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## MOUNT ETNA BATS OR CEMENT?

by Glenn Pace, Vice-President of  
The Australian Speleological Federation

Mention of the town Yeppoon brings to mind palms, tropical islands and fabulous beaches rimmed with coral reefs.

These are easy to appreciate.

However, situated just west of Yeppoon is one of Queensland's least appreciated natural features.

Mt. Etna, rising steeply from the coastal plains north of Rockhampton, is the home of over a quarter of a million bat.

The colony of little Bent-winged bats, representing over 80% of the Australian population of this species, has a unique dependence on Mt. Etna. Late in November this year, these tiny creatures will swarm from hundreds of kilometres to a cave on Mt. Etna, as they have done for thousands of years.

The female bats, 125,000 of them, will leave the males and descend into the deep shaft of Bat Cleft cave where, in its depths, they will give birth to their single young.

The roof and walls of this relatively small cave will come alive with tiny, new-born bats. Furlless and helpless, they need special conditions to survive.

Bat Cleft's unique structure provides these special conditions. An aven at the bottom of the cave acts like a humidifier, trapping warm moist air for incubation of the baby bats. And the deep entrance shaft deters predators from the crowded nursery below.

Like all mammals, the mother bats will suckle their young until they can fend for themselves.

For about 40 minutes at dusk, in a natural spectacle unparalleled in Australia, the parent bats will sweep up the cleft and out into the warm night air to feed.

The escapades of Queensland's fruit-loving flying foxes may not have helped the image of these little creatures. But each night, the bat colony aids Rockhampton's farmers of nearly one tonne of insects, each bat eating half its own body weight in insects during the evening.

After eight weeks, when the rapidly growing juvenile bats are approaching full body weight of about eight grams (a quarter of an ounce) they will finally leave the cave with their parents, to return again next November.

Sadly, Bat Cleft and the 45 other limestone caves that honeycomb Mt. Etna, seem certain to be lost at the hands of man.

The lush green vegetation on Mt. Etna's southern flank gives passersby no indication of the large open cut mine which is slowly pulverizing the other side of the mountain.

reprinted from:

THE QUEENSLAND HOSTELLER AUGUST 1979



The rock drilling and blasting are slowly drawing closer to the all important northern slopes. It is the northern slopes that conceal Australia's most densely calcareous limestone.

The limestone which is mined at Mt. Etna is trucked a few kilometres south to Central Queensland Cement's plant, on the outskirts of Rockhampton. The cement plant, which employs 120 workers, needs the limestone to continue operating.

The key question is: Does the limestone have to come from Mt. Etna?

The Queensland Mines Department's own report has shown that several limestone deposits occur in the Rockhampton region of the grade, size and accessibility needed to supply the cement plant.

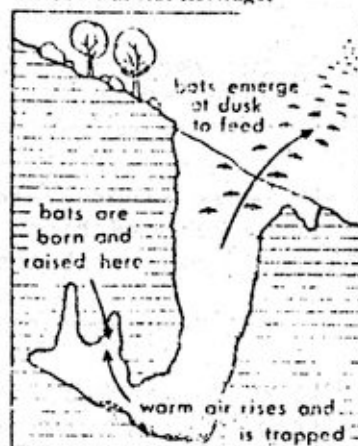
But moving the mining operations would mean the cost of setting up a new quarry, a cost the company is not prepared to meet.

Blasting checks from the nearby quarry have had little effect on the caves so far.

Thanks to the work of speleologists (cave explorers), the twists and turns of the extensive cave systems are still revealing new passageways.

The spectacular bat flight and the beautifully sculptured and coloured passages of the caves have tremendous tourist and recreational potential.

Let's hope the miners will move to the other limestone deposits, before it's too late, so that Mt. Etna can take its place as a permanent part of our natural heritage.



Bat Cleft's unique structure renders it irreplaceable as the breeding cave for the Little Bent-Winged Bat.

## DETERMINING DYE INJECTION QUANTITIES

Determining the quantity of dye needed for successful tracing is crucial to any dye tracing investigation. An insufficient quantity will result in an unsuccessful trace; too much dye wastes materials and degrades water quality. Tracing is frequently conducted in areas where domestic water supplies and recreational water use may be involved. Dye concentrations in these areas must be kept low, and definitely below the visible threshold (approximately 1 ppm for all of the fluorescent dyes). The U. S. Geological Survey has established a maximum allowable concentration of rhodamine WT of 10 ppb at points where the water is withdrawn for domestic use.

Toxicity concentrations for rhodamine B (somewhat similar to rhodamine WT) and fluorescein have been investigated by Lennon (1969). He reports that:

*"Rhodamine-B and fluorescein are dyes commonly used in tracing flows of surface and ground waters. Concentrations used in tracing are relatively nontoxic to rainbow trout, channel catfish, and bluegills. The 96-hour LC<sub>50</sub>'s of rhodamine-B range from 217 to 525 ppm at 12° C and those of fluorescein are 1,372 to 3,433 ppm. In compatibility tests, we found that neither dye increases nor diminishes the toxicity of antimycin to fish."*

Determining the quantity of dye necessary for successful tracing varies between surface and subsurface systems. For this reason, and also because different dyes are used for the two types of application, surface water and groundwater will be considered separately.

Groundwater

For the purpose of this section, groundwater systems have been divided into concentrated flow and diffuse flow conditions. Concentrated flow is primarily restricted to subsurface channels such as solution channels, fault or fracture zones, or integrated conduits in lava. Diffuse flow occurs in sandstone, sand, gravel, and other similar aquifers. Both concentrated and diffuse flow occur in soluble rock terrains.

Fluorescein is the recommended dye for use in groundwater tracing. If for some reason rhodamine WT is used, the quantity needed will be at least twice the recommended fluorescein amount. If one is dealing with groundwater systems conducive to the use of fluorescein, the quantity of rhodamine WT necessary (as compared to fluorescein) may be as much as ten times greater for a comparable level of detection. Investigators working with rhodamine WT will need to make their own estimates for dye quantities.

Concentrated Flow Conditions

The quantities of fluorescein necessary for groundwater tracing in concentrated flow situations has received some consideration in the literature, but the methods of estimating the dye quantities have major shortcomings. Three methods of calculating dye quantities are the Wilson method (Dunn, 1968), the Cobb-Bailey method (Dunn, 1968), and the Haas method (Haas, 1959). The Wilson and the Cobb-Bailey methods are both designed for surface water use, but have been considered for some groundwater applications. The Haas method was designed for use in cave regions.

Unfortunately, all the above methods greatly overestimate the quantity of dye necessary for successful traces involving large volumes of water, long travel distances, and long travel times. The overestimation of dye quantities

because these approaches are designed to produce a particular concentration of dye at the point of resurgence. Successful dye tracing using activated charcoal packets is more dependent upon the total quantity of dye passing through the packet than on the peak concentration of dye in the water. With this in mind, our approach to estimating dye quantities gives primary emphasis to the total quantity of dye passing through the sample packets.

In one successful dye trace from the Hurrican Creek Basin to Big Spring, Missouri (a straight-line distance of 29 km), we used 2.3 kg of fluorescein; this produced a strongly positive dye pulse at the spring. Using the Wilson method of estimating dye quantities, we would have used 91 kg of dye. The Cobb-Bailey method would have required 20 kg, and the Haas method, 45 kg. We have had many similar experiences where successful traces occurred with significantly smaller quantities of dye than were estimated with the Wilson, Cobb-Bailey, or Haas methods.

Figure 2 shows a nomograph for determining quantities of fluorescein to be used in groundwater tracing where concentrated flow conditions prevail. We have developed the nomograph based on successful dye tracing work done in southern Missouri, and have compared the results with successful tracings in Indiana and Arkansas. In our experience, the nomograph is applicable for groundwater tracing where the following conditions are met:

1. The pH of the water is greater than 5.5
2. Water movement is primarily in subsurface conduits such as solution channels, fault zones, or integrated conduits.
3. Activated charcoal packets are used for collection of the dye.

The fluorescein nomograph in figure 2 can be used to estimate the quantity of dye necessary to produce a strongly positive test with an activated charcoal packet. The empirical equation on which the nomograph is based is:

$$W_d = 1.478 \sqrt{DQ/V}$$

Where:  $W_d$  = weight of fluorescein dye in kg to be injected.  
 $D$  = straight line distance in km from point of injection to the point of resurgence.  
 $Q$  = quantity of flow at the resurgence in cubic meters per second.  
 $V$  = velocity of flow in meters per hour. The velocity is based on the straight line distance between the point of injection and the resurgence.

To use the nomograph, determine values for the factors  $D/V$  and  $Q$ . Place a straight-edge on the  $D/V$  value on the left scale and the  $Q$  value on the right scale. Where the straight-edge intersects the  $W_d$  scale, read the quantity of fluorescein dye needed in kilograms.

The estimation of  $D$  and  $Q$  is simple; the estimation of  $V$ , the mean velocity of the groundwater, is a more difficult matter. In an attempt to help in the estimation of groundwater velocities, we have prepared Table 1 which summarizes groundwater velocities encountered in water tracing investigations in the soluble rock regions of the midwestern United States. The data is drawn primarily from southern Missouri, but we have also incorporated information from northern Arkansas and southern Indiana.



Table 1. Groundwater velocities encountered in water tracing work in soluble rock lands of the midwestern United States. Velocities are based upon straight-line distance between point of injection and point of recovery.

Tracing Distance (km)	Number of Traces	Mean Distance (m.)	Mean Velocity (m/hr.)	Maximum Velocity (m/hr.)	Minimum Velocity (m/hr.)
less than 0.2*	3	110	6.1	8.8	0.7
0.2 to 3.0	5	1,610	10.0	19.7	3.0
3.0 to 65.0**	27	30,000	104.0	230.0	3.0

\*All of these traces were at Blanchard Springs Caverns, Arkansas, where water was successfully traced from a parking lot into the ceiling drippage of the cave. Dye and water were injected in the parking lot drains; the rates of flow of all ceiling drippage zones were less than 0.5 liters/second. These cases involved groundwater recharge; many of the conduits utilized by the water were probably air filled.

\*\*This range in tracing distance is substantial, however, the mean velocity of 105 m/hour is generally reflective of all groundwater traces within this range of tracing distance.

#### Diffuse Flow Conditions

Diffuse flow conditions are common in many aquifers, including those in alluvium. One common situation where hydrologists could use water tracing is in relation to stream or lake contamination from septic fields or pit toilets located in alluvial materials. Based on our experience, fluorescein dye can be used in some of this tracing. Diffuse flow conditions require more dye than is indicated by the nomograph developed for concentrated flow conditions. In the absence of adequate data for developing a nomograph for dye quantities in diffuse flow situations, we tentatively recommend 2.5 kg of fluorescein for distances of less than 50 meters from point of injection to point of resurgence, and 5 kg for distances between 50 and 150 meters. When trying to trace dye into a lake, failure will often result unless the lake level can be lowered in conjunction with the investigation. With a stream or river, a better chance of success exists since charcoal packets can be placed into flowing water to adsorb dye.

# Lost cave painting sees new light of day

By Terry Ingram

THE lost Australian paintings that suddenly see the light of day again never cease to surprise.

Perhaps none of these is more striking than a painting of a cave interior now being considered for acquisition by the Art Gallery of NSW.

*Devil's Coach-house, Fish River Caves, Jenolan*, by Lucien Henry was shown at the (Royal) Art Society of NSW annual exhibition in 1893. Although critically acclaimed, the painting failed to sell (the dark subject matter and the then enormous price of £105 may have had something to do with this), and it has passed down to the present vendor by descent from the son (to a previous marriage) of Juliette Lopes, wife of the artist.

The owner of the painting, Mr P. Estrenaud, of Bondi, Sydney, decided to contact the Art Gallery of NSW, and the

cave for the painting's re-exhibition was immediately taken up by the gallery's curator of Australian art, Mr Harry Pearce — who understandably was fascinated by the kind of mentality that found the cave interesting subject material for a painting.

Only too many artists have painted the Blue Mountains, west of Sydney, but few have painted the mountains "from the inside-out" as it were.

Conrad Martens sketched the Abercrombie, Bombeyan and Bungonia caves when he was staying with the MacArthur family in the 1870s.

Snell did some illustrative woodcut blocks for the book, *The Last 100 Years*, yet but for Miss Florence Fitzhardinge's sister (whom we will discuss later), only that extraordinary person, Mary Edwards, seems to have set down and done a consistent body of work around the caves of Jenolan.

Ironically, considering the

role Mary Edwards played in the court action over Debelle's Archibald prize-winning portrait of Joshua Smith, which she considered a "caricature", Miss Edwards' efforts at pure record were considered by the critics to resemble the abstractions of Kandinsky.

"Provided beforehand with knowledge of the caves themselves, one can appreciate the fantastic lines in Miss Edwards' canvases," the reviewer for the *Sydney Morning Herald* wrote of her exhibition of Jenolan Caves' paintings at the Hotel Australia in May, 1935, "but upon approaching a picture like No 2, *The Gallery*, without having been informed what the subject was, one might be pardoned for thinking he was looking at an abstractionist painting by Kandinsky."

Miss Edwards' experience probably explains why there are so few cave paintings in Australian (European) art:

"During my month and three days at Jenolan, I made about 56 trips into the caves, sometimes ascending and descending thousands of steps a day," she wrote.

"When my load of gear was too much for me, a guide would help me, but there was one never to be forgotten trip out from one of the innermost caves which I accomplished

laden with a large wet canvas in each hand, and my folding easel and heavy paint box tied to my back with string.

"Much exertion underground is somewhat exhausting, and I felt like throwing my burden down a crevasse and abandoning forever painting in general and of the caves in particular."

Her clothes were never quite right (she was either too hot or too cold), and she had problems sustaining herself (a strict rule that food was not to be taken into the caves was occasionally broken), but she described her experience in one of the caves, the Temple of Baal, as one of the richest in her life.

*The Devil's Coach-house, an oil on canvas, 116.2cm by 65.2cm, by Lucien Henry was one of the few successful attempts to capture some of the fantastic character of the caves of Jenolan.*

## TRIP REPORT

CHILLAGOE CAVES, NORTH QUEENSLAND

18 - 19 August 1979

Present: Kevin Ridgeway, Hazel Wilson, Alex Buckley, Mark Hawkes  
(all Cairns CCC) Colin MacDonald (Brisbane) Ivan Desailly, Judi Strickland  
(both Sydney, SUSS).

On returning from our Cape York trip, including a successful drive across the Jardine River (157 metres wide, 3ft 2in. deep), we contacted Tom Robinson in Cairns, just in time to watch him take part in starting and controlling a cane fire on his property. Tom, from Cairns Caving Club, has all the knowledge, information and maps about the Chillagoe region and the new, relatively unfrequented Mitchell/Palmer River region. We found him and another club member helping with the fire (? Danny) to be most friendly and helpful in organising things so that we could join a few other members in a weekend trip to Chillagoe. (Chillagoe is about a 3-hour drive from Cairns).

We found our way to Chillagoe - to the pub first, which was rather quaint and decorated with turtle shells and swords from sword-sharks. Apparently the publican had won a share in \$1/2 million and was elsewhere spending up! Next we headed off to the caver's campsite - following very vivid directions through the old smelter to some big old mangoe trees by a deep narrow creek, very blue and clear and tasting of limestone.

Here we found some SSS members who had been doing some work in the region, but their plans to visit the Mitchell/Palmer had been destroyed by diesel shortages. Both areas are large and the caving club is relatively small, therefore there are good possibilities of finding new caves and surveying them.

The rangers show people through the tour caves (free) and people travelling with us were most impressed.

We made camp and were joined later by Kevin, Hazel, Alex, (Buck), Mark and Colin. Next morning we headed off from the graffiti-decorated roadhouse to one of the many karst towers about 10 miles out of town.

Unfortunately there is other value in the towers besides caves, and mining companies are tearing into them. Apparently they have only attached towers with little cave formation, so far. As soon as the caving club hears that a new tower is about to be mined, they have an all-out effort to find caves in that tower, and along with the National Parks and Wildlife service - fight for the protection of the caves and towers. Unfortunately mining companies money can be stronger.

The caves extend throughout the towers and rarely go below the level of the surrounding plain country.

Access to cave entrances involved climbing over bare limestone which had been weathered until it had formed small sharp ridges.

All the caves were dry and crumbly with powdery dust floors. As you can imagine the rock piles and climbs could be rather dangerous, tending to give way beneath you till you get below the crust. You really had to test out foot and hand holds. The passages tended to be rather roomy with frequent daylight chambers, some of which were very large with small trees and ferns growing there. There was much evidence of past life with small white snail shells and bat skeletons.



The caves we visited were the New Southlander, the Queenslander, Centenary Cave and Crocodile Cave. Many of the chambers or caverns in the area are named with the aid of Tolkein's "Lord of the Rings".

We only spent a short time in the New Southlander, being mainly interested in looking at the Queenslander (as Hazel and Kevin had a map of this cave). The Queenslander is described as a large rambling cave. We spent about 5½ hours, but it would take days to see the whole cave. It has a very interesting passage called the Queen's Bum - a narrow upward-slanting passage beginning about 4½ ft from the floor on a smooth wall with a few badly-placed hand-holds. Some people do this by doing a running dive!

At one stage we followed a system of downward-going passages and came to a damp earth floor. A hole against a wall showed down into a deep clear blue pool from which with some difficulty, Kevin managed to fill his helmet with water for drinking. Apparently water has only recently been found in this cave, so that was quite exciting.

There were some interesting chimneys in the cave including a nice 20 ft chimney, to the exit, with a nasty 30 ft hold below that. Kevin, Alex and Ivan free-climbed and brought a rope to belay the rest of us.

The next day Alex showed us Centenary Cave - a large spacious cave with a beautiful small, blue lake at the bottom of one of the daylight chambers. Here we also found some more bat bones, including some skulls which were about 1 cm. long. We spent about 3½ hours in this cave.

Then Alex, Mark and Colin returned to camp for a swim, while the rest of us continued on to have a quick look at Crocodile Cave. The entrance was concealed, even the way had a rock placed over it. A large fallen stalagmite with a peculiar likeness to a croc head - gives the cave its name. The entrance chamber is particularly well decorated. Access to the next chamber is via an interesting climb up 20 ft of fig-tree roots or a squeeze in a 20 ft chimney. After passing through several large chambers and down a dusty crawl they entered into a noticeably hot, humid chamber with a heavy layer of bat droppings. Evidently there are often baby bats to be seen.

We then returned to camp for a swim - Hazel continued on to the Mitchell/Palmer region, Kevin, Alex and friends returned to Cairns.

We left Chillagoe next morning for Normanton via the extremely bulldusted Burke Development Road - or roads - sometimes we had eight slalom-type tracks to choose from.

We thoroughly enjoyed our visit to the Chillagoe Caves and felt very comfortable with the friendly CCC people. Our thanks especially to Tom, Hazel, Kevin and Alex.

Sorry that this report has taken such a long time to arrive - but travelling has put us in the grips of lethargy.

Jud, Strickland

Present: Mike Lake (TL), Bruce Welch, Paula Welch, Richard Mackay, Mark Twigg, PAUL Mattes Bryan Cleaver, Ian Carey, \_\_\_\_\_ Carey, Colin May, Steve Seward.

We entered Spider Cave in two parties, so as to avoid congestion at Pirates Delight. Bryan carried his wetsuit and 20m of polyprop rope to dive the sump upstream of Pike Lake. Bruce had his camera and tripod while other suckers carried in the survey gear.

Numerous photos were taken and the H.D. was surveyed from the last survey station at Pike Lake to the sump and the down stream rockpile was surveyed. This now gives a total surveyed length of river of over 500 feet.

Bryan found that his wetsuit (short but oversized) was too cold for prolonged immersion, however, he found that the sump does not, as far as he can ascertain, plunge downwards, as previously suspected, but that the roof remains 3-4" below water level, for an indefinite distance.

On the previous trip, Ross Franklin and Mike Lake had crossed Terror Traverse (It's really Dead Simple) to investigate the highest level passage named the Eyrie, which leads off from the Mausoleum. Bruce and myself now rigged a rope across so that Richard would come across.

The dominant speleothems in the Eyrie are shawls due to the development along bedding planes in the limestone. We passed the Eagles Wing, a shawl around 20' long, and the Sharks Fin, another shawl that needs cleaning, and reached the Singing Shawls. These are a collection of long parallel shawls along a bedding plane roof which resonate if you sing a note of the correct pitch. Bruce spent many minutes singing ah, aah, aah, aaah etc....., while Richard went: so, la, ti. do.....

The 3 of us tried to push the rockpile but we couldn't penetrate very far. There are at least 2 streamways in the rockpile but they are too small to negotiate. The rockpile

is is compact, stable and very muddy.

I decided that the only way on was to detrog and push upwards between 2 very long delicate shawls. Bruce and Richard declined to do likewise, and after a difficult climb, in the sense that 1 wrong move would shatter a very long shawl, I reached *an exquisitely decorated cavern*.

A large expanse of beautiful gour pools filled with calcite crystals amongst numerous speleothems, and broken speleothems abound however, most are calcited to flowstone floor. Obviously some earth movement occurred a long time ago. Many columns are fractured or even displaced.

*This beautiful cave* ends in rockpile which is sharp and fractured in appearance and unstable. A dirt aven appears as if it might be the way on and I hope to push this next trip. Coming down from *this* required the greatest of care to prevent the shawls being damaged.

SUNDAY: Briefly, we visited False Frenchmans and the main chamber in Spider (main chamber??) as Steve and Colin had arrived too late on Saturday to do any caving.

The remainder of the day was spent surface surveying to tie in the entrances of Frenchmans, Spider and Ian Carpenter Cave so as to be able to ascertain their speleogeographical relationships to the Hairy Diprotodon.

Mike Lake

JENOLAN TRIP REPORT : SATURDAY 18 - THURSDAY 23 JUNE

Present : (Not all at the same time ) - Mike Lake, Bruce Welch, Paula Guard , Richard Mackay, Paul Baker, Ian Mann, Bryan Cleaver, Ramsey Ali, Martin Smith, David Willoughby, Charles Loxton, Mark Finney, Colin May, Guy Cox.

Saturday 18th: Ian arrived early and took Ramsey and Colin into the H.D. for a tourist trip. Bruce, Paula and Mike searched the Aladdin area for caves that might lead to the downstream rockpile in the H.D. Bruce believes that

Duckleg Cave and J 168 are good possibilities.

Bruce and Peter Campbell had found 2 untagged cave entrances some weeks before near the wallaby enclosure fence high up on the hill. As I was the only idiot in caving gear, I crawled in to find a small cave leading out the other entrance and past the dead wallaby (phow!) Maybe Dead Wallaby (mike's smelling) Cave will be tagged next trip.

Sunday 19th; The H.D. was visited, the purpose being to take photographs so as to be able to put together a slide show for a JCHAPS meeting. I took a quick trip into the Eyrie with a Suunto to check its direction and found it ran <sup>due</sup> East.

I returned to find Bruce and Bryan had built a small dam to divert the water away from a small hole which now is negotiable for a small person in a wet suit.

They had also tried to crack the rockpile and informed me that it was very dangerous. However, I wanted to see for myself so Bruce and I pushed further into the rockpile. Every rock you place your weight on needs to be checked carefully before doing so. We penetrated about 5m to the other side of the point where the water runs under the 2nd boulder. Bruce then continued further (getting soaked in doing so) and found a further 5m of wet crawl through the boulders. He stopped where the water started to get deeper and the passage narrower. A wet suit would be needed to get further.

Monday 20th; Bryan and Ramsey headed off for Mammoth Cave as Bryan wanted to investigate the Can't Get Lost Rockpile which he believes could lead on to more passage. The rest of us went to Black and White Cave where we dug out more rubble. David Willoughby tried to squeeze in, but soon abandoned all hope. I only got as far as the bend. Its a very nasty squeeze but it is definitely possible to negotiate it.

We then went to Mammoth where in the entrance cavern we met Bryan and Ramsey. They could not find the Jug Handle and were hopelessly lost. We led them to the Skull and Cross bones and gave them some maps to follow and said fare well. As fresher Ramsey looked down at the holes beneath his feet beyond Skull and Cross bones and said CENSORED!



As Tuesday would be a H.D. trip I took the others to Lower River to acquaint them with the most upstream sighting of the J.U.R.

We then visited Serpentine Cave, Hennings, and McKeowns Hole where a middle aged woman photographer asked "Do you go down into Tunnels?"

#### Mike Lake

Tuesday 21st; Spider Trip - Present = David Willoughby, Mark Fenney, Martin Smith, Ramsay Ali, Mark Hampson, Paul Baker, Bryan Cleaver, Mike Lake, Richard Mackay (Charles Loxton for first 10 mins).

Since all but the last 4 of the above mentioned had had little or no caving experience, this trip into Spider was relatively slack. (If any trip containing 4 such notorious squeezers can be termed "slack"). We entered in 2 separate parties and after the usual tourist guides, regrouped at the tomb of the unknown Caveman (for chocolate). The party again split - 1 group exploring various holes leading off the main stream way, the other negotiated "Terror traverse" and began work in the Eyrie.

Mike and Richard detoggled at the eastern extremity in order to further explore a passage discovered by Mike some weeks previously. This is a high level passage which contains magnificent translucent stalactites and several thousand ( yes thousand) square feet of incredibly beautiful crystal rivers and gours. This passage terminates in a massive rift which is choked by a very unstable rockpile which would be suicidal to push. Except for photographic purposes, there is no further reason to enter this passage which requires a very small person to negotiate a difficult climb and to let down a tape for others. Mike and Bryan stayed on in the Eyrie to do some surveying while Richard led the rest of the party out. With such a lot of old grannies ( 2 in particular ) in the party, the 40 minute trip out took 4 hours!! Next time I will not wait for them!

To complete a disastrous evening, Richard was accidentally hit over the head with Richards caving light by Richard. The resulting cut necessitated a quick (?) drive to Katoomba Hospital and a free wash by a nurse - who incidentally is the

only person that I have ever met, who is wider than she is tall !

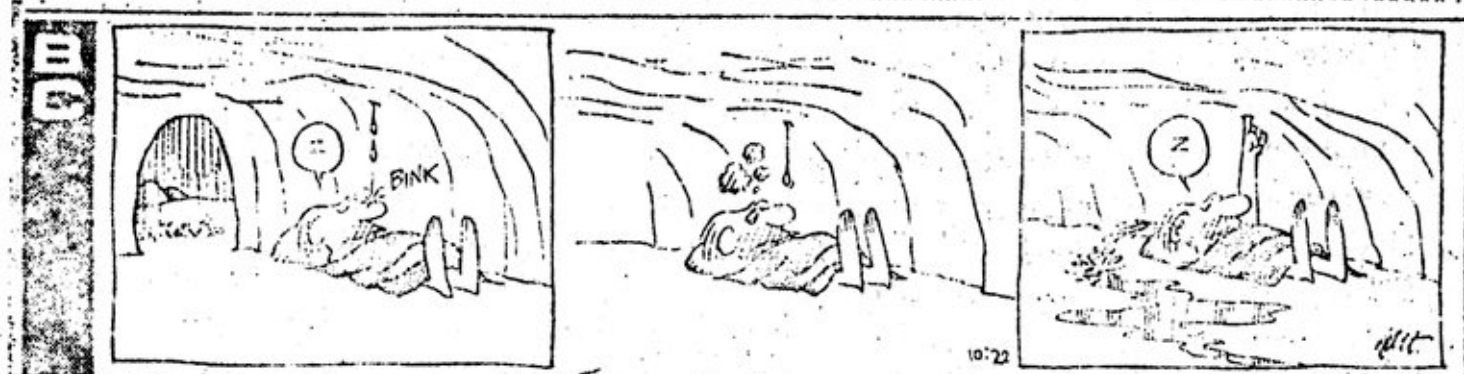
Richard Mackay

Wednesday 22nd: We all needed a slack day so we walked up to the sink. It seems that some freshers had expected to see vast quantities of  $H_2O$  chundering down a great hole. Some of us then walked up to where the river forks. The area there is very shady and quiet because there has not been a plague of phasmids this far up the valley (obnoxious stick insects).

In the afternoon 6 of us did a heavy Temple of Baal tour ( via the Bincomee but not Spider Cave). Purely for a speleological comparison, Baal has the largest helictites by a long way, however, Spider Cave maybe has the best straws and certainly the most beautiful expanse of calcite crystals and the Angels wing and the Eagles wing are incomparable to each other.

Thursday 23rd: We all packed up and left. The only incident was that Richard and I had to walk to the Guides Office while Paul sat on the front of Marks Renault to enable it to get up the hill !

Mike Lake



Present: Richard Mackay, Richard Walker, Scott Powell, Paul Mattes and friend, Ian Mann and Helen, Mike Lake.

We arrived at Wahroonga Rocks early on the Saturday morning and rigged the ropes over the notorious overhang - a magnificent 60 foot of nothing.

Richard Mackay and I had our rope walking systems to tune up; Ian and Helen wanted abseiling and jumaring. Paul and his mate set up their rope about 50 feet away on a nice tame cliff face with no overhangs. Scott, a young member of Richards Scout group, has a fear of heights so Richard gave him some abseiling and jumaring instruction.

Richard Walker, an abseiling instructor, gave us a demonstration of a Geneva Rundown. He used a single piton Brake, on a new Bluewater that was slightly fast. Consequently, the 60 foot was descended in under 3 secs, head first, with him stopping abruptly 1 foot above the rocky ground.

Demonstration number two was performed using a double rope. At the place where he braked the fuzz on my Bluewater is singed!

Ian practised with a sit-stand system using Tony Austins jumar gear; under the impression that he was of a similar size. Legs and arms splayed out uselessly in all directions and IAN PIKED at the overhang - preferring to alight on a ledge half-way up and to dance up from there.

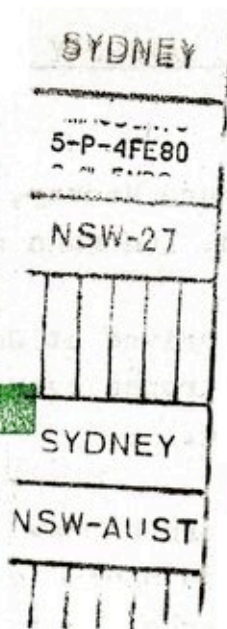
Helen abseiled down a shorter cliff a few times, leaving the overhang to the men. With my system in top tune, I challenged Richard to a ropewalking race. The Result: Richard conceded defeat, but claimed that I had cheated.

The field day was concluded around 4.00pm after a very profitable day for all of us. P.S. Richard has a phobia of scratching his new CM1 - 5000's.

R.M.  
his new CM1-5000's  
MIKE LAKE.



Lumen in Tenebris



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