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# BULLETIN of the Sydney University Speleological Society

Lumen in Tenebris

SUSS

FOUNDED 1948

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Box 35, Holme Building, University of Sydney, N.S.W. 2006.

# Speleo ~~Sleeps~~ 87 KWISINE

The N.S.W. Cave Rescue Group
are proud to host this year's
ANNUAL CAVERS DINNER
to be held on Fri 23rd October '87
(night before SPELEO SPORTS)

CHILDREN WELCOME

LUCKY DOOR PRIZES

VENUE

BANKSTOWN SPORTS BOWLING CLUB
ALLUM ST, YAGOONA
(parking available and close to public transport)

MENU

Entree — Curried Prawns and Rice

Main — Roast Beef and Vegetables
Roast Chicken and Vegetables

Sweets — Pavlova
Wine with Meal
Tea and Coffee

Dinner Starts at 7 pm
Bar Opens at 6.30 pm
Licensed Premises
NO BYOG

Guest Speaker

Club Closes at 12 pm

RAFFLES

Tickets can be purchased from your CRG Club Member OR

Joe Sydney
17 Oxford Street
BURWOOD NSW 2134 Home phone 745 1542

at $18 per adult
$10 per child (under 10)

Monies must be in by 1st October

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Your name.....
Address.....
Phone.....
Club.....
Tickets required

Adult x x $18.00 $
Children x x $10.00 (under 10) $_____

Total $_____

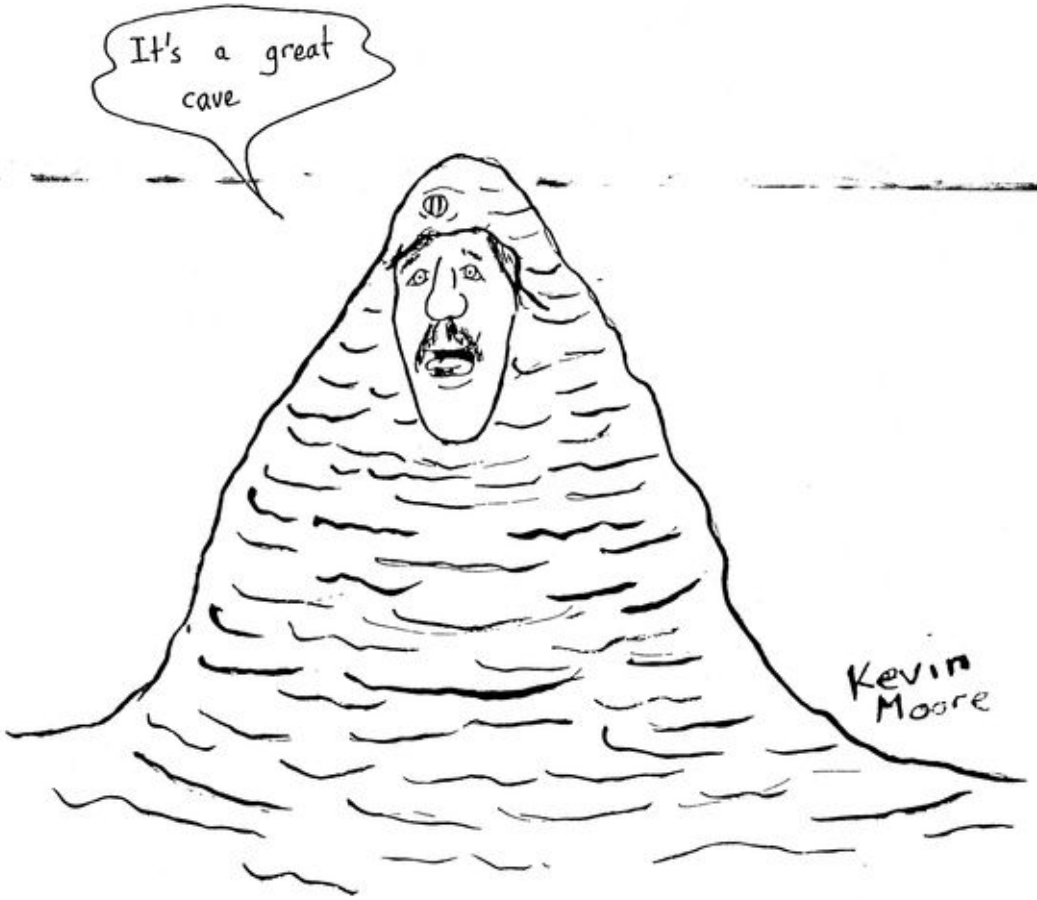
Cheque or money order enclosed for $_____

We need to know your dinner preference, Roast Beef ☐
Roast Chicken ☐

REMEMBER,"ONLY NUMBERS COUNT"

# Contents






A really disgusting mud formation seen in Dwyer's Cave

# Editorial

Over the last year initiatives at Jenolan have encouraged a great deal of participation by speleo groups in regard to scientific projects and general involvement with Jenolan. One project that has emerged as a result of this is the resurveying of the tourist caves. This project has involved the work of speleos from many groups and is likely to continue into next year. The main passage is being surveyed to a high degree of accuracy providing a backbone on the survey from which the less navigable passages will be surveyed with less accurate instruments. Most of the theodolite work on the north side is now complete however there still many small passages yet to explore and document. The results of this survey are likely to reveal Jenolan as the longest cave system in Australia (at least for a while).

Quite possibly as a result of the systematic exploration during the surveying process, new cave will be found and who knows maybe even the undiscovered master cave. This is for me the first real look at the tourist sections at Jenolan and every visit to the caves reveals aspects more splendid each time. Like a true work of art their enchantment increases with familiarity.

The upper reaches of Imperial streamway has spawned a cave diving group under the guidance of Simon Macartney. The divers are systematically surveying beyond sumps and into new territory. The possibility to gain access to new cave this way is strong. Connecting Spider and Imperial is possible but aside from this there are many leads, including two underwater digs one of which will break through in about two more dives. (See trip report)

Jenolan appears be the site of renaisance, productivity and communication and hopefully administrative forces will note what can be achieved if people are given a go. Elsewhere, however the great outdoors is gradually being fenced, licenced and closed.

Many hold the view that the best policy for the caves is to keep everyone out of them. There are of instances in NSW of caves being closed for regeneration in the belief I suppose that if left for a while, stalegtites will regrow like some kind of lawn mix. Entry to some caves will only be granted to those performing some sort of scientific investigation. Caving for pleasure or sport is not seen as a reason to wear out the cave resource and it is argued that we have to preserve what remaining caves we have, for future generations. (An optimistic view about the human race's management of this planet)

If there is someone out there doing something worthwhile, fun and exciting then there is bound to be someone else doing their best to prevent it. (Ask Fred Nile) There will always be good reasons to prevent fun., "It is dangerous, it will potentially cost society, we must protect the resource, lets gate it, lock it up and throw away the key."

We all know about the speleo politician. While there are one or two soles out there actually interested in achieving useful goals rather than playing games, at times I wonder about what our "representatives" are doing to us.

Often some "speleologists" go into a cave, become so amazed at its beauty and grandeur etc etc etc that the protective mothering instinct emerges in full force and the next thing you know they are on some comittee proposing a gate and access conditions that will keep everyone out but them and an elite few. This is wowserism in disguise of management. This is not management but the philosophy of Basil Fawlty. "I could run this park a lot better if it wasn't for all these people."

Management of caves, parks etc should not be based on the premise "How do we control and restrict the user" but rather about <u>providing</u> for these people. Most cavers I know are not politically inspired and leave the politics to those that use caving as their political arena. I can sympathise with this notion but it is naive. Regulation policy is being decided now and in the future we will have to live with it. I encourage those of you like enjoy the freedom of the outdoors, to become involved and aware of the management changes underway in NSW before what you take for granted is taken forever.

# Friendly Joust at Jenolan


In Martin Gardiner's book "The Annotated Alice". The criptic mathematical references of Lewis Carrol were annotated with the text of Alice in Wonderland on the left and notes and explanations of the text on the right. The following trip report has been given this treatment for the benefit of those that were not on the trip and do not know of the famous persons referred to in the story.

In a time long, long ago did a band of courageous knights and fair Maidens set forth from their court of SUSS and the Square Table to a land of peril and adventure.

The SUSS square table was created square so as to increase the likelyhood of arguement and political wrangling importance. It is alo square so as to make it less unssstable.

The leader of this sometimes enlightened court was the great hero Sir Bar who bore his mighty staff, the pink umbrella which struck cold fear into the hearts of the enemy. Many a hideous monster wombat had fallen before it.

Sir Bar is heroic trip leader, Robert Crow alias Crowbar. Crowbar has a pink umbrella and a plastic duck, both of which accompany him into raging water filled canyons and the occasional deep cave in Tasmania. Tasmanians show they are macho by drinking and smoking, whereas Crowbar takes his duck for swims at the bottom of KD. When he first joined the big time and applied to become a member of Cave Rescue they asked him what he had to offer cave rescue. He replied "A Pink Umbrella and a yellow duck." They made him a provisional member. (He should have told them about his four wheel drive.)

His loyal retainers Sir Buckle, Sir Chrispy and Sir Keen were always ready to dive down any muddy hole Sir Bar pointed his pink umbrella at. After many hours along trecherous paths and across swollen rivers the band did arrive at the desolate and deserted Cavers Castle. What terrible fate had become of the people before us ? I swear we shall avenge the owners of this once fair castle" cried Sir Bar, "What council my lords and Ladies ? "I think we should turn the electricity on", spoke I. "Oh yes my lord I would dearly like a hot bathe", spoke the fair lady Dedrie excitedly. "Yes, yes and some chinese food and wine.", said the Lady Currie. "What nonsense!", Lady Cylone did exclaim, "We must send out search parties to combe the land in these parts and torture, maim, kill, chop into lots of little bits and slap the wrists of any that stand in our way or are found to be guilty. But first I must make a meal of alfalfa sprouts."

Sir Buckle, Chrispy and Keen are one of the more gung ho active and very SUSS members. A subset of which is not up to date and financial.

The cavers castle refers of course to the newly establish cavers cottage where cavers are losing their outdoorsy ruggedness and becoming spoiled by luxuries like baths and protection from rain.'

Lady Dedrie has class, she would descend muddy caves, hang off one hundred metre drops and simultaneously paint her experiences. (I always thought photography was hard enough). Lady "Go for it" Cyclone is my favorite SUSS person. She is so named because of her unpredictable and untamed personality. She eats a lot of alfalfa sprouts which is where she gets her energy for killing maiming and torturing.

There were many shouts of confusion from the weary court, (many of whom were not vegetarian) and many of the brave knights did but look horrified when Sir Norris and Sir Gunner and Grott did reach for the holy port

Holy Port...to be annointed on tongue and mouth only. Extremely useful after cave discoveries for baptism purposes.

bottle to clense themselves while Sir Marty announced he was going off to do some digging.

Sir Bar did then arise and speak, "My lords, Ladies and grotty, to settle our confusion we shall hold a joust in this very castle at dawn."

That night many ladies of the courst slept uneasily, but the Knights chose their beds with care and great thought to ensure that at least many of them had a great knights sleep, which might explain why the joust did not commence till well after dawn had come and gone on the next morn.

Then did the joust begin, knights and maidens of all shapes and sizes did attest the contest, climbing through coathangers, traversing through chairs and completing climbs around the inner castle and around the garage moat out back. Many did fail and plunged into the acid filled moat (muddy ground). The winners of the noble contest were the knights Sir Buckle and Keen. Sir Bar was moved to speak again, "Well trusty and worthy Knights what is your will ? Sire we wish only that we might seek the underworld in the Cave of the Mamoth.", cried Sir Keen and Sir Buckle together. " So be it"

And so the court did set forth to Mammoth cave bearing lanterns and thermopile underware and reached Slug lake to discover a dead serpent at the edge of the bottomless depths (which Lady Cyclone and Lady Dedrie did bathe in) before retiring back to the castle to feast and comfort each other. Many slept even better that night in the castle and most agreed that double sleeping bags as provided by Sir Hunt were a very good idea and should be manditory for all trips by SUSS of the square table and much less mucking about in the underworld of the cold and dark fighting monsters who may or may not be strictly vegetarian.

# The End

Joust....otherwise known as spelosports.

This is a nudge nudge wink wink reference .

Speleosporting rarely begins before ten. Taking cavers to a party invites embarrassment, they start squeezing through coat hangers, climbing under desks and walking on beer bottles only using their hands. "Bet you you can't traverse across this mantlepiece, hang by you toes and knock over the pocker with your nose." This is totally marvellous if you are at a boring yuppie house party with one of those awful boring dress up themes and suddenly fifteen goal directed cavers arrive and blow everyone away. "Are these friends of yours ?"

Sir Buckle and Keen won last years Speleo sports and they will probably win it for us next year too (if they pay their subscriptions.) The only group that seems to have a chance of beating SUSS at speleo sports is Hills and I suggest that their best approach is to give Sir Buckle and Keen a strong dose of the holy port on the night before.

This means that they actually overcame their excesses with bean sprouts and went caving in Mamoth. Quite often trips have reported Monster sightings in slug lake. These are usually exaggerated eel sightings. There is no truth in slime trails in the mud stories.
Using thermal underwear in NSW caves is like simulating an antipersperant comercial. Slug lake was no doubt an underwarm Barrier Releef. (Ouch !)

As to less mucking about in the underworld I'm sure that we sll agree...but for some reason we keep going back to investigate the slime tales.
I personally like a good steak.

# MAGICAL MYSTERY TOUR

( Or where do we try next? )

Barry - Glenrock - Karoo - Pigna Barney - Myra - Glen Ward

Martin Scott, Ian Cooper, Nick Hawkes (U.K.) Wed. 13/5/87 to Mon. 18/5/87

The aim of this trip was to go to limestones where no caver had gone before and to examine reported caves at Barry and Pigna Barney. After leaving Sydney far to the south we arrived at Barry to be promptly told that no one is allowed on the property, so plan B swung into action and we spent the night at nearby Glenrock.

Glenrock is a fairly large karst area with about 100 tagged caves that should be experienced, but only once! Most of the caves are vertical pots with limited horizontal development. They make good ladder pitches and there are some sporting chimneys. The 20m chimney in G.R.23 was made even "better" by the presence of high $CO_2$ and torrential rain. In the bottom of G.R.1 are some paintings and drawings that look suspiciously Aboriginal. Other caves examined include G.R.2, G.R.3, G.R.5, and G.R.17, we then decided to move on.

Our next target was Barrington Cave (P.B.1). As we headed towards Scone we found a limestone hill observed on a previous trip, (Scott, 1986). We traced this limestone approximately 900m south towards "Karoo" station but alas no caves. (See figure 1).

Friday morning found us at "Greenwood" station where the overseer gave us directions to Barrington Cave. This involves a one hour walk along a farm track which leads straight to the limestone. A 90m climb up the west side of Limestone Creek leads to Barrington Cave doline, (see figure 2).

Barrington Cave consists of a large walk along streamway which is active only after heavy rain. The streamway descends parallel to the eastward dipping bedding for approximately 200m to the top of a 15m pitch. From the base of this pitch approximately 100m of 3m x 8m near horizontal passage leads to two promising digs. The left hand dig is at the end of 8m of 0.5m x 0.3m near horizontal pressure tube. The right hand dig is a higher level pressure tube of similar dimensions that ascends for about 6m getting tighter, but continuing narrowly.

As we descended we had seen a few bats disappear further ahead into the cave, this gave no inkling of what lay at the base of the pitch. Upon entering the lower passage we were attacked by thousands of bats and were forced to dodge bats for 10 minutes as the cave cleared. It is apparent that this cave is a major bat breeding site that has been protected thusfar by it's isolation and remoteness.

On the way up the hill Nick had noticed a squeeze through a rockpile with a breeze emanating from it. Martin and Nick started digging at this potential cave while I wandered over the rest of the limestone looking for new caves. I found a small grot hole which was subsequently tagged P.B.3. , (see figure 3). Meanwhile Nick had broken through into a large chamber with a strong pulsating draft coming from a small crevice. After about an hours digging involving the removal of some large rocks we broke through into the upper part of Barrington Cave. We were stoked at finding pristine cave but disappointed it was only another entrance into P.B.1. The new entrance was tagged P.B.2.

With daylight fading fast we decided on a quick look around the limestone. We tagged and surveyed P.B.3 and then found P.B.4 which was duly tagged and surveyed, (see figure 3). It was well after dark when we finally trudged back to the car.

The next morning while Martin went to derig Barrington Cave Nick and I took the car down the track towards Glen Ward which was the next target area, the track was impassable and we returned to Pigna Barney. An hour and a half later Martin returned and reported that Limestone Creek, which had been flowing on the previous day was now flowing somewhere under the limestone.

## Magical Mystery Tour (Cont)

Barrington Cave is a significant cave for which no published survey is known to exist. The limestone has potential for several new caves also another pod of unexplored limestone has been reported to occur to the northwest by Tippet, (1974).

The small mining company Pola Fogal Pty. Ltd. is currently active in the area. The area is currently covered by Prospecting Licence 1038 and Mining Lease Application 92, (Newcastle district). The prospecting licence is for "oxide of iron and calcite" to be explored for by geophysical methods and drilling. M.L.A. 92 is for the mining of magnetite by open cut methods. It appears that any plans to quarry limestone as suggested by the inclusion of calcite in P.L. 1038 have been cancelled. This is not suprising considering the limited tonnage of limestone present and the remote location of the area. The company has put the local farmers offside with a dictatorial and arrogant attitude, also the farmers could recieve no compensation if mining does go ahead.

Once Martin had returned with the gear we headed for Gloucester via a pleasant drive over the Barrington Tops. Nick was put on the midnight train to Sydney after a night in the pub. On Sunday Martin and I arrived at "Myra" station to examine limestones reported by Tippet, (1974). Plenty of limestone and hills but no caves, (see figure 4). The rest of the time was spent near "Benny's Tops" station exploring the limestones. We examined all of the limestones shown in figure 4 except for the pod at grid reference 780 840. Again plenty of limestone bluffs and even the Pigna Barney River but no caves. Now we were discouraged and out of food so it was back to Sydney. Further exploration will follow.

Ian Cooper

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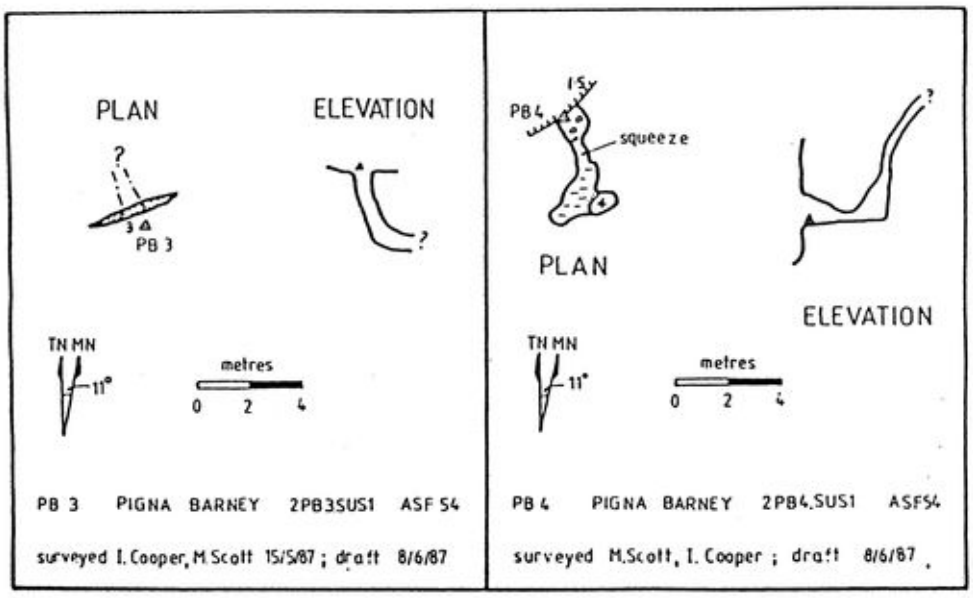


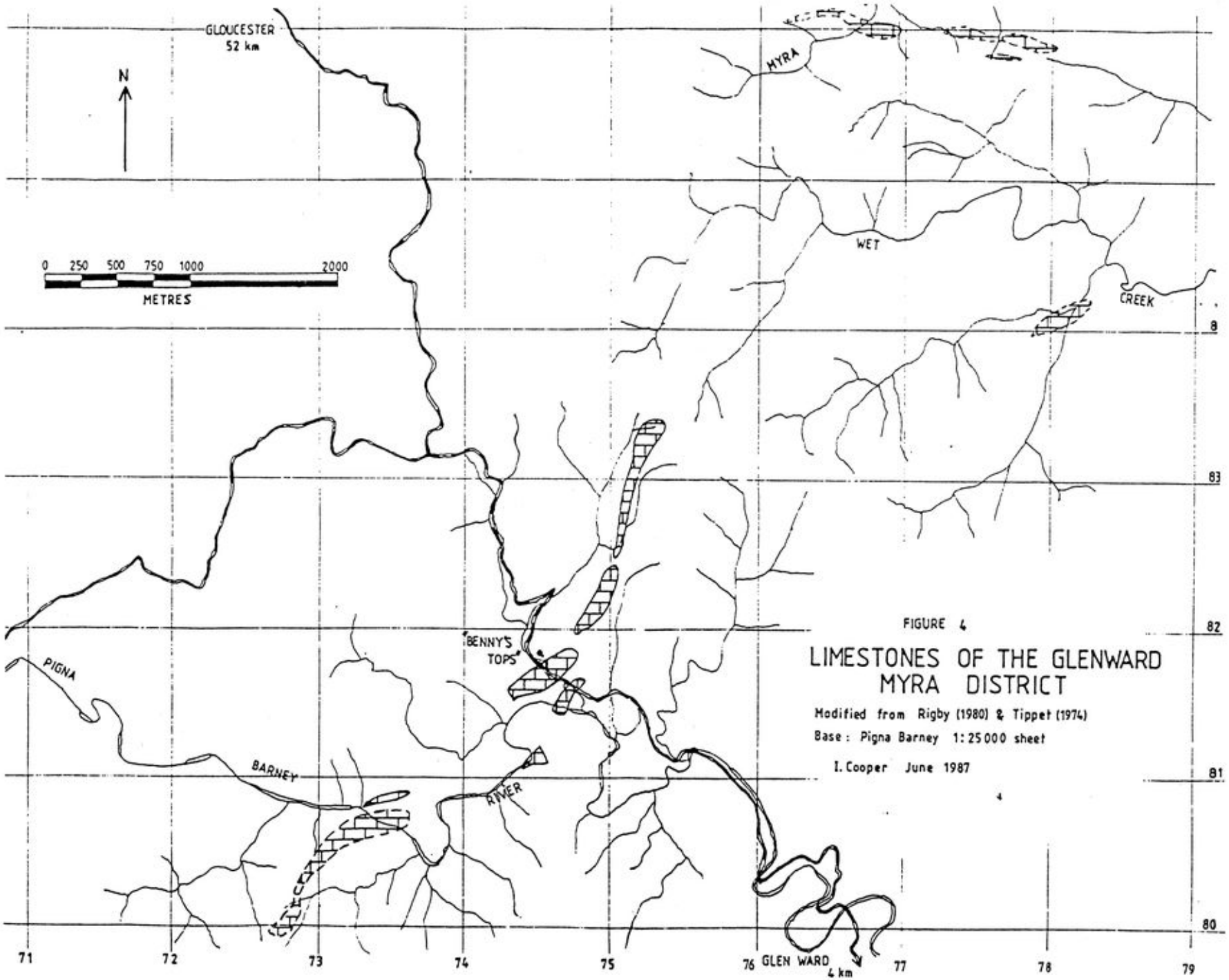



FIGURE 4

LIMESTONES OF THE GLENWARD MYRA DISTRICT

Modified from Rigby (1980) & Tippet (1974)

Base : Pigna Barney 1:25000 sheet

I. Cooper June 1987

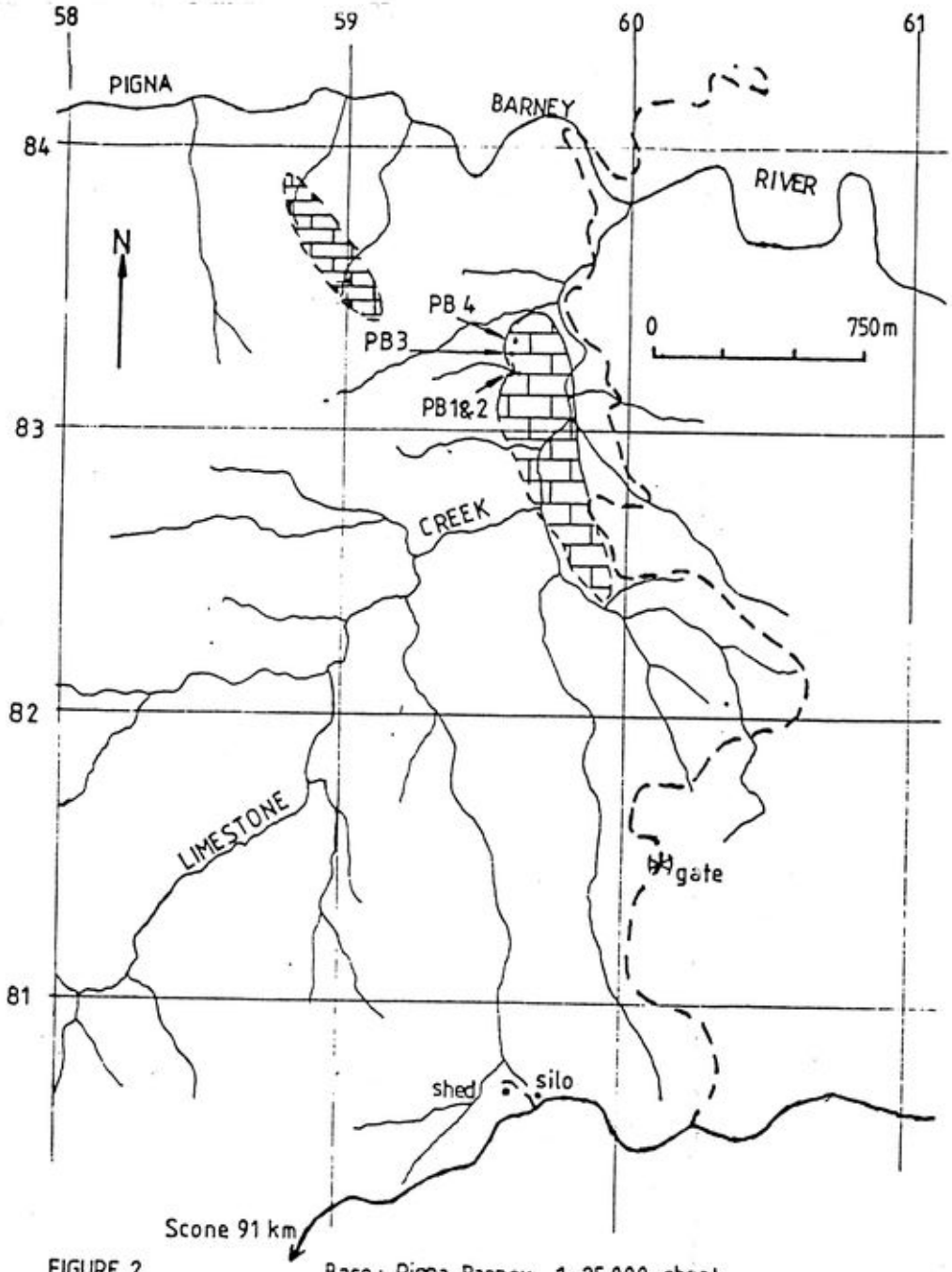



FIGURE 2 Base: Pigna Barney 1:25 000 sheet

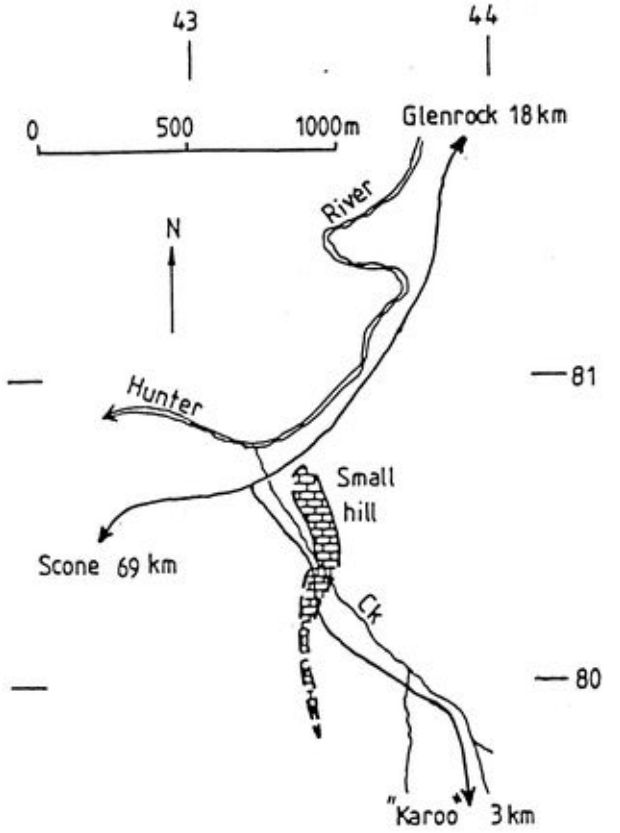
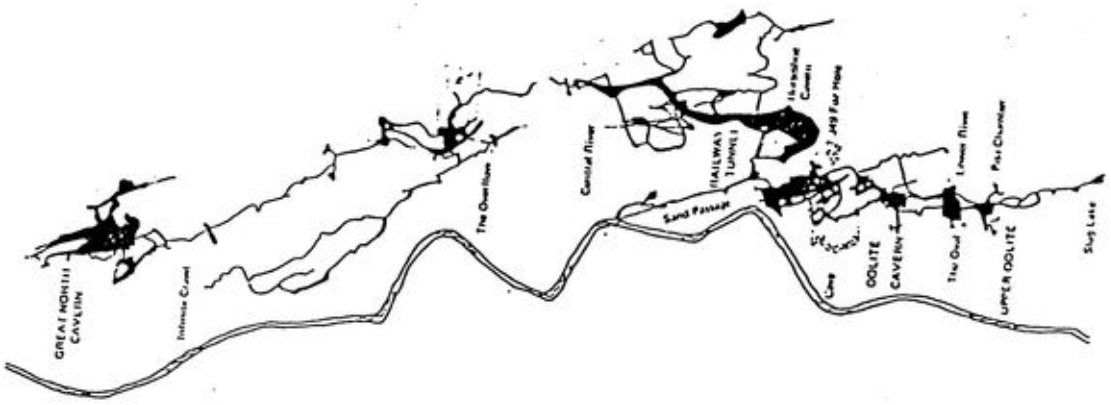



FIGURE 1 Grid from ELLERSTON 1:100 000 sheet 9134




## MAMMOTH CAVE: TIDBITS.

TRIP REPORT Jenolan, 11th-12th July 1987.

Present: Martin Scott, Mike Gibian, Mark Staraj(T.L.), Marita, John Day, John Morris, Angus North, Julius Pucci.

Like all memorable trips, half the fun is getting there. Martin Scott's synonym for a memorable trip is a Ford Cortina.

On this occassion we had to suffer the general contempt of other road users for Martin's pride and joy. First to express his ( or their's ) opinion was a truck. When trying to overtake it in a drag start from a traffic light the Cortina was beaten pointless. Forced to travel behind it, we couldn't get far enough away. The truck was a livestock carrier and the poor creatures were suffering simultaneously from bouts of diarrhea and incontinence. A brown slurry with the appeal of J41 mud poured from the back, created a foul stench, and coated the windscreen with a fine spray.

The second incident occurred on the winding road to Jenolan. Without warning a garbage truck swung around a bend using the whole road. Slamming on the brakes we finished up about a metre from its bumper bar. So, smeared with excreta and mistaken for scrap metal (for further analysis see the next trip report), we arrive at Jenolan.

That evening we went caving. Martin and I explored through the Unsurveyed Connection into Skull & Crossbones, then via an awkward vertical squeeze into a steeply descending narrow rift that joins a larger rift. This led us to Ice Pick Lake. On the way we looked at the 'hole to water' and noted that the bottom dropped off steeply, perhaps a water filled rift. In the meantime Mike Gibian was collecting insect specimens. We found a flatworm in Sand Passage.

The next day I took Derek and John Morris to G.N.C. About a year and a half ago G.N.C. had been my first caving trip, a trip reserved for special friends of Rolf Adams. It was just as much fun as I remembered. Relying on memory of that trip it took us about 7 hours to complete, with Derek showing an uncanny ability to find the way on. On one occasion I very relunctantly climbed up about 3 metres of crumbly mud and rock to find a phreatic tube blocked by mud after 2 metres, up near Can't Get Lost. As before, we admired G.N.C. from a ledge for a while before turning back. Meanwhile the others went to dig in Wiburd's.

On the final day work continued in the dig at Wiburd's, while Derek and I spent a lazy day poking around on Dwyer's and Serpentine Bluffs noting that J125 upper entrance was blowing a gale.

Coming home with John Day was an anticlimax.

Mark Staraj.

TRIP REPORT Jenolan, 12th-14th August 1987
Present: Martin Scott, Mark Staraj(T.L.), Ian Cooper, Dave Lee, John Day, Chris Young.

The doorbell rang and there was Martin to pick me up:
" I've had to leave the motor running. I'm having a bit of trouble with the car. "
With a sigh, I realised I had another memorable trip on my hands.

'Trouble' meant something like having to do a roll start in reverse and an alternator light that had not come on for the last two weeks.

On a dismal wet day we headed off to Jenolan. We quickly realised something was very wrong. An acute power shortage prevented us using the radio, meant the blinkers had to be flicked on and off, and the windscreenwipers barely moved. Finally the car quit us at Lawson. The NRMA arrived and told us that a jump start would give us maybe 10 minutes if we used no accessories and that the autoelectrician at Leura was a must. He was incredulous that Martin had left Sydney knowing his alternator wasn't working. With heads peering out of the windows occasionally to see where the highway was we just made it to Leura. He managed to fix it in a few hours and had a few comments on Martin's car. The Email regulator, he said, was second rate, and he had a stack of faulty ones that had been removed from other cars. As for the alternator, he described it as experimental and the sort you might find in a refrigerator. Noticing modifications to the motor such as a bracket, he described them as amateur and would you look at these soft bolts!... never use anything but high-tensile myself. Oh, says Martin, I put that in.

Left Sydney at 9:30 am, arrive Jenolan at 4:30pm. Went caving that night in Mammoth Cave, where we looked at a number of leads (see below) in and near the Railway Tunnel. Two places were promising: one needed a hammer to open up a squeeze and the other needed digging.

Next day I took John for a tourist trip to Lower River then showed him out. Since the previous night a rabbit had expired while caving and had got as far as the hole in the Rockpile in the Entrance Cavern. Then it was back to force the squeeze, and then all but opened the dig. I returned the next day with Chris to this dig and we broke through (see below) and then went on to explore the large passages below the Railway Tunnel that lead to Central River.

During all this Martin was diligently at work on the Wiburd's dig. 'The Bowling Alley', he reports, is easy digging with 3 or so metres having been gained but it has become tighter and appears to turn a corner. Also of interest is that the stream in Wiburd's is flowing again. Outside, McKeown's creek was flowing and sinking just past the entrance. Further downstream Dillon's creek was flowing strongly with at least the rate of Central River into its sink, and the stream at the Playing Fields was sinking in McKeown's creek just beyond the road crossing.

To complete the experience Martin and the others were treated to seeing a majestic herd of wild goats sweeping across the valley near Serpentine Bluff.

MAP DESCRIPTION

The following descriptions are a key to the accompanying map. All the descriptions refer to areas not shown or inadequately described in the second edition of the yellow Mammoth book.

#1: Martin pushed a short squeeze in a tube to find a small room with sitting space, containing cave coral. Signs of previous entry.

#2: This is the left hand branch of a stream channel. The right hand branch is by far the larger but is choked with material including some head-sized 'pebbles'. The left hand branch contains silt floor over gravel but is blocked by fresh rockpile after about 3 metres. There is a squeeze into the rockpile with signs of attempted entry, but I don't believe it was successful. After removing a large rock and debris from the floor, and some remodelling with a hammer I was able to force my way through 'the Shredder' into a standing sized room formed completely in the rockpile. Through gaps I could see bedrock wall and as much space again. The rock test suggested a hole descending 3-5 metres to mud.

#3: Martin braved a dicey 10 metre climb up the so called 'blind mudslope aven'. The slope is actually flowstone and the top was a well decorated high-roofed chamber with the inscription "J LOTZ 1962 SUSS". The roof appears to ascend as a rift at the back of the chamber and is a possibility.

#4: A 6 metre or so low crawl gives way to a short climb over an obstruction in a sloping rift. On the other side the rift widens and there is a 6 metre climb down. From the bottom a hole leads into a tiny mud chamber.

#5: A steeply inclined bedding plane behind rocks is a 5 metre climb down. At the bottom it widens into a comfortable sized mud room. The wall on the Railway Tunnel side is formed of boulders.

#6: A 6 metre climb down in a rift ends at a blocked tube. With encouragement from Martin's boot a large rock was pushed down the tube. He descended the awkward squeeze into rift. Passing other leads and following footprints he emerged out of the first big hole in the Railway Tunnel.

#7: A small hole at roof level opens into a small room in crumbly fill. The whole room was covered in moonmilk.

#8: With the help of Chris Young, I dug out a phreatic tube to where it joined another passage and opened up. However only 10 metres was gained to where the phreatic passage ended at the flat roof of the Railway Tunnel for a nice view. The remnant of the tube can be seen in the roof of the Railway Tunnel heading almost straight back down it (southwards), where it has been exposed by roof collapse. The section contains some formation: some small straws, a small straw-stalagmite column, a patch of flowstone and a small shawl.

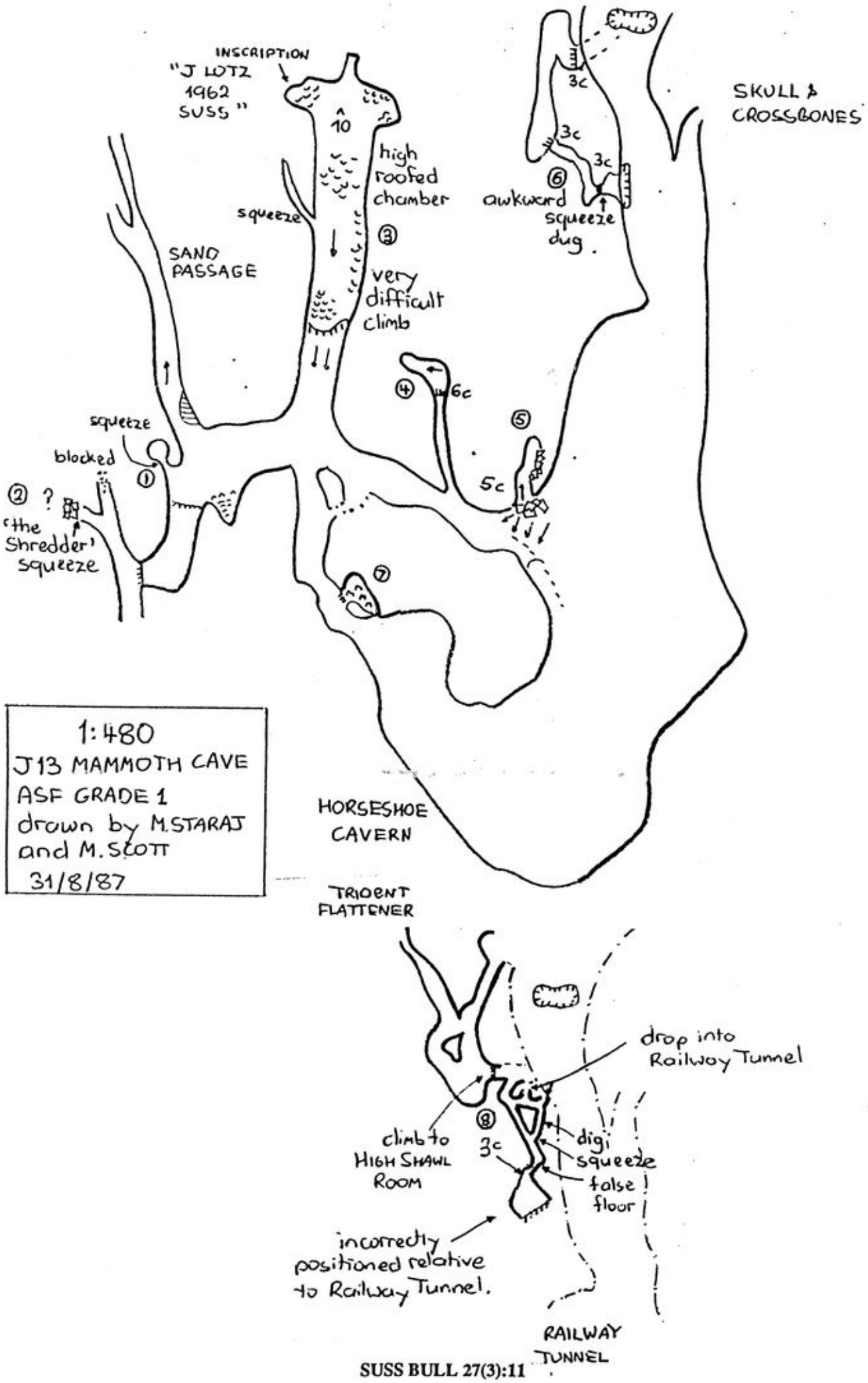
#4,5 and 7 also showed signs of previous entry.

FOOTNOTE

Also noted was a striking error in the book regarding Mammoth Squeeze: it most definitely does not cross the rift and does not enter it on the side shown on the map.

I would welcome any information regarding ommisions or errors or anything else to do with Mammoth Cave not contained in the yellow book, especially regarding the location of survey stations and maps (eg. the Railway Tunnel Extension, High Shawl Room, Helictite Hallway, etc.).

Mark Staraj.


INSCRIPTION
"J LOTZ
1962
SUSS"
10
high roofed chamber
squeeze
SAND PASSAGE
very difficult climb
3c
3c
3c
SKULL & CROSSBONES
6
awkward squeeze dug.
4
6c
5
5c
squeeze
blocked
1
2 ?
'the Shredder' squeeze
7
1:480
J13 MAMMOTH CAVE
ASF GRADE 1
drawn by M.STARAJ
and M.SCOTT
31/8/87
HORSESHOE CAVERN
TRIDENT FLATTENER
drop into Railway Tunnel
8
3c
climb to HIGH SHAWL ROOM
dig
squeeze
false floor
incorrectly positioned relative to Railway Tunnel.
RAILWAY TUNNEL

# ETTREMA GORGE

**Craig Buckle, Ian Cooper, Robert Crowe, Dierdre Hargreaves, Steve Keenleyside, Bruce Porter, Martin Scott, Chris Young.**

5-7th June

## Access

Ettrema Gorge is not visited by cavers very frequently because they have had troubles gaining access to this ruggard area, and because the caves are not particularly impressive. Armed with some information from a recent geology honours thesis (Stone, 1982), we set off to Ettrema hoping not to bushwalk overnight as cavers have done previously to get to the area.

Ettrema Gorge is a tributary of the Shoalhaven River, having impressive sandstone cliffs enclosing steep valley sides and rapidly descending creeks. The relief from the sandstone plateau down to the creeks is about 300 metres and the region is littered with canyons. Most of the region is in the Morton National Park, but the National Park does not include the caves, presumably so that mining companies can still take up leases over the mineralised "Ettrema Limestone Member".

After meeting in the nearly deserted and bypassed Marulan, we spent the night beside the Endrick River. After confirming that the gate to the road along Ettrema Ridge is locked, we visited the property "Attaahua Farm". The landowner was cooperative, and let us drive through the property to rejoin the road that leads to the caves(fig.1). Roberts' 4WD had no trouble along the road, but Steves' Escort had to be coaxed over some nasty bits until the car and his enthusiasmn were stopped. All of us then squeezed into the 4WD and proceded to get high on the petrol fumes from a leaking Jerry can. The road finally ended, and we all got a breath of fresh air and an impressive view down into the Gorge over some large cliffs. The sandstone cliffs about 70 metres high were abseiled. It can be done as a single freehanging and rebelayed pitch, or with multiple rub points over 2 pitches and by using the 'permanent' wire ladders to ascend the cliffs later. A scramble down the valley side passes a 50+metre waterfall in Jones Creek, with a large pool at the base. The caves are not far past the waterfall in some pretty srappy limestone beside the creek.

## Caves

There are 2 known caves at Ettrema which have been surveyed and maps published by Hills Speleology Club (Lichacz, 1984). The caves are small and the formations are not very impressive, but they are worthwhile visiting just for the exhilarating scenery.

EG1 : A small cave developed along strike of the vertically bedded limestone and siltstone (see also Lichacz, 1984).

EG 2,3,4. Ettrema's Mineral Cave-Grovel Cave. This horizontal cave is about 10 metres above the present stream bed of Jones Creek having wide passages that are only about 1 metre high at the maximum, requiring grovelling for much of its length over breakdown on the floor. Many bats have found themselves a home in the cave. Stream gravels in the entrance to Mineral Cave have been excavated by miners in the past, and their tools litter the entrance.

## Geological Control on Cave Development

The Ettrema Limestone Member is a calcareous and silty unit about 30 metres thick, part of the Upper Devonian Merimbula Group. Massive thickly-bedded limestone forms only about 5 metres of this, and so it surprising that there are any caves at all. This karst areas' only claim to fame would be that it probably has the greatest cave to limestone ratio in Australia. The limestone is deformed into a number of folds, which are excellently exposed along the creek.

The cave EG2-4 is developed horizontally around the limbs and nose of an anticline plunging about $20^0$ to the south(fig.2). The EG 2 entrance is developed in the nose of the adjacent syncline. The cave was presumably formed when the Jones Creek stream was about 10 metres higher than it is presently, when the stream sank in EG3,4 and resurged through EG2. The old stream must have done a good job dissolving the limestone because siltsone forms the roof over most of the cave.

We set off back towards the vehicle, up the steep valley side and then an ascent of the cliff-face. The sun was setting as we got into Roberts' 4WD and gone by the time we found Steves' car. The action continued as we blindly dragged the Escort in the dark, over the nasty bits in the track. We were all really buggered by the time we got back to a more-crowded Endrick River.

The next day we set off to have a look at Tianjara Falls and the Efflux and the Gorge at Bungonia. Although I had suspicions that one of the cars would have some trouble on the weekend, little did I know what was to follow. On the way to Bungonia, a tyre on my car decided to get intimate with a sharp rock and deflated itself. So a flat tyre is not too bad, but a bit further on the exhaust pipe burnt through the hydraulic clutch fluid hose, making changing gears interesting. This was temporarily bandaged as we made our way through the throngs of long weekend crowds at Bungonia.

Back at the invalid Cortina, we got it moving towards Sydney. On the way to Marulan the gearbox could not cope without clutch-assisted gear changes, and decided to stay stuck in first gear. This made for an interesting entry onto the highway and a very slow trip to Marulan. Some better bandaging on the clutch hose, and a hammer onto the gear linkages got the car into a more mobile state. By pumping the clutch furiously before changing gears we somehow managed to get back to Sydney using only second to fourth gears, with third gear only occasionally available. This was not before the hand-brake cable decided to disconnect itself and drag along the highway at 100 km/h spraying sparks all over the place. This was not the cars' best weekend; I should of left it in the garage and gone to Tasmania. The next obscure caving area trip epic will be organised soon, watch out for details!

Martin Scott

References


Lichacz,R.,1984: Ettrema Gorge Caves. Anthodite 1, Hills Speleology Club Ltd.

Stone,J.O.,1982: The rocks of the Southern Ettrema Gorge. BSc. Hons. Thesis, Univ. Syd.(unpubl.).


# Heresay

"You should use Duracel batteries and then you wouldn't need two lights."
(Precotious teenage girl hanging out of a tour bus to cave divers)

Kleeneliness is next to Goedeliness
(Steve Keenelyside)

aibohphobia, n fear of palindromes
(Mike Lakes dictionary)

The coroner gave you a clean bill of health.
(Whoever phoned me very early on monday morning after canyoning)

Research where you get paid for looking, regardless of results wont be funded by this "we must be commercial policy."
(Mike Lake lamenting University funding)

The three laws of caving: distance = half acceleration times (secs) squared
things fall down
you can't push a rope

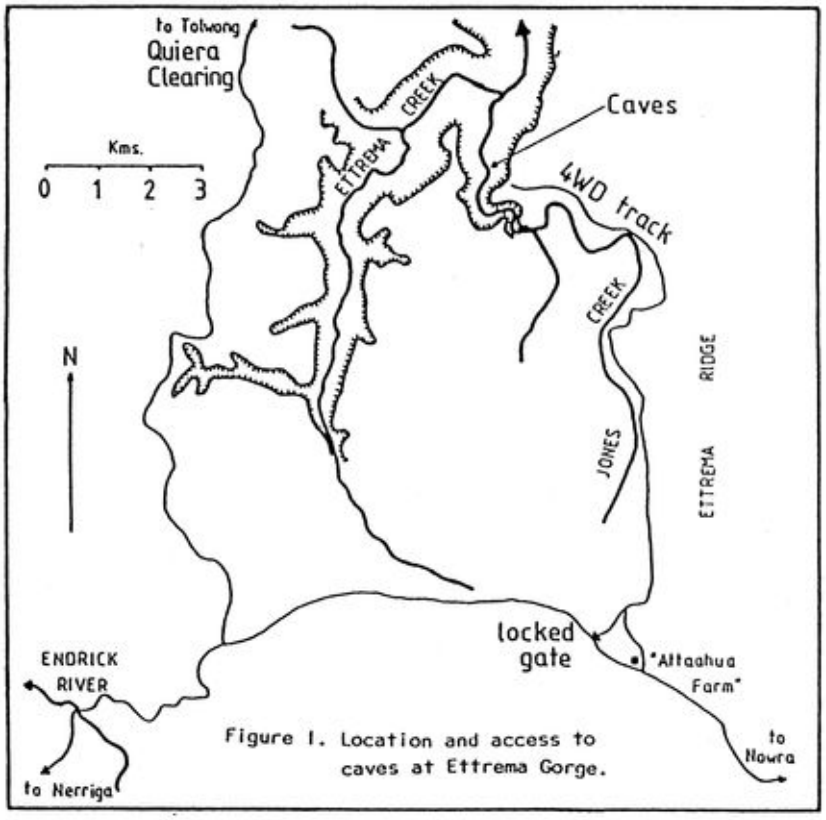



Figure 1. Location and access to caves at Ettrema Gorge.

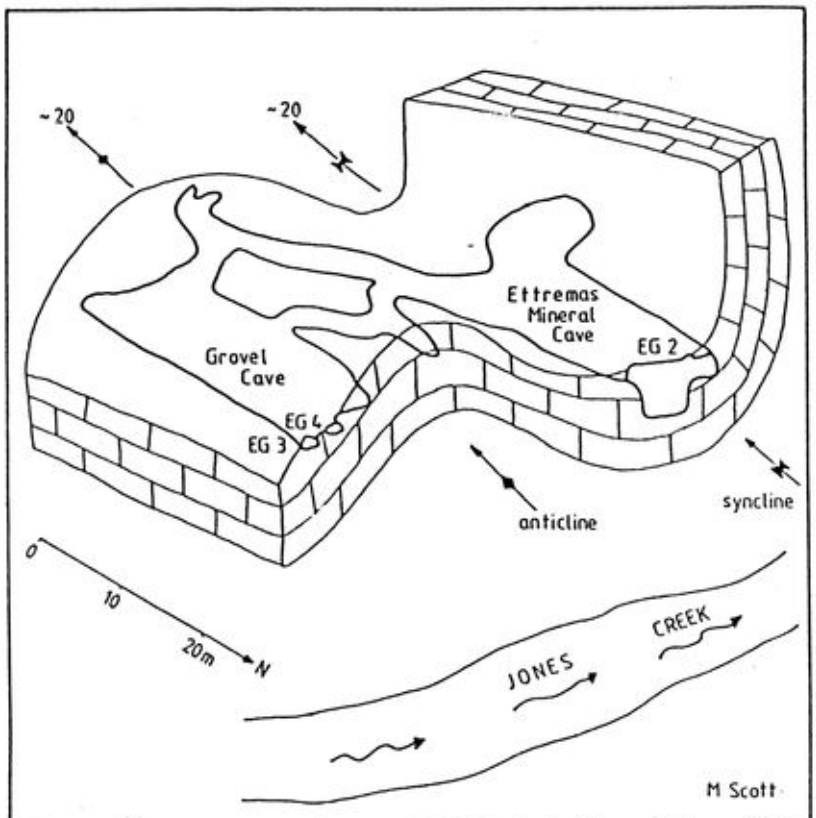
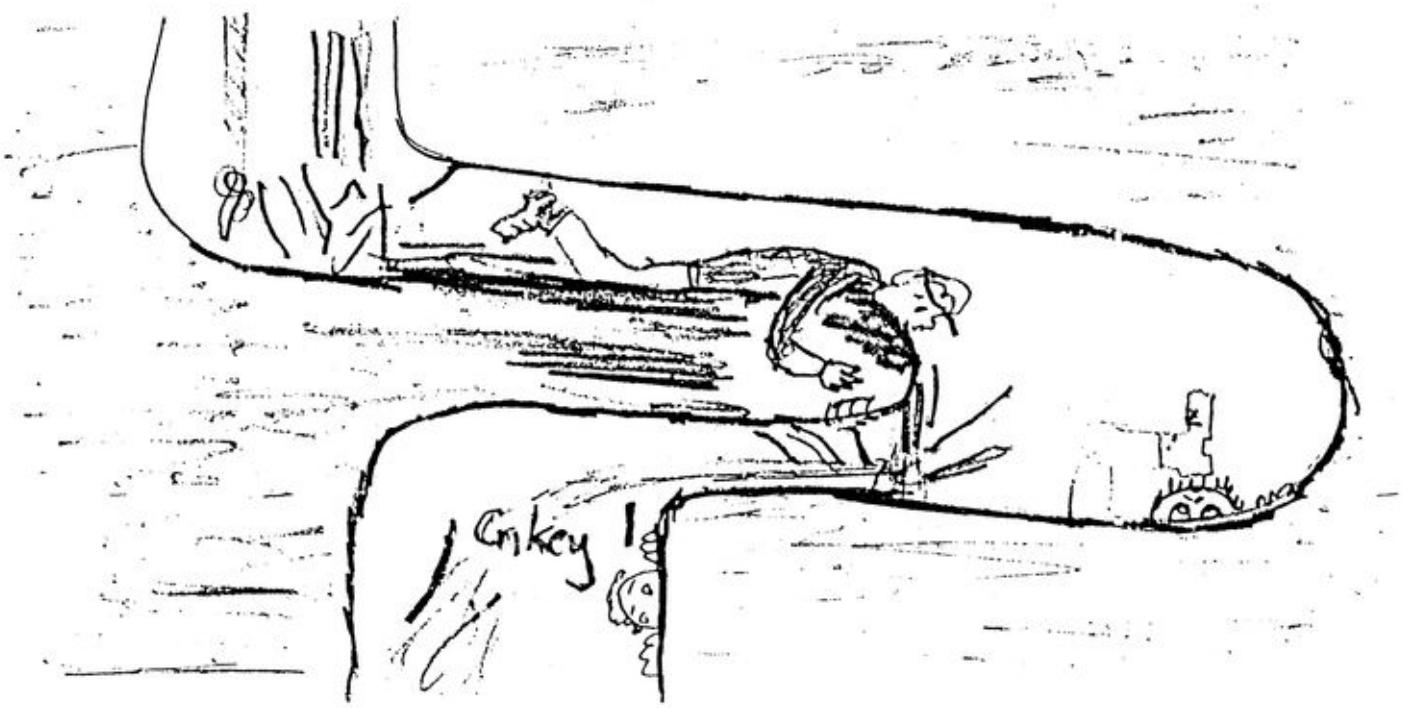



Figure 2. Block diagram of caves EG 2-4 (adapted from Lichacz, 1984) showing the geological control on their development.




## Crikey Canyon

The first canyon of the season.

**Present:** **Kirsty, Dedrie, Steve, Robert, Keir**

Getting to the end of the ridge did terrible things to the "Heart of Gold" and I shall only mention that in the search for the road leading to Deep Pass I ripped my snow chains apart , blew out one tire and ripped off the muffler. This day I got away with only minor problems.

Newnes is one of my favorite canyon areas. Usually the canyons are comparitively short but there is a long walk through spectacular countryside followed by the canyon itself and then the problem of climbing out of the a deep gorge and walking back, all without getting lost. Every canyon is new and so the thrill of something different is always present.

The hike to the canyon is about four hours including time to get a bit lost. Robert was most insistant that we take the map and I admit it probably did save a bit of mucking about. Steve protested that the compass was being a bit sappy but we took it anyway on the Richard Macneil principle that its better to have a compass than a map because a compass is good anywhere whereas a map is only good for one place. Pity we only had half of the map we needed but that was okay, if we walked off the map we needed to only walk north and get back on it again.

Robert claimed that it was not the done thing to do a canyon when it was likely to rain. We pointed out that it was already pouring with rain and with that we all set out intent on descending a narrow fissure gushing with water. I dont think Robert ever thought we would find it but when we did he didn't seem worried by the torrential dowpour at all and we rigged off a convenient tree into the slot called Crikey. It is called Crikey because when you see it at first see the grandeur etc etc etc you exclaim "Crikey". This is of course a pile of rubbish. The real reason is that when you strike the water at the bottom of the abseil you exclaim CRIKEY ! and swim rapidly to the next belay point.

The canyon is about 20 to 30 cm wide with lots of 10 metre abseils and small water falls. I elected not to take wet suit and braved out the chilly waters armed and legged only with thermals and wooley jumper. Very refreshing ! It all seemed to be over too soon , this trip the discovery of a route out of the main canyon was easy. The way out revealled a potentially longer and spectacular canyon on the next ridge around and we will go back one day to check this on out for size and adventure.

By a process of democracy and indecision we navigated exactly back to the Deep Pass crossing and the cars. I still am suprised we managed this since during the whole journey I felt that we were really lost. I think I was trip leader on this one so of course as far as the others were concerned the car location feat was even more of a suprise. Back to Lithgow and the parting cups of coffee and vacant stares of those stuffed by the first canyoning exercise for some time.

# MA 13 - The Dirty Elf

Martin Scott and Danielle Gemenis 14/1/87 Mount Anne

So have you been wondering about the photo of Danielle and I covered in mud with the dolerite peak Lots Wife in the background?; probably wondering about what we were up to in the caves at Mt. Anne. What follows is the story behind the photo by John Woodard published in University of Sydney Gazette Vol 6 Number 19 and Australian Geographic Number 7, which unfortunately is better than the cave - The Dirty Elf (MA 13).

We set off one typical miserable morning on Mt. Anne, with the irrepressible Guy McKanna to explore a hole found on the southern slopes of the large doline which includes Kellar Cellar. The cave (Godzone - MA 18) drops down 2 pitches to a depth of about 50 metres, and was beautifully rigged by Guy with his 100 metre rope all the way to the bottom. Guy swears by this method of shaft-bashing, just run the rope from the entrance down the pitches and along the passages until you run out of rope. I guess you don't have the problem of choosing ropes for pitches or getting lost in the cave!

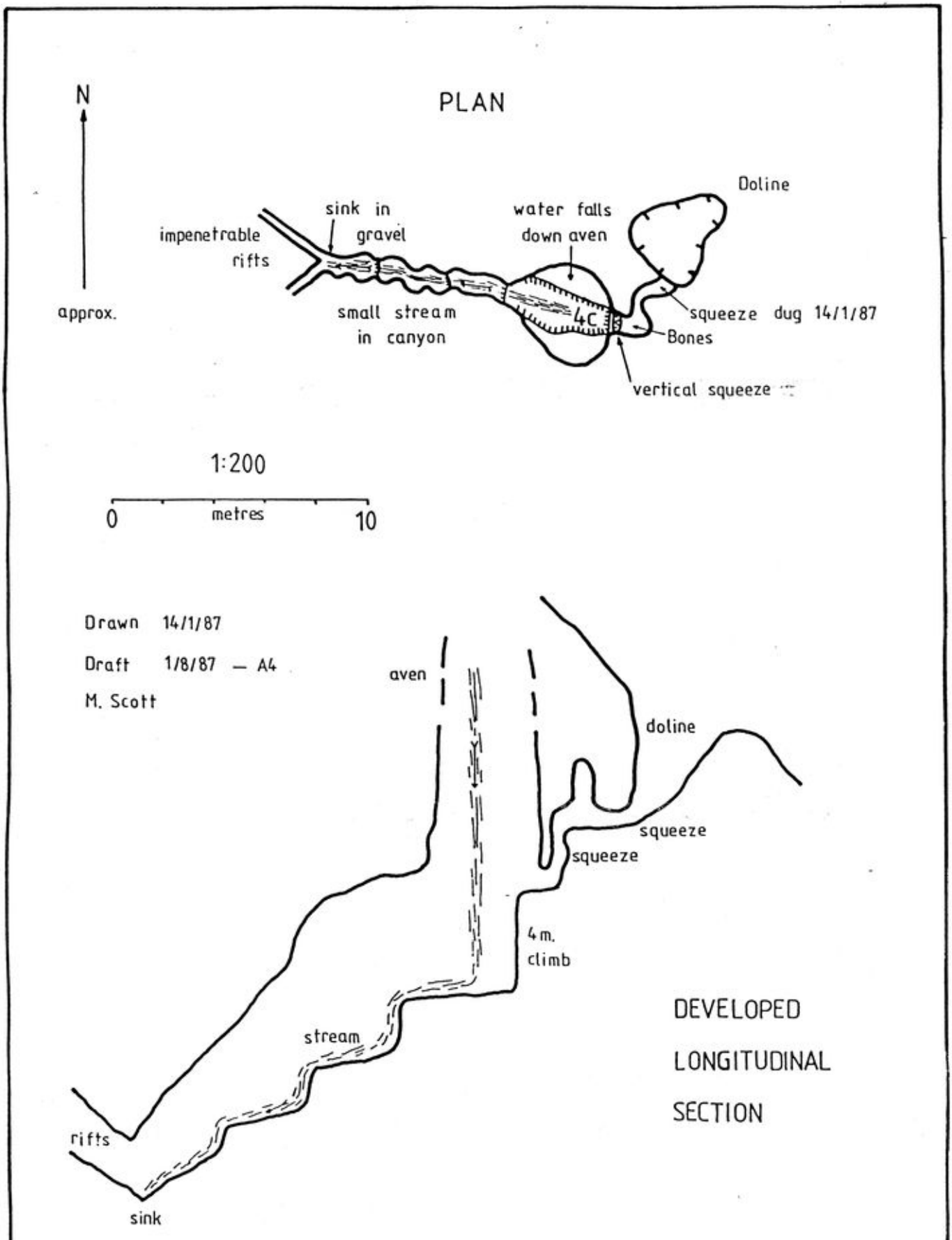
After this was derigged, we set off to find another cave higher up towards the Anne-A-Kananda doline lip. Danielle found a promising looking doline in no time at all, but she reported that it didn't "go". After some more disappointing cave-hunting I "refound" the doline, and decided to have a look anyway. The doline is filled with thick slushy dark-brown humus mud, but at its' base I could hear the faint noise of water running. Wow, here was a goer I had ever heard one!

So started the crazed digging through the slush, initially into a small chamber and then down through a vertical squeeze. The running water now had become a roar - was this the master system on Mt. Anne? Danielle returned to the doline, and so I nominated her to go down the tight squeeze first - she is a bit thinner than I am. She hesitatingly sloshed through the mud and down the squeeze, to return shortly even more hesitant about the nasty drop at the bottom of the squeeze. So with a bit more widening of the squeeze, I slithered down the hole. Half-way down my light failed; they always tend to go on you when you're in a critical position, like hanging helplessly above a pitch that you can't see. A borrowed light from Danielle, and the squeeze was negotiated and a well dropping 4 metres to the bottom appeared. The roar of water turned out to be an accoustic exaggeration, as it was in fact just a very small waterfall dropping from an aven into the well. The water lead off as an equally small stream through an impressive highly incised meandering vadose canyon. All of the canyoning we had done before Tassy came to the fore as I bridged and descended down the sinuous stream passage - just like Tiger Snake Canyon at Newnes in our own N.S.W. But it wasn't to last long, as the the small stream sank into gravels and the passage narrowed into two bifurcating impenetrable rifts (see map).

I returned to a shivering Danielle as it was now sleeting outside and the wind howling over the Mt. Anne ridge. By this time Guy had long since gone home, sensibly getting out of the weather and getting into his usual sleeping bag abode. Covered from head to toe in chocolate-coloured mud, we trudged back to the campsite as the mud was slowly dislodged by the rain and the knawled scoparia bushes grabbing at our overalls. The reception back at Pandani Flats was unexpexted, as grinning cavers mobbed us with their cameras. So ends the story behind the photo, but the wrath of the slush in MA 13 lived on. It snowed the following night, and getting back into my overalls was truly a "hard-man" act; like being buried in Siberia - covered in permafrosted soil.

Should anyone want to return to MA 13, the aven is more-or-less unclimbable and as it heads to the surface it is unlikely to lead to anymore cave, and the rifts at the end of the cave really are impenetrable. The tag is nailed to an old log and should be permanently affixed to the doline wall, and then the cave surveyed. It should be easy to tie the cave into the nearby surface survey station "B", allowing its position in relation to the nearby caves Anne-A-Kananda and Deep Thought to be assessed. The approximate location of the cave will be shown on a detailed topographic map in a future SUSS Bulletin.

Martin Scott


PLAN
N
approx.
impenetrable rifts
sink in gravel
small stream in canyon
water falls down aven
Doline
squeeze dug 14/1/87
Bones
vertical squeeze
1:200
0
metres
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Drawn 14/1/87
Draft 1/8/87 — A4
M. Scott
aven
doline
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4 m. climb
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DEVELOPED LONGITUDINAL SECTION
MA13 The Dirty Elf Mount Anne 7MA13.SUS1 ASF1
SUSS

# Cave diving at Jenolan.

**Present** Simon Macartney, Judi Macartney, Greg Wilkins, Pat Larkin, Keir Vaughan-Taylor.

Over a number of weekends Suss Members of the Cave Diving Group passed through the sumps in the Imperial Streamway. The Imperial - Spider rockpile was explored enthusiastically , while no real lead to connect Spider has yet been found there are good possibilities. Sump 4 is the last underwater stretch before the rockpile and is about 48 meters long with an air space half way. Here according to ancient SUSS survey manuscripts the chamber is adjacent and extremely close to Spider. Until the radio direction finding is done in the next few weeks we do not know exactly how close this chamber lies in relation to Spider since it is minutely possible that the surveys that locate there position might have (tiny) errors associated with them. The nature of the rock pile and the type and shape of rocks is much the same. As you face the water emerging from the rock pile it is apparent that there is no easy way on. The rock pile is unstable and the squeezing we performed through dubious leads in the pile has in retrospect not been wise.

One one occasion a cascade of boudlers collapsed from above with some convincing rock removal from below. While the results of this rock rearrangement technique was what we were trying to achieve, it was prudent that we were not in the wrong place when it all came down. Despite the new house arrangements there is no evident way into Spider.

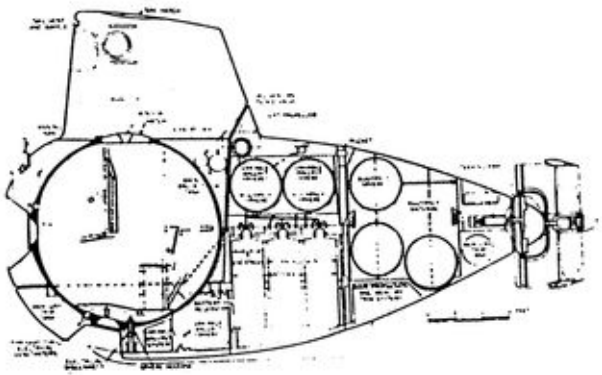
It is possible that there might be a voice connection to the other end of the rock pile that SUSS has explored for so many years and we plan a joint Spider-Sump 4 trip next time we survey. If these two caves are connected and the hyphen removed from the Spider - Imperial rockpile it will be the longest cave in Australia . It is rumoured that a very large bottle of finest quality Scotch will be consumed on the following night.

The rock collapse goes high, at least fifteen meters and a myriad of horozontal posibilities that may connect. It is my opinion that this is the most likely way to make a connection since the lower parts of the rockpile is fairly compressed. To really do the "hyphen" justice once through sump 4, we have to get out of our wet suits and into dry overalls to really put some effort into the high level squeezing without overheating and ruining perfectly good wet suits. As well as this there is substantial phreatic passage beneath the final chamber, in fact masses of it with lots of squeezing involved that still need to be surveyed. Most of this has been superficially explored up to where it gets squeezy. The passages seem to go ever which way and without a survey it is difficult to say where it all heads. From general compass observation the way on north continues but these passages need digging and squeezing to go any further.

Sump 5 is a short duck under that connects from the main streamway to a large spherical chamber called Snorkle Chamber. This is the famous passage that connected finally to the underneath of a concrete path in Imperial. Another route also connects to the infamous and dreaded sump 6.

Simon had previously penetrated sump six and discovered that it was a "sporty" little affair not to be tackled by the faint of heart. (I love that word sporty with all its significance). On the other side of the sump there is a small flowstone scramble to be negotiated in on the other side from here about ten meters of passage leads to a couple of high muddy leads that choke off. Judging from the footprints these leads were already explored by Ian Lewis some time ago although he did not draw them in on his maps. Simon's story about what lay down the main passage would intrigue the Ancient Marina. The main passage was blocked by a large stalegtite with insufficient room on either side to squeeze through. You can hear the sound of a small stream on the other side as though running over a small waterfall.

All the previous sumps are easily passed and it is not until passing through sump 5 into the Snorkle Chamber (KSC) that the delight of the streamway diving loses its appeal. To the unhindered cavers the journey is easy (except for the sumps). With the tanks weight belt, camera gear, kitchen sink, heavy lights laden helmet and low roof the going is mostly experienced by ones knees. A task not to be skneesed at. All this mega grovelling takes our early morning party along phreatic route loops and then to the dreaded sump six.



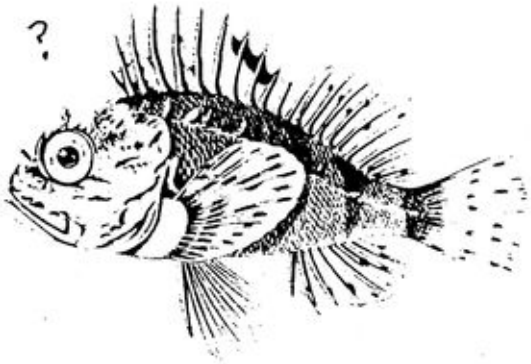
Sump six is a grotty little one meter square puddle of brown water that beneath its unassuming surface dips about thirty degrees into zero visibility water. The passage descending to sump six is called the Departures Side and sump six has been dubbed Tubular Swells. Tubular Swells is tight, very constricted and all underwater. As each diver is engulfed their progress (or lack there of) is clearly transmitted to those waiting on the banks of sump six by the echos thumping from their scuba tank against the roof . The exhausted air gurgles into airspaces and bubbles back into the Departure Chamber. As the diver passes the lowest point in the phreatic loop the air rises on the other side and all goes quiet on the Departure Side. Next person ..... me. Head down and waist deep the first squeeze is encountered. The tank bumbs on the roof and the gravel floor is hard against your chest. With several divers already through, the siltout is complete, nothing can be seen except the low glow of your helmet light.

The guide line tends to pull into the narrowest place in the passage and so it is necessary to have a good feel around to find the widest route. By rotating your body so the tank rolls onto one side you can progress forward until the tank finds the next place in the roof it doesn't want to go through. By successive rolls of the tank you can inch along the guide line and eventually descend to the lowest place in the loop where a rewarding experience of wide open water is encountered. I remember being pleased to scrape passed the difficult section and surfaced in the Far Country bubbling sighs of release with Simon beaming down from flowstone on high.

Simon wanted the reel.....I hadn't brought the reel. He wanted the reel ...could I go back and get it.....I thought that he might like to go back and get it but he pointed out that I was already in the water and so had logical priority. "Can you get the survey gear as well ?" "I thought Pat brought it ?" Of course he had.....great thats only one thing I have to get. So I bit the regulator bid farwell to Pats smiling face and grunted back. Tubular Swells were losing their mystique but their beauty was still out'a sight. The process of passing to and fro with the swells of limestone was now merely series of sequential operations. The reel was soon in my grasp , and we were soon ready to heave diving equipment even further along cave passages. No more did I wonder why Simon called it the Far Country. It was far enough all ready and there was a bit further yet to go.

The passage beyond Tubular swells is called epiphreatic I think. It can't decide whether it is vadose or phreatic. On a rock shelf we found a note left by Ian Lewis in 1979. The floor is eroded river gravel and the passage was once half filled since formations have grown and then later the gravel underneath the formation washed away leaving false floors in some places. The formation that blocked our way was mounted over such gravel and if you listened carefully, on the otherside..... sure enough the sound of running water. Simon and Judy were able to clear away gravel from underneath and by applying some standard New South Wales squeeze techniques (we removed our scuba tanks...if only Ian Lewis had thought of that ) we slipped down and into brand new, never before seen by human beings, cave passage. Sure enough...running water , not as much as the sound implied from the other side of the formation but a good two inches to get your toes wet. My somewhat aging wet suit booties expired and enlarged their holes enough for my feet to appreciate the fresh air. We stepped into the pools and waded into the passage. The luxury of standing was soon sacrificed to pay homage on our hands and knees to the mysteries of the cave ahead. I can't begin to express the discomfort of cave grovelling in a wet suit with full thermals . Naturally along the way there are a number of vertical avens where we would first play a game of convincing someone else that it was their turn to investigate that section.

Every lead went far enough to extract some fancy climbing efforts but the way on always narrowed to cat size. (The eye of a cat is very small) I never thought I would feel good about finding wet pools to crawl along in and along and lie in. We all sat round in one such pool looking like seals in conference or perhaps a SUSS committe meeting.




Looking round at our passage it is clear from the smooth walls and high false floors that on occassion a considerable quantity of water fills the passage and rushes through fed by the avens and from whatever lay ahead. We pressed on and finally encountered sump 7. It was about three by four meters surface but without the same loop characteristics of any of the previous sumps.

It appeared to be more like a lake. Simon reeling with excitement spooled into the darkness . He was black soon with the perplexing views report that he had started a new dig at the bottom and could see very little. There are now two underwater digs at Jenolan but this one is probably not a goer. With no survey yet completed for this area we can only guess at its location relative to the outside world. Possibly under Henries hole or Alladins. The system shows signs of periodic flooding and is surely an overflow passage for some other body of water. (maybe even the REAL Lake Cave).

This is the moment when the adventure suddenly seems over and we started our return to the outside. Upon checking our gear prior to re-negotiating Tubular Swells we discovered Pat's O ring seal on the first stage had failed.(The one on the tank) Being good little scuba divers we were equipped with spares and so unpacked a replacement. The new Pat seemed much the same as the old one and so we were able to make the long journey back with songs from Pat filling the chambers along the way. Tubular swells yielded slightly better visibility (to the lead diver) and a new lead was discovered at the bottom of the phreatic loop just before the squeeze passage. The surveying is not complete and so there will be one more visit here with the lure of a new lead. It might connect with sump 7 who can say.

I always seem to forget about the effort required to get back. The way home lies through all that passage, up the scabby bits that keep catching the tank, the bits where you cant wear the tank because the roof is too low and you then have to lift it, haul it , drag it through a couple of feet at a time, lie it down for a while, lie down for a while and build up some energy reserves to start again. (Lots of fun really). The last of the grovelling is just before Snorkle chamber. Its only a grovel if you have a tank. There is the emersion through sump 5 and the dive through sump 2. There are inspiring wades through chest deep lakes along the way and one passes under a roof sniff. The chamber before the duck-under is called "Virgin Sacrafice Chamber" in anticipation of some future trip but there is a problem finding anyone that seems to qualify. Maybe Mike Lake ? The final dive is the longest underwater stretch through sump 1 where the tourist ramp provides easy diver access. There is the long walk back through the tourist sections and then we emerge into the Grand Arch greeted by nippy Jenolan temperatures and the hardship of removing a nice warm wet suit..

## From the Larkin Files (More Hearsay)

But felix, we'll tear each other apart
(Oscar) (Ed. Who's Oscar and Felix Pat ?)

I think Oscar has potential
(Felix) (Ed. So inhouse it's outhouse)

I can see that you shouldn't hang about in sumps without any air.
(Martin Scott)

"That lad will go far....."
(Simon Macartney)

"In a cave the only predicatable element is the unpredictable.....
your seismic tests triggered and inverse rockfall"
(The speleological expert in that great film
The Secrets of the Phantom Caverns)

Elysium

(Limestone Ridge Queensland)

Present:

| | |
|---|---|
| Craig Hardy | (CQSSS) |
| Owen Langley | (CQSS/OTCCC) |
| Joe Vavryn | (CQSS) |


Mt. Etna Book

Situated below Limestone Peak and to the North. It is a very extensive cave of two systems with impressive decorations. The one known entrance is a narrow 80Ft shaft which leads to the Upper System of one large chamber 145Ft by 120Ft; floor has upward of 9 pits from 30Ft to 130Ft deep; one 60Ft pit leads to the Lower System. Lower System has undetermined numbers of small and large chambers ranging from 40Ft by 60Ft to 200Ft by 20Ft with ceiling heights up to about 80Ft and approx 2500Ft of passages. Upper System has a number of stream beds; Lower System has generally mud floors, some mud walls, and occasional pools of water. Decoration includes 12" helictites, shawls, flowstones, stalagmites and stalactites. Present depth estimated at 300Ft below entrance. Named after "Paradise" of the Classical Greeks. Although this cave is one of the largest in the area it appears not as large as either Johannsen's or Mella Grotto.

The Trip

Departed The Caves township at 7.30pm Fri 29th Aug for Limestone Ridge. After a rugged 30 minute walk over Limestone Ridge we began our decent at about 8pm. The first section of the cave is a verticle 80Ft dog-leg chimney. This brings us into the 1st chamber. A most amazing sight, this chamber was once a horizontal Andersite intrusion which has since disappeared. The large cavernous area measures only about 3-10Ft high by 145Ft long by approx 120Ft wide. Crawling around in this area reminds you of crawling under a large table. The ceiling is very flat and dotted around the floor are pits so one has to watch their step. One noticeable feature is that there are no roof supports, so the 145x120Ft area is solely self supporting.

From the 1st cavern the 2nd abseil begins. This pitch is of 60Ft. A good verticle abseil down a wide pitch (a cavers dream!). At the bottom of the 2nd pitch we followed a passage way downwards into a passage called "Yellow Brick Road". This part of the passage has a raised central floor with either side falling away and high walls. The once "black" floor from queno was now white from many cavers upsetting the limestone floor. A short distance further on and down a hand-over-hand climb by rope. This is where the maze begins & many of these passage ways being phreatic tubes.

One of these passage ways bought us to the "impossible squeeze"! I suppose every cave has an impossible squeeze, but this one must be one of the most challenging. Located approx 10Ft from the floor in a narrow passageway, one has to chimney up to position yourself in a horizontal configuration ready to begin the ordeal. Joe didn't try!, I looked at it and thought no!, & Craig gave up! (been there done that & not worth doing it again). Craig was the only one of our party that had been successful on a previous occassion.

Returning to maze of passageways we arrived at an area called "The Foyer". Standing at "The Foyer" we were now looking into "The Cinema". This is a large cavern approx 30'Hx60'Wx60'L with a horizontal Andersite

shawl, after the flash was discharged, glowed a flouresent green. From the "front" of the stage Joe and I took several photos of the large column and approx 50 straws varying in length from 3-8Ft with the largest 12-15Ft.

Retracing our steps down to the stream-bed, we followed along to where Craig was at the base of the large column. This column was standing on a mud floor and the stream had undermined one side. This meant that the column was only partially supported by the floor and ceiling. The mud walls along the side of the stream contained unusual scupltured formations (of mud) similar to "cave-coral" in its appearance. This sculptured mud was most unusual and extended for quite some way along the stream course.

From the base of the large column we travelled down-stream into another large cavern. The cavern walls displayed some large flow-stone formations and huge areas of rock fall. This cavern was approx 23Hx12Lx6mtrsW. High above the rock pile we could see upper-level passage-ways which were difficult to reach without scaling poles. The stream itself disappeared under a rock-mud scree which was impassable to us. This was the end of this section of the cave without scaling to an upperlevel.

From here it was a matter of retracing our steps down past the large column to the stream bed. Behind the large column was a long mud slide elevating 45-60 degrees upward some 10mtrs to a landing beneath a large flowstone. At this point we had to strip to climb up on top of the flowstone (3-5mtrs) to a position where we could photograph the walls and ceiling of the small cavern above. Only Joe and I ventured forth whilst Craig waited on the landing. This small cavern was extensively decorated with shawls, helictites, flowstone and calcite crystals, straws, stalicmites and stalictites. Another photographic session lasting about .75 of an hour. As I decended back to the landing Joe continued to snap-away. From the landing I was able to photograph an incredible straw (approx 4-5mtrs in length) with Craig standing nearby for perspective. Climbing back into our muddy gear, we decended back down to the stream-bed.

We retraced our steps back to where we first sighted the stream. Joe wasn't happy with his camera fogging during the 1st photographic session and wanted to try again. Both he and Craig went back to the meandering stream with the false floors. It was pointless all of us going so I waited near the "black deposits" described earlier. During my wait I had 3 green frogs to keep me company and continuous sounds of water falling from the ceiling. 50 minutes later our group reformed to start our long trip up and out of the cave.

From the stream it took the 3 of us 1 hour 55 mins to surface. The last 6mtrs to the surface was a very slow trip for me. Help was almost impossible as I had to exhale to move up. Fortunately Craig cleared the cave 1st and was able to assist by heaving on a petzel ascender which was attached to 2 foot loops around my feet. Through me exhaling-wiggling and Craig keeping tension on the ascender I was able to surface. Joe tried a new technique with one arm up and one down! but I feel it is only suitable for someone with "Ducks Disease"! On the surface it was still raining as we packed our gear and headed for "The Caves" township. Arriving back at Joe & Di's we sorted our gear and settled down for a most grateful cup of coffee (thanks Di).

Departed "The Caves" at 8.30am
Returned .. 9pm
Total downtime = 10 hours 15 mins

Regards, Owen Langley,
A/Mgr QIC Rockhampton.
079-221844

# CAVING - CENTRAL QUEENSLAND

Mt Etna and Limestone peak on Limestone Ridge are the highest points of a cavernous limestone outcrop in Central Queensland, just north of Rockhampton. Mt Etna (co-ordinates 23 degs 9.5 mins south and 150 degs 26.5 mins east) is a conical peak rising to 930 feet above sea level. Limestone Ridge is an open "U" shaped ridge rising to 650 feet on Limestone Peak (also known as Crystal Peak). The outcropping limestone supports a semi-evergreen vine thicket vegetation and shelters a variety of birds and animals, including large colonies of insectivorous bats.

These peaks are situated approximately 2.5 to 3 Kms north of the Caves Post Office along the Milman Road. The main Rockhampton-Mackay railway line runs to the west of the area in close proximity to the Bruce Highway. The Caves township is approximately 15 miles north of the city of Rockhampton along the Bruce Highway, on the eastern side of the railway line.

Mt Etna remains a puzzle in that it is the most cavernous limestone outcrop in Australia, yet the caves have developed in a dry subhumid climate which would be expected to inhibit cave development. Temperate rainwater caves occur as minor features in areas dominated by river caves. At Mt Etna there are no river caves at all. The key factors allowing the cave development at Mt Etna are the karrenfields (area of limestone surface with solution features), which provide a local hydrology which offsets the general dryness of the climate; and the vineforest vegetation, which sends tree roots into the caves where they provide the acid necessary for solution of the limestone.

The Chillagoe caves resemble the ramifying type of the Mt Etna district, but without the modifications due to rejuvenation and without the rainwater inflow cave type. Water inlets are generally through daylight holes in domed caverns. In the Kimberleys there are small caves of the Chillagoe type (eg. Window Cave), but the larger caves are river caves. The humid tropical karst (general term for solution controlled landforms, particularly where connected with underground diversion of drainage) areas of New Guinea and New Caledonia appear to be river cave areas, but perhaps the Mt Etna type of rainwater inflow cave occurs as well.

## CONTRASTS BETWEEN RIVER CAVES AND RAINWATER INFLOW CAVES

| River caves, eg. Yarrangobilly NSW or Camooweal Q. | Inflow caves of Mt Etna |
|---|---|
| Typical cross-sections are either flat lying ovals or composites of ovals one on top of the other. | Cross-sections are generally tall triangles. |
| Cave passages develop away from primary joints tending towards meandering forms. | Cave passages remain straight but the hanging wall side is selectively eroded. |
| Wall sculpture is characterised by directional forms, particularly scalloping and incut benches (which make up the oval elements in the cross-section). | Wall sculpture is generally non-directional; shallow dish-like hollows to four feet across are the most common. |
| Stream sediments are well sorted, generally rounded gravels derived from the diverted surface creek, sand and bedded clay. The affinities are with alluvial deposits. | Stream sediments are poorly sorted, generally angular blocks and chips of limestone with earth and vegetable matter as the matrix. Affinities are are with hillwash (colluvium). |
| Flowing water is the main solution agent. The water of the underground river attacks the cave walls directly and the fill is practically inert, but the ceiling of the cave is sometimes attacked by river water percolating through gravel in filled caves. Vegetable matter is not normally present in quantity. | The cave water generally deposits lime except where it is soaking through organic fill; the acid-sponge effect is the main agent of solution. The cave floor is attacked. The acid is supplied by decaying vegetable matter in place. |

| | |
|---|---|
| Caves develop by diversion of surface creeks, generally on upland plateau or through creek beds. Inflow caves do not develop on steep slopes. Swallet (depression by which a surface stream is diverted underground) development generally related to creeks starting outside the limestone terrain. | Inflow caves develop mainly on steep hillsides without prior concentration in gullies. There is no diversion underground of surface creeks. Inflow caves can develop entirely from the limestone catchment. Outside runoff does not seem very helpful. |
| The limestone outcrop generally has some soil cover except on steep cliffs and buttresses. Karrenfields consist of "tombstones" (with rillenkarren (simple solution rill on limestone surface up to 3cm)) poking through soil cover, generally on gentle slopes with associated bowl-shaped solution dolines. | Most of the limestone outcrop is bare rock pavement with very sharp pinnacles and rinnenkarren (natural gutters and aretes (knife ridges) 10cm or greater generally with rillenkarren hence compound solution rills). Dolines (more or less circular karst depression) are replaced by solution pipes and shafts. Where there is much soil cover, cave entrances aren't found. |
| Wet climate and microclimate favours cave development. Active cave development confined roughly to humid climate areas and active swallets to super-humid climate (Snowy Mts). The drier caves of the central west are generally inactive. | The climate of Mt Etna appears to be drier than that of any NSW cave area. Rainfall is moderate but evaporation is very high. Pediments, characteristic of arid climate, are normal. The moister southern and western faces are often soil covered and lack entrances. |
| Most caves contain permanent water. | All caves lack permanent water. |
| Rainwater caves few, small and often not present at all. | Rainwater caves dominant and river caves not present. |
| Subaerial chalky weathering of cave walls confined to development of a soft patina over fresh rock. | Chalky weathering causes deep etching of the rock, with development of a a layer half inch thick of altered powdery rock and also thin crusts over soft chalky rock. Buttresses inside the caves become "rotted". Flowstones are attacked more than limestone. |
| Flowstones generally coarsely crystalline, with c-axis oriented perpendicular to the growth lines; surfaces of active flowstones have waxy or sparkling appearance. | Flowstones generally finely crystalline, without obvious orientation of the crystals. Active flowstones have a "flat" finish. |

REFERENCES


'Geology of the Mt Etna area' by C.H.C. Shannon (Member of the UUSS)

Bogli, A. and Franke, H.W. (1967). "Radiant Darkness". (G. Harrap & Co.).

Janinski, M. (1967). "Caves and Caving". (P. Hamlyn; London).

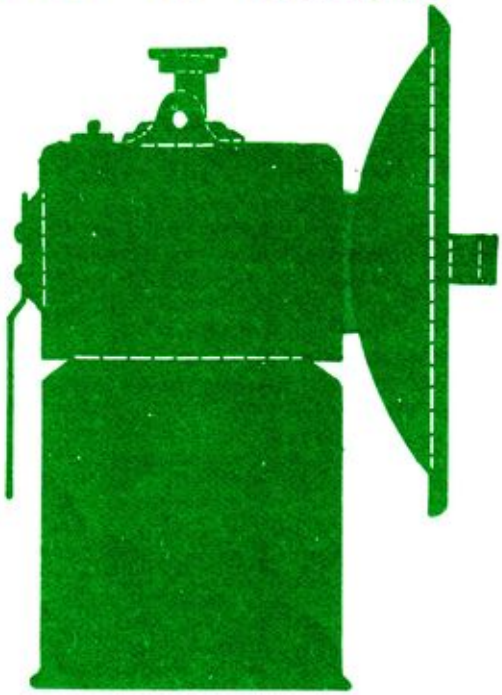
Jennings, J.N. (1967). Some karst areas of Australia. p279 in "Landform Studies from Australia and New Guinea" (Eds. J.N. Jennings and J.A. Mabbutt) (Australian National University Press: Canberra).


CONTACT NAMES AND PHONE NUMBERS.

Please note that to visit these caves it is best to contact one of the following members of the COSS (Central QLD Speleo Society). Some of the caves in the above mentioned area have been barred and access can be gained with permission of COSS & NPWS. It is only good manners to approach the club and advise them of your intentions, they are only too glad to show interested parties some of the excellent caves in the Mt Etna area.

| | | | |
|---|---|---|---|
| Clive Kavanagh | 079-282517 | Craig Hardy | 079-272490/W<br>079-279016/H |
| Jeff Simmons | 079-285798 | Joe & Dianne Vavryn | 079-342788 |

Lumen in Tenebris



# SUSS

## BULLETIN of the SYDNEY UNIVERSITY SPELEOLOGICAL SOCIETY

BOX 35, HOLME BUILDING,
UNIVERSITY OF SYDNEY,
N.S.W. 2006

## Future Events

19 - 20th Sept Jenolan

Julia James continues the exciting saga of the Jenolan Caves Survey. This is strictly serious surveying only and not generally open.

26 - 27th Tuglow Keir 519 9769

This is the SUSS mega survey of Tuglow which will ultimately result in the Tuglow book/map publication. If you want your name in the book as being on the team then this is for you. Briefing on how we want the survey done and task allocation etc 9.30am Saturday at the cave entrance.

3 - 4 - 5th October Tuglow Keir 519 9769

This will finish up the survey from the previous weekend.

10 - 11th October Bungonia Martin 449 4092

Martin is about to try a novel cave search on the cliff walls of Bungonia. The first surface search entirely on the end of a rope.

17 - 18th October Jenolan & Canyon Greg 86 6135 (h)

Depending on Ernie's approval Greg Wilkins plans to push Water Cavern. (Note emphasis on water ) There is a strong breeze blowing (As always a really promising dig)

23rd October Speleosports

Crowebar is rumoured to be representing Cave Rescue on this one. This is despicable. SUSS wants an all girl team if possible and we will wax everyone as usual.

31 - 1 November First Aid course at Police Rescue

Contact Grace Matts 700374 (h) 6442255 (w)