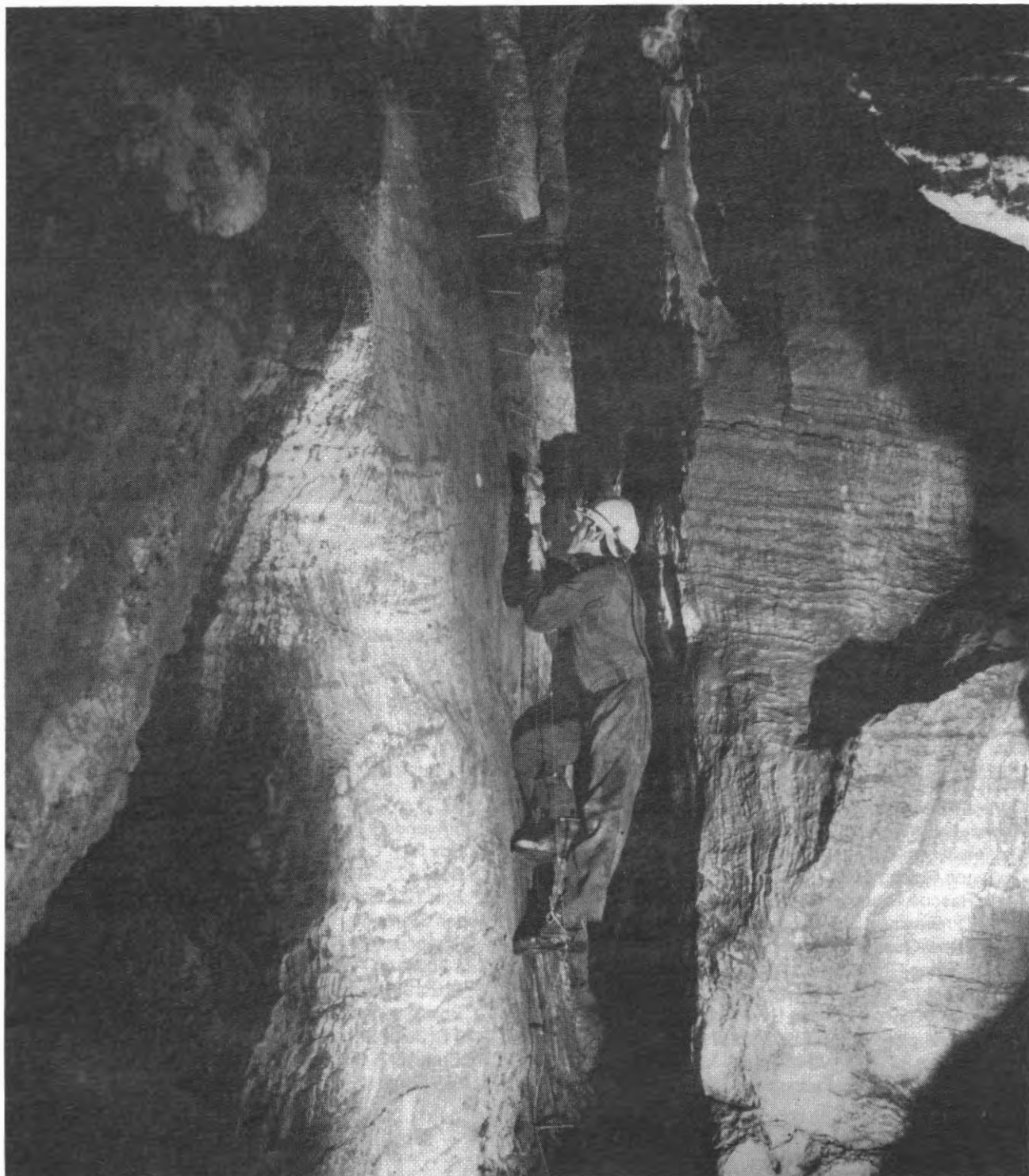


AUSTRALIAN CAVER

THE AUSTRALIAN
SPELEOLOGICAL QUARTERLY

No.117

1988



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*All articles, reports, tests, photos and
reviews are welcomed for publication.*

These may be sent to:—

EDITOR:

*Kerrie Bennett
90 Gahans Ave
Woonona 2517
Ph. (042) 846829*

AUSTRALIAN SPELEOLOGICAL FEDERATION INC.

*P.O. Box 388
Broadway, N.S.W. 2007*

NEWSLETTER MANAGER:

*Ian Mann
28 Stephen St.
Lawson 2783
Ph. (047) 591890*

DEADLINE FOR COPY

*All articles should be submitted to the
editor by the end of:—*

*FEBRUARY
MAY
AUGUST
NOVEMBER*

*If you find writing a chore, why not phone
the editor directly???*

COVER PHOTOGRAPH:

*Climb into Y-1 Entrance to
Eagles Nest Cave, Yarrangobilly
By Peter Ackroyd*

*The opinions expressed in this journal are
not necessarily those of the A.S.F. Inc. or
the Editor.*

EDITORIAL

Well the Australian Caver is on the streets again. We have finally put them together!! This should get us up-to-date and keep it that way.

There is a more serious aspect of caving in Australia that we should be supporting.

Over the past year or so the events at Mount Etna have resulted in a welding of the caving communities' ideals throughout Australia. Cavers are usually a reticent group especially in relation to political matters. They would rather enjoy the subterranean aspects of mother nature than delve into the depths of state and federal political intrigue. However the actions of local caving groups in the Rockhampton area compounded by the assistance of cavers around the country has demonstrated the unity of purpose and the manner in which cavers will stand-up for what they believe is right.

However, the battle for Mount Etna is far from won.

The Central Queensland Speleological Society needs your support. Make the effort either individually or as a society to contact them and find out how you can be of assistance to them. The protection of our national heritage required a combined effort from all the cavers of this country.

If you are wanting to know the latest information on Mt. Etna you can ring the Mt. Etna Hotline on 5520945. Write or ring now so that C.Q.S.S. know they have support from Australian Cavers!!

For those who have an interest in speleology and Hungary the 10th International Congress of Speleology is now being organized. It is to be held from August 14-20th, 1989 in Budapest, Hungary. For further information write to:

Organizing Committee
c/- Magyar Karsztés Barlangkutatás Társulat,
Ankor, Kőz, 1
H-1061 Budapest
Hungary.

I hope you enjoy reading your issues and don't forget to book for Tropicon '88 soon.

Yours in Caving
KERRIE BENNETT



EVERYTHING YOU WANTED TO KNOW ABOUT BLASTING, BUT WERE AFRAID YOUR CONSERVATION OFFICER MAY OVERHEAR

by Peter Ackroyd

Firstly, let's cut out the emotive argument and get down to facts. Once the practice of digging in caves is accepted, then arguing about whether blasting should be permitted or not is like arguing with the cop over the amount of bribe he'll take. The principle is already established: all we are now discussing is the effort expended.

Blasting in caves is entirely safe provided it is carried out by a properly trained and licensed shot firer. This is a legal requirement and need be discussed no further. Blasting may well be safer than more primitive means. On one particular dig, the only way I avoided a serious skull fracture after an enthusiastic pick wielder missed his aim was by the intercession of my (now replaced) Joe Brown helmet.

Modern explosives (particularly emulsions and watergels) are very stable, 'user friendly' materials. Gelignite still provides the shot firer with a nice headache (nitroglycol, a stable derivative of nitroglycerine, is a vasodilator which causes headaches) but even this can be avoided by taking an appropriate prophylactic, eg two Disprin.

So now that we have established that using explosives in caves is simply using a "bigger hammer" and that it is as safe or safer than other means, we have only one final argument to dispose of - potential for damage to decoration.

The best measure of the potential damage a blast can cause to adjacent "structures" is the peak particle velocity (ppv) which the blast generates (Goldberg, Meldrum & Drew, 1985). It is well established that the minimum (ppv) detectable by humans is about 1.5mm/sec (ibid). The several blasts that I have conducted have used quite heavy charges (by caving standards) of 1.0 to 1.5kg and yet of all witnesses who were present in the cave or directly above the blast on the surfaces, only about half actually felt anything at all, indicating ppvs of around 1.5mm/sec. Distances between blast centre and witnesses were less than 40m and the witnesses knew the exact instant of initiation, hence their senses were straining to feel the slightest vibration. (Note: the low ppv registered is mainly due to the fact that the charges were not in shot holes, but were plastered onto the rock thus giving poor "coupling" to the rock).

Is a peak particle velocity of 1.5mm/sec sufficient to damage decoration in adjacent caves? The international Organisation for Standardisation (ISO) has issued a draft standard, DP 4866-1983, for the evaluation of vibration in buildings. The lowest ppv it cites for any damage at all (cracking of plaster in buildings - an architectural blemish on a non-structural element) is 3mm/sec. It may be argued that if plaster can be cracked at a ppv of 3mm/sec, a straw may be broken off at the same ppv. However, the likelihood of such damage at a ppv of only 1.5mm/sec seems very remote. One final point while we are on this subject. The codes have a built-in margin to allow for 'magnification' of the ground ppv by the inherent inflexibility of a structure which is attached to the earth by its base only. Clearly a cave wholly buried in the earth can suffer no such magnificent effect.

To get down to the nitty gritty of blasting, I could do no better than refer the reader to Judson 1985. The British are masters at this activity since they have had many years to develop techniques that at present we can only dream about. It is only recently that some population centres within Australia have begun to get that 'caved out' feeling which necessitates a more sustained and organised effort before the intrepid explorer can find his/her very own cave. In Britain, where this happened decades ago, modern digging and blasting techniques mean that equipment haulage, expertise and general labour are not hard to organise. Thus, where the Brits have invented manually operated rock drills, hydraulic jacks and special shot firing equipment, we can only rarely utilise such efficient means of placing and initiating explosives - usually at the surface or in very shallow or short caves.

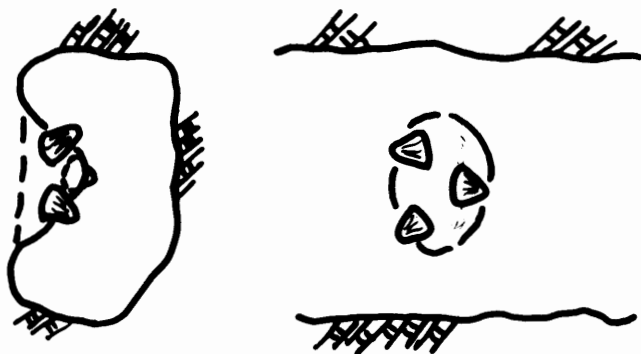
All is not lost, however, for, while charges placed in shot holes are by far the most effective means of blasting, explosive material plastered directly to the rock does work and can have astounding results if a bit of science is used. The following rules, while not essential, will greatly enhance the results of each blast.

1. Pack the explosive with an eye to utilising lines of weakness.
Use a joint partially etched by water or, if blasting an outstand, place the charge

at the junction of outstand and main rock.

Take time to look at what is to be achieved and place charges where they will complement each other, eg removal of base rock to widen

passage that is too narrow (this is most difficult of all tasks). Place charges so that a shearing action results (Fig. 1).



passage cross section

side elevation

Fig 1

Bulge of rock impeding progress. Place charges as shown. One charge beyond constriction pointing slightly back towards other two charges which are pointing slightly forward.

2. Always 'aim' detonator towards direction of main thrust desired. This can make quite a lot of difference. The direction of initiation is almost as important as the individual placement of charges.
3. Charges should be shaped. A simple cone is the most useful and can be easily pre-shaped using a funnel as a mould. Use plastic film or aluminium foil as a release agent between mould and explosive. Either material will be entirely consumed during the blast.
4. Wherever possible, pack smooth, rock-free mud over primed (explosive with detonator) charges. The thicker the better, but usually only about 50mm mud can be packed over charges on walls before the weight of the mud pulls the whole mess off.

General Notes:

1. Licensing

All States in Australia require shot firers to be licensed and to use only approved equipment. (However, provision is made in each State's statutes for a farmer to purchase explosives to be used on his own land for the purposes of agriculture). In Victoria, and presumably in other States, courses are run for shot firers to prepare them for the exam, usually oral, set by the relevant licensing authority.

2. Plain detonators and safety fuse (which burns at a set rate of 10mm/sec) are acceptable for surface work only. Electric firing is a must once underground. Minimum equipment is

shot firing cable (100m), circuit tester approved shot firer (eg Nissan 30 shot). Electric firing gives total control over the instant of initiation (nothing worse than taking a bad fall in a cave with the safety fuse still burning behind you) and it allows blasts to be carried out on underwater sites or in very wet conditions.

3. The shot firer is naturally the last one out of the cave prior to blasting and the first one back in after fumes have cleared (usually 24 hours). If the cave is not going to be checked for unexploded material or unsafe conditions during the same weekend, then a notice, to the effect that the cave has had a blast and has not yet been cleared for safe entry, should be left in a prominent position within the cave.
4. The choice of materials is largely a matter of preference. My personal favourites are cones consisting of 250g of emulsified explosive (ICI Powergel) since this does not cause headaches, has excellent moulding and adhesion qualities and has low fume so the cave can be safely re-entered after only 18 hours. The equivalent material in NSW is Dupont's Tovex. Ordinary instantaneous electric dets are the best initiators, used either one per cone or by using a single det to initiate detonating cord which links each cone. The circuit is wired in series and the resistance measured from the firing point to ensure all dets are included in the circuit.

5. Permission from landowner.

This is obviously essential both legally and morally. It is worth informing the owner of the quantities used and expected effects. Most landowners have more than a nodding acquaintance with explosives and do not have a city person's attitude equating the use of such materials with wall-eyed terrorists.

Conclusion:

I have deliberately assumed the reader has basic shot firing knowledge and qualifications. The article is not intended to be a cookbook for illegal blasting. As new caves become more and more difficult to dig up, I'm sure more Australian cavers will turn to the "big hammer" so they can do their bit in revealing more of the caves of this country. And if your conservation officer looks darkly in your direction? Just keep in mind he may have used a smaller hammer to find his bit of cave 15 years ago, but he still had to use something.

References:

1. Goldberg J.L., Meldrum B.H., Drew P. 1985. The response of High-Rise and Domestic Buildings to Ground Vibration from Blasting and its Relevance to the SAA Explosives Code AS 187. Civil Engineering Transactions, 1985: 251-262.
2. Judson, David (Ed). 1985 Caving Equipment and Practice David & Charles Ltd, Devon, UK.

BOOK REVIEWS

CURRENT TITLES IN SPELEOLOGY 1986

British Cave Research Association

Back in 1969, Ray Mansfield started systematically indexing the speleological literature of the world. Tony Oldham backed this by producing Current Titles . .and marketing it around the world. For at least some of us, its arrival in the mail has been one of those annual events that help to lift our spirits and revive our curiosity.

Rays' labour of love continues - for 1986 - the nineteenth issue - he has indexed 4,679 items of caving literature - a feat of endurance, comparable with our own Karst Index. But now it is published B.C.R.A. and their greater resources have enabled an improved quality of production, although it remains exactly the same otherwise.

Even though a lot of Australian caving organizations have obviously not sent their journal, or newsletter on to Ray, I am prepared to wager that every Australian caver would find Australian articles listed, which they have never seen or even heard about. And ofcourse, it includes literature on such places as Albania, Ethiopia, Belize, Iraq, Palau, Easter Island, Zaire, let alone the well-known caving areas on the globe.

So - make sure your society sends on your publication to Ray Mansfield, Downhead Cottage, Downhead Shepton Mallet, U.K. BA44LG. You will probably be able to arrange an exchange, which would be a really great deal. If you want to know what happened in the world of caving during 1987, order

your copy of the 1988 volume from B.C.R.A., 20 Woodland Ave., Westonzoiland, Bridgewater, Somerset U.K. TA7 0LQ. It will cost you £11.sterling (including postage). Better still, subscribe to B.C.R.A. which will include other beaut journals as well as a discount on C.T.S. Finally, many of the back issues are also available from B.C.R.A.

Elery Hamilton-Smith

THOMAS, C., 1987 Grottes de Nouvelle Calédonie, Noumea, Sophocle, ISBN 2 9501385 1 9.

Several Australian expeditions have visited New Caledonia and the last reported 'The future caving potential of the island in original exploration terms could only be described as modest'. Doubtless that viewpoint, coupled with the excitement of Papua New Guinea, has discouraged any further ventures. Thomas now provides an account which suggests that our judgement has been mistaken and that at least cave divers should pay much more attention to New Caledonia.

The book documents, (with the assistance of some spectacular colour photographs), exploration undertaken by the author and four companions during 1986 and 1987. It deals with over 100 caves and other major karst features and still omits some areas completely, as well as noting that various areas described have many unexplored leads available.

Excellent maps are presented of the well known Grotte de Koumac and Grotte d'Adio of some 3.4.km and 6km. respectively. The latter is shown to be more complex than realised by earlier explorers, with connections to a number of immense dolines and various stream sinks feeding it.

As was already known, archaeological sites are not uncommon, with both skeletons and paintings of various kinds to be seen.

However, the notable discoveries are on the outer islands, where many demand diving and may descend to at least 100m. below sea level. Many of these are beautifully and richly decorated, also indicating a eustatic change of at least 100m. Some are accessed through huge cenotes with diameters of up to 100m. and at least one has an underwater volume which exceeds that of the infamous Shaft in the Mt. Gambier region.

My copy was made available by Max Sheklton, of Center Voyages, BP 50, Noumea, New Caledonia. Max will be glad to assist anyone contemplating a visit. He tells that although the book is almost out of print, a free 'Caving Guide' based upon it is being published and will be available from the New Caledonia Government Tourist Office in Sydney.

Elery Hamilton-Smith

GLENROCK CAVES

- A Speleological Field Guide to the Limestone Caves on Glenrock Station.

Edited by R. Pincock.

Compiled, Published and Distributed by Hills Speleology Club Ltd. - 1987.

A4 format 43p text & 100p cave maps. \$18 incl. postage.

A book review by **Martin Scott (SUSS)**.

the value of publications on karst areas, is that they bring information gained from a number of speleos into a volume that is accessible to anyone that wants to visit the area. This is particularly important for cavers because they are usually keen researchers or don't have easy access to an often incomplete club library. While most caving areas in NSW have been visited for quite a substantial period of time and by a number of different clubs, Glenrock is a very new area which has been explored and documented almost exclusively by Hills since 1983. It is therefore quite a feat for such a comprehensive publication to appear in such a short period of time and a tribute to the organisational abilities of Hills.

There are over 100 caves described at Glenrock, that are typically short tight vertical shafts with very little horizontal development. None of the caves are extensive but the redeeming feature of Glenrock is that this type of karst is probably unique at least in NSW. Each of the caves is described with map reference, length, depth and the gear required to descend them. The location of the caves is shown on a large scale surface map, tied in from a theodolite traverse of the more cavernous outcrops, with the approximate location of the other caves shown on geological maps. Maps of the caves are generally at a scale of 1:100 (any smaller and you probably wouldn't be able to decipher most of the caves) and include plans and vertical sections for most of the caves. Also included in the guide is some general information about the area, a description of the geology focusing on the limestone outcrops, findings from preliminary palaeontological collections and a concise listing of the caves.

There are a few disappointing aspects of the otherwise exhaustive publication. The survey grades of the maps are described in the text as being of ASF standard, but all the cave maps show only CRG grades so leaving the reader unsure what to believe. No speleological references are included in the guide, which although sparse they would give the more inquisitive speleo a better insight into the memorable-epic cartoons included and the history of Glenrock's exploration. There are an excessive number of very small caves given a name by Hills, but this probably reflects the difficulty of finding and so naming new caves in NSW.

Unfortunately for publications on rarely visited karst areas, there is only going to be a limited demand. Hills have so compiled this book from bound high quality photocopies that are very readable but the few photographs included lack definition and are probably worth leaving out. The price for the publication is pretty expensive for speleological literature, but well within the budget of your caving clubs' library. If after spending a weekend at Glenrock in the Upper Hunter Valley (or strictly speaking the completely separate Barnard River Valley) you become on the off-chance infected by the area and the high chance of finding new caves in overtropped NSW, or simply fascinated by the geomorphology of the karst, then this guide will be essential reading.

A BRIEF NOTE ON KHAZAD DÛM (JF-4)

by PETER ACKROYD

Members of the Victorian Speleological Association visited Khazad Dûm on 17th and 18th April 1987. In the usual relaxed VSA style the cave was bottomed to the sump and fully derigged in a total of 17 hours.

Points of interest were the discovery of two 30mm long un-pigmented shrimp about 3m upstream from sump 1, and the appearance of two well-placed 8mm 'terrier' anchors on pitches 2 and 6 (Bunton & Eberhard, 1984).

Khazad Dûm is truly a classic in Australian caving and is highly recommended as an exciting trip. With sufficient numbers in the party (say six) a through trip can be effected via Dwarrowdelf.

A revised rigging list to bring intending visitors up to date with the latest developments in this top class cave follows.

Pitch details

Using same numbering as found in 'Vertical Caves of Tasmania':

1. 5m Scaling pole pitch. A short (6m) ladder is best for this. The ladder may be rigged using the original wooden scaling pole, but it is probably just as easy to have someone go in via the Serpentine entrance to rig it from the eyebolt.
2. 4m This short pitch can be free climbed but for a bottoming trip it is recommended that it be rigged to help tired cavers on the return journey.
A new 'terrier' has been placed on the right hand wall. A tape back-up to a bollard on the left gives a good 'Y' free hang. Bolt and hanger are not in place. Use a 6m rope.
3. Handline. A short pair of climbs. No handline required.
4. 28m. The two eyebolts in place give a good hang and should be used.
5. 9m. This pitch really calls for a bolt on the left hand wall. However, the existing eyebolt on the right, backed up by a tape around a nubbin above and behind it, gives a reasonable hang. A single protector is needed over the lip.
6. 21m. The eyebolt here is in a hopeless position and is useful only for a traverse line to allow access to a good hang 5m out over the pitch. A new 'terrier' (bolt and hanger not in place) on the right hand wall with a back-up on a short stalactite on the left hand wall gives a perfect 'Y' free hang.
7. 6m. Several nubbins of rock in the right hand wall allow a good backed-up free hang. A short traverse line out to the rigging point may be desirable.
8. 9m. Bridge up directly above the stream to a ledge on the right. A trace around an enormous bollard projecting over the pitch gives a good free hang. Back up to the closer of the eyebolts. Use a 12m rope since this rigging gives a 10-11m pitch.
9. 5m. On a small ledge on the left hand side is an eyebolt. The rope rigged from this with a short trace gives a free hang. A back-up is available on a short nubbin behind the eyebolt. The take-off for the pitch rigged in this way is energetic but the rope hangs free and it is not too difficult in the circumstances. A better rig is a good free hang from projections above the ledge on the right hand wall. This creates a 7m pitch however, and if you believed 'Vertical Caves of Tasmania', the rope you have with you probably will not reach.
10. 8m. Use a 12m rope. Tie one end to the eyebolt in the left hand wall just behind the waterfall. Traverse out for 4m to a 'sentry box' ledge. Rig from solid projections at head level and gain a free hang out of the waterfall.
11. 8m. 'Vertical Caves of Tasmania' calls this an 8m pitch but we found that if a 9m rope is rigged from the obvious flake on the right hand wall, about 1m above the floor, a 6m pitch with a reasonable hang clear of the waterfall is achieved over a gently rounded slab.
12. 9m. The eyebolt on the right hand side gives a poor hang. It is better to use the eyebolt as a back-up to a No.4 friend in a pocket right on the lip of the pitch on the left hand side.

CAVE CONVICT

13. 42m. The eyebolt for this pitch gives nothing but trouble positioned as it is to take the rope up and over sharp flakes, then down the pitch via a narrow ledge - two bad rub points. One of these can be eliminated by rigging via a tape from the very flakes which cause the first bad rub. A re-direct and a rope pack at the lip eliminates the other. Keep an eye out for the 8mm 'terrier' a third of the way down the pitch (bolt and hanger not in place) to which the rope can be re-belayed for the final exhilarating free hanging descent adjacent to the waterfall.

REFERENCE:

Bunton, Stephen & Eberhard, Rolan. 1984. Vertical Caves of Tasmania. Adventure Presentation, Sydney:27.

"Proceedings of 13th ASF Conference (Cave Convict) now available. Send cheque or money order for \$15 (includes postage) to:

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(* Overseas buyers should add \$2 Australian).

Peter Ackroyd

SPELEO SYNOPSIS

March-July 1987

AUSTRALIA

Speleo Spiel 223 contains a very interesting article by Pat Wessing describing caving with TOC in the very beginning, circa 1946.

SUSS Bull 27 (1) has a brief article covering the major discoveries of the SUSS Mt Anne Expedition in January 1987. About 100 caves checked on the ridge, 10 caves deeper than 50m discovered, over one vertical kilometre of new cave surveyed. Deepest cave found was Deep Thought (MA-10), 185m deep.

EUROPE

Cave Science 13 (2) Karst geomorphology and subterranean drainage in South Dushan, (Guizhou Province, China); BCRA Cave Science symposium abstracts; the caves and 'blue holes' of Cat Island (Bahamas); preliminary studies of speleogenesis on Cat Island; preliminary biological investigations in the caves of Cat Island.

Descent 75 More extensions in Daren Cilau (South Wales) called 'Saturday night at the movies'. It is 500m of passage containing 5 sumps just past 'Borrowed Boots Streamway'. The connection between Daren Cilau and Agen Allwedd draws closer with sizable extensions in the latter off Gothic Passage - a fossil section of cave above southern stream passage. A nifty programme for PCs using the analogue port to check the health of your caving battery. Discoveries in Caving Ghyll -

Peter Ackroyd

the Mousehole Shaft. A ballsed-up expedition to Madagascar - the equipment didn't arrive because someone had typed '100 carbines' instead of 100 carabiners - the whole lot was confiscated at port. Rigging for SRT - a sneak preview of Dave Elliot's book 'SRT'. Electronics for caving - bulbs - unfortunately restricted to British equipment only.

Caves and Caving 35 Full description and circuit diagram for the 'Ogofone', a magnetic induction type cave communication and location device. The discovery of Christmas Swallet, a 70m deep cave in Derbyshire. Caving on Mallorca, a Spanish island Connections by British teams in Matienzo (Spain) create a 32km system. A British group of cave divers visited France and managed to cram a few weeks of sump diving. Stratigraphy of British caving areas Part 3 - Derbyshire. Mike Boon concludes his two part series on exploring methods when in big river caves. History and exploration of Smeaton Pot, a 265m long hard-won cave in Yorkshire. The lava caves of Lanzarote, an island off Spain.

Descent 76 More discoveries by cave divers in the Green Holes area of Doolin (Ireland). A crew of five cavers camped for 8 days (209 hours) in Daren Cilau (South Wales) to try and push the far reaches of the cave. An objection to the extension of Eldon quarry was successfully sustained by close cooperation between cavers and the Nature

Conservancy Council of Britain. Electronics for Cavers part 111 - chargers.

Cave Science 13 (3) Karst Geomorphology of Western Guizhou. Caves and Limestones of Tonga. Evolution of the Castleton cave systems.

USA

NSS News 45 (2) (Feb 87) The geology and geomorphology of Fulton Cave (Colorado). Detailed article on the discovery and mapping of Roaring Spring Cave (Kentucky), a 3.3km stream cave (Map). Apparently a sealed road now allows cavers to park within 500m of Sotano de las Golondrinas, eliminating the slog up the track with bulging rope sacks.

NSS News 45 (3) (Mar 87) Letters for and against the European method of rigging caves (light ropes hanging free) and the American method (11mm straight over the lip of the pitch). Two articles on the 3rd expedition to Jamaican cockpit karst. Index to NSS News Volume 44. Two Australian references - an advertisement for the Australian Karst Index 1985 and an article on the conservation efforts of Northern Caverneers in Kubla Khan Cave (Tas).

NSS Bulletin 48 (1) (June 1986) Stratigraphic sections exposed in caverns - West Monroe County, Indiana. Structural and stratigraphic influences on the development of solution conduits in the Upper Elk River valley, West Virginia. Bacterial

deposits of iron and manganese oxides in North American caves. Abstracts from the NSS convention, Tularosa, New Mexico, June 1986.

NSS News 45 (4) (April 1987) Description of exploration of a large cave in Turkey - 40km stream trace between sink and resurgence. Report of a very smooth rescue in Ellisons Cave (Georgia), in which a person with a compound fracture of the right lower leg was hauled up pitches in excess of 100m using a SKED stretcher. Review of the SKED stretcher - essentially a sheet of polyethylene 900mm x 2400mm x 2.5mm thick, wrapped around the patient, very good for dragging, satisfactory for hauling.

NSS News 45 (5) (May 1987) A Federal Act to protect caves goes to Congress with introductory speeches. Rio Camuy Cave (Puerto Rico), originally purchased by the Gurnees, is opened as a tourist cave by the Puerto Rican Government. Details of a massive search and rescue operation in McClung's Cave (West Virginia) in Sep 86, in which 160 cavers were involved.

Nylon Highway 24 A brief review of the Petzl rack. Design of a rope pad. A prusik practise device using hydraulics. Energy expenditure during a prusik. More on the American versus European rigging system - "Are Rebelays Safe?". A lengthy article on how to build a Mitchell prusik system. Some thoughts on education of aspiring vertical cavers. Advantages of a low tie-in to a sit harness. A review of pre-sewn ropewalker harness accessories. Two 'Vertical Classics' - CN Tower in Toronto, Canada, and half Dome in Yosemite National Park.

* * * * *

DOWN UNDER ALL OVER

HSC:

Over the past two years the club has been very active with trips to, Nangwarry, Wyanbene Lake Burrinjuck, Jenolan, Wee Jasper, Berotha, Billy's Creek, Deva, Mt. Fairy, Yarrangobilly, Campbells Creek, Tuglow, Colong, Glenrock, Pignabarney.

All this between trips to the Snow and summer jaunts canyoning, rock climbing and cycling.

Early in 1986 Roman Lichacz had a 2 week trip to the Nullarbor, covering 20 caves.

In the last 3 years the club has finished a surface survey of known cave entrances at Glenrock. Plus mapped 108 caves, the longest Bats and Bandicoots at 136m with Hensteeth the deepest at 47m.

The Glenrock Book is out now and on sale at \$18 a copy. Hurry this is a limited edition. In August, 4 members assisted with mapping of tourist caves at Jenolan, they are looking forward to the next trip.

Tasmania was visited by 12 club members in November.

Two major trips are planned for '88.

In June/July a trip to Mitchell-Palmer and Chillagoe and one month in New Zealand.

P. OLIVER

TROPICON UPDATE

by Jan Parr

Tropicon is just over six months away, so hopefully all your arrangements have been made. Registration forms have been included with this edition of Australian Caver. Additional copies can be obtained from Doug or Chris (refer to back page for details)

Details of the photo competition and judging criteria were published in Australian Caver 115 and are summarized below.

CATEGORIES:

A. Colour Slides

Divisions

1. Abstract - use your imagination
2. Flight - bats, swiftlets
3. Karst - entrances, chambers, speleo-therms, etc.
4. Water - caves behind waterfalls, waterfalls in caves, etc.
5. Scientific - geological, biological, paleo-tological, etc.
6. Humorous - must be able to raise a laugh

B. Prints

A series of 5 to 10 prints on any theme

1. Monochrome prints -
minimum size 25cm x 20cm, mounted
2. Colour Prints -
minimum size 18cm x 13cm, mounted

Video

5 minute video on any theme (preferably on VHS)

Conditions of Entry

1. A limit of 2 entries per division in the slide and photo competition.
2. All entries must be taken by the person entering them and have been taken in the period Jan '87 to Dec '88.
3. Only 35mm slides will be accepted (5cm x 5cm mounts).
4. All prints must be mounted.
5. Humorous slides will be voted on at the presentation of the slides, after the Cavemans' Dinner.
6. A prize will be awarded to the winner of each category.
7. Slides must be labelled in the following manner:

Place a black dot of at least 5mm diameter in the bottom left hand corner (when viewed correctly) to indicate correct position for projection.

Refer to diagram above:

	Title	D!
	-----	i!
		v!
		i!
		s!
		i!
	-----	o!
	. Name	n!

8. Deadline for entries will be 2pm Tuesday 27th December - either hand in at registration desk (labelled as per point 6) or post to: Tropicon
c/- P.O. Box 92
Cairns 4870.

Ensure that all entries posted, arrive in Cairns for collection on the morning of the 28th December.

Cave map Competition

No specific categories have been set, so your cave map could be a passageway, total cave, or the relationship of a cave to its surrounding topography and geology.

CALL FOR PAPERS

Conferences can't work without papers. Please support the Conference and present a paper on any aspect of Speleology. It is hoped to produce the proceedings prior to the conference, rather than 12 months later. To help us with this aim, it would be appreciated if manuscripts could be submitted by the end of September. Abstracts will also be accepted. Where possible, it would be appreciated if the paper could be submitted on a 5 1/4 inch mini floppy disc on a MS DOS IBM format of a CPM Z80 format. The wordprocessing language we are using is "Microsoft Wordstar".

Information for Contributors

Manuscripts

Submitted manuscripts should be in a final form ready for publication. Particular care should be taken to check for typing errors. Manuscripts should be typed, double spaced and on only one side of paper. The title should be uppercase and underlined and the authors' names should follow. A brief and explicit summary of the notable aspects of the paper headed, Abstract, should precede the main text.

Throughout the main text, major headings should be in uppercase, centred and not underlined, while subheadings should use lowercase, underlined and aligned with the references and the authors' addresses for correspondence should follow the references.

References

References should be listed alphabetically at the end of the manuscript and cited in the text by the authors' name and the year publication (e.g. "(Gray, 1973)"). Where there is more than one reference for the same author in one year, the letters a,b,c, etc. should be added. If there are more than two authors, they should all be named at the first citation and in the reference list, but the first name followed by 'et al', should be used in subsequent citations. References should be checked carefully for accuracy. Journal titles should be abbreviated following the "World list of Scientific Periodicals". The following examples illustrate the style:

GRAY, M.R., 1973 Caernicolous spiders from the Nullarbor Plain and south-west Australia. *J. Aust. ent. Soc.* 12: 207-221.

VANDEL, A., 1965 Biospeleology. The Biology of the Cavernicolous Animals. Pergamon, London. Pp xxiv, 524.

Illustrations

All illustrations should be drawn to fit a print area of 153 x 260mm. They may be larger, provided that these proportions are maintained and allowance made for clarity after reduction. Figures and plates should each be numbered consecutively and specifically referred to in the text. The numbers should be marked lightly in pencil in the margin or back of each illustration. Captions should be typed on a separate sheet.

Units

The S.I. system (Australian Standard AS 1000) should be used unless citing historical data, in which case the original units should be quoted and appropriately rounded metric equivalents added; e.g. "100 feet (30m).

Looking forward to seeing you all at Tropicon.

Jan Parr

ASF Documentation Commission News

Peter Matthews Phone (03) 876-1487
66 Frogmore Crescent, Park Orchards, Victoria 3114

Karst Index Sales. After several overseas reviews and an NSS News advert, overseas sales have been coming in steadily. Effort is now being directed to expanding local sales. Ordering has been streamlined by now allowing individual buyers to order direct, quoting their club affiliation, instead of having to wait for their club's ordering machinery to get into operation. See advertisement in this issue. As of August, 367 copies have been sold, but we still need to sell many more to keep the Karst Index viable.

KI Data on IBM PC. The Karst Index Database is now being converted to run on a (large!) IBM-compatible microcomputer using dBaseIII+ database software, a common combination. A further project is the distribution of the data for use on State-based micros. For this, a pilot project was to be used to iron out the procedures before general use. There have been no viable offers, so I am now using VSA as the pilot.

Updating. The new Karst Index Editor, Ken Hosking of VSA, has returned the data forms to each State, together with a listing showing all their current data. He will be making arrangements for updating shortly. The next published edition is planned for June 1989, although updated data for specialised purposes will be available well before then. If you have any strong feelings about what form the next published version should take I would be glad to hear from you.

Extra Data Fields. The present database, which was a "first pass", contained of course only a selection of the possible types of data which could be recorded for a cave. This is about to be expanded considerably. So if there are any fields you would particularly like to see included, either of a general nature or for a specific speleological discipline, please contact me as soon as possible with details of how you think they should be presented, but retaining the basic style of the present fields. Similarly for any extensions to existing fields.

International. There is considerable international support for standardised karst data fields. As UIS Informatics Chairman I will be proposing a wide-ranging set of karst data fields and numeric codes for approval by interested countries. Naturally the Australian Karst Index will comply with these standards, and it is also in the interests of any local karst databases to do so, because it will facilitate the transfer, comparison and consolidation of karst data when they require.

THE N.S.W. CAVE RESCUE GROUP

MEMBER OF N.S.W. VOLUNTEER RESCUE ASSOCIATION

Fellow Cavers

Ninety three patrons of caving attended this year's (1987)

Annual Cavers Dinner

hosted by

the N.S.W. Cave Rescue Group

at the Bankstown Sports Bowling Club, Yagoona. We were pleased by the number of cavers who attended this year's dinner. It goes without saying that cavers are truly a sociable bunch of characters.

We of the N.S.W. Cave Rescue Group would like to thank all of you who attended this year's dinner and who made it a truly successful event. A special thanks to all of those who helped in the organisation and catering.

Cavers at this year's dinner were entertained by Dr David Brannigan who presented a slide show on the lighter, humorous side of "Caving Through the Ages". A job well done and enjoyed by all.

To make the occasion a little more formal, the members of Macquarie Uni Cavers in our organisation thought of a different way of fund raising...Bat Bow Ties. Selling for only \$2 the Bat Bow Ties went down well and by the end of the evening it equalled the brilliance of the emergence of bats from Bat Cleft!!

There were also raffles and a door prize which added to the amusement.

Club and Society pennants proudly decorated the walls of the dining hall to add colour to the occasion. It really was a great get-together and the perfect occasion to socialise amongst other groups. Time flies when you're having fun and all must come to an end. Last patrons started to leave close on midnight.

I trust a good time was had by all and hope that next year's organisers have just as successful an event.

It's not until a function has passed and all receipts are called for that a final figure can be produced.

Ticket prices, printing, mailing etc. and even last minute cancellations need to be taken into account when costing.

In our case we were fortunate enough to have members who are committed enough to generously absorb the costs of allocated tasks which is a great help financially.

Due to this generosity we were able to lower our overheads when finally balancing our books.

For the interest of cavers and to help those who are organising next year's dinner, I've listed a breakdown of our costs and profits including costs that were absorbed.

Once again I would like to thank all those who attended and those who donated time and materials to make this dinner such a success.

Yours in safe caving

Joe Sydney

Joe Sydney

Secretary

N.S.W. Cave Rescue Group

	+	-
Raffles	\$ 100	
Bat Bow Ties	\$ 100	
Guest Speaker		\$ 36
Club Stewards		\$ 100
Catering 100 x \$10.50		\$1050
Dinner Charge 93 x \$18	\$1674	
Print 800 Aust. Caver		
* Inserts	\$ 40	\$ 40
* Print Notices to Clubs	\$ 25	25
* Mailing Club Notices	\$ 15	\$ 15
* Door Prize...Wine...	\$ 40	\$ 40
* Club Cleaning Fee	\$ 300	\$ 300
* Ticket Printing	\$ 20	\$ 20
* Shop Notices...printed	\$ 5	\$ 5
Total	\$2319	\$1631
Note: Those services marked with a * were donated. Catering was provided at cost by our CRG members who also provided waiters, cleaners, washer-ups etc.		
Total Profit	\$ 688	-



1988 BICENTENNIAL YEAR CHILLAGOE Nth Qld

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For Further Information Contact:

Doug Irvin (070)54-6612

Chris Parr (070)51-0452

or write to:

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CAIRNS 4870.**