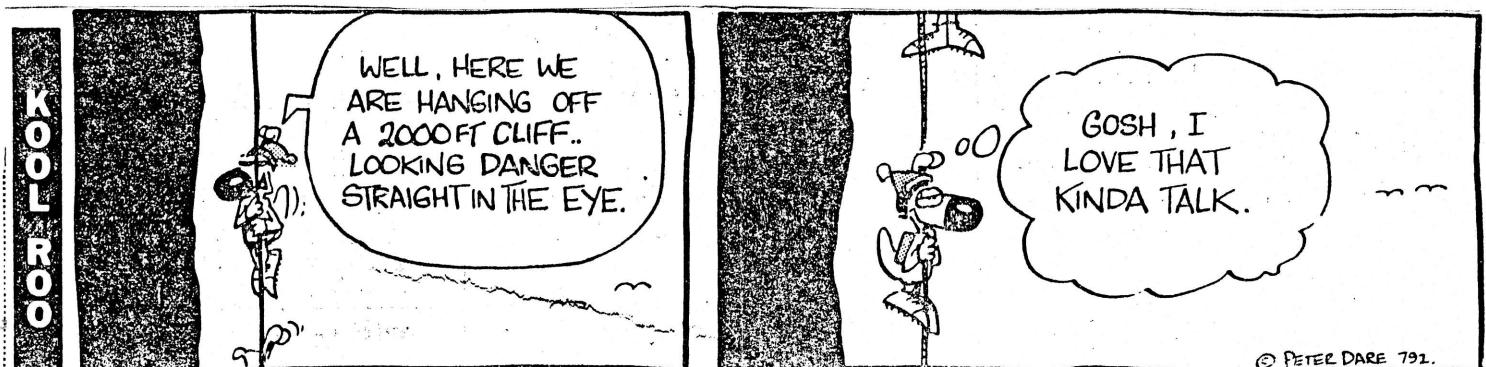
A decision had been made to haul the stretcher up through the daylight hole to the surface. It was noticed (and queried) by HCG members that no belay line had been set on this pitch for the stretcher and, again, the ambulance officer 'rode' the stretcher up the pitch. HCG members were by now fairly tired but left the cave to assist with hauling. While the stretcher was being hauled, it was noticed that the hauling rope was under extreme strain - "flattened out" was the description given. Also, the hauling line was running across very rough ground.

The patient was finally brought out of the cave at 2025 hrs. She was put into the ambulance at 2032 hrs and was taken to Goulburn Hospital.

Elizabeth had been extremely brave throughout her ordeal and kept her spirits high the whole time (notwithstanding the numerous bottles of Entinox administered during the rescue). Elizabeth has since been operated on and a Huckstep pin inserted in her left leg - the femur only was broken approx. 10-15 cm above the knee, while minor crushing to the lower leg damaged nerves to this region.

Many thanks go to all those who participated in the rescue for their quick response to the situation, and especially all HCG members for keeping their heads throughout.

Ian Lutherborrow



SAFE CAVING

by Ann McLaren

"There is no comparison between the voluntary acceptance of danger, which is a spur to action, and the acceptance of death, which is a spiritual achievement."

A. De Saint-Exupery

The exploration of limestone caves can be a dangerous business and should not be taken lightly. As a caver, it is essential that you understand the potential hazards of caves: it is this understanding which prevents a possible danger becoming a real one. Develop the attitude of mind that weighs up the risks of a cave both beforehand and as you go through it. Be fearful if necessary. Fearlessness can lead to foolhardiness, and a strong yellow streak is very good for survival!

Anybody who has participated in the Cave Rescue practice weekends should understand very well the difficulties encountered in rescuing an even slightly-injured caver from a long and difficult cave. When the cave is cold and wet and the patient has to be moved up multiple pitches, the problems are magnified a thousand-fold.

A review of all safety aspects is always valid, but (to my mind) the four Cardinal Rules of caving must be:

- 1) Always cave in parties with a minimum of four people.
(One to stay with the injured caver, two to go for help.)
- 2) Always carry at least two independent sources of light.
(Main headlamp, small torch and preferably, candle and matches as well.)
- 3) Always wear a helmet WITH A CHINSTRAP.
- 4) Safety lines must always be used on ladder pitches in excess of five metres.

DO'S AND DON'TS

Beware of those minor slips which can cause a twisted ankle or a broken wrist. Climb down even small drops - never jump - and tread carefully at all times. Beware of black holes in the floor. 'Out of sight, out of mind' is an easy but dangerous attitude to develop. In the darkness great drops are less frightening, and are often treated too lightly. Always clip or tie into a rope or belay at the head of a pitch. Be especially careful if the rock is loose or muddy, and remember that cave floors are usually very hard. A fall of 10m or even less will often be fatal underground.

Beware of poor equipment and poor use of equipment. There is no excuse for accidents caused by bad gear or bad techniques; they are entirely preventable. If you are not satisfied that your rigging is safe, do not go down. Remember that two doubtful belays do not equal one safe one. If you are using ladders, remember that sloppy belaying may be even more dangerous than no belay, and no belay is an underground form of Russian roulette.

SAFETY-LINING

It is not difficult to imagine a scenario in which, say, a group of four cavers, using mainly SRT equipment, arrive at a pitch too short to warrant using SRT and so put down a ladder. Normal, safe practice is to also put down a safety-line. How many of us more "experienced" cavers would bother doing so? Not many. And yet, one slip on that ladder (especially whilst carrying heavy rope packs and wearing muddy boots), and the whole trip suddenly changes from a fun past-time to a major, life-threatening, rescue situation.

Nobody, no matter how experienced, can know when some untoward may occur whilst ladder climbing. Recently I heard an amusing (?) anecdote from an old-time caver who was climbing a ladder up over the edge of a grassy bank when a brown snake popped out of the grass right in front of his face. Fortunately he was on belay, as in his fright he let go the ladder with both hands and then slipped off the rungs. Without the belay he wouldn't have been around to tell the story.

Safety lines MUST be used in any situation where a fall could result in any injury. The Trip Leader should make the decisions considering:

- a) Experience of the party.
- b) Physical condition of the party at the time.
- c) Difficulty of rescue if a fall should occur.

If the ladder is to be descended as well as ascended, "traditional" belaying is called for. The belayer secures himself at the head of the pitch. Ideally he should be able to see down the pitch. The mechanical belay has superseded body-belaying, where the belayer held the rope around his body. This may still be seen in action, but should not be copied. To use a mechanical belay, fix a separate belay next to the belayer and attach either a rack or other abseiling device (NOT a figure-eight). The caver who will climb down the ladder ties a figure-eight loop in the free end of the safety-line and clips this to his harness with a krab. The safety-line is then run through the abseil device and the belayer pays the rope out as the climber descends. There is no need to tie off the end of the safety-line, provided the rope is at least several metres longer than the pitch. Should the climber need support, or even fall off, the belayer can hold the climber without difficulty.

On the ascent, the abseil device can be exchanged for a Jumar or other ascender. (The Jumar can be held with the feet whilst sitting with legs out in front.) Ascending can be made even simpler if a fixed rope is used for self-belaying. The climber simply tows an ascender up the rope while climbing the ladder, using the rope for resting, or for safety in the event of a fall. To be really safe, it is best to have a chest-ascender in place, so that should a fall occur the climber is left suspended in a sitting position on the rope. Assuming all of the party are carrying SRT equipment, everyone should be able to self-belay. However, if not, then the first man up can use this method and then belay the others up as described above.

How does the last man down protect himself? The easiest way is for him to use a Gibbs on the end of a cow's tail attached to his harness. He then simply unlocks the Gibbs, slides it down the rope about a metre, climbs two or three steps down, slides the Gibbs down again, and so on down the ladder.

Signalling between belayer and climber can be difficult. Misunderstood calls have caused deaths on pitches as short as 16m. The code to use, verbally, is:

Belayer:	"On Belay"
Climber:	"Take In"
Climber:	"That's me" (when all slack taken in)
Belayer:	"Climb when ready"
Climber:	"Climbing"

The use of the word "rope" should be avoided, as it can be ambiguous, meaning either "give rope" or "take rope" if the first word is not properly heard. The same applies to the call "slack".

All too much of a hassle? Consider the following: Ladders are not as strong as caving ropes. The latter have a breaking load, when new, of two tonnes or more, whereas ladders may break at half a tonne or less: any stronger, and they would be too heavy for convenient use. After ageing, there is always a chance that ladders may fail, and in addition, even experienced cavers can run out of steam, or simply slip. Accident statistics bear this out. In the north of England, for instance, there are many short pitches which were usually done on ladders before the 1980's: there is a long list of accidents in the region caused by lack of an effective - or any - safety-rope, even on pitches of less than 10m. Below is an excerpt from the records of the Clapham (UK) Cave Rescue Organisation:

27th August	Ireby Fell Cavern	Caver fell 25ft from ladder on first pitch. <u>No lifeline</u> . Serious chest injuries, incl. 11 fractured ribs. Died during rescue.
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27th Sept.	Tatham Wife Hole	Caver fell 25ft from ladder on first pitch. <u>No lifeline</u> . Severe bruising, muscle damage to leg.
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Older, but still valid, accounts of accidents on ladder pitches, come from Norbert Casteret's book "The Darkness Under the Earth". After recounting one fall after the other for nearly a whole chapter (wonderful vivid descriptions designed to make your hair stand on end!), Casteret has this to say:

"Arthur Watkinson, pot-holing with some friends in May 1950 at the Cavern, Ireby Fell, suffered two broken arms and a fractured leg. Not using a safety-line, he fell from near the top of a 25ft pitch to the bottom. A fall from that height may not appear very dangerous, and may seem to demand no extraordinary precautions; but who is to say where danger begins? At what depth (or height) should one use the safety line? Opinions will always differ; but Watkinson, who is well qualified to judge, will remind us that his fall cost him two broken arms and a fractured leg."

Casteret sums up this gory chapter with the following paragraph:

"Of thirty-seven falls which I have mentioned, all but three would have been avoided if the men concerned had used a safety rope. Those figures render further comment superfluous."

This type of accident is not confined to Europe and the "old days". In the ASF Safety Officer's Report 1987, two accidents are recorded by Terry O'Leary, one on the "short" pitch in Wyanbene and the other in Drum Cave, Bungonia. Both could have been avoided by the use of belays.

SAFER SRT'ing

With the advent of Single Rope Techniques in the last 10-15 years, the selection and maintenance of personal equipment and rigging tackle must also be given careful consideration - a worn or badly fitting harness, borrowed and unfamiliar hardware, or simply ignorance of SRT safety techniques can mean YOUR DEATH! Three items are worth elaborating upon:

Harnesses

An SRT harness must be completely fail-safe. This means that if any one point on the harness "goes", at least one part of the harness still bears the weight of the caver. Most bought harnesses are made with this in mind. It is the home-made harness, however, which can be dangerous - the "swami-seat" and the one-piece knotted styles. Imagine what would happen if a section of these harnesses failed - the whole lot would simply fall apart. If using this type of harness (and this often occurs when teaching beginners who have not yet outlaid the money for a proper harness), a waist tape must always be added and clipped into the harness in front with a large "D", or better still, a "Maillon".

If making your own harness, be sure to obtain and use terylene thread to match the terylene tape. To be safe, each row of switching should be at least 4 cms long and not cross itself at any point, and there should be at least 6 rows of switching at each join. An industrial sewing machine is a must for this operation - don't trust the local bootmaker, unless he is willing to obey your instructions and use the correct thread.

Safety cord

Ever imagined what would happen if your chest ascender suddenly failed? That's right - you'd hang very nicely upside down by your foot ascender! A simple safety precaution to avoid this is to attach a safety-cord from the foot ascender to the main point of attachment on your harness. It should be of dynamic rope and be just long enough to reach when the foot ascender is pushed up to its highest point.

Cows-Tails

For safety and ease of crossing rebelay, this brilliant English innovation should be adopted by every Aussie caver.

Cows-Tails are made from one piece of dynamic rope, tied with an Alpine Butterfly about two-thirds of the way along, thereby forming two lengths, one short and one a bit longer. The knotted centre is clipped into the main point of attachment on your sit harness and snap-links are clipped into the end of each. For crossing a rebelay (or knot) when abseiling, you abseil down to a point level with the rebelay (the abseil rope should have at least a one metre slack hanging at this point), then before doing anything else, clip your short cows-tail into the rebelay. You are then perfectly safe and free to disconnect your abseil device in order to attach it to the other side of the rope.

Similarly when ascending, but the longer cows-tail is used instead. Its a good feeling when you clip into that rebelay and know you're safe while you play around with ascending/abseil gear!

In conclusion, I believe it is the responsibility of every caver to keep themselves informed of new and better techniques and equipment. It never ceases to amaze me how many people take up vertical caving, relying solely on the recommendations and advice of friends and thereby at times duplicating and even magnifying bad or incorrect techniques. There are available some excellent publications on SRT ("Single Rope Techniques" by Neil Montgomery is one of the best) - get hold of some and READ! Attend Field Days; try several different techniques; be willing to change your rig and experiment in order to achieve SAFER ropework.

What is required, to quote one of our newer members, is **responsibility**, not just **ability**!

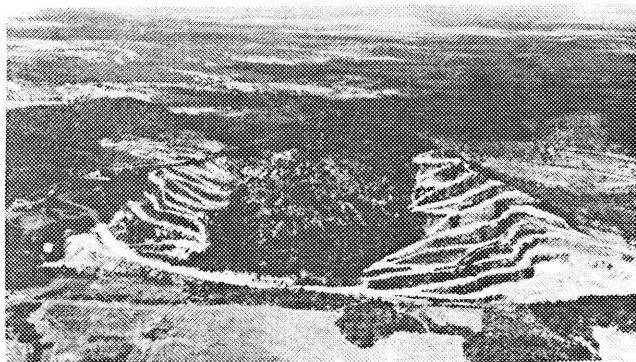
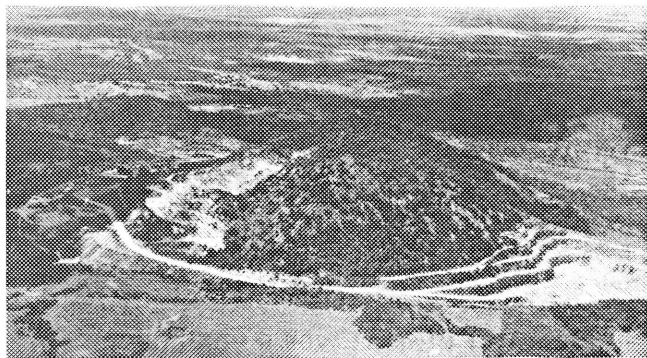
References:

Norbert Casteret: "The Darkness Under the Earth", Dent, 1954

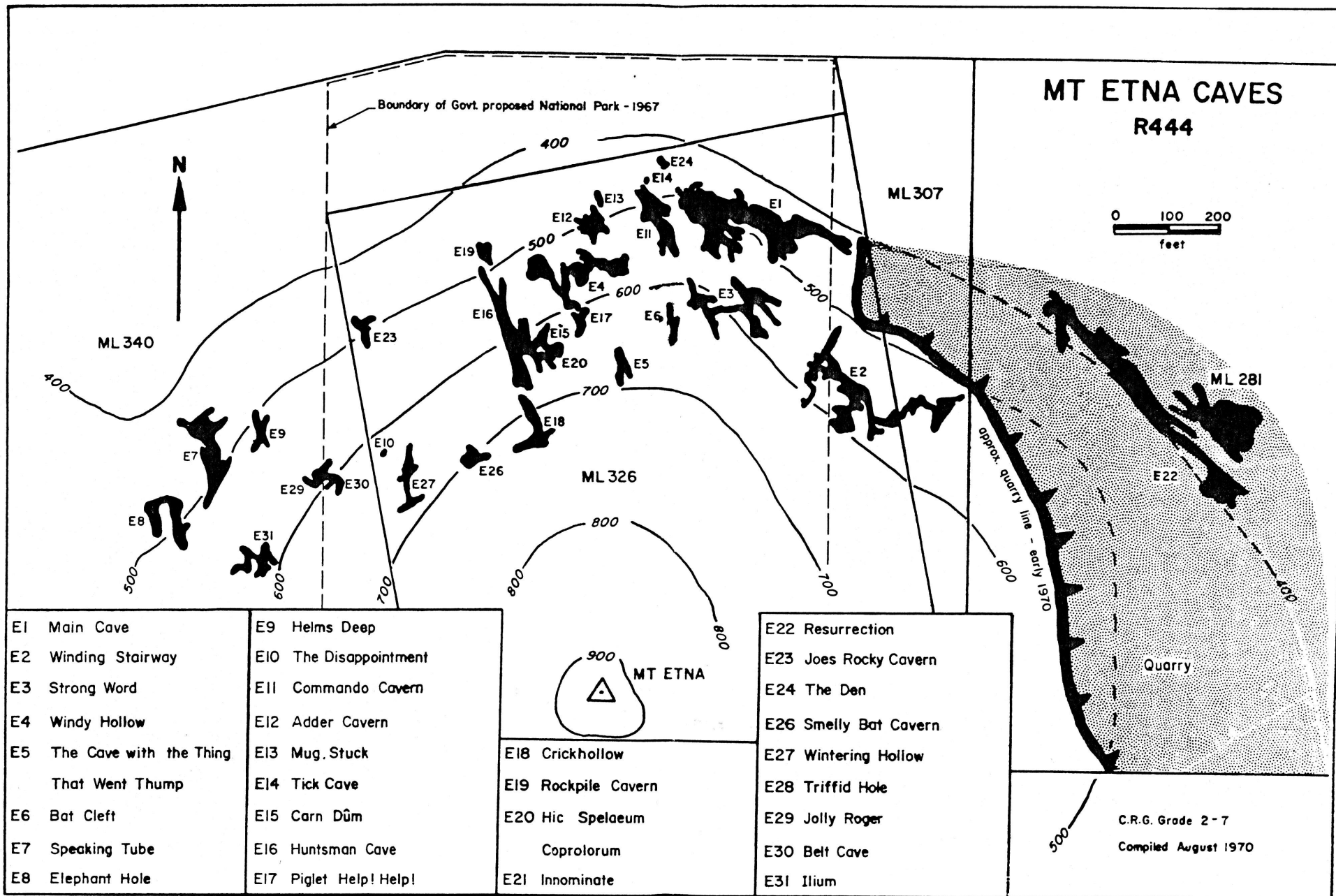
Ben Lyon: "Venturing Underground", E P Publishing Ltd, 1983

Campbelltown Caving & Outdoor Group Members' Handbook.

Mt Etna now.....



.....in 30 years time?



SAFETY GUIDELINES

1. GENERAL
 2. RESPONSIBILITIES OF TRIP LEADER
 3. PERSONAL & PARTY EQUIPMENT -
 - 3.1 Mandatory Equipment
 - 3.2 Recommended Equipment
 - 3.3 Mandatory Party Equipment
 4. ABOVEGROUND ORGANISATION
 5. LADDER CLIMBING
 6. SINGLE ROPE TECHNIQUES -
 - 6.1 General
 - 6.2 Ascending
 - 6.3 Abseiling
-

1. GENERAL

- 1.1 There should be at least **four** members of every caving party: if one person is injured, one stays with the injured party, whilst two go for help.
- 1.2 Every caving party should include at least one person with a **current first aid certificate**, and it is recommended that every member obtain a first aid certificate.
- 1.3 Advice should be sought from local clubs as to caving hazards when visiting unfamiliar areas.

2. PARTY LEADER'S RESPONSIBILITIES

- 2.1 It is the Party Leader's responsibility on each trip to check that the trip is fully equipped before entering any cave.
- 2.2 The Party Leader has full authority and may prevent any caver from entering a cave at his/her discretion.
- 2.3 The Party Leader should be prepared to travel at the speed of the **SLOWEST** member of the party.
- 2.4 The Party Leader should make every effort to avoid the party becoming unintentionally separated whilst underground.
- 2.5 Should a split in the party become necessary (due to size of party, tiredness of a member, etc.), then the Party Leader should appoint a responsible and experienced person to lead the other party.

- 2.6 The Party Leader should ensure that no member of the party is coerced into a situation beyond their capabilities.
- 2.7 It is the Party Leader's responsibility to inspect for wear and damage all ropes and other equipment the failure of which could result in injury, before every trip.

3. PERSONAL & PARTY EQUIPMENT

The following guidelines relate to equipment to be carried by each party member whilst underground and are divided into three sections:

- 3.1 Equipment which MUST BE CARRIED AT ALL TIMES underground
- 3.2 Other equipment, recommended only
- 3.3 Mandatory party equipment - to be carried by at least one member in the party.

3.1 Mandatory personal equipment

- a) Helmet WITH chin strap
- b) Adequate clothing for the cave attempted.
- c) Second source of light - which should be carried ON THE PERSON, not in a pack.
- f) Adequate footwear.

3.2 Recommended Personal Equipment

- a) Third source of light - matches and candle are useful for meal/rest stops.
- b) Food and drink - even if only lollies, muesli-bar
- c) Triangular bandage
- d) Extra clothing - eg. thermal top
- e) Jumar or Gibbs, pulley and krabs or prussik loops. (If vertical work is being undertaken.) If only two people had one set each, then a ready-made hauling system would be available.
- f) Small first-aid kit.
- g) Notebook and pencil
- h) Whistle and pen-knife
- i) Space blanket
- j) Spare headlight bulbs/batteries

3.3 Mandatory party Equipment

- a) Notebook and pencil
- b) First Aid Kit - leave at entrance or in car for short trips; take along on longer trips.
- c) Water
- d) Set of Jumars and pulleys (if rope is to be used)
- d) A watch

4. ABOVEGROUND ORGANISATION

- 4.1 At least one car should be driven as close as possible to the entrance of the intended cave. The car should carry:

- a) A fully equipped first-aid kit.
 - b) A sleeping bag and sleeping mat of some description.
 - c) Water
- 4.2 Every member of the party should be made aware of where the driver has left the car-keys before entering the cave. The keys should be left on or near the car.
- 4.3 The **Visitors or Intentions Book** (where appropriate) should be filled out with intended cave, names of members of party, departure time and estimated period underground. Entry should be completed with time of arrival back at camp.
- 4.4 Elsewhere, a note should be left on the vehicle with these details.

BELOW GROUND

5. **LADDER CLIMBING**

- 5.1 Safety belays should also be used on any pitch where a fall could result in an injury. The Party Leader should make the decision considering:
- a) Experience of the party
 - b) Physical condition of the party at the time
 - c) Difficulty of rescue should a fall occur
- 5.2 Any member of a caving party always has the right to request and receive a safety line.
- 5.3 There should be only ever one person at a time climbing a ladder.
- 5.4 Climbing calls should always be used when ladder-climbing, abseiling or belaying. The recommended calls are as follows:
- | | |
|----------|--|
| Belayer: | "On Belay" |
| Climber: | "Take In" |
| Climber: | "That's me" (when all slack is taken in) |
| Belayer: | "Climb when ready" |
| Climber: | "Climbing" |
| Climber: | "Off rope" (climb finished & clear) |

The term "okay" should be used for an affirmative.

The words "slack" and "rope" should NEVER be used in calls, as they are ambiguous.

Instead, the term "give" should be used if more slack is needed, or "take" if slack needs to be taken up.

The term "resting" should be used if for any reason climber needs the rope held taut.

The term "falling" should be used if the climber is about to fall or falls.

6 SINGLE ROPE TECHNIQUES

6.1 General

- 6.1.1 Any person engaging in vertical caving must be able to demonstrate their proficiency at tying knots, namely the following :
- a) A tape knot
 - b) A Figure Eight
 - c) A Double Fisherman's
 - d) An Alpine Butterfly
- 6.1.2 Cavers must be familiar with equipment and must have had above-ground experience before using SRT underground. Before SRTing underground, each member should have experience with:
- a) Changing from descend to ascend and vice versa
 - b) Crossing knots
 - c) Crossing rebelay and rope-protectors
- 6.1.3 Each member of party should have their own equipment. Sharing equipment is unacceptable.
- 6.1.4 Any person who is not satisfied with the rigging has the right to a re-rig or re-tie any knot themselves (but only with the express approval of the Party leader).
- 6.1.5 No person may re-rig or re-tie without the express approval of the Party Leader.
- 6.1.6 It is the responsibility of every member of the party to CHECK AND/OR QUESTION THE RIGGING for themselves before descending a pitch. Items to be checked:
- a) Gates on all krabs should be fully screwed up
 - b) Buckles on harness should be safely secured
 - c) All knots - if tied by another person, you check. If tied by yourself, your mate checks.
 - d) Attachment of rope to each person.
- 6.1.7 A helmet with chinstrap should be worn for any vertical work, whether above ground or below.
- 6.1.8 Long hair must be tied back for any vertical work.
- 6.1.9 Any ascending/descending ropes should have a knot tied at the end.
- ### 6.2 Ascending
- 6.2.1 A safety-line/security link must be incorporated into any type of SRT system.
- 6.2.2 There must be TWO POINTS OF ATTACHMENT AT ALL TIMES. This means that a third Jumar, Gibbs or cows-tails should be used when crossing re-belays, rope protectors, or overhangs/lips.
- 6.2.3 Every person ascending must also carry an abseil device.

6.3 Abseiling

- 6.3.1 The first person down any pitch should always carry ascending equipment.
- 6.3.2 Techniques such as "classic" or "commando" style abseiling and more than one person on a rope at a time should never be used.
- 6.3.3 Sticht Plates should not be used on static rope.
- 6.3.4 Figure 8 and Harpoon abseil devices and the "twisted knot" technique should NOT be used.
- 6.3.5 At least one glove should be worn whilst abseiling.
- 6.3.6 Abseiling calls should always be used. Recommended code is:

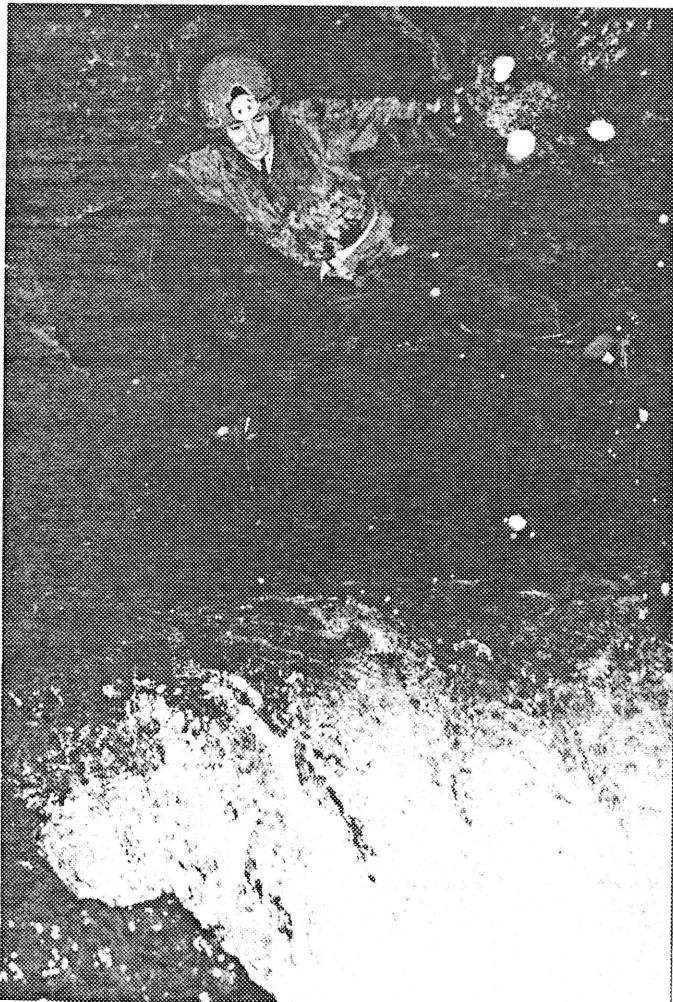
"On Rope"

"Abseil When Ready"

"Abseiling"

"Abseil Clear"

- as abseiler leaves top of pitch
- when disconnected from rope



TRIP REPORT: GLENROCK, 6-8 June, 1987

PRESENT: Chris Dunne, Mimi Humphries, Michael ("Flash") O'Driscoll, Evalt Crabb (HCG), Peter Murray (3rd East Maitland Scouts), John Cameron, Charlie Cameron (1st Green Valley Scouts), Peter Oliver (HSC)

Most arrived Friday night at the campsite (east of the Hayshed; GR 502915). Chris, Mimi and Flash had stopped just out of Aberdeen and got to view the lovely country up through Gundy and Elliston, arriving Saturday morning. Peter Oliver (from Hills Speleo Club) was up on his own, expecting to be joined by another HSC bod on Sunday to do a dig.

Breakfast was rather a protracted affair, until Evalt and Charlie went and looked at Fig Tree (Gr1), Clunk Clunk Clunk Bang Pot (Gr2), and Ewe Beaut (Gr5), about 300m SW of camp (GR 501913). Meanwhile, Peter Oliver and Chris drove down to Glenrock Station to speak with the manager.

HSC have been visiting Glenrock for about three years and were on good terms with the previous manager. A new manager, Peter Armstrong, has been here since Christmas '86. Hills had run a couple of trips earlier this year but had not been able to contact him; we met him now for the first time. Initially, he was wary of allowing us to remain on the property, explaining that he had been directed by the Company (in Switzerland) to close up access. He was concerned at streams of visitors being on the property, camping and shooting, and the disturbance of tracks and stock. It was obvious he saw us initially as just another mob of the same, till Peter explained the work Hills had been doing here: 100 caves tagged and most of them mapped; though most of these are of limited extent, ranging in size from 2-150m. Unfortunately, Peter had not brought down the "Glenrock Book" from camp to show him.

Most of the caves are less than 10m and despite the high relative relief and the fact of most entrances being near the top of the ridge, the karst is heavily infilled with clay and breakdown. There are several pot-hole and grike type "entrances", but no dolines obvious (except a few in 'depressions' of less than 2m relative relief). Unfortunately, Peter Oliver had not brought down the "Glenrock Book" from camp to show him.

Returning to camp (which incidentally is on a Travelling Stock & Camping Reserve and not part of Glenrock property), Chris discovered in the "book" some SSM (State Survey Mark) location sketches which Hills had got from the Lands Dept. Running through the property is an aqueduct tunnel, part the Barnard River - Hunter River water scheme. Despite this "connection", Glenrock does not lie in the Hunter River catchment (as asserted by Hills in "Glenrock Caves"), but in that of the Barnard, a tributary of the Manning. A series of SSM's were placed along the road as BMS (level Bench Marks), no doubt in conjunction with construction of the aqueduct. We walked over and located SSM 37540, near the hayshed (GR 501915). Returning to camp, Flash, Peter and John stopped to poke at a possible dig about 100m SW of camp (GR 502915), while the others started into a late lunch.

Eventually we departed for Fig Tree (Gr1), (GR 501913), where John was being tested by Evalt and Peter Murray for his 'caving' pursuit towards his Queens Scout (Caving) Award: rigging, laddering, belaying (mechanical)... They spent about two hours down the cave.

Chris had with him a sketch of the limestone outcrop from a SUSS trip report by Martin Scott, and had transferred this to a copy of the 1:25,000 topo map. He noted Gr1, Gr2, Gr5 (these three mentioned previously) and Gr83 in the same vicinity, before he, Peter Oliver and Mimi walked NW across the road (and the 'pipeline') past the hayshed and looked over the ridge-top for about 400m, SE-NW: Gr9, a solution depression (in the first saddle at GR 499916); a shallow, rock-filled 1m diameter hole near Gr10; and Gr10 itself. Downhill to the north, Gr75 at GR 500917; and 300m further NW at GR 497918, several other holes: Gr11, 12 and a filled 3 x 2m grike with trees growing out; Gr64, 40 and 13 - another filled hole; Gr100 (untagged) - all on a saddle.

Immediately downhill a few metres west of the saddle-top, amongst a clump of fig trees, are two sizeable pot-hole type entrances: Gr14 - 4 x 5 x 5m deep and an untagged one 5m away, 3 x 4 x 5m deep. Both had fig trees growing out of them, and soil floors. (It reminded me Chris of a cave at Waitomo in New Zealand with a similar pot-hole entrance 50m deep, halfway down a hillside of similar relief, with better than 500m of stream going off at the bottom and about 1500m of passage all up!)

We returned to camp about the same time as the others - 5:30pm - to find the same three: Flash, John and Peter were having another 'poke' at their dig near camp.

Sunday morning some of us waited for Peter's friend to arrive, which he didn't; and Evalt, Flash, Jim and Peter went and did Gr2 - further testing. Peter finally gave up waiting and the remaining four of us went back over to the saddle at 'Gr100' (untagged), where Peter and Mimi - with a hand-winch - spent a few hours trying to remove a 0.7 x 0.4m rock blocking the way on in a "shaft", measured (by plumbline) at 45m deep. Meanwhile, Chris drew a better sketch of the entrance locations in his vicinity (GR 497918) - some ten in all; and accompanied by Charlie, went for a reconnoitre over the ridge top for a further 5-600m, working round clockwise past Gr103 (tagged), and keeping above the slopes. Gr66 was noted at GR 495923. Chris went as far as where the ridge narrows to a saddle at GR 496926 before heading back over the tops of the NE slope of the hill, noticing two untagged entrances about 30m apart at GR 496925, but nothing further over this hilltop nor round those tops till Gr69, halfway down the gully at GR 498920. He followed the contour SE for 200m and crossed the gully onto the small ridge at GR 500919, where Gr65, 93 and two shallow rock collapse depressions were noted, only 3-4m across. Then he walked back up this ridge and returned to camp.

Charlie and John left for home; Flash and Peter, having just returned from the Gr2 area, went on with their dig: removing several boulders to gain a few metres access, but only 1m depth, into a soil/clay-filled solution collapse. Chris, Evalt, Peter and Mimi took a walk up the road to the saddle at GR 499913 from where one can see the SW flank of the limestone ridge from the road. This outcrop extends for about 2 km NNW as a ridge 60 - 80m above the creek to its west and up to 120m above that on its east. Dip of the limestone appears to be from near vertical to about 70 degrees NE and, together with the distinct lack of major karst features, ie. anything more than 5m above the normal land profile, I suspect there will be no entrances to be found on this eastern flank. Evalt was enticed into taking a look over the ridge top (GR 499917) NW from the hayshed as far as the clump of entrances in the saddle at GR 498919. This was done at a leisurely pace, followed by a leisurely return to camp.

Camp was broken and the last of us left for home. Having come so far north, and as it was still only mid-afternoon, Chris, Mimi and Flash returned to Sydney via Barrington Tops, taking the Barrington Tops road across to Gloucester.

Chris Dunne

References: Scott, Martin (1987) in SUSS Bull 27(3): "The Glenrock Epic, with Hills"
Hills Speleology Club Ltd (1987) - "Glenrock Caves"

TRIP REPORT: YARRANGOBILLY CAVES, November 1987

PRESENT Ian Lutherborrow (Trip Leader, Phil Flemming, Christine Kennedy, Chris Dunne)

We finally made it to Yagby 9 am Saturday after camping just outside Adaminaby, due to the fact that all petrol stations at Cooma were closed and we ran out of gas.

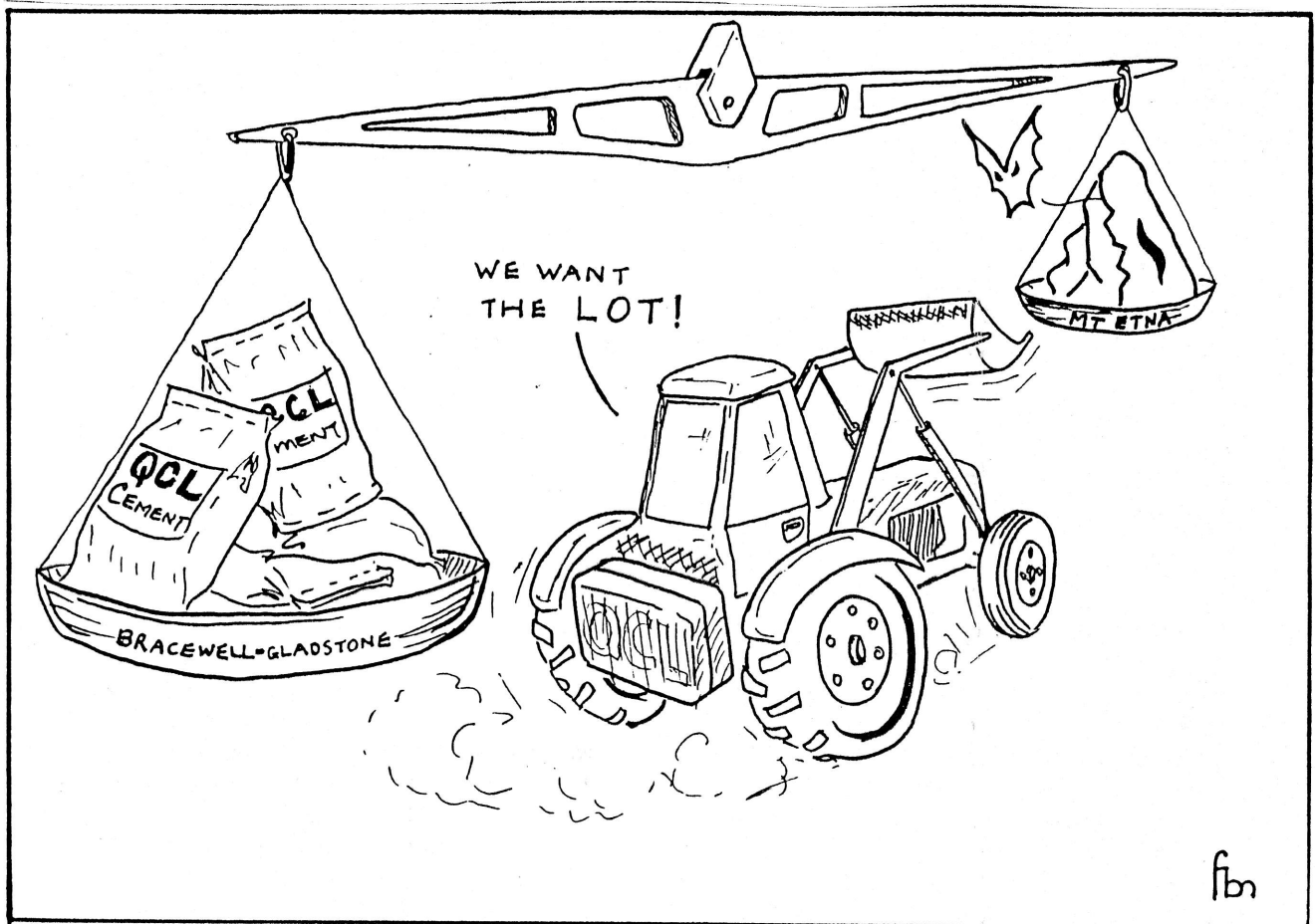
Unfortunately we missed the Ranger at Yagby, so we took ourselves on a self-guided tour of Glory Hole first. We then headed for Cottrills Cottage where we had arranged to meet Mick Williams from Snowy Mountains Speleos - apparently we just missed him also - so we decided to visit the Deep Creek area. We started with West Deep Creek and decided to push the streamway through the rockpile. After a wet couple of hours we realised we were not adequately clothed for any more caving and returned to the surface and "thawed out" in the sun, although Ian thought the time was better spent exploring the surrounding area. He was eventually joined by the others and we all poked around any holes we could find near West Deep Creek, but found no breezes or other leads. We came to realise that the whole area is one big collapse area, with a lot of (very frustrating) potential.

After a mild night (socially) at Cottrills and still no Mick (who had this time left a note on the car) we decided to have a look at Coppermine. We poked around the top levels and found some nice calcified bat skeletons, then finally found the gate and managed to eventually squeeze Phil through it. We noticed that the breeze coming through the gate was lost in the upper reaches and the stream passage was still going, but is only a side feeder with no flowing water. We then continued on through all the "pretties" into the rockpile and pushed some low level stream passages. At this stage we decided it was not worthwhile getting cold and wet again, so turned back.

We thought that the formations are still reasonably undamaged, although there is some damage off the main track (between the gate and the aven) - it might be worthwhile putting some track marking in here.

After an enjoyable few hours underground we had a walk around Yagby Creek and then met up with Mick at long last, who had been having a wonderful time rafting.

Ian Lutherborrow



Balanced Development ?

‘Every mainland National Park within 100 kilometres of Rockhampton contains at least one quarry?’

TRIP REPORT: BUCHAN, Easter weekend 1988

PRESENT: Ian, Natalie, Chris, Ann, Lindsay, the Waddington family, Phil, Ron Catlin, Robert Wray, Phillip Dunne.

Friday (with no sleep the night before) was spent in Honeycomb Cave with a couple of million blowflies! This is one of the caves of the "Potholes" area at Murrindal, some 5-10 km north of Buchan, and is typical of that area, the upper sections being phreatic 'spongework' development, dropping down via narrow rift passages to a streamway. Although we rigged one of these rifts and Ann, Chris, Ian and Robert abseiled down, it was apparently the wrong hole and just narrowed off to a boulder-choke. The other nine members of the party amused themselves for a couple of hours warding off the blowflies while all this was going on.

On Saturday we split into two groups - a "vertical" team and a "horizontal/surface trog" group. The vertical group (Chris, Ann, Robert, Chris's brother Phil and Ron Catlin) dropped down "Baby Pierre" (again in the Potholes area) and then wished they hadn't (a muddy, godforsaken hole if ever there was one); while Ian's group (everyone else) explored the Murrindal River area. Both groups also did (separately) the walkthrough Wilsons Cave at East Buchan, which goes under the main road.

Saturday night was the climax of the weekend, with the Waddington and VSA kids opening a "disco" in the cellar underneath Homeleigh. For 20 cents admission we got to dance on our knees till 3 am under the flashing strobe (really a Dolphin on a string!) It is rumoured that certain HCG members actually passed out (from exhaustion from dancing, of course) shortly afterwards.

Sunday saw everyone together again (although not everyone was feeling completely together) to explore Dalley's Sinkhole (described in the VSA Handbook as "extremely unstable", with a note that "you will not find any VSA members to guide you through this cave"). Nevertheless, Miles Pierce led us down through the horrifying rockpile ("just don't tread on the [shiny!] rock that's painted orange!") and on into the streamway. Downstream the cave becomes a veritable "railway tunnel" with some good decoration and very interesting geology; upstream is not so interesting - just more rockpile. A white fish about 10 cm long was noticed in the stream by Ann. On the way back up the canyon we had a look in the old Lead Mines (really a cave) and then a swim through the Dalley's resurgence ("Subaqua"). The walk back up the river is really spectacular and would be great in summertime for swimming.

Monday we returned to NSW via the Suggan Buggan Road, Snowy River (beautiful) and Jindabyne.

All in all, a great weekend, with a good turnout by members.

Thanks VSA!!

Ann McLaren

FIELD DAY: 22nd May, 1988 at Kentlyn

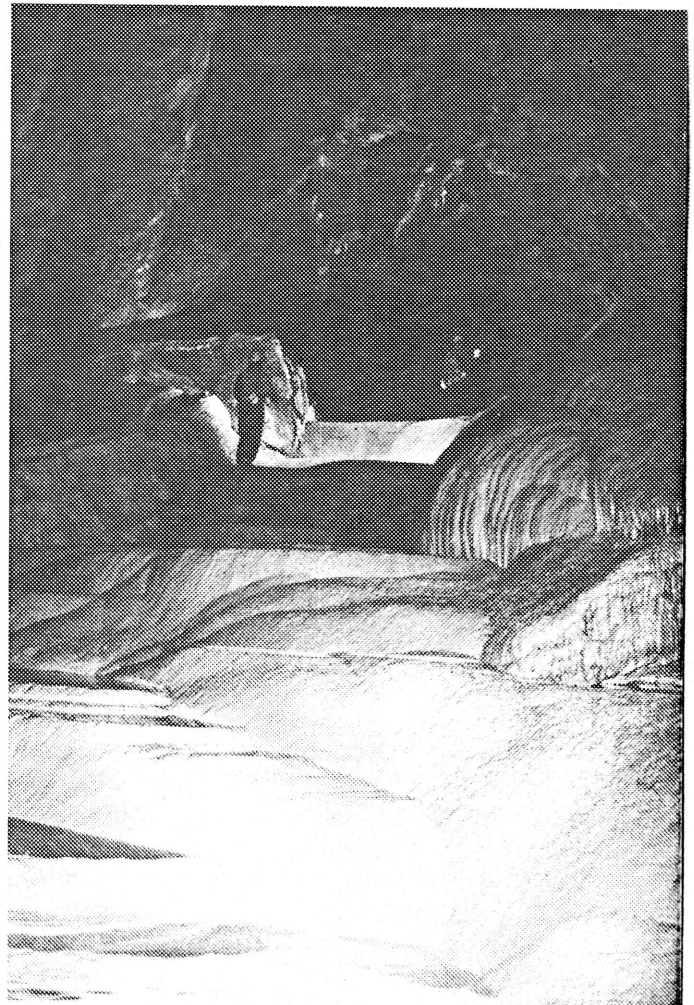
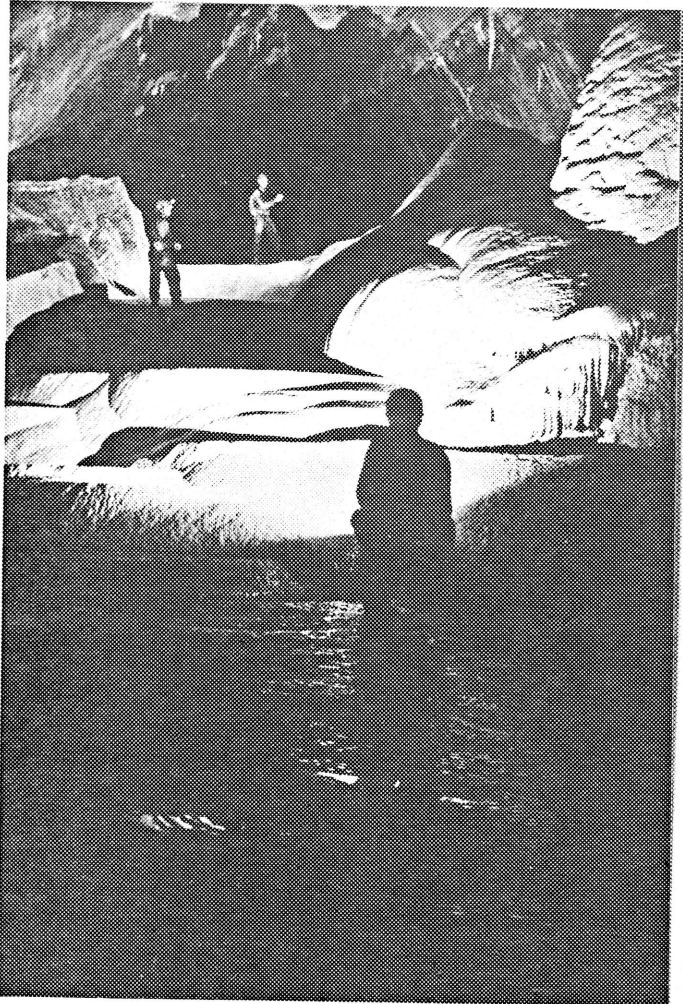
PRESENT: Peter Dohnt, Brian Boulton, Mimi, Craig, Phil, Paul, Lindsay, Robert (plus several friends of Peter)

Following a leisurely Sunday morning start, the group engaged in a few hours abseiling practice on an 27m overhanging cliff a few minutes walk from Peter's house.

After consuming a barbecue lunch most hospitably provided by the Dohnt's, members wandered back to the cliffs, a ladder pitch was rigged and abseiling and laddering practised until about 5 pm.

The site itself is ideal for SRT practice, with a range of cliffs of varying heights and technicality, located in a shady bush setting. Peter and Gwen Dohnt's hospitality was absolutely first rate and, combined with good weather, contributed to an enjoyable and instructive day.

Phil Fleming



The famous "Golden Staircase" - Croesus Cave, Mole Creek, Tas, Jan '87

EXTRACURRICULAR.....

Ann McLaren

Rescue 88, Bungonia - Chris Dunne, Ann McLaren, Cathy Brown, Lindsay Matheson, David Knights

Cathy and Lindsay scored a Green Team this year, while Chris and I were pulled out of the Yellow exercise to become Assistant Observers on Green Team exercises. The Yellow exercise (Advanced) involved a rescue from the bottom of Shaduf (B15) and took around 13-15 hours (with a change in "victim" halfway through). Although very successful from a learning aspect, a real victim would probably have died of hypothermia in a rescue of this length. A good lecture was given on "Crush Syndrome", and Terry O'Leary (Cave Rescue Group) gave a run-down on Mim's accident, although neglecting to mention HCG's efforts in the rescue (until reminded). We felt that the whole weekend was very informative and well worth the effort of attending.

"Greenie Guerillas" & the Battle for Mt Etna

Things have been moving fast since the last "Calcite":

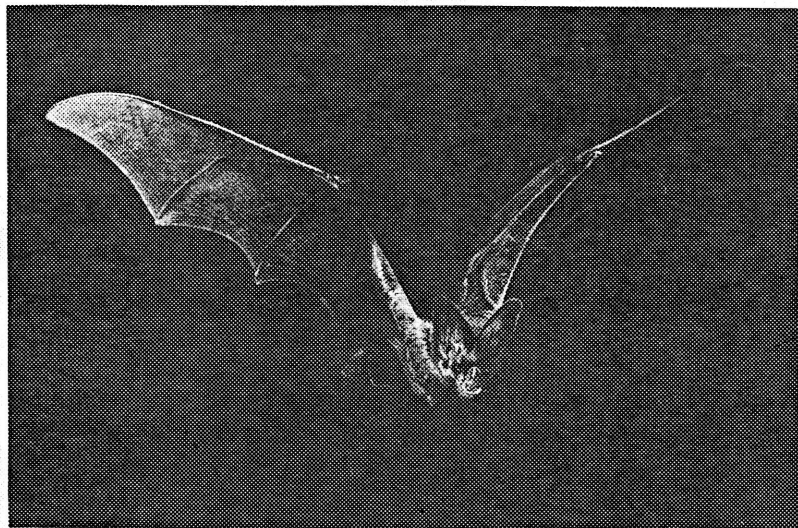
The "enemy" (Queensland Cement Company) moved in to blast Elephant Hole and Speaking Tube. The "allies" (speleos & conservationists) in a strategic counter-move, sent in the "Greenie Guerillas" to stage a sit-in in Commando Cave and other (unnamed) caves on the mountain. They say they have enough food and water to last 12 months.

This was the style of the "Sydney Morning Herald" article about the affair on 29 April.

Unfortunately, it was rather disconcerting - for some of us - to be portrayed by the media as "rice salad and peanut-sauce-eating, radical, student Greenies, attracted by the noble cause and the thrill of hide-and-seek in the dark." The choice of Commando Cave for the sit-in seems to have prompted the "Herald" to write their article from a pseudo-military angle, using such expressions as "Bat Guerillas", "Greenie incursions" and "green get-away cars". Chris and I both wrote letters to the Editor expressing our disappointment at this sort of adverse publicity.

A week later, on "A Current Affair", the cavers on the mountain were being referred to as "rent-a-protesters"! It is very difficult to recruit support/sympathy from the "lay" community for any environmental issue when the media continually give a slanted (or just tongue-in-cheek) coverage. Anyway, the Sydney branch of the Mt Etna Committee are not too concerned and seem to be pleased to get any sort of publicity.

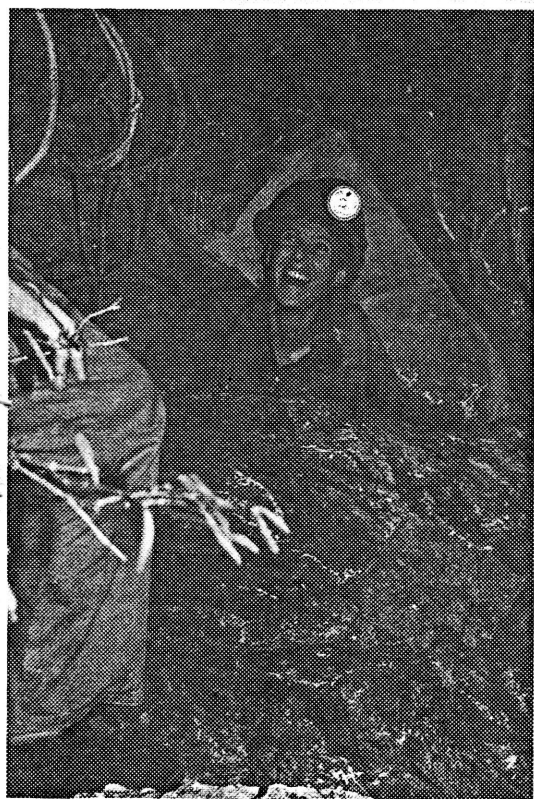
Since then, Pat Larkin (ASF Conservation Commission & Mt Etna Committee) reports that the security company hired by the "enemy" approached a well-known Sydney caving equipment supplier to buy some ladders, etc. Naturally, they were out of stock. (Sad!) Also, Sydney cavers bought 200 odd shares in the Central Qld. Cement, but the company refused to register them. Since this is illegal, Pat and co. have shaken their barristers wigs at the company and it looks as though some agreement will be reached shortly.....



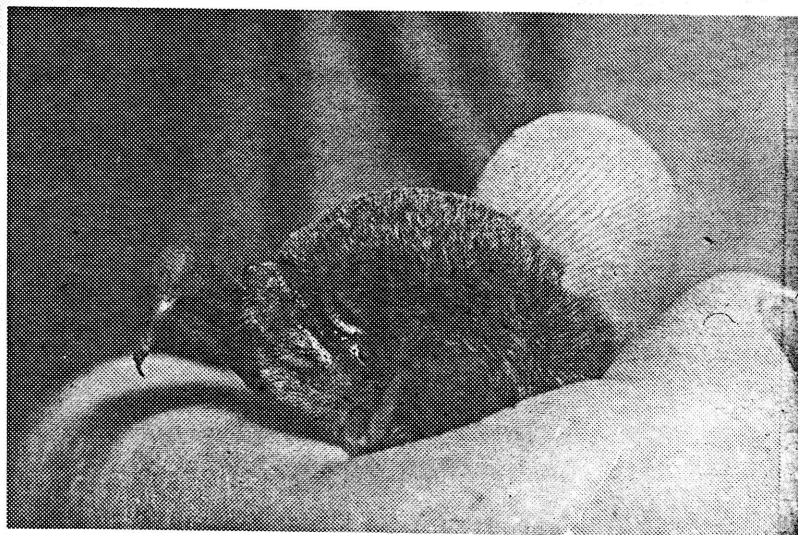
Rare Ghost Bat in flight.



'Reverse roles'
frog attempts to eat snake, Bat Cleft.



Thrill of exploration,
Dead-of-Night Cave.



Delicate and furry Little Bent-winged Bat.

The Great Jenolan Survey

Well no-one can say that Highlanders don't stick at something once they start! After a brief rest over the Christmas (and canyoning) season, the 'crew' are at it again - Lyn and Helen still furiously drawing wall detail underground, Mark and Dirk tripping over each other setting up survey tripods in tight passages, and Greg has been seen once or twice dripping wet and muddy in the company of a diver or two. Chris, myself, and more recently Flash, still prefer the surface surveying and this month spent a good part of the weekend sitting on the top of Lucas Rocks with walkie-talkies, directing the placement of survey stations up to 800 metres away in McKeown's Valley (to connect with Glass and Spider Caves). The northern show caves are just about completed and work has now begun on the southern side. They should still be at it in a year's time by most reckoning....

Are you still reading? Good - read on:

Wombeyan Transmission Line

The "SUSS Bull" last month carried a detailed article re the submission made by ASF Conservation Commission and the outcome.

In short: Elcom called for objections to the proposed transmission line which, they maintained, would pass outside the Wombeyan karst area. Pat Larkin (ASF), with the help of Andy Spate and Armstrong Osborne, prepared a submission, objecting to: the silt impact construction would cause in the karst catchment; the visual impact of the towers; and that Elcom appear to have 'shifted' the limestone boundary (compared to that drawn in "Limestone Deposits of NSW") to conveniently miss their proposed line.

In the event of Elcom not accepting the objections, Pat called for a full public inquiry into the effects siltation would have on the cave biota.

Elcom's answer was predictable: they maintain sufficient scientific study has already been undertaken (it hasn't!) and the line will go ahead as proposed!

You win some - you lose some.

6/88.

HCG MEMBERSHIP LIST, 1988

BOGNAR, Frank/Felic.	26 Adamson St, Dundas Valley, 2117	(H) 638-3749
BOULTON, Brian	36/534 Hume Highway, Liverpool, 2170	(H) 602-2272
BROWN, Cathy	64 River Road, Earlwood, 2137	(H) 789-1078
		(W) 240-4128
CATLIN, Ron	1/41 Morts Road, Mortdale,	(H) 570-1079
CHUNG, Craig	67 Vista St, Sans Souci, 2219	(H) 529-3098
CRABB, Evalt/Joan	121 Hoxton Park Rd, Liverpool, 2170	(H) 607-2142
CRASS, Jeff	9/14 Clifford St, Mosman, 2088	(H) 969-1173
DOHNT, Peter/Gwen	PO Box 1014, Campbelltown, 2560	(H) (046) 26-4338
		(W) (046) 28-2819
DUNNE, Chris	13 Bainbridge Ave, Ingleburn, 2565	(H) 605-7003
FLEMING, Phil	(W) GPO Box 3898, Sydney, 2001	(W) 261-5588
		(H) 692-9844
GARDINER, Tony	6 Cliff Terrace, Glebe, 2037	(W) 923-6195
HODGE, Philip	c/- Police Station, Forbes	(P) 771-5992
HOPKINS, Gerry &	Wedderburn Rd, Wedderburn, 2560	(H) (046) 34-1316
HUMPHRIES, Mimi	68 Laycock Avenue, Penshurst, 2222	(H) 579-1321
KNIGHTS, David	8/12 Mdm. Regiment TST Milpo Holsworthy	
LAURENET, Mark	2 Soldiers Road, Como, 2226	(H) 528-6324
		(W) 525-6295
LUTHERBORROW, Ian	68 Laycock Avenue, Penshurst, 2222	(H) 579-1321
		(W) 666-8000
McLAREN, Ann	13 Bainbridge Ave, Ingleburn, 2565	(H) 605-7003
		(W) 603-2552
MATHESON, Lindsay	48 Malvern St, Panania, 2213	(H) 77-7562
		(W) 633-1999
O'DRISCOLL, Michael	12 Cobar Place, Cartwright, 2168	(H) 607-9097
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		(W) 666-9841
STOFFELS, Dirk	14 Parthenia St, Caringbah, 2229	(H) 525-9184
		(W) 337-0420
TUNNOCK, Greg &	20 Kareela Cres, Greenacre, 2190	(H) 708-5262
" Lyn	as above (W-L) 236-8282	(W-G) 406-6177
WADDINGTON, Bruce	46 Nelson Avenue, Belmore, 2192	(H) 750-2378
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