OOLITE

Journal of the Blue Mountains Speleological Club.
Post Office Box 37,
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Edited and Published by Ian S. Bogg.

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Subscription and Journal exchange enquiries to be directed to the Secretary.

COMMENT - A NOTE TO CONTRIBUTORS

The response to my plea for publishable material has been exceptionally good thanks to the efforts of a few members. I make no apology if this issue appears to favour certain Club members, because it reflects their contribution.

However, this editorial is not a plea for further material as it is directed specifically to the contributors of OOLITE (present and future). The following information warrants some attention and should not be taken as a criticism, but, as a guide for the overall inprovement of our Journal.

References.

References covering material or information source(s) should be cited and listed alphabetically at the end of your article and they must be accurate. The following form should be used in sequential order :- Author(s) Surname; Initials; Publication Date; Title of Article and/or Publication Name; Volume and Issue Number if applicable; relevant page numbers.

Example:

McClure, H. Elliot; 1961: Batu Caves, Mayalsian Nature J. Aniversary Issue, 73-78

Morris, S., 1968: History of Abercrombie Caves, N.S.W. Newsl. Aust. Speleo. Fed. 39 2-6

Similarly, if any manuscript has been adapted, abridged, abstracted, condensed or reprinted from an original article, an appropriate note with reference/source must be made.

Diagrams.

Because of production method and tight budget, it is not possible to have maps, diagrams etc embodied within the text (except for very simple ones within the scope of the editor 's ability). Generally, they will be produced as a photocopy insert page. Limited photoreduction facilities are available for oversize maps etc, which need to be reduced to fit the format size.

All artwork should be prepared ready for production within a maximum size format of 175 x 260mm, and must be black on white for real definition and clarity.

If you cannot print neatly by hand, then the use of stencil lettering templates, typwriter (Clean type face), transfer lettering etc is strongly recommended. Please take care of line thicknesses and size and heaviness of print if diagram or map has to be reduced to the format size.

ALL ARTWORK SHOULD BE BETWEEN STIFF CARDBOARD TO PREVENT DAMAGE.

Layout.

Normally, layout and presentation is at the discreation of the Editor, but, every endeavour will be made to accomodate any specific requests or treatment of material submitted for publication.

A little care and attention to detail and presentation will greatly assist in the production of OOLITE. It also means the difference between a Journal and A JOURNAL - let's be the latter.

☆

Ian Bogg

HELIGOBLINS

A ray of golden daisies o'er the hillside;
A tinkling silver, chuckling, elfin sound;
A scratching little scamper in the moonlight;
A grey-and-crimson feather on the ground.

And caverns filled with phantom-throated echoes;
Each grottoed rock a "wallygoblin's" lair;
A willowed lake of myriad reflections,
And wisps of mem'ry in the list'ning air.

All over all, the hand of untold ages,
Magic and haunting as a bell-bird's chime,
Hovering, spell-like, upon glance and footstep:
Mysterious witchery of change - and time!

The above poem was first published in the book "The Wizard of Jenolan" by Nuri Mass in 1946.

Selected extracts will appear in future issues. Just to wet your appertite, have you heard of "Billy the Bird Woman; The White Star Man; Wallygob; The Cave Brothers; Heligoblins; Mr. Tite; What did the Right Imp say to the Left Imp;....." you will just have to wait and see the next installment.

☆

Ian Bogg.

CAVE FAUNA N.S.W.

Louise & Terry Coleborn.

INTRODUCTION.

This article will be in several parts, and is designed to help give a greater understanding of the life that exists in the caves. When we first start exploring and crawling around in caves, they only appear to be dark lifeless voids, but, with a little patience and time, we find that most caves abound with tiny invertabrate animals.

Part 1, is an introduction to the fauna found in the caves, other parts will deal with the different orders and families that are present in the undergroung paradises we all like to explore.

Caves provide a very unique environment and this is usually divided into three zones :-

1. Entrance Zone: The area around the doline and entrance to the cave.
2. Twilight Zone: Is where some light is present and green plants can still grow.
3. Dark Zone: Is where the light is absent altogether, and is further sub-divided into two zones.
   a) Transitional Zone: A zone which has a daily variation in temperature and humidity.
   b) Troglic Zone: Is where the temperature has very little variation and the humidity is always high.

Each of the zones are divided into areas :-

a) Ceilings.

b) Walls.

c) Floors.

The next section will show the distribution of the cave animals in the above zones.

1. Entrance Zone:
   a) Ceilings: mosquitoes, moths, wasps, flies.
   b) Walls: centipedes, millipedes, geckes.
   c) Floors: snails, millipedes, springtailes.

2. Twilight Zone:
   a) Ceilings: crickets, spiders.
   b) Walls: crickets, harvestmen, millipedes.
   c) Floors: beetles, snails, millipedes, springtails.

3. Dark Zone:
   a) Ceilings: bats, crickets, spiders.
   b) Walls: harvestmen, crickets, millipedes.

Cave animals have different degrees of adaptation to cave life.

1. Trogloxenes: From the Greek words, troglos (cave) and xenos (guest). An animal that habitually enters caves but must return to the surface periodically for certain of its living requirements, usually food. The entrance zone of the cave is usually inhabited temporarily by animals that live above the ground but move into the cave for protection. Bats hibernate in caves continuously during winter. Kangaroos and Wallabies, moths and mosquitoes take refuge in caves to avoid extreme heat, cold or storms. Trogloxenes never complete their whole life cycles in a cave environment.

2. Troglophiles: From troglos (cave) and phileo (love). They usually inhabit twilight or the dark zones. Although this group are regularly found in caves they can and do survive outside of caves provided the environment is moist and dark. There two levels of troglophiles; First level troglophiles are found both inside the cave and can be also found living on the surface. Second level troglophiles are found only in caves but exhibit no morphological adaptations to the environment.

3. Troglobites: From troglos (cave), bios (life). This form live permanently in the dark zone and are endemic to caves. They usually show some form of adaptation, such as reduced pigment, longer legs or antenna. Some have very small eyes and others none at all.

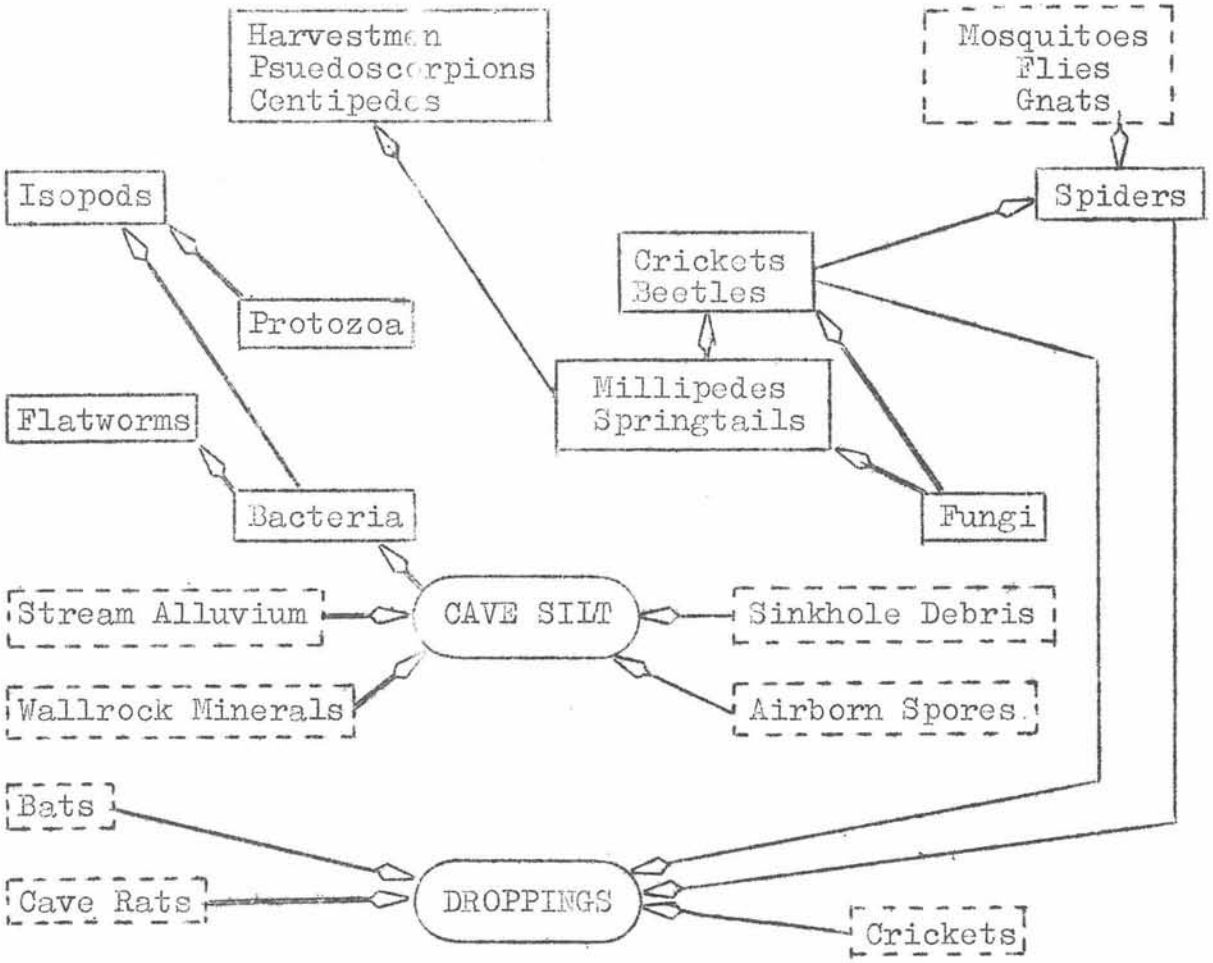
Australian caves have very few troglobites, but are well endowed with second-level troglophiles.

Cave animals like any animal needs food material to continually exist in a cave. No green plants grow in the dark zones of the

caves due to the lack of sunrays necessary to provide the energy required for photosynthesis. Therefore all the nutrient material has to be brought in from the surface. This material may be carried in directly by flowing water and sinkhole debris or indirectly by droppings from animals that feed on the outside but return to the cave to rest. Spores and fungi are carried in by slight air movement and currents and also by the bodies of animals. Organic material is also returned to the cave environment from the dead bodies and droppings of larger animals, eg., bat guano is an important nutrient material in some caves. Thie recycling of material is known as the cave food web.

Diagram 1 below illustrates how cave silt, forms the main basis of food for the smaller cave animals such as millipedes and springtails which in turn provide food for the larger animals such as crickets, beetles and spiders.

The dashed boxes indicate the food is derived from the surface.



CAVE FOOD WEB.
Diagram 1.

References:

Moore, G.W., Nicholas Sullivan, G. : Speleology - The study of Caves.

Mohr., Poulson.: The Life of the Cave

THE FLOYD COLLINS HORROR.

Ian Bogg.

THE STAFF OF THE LOUISVILLE JOURNAL IN KENTUCKY COULD NEVER GET ENTHUSIASTIC ABOUT WORK ON SUNDAYS FOR THAT WAS THE ONE DAY IN THE WEEK NOTHING SEEMED TO HAPPEN. IT WAS JUST LIKE THAT ON SUNDAY MORNING FEBRUARY 1, 1925.

Then a story from a correspondent in Central Kentucky was dropped on the news editors desk concerning a local hick being trapped in a limestone cave. A junior reporter was assigned to follow it up.

THE STORY THE REPORTER SENT BACK HIT THE JOURNALS FRONT PAGE AND SPARKED OF A WAVE OF INTEREST THAT BURST OVER AMERICA FROM COAST TO COAST.

Floyd Collins was a member of a family who farmed in the hills not far from the now renown Mammoth Cave. In 1922 Floyd who was fascinated by the cave discovered the chamber known as the Crystal Cave by accident - he fell into it through a covered hole! After this he spent all his spare time looking for another entrance into the Mammoth Cave complex. In January 1925 he located a fissure at the bottom of a sand pit. Hoping this might lead into the cave complex he began worming his way down this meandering rocky corridor. He had gone almost 60 metres when suddenly a great rock fell from the roof pinning his legs. Not only was his legs pinned and burning with pain, but the fissure was so narrow that his arms lay by his side and he was barely able to move them.

It wasn't untill the next day after spending a painfull night with freezing water dripping on his face that he was found by a 14 year old boy searching for the overdue Collins.

"Git my brother Homer" Collins gasped.
"Tell him for Pete's sake to git me out of here!"

Homer Collins was a big man and it took him some time to reach his brother where he fed him bread and bacon, spooned coffee into his mouth and made a hessian pillow for Floyd. Homer assured Floyd that he and some neighbours would soon have him out. By dusk 20 men with digging tools were in the sand pit unsure what to do. Finally they looped a rope around Floyd's shoulders to form a harness and pull him out. At the first tug Floyd's agonising screams were so horrifying that Homer cut the rope.

The next tactic was to chip away at the passage walls in an attempt to widen it. But only one man could work at a time on the hard limestone.

Floyd had been in the cave some 40 hours when the young reporter arrived on the scene and slithered down to him. Floyd in a dreadfull state managed to mumble "Sometimes I pray, sometimes I holler, sometimes I jest lie and think how good the sunshine would look. I sleep a bit and I dream of white angels bringing plates of sandwiches. I don't feel me legs no more. I guess they must be busted proper."

So sentational were the press reports that sightseers, pressmen and newsreel cameramen began arriving, which became so much of a problem that Governor Fields in Louisville sent a detachment of militiamen to control them. The track from the nearby Cave City was soon congested with motor and horse drawn vehicles of all descriptions. The gouhls attracted by one mans' agony passed the time gorging on hot dogs, guzzling liquor and patronised hastily erected sideshows.

Even Floyds' father got in on the act by selling literature advertising the Crystal Cave which his trapped son discovered. The scene above the cave illustrated human nature at its worst.

Meanwhile Floyd Collins still able to take a little nourishment made a plea that his legs be amputated. His family offered $500 to any surgeon who would do the job - a doctor from a Chicago hospital (Dr. Hazlett) responded and eventually reached Collins, but amputation was impossible because he could not reach or get his hands below the now almost unconscious mans' shoulders.

On February 14 a further mass of rock fell from the corridors roof completely cutting off Collins from the outside world. When this news broke more sightseers began pouring in adding to the carnival atmosphere and hindering rescue activities. The Kentucky Asphalt Company prepared and sent a team of shaft sinkers, the Nashville Railway Company prepared a special train with 100 men to go with it, a Professor of Geology from the Bureau of Mines, prophets and spiritualists, heavy trucks laden with drilling and hoisting machinery, tractors carrying dynamite were all heading to the rescue site. But it was all useless.

By February 8 over a week after Floyd was trapped more than 10,000 people swarmed over the Mammoth Cave area where hamburger vendors were selling their products at highly inflated prices, while in Cave City bedrooms that normally cost 75 cents a night were now marked up to $3. The local post office could not handle the thousands of fan letters addressed to Floyd Collins. Girls offered to marry him in the cave and vaudeville entrepreneurs wanted him to sign contracts with a pen held in his teeth.

After three days a rescue shaft was only 17 metres deep due to the unusually hard limestone. Explosives could not be used for fear of further cave ins. Work continued for another six days while news of the rescue attempts made headlines right across the country with the circulation of a New York afternoon paper leaping by 60,000 copies during the time Floyd Collins was underground.

Came February 16, the miners had broken through to find Floyd Collins had died 24 hours earlier from starvation!

The final curtain had not yet come down on the drama because the body could not be moved without amputating the legs. The body was left where it was and a funeral service was held at the mouth of the tunnel. However a few months later Homer Collins hired miners to remove his brothers corpse.

Then as a final indignity to the dead man, his remains were placed in a coffin with a glass lid and displayed in the Crystal Cave which had not been attracting tourists. In 1929 the coffin was broken open and the body stolen and what happened to it after that is unknown.

A few more dollars were to be made from the death of Floyd Collins as a songwriter composed the words and tune of the ballad "The Death of Floyd Collins" which for a while was a best selling gramaphone record.

ABSTRACTED from the Daily Mirror Historical feature entitled "US Mob made Fiesta of Mans Agonising Death." September 7, 1978.

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CLIEFDEN CAVES ACCESS

CONDITIONS OF APPROVAL.

1. Maximum of twelve cavers on a trip to Cliefden area. Names of the cavers plus any surface party are to be provided.
2. Total party in any one cave at any one time be no more than six and not less than four.
3. No more than two inexperienced cavers are permitted on each party.
4. A freshers trip to the area requires special permission.
5. The A.S.F. Code of Ethics will be observed at all times.
6. The party may have more than one trip leader providing that they have been nominated on the permit.
7. A trip leader must be with an underground group at all times.
8. The trip leader's written report is the sent to O.S.S. within 21 days of the trip.
9. Two copies of any map, charts or written articles are to be supplied free of charge to O.S.S. within 21 days of completion.
10. The Country Code will be observed.

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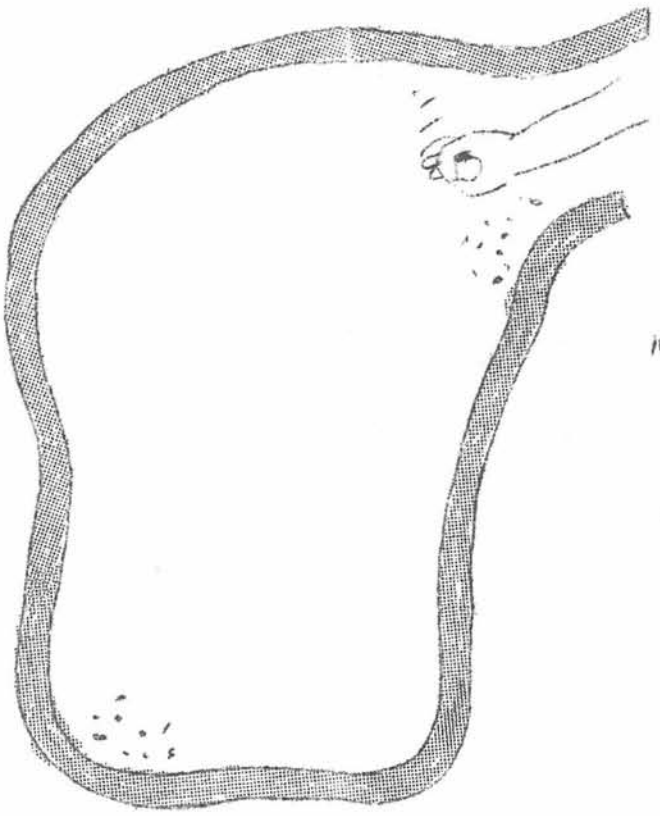


"EVERYTHING'S A-OK, FOLKS!"

Continued on Page 24

FROM THE LIBRARY - SELECTED EXCERPTS

L. Coleborn.

Speleo Spiel: No. 166, May, 1981

An interesting Trip Report is featured in this Journal on the bottoming of Tassie Pot - 231m.

Down Under: Vol 20, No.1.

Reprint of Safety and Training - Part 1 which appeared in an earlier Volume. The article deals with safety in caving, the A.S.F. Code of Ethics, Rope and Ladder care, a comprehensive section on Karabiners and their use and missuse. It also includes a section on knots with diagrams.

Anyone interested in the different methods of tying off effecting the breaking strain of ropes will find the article on "A Tension Headache" by Tony Howes, very enlightening.

Cave Exploration Group of S.A. Inc.: Vol.25, No.4 - March, 1981

More on excavation of Henschke Fossil Cave by Neville Pledge. This Journal includes a review on a book called "The Jenolan Caves" which was printed in 1889 - of particular interest is the old photos of Jenolan.
And yet another article on the care of equipment.

Nargun: Vol.13, No.1

The article "The Tension Developed During a Fall On a Rope" - deals with method of calculating the energies and tensions involved during a fall. This article is very good reading and very comprehensive.

J.S.S.S. Vol.25, No.4, April 1981.

Yet another new abseil device - this one is called "The Thumb Screw" and is designed for canyoning and is compact and light weight. The article deals with its construction and also includes its field test and evaluation by A.S. White.

Equipment review - Maillon Rapides. Its uses instead of karabiners. It includes sizes, shapes which it can be purchased It has a very comprehensive section on its advantages and disadvantages. Also a comparison chart, Maillon Vs Karabiner, this includes cost, strength, weight and gate opening. Cost is certainly a big factor - a large Maillon is nearly $6 cheaper than Stubai big D, and small Maillon Oval is $5 cheaper than Stubai Oval.

Grothadda: Vol.5, No.3

This Journal includes a trip report on a dig at Bungonia and the fencing off of this dig and B71, B72 which is on the property of B. Welch.

A canyoning report on Wallara Falls and Kalang Falls at Kanangra Walls, also a report on an orienteering night to give members an excerise in compass and map reading is included.

Descent: No.5

Once again the A.S.F. Safety Rules for Abseiling.

Also a reprinted article by G. Thompson on Australian Karst and Coservation. This article has a lot of interesting points such as the value of caves, the cave ecosystem and the conservation problems facing Australian Caves. Anyone interested in the conservation of our caves will find this article very comprehensive. It includes areas such as Cliefden, Borenore, Wee Jasper, Abercrombie, Bungonia, Wellington, Texas and Mt. Etna Caves and the threat of mining, flooding etc. which these areas have faced a some time.

Lastly an article that will interest all Cliefden fans. A MAJOR NEW FIND from a dig at the end of the Laurel Room - 30/11/80. The new section of cave found contains a large column, masses of straws, many full length from ceiling to floor - crystalline flowstone which has a beautifull collection of oolites at its base. Both in the extension and Main room of this new find, helictites of infinite variation, crown the chamber. This new section was gated by O.S.S. on the 12/80.

BLUE MOUNTAINS SPELEOLOGICAL CLUB

PO BOX 37
GLENBROOK 2773

CONTACT LIST
1981

Anderson J	PM	Rodway Ave, KOTARA STH 2288
Baker L	FM TL	PO Box 44, ENGADINE 2233 (02) 520 4224
Baxter G	PM	66 Mimi St, OATLEY 2223 (02) 579 1267
Bogg I	FM TL	29 Scott St, SPRINGWOOD 2777 (047) 512838
Brown K	PM	97 Glenbrook Rd, BLAXLAND 2774 (047) 395885
Brett R	PM	Terrace Rd, FREEMANS REACH 2756 (045) 796065
Charley Jack	FM TL	Mt Tomah, BILPIN 2758 (045) 672124
Charley Joel		Mt Tomah, BILPIN 2758 (045) 672124
Coleburn L	FM	15 Springfield Crescent, SPRINGWOOD 2777 (045) 702187 (W)
Coleburn T	FM TL	as above
Cummings G	FM TL	1 Kipara Crescent, WARRAGAMBA 2750 (047) 741202
Ellis T	FM TL	36 Western Ave, BLAXLAND 2774 (047) 391528
Ellis R	PM	as above
Fairweather A	FM	c/- Abercrombie Caves, TRUNKEY CREEK 2741 T/C 41(M)
Fairweather G	FM	as above
Gabb W	PM	Lot 21 Oakes Rd, WEST PENNANT HILLS 2120 (02) 872 2731
Gardiner D		8 Russell Ave, FAULCONBRIDGE 2776
Goodwin E	PM	5/85 Albert Ave, CHATSWOOD 2067
Jones P	PM	2 Penelope Cres., CRANEBROOK 2750
King E	PM	26 Berryl St, WARNERS BAY 2282
Knox G	HM	c/- Abercrombie Caves, TRUNKEY CREEK 2741
Martin S	PM	7 Penelope Crescent, CRANEBROOK 2750
Matthews E	FM TL	c/- Nepean High School, Great Western Hwy, EMU PLAINS 2750
Nelson G	HM FM TL	PO Box 147, NARRABRI 2390 (067) 1440
Olsen C	FM	2/27 Darley St, KATOOMBA 2780 (047) 823350 (W)
Ozanne K	FM	42 Meeks Cres., FAULCONBRIDGE 2776 (047) 511547
Powell G	FM TL	37 Frederick St, VALENTINE 2280
Richards B	FM TL	c/- Guides Office, JENOLAN CAVES 2786 JC3(M)
Sammut P	FM	Lot 3 Stahls Rd, OAKVILLE 2765 (02) 6271602
Sanderson R	FM TL	71 Camp St, KATOOMBA 2780 (047) 823350
Sinfield P	PM	c/- L Baker
Skinn B	FM TL	4 Macadam St, PAGE ACT 2614
Skinn C	FM TL	as above
Tereszkun N	PM	29 Byrne St, LAPSTONE 2773 (047) 394017
Thomson R	PM	4 Penelope Crescent, CRANEBROOK 2750

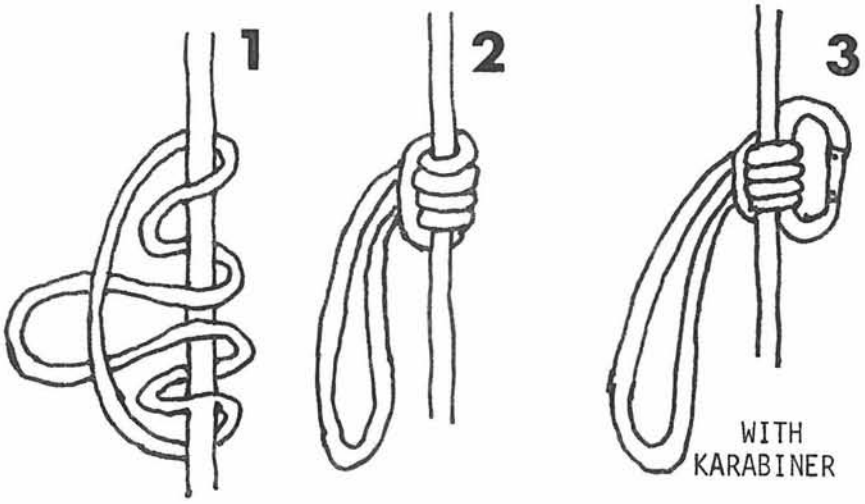
TAPE ETRIER.

DIAGRAM A.

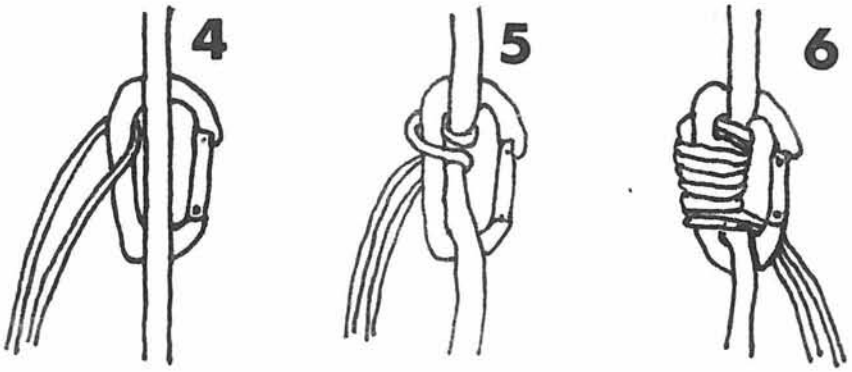
FROST KNOT.

DIAGRAM B.

PRUSIK KNOT.



BACHMANN KNOT.



TECHNIQUES TECHNOLOGY

USEFUL CLIMBING AIDS for CAVERS

Terry Coleborn.

PRUSIK KNOTS.

The Prusik Knot was invented by Dr. Karl Prusik, and was originally used in the repair of violin strings. It was later adapted by its inventor to climbing ropes, a purpose for which it is aptly suited.

1. Basic Prusik Knot.

   It is simple and comparatively inexpensive. However, it may prove to be hard to move on a wet rope or after it has been subjected to a heavy load.

There are several variations of this knot which have proven mote effective.

2. Basic Prusik Knot with Karabiner.

   The addition of a karabiner as shown in diagram 3 helps to alleviate the problem of the basic knot.

3. Bachmann Knot.

   This knot is easily moved when the load is removed and clamps immediately when the load is re-applied. The knot is tied as shown in diagrams 4 to 6, and the friction is controlled by the number of turns around the karabiner and rope,

THE ADVANTAGES OF THESE KNOTS ARE THAT THEY ARE READILY MADE FROM AVAILABLE MATERIALS AND ARE UNLIKELY TO FAIL DUE TO MISSUSE OR INEXPERIENCE.

Reference:

Scott, Doug, Big Wall Climbing.

TAPE ETRIER.

This is a pratical, easily carried device that can (if necessary be made on the spot from a suitable length of tape or tapes.)

The Tape Etrier is constructed from 25mm (1") stiff webbing approximately 7 to 8 metres in length.

Construction.
Join the ends with a Frost Knot as shown in Diagram B, making the loop just large enough to take a karabiner and the second loop. Tie the foot loops using an Overhand Knot making one

side longer to keep the loop open. The loops can be positioned either all on one side or alternating.

The second loop is constructed from 12mm ($\frac{1}{2}$") webbing approx. 2 metres and is placed through the karabiner loop and the ends secured with a Tape Knot. The Overhand Knot and the Tape Knot are positioned such that the loops are the same size as the loops on the Etrier. See Diagram A.

AFTER USE THE OVERHAND KNOTS MUST BE CHECKED AS THEY COULD SHIFT.

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TRIP REPORTS! MEANINGFUL SUGGESTIONS

Louise Coleborn.

We all have trouble writing Trip Reports, there is always the problem how to fill up the page without information to include in it.

But, if a little time is taken and given our full attention, we could all write an interesting report, even if we have already visited the cave area a dozen times before.

Firstly, we will start with Karst :-

Karst is a name used for the surface terrain. Every area we visit has a specific Karst Feature. Some of the common and not so common Karst Features are

i) Entrance.

ii) Arch.

iii) Bridge.

iv) Blind Valley: A valley that is closed abruptly by a cliff etc.

v) Doline: A Karst, dominated by closed depressions.

vi) Cone Karst: Usually tropical and is dominated by projecting limestone rather than depression.

vii) Tower Karst: Cone Karst where the residual hills have a very steep or overhanging sides.

viii) Karst Window: Depression revealing an unroofed part of a cave or subterranean river.

ix) Polje: Large closed depression with flat bottom. Syn with interior valley.

x) Rising: Emergence, exsurgence, resurgence eg. spring.

xi Stream Sink: Where surface stream dissapears underground.

xii Tufa or Travertine: A spongy calcium carbonate deposit from springs etc.

xiii Uvala: Large closed depression usually having other smaller depressions within its rim.

Now we have the Karst Features, and one of the above should describe the surface terrain of the cave area visited.

Now for the cave itself. Always include the name and number of the cave if known. If no name or number known, then include a general description of the area where the entrance is located. The next heading we consider for our report is the entrance.

What type of entrance - Is it vertical or horizontal and whether it is a walk in entrance. Has it a perennial / intermittent stream and if so, is it flowing and in what direction - inflow of outflow

Next include the type of rock, particularly if it isn't limestone. It could be any of the following:- Marble, Dolomite, Basalt, Granite, Gypsum, Lava, Mudstone or Sandstone. Also state if it is a sea cave, lava tunnel, rock shelter etc.

Development of the cave is one of the most interseting points in any report and in most cases would be the bulk of the report.

Firstly we ask ourselves is it active - has it a stream flowing through it. Then we consider the type of passages - Does the rock exhibit a rounded, sculptured appearance - if so then it was probably formed by water below the water table and known as Phreatic Passage. Passages formed by seeping or percolating water form Vadose Passages and differs in shape.

Next, is the cave basically horizontal or vertical. Has the cave low or high level passages and if so, are they interconnecting. Always include all avens or sumps in the report as they could be leads to lower or higher sections of the cave. Include the water level in all sumps as this can provide good reference information.

Decoration is next after development. Has the cave extensive decoration, unusual decoration or poor decoration. Always include any damage and to what degree eg, complete, some, little. The report how the cave was damaged, whether by breakage, marking, muddying, rubbish etc. If the area is extensively decorated and any exploration would mean that the formations getting muddy then the report should contain a request for future explorers to take a change or several changes such as socks, cloths, overalls etc.

Hazards are next. However small or minor they should be listed as it could save some ones life in future trips. Such things as snakes near or in entrances should be recorded as quite often they spend a lot of time in that place, eg EB1, Marble Cave, a

snake on several occasions has been seen sunning itself on a balcony just inside the cave. Other hazards are deep holes in stream passages, sumps that are likely to rise quickly, and any caves that flood quickly after heavy rains. Any tight or difficult pitches should be included in the report. Any foul air encountered should be included with location and its affect on any members of the party.

A report should include any difficulties encountered. Such things as unstable rockpiles or loose stones or rocks on pitches could be a hazard to parties at later date. If a cave has an extensive area of tight squeezes it is always wise to include these too. Other things not so common with the caves we visit but would be wise to record are duck unders, any place where full immersion is required, or where the roof comes down to water such as in a sump.

Cave environment is another section that could be included and such things as dust, dampness and humidity should be taken into account.

Lastly any cave life seen, even if only a frog at the entrance or blowflies in the first chamber. Then include the cave contents, waterfalls, bones, lakes, fossils etc.

To finalise the report, list the prospects for further trips including detail of such things as draughts, possible digs, or difficult leads not investigated.

SO LETS SEE IF WE CAN'T ALL IMPROVE OUR TRIP REPORTS!

RARE PAINTINGS FOUND

More than 200 cliff-side paintings, believed to be several thousand years old, have been foundby an archaeological survey team along the Mekong River, 560km north-east of Bangkok.

The cliff, about 50m above the Mekong River, contains a series of prehistoric paintings along a 200m stretch.

Figures depicted include, fish, elephants, unidentified animals, people, geometric and other objects.

THE SUN, Tuesday, May 19, 1981

BON VOYAGE

Ted Matthews left Australia in early June for five months of tripping around the globe. Apparently nothing planned out specifically for an itinerary. Teds as free as a bird.

Bon voyage Ted - see you in November with report!

CLIEFDEN - NUMBERING & NOMENCLATURE -

The ollowing list has bee reprinted from Descent, No.4, 1979, the Journal of the Orange Speleological Society

NO.	CAVE NAME.	NO.	CAVE NAME.
1	Main Cave.	46	CL45.
2	Murder.	47	CL1 (Lower Entrance).
3	Boonderoo.	48	-
4	Trapdoor.	49	-
5.	Taplow Maze.	50	-
6	Island.	51	CL50.
7	Gable.	52	-
8	Transmission.	53	-
9	Wareemba.	54	Kim's Crack.
10	Lock	55	CL6.
11	Stable.	56	-
12	CL2 (Daylight Hole).	57	CL6.
13	Yarrowigah.	58	CL6.
14	Blowfly Hole.	59	-
15	The Deep Hole.	60	-
16	Alladins Cave.	61	-
17	-	62	-
18	-	63	'Orrible' Ole.
19	Eyrie.	64	Noonameena.
20	-	65	Tet-Anus.
21	-	66	Frog Hollow.
22	-	67	Carripan.
23	-	68	CL11.
24	-	69	Mallongulli.
25	-	70	CL69.
26	-	71	-
27	Kelly's Cave.	72	Daveys Ck. Cave.
28	Warrigal.	73	Kalimna.
29	Tiddalick	74	-
30	CL10.	75	-
31	-	76	Skull.
32	Casuarina.	77	Sunset Strip.
33	CL32.	78	-
34	-	79	-
35	-	80	-
36	Petes Pit.	81	-
37	CL32.	82	-
38	-	83	-
39	CL13.	84	Sementite.
40	CL32.	85	Kave.
41	-	86	-
42	Burramburanga.	87	Gendarme.
43	Nibican.	88	-
44	CL42.	89	-
45	-	90	Swansong.

NOTE.
The spelling of the cave names are in originality.

BOOK REVIEW

BUSHWALKING in the BLUE MOUNTAINS.

AUTHOR: Greg Powell.

Ian Bogg.

PUBLISHED: Rigby, 1980. $7.95 retail

TECHNICAL: 143 pages; 20 maps and diagrams; 12 colour and 14 black & white plates.

When Greg first mentioned the fact that he was writing a book on bushwalks in the Blue Mountains, my immediate reaction was to say

"It's been flogged to death Greg, there are many books and guides on the subject already, no one will publish it."

To which Greg replied,

"I know that, but my book will be different as it has not been done beforein the manner that I have undertaken."

"Yeah, yeah " was my cynical reply, "Let's wait and see!"

I was not sure wether Greg was writing a bushwalking guide or a tourist guide, or a history book or a safety outdoors manual or a biography or a guide to the caving areas of the Blue Mountains - whatever.

Wait and see I did.

Much to my surprise, early one Saturday morning late last year we were awoken by a knocking on the front door, and upon opening, I was confronted by a human smiley (Greg with a smile that would put the Chesshire cat to shame) and in his hand (yes you guessed it) a proof copy of his book.

"Ya dunit - good onya mate" was all I could say.Talk about putting ones foot in ones mouth; eat humble pie. You ever know the feeling. It was many months later before I managed to secure a copy. I didn't get an autographed freebie (For review purposes) and I couldn't buy it - it was either not in stock or just sold out. Eventually I managed to purchase a copy which at $7.95 I felt was overpriced, initially anyway. Maybe Greg is laughing all the way to the bank $$$c$$$$$$$$$$

Levity aside,

Ostensibly it is a bushwalking guide if one takes the covers literally, but, the contents differ greatly from the orthodox or traditional bushwalking guide. What Greg has managed to

achieve successfully is a coherent overlay of select walks suitable for the ardent bushwalker or day-tripper with a perspicuous historical exposition of the trials, tribulations, and exploits of the early pioneers and explorers of the Blue Mountains region.

The walk titles are enough to stimulate ones immagination such as "Into the Tangled Ravines"; "Whale Boats along the Grose"; "With the Duffers on the Cox's"; "Kowmung Country - Last of the Wild Rivers" etc. One wonders what thoughts must be conjured up in the minds of the readers with these titles before they actualy read the text. Apart from the narrative, each walk is accompanied by a clear, concise map, and is further supplemented by appropriate diagrams and pictures throught the book.

Anyone who reads or eventually uses the book will "step back in time" or "tread in the footsteps" of our early pioneers and explorers. As greg points out the modern-day walker is much better equiped and does not have to suffer the hardships and privations that the early explorers endured, and is therefore in a much better position to appreciate and understand more fully their courageous attempts.

Throughout the book, a number of subtle messages pervade and quite obviously reflect Gregs' tenets towards conservation, bush safety, leadership and preparedness. These points and many other aspects are thoughtfully covered in chapter 10, "Filling the Gaps", which again is supplemented by useful contacts, maps and references. Somehow, I cannot quite justify using white paint to mark exits or tracks.

What is far more clearly evident to me in reading the book, which I found hard to put down, is the fact that Greg exposes himself as a writer with a fondness and an appreciation not only for his native country, but more particularly our Blue Mountains, and its history, and as a person who has a high regard and respect for the exploits of our early pioneers and explorers.

☆

ABSEILING A HISTORICAL NOTE

Terry Coleborn.

According to W. Hutton's "The History of Derby", published in 1801, Abseiling was developed in the Middle Ages by jugglers in Germany who used to descend from church steeples for money.

Such a demonstration occured in Derby during the October of 1732. It was performed by a man called Chapman, who was described as "A small figure of a man seemingly composed of spirit and gristly."

His rope was fixed at one end to the top of All Saints Steeple and the other at the bottom of Saint Michaels, a horizontal distance of 80 yards, thus forming a very steep incline plane. His security (for want of a better word) consisted of a breast plate of wood with a groove to fit the rope, and his own equilibrium.

The technique consisted of sliding down on his belly with arms and legs extended. The descent probably took no more than 6 to 7 seconds, during which time he fired a pistol and blew a trumpet. Although he succeeded at this showing he fell soon after at Shrewsbury and lost his life.

HONORIFICABILITUDINITY

A member of the staff of the Department of Tourism, the Superintendent of Wombeyan Caves, Mr. Clyde Stiff, has been awarded the British Empire Medal.

Clyde Stiff was appointed as attendant at Wombeyan on January 16 1948, and then became caretaker as from February 4, 1948, after having been employed as an assistant guide at Jenolan Caves from December 19, 1946.

He has remained in charge of the Wombeyan Caves Reserve since his appointment as caretaker, a period of more than 32 years.

On November 20, 1964, his position was officially designated as Superintendent Wombeyan Caves.

In his 32 years at Wombeyan, Clyde Stiff has faithfully carried out not only his routine duties but has been personally responsible, with few staff, for the progressive development of the Wombeyan Caves area.

He has contributed to the significant improvement of the caves system, with the installation of walkways, steps, safety railings and illumination, and recently the development of the first "self-guided" tour operated by the Department.

He has also helped considerably with the development of the camping and caravan park, and has been to a large extent responsible for the growing population of Wombeyan as a tourist resort for a day visitor and for campers.

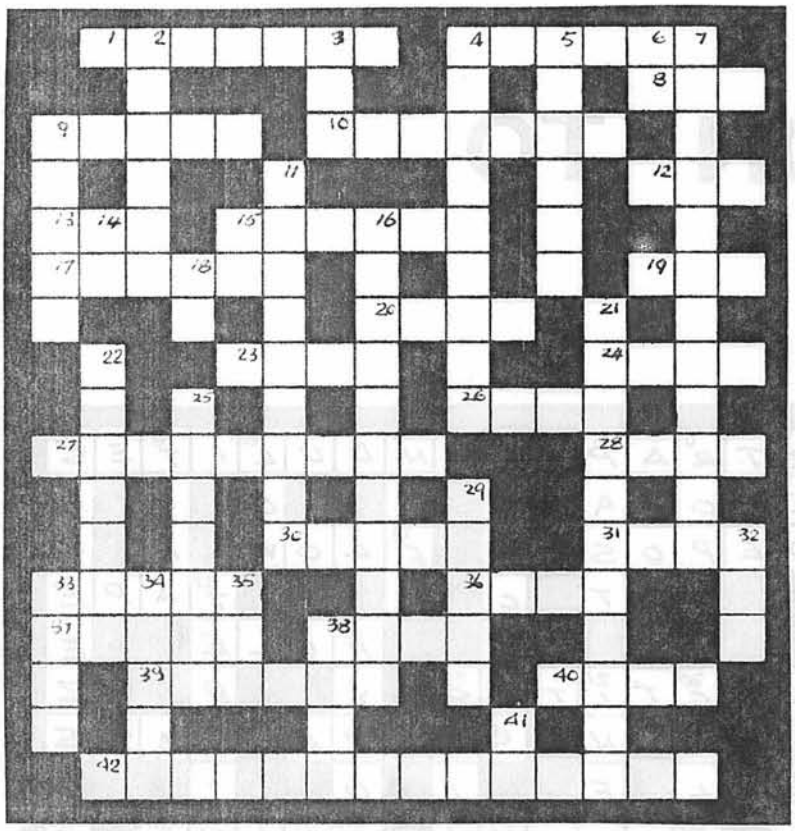
SROGWORDS

Well, how did you enjoy SPROGWORDS No.1. As I said you may find them easy or you may find them hard, or didn't you put pencil to paper.

The solution to SPROGWORDS No. 1 can be found on the back of SPROGWORDS No. 2. I trust you find No2 as interesting as NO1.

FOZZIE.

Fozzie's 'SPROGWORDS' No.2



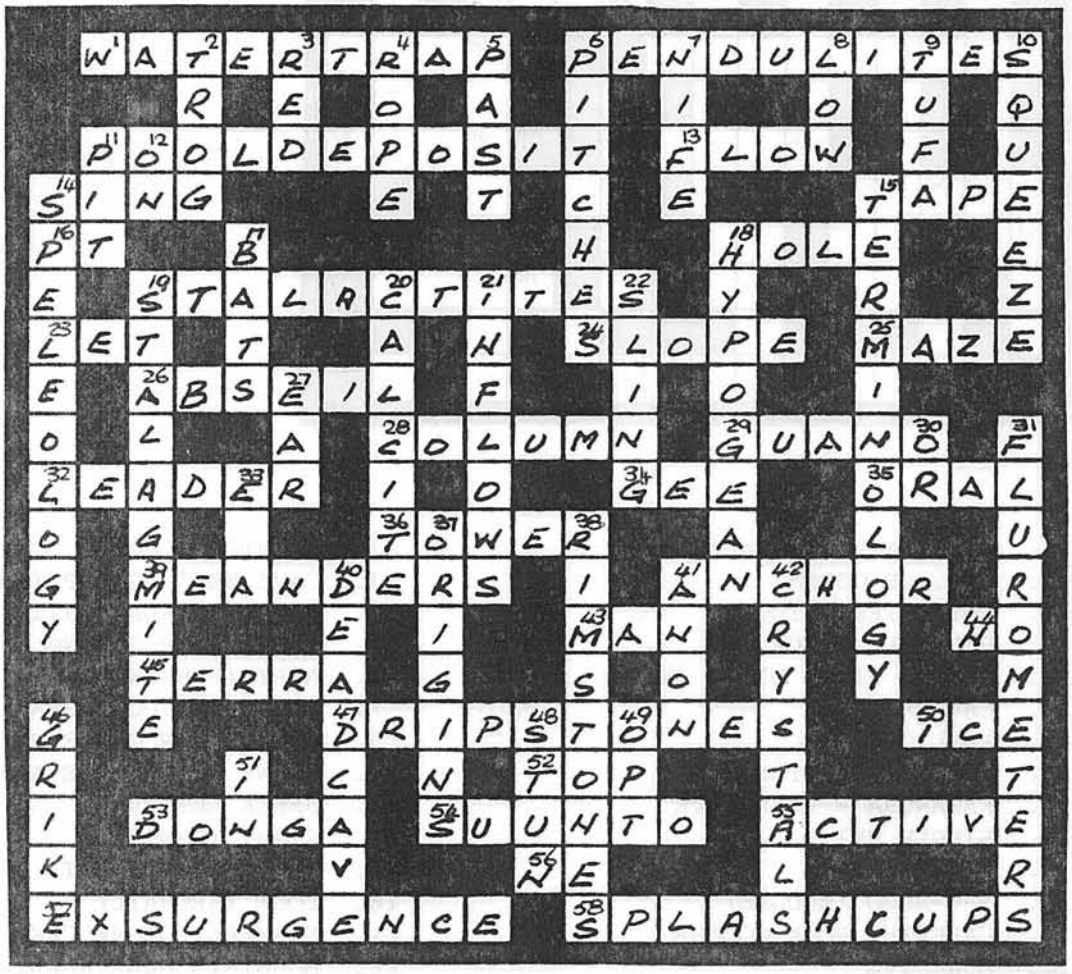
SOLUTION IN NEXT ISSUE

1. GIPPSLAND CAPE AREA
4. S.E. OF COOMA
8. CHIROPTERA RIDGES
9. BELUBULA GROUP
10. BORDER RIVER DIST. (VIC)
12. CAVERS LIMB
13. PUBLIC HOUSE
15. NEAR WELLINGTON
17. KANANGRA - BOYD CAVE
19. SINGLE UNIT
20. MINERAL
23. ----AROO (MUDGEE)
24. CAPERTEE ROCK COLOUR
26. ADHESIVE
27. MOON CAVE LOC'N
28. CARTOGRAPHY AID
30. FLAT FRUIT TREE
31. CLEFT OR FISSURE
33. DRIED PLUM
36. DESICCATION
37. TREE
38. NEAR LAKES ENTRANCE
39. HUGE SERPENT
40. EAST OF ARMIDALE
42. PERSONIFIED BRITAIN CRK

2. LANNIGANS HOME
3. CAVE EXP'N GROUP (ABBR)
4. MACLEAY VALLEY SITE
5. CREEK NEAR COLONG
6. AWAY (PREFIX)
7. IN BURRINJUCK AREA
9. ROCKS NEAR CANBERRA
11. SNOWY RIVER CAVE AREA
14. GREEK LETTER
15. START (SYNOM)
16. NTH QLD DISTRICT
18. LOOK (ARCHAIC)
21. FORMERLY GROVE CRK.
22. MOUNTAIN NEAR WARRICK
25. PASS AT TIMOR
29. U.S. STATE (QLD)
32. NUMBER PLATE
33. BEYOND IN TIME
34. CAVE LEVEL
35. SUFFIX
38. 38 ACROSS
41. NSW TOURIST AREA (ABBR)

CLUE: EAST AUST. CAVE AREAS

SOLUTION TO



Fozzie's `SPROGWORDS' No. 1

FINANCIAL STATEMENT.

12 Months to December 31, 1980

	$	$
Balance brought forward 1979		
Building Society	319.24	
Cash at Bank	139.03	
		458.27
Income	1278.63	1736.90
Building Society Interest	22.05	1758.95
Less Expenditure	1314.49	
Withdrawal from Buil. Soc	300.00	
Expenditure	1.25	
Adj. Income	5.75	
	1621.49	137.46
Building Society Balance	41.29	
Bank Balance as per statement	103.17	
Less ?½S Cheque Nod. 892	7.00	
BALANCED CARRIED FORWARD	137.46	

For detailed explanations re the above statement, members should contact the Hon. Treasurer.

Detailed audited accounts are held by the Treasurer.

SALE

CLOTH BADGE: B.M.S.C. Shield - Blue on White.		$0.50	each.
WOVEN NAME TAPE: B.M.S.C. - Red on White.		$0.20	pair.
CAR STICKERS: Passport To Adventure.		$0.60	each
	or	$1.00	two
CAR STICKERS: B.M.S.C. Shield - Reflective.		$0.50	each.
METAL BADGE: B.M.S.C. Shield , Club Colour.		$1.00	each

STOCKS limited

MONEY SAVERS get yours NOW!

BARGINS GALORE

WHILE STOCKS LAST.

See Graham Cummings - cash sales only - NO CREDIT.

"THIS IS A HELL OF A WAY TO SPEND A MONDAY!".

HIGH EXPECTATIONS

A HAPPY ENDING or no more caving Brian

CONGRATULATIONS

BRIAN and CAROL SKINN

on the birth of their daughter on the 4th. May, 1981.

B.M.S.C. welcomes its first true and real sprogette

LARISSA JANE SKINN.

JACK'S JOKES.

△ A newsletter reported a party held by an Auditors Association and commented. "They only invited people who count!"

—

△ A Librarian who wanted to grow a few herbs planted seeds in a window box. Asked how she would know which was which in such a small place, she replied, "I planted them alphabetically."

—

△ Bald man to his son: "Admire the foresight of nature, which removes a man's hair at that point when he begins to tear it in despair at the memory of his youthful folly.

—

△ On a bank managers' desk: "In this office the word NO is a complete sentence."

—

△ In a gift shop window: For a man who has everything: A calendar to remind him when the payments are due.

—

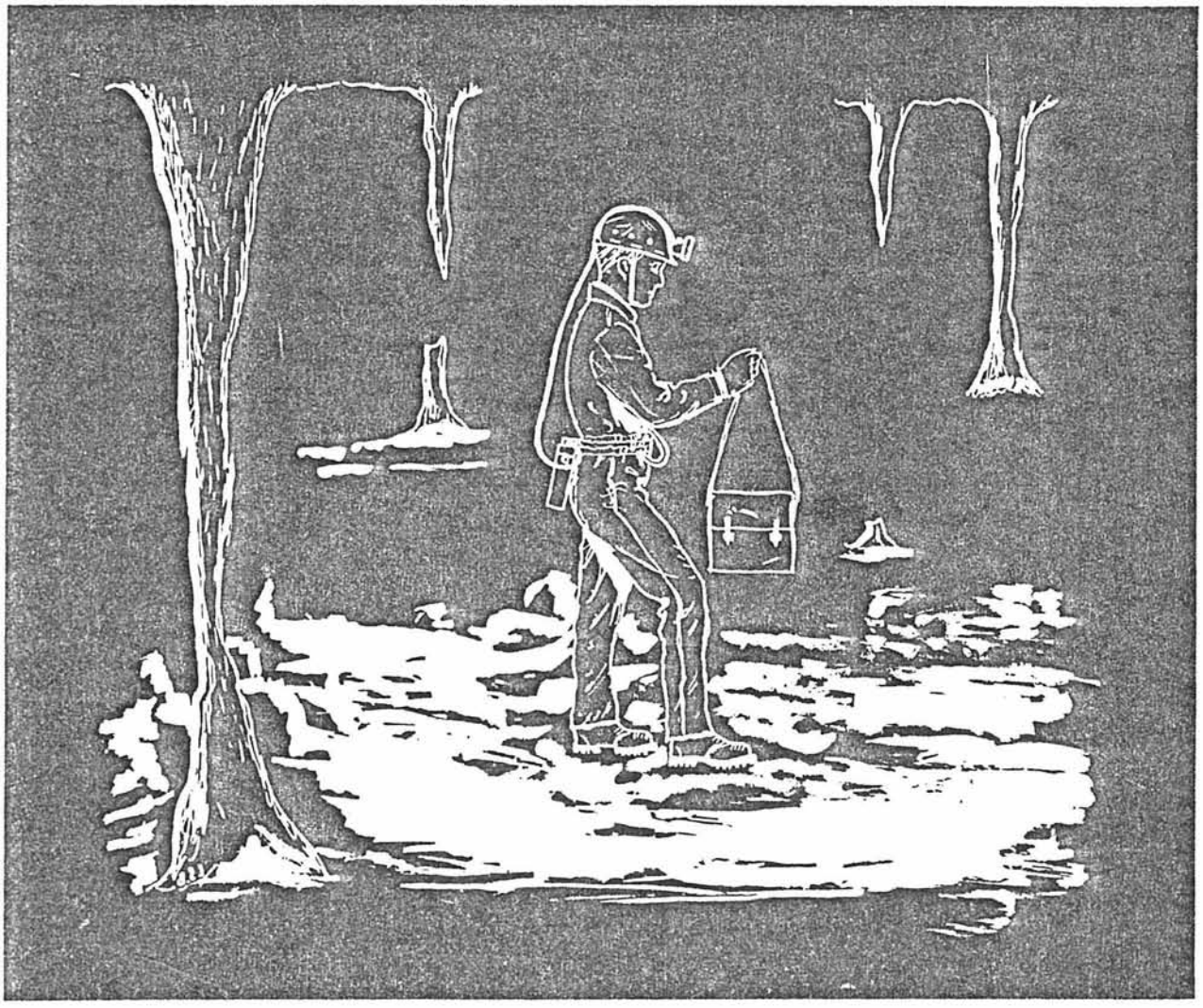
△ A policeman was being teased because he and his colleagues had never stopped a Rolls Royce for speeding. "It's quite simple" replied the policeman, "You never see a Rolls Royce owner racing to get somewhere, because he doesn't have to, he's already arrived."

—

△ Point well made, "They say that an oldtimer is one who can remember when people rested on Sunday instead of Monday.

—

TRIP REPORTS.



UNLESS THE AUTHOR OF A TRIP REPORT IS SPECIFICALLY MENTIONED,
AUTHORSHIP MAY BE ASCRIBED TO THE TRIP LEADER.

Sunday. Sunday morning five of us again entered Mammoth, intending to reach the far reaches of the North West Passage. Heading north the cave was again noticed to be much drier. Central Lake was reached and found to contain no water at all, just a seemingly thick mud bottom. Further on a totally dry Central River was reached. Taking advantage of the dry condition we pushed down the way of the River but it closed off after travelling a short distance. The Dry Siphon was interestingly enough normal. Having a steady flow of water from the Waterfall Passage, the Siphon itself was as usual quite wet to manoeuvre through. Further on and in the North West Passage, we progressed till we reached the Gazova, noticing immediately that the proverbial mud was quite slippery, causing some concern when the descent was attempted. In fact, considering the dry conditions outside, this region was wetter than I'd ever seen it before. Not having the equipment to proceed safely we returned to the Horseshoe Cavern where we met Ted, Chris and Lionel. A thorough investigation of the rock fall at the end of the Railway Tunnel followed after which more photography was undertaken. Finally when all was finished we surfaced after finding some encouraging prospects for future envestigation.

XXXXXXXXX

PILCHERS HILL.

Date: 17th. - 18th. May, 1980.

Aim: Exploration and Familiarisation.

Members Present: G. Powell, T.L., B. Skinn, C. Skinn, L.Baker, P. Sammut.

The B.M.S.C. main party arrived at Valentine late Friday night and after a short sleep left for Pilchers Hill on the Saturday morning. After losing all the trip fees on the wicked lucky numbers of the Warners Bay Lions Club, the party continued penniless to the caves.

Upon reaching the farm we trogged up and headed along the rain forest track to the gorge where we had lunch.

We then proceeded to inspect Bat Cave, Cleft Cave, Stalactite Cave and Arch Cave. We also had a brief look into the top of the 50 metre deep Rebel Cave. After photographing the sun setting over the Barrington Tops and collecting mushrooms we headed for the car again down the farm track, and discovered that the alternator was faulty.

After dark with failing headlights we just made it in to Paterson where we discarded the car and rang Dave Dial, who promptly drove up to the rescue.

Back at Valentine we enjoyed a late shower and Bar-B-Q with members and guests practising their items for the forthcoming talent night.

Sunday. A late breakfast was enjoyed on the verandah after which the main party departed for Sydney.

BUNGONIA.

Date: 7th. - 8th. June, 1980.

Aim: General Exploration.

Members Present: K. Bilger, T.L., J. Charley, T. Matthews.

Visitors: G. Baxter, W. Gabb, R. Ellis, M. Dixon.

We arrived at Marulan at 10.30pm Friday night to find Robert and Mark waiting at the Ampol Cafe. After 11.00pm came and went we left for Bungonia. Geoff and Wal were supposed to be there by that time but were not, so we left them to find their own way.

Saturday. On crawling out of the tent at the ungodly hour of 8.00am we discovered that Geoff and Wal had arrived before us last night and had not waited. Finally about 10.00am we headed for the caves with Ted bringing up the rear. The first cave visited was B39. This cave is a short solution tube ending in a sump after about 20 metres. We then headed across to B11, another small cave again noticeably dry. Next was B16. This cave was descended on ladders using the stitch plate for belaying. Some fun arose at the Spokeshave and Dragons Teeth. On the way out Wal had some trouble at the Spokeshave again and fell down the hole in the floor. Having regained the surface I wanted to go over to B4, Robert and Mark wanted to go back to camp. We conned them into being pack horses to carry all unwanted gear back to camp while the rest of the party went looking for Powell Pot which we found, but only Jack could reach through the squeeze. Finally we returned to camp.

Sunday. Again a late start due to the efforts of Ted, we again went over to B4-5. This time we entered through B5 and proceeded to the Hairy Traverse via the Cement Bag. At this point we went down to the low level connection to B5. One member of another party was just emerging when we arrived, Jack Ted and Robert went back with him to try and find the way into a high passage we were looking at. Jack eventually found his way around but could not get down. After the others returned we continued on through the cave, reaching the other entrance, B4 that is, safely.

The caves were all very dry and dusty, which made some of the climbs much easier as they were not muddy at all. On our way back to camp Jack and I visited B32, 38, 34, 35, 36, which included Hollands Hole and College caves.

XXXXXXXXX

ANOTHER TUGLOW MYSTERY ?

A copper plate was fastened to a stalagmite in Tuglow Main Cave in October 1932 on which the following names were stamped into it:- T. Brophy, S. Hardy, R. Kanaley, O. Moriarty, W. Sawkins, W. Sawkins and M. Tyler.

A relic of antiquity - who knows ? - If you do let me know.

Ian Bogg.

CLIEFDEN.

Date: 14th. - 16th. June, 1980.

Aim: General Exploration.

Members Present: B. Skinn, T.L., C. Skinn, L. Baker, C. Olsen, T. Matthews, G. Baxter, D. Gardner, G. Skinn, J. Charley, E. Goodwin, G. Morgan-Thomas, K. McKendry.

After arriving late Friday night, a surprisingly early morning was achieved on Saturday. But alas, a slow breakfast put a stop to that. Just after nine am two O.S.S. members arrived to start their cleaning programme. Ted and Chris volunteered to assist them in accordance with O.S.S. policy.

As the cleaning party headed off through to the Boot Room and beyond, the bulk of the party headed off for a total exploration of the area to the left of the main chamber. Around two hours was spent finding all there was to find in this area.

On our way into the cave proper, we met the cleaning party who were heading out after their days cleaning. A small discussion followed after which the O.S.S. members left.

Ted and Chris then showed us the clean areas of the cave. The newer members were then shown Helictite Wall and further on, the Ice Maidens at which stage we about turn and made our way out of the cave.

Sunday morning found us in Murder, with half the party in the Right Hand Extension. Whilst photographers took pictures of the far end of the extension the rest of us found all the other caverns in and around the Blue Stal area. After four hours underground we made our way out.

With five members homeward bound early monday, those who were left did some light caving in Transmission for two hours before calling it quits for the weekend.

XXXXXXXXX

JENOLAN.

Date: 19th. - 20th. July, 1980.

Aim: Continue programme in Mammoth and Wiburds Lake Caves.

Members Present: B. Skinn, T.L., C. Skinn, K. Bilger, G. Baxter T. Matthews, D. Gardner, W. Gabb, K. Raddatz, R. Brett, R. Sanderson.

After checking in at the Guides Office to obtain the keys, camp was set at Mammoth Flat. Then to achieve maximum thrust for our exploration, the party was split in two. The first party's objective being exploration of the Great North Cavern. A party of four was chosen, leaving six to find the Infinite Crawl

and possible dig from the Guzunda region of the North West Passage. We all progressed as one party as far as the Junction then went our separate ways. Coming through the Central River section the River was found to be flowing and the Central Lake about 300mm deep, unlike the previous trip when both were dry.

On reaching the Great North Cavern very light exploration took place due to the conditions encountered on the trip in, although a second trip could be beneficial in determining the exact potential for future extensive exploration.

On gaining the entrance after 8 hours under, the other party was found to be already enjoying tea. This party had reached the Guzunda, but due to the time limitation had to return before complete exploration had been achieved.

The next day upon the direction of the Chief Guide, we pulled up the ladder leading to the False Frenchman's Cave. We, like the Chief Guide felt that leaving a ladder in dubious condition dangling from a cave which tourists pass quite frequently was not wise. Whilst in that region, the entrance to Rho Hole was measured up for the gate. Our next trip to Jenolan will see a start in the placement of the gate.

Sunday afternoon was spent walking up the North Valley to familiarise the new members with the area.

SUPPLEMENTARY REPORT BY K. BILGER (Leader of the 2nd. party)

After we split into two groups, Brian taking Robert, Ted and Geoff onto the Great North Cavern, I took the other less experienced members onto the North West Passage to have a look at the Guzova and Guzunda. Some fun was had by mysely at the Dry Siphon as I had on my short wetsuit and the others did not know what was in store for them as my maniacal laughter rang out fron the other side. We continued on along the passage with Kathy getting a little weary in the arms. The gravel crawl was only about 100mm high and had to be dug out, so I became a wombat. Soon we were all through and into the cavern. Kathy had some difficulty climbing up to the Guzova as did some of the stalwart members of the party. The trip was terminated here and we headed out showing Kathy a small but well formed phallictite - she had been warned by workmates to look out for these formations.

An enforced stop was made at Central Lake to bolster the nerves of some of the members. The next problem arose at the squeeze at the bottom of the Skull and Crossbones as we had to push and shove to get our female associate through. Having successfully negotiated this hazzard she was securely attached and belayed up to the top of the Skull and Crossbones. A further stop was called in the Railway Tunnel where liberal doses of sundry internal medication were partaken (ie. jelly beans, chocolate etc.) From here we made our way out without difficulty although progress was painfully slow, much to the delight of the more fatigued male members of the party.

XXXXXXXXX

CLIFFDEN.

Date: 2nd. - 3rd. August, 1980.

Aim: Further survey work in Taplow.

Members Present: K. Bilger, T.L. and Kathy Raddatz.

Due to the absentmindedness of the Trip Leader, some necessary information was left at home and as a result no work could be done. So, on saturday afternoon a couple of hours was spent in Wyreemba Cave.

On sunday we visited Trapdoor and had another look for the elusive Eyrie Cave entrance.

SUPPLEMENTARY REPORT.

Aim: Exploration.

Members Present: L. Baker, T.L., T. Matthews, J. Charley, E. Goodwin, R. Brett.

While Ted and Jack spent 1½ hours cleaning in Main with O.S.S. members, Rick and myself went off to do surface trogging on the side of the hill near No.36 and between Main and the road going down to Transmission Flat.

Saturday afternoon saw us heading for Wyreemba, the weather was bleak so we left the cars at the silo and walked cross country for the cave. Wyreemba was found to be a good sporting cave with maze passages and a few small climbs. On returning to the surface the weateher was still bleak.

Sunday saw Ted leave early, the rest of us heading for Trapdoor where most passages were pushed and we found the inside entrance to Eyrie, but not having Graham with us we all chickened out in pushing the squeeze returning to the surface.

Next the hillside was searched for the outside entrance to Eyrie with no such luck. We gave up and headed back to the hut, cleaned up then headed for home.

XXXXXXXXXX

WALLI.

Date: 9th. - 10th. August, 1980.

Aim: Exploration and familiarisation.

Members Present: J. Charley, T.L., B. Skinn, L. Baker, R. Brett.

We all met at Mt Tomah, saturday morning leaving at 6.30a and arrived at 9.15 after checking in with the farmer.

We began our search of the area by spending one hour in WA49. I noticed that it was wetter than last time and some digging was done in some side leads. The awkward entrance pitch induced some curt comments - Lionel was not pleased.

We decided that to compile a map of the area was expedient, so we spent 3 hours of the afternoon searching for caves, noting tag numbers and possible dig sites and collating same on map. By dusk we were glad to head back to camp for a pleasant meal and were all in bed by 8.30.

Sunday morning we headed off to examine the northern half of the outcrop, to our surprise it is quite extensive and enters the neighbours property. We only found five dig sites and one tagged cave. The limestone is of a different character, hardly cavernous at all. After 3 hours we had covered most of the remaining area and had it all on paper. Next trip we will be able to add more detail to the map and visit some of the caves we located.

One of the difficulties of Walli area is the nature of the entrance and lack of doline in most cases making it difficult to locate caves, WA21 is a good example. We spotted the small doline adjacent to the cave and only then did we spot the real cave entrance ,these generally speaking have vertical pitches and some are very deep.

Not a very exciting weekend but none the less fruitful, as we now know the extent of the limestone and roughly what it contains.

XXXXXXXXXX

JENOLAN.

Date: 30th. - 31st. August, 1980.

Aim: Exploration - Southern Limestone.

Members Present: I. Bogg, T.L., B. Skinn, L. Baker, G. Baxter, G. Cummings, D. Gardner, W. Gabb.

After completing formalities at the Guides Office we headed to Mammoth Flat to await the arrival of the late ones.

Arriving at the Flat we introduced ourselves to a couple of undergraduates who were working on a zoological project in relation to the wallaby population at Jenolan. "Shakey" Baker, the ever inquisitive one with a profound yearning for higher learning inquired "Hav ya found anythin interestin yet ?" to which they replied, "Yeh, some wallabys are homosexual" - pause - pregnant silence - then Shakey, never lost for words said "Geez mate, ah neva newd dat, where ah dey" - Leaving Shakey to carry on in his inimitable fashion we pitched camp, had a feed and trogged up.

With two vehicles we headed up to Kanangra Walls road and around

to Mt. Whitley. Our aim was to pick up the southern most extremity of the limestone and travel northward systematically. Unfortunately we took the wrong fire trail which meant we ended up at Ginkin Point on the West of Camp Creek. Lionel elected to remain behind (to mind the cars ?) so we headed off down the spur in a S.E. direction, reaching the limestone some 30 minutes later where a short R'R stop was called.

Spreading out we elected to work over this outcrop, which we did rather thoroughly finding only 3 caves, one of which was tagged J46.

J46 obviously has had a lot of attention as there was a considerable amount of debris removed from a quite impressive entrance. More work is required, but at this stage what cave there may be has not been uncovered.

The second cave is some 10 - 15 metres above creek level and is not visible from the creek bed. A small opening in the tussock covered slope leads into a very small chamber with some potential - would require some digging.

The third cave lies on top of the outcrop and has a tight vertical entrance which opens into a small chamber. The cave is some 20 - 25 metres long and 5 - 6 metres deep with good digging prospects.

A fourth hole (pit) was located at creek level which was some 2 metres wide by 5 metres deep. A shape representing a stubby boot in cross section vertically. For anyone walking this track at night, the pit, hole or sink could prove hazardous as it bisects the track.

The cave locations and the outcrop which we trogged are covered by the following map references ..... (supressed)

The worst part of the days activity was to haul back up to the vehicles. A gradient better than the renown Acetylene Spur at Colong. However, the day was capped off by a very pleasant social evening around the fire.

Sunday. We were up and away at a respectable hour, the intent being to walk up Camp Creek. This was started at Surveyors Creek to traverse up and over the top of the limestone, but, aborted due to heavy rain - an early start for home was in order.

XXXXXXXX

WYANBENE.

Date: 4th. - 6th. October, 1980.

Aim: General Exploration.

Members Present: L. Baker, T.L., G. Cummings, E. Goodwin, J. Charley, P. Sammut, R. Brett.

Visitors: B. Stevers, M. Erwich, P. Byrne.

Arrived Friday at 11pm.

Saturday morning bluff, smoke fom nearby bush fires fill the air. Surveyed all caves known to us. Found No.3 and 1 just over the ridge. Arriving back for lunch to find camp packed with people. That afternoon we spent exploring the old tourist section.

Sunday morning we saw many cavemen entering main cave. Many ladders at the Keyhole. Dispute at intermediate chamber and after discussion we continued through to Gunbarrel then onto Ceasars Hall moving on to Frustration Lake. We retraced our steps after 7½ hours in the cave.

Next morning we headed for home.

XXXXXXXXX

JENOLAN.

Date: 11th. October, 1980.

Aim: Exploration in J41.

Members Present: T. Matthews, T.L., R. Brett, G. Baxter.

Entered J41 and preceeded as far as the Slop Trough. Recommend a single ladder be used in future from the top of Cloud Pitch to the Chocolate Box. This is achieved by connecting 2 or 3 ladders together. Belay is only required on Cloud Pitch.

XXXXXXXXX

CLIEFDEN.

Date: 2nd. November, 1980.

Aim: Photography.

Members Present: T. Matthews, T.L., T. Ellis, R. Brett.

Five hours was spent photographing in Yarrowigah.

A dig was commenced into the top of rock pile below Noonameena but across in direction of Yarrowigah.

XXXXXXXXX

WALLI.

Date: 18th. - 19th. October, 1980.

Members Present: J. Charley, T.L., J. Charley, L. Baker, R. Brett.

Aim: Surface Examination and Cave Investigation.

Arrived 9.45am Saturday and within half an hour we set out on a trog of the limestone along the creek, finding most of the cave tags we sought. After two hours of walking around in circles it was back to camp for lunch and then on with gear and set off for WA42 which was one of the caves we had to find that morning. According to the map there is a lake at the bottom but that has long since dried up. There is some good sporting climbimg above the lake floor, we used a ladder to gain access to the bottom but it was unnecessary for the more intrepid. Spent two hours in there and then wandered over to WA32 and had a fun ninety minutes investigating the many tight squeezes to be had. There is a 12mstre ladder pitch into it then there is no further gear needed. I found a small number of bats near the entrance and a swallows nest with three eggs in it. I hope the chicks have a successful test flight because there is about 10 metres of fresh air below the nest. Left the cave at dusk and went back to camp.

Next morning we headed off to see the sights of WA41. Is only small but interesting with a small roof collapse, only a voice connection, WA47 also connects into it near the entrance, again only a voice connection. One and a half hours elapsed in there. Next, off to WA12 (Piano Cave), for a look. Lionel showed us the connection to WA13 and had some fun wandering the many tunnels and false floors. Another hour and a half in there, a nest of swallows with three babies in it trying to look invisible when we came near. Had lunch, packed up and left at 1.30pm.

Summing up - a good trip over all, we now have a map of the outcrop showing all but thirteen cave tags ou of a possible fifty seven. Thunderstorms in the area Saturday night and Sunday morning, we were not inconvenienced by the rain but did not recieve much anyway.

XXXXXXXXX

CLIEFDEN.

Date: 2nd. - 3rd. November, 1980.

Aim: Taplow survey.

Members Present: K. Bilger, T.L., G. Cummings, K. Bilger (Mrs)

Weekend spent on the continuation of the survey.

XXXXXXXXX

Geoff Baxter was heard to say while caving at Cliefden

"The Irish have invented solar powered caving lights."

BUNGONIA.

Date: 17th. - 18th. November, 1980

Aim: S.R.T. exploration.

Members Present. K. Bilger, T.L., K. Bilger (Mrs.), G. Cummings.

S.R.T. exploration in Acoustic Pot B22, B7 - B14, B51, B34.

XXXXXXXXX

TASMANIA.

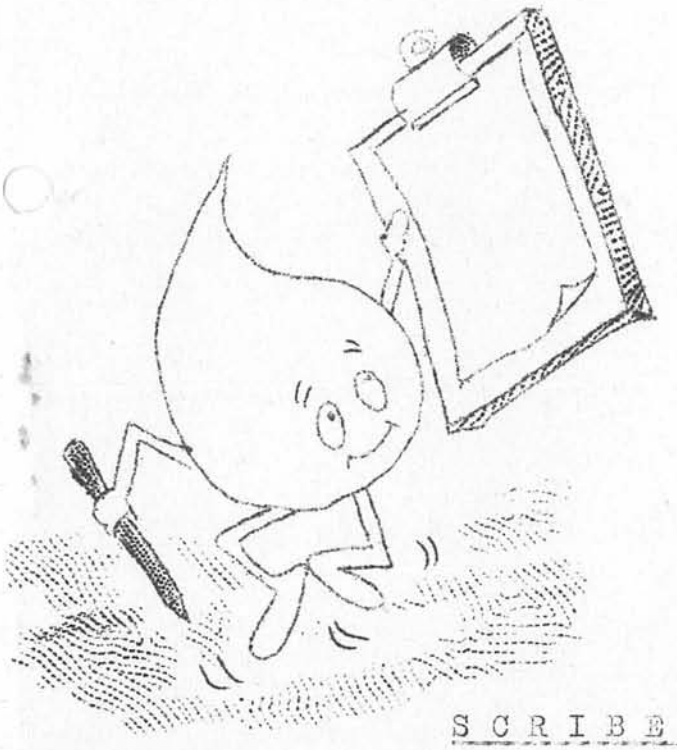
Date: 14th. - 22nd. December, 1980.

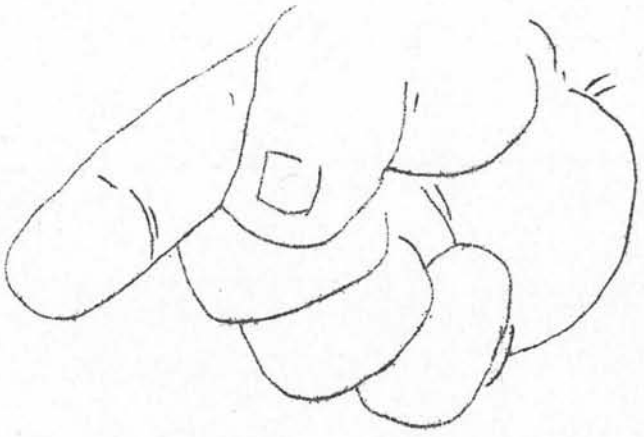
Aim: Familiarisation.

Members Present: K. Bilger, K. Bilger (Mrs) G. Cummings, T. Matthews. C. Shaw.

In total 44 hours of solid caving involving abseiling and jumarring into Kubla Kahn, Ghengis Kahn, Croseus +++++

XXXXXXXXX





ARE YOU BRIGHT ?

ARE YOU SMART ?

THEN

S C R I B E F O R O O L I T E !

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CAVE FAUNA N.S.W.

PART 2

Louise & Terry Coleborn.

INTRODUCTION.

This is the second part in our N.S.W. Cave Fauna Series. Part one previously published in Vol 12(1)

SPIDERS

Spiders are classified under the following:

Phylum:	Arthropoda.
Class:	Arachnida.
Order:	Araneida.

Cave spiders are classified into four major groups or Sub-orders:-

1. Liphistiomorphae.
2. Mygalomorphae.
3. Hypochilomorphae.
4. Araneomorphae.

The cavernicolous species:-

Liphistiomorphae: Is a group of primitive spiders with segmented abdomen. This group is not represented in Australia; they are confined to Malaysia, China, Thailand and Japan.

Mygalomorphae: They are nearly all large dull coloured spiders which live in burrows or silk tubes in or near the ground. They are recognised by the two pairs of booklungs which show as light patches on the underside of the abdomen.

The chelicerae projects forward from the head and the fangs point backwards (dagger-like) eg. Funnel Web, Trapdoor

There are two representatives of this group in Australia:

1. Ctenizidae.
2. Dipluridae

They are recognised by:

1. Chelicerae with rake or rastellum. Ctenizidae
2. Chelicerae without rake or rastellum. Dipluridae

From the family Dipluridae we have a unique troglobite, Troglodiplura loweyi (Grey 1973) which was recorded from collected fragments taken with cockroach remains in Roaches Cave (N58), Nullarbor Plain (Main 1969).

From the family Ctenizidae we have a trapdoor specie Dyarcyops sp., it was collected in the soil floor of Yessabah Bat Cave (KS5) NSW, their burrows are a V shape.

Hypochilomorphae: They are four longed spiders with pincer-like fangs. This group is relatively rare. There are two families ffom this group in Australia and both have cavernicolous representatives. The families are :-

1. Gradungulidae.
2. Hickmaniidae.

Family Gradungulidae:

Specimens of a troglophilic Gradungula sp. that were partially depigmented were collected ffom Cliefden, Jenolan and Yarrangobilly. The only web building Gradungulid sp. was collected from Carrie Bat Cave, N.S.W., from the dark zone. This species was partially depigmented. The web of this Gradungulid is highly specialised, it consists of a tnagled sheet from which two silk lines lead down to a vertical catching plarform just above the ground level. The spider sits head down to the platform, waiting for an unwary ground dweller to walk into or near the ground attachments. Refer Figure 1.

Family Hickmaniidae;

This is represented by Hickmania troglodytes a large Tasmanian spider and is the sole representative of this family. (Goedc 1967) states it is commonly found in the twilight zones in Tasmanian caves, it builds an extensive sheet web (Hickman 1928).

Araneomorphae:

This group is well rep esented in Aust. caves.

Family Pholcidae: (Daddy Long Legs)

This is a well known family, easily recognised by their exceptionally long spindly legs. Their general colour is a pale creamy fawn, with irregular markings. Pholcidae is represented by several troglophiles but only one troglobitic species which was recorded from Mt. Surprise Lava Cave, Nth. Queensland, Spermophora sp. - Its eyes were degenerate and its pigment was lacking. Another species found at Camooweal also lacked pigment but has normal eye development.

Family Amaurobiidae: (Sheet Builders)

Spiders of this family have cribellum and calamistrum. The webs of this family have a bluish tint and are rather untidy. It is a loose sheet extending outwards from a crack or small hole. It is in this crack or hole that the spider makes her retreat and the sheet often forms a rough funnel-like shape near the entrance.

Genus Ixeuticus
The black house spider is typical of this genus. The cavernicolous species is Ixeuticus socialis and is known from cave entrance areas of Jenolan, Abercrombie and Bungonia, where it builds large communal sheet webs in the roof arches (Gray 1973).

Sub-Family Stiphidiinae:
This family is represented in N.S.W. by Procambridgea cavernicola which is a depigmented troglophile in the Wombeyan-Wee Jasper areas. It has a funnel-like web attached between rocks or under overhangs.

Sub-Family Amphinectinae:
This family is represented by the genus Amphecta, which is a spider found in the large cave systems of Tasmania.

It is also represented by Epimecinus alkirna a troglophile from the Nullarbor Caves area, where it builds a horizontal shawl-like web under rocks. This species has also been collected on the surface.

Family Miturgidae:

Janusia muiri (a blind hunting spider) was recorded from Weebubbie Cave (N2) Nullarbor Plain from the twilight zone. Related species of J. muiri have been recorded from Buchan-Murrindal areas - it has marked eye reduction and depigmentation. Another related species was collected from Kempsey, it was a depigmented troglophile.

Family Sparassidae (Huntsmen)

This family usually have bodies which are brown and hairy. The eyes are arranged in two rows of four. The tarsus of at least the first and second legs have a dense brush of short hairs. Its spinnerets are fairly short and very close together. This enables it to be distinguished from two other families of spiders, the Hersiliidae who has very long spinnerets and the Drassidae in which the front spinnerets are wider apart. Refer Figure 2.

Males are usually identified by their club shaped palps.

Genus Olios
They are among the smaller huntsmen with bodies about 12mm long and a leg span of 50mm. The prosoma and the abdomen are more rounded and not as flattened as with other genera in this family. Their colour is usually a fairly uniform yellowish-brown with a paler underside.

Heteropoda procera is common in caves in the Comboyne-Yessabah areas and Olois pictus has been recorded from Yarrangobilly Caves.

Family Cycloctenidae: (Forest Hunting Spiders)

An endemic family of Australia and New Zealand. The genus Cycloctenus are known from caves in N.S.W. and Victoria. They are the same as the surface dwellers. Toxopsiella sp. are small hunters which are found wandering on cave walls and floors.

Family Lycosidae: (Wolf Spiders)

This family is comprised of fairly large spiders which can sometimes be seen in large numbers running in fields and woods.

This family is considered to be only accidental visitors to caves as they are visual hunters, and the cave environment in very unlikely to attract them. owever, (Gertsch 1973) described a blind wolf spider from Hawaiian Caves.

Family Mimetidae: (Ambushing Spiders)

Found in caves as a first-level troglophile. Mimetus sp. has been recorded from Yarrangobilly (Y30) N.S.W.

Family Symphtognathidae:

A small troglobitic species Micripholcommo longissima is found at Jenolan, it constructs small sheet webs in the crevices of active formations.

Family Theridiosomatidae: (Orb-weaving Spiders)

Specimens of this family have been collected in caves in south-

east and sout-wast Australia. Theridiosoma sp. was recorded from Abercrombie Caves, N.S.W. (Bogg 1969)

Family Linyphiidae: (Money Spiders)

Small black money spiders constitute the bulk of this family. Laetesia weburdi is found at Jenolan Caves where it constructs small suspended sheet webs in the crevices of moist formations.

Also from Jenolan Caves is the only Linyphiid troglobite, a white long legged blind spider which builds a sheet web similar to L. weburdi.

Wyanbene has a second-level troglophile from this family the genus Synotaxus its eyes are normal but its appendages are much greater than is usual for this species

Family Theridiidae: (Red-Back Spider)

The eyes of this spider family are in two rows of four with the outside eyes of both rows close together. These spiders build irregular lattice webs. This spider usually stands upside down near the top of the web. In spring it is very common to find the egg sacs which are usually globular and coated with a white fluffy silk, suspended from the lattice web.

This family is mostly common surface dwellers, but their webs are often seen in dolines abd cave entrances. Latrodectus hasselti (red-backed spider) is one example of this spider.

Achaearanea extrilidium has been recorded from Yarrangobilly Caves (Y30) N.S.W. Archaranea sp. was collected and recorded from Abercrombie Caves (Bogg 1969). Steatoda sp. has been recorded from caves in south-eastern Australia - from Kempsey to Mole Creek.

All species of this family are recognisable by the characteristic comb on the tarsi of their fourth legs with which they draw out a ribbon of silk to be thrown over their captives.

Family Uloboridae:

This family of spiders is recognised by its comb, the calamistrum on the hind metatarsi, and the broad silk-producing plate, the cribellum, in fromt of the spinnerets. Several other spiders have these organs, but only this one builds a wheel web. The silk produced by the cribellum tends to have a bluish tint. Therefore a bluish wheel web is almost certain to be made by an uloborid spider. Its web is seldom regular and is usually supported by a rather untidy mass of threads above and below. Uloborus pantherinus builds a horizontal orb web and was recorded from Grill Cave, (B44), Bungonia, N.S.W. (Wellings 1972).

SPIDER RELATIVES.

Ticks and mites belong to the order Acarina. They are distant relatives of spiders, harvestmen, scorpions and pseudo-scorpions. They are characterised by eight legs where an insect have only six. An interesting fact is that mites hatch as nymphs with six legs but they have eight as adults (Savory 1974)

To say that mites occur everywhere on the surface they make up a

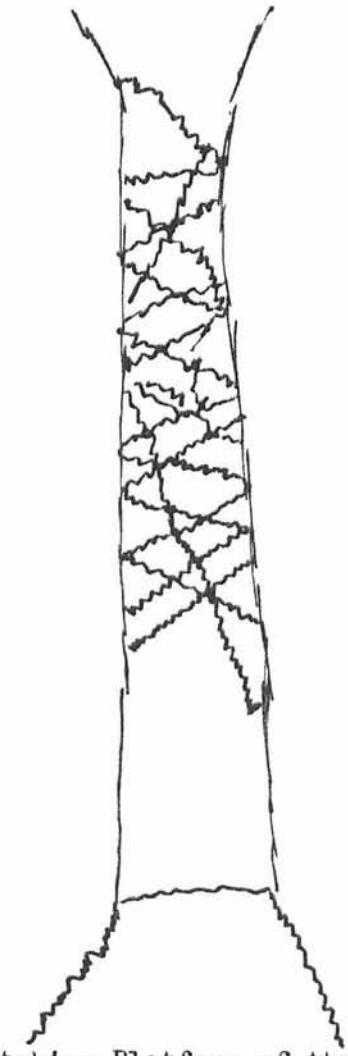

Figure 1. The Catching Platform of the Gradungulid sp. found in Carrie Bat Cave N.S.W.

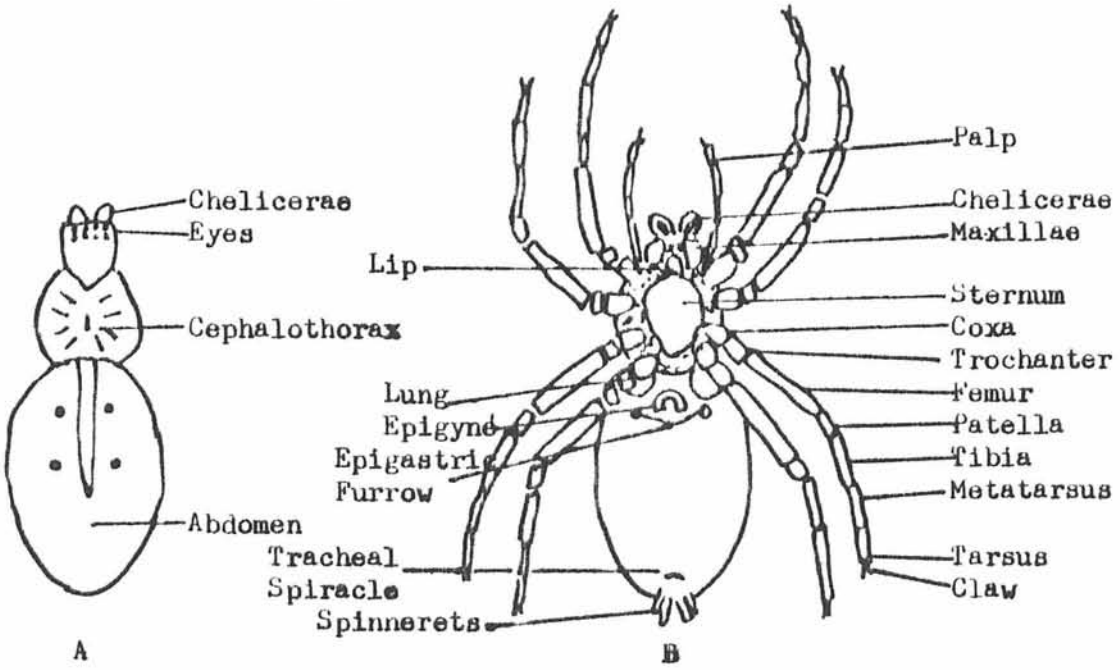

Figure 2. Dorsal and ventral surfaces of a spider.

large section of our cave population.

They are very small and live in the cave soil and rotting wood. Some are parasites and are carried around on the legs and bobies of larger cave animals.

Ticks are usually larger than mites, and they have a hard leathery skin. The ticks and mites found in caves are usually associated with bats or bat guano.There are five stages of development of the guano mite Uroobovella coprophila - egg-larvae - protonymph - deutonymph - adult. This mite feeds on fungi but bat guano is necessary for egg laying.

The newly hatched larvae of the parasitis ticks and mites wait on the bat guano or similar organic material for an animal to brush against them. They can then transfer themselves to the coat or hide of the animal. After several months they reach adult size and sexual maturity. They breed on their host after which the female drops to the ground, where she deposits her eggs, she dies shortly afterwards.

Ticks and mites are usually grouped into six sub-orders (Savory 1964) of which three have been recorded fron caves:-

1. Parasitiformes.
2. Sarcoptiformes.
3. Trombidiformes.

Parasitiformes (sub-group Metastigmata)

This group is commonly known as ticks.

The family Ixodidae is well represented in Australia both on the surface and underground.

Aponomma auruginana (Schulze 1936) was collected from the twilight zone of Range Cave, Flinders Island. It is a common tick which uses the wombat as its host.

Aponomma hydrosauri (Newman) was collected from Tick Cave (E14) and Mug Stuck Cave in the Mt. Etna area. The host of this species is generally a reptile and its occurrence in these caves is probably related to the occurrence of a species of Python (Hamilton-Smith).

Argas daviesi sp. nov was collected from the caves at Cue, W.A. Its host is a bat. This specimen was taken from Eptesicus pumilus.

Ixodes holocyclus has been recorded from Fox Den Cave, TR42, Timor.

Ixodes trichosuri (Roberts 1960) specimens have been collected from the dark zones of Mersey Hill Cave, Mole Creek. Its host is probably the bush possum but it can also be found in association with the kangaroo rat and introduced rats.

Ixodes ornithorhynchi (Lucas 1845) was collected from the Wind Tunnel,Exit Cave Ida Bay. A male specimen was collected from the dark zones od Scotts Cave, Mole Creek. This specimen from Scotts Cave os of particular interest as it was the first male of this species to be recorded (Goode). The host of this species is the platypus (Ornithorhynchus anatinus) which has been encountered in the caves.

Ixodes sp. has been recorded fron the River Cave, Yarrangobilly.

The following three families have been collected from the Grill Cave and Drum Cave at Bungonia, Wombeyan Caves and Church Cave, Wee Jasper in association with the bent-winged bat (Miniopterus Schreibersii)

1.	Ixodidae	Ixodes simplex simplex (Dew 1968)
2.	Spinturnicidae	Spinturnix psi (Dew 1963)
3.	Laelapidae	Ichoronyssus aristippe (Domrow 1963)
		Spinolaelaps minioptcri (Domrow 1963)

Parasitiformes (Sub-group Mesostigmata)

This group consists of the long nosed mites. They have been collected from the dark zone of King George V Cave, Hastings from organic material

Sarcoptiformes (Cryptostigmata)
This group consists of the seed mites. They are smaller than the head of a pin and they feed on organic material within the cave. A large number of seed mites belonging to the family Oribatidae were found in association with damp buried wood in King Goerge V Cave, Hastings (Goede).

Trombidiformes (Prostigmata)
The adult of this group is a large bright red mite and can be found in cave debris. Microtrombidium sp. (Robertson) was found in the dark zone of Cushion Creek Cave, Florentine Valley.

HARVESTMEN

Harvestmen are frequently mistaken for spiders to which they bear a superficial resemblance. Unlike spiders harvestmen have no constriction between the cephalothorax and abdomen. They have four pairs of long delicate walking legs, a pair of pedipalps (Leglike appendages that serve as chewing parts) and a pair of claws for biting. The body is roughly egg shaped and about 6mm long. They inhabit damp places and are not found in dry areas. They have no poison glands.

The harvestmen obtain oxygen and get rid of CO_2 by means of a network of finely branched tubes r trachea like the insects.

The name harvestmen comes from the fact that they are commonest in late Summer and Autum.

The harvestmen belong to the order Opiliones and can be classified into three sub-orders:-

1.	Laniatores:	Nearly 1000 species are known, chiefly from the Southern Hemisphere.
2.	Cyphophthalmi:	The most primitive group (Sub-order), occuring mainly in the tropics.
3.	Palpatores:	A dominant group in the northern temperate lands and not as widely distributed in hotter countries.

Species of cavernicolous harvestmen.

Holonuncia (Forster) is widespread genus in N.S.W. caves and is also found on the surface under logs.

Holonuncia sp. has been reported from several of the caves at Bungonia. They have been collected from Argyle B31 (Dew), Fossil and Hogans Hole B4-5, from the doline and under rocks and wood in the Drum Cave B13 (Hunt), they have also been collected from guano in Grill Cave B44. The species of Holonuncia from Bungonia is near a specie to Holonuncia cavernicola (Hunt).

Holonuncia sp. has been recorded from Y13, Y27, Y30, Y76 at Yarrangobilly and also from the Belfry Cave (TR2), Timor Caves.

The specie Monoxydus cavatiam has a leg span of about 25mm and is fairly common throughout Hasting Caves, Tasmania.

Lomanella sp. also occurs in Hasting Caves and at the time of collection was very rare, only the second such species known to science (Goede).

PSEUDO-SCORPIONS

False scorpions are tiny arachnids seldom more than 6mm long. In shape they look like a scorpion which has lost its tail. Its palps are almost as large as its body. They are generally very flat and this enables them to retreat into small cracks. They are smooth and glossy in various shades of brown.

The pseudo-scorpions have a silk gland which open onto the chelicerae and with the silk they build their nest. Their legs are fairly small and slender and it has the marvellous ability of being able to move backwards as fast as it can forewards.

Theprincipal food of the false scorpion is springtails, tiny insects of the Collembola order - which they consume whole. Where as spiders suck their victims dry, and true scorpions eat all but the tough bits, pseudo-scorpioms devour their victims right down to the last particle.

At some seasons of the year pseudo-scorpions may be seen clinging tothe legs of insects and harvestmen in the act of hitching a ride to a more favourable spot.

It may be distinguished by the following points:-

1. Eyes - it can have 4, 2 or no eyes at all.
2. The abdomen consists of 12 distinguishable segments.
3. The legs 1 and 2 are usually different from the legs 3 and 4.
4. There are two pair of respiratory spiracles on abdominal segments 3 and 4.

The order Pseudoscorpionida contains three sub-orders:-

1.	Heterosphyronida	Family	Chthoniidae
2.	Diplosphyronida	Family	Neobisiidae
3.	Monosphyronida	Families	Cheliferidae
			Chernetidae

Most species of pseudo-scorpions found in Australia belong to the family Chthoniidae. Seventeen species are described for Australia and they are divided into five genera.

1. Tyrannochthonius. Has two species but none are found in caves.

2. Pseudotyrannochthonius. Has nine species and six if these are found in caves. All the Tasmanian pseudo-scorpions belong to this genus.

   P. typhlus has been collected from Mole Creek, Baldocks Cave and Scotts Cave. The specimen collected was completely eyeless.

   P. tasmanicus was collected from the dark zone of King George V Cave, Hastings and also from the surface. The specimen from the surface was completely eyeless but the specimen from the dark zone still retained a pair of eye lenses. If it wasn't for the surface specimen this species would almost certainly be classed as troglobite.

3. Austrochthonius. Has two species and one is found in caves. It is found in the southern half of Australia.

4. Satrochthonius. Has three species and one is found in caves. In fact it is only found in Australia.

5. Morikawia. This genus has only one specie and it is found in caves. In fact this species has a very interesting distribution. One was collected from West Coast of Mexico, one from Japan, two from New Caledonia and a cave adapted specie from the Grill Cave, Bungonia (Chamberlin 1962)

In time there will be many more species identified that are not as yet known - maybe you will discover them.

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EDITORS THANKS.

My thanks must go to Terry and Louise Coleborn for their effort tremandous contribution towards OOLITE material. Many, many times in this combined issue particularly, you will see lead credits. Obviously they have put in a great deal of time in our lead article series "Cave Fauna in N.S.W." Fortunatelt, as Editor, I am well aware of future material held pending publication. This only indicates what can be achieved with a little resolution and dedication by club members.

SPIDER SURVEY OF N.S.W. CAVE AREAS.

AREA/CAVE	FAMILY.	SPECIES.
ABERCROMBIE	Theridiosmatidae Theridiidae Theridiosmatidae Amaurobiidae	Theridiasoma sp. Archaranea sp. Theridiasoma-tidae Ixeuticus socialis
BUNGONIA. B26, B4-B5,B13 B44 B44	Amaurobiidae Uloboridae Theridiosomatinae	Ixeuticus socialis Uloborus pantherinus
CLIEFDEN.	Gradungulidae	Gradungula sp.
JENOLAN.	Amaurobiidae Linyphiidae Linyphiidae Symphtognathidae	Ixeuticus socialis Laetesia weburdi Linyphiid (troglobite) Micropholcomma longissima
KEMPSEY/YESSABAH. Bat Cave (BS5) Kempsey Yessabah Kempsey Carrie Bat Cave	Ctenizidae Miturgidae Sparassidae Theridiidae Gradungulidae	Dyarcyops sp. Janusia muiri (form sp.) Heteropoda procera Steatoda sp. Gradungulid sp.
TUGLOW. Tuglow Main (T1)	Theridiosmatidae	Theridiosoma-tidae
WEE JASPER.	Amaurobiidae Sub-Family Stiphidiinae	Procambridgea cavernicola
WOMBEYAN.	Amaurobiidae Sub-Family Stiphidiinae	Procambridgea cavernicola
WYANBENE. WY1	Linyphiidae	Synotaxus sp.
YARRANGOBILLY. Y30 Y30 Y27 Un-numbered Y30 Y30 Y30 Y13, Y27	Amaurobiidae Ctenidae Gradungulidae Linyphiidae Mimetidae Sparassidae Theridiidae Theridiidae	Stiphidion facetum Thasyrea lepida Gradungula sp. sp. indent. Mimetus sp. Olois pictus Achaearanea extrilidium Steatoda sp.

Natural Resources - ORANA REGION n.s.w.

Ian Bogg.

This paper is a condensed abstract of the natural resources of the Orana Region which is in the Central Northern part of N.S.W. The location is shown in Figure 1.

GEOGRAPHY.

The Orana Region is dominated by two physiographic units:

* an elevated area of undulating to rugged terrain in the southeast corner, and
* a large area of low-lying, low-relief land generally covered with allivium, which occupies the major part of the Region.

The boundary separating these topographic areas can be recognised as a line drawn roughly from Baradine to Peak Hill.

The hilly southeastern corner of the Region forms part of the western slopes of the Great Dividing Range, and averages 500-600 metres in altitude. The topography ranges from gently undulating to undulating with broad shallow valleys.

There are three areas of exceptionally rugged terrain in the southeast

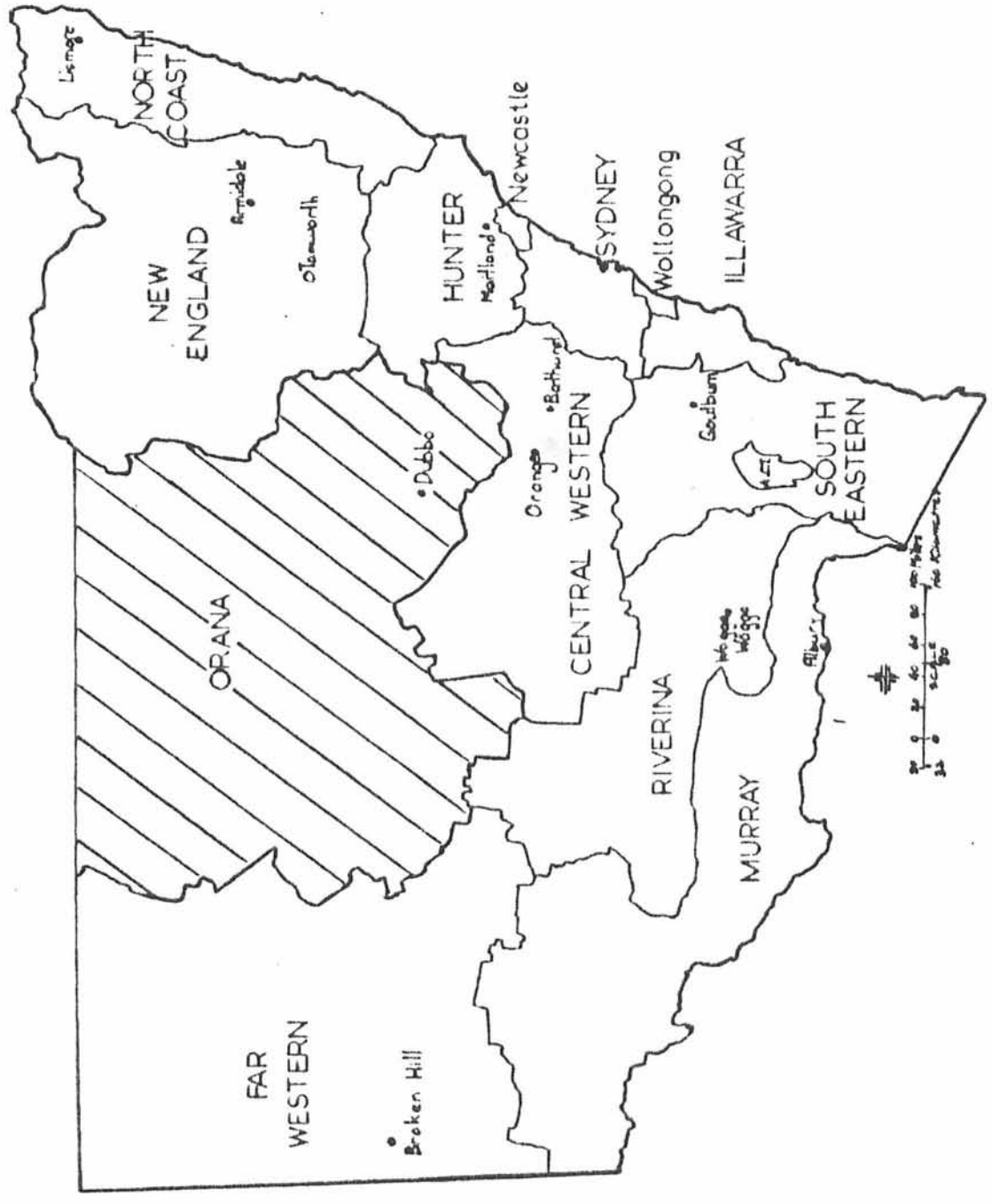
* the southeastern extremity of the Region where valleys are steep, sometimes rugged, with a maximum elevation of 1,100 metres above sea level;
* the western extremity of the Liverpool Range which extends into the Region just north of Coolah, its crest being narrow, elongate, dissected plateau remnants 1,100 to1,200 metres above sea level; and
* the Warrumbumgle Mountains, a very rugged and spectacular mass of eroded Tertiary volcanics, lying about 140 km west of the Divide and surrounded on all sides by much lower country with a subduded topography. The highest point in the Warrumbungles and in the Region, is Mount Wambelong - 1,206 metres above sea level.

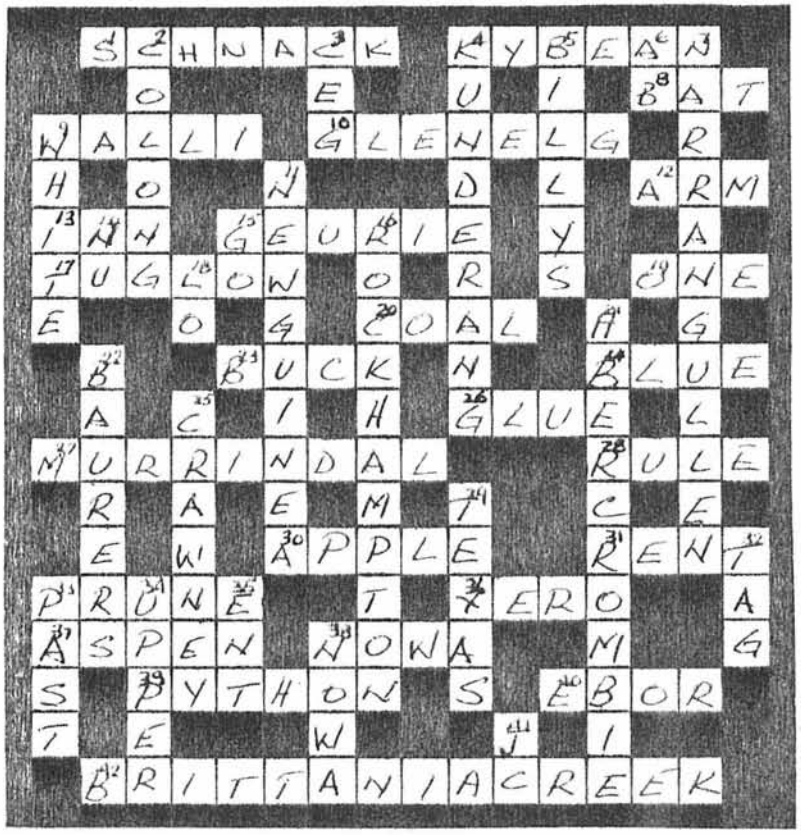
The major part of the Orana Region forms part of the Western Plains and here the topography is predominantly of low relief and elevation. Except for an outcrop of Palaeozoic rocks in the southwest corner of the Region the Western Plains consist of alluvial flats which rise to about 350 metres above sea level at the western boundary of the Region. Some low rock reliaf outcrops and stabalised dunes appear in the west.

MINERALISATION.

Metallic mineralisation in the Orana Region is confined to rocks of the Lachlan Fold Belt. The chief metals are gold, copper and silver. Gold was the first meneral resource exploited and contributed significantly to the area's development, particularly during the nineteenth and early parts of the twentieth century, as the Region contained some of the largest gold fields in the state at that time.

FIGURE 1. LOCATION OF THE ORANA REGION





SOLUTION TO

Fozzie's `SPROGWORDS´ No.2

GEOLOGY.

Rocks belonging to three of the geological provinces into which New south Wales has been divided are present in the Region. These provinces are the Lachlan Fold Belt, consisting of folded rocks of Palaeozoic age, the Great Australian Basin and the Sydney Basin which contain flat-lying sedimentary rocks of upper Palaeozoic and Mesozoic age.

Lachlan Fold Belt.

The rocks in the Lachlan Fold Belt consist of folded sedimantary and volcanic rocks which range in age from Ordovician to Devonian. These rocks are intruded by numerous granite bodies that range from Silurian to Carboniferous in age.

There are two major areas of outcrop within the Region, the frist being a large area occupying most of the south-west corner extending north to Brewarrina and east to Nyngan and the second a smaller area in the far south-east centred on Wellington and Mudgee. Much of the south western area of "outcrop" is mantled by superficial Quaternary sediments, residual deposits and soil so that actual outcrop is fairly rare.

In the western part of the Region a multiply folded Ordovician sequence of slates, schist, phyllites and sandstones is overlain by Silurian and Devonian sedimentary and volcanic rocks. Silurian and Devonian granites intrude these rocks.

In the Wellington-Mudgee area, sediments and volcanics of Ordivician, Silurian and Devonian ages occur as a series of linear belts trending north-south. The geology of this area is complex, and there has been considerable folding, faulting and granitic intrusion.

Andesitic and acid volcanics, shale, limestone and sandstone which were deposited in shallow water, are the dominant rock types in three areas, viz: a belt passing through Wellington; a belt to the east of Mudgee which is overlapped to the east and north by sediments of the Sydney and Great Australien Basins respectively; and an area in the vicinity of Narromine. The areas between the abovementioned belts are characterised by sandstones and slates which were deposited in deeper water conditions.

Late Devonian sandstones, conglomerates and siltstones occur north of Wellington (Catombal Range), in the Hervey Range (near Tomingly) and east of Mudgee. Granitic intrusions of Carboniferous and Devonian age crop out in a number of areas.

Great Australian Basin.

A large part of the Region is covered by the sedimentary rocks of the Great Australian Basin, which extends across the full width of the Region. In the east, the Basin overlies Permian and Triassic sedimentary and volcanic rocks of the Sydney Basin. In the west, it overlies folded sediments and igneous rocks of the Lachlan Fold Belt.

Sediments of Jurassic age crop out almost continuously along the eastern and southeastern margins of the basin, extending as far west as Gilgandra and Baradine, before disappearing beneath Quaternary deposits. The Jurassic strata consist of

a sequence of sandstones, claystones, carbonaceous shales and minor coal seams.

To the west of the Darling/Barwon River, sandstones, claystones and shales crop put as small isolated hills and areas of low ridges, commonly capped with a thin cover of silicified Tertiary sediments (silcrete) as residual gravel and soil so that actual outcrop is rare. In the area between the Barwon and Culgoa Rivers these outcrops occur in the form of two parallel south-westerly trending areas of low ridges, about 30km apart, the western one containg the Lightning Ridge opal fields.

Sydney Basin.

Permian marine sandstones, mudstones, shales and siltstones crop out in two small areas near Wollar, and along the margin of the basin to the south of Ulan. These are overlain by Permian coal measure sediments which crop out along valley sides in the area. The coal measures are overlain by massive sandstone, siltstone and shale of Triassic age which form the prominent cliffs and plateaux in this area.

Limestone and Dolomite.

Extensive reserves of limestone of Silurian and early Devonian age are present in the Region to the southeast within the Lachlan Fold Belt, particularly near Wellington. The Narragal Limestone Belt consists of a long belt of disconnected outcrops of Silurian limestone extending over a distance of more than 100km from north of Wellington south towards Molong. Despite large reserves, these deposits are not favoured for use in cement manufacture because the limestone contains a high proportion of dolomite and other impurities. The largest reserve of high quality limestone in theRegion is the Nubrigyn Limestone within the early Devonian Nubrigyn Formation, which is best exposed 25km southeast of Wellington.

Other significant limestone deposits occur elsewhere in the Wellington area, and near Mudgee, Havilah, Cudgegong and Geurie. Dolomite and dolomitic limestone have been worked at Buckaroo near Mudgee. Existance of substantial high quality limestone deposits outside the Region to the south and east. closer to markets on the east coast, will preclude the large scale development of deposits in the Orana Region in the foreseeable future.

Dolomite is very similar to limestone except that it contains magnesium carbonate as well as calcium carbonate. Significant deposits of dolomite with 40 per cent or more dolomite mineral occur in the Mudgee area. Minor deposits also occur at Cudgegong.

Building and Ornamental Stone.

Deposits of granite, limestone ("marble"), slate and chert have been worked in the southeast of the Region.

Grey, folliliferous Devonian limestone (Mudgee Grey Marble) and greenish, grey limestone (Mudgee Green Marble) have been worked near Mudgee and Mullamuddy and Munna respectively, while prestige "Cudgegong Ivory" was formerly produced near Cudgegong. Some limestones in the Cudgegong area are currently being worked on a limited scale to supply marble chips for use in Terazzo work.

Slate was formerly produced from several quarries in Silurian sedi sediments 18km west of Mudgee where good quality, hard, dark grey slate used for roofing and lower quality material used for slabs and damp courses were produced.

REFERENCE:
Costello, k.l., 1980: Development and Employment Prospects Associated With Natural Resources of the Orana Region, Dep't Industrial Develop't & Decentralisation, New South Wales; ISBN 7240 4936 3 .

$21m BID TO SET RECORD STRAIGHT ON 'CAVEMEN'

FRENCHMAN JEAN-JACQUES ANNAUD IS A FILM DIRECTOR WITH A PASSION FOR THE PREHISTORIC

Sitting in his plush hotel room in Claridge's, London, he enthuses about the time when man was only just man and grows and: when people talk of cavemen, clubs and dinosaurs.

Annaud, 38, has just spent three years and $21 million, attempting to set the record straight about life on earth 80,000 years ago, and the result - a film called Quest For Fire - will be released at christmas.

"People always think of Fred Flintstone and cave dwellers (I hate the word cavemen) rushing around with clubs, dragging women by their hair and fighting dinosaurs" he said.

"Anyone who knows anything about history knows when homo sapiens emerged dinosaurs had disappeared.

Quest For Fire is unique, Clockwork Orange maestro Anthony Burgess created a special language for the actors and anthropologist, Dr. Desmond Morris, provided the body language and movements to accompany it.

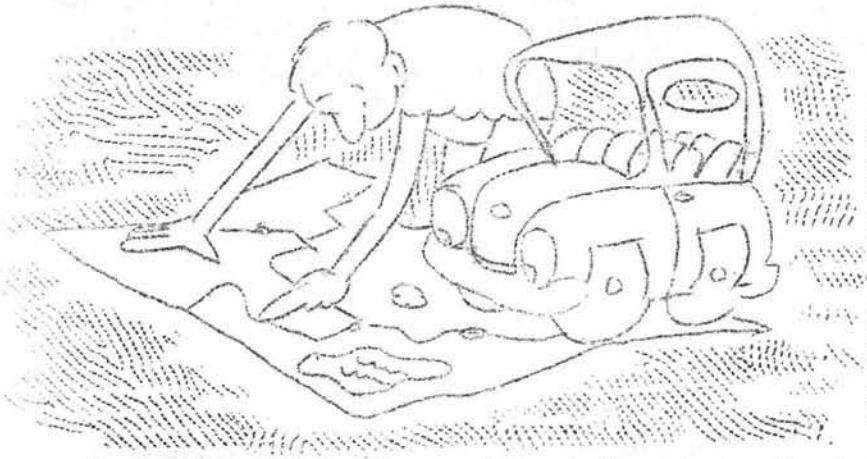
The film opens with the Ulam tribe being savagely attacked by less developed Neanderthals, the Wagabou, who extinguish the Ulam's fire. The Ulams are almost wiped out but the survivors realise that without fire, they are doomed. They send their three strongest men to find fire.

In the venture they encounter hostile tribes, cannibals, gigantic mammoths and sabre tooth tigers.They were chased by lions, attacked by wolves and ironocally, nearly burnt to death.Hidden amongst all the basic emotions is a love story.

Annaud is confident that his film is as close to recreation as possible to the conditions that existed on earth at that time.

THE DAILY TELEGRAPH Nov 81

WEEKEND with a DIFFERENCE



A WEEKEND WITH A LITTLE DIFFERENCE WAS HELD ON THE 10th-11th October, 81 in the KANANGRA BOYD NATIONAL PARK.

ON THE SPOT REPORTER TERRY COLEBORN REPORTS ON THE PARTICIPANTS, ACTIVITIES, HIGHLIGHTS.....

Jack, Louise and myself went out to Boyd Crossing on the Friday afternoon, with the kids doing their observation trial on the way out. Firstly we did a quick check over the Day Observation Course that we set up over a month ago, to make sure all the markers were still there. Then we set up the night orienteering course. As Louise was meeting the others at Mount Victoria the next morning, she left for home after we had finished tea.

The next morning while awaiting the arrival of the others we collected firewood for the nights festivities, and did a final check of the night course. About 10.30am the victims commenced arriving, some twice with an effort to complete their observation trial. Eventually they all made it except for Greg who arrived after we had set off to commence the afternoons course.

With lunch over, we loaded all the competitors in, on or under available vehicles and set off around the firetrails to the start point. Louise was left to start them at five minute intervals while Jack and myself left the area to man check points. Leaving Kevin at the first check point I wandered down to the creek with my 500mm lens to photograph the competitors at the crossing. Most arrived with a bewildered - disgusted look, as they realised that their last bearing led them right across the creek, so it was wet feet or jeans for all but Tony who found the dry way around.

After all the competitors had passed the check points we headed back to camp to await the first arrivals. They were somewhat late due to some confusion with the markers, we had omitted 26 and had two 27's and 14 went straight to 16 (wat! wid all dat chekin an re chekin - gwan mate, who ya tryna kid ?) as the first three through found out. At last with them all back and all points etc, tallied, it proved the last to arrive was the winner.

Tony was presented with the prize. This shows that taking your time and completeing the course for the maximum number of control points even with time penalty points deducted certainly pays, in the LONG RUN.

It was about this time that Greg arrived from Kanangra Walls and with his observation trial added to the rest was the declared winner, eventually, with a total of 330 out of a possible 335. The bar-b-q was set up and after tea with darkness and the

mist rolling in, our competitors paired up (Oh really !) for the night course. It appeared, due to the mist, that they had more difficulties finding the markers than we had in placing them. So it was 1½ hours before the first arrived back. Some were totally confused as they had very little luck in finding No.3 and on retracing their steps back to No.2, found No.9 and so completed the course from there. Others went from No.9 to No.12 and then back to camp, missing 10 and 11 (markers or bods ?) This was not hard as No.10 was very near to No.12 - sneaky move - the eventual winners however found all the markers even the marker hidden in the rocks which had eluded everyone else. Congratulations Tony and Robert.

Sunday morning we set up the Speleo Sports and put everybody through their paces - this included climbing a caving ladder which did have a whistle at the top, crawling through a low crawl set up with stakes, climbing through a swinging tractor tyre and 16" tyre, passing a 14" tyre over the head and body, climbing between trees 10" apart, climbing across a rope traverse, zig-zagging through the small end of an extension ladder and finally crawling through four 16" tyres tied together.

After a fun weekend, Terry, Louise Coleborn + 6, Jack and Joel Charley, Ricky Brett, Greg Powell, Tony, Marie, And Robert Ellis, Kim, Harry, Glenn, Donna and Peter headed for home.

SCOUT CAVING & B.M.S.C.

I WOULD LIKE TO THANK THE CLUB (B.M.S.C.) FOR A VALUABLE SERVICE THAT IT HAS BEEN PERFORMING.

Most spelos have varying views on Scout Cavers, but despite those views Scouts will continue to go caving. We as trained speleos can either keep critising Scout Cavers, or we cav try to do something about the so called "problem".

Most Scout Areas have Caving Teams now, but their activities are restricted. It is for this reason that over the years I have endeavoured to introduce Club Caving to as many Scout Cavers as possible. The B.M.S.C. has accepted those visitors each trip with much encouragement, and the experience gained has been most valuable, as it has enabled those visitors to go back and pass on their experience, to other Scout Cavers.

Although a speleo club os not a Service Organisation, the B.M.S.C. has been performing a valuable service, often unknowingly, that has neither disrupted, nor hindered normal club activities. In actual fact, the club has been enriched, in many ways, by the contacts with the Scout Cavers.

I would like therefore, to thank the club members particularly, the understanding Trip Leaders who accepted the visitors, and gave them so much assistace and much of their knowledge. Because of this Scout Caving in the Newcastle & Hunter Area, is much more enriched.

Greg Powell.
Area Caving Co-ordinator.

EXCHANGE PUBLICATIONS

B.M.S.C. exchanges Journals and Magazines with other groups whose interests are akin to ours.,

Copies of the following can be borrowed from the club library!

A.S.F. Newsletter.
Bermagui Caver.
C.C.O.G. Journal (Grothadda)
C.E.G.S.A. Journal.
The Explorer.
Chillagoe Caving Group Journal
Evil Sevac.
Highland Caving Group Journal.
I.S.S. Journal.
Trog.
Quaver.
M.S.S. Journal.
Speleograffiti.
Labyrinth.
Northern Caverneers.
Descent.
Nuigini Caver.
Southern Caver.
Cavers Chronicle.
J.S.S.S.
S.U.S.S. Bulletin.
Speleo Spiel.
Spar.
Down Under.
Nargun.
The Western Caver.
Helictite.
U.I.S. Bulletin.
J.C.H.A.P.S. Newsletter.

Jack Charley.
Librarian.

FINANCIAL MEMBERS.

July 1981.

Lionell BAKER.
Geoff BAXTER.
Ian BOGG.
Ricky BRETT.
Jack CHARLEY.
Joel CHARLEY.
Louise COLEBORN.
Terry COLEBORN.
Graham CUMMINGS.
Tony ELLIS.
Wally GABB.
Dave GARDINER.
Phill JONES.
George KNOX. (HM)
Steve MARTIN.
Graham NELSON. (HM)
Ken OZANNE.
Greg POWELL.
Barry RICHARDS.
Paul SAMMUT.
Brian SKINN.
Robert THOMSON.
Bernie STEVERS.

PEOPLE ON THE MOVE

The R.A.A.F. have done it again by transferring a member to Wagga!

Terry and Louise Coleborn now live at 69 Connorton St., Ashmont 2650

MULU MAGNIFICANCE

Ian Bogg.

THE MALAYSIAN GOVERNMENT IN 1975 DESIGNATED THE AREA AROUNG GUNONG MULU IN NORTHERN SARAWAK AS A NATIONAL PARK. THE PRIME PURPOSE WAS THE CONSERVATION OF EXCEPTIONAL LUSH EQUATORIAL RAIN FOREST AND THE VARIETY OF TERRAIN TYPES, THE MOST SPECTACULAR BEING THE PRECIPITOUS LIMESTONE CLIFFS - AN EXTRAORDINARY FACET OF THE PARK'S LANDSCAPE

It was known that caves existed and when the Royal Geographic Society massive expedition went to Mulu a team of six speleologists were included among the scientific personnel.

Their explorations covering nearly three months make it clear that Mulu is one of the world's most important cave regions. More than 50 kilometres of cave passages were discovered and surveyed, and it is admitted that this is, but a small fraction of the caves believed to exist there. The claim as one of the world's greatest cave regions is based least partly on the sheer size and present features and pose problems which add considerably to the understanding of cave geomorphology in such environments.

GEOMORPHOLOGY,

North-west of Gunong Mulu, the summits of Gunons Api, and Benarat each rise to more than 1,500 metres - they are both formed in the Melinau Limestone which creates a broken ridge north-east/south-west across the park. The limestone is pure, exceptionally structureless and dips steeply to the west, and the main ridge may be roughly viewed as an escarpment with precipitous scarp faces on the east side. Breaking the ridge south of Gunong Api, is the cliff-flanked valley of the Melinau Paku, whilst between Api and Benarat lies the Melinau Gorge.

Hidden Valley is the most remarkable single feature on the eastern flank of the limestone. A river drains of the slopes of Mulu into a narrow limestone canyon just south of the summit of Api. Vertical cliffs tower 500 metres on each side of the blind canyon. Known only from the air, Hidden Valley was the prime objective of the expedition.

Gua Ajaib - Wonder Cave.

The cave was named after the series of amazing collection of cave dedorations found.

Five hundred metres of very energetic rift passage leads to a series of massive chambers. Massive flowstone walls and towering

stalagmites vie with sparkling crystal floors and stalactite screens. Smaller formations include beautiful gypsum flows and tangled calcite helictites up to a metre long. The Moulin Rouge chamber contains hitherto unknown type of cave deposit.

Wonder Cave is the jewel of the Mulu Park and its remoteness and difficult access should ensure its conservation.

Clearwater Cave.

This gently graded cave derives its name from the Clearwater River which is a short tributary to the Melinau River. The river rises from a boulder rockpile and is recognised as the resurgence for the river of Hidden Valley. A vast entrance opens in the forest 50 metres above the rising and the expedition mapped 25 kilometres of cave passage.

The main river cave 20 metres wide and 30 metres high, carries a base flow of 3 cubic metres per second. Wadind, climbing and swimming and boating takes the explorer 3 km from daylight to an impassable sump pool. Near the entrance a complex series of side passages carry tributary streams in from sinks on the edge of the alluvial plain. A junction of the the main river passage leads into a massive high level fossil passage. Over giant boulder piles and beneath lofty black holes in the roof, past dozen of side passages, this enormous dry passage penetrates half the length of Api to where progress by boulder chokes.

Clearwater Cave with its great variety of passages proves to be the key to the caves of Mulu.

Prediction Cave.

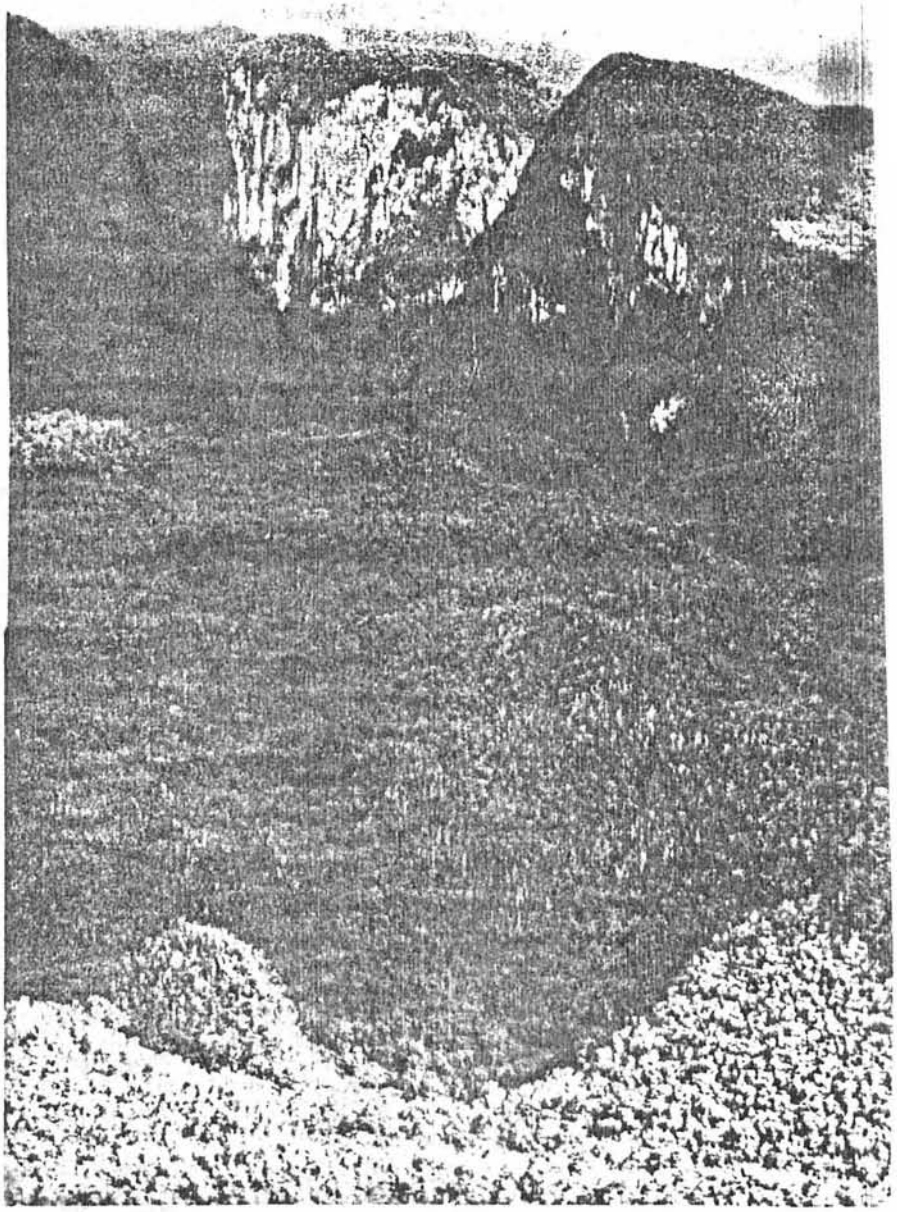
In the south wall of Hidden Valley, a vast yawning entrance leads into Prediction Cave, which has a very large passage up to 100 metres wide, but almost full to the roof with sediment. Beyond the terminal choke there is an unexplored gap in speleological knowledge but, the cave almost certainly continues to one of the large holes in the cliffs overlooking the Melinau Paku River.

Green Cave.

On the southern side of the broad Melinau Paku Valley, a hole in the cliffs leads to the enormous fossil tunnel of the Green Cave, whose southern end is truncated by the blind valley christened the Garden of Eden.

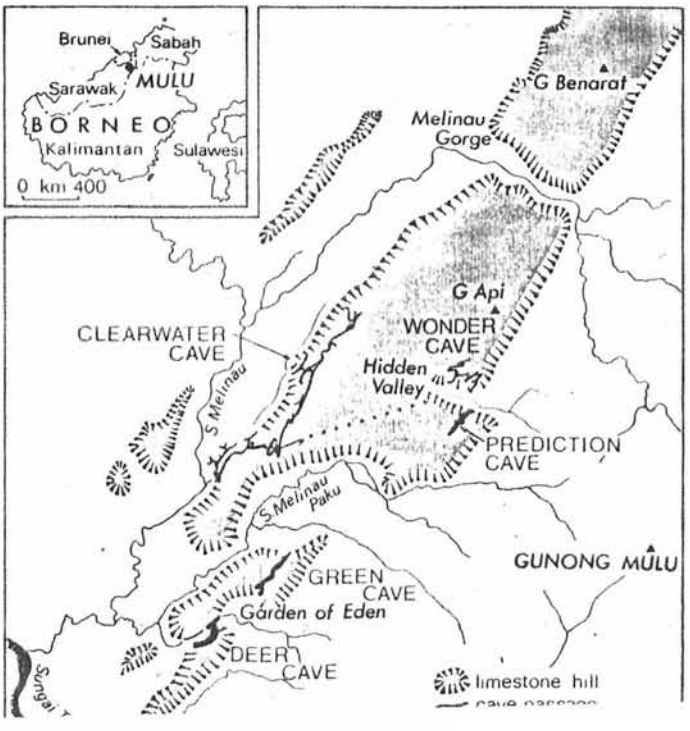
Deer Cave.

Deer Cave, claimed to be one of the most remarkable caves in the world, is a 1 km long through tunnel, and has long been known. Untill surveyed by the Mulu expedition, it was not really appreciated simply because of vastness, which almost defies comprehension as at its down stream end it is 170 metres wide and 120 metres high, and at a few points is less than 100 metres in diameter. Mountainous rubble piles and soaring black holes in the roof adds to the caves grandeur. The small river at the northern end (Garden of Eden) bypasses the downstream half in a smaller parallel river cave.

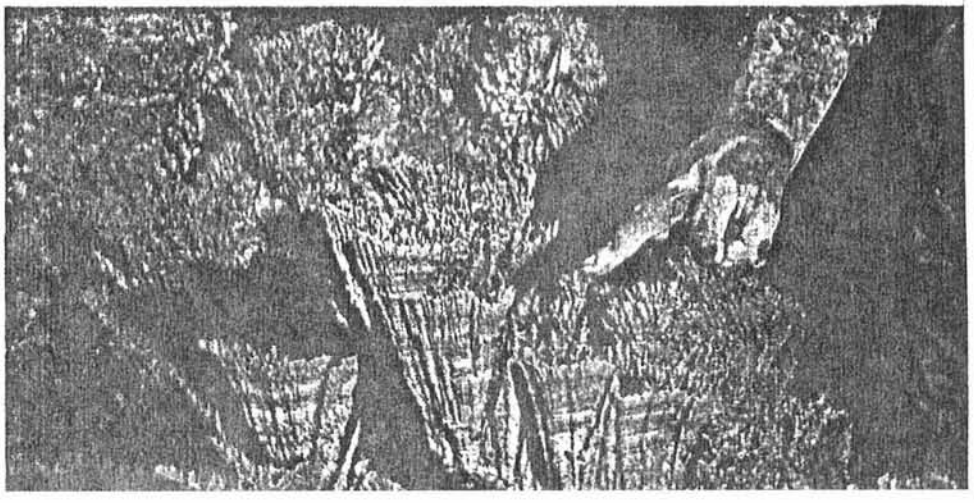


Limestone cliffs tower 500 metres above the Hidden Valley which cuts into the southern side of Gunong Api. Its river disappears underground to re-emerge as a tributary of the Melinau

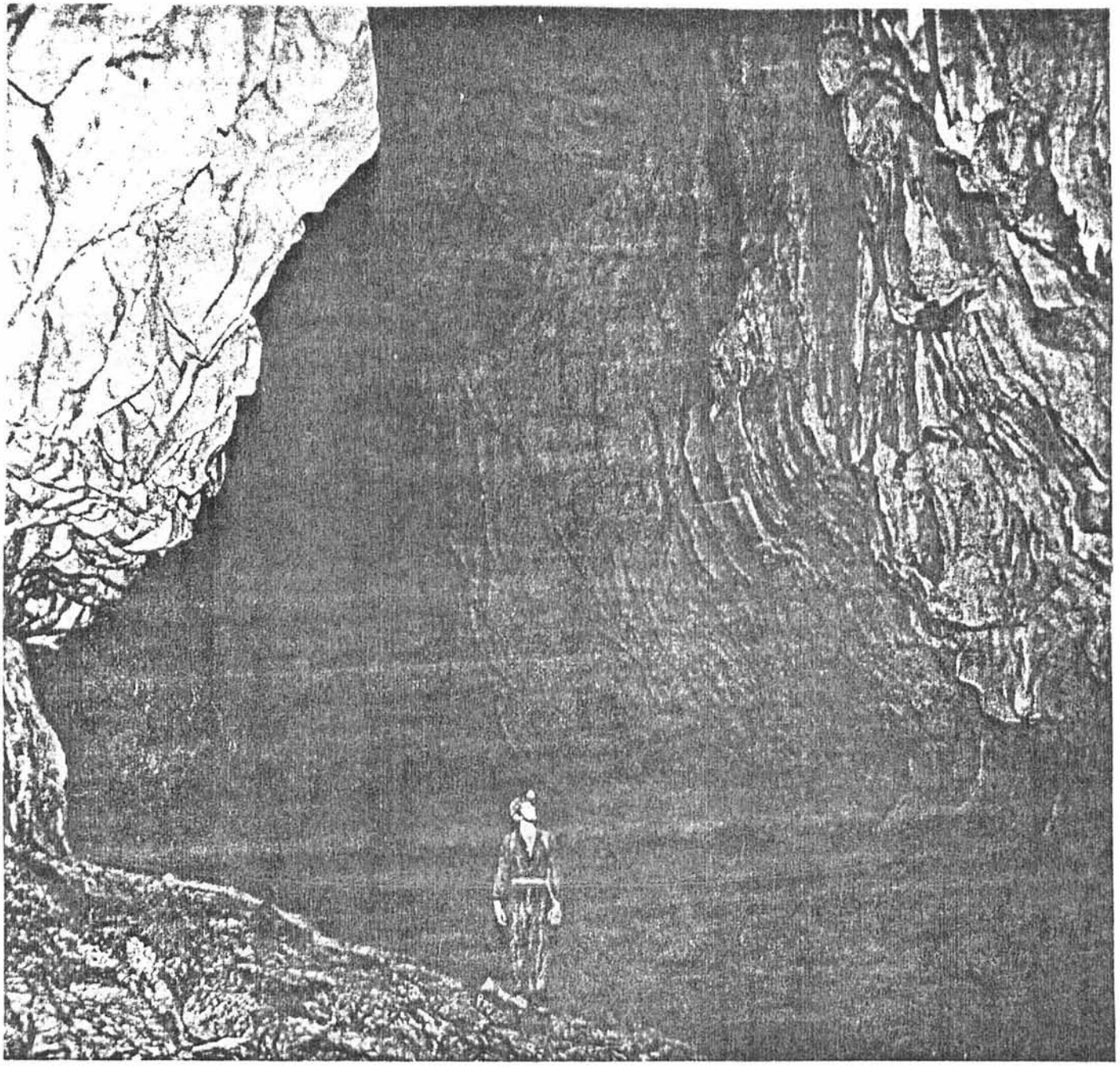
Caves in Mulu hills



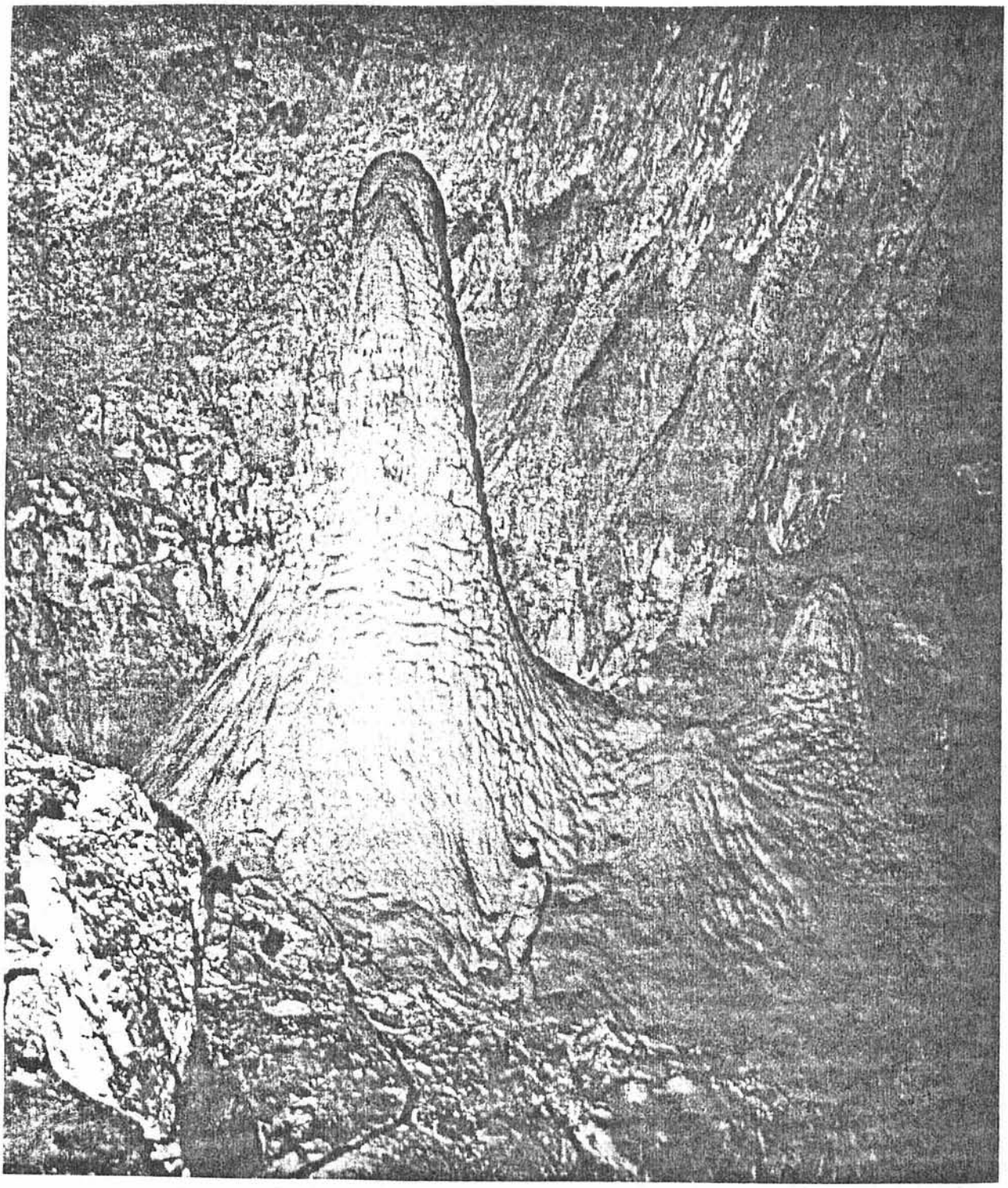
Wonder Cave's splendour reaches a climax in the Moulin Rouge chamber (above). In this cave the explorers found some examples of almost every type of calcite formation



(Right) delicate calcite fans in the Moulin rouge chamber appear to be a previously undiscovered type of cave deposit. The outer skin encases a tangled mass of coral-like structures. Origin is uncertain as yet but they



Main drainage between the Hidden Valley and the Melinau Plain flows through the river passage of Clearwater Cave (above). The expedition mapped twenty-five kilometres of cave passage within Clearwater Cave but the system is still incompletely explored



Unable to follow the river of the Hidden Valley underground, Mulu speleologists examined the sides of the valleys and found a number of fossil caves. In one of these, Wonder Cave, they discovered an enormous isolated stalagmite, now named The Watchman

Everything about Deer Cave is on a magnificent scale. The bat population is estimated to exceed 500,000 and probably approaches 1,000,000. Sharing their Deer Cave home are thousands of cave swiftlets, which between them have accumulated vast amounts of guano which in turn supports an enormous population of smaller cave animals. Additionally, there are cave snakes commonly over 1 metre long who feed on the bats.

HOW BIG IS BIG ?????

Deer Cave provides thought provoking memories - how large can a cave passage be be before it collapse, and in turn, how was the Garden of Eden blind valley formed?

Viewed from the air, the ridges around the Garden of Eden are distinctly asymetrical with inner walls being much steeper and in many parts vertical. In addition, it lies between two remnant seg segments of a once continuous cave passage of almost unprecendenteed proportions. It is difficlut to suggest or even concieve a single chamber approaching 700 meters across collapsing to form the valley!

or is it ?

ABSTRACTED from Caves in Mulu Hills;A.C.Walthan and D.B.Brook; Geographical Magazine, Vol L1 No.7, April 1979. IPC Magazines Ltd., London.

Editors note on Authors.

Dr. Tony C. Walthan, is a senior lecturer in geology at Trent Polytechnic, England

David B. Brook, is a research chenist at Leeds University, England.

TECHNIQUES TECHNOLOGY

THE LIFE OF A NYLON SLING.

When nylon slings are used as an anchor point for an abseil rope, great care must be exercised. When the rope is pulled through the sling the heat generated maybe enough to weld the filaments of the sling together.

Tests carries out in America show that a tape sling made from ¾" (20mm) tape loses approx. 36% of its strength after 33 metres of Kermantle has been pulled over it during a typical abseil recovery operation. The breaking strain of a typical tape is therefore reduced from 1100kg to 750kg.

The above tests show that a sling could be unsafe after only one use. Slings found in positions on pitches should therefore be regarded as suspect, and should not be used.

Terry Coleborn

FROM THE LIBRARY ◇ SELECTED EXCERPTS

Louise Coleborn.

THE WESTERN CAVER: March, 1981 Vol 20(4)

This month it contains a report of the 1980 Cape Range Expedition. It contains cave descriptions and maps.

The article "Go sit in a cave" was reprinted from Playboy (U.S.A.) and informs the reader where to find the most energising air.

J.S.S.S.: May 1981 Vol25(5)

The tight section of Khazad-Dum called "The Depths of Moria" explored and surveyed. New products - Quartz Halogen Bulb Convers'n Batu Caves, Malaysia.

CAVE EXPLORATION GROUP OF SOUTH AUST. INC: May 1981 Vol26(4)

A short article extraced from "Jumars, Ascending and Hauling Techniques" deals with jumar loading and failure. This article is a must for all jumar users.

Comprehensive article on Herberts Pot, Tasmania.

SPAR: July 1981 No.79.

The article "The Thread Technique" describes the method used for descending a multipitched cave using only one rope, eg. It is possible to do Khazad-Dum Cave (Total of 13 pitches and 321m deep) using a 40m S.R.T. rope, 30m of cord, numerous crabs and three 100m reels of thread. Anyone interested in how this technique wotks should see the Librarian.

A circuit for battery charger for sealed lead acid batteries but will work equally well with regular caving batteries.

Do you run short of food on your trips? Why not try Graeme Pattison's "Stinging Nettle Soup".

Report and map "Leak in the Creek" Y112, Yarrangobilly.

TROG: March 1981 Vol 16(6)

Report on Sebastapol Mountain Limestone.

HILLS SPELEOLOGY YEAR BOOK: 1980-1981

This years book includes descriptions, maps and photos of Timor (Isis River Caves). The presentation of this book is a credit to the members of the Hills Speleology Club.

J.S.S.S.: Vol25(8)

Anyone interested in caves overseas will find Jeff Persson's report on "Holloch", Switzerland, good reading.

The August Journal contains more information on the excavation of Henschke Fossil Cave. They have found such things as the skull of a giant echidna. The bones of a huge mallee fowl, also some bones of a large unidentified waterfowl, which is bigger than a swan.

The information leaflet from the S.A. Museum on Australian snakes is very informative.

LABYRINTH: No.28

This journal contains mostly reports from Annual Meeting, but there are two accident reports. One from Chalk Cave, Bungonia and another from Canyonleigh Cave.

NARGUN: VOL 14 (1) & (2)

August journal has extensive report on May 1981 Kimberly Trip.

The article on S.R.T. Notes, gives warning to using jumars - check the wear of their slings attached to jumars. Worried about abrasion of your S.R.T. ropes, then why not read this article.

SPELEO SPIEL: No 168, July 1981.

July's Journal consists of varied trip reports on an expedition to the Nullarbor Plains.

S.U.S.S. JOURNAL: Vol 21(3)

An article for all you Taplow surveyors that have trouble with lights konking out way down in the O section. Michael Lake has the answer! Battery indicator designed to indicate low battery charge. This is done by a flashing red light and it allows the user to get back to the entrance before their light goes out. The article gives circuit diagram with instructions.

VERY ANCIENT GREEKS.

PARTS OF TWO HUMAN SKELETONS BELIEVED TO BE 800,000YEARS OLD HAVE BEEN FOUND IN A CAVE IN THE KALKIDIKI PENINSULA NEAR SALONICA, GREECE.

The bones were spotted in the same cave where 700,000 year-old human bones were found 15 years ago. Prof Aris Poulianos, President of the Anthropological Society made the announcement.

Other indications of human existence in the cave seem to suggest that the cave was inhabited as far back as one million years.

THE SUN, June 3,1981

BOOK REVIEW

VICTORIAN CAVES and KARST

A GUIDEBOOK TO THE 13th. A.S.F. CONFERENCE.

Ian Bogg.

This guidebook was prepared principally for the field trips that followed CAVECONVICT - the 13th. Biennial Conference of the Australian Speleological Federation.

The publication is edited by Lloyd Mill, Sue White and Phil Mackay, and published by the CAVECONVICT Ad hoc committee on behalf of V.S.A. and the A.S.F.

The guidebook of 86 pages includes 8 black and white plates and numerous area and cave maps. The contents cover the Victorian cave areas on an individual basis with specific notes on geology, geomorphology, cave descriptions, equipment required, climate, history, fauna, accomodation, local facilities, cave hazards, time to reach specific cave and cave exploration time, with appropriate warnings.

Caves of Victoria are not renown for their length or depth, even by Australian standards. The guidebook provides data on the diversity of caves, both in their form and in the host rock, covering Basalt, Limestone, Granite and Sea caves. For any Australian speleologist if nothing else, it will enhance their overall understanding of our caves - Top marks!

As stated in the introduction to the publication, the guidebook represents the first attempt by Victorian speleologists to set down unrecorded and recorded information existing about Victorian caves - far more than one ever ever reads between the covers of Nargun, V.S.A.'s Journal. To this extent V.S.A. must be complimented.

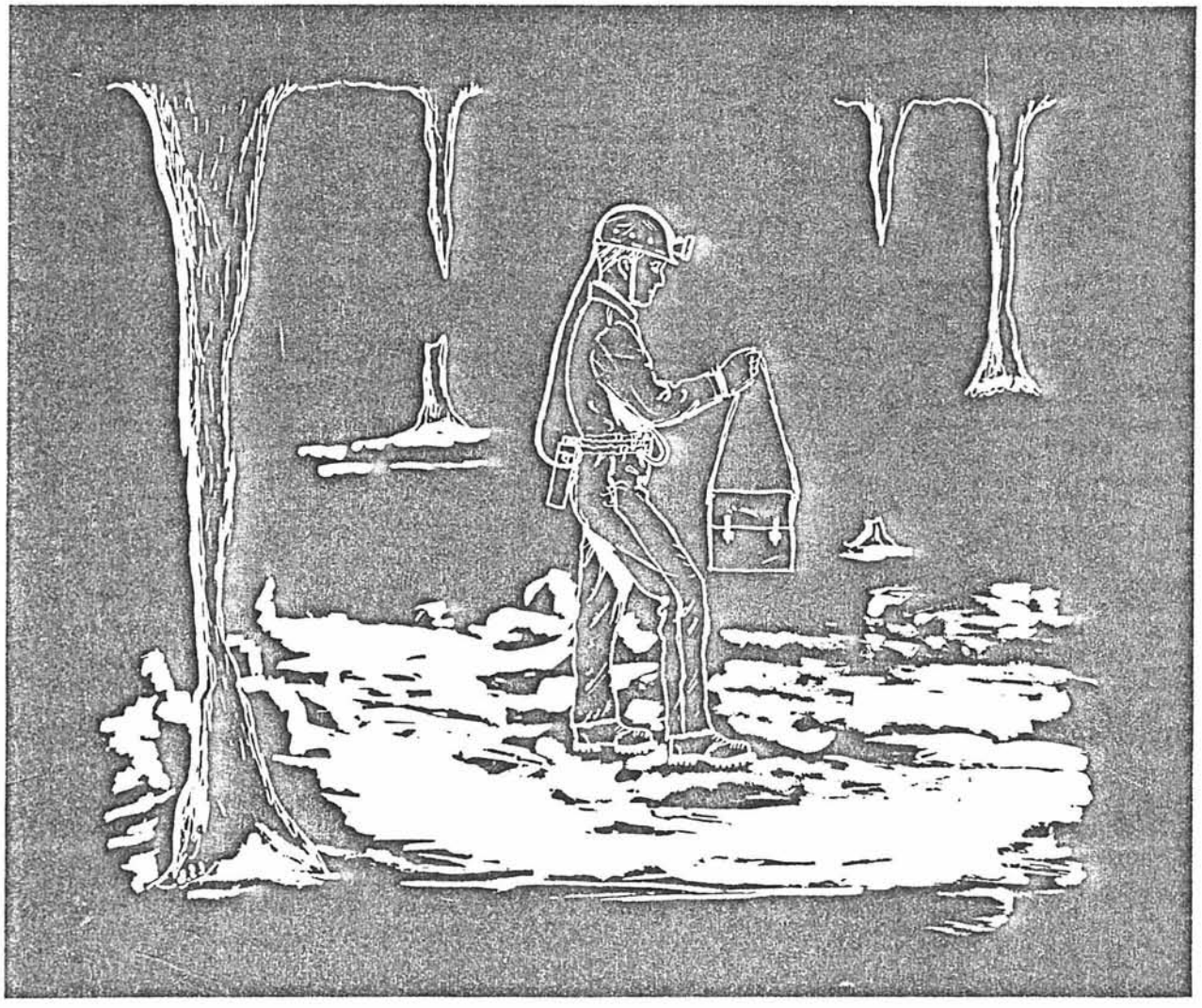
The guidebook is a clear, concise and pertinent publication, with a high readability factor. As with guidebooks of this nature, it discloses the location of caves and I for one, sincerely trust, that into whose hands it will eventually end up that those persons will use such information responsibly.

Victorian Caves and Karst is a worthwhile addition to any speleo's library and is an excellent companion to the CAVECONACT Field Guide.

A young woman whose car had recently had a major tune-up, drove into the garage near where I work. The proprietor asked her what seemed to be the trouble now. "Well" she said, "it's hard to explain but, it sort of chokes up like I did when I recieved your repair bill."

Another of JACK'S JOKES !

TRIP REPORTS.



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CLIEFDEN.

Date: 11th. - 12th. April, 1981.

Aim: To visit Gable, Transmission, Lock and Yarrawigga

Members Present: Jack Charley, T.L., and R. Brett.

Rick and I arrived Friday night about 10.30 pm after an eneventful journey. We awoke next morning to find that Dave and Wal, whom I assumed were coming were not there, so I decided to give them untill lunch time before we went down to the caves. We had a pleasant morning walking around the limestone near the hut and up the creek behind the woolshed. Midday came, still nobody in sight, so I explained to Bruce Dunhill that I was waiting on two people and said that I would come and get the keys if they arrived. We went off down to Transmission Flat crossed the river and spent some time looking for the Eyrie entrance of Trapdoor, but that was in vain.

After all the rain in the ranges the river had been up 225mm - 250mm higher and was quite muddy and cold. We had a little paddle, skipped a few stones and then showed Rick the entrances of Transmission and Gable Caves, then went back to camp.

Next morning we had another look for the Eyrie entrance, but this time a lot further along the bluff. Rick found No.19 tag on a very well hidden blind hole. I dug out one possibility, but no go, and as we were wandering ainlessly around, I spotted a 50mm hole in the ground with wet moss growing around it. With much excitement, I called Rick up and we gained entrance to a 6metre deep hole that could be dug out. It has a small low chamber with some dry roof formation. We blocked up the entrance with stones and went back to camp, cleaned up and headed home, thanking Bruce for having us as we left.

MOLE CREEK - TASMANIA.

Date: 12th. - 20th. May, 1981.

Members Present: T. Matthews, J. Charley, G. Baxter and S. Greirson

Arrives 8.30am Launceston airport and were met by Chester Shaw. Some how we managed to load all our gear into his Skyline and arrived in Mole Creek well after 10pm, to be greeted by Janice and Kevin Parsons atbthe hotel.

Next morning (Wednesday), Chester picked us up and headed for Kubla to rig the cave and check out our gear. Photography reigned supreme in Forbidden City as the new chums boggled at the sights. Eight hours underground this day.

Thursday, more photography in Forbidden City, Jade Pool and down to the Kahn, lunches courtesy of Janice with cups of tea or coffee heated on a choofer.

Friday saw us heading off for Genghus Khan, for a very thorough six hours photographing. Geoff's slave units were brilliant. One bout of flashing saw six go off at once.

Saturday we went to see some sights above ground and visit friends.

That evening we had an inspection of Dulcimer Hole. Poor Geoff boggled again, actually we all did, it is so beautiful, protected by its geographic location. Spent three hours in there with all those needle like transparent helictites, the pure white stalictites and the red flowstone walls.

Sunday was a rest day and was spent sightseeing.

Monday we drove around to Creocus Cave and paddled in the cool waters as we viewed the sights on either bank of the river. We walked as far as the Golden Staircases before photographing our way out.

Tuesday, our last day of caving before starting our journay home, we had to derig Kubla. Headed off early with frost underfoot, we walked slowly up the winding path to the top entrance. Photography being part and parcel of the whole holiday ran rampant again, this time we saw the far side of the Kahn, down to Began and on to the Moonscape, then we packed all the ropes and left as we said farewell to this magnificent cave, filled with beauty, delicasy, mystery, grandeur, colour and sheer size and quantity of formations plus the enormity of the caverns. Kubla Kahn may not be one of the world's greatest caves, but judging by reports of other caves it certainly is one of Tasmanias greats.

BUNGONIA.

Date: 30th. May, 1981.

Aim: To visit the Penelope Chamber, B24.

Members Present: T. Coleborn, T.L., Joel Charley, R. Brett, W,Gabb L. Coleborn.

Visitor: Kevin Coleborn.

After some hefty lead up work and a lot of phone calls, I found myself on the road to Bungonia very early Saturday morning. We arrived at the Bungonia gate at 8.15am closely followed by Wally. Rick and Joel had arrived the night before, so we went to the Grill camp to wait for them. They soon arrived from the direction of the lookdown, we loaded up with all the necessary equipment and headed for the B24 entrance.

I cannot confess any great love for the rockpile of this cave, and this trip did nothing but reaffirm my belief that it looks and can be bl...y dangerous. It was however negotiated without incident and only one case of "which damn way do you go from here" I set up the 8m pitch and belayed everyone down the ladder, and then abseiled down myself. Rick and Kevin led the way to the top of the 20m pitch. Here Rick, Joel and Kevin abseiled down first, closely followed by Wally who laddered in then I abseiled down.

At the top of the shale band, the first CO_2 was encountered. As it was only minimal at this point we decided to do the shale band and check the conditions down here. It turned out to be no worse so we climbed up into the Penelope Chamber. Conditions improved slightly, so everone was able to relax for a bit and enjoy the sights of the Chamber. After a short stay, we headed back to the shale band. Rick headed off hand over hand while the rest of us used a jumar connected to a waist crab for support.

The exit from the cave was eneventful, de-rigging the cave as we went. Nobody got lost at Confusion Corner, and we emerged tired and cold after 9 hours underground.

CLIEFDEN.

Date: 6th. - 8th. June, 1981.

Aim: To recheck the L and M sections of the survey of Taplow Maze.

Members Present: T. Coleborn, Survey Co-ordinator, Jack Charley, R. Brett, G.Powell, L. Coleborn and family.

Visitors: Warren and Ian Lacey.

Arrived Friday night about 8pm in miserable weather, and the prospect of a long cold walk to Taplow from the silo, for the next morning. Rick and Jack arrived about 10pm closely followed by Greg and Warren.

Saturday morning was cold and wet as promised by the previous night. The only thing that was lacking was the rest of the bodies for the survey party. Not to be daunted the six of us plus Kevin drove to the silo and trudged down the hill and across the flat to Taplow. The river was up slightly, so wet boots and socks were the order of the day. Once in the entrance however we left the rain and cold behind and were welcomed by the dust and dirt of the crawl passages.

Firstly we took the newcomers down to the sump north on the entrance for a quick look at the "calcite rafts" and to give them a small taste of what was to come. Ricky found a cockroach in the crawl passage leading to the sump. It was approximately 1cm long, reddy brown in colour. Not to be outdone, Kevin found a dead spider large and hairy, probable specie of huntsmen. He also found a partially decomposed mouse skeleton.

We headed back to the main section of the cave and on the way down Ricky found a centipede 7.5cm long, olive green in colour, the same specie found on the surface. On to 22 where our gear was left then everybody went for a look at the L. section prior to commencing the survey. This section consists of a series of triangular passages with walls covered with cave coral. It is almost entirely made up of crawl passages about 0.5 to 1 metre in width at the floor level.

While Jack, Rick and Kevin put down the traverse, I took Warren down to the Railway Tunnel and then returned to the others via the passages we had to survey. Greg and Warren armed with a copy of the map then went off to explore the rest of the cave looking out for possible leads.

With the survey nearly completed for the day, Greg and Warren returned with glowing reports of a "Blue Column" to rival the "Blue Stal" in Murder, but as it was late we decided to finish the survey and return to the hut.

On Sunday morning after the arrival of Warren's brother, we walked from the house to Taplow and made a bee-line for the "Blue Column" for a photographic session.

A green tree frog was found in a low mud crawl near the end of this section of the cave, one can only speculate how it got there, as it is a long way from any known entrance. This section has been given the name "Frog Hollow".

We then returned to commence the survey of the M. section. Rick and Greg succeeded in connecting this section back to station 14 on the number traverse via a short dig. Except for the initial crawl this section has large walk through passages. But the most endearing feature is the absence of cave coral from the walls.

At the end of the larhe chamber we found another freen frog, this section has since been proven to be near the surface, and there is a good possibility of another entrance through the rockpile at least large enough for our green friends to enter.

The prospect of a long walk back in the dark forced us tomleave the cave at 5pm.

Monday morning saw Greg and Warren departing for Newcastle while Jack, Ricky and I returned for three hours of surveying. On the way across the hill from the cave we discovered a 0.3 metre hole with warm air flowing from it, so before leaving we shot a bearing from it to the cave entrance and we have since found out it is 15 metres away from the so far surveyed M. section, which is heading in that general direction.

Then back to the house for lunch and a clean up of the house. With chores completed we left for home.

GLENBROOK FIELD DAY.

Date: 21st. June. 1981.

Members Present: T. Coleborn, L.Coleborn, Joel Charley, P.Jones, B. Thomson and S. Martin.

The morning was spent with revision of knots and their application. Discussions were held on theit efficiency and the stress each knot applies to the rope under different circumstances.

The new members then rigged a ladder and set up an independant belay. Each one then took turns of climbing, belaying, experiencing a fall while climbing, and experiencing a falling weight while belaying.

When this section of the field day was completed we headed to the Portals for S.R.T. practice. After everyone had abseiled the 106ft (34m) pitch, we spent the rest of the afternoon sorting out abseiling and prussiking on the 60ft (18m) pitch.

The days attendace was very poor, but a good days practice was had by all.

CLIEFDEN.

Date: 11th. - 12th. July, 1981.

Aim: Continue Taplow Survey.

Members Present: T. Coleborn, T.L., L. Coleborn, I. Bogg, R. Brett, Joel Charley, B. Thomson, P. Jones and S. Martin.

Visitors: P. Bain.

We all arrived in the bitter cold on Friday night with the exception of Ian who arrived with the frost on Saturday morning. Upon Ians arrival we all trogged up and headed for Taplow Flat. The river proved somewhat of an obstacle with the new comers wondering just what they had let themselves in for.

The morning was very cold and we noted condensation rising from the hole in the hill near C113. Everyone was looking forward to the warmth of the cave, so in no time at all we had the climb near the entrance rigged with a ladder to facilitate entry. With everyone down we headed for the M. section through all those crawls.

At station 22 we set up a maximum - minimum thermometer, which was to be left overnight. The day was spent surveying and exploring possible leads. The M. section is almost completed except for the area near the dig we had commenced whic is now 4 metres long and heading back under the un.table section in C., below where the Danger Sign is situated. On completing this we headed back to the hut.

On sunday Phil, Bob and Steve commenced the dig not far from C131, which was no longer emitting the condensation it had been the previous morning.

The rest of us made our way to the Railway Tunnel, then we headed down to the J. section detouring for a look at the "Blue Column" on the way. It should appear from our present map that there is still more to survey in the J. section. We explored a hole in the roof by boosting up Ricky onto our shoulders, he was able to crawl up and explore the passage and by dropping a stone down, the hollow sound gave the impression of a false floor. This area has great possibilities for extensions.

The maximum - minimum thermometer recording was a max of 15^{0}C and a min of 14.5^{0}C, over the 24hr. period, from 10am. Saturday to 10am. Sunday. Once again several frogs were seen in the M. section over the weekend, next trip we intend to mark them for future reference for locality distribution. The M. section formation is predominantly Cave Postules. A cockroach was observed at station M8.

With the morning over we headed back to the house for lunch. With the hut cleaned and fees paid to Bruce, we headed home.

JENOLAN.

Date: 18th. - 19th. August, 1981.

Aim: Finish Rho Hole gate and continue exploration inthe N.M. Passage, Mammoth Cave.

Members Present: Jack Charley, T.L., T. Coleborn, G. Cummings and

We checked in at the guides office Saturday at 8.30am, and as I was not familiar with the work that had been done to the gate anchors, we walked to the cave and checked the measurements that I had previously obtained for Karl. Duly noting these, we went and hassled Barry Richards to get into the machine shop to make the gate. An hour and a half later we attempted our first fitting, but in vain, so as we were trogged up for Mammoth, I threw the gate in the grass and headed for the N.S. Passage.

Graham being the only one who new anything about where we were going, it was like the blind leading the blind. We found Central Lake to be about 5m down on top water level but river to be flowing well. After six hours we decided it was enough and beside Terry was going home that evening anyway.

Back at No.2 carpark, Louise was waiting for us. Nobody is allowed to drive to Mammoth Flat anymore now, because som SPELEO chain-sawed a big live tree down at the campsite, so everybody has to camp at the top of the Five Mile behind the D.M.R. Stockpile. we were not impressed by the whole situation.

The guides would not tell us who cut the tree down, only that it was a speleo group.

On Sunday we descended the Five Mile, went to the machine shop and altered the gate, took it up to the cave and this time it fitted perfectly. The guides were to supply and fit the padlock. As we did not want to go home early, we went walking around the reserve near the Caves House, said farwell to Barry, thanked him for the access to the machine shop and checked out at the guides office as we walked back to the cars. A very pleasant weekend.

CLIEFDEN.

Date: 1st. - 3rd. August, 1981.

Aim: General Exploration.

Members Present: L. Baker, T.L., T. Coleborn, L. Coleborn, G. Webb, G. Baxter, R. Brett, G. Powell, R. Thomson and S. Martin.

Visitors: Warren Lacey and David Grey.

We all arrived Friday night with the exception of Rob and Steve who arrived at 9am next morning.

After we trogged up, one party headed off to do the Taplow survey, and the other to Murder Cave.

My Group headed onto Murder as far as the "Blue Stal", where the new members to Cliefden got busy taking photos. From here we headed back to the left-hand extension to explore the section near the sewers and of course more photos were taken.

On our way out we encountered the survey party which had no hope in getting across the river. We left this party to continue on with the leadership of Greg, while the rest of us pushed on to the

entrance. From here the party broke into two groups, the hungry ones back to the hut and the others to Main. That night Greg said to congratulate O.S.S. on their cleaning programme in Main Cliefden, he and the others were very impressed.

Sunday morning saw the group drop into Tet-a-nus to have a look at the Oolites. After this we said goodbye to Greg and the Newcastle boys, and Rob and Steve who were heading for home. After an early lunch Geoff, Ricky, Louise, Kevin, Cheryl. and yours truly headed for Transmission in the back of Ricky's truck. Here three hours was spent exploring the maze section. While we were in Transmission Terry and Gary were doing a surface fauna study.

Monday morning I led a quick trip to Molongulli to show the new members the Nazgal and the Barries Shawl. Then back to the hut for linch and with the hut cleaned we headed for home with a short detour to see the waterfall at Junction Reef.

WALLI.

Date: 22nd August, 1981.

Members Present: Jack Charley, T.L., L. Coleborn, T. Coleborn, R. Brett.

Visitors: Harry Morio.

Aim: Continued Area Exploration.

We started out abseiling into Deep Hole as Harry had not been on a rope before we gave him a crash course in abseiling. He took to it like a duck to water. Spent 3½ hours in this quite extensive cave, lots of good passage to explore.

Back to camp for lunch, then into Horse Hole for 1½ hours. Quite a nice little cave.

We then wandered down to Fox Hole, but it did not amount to anything. Over to Bone Cave for 1½ hours. As Terry and Louise could only attend for one day, we all elected to do the same. So we packed up and headed for home after an action packed day.

CLIEFDEN.

Date: 12th. - 13th. September, 1981.

Aim: Taplow Survey.

Members Present: T. Coleborn, T.L., L. Coleborn. R. Brett, Jack Charley.

Visitors: Peter Brett.

We all arrived Friday night. Believe it or not, we were trogged up ready to go by 8am. on the Saturday morning, much to the disgust of my fellow party members. We drove to the wheat paddock and walked across to Taplow. Not wishing to go underground before 10am, certain members of the party mutinied and decided to mess around the river

for awhile. Peter not wishing to get his feet wet decided he would use the boat to cross, needless to say after being rescued from the rapids he had more than his feet wet.

After drying out we headed underground and down to O. section. It takes about half an hour to reach this section after rigging the entrance pitch. Not being able to find the original survey stations the quickest way is to resurvey this section from the numberline. After this was complete we surveyed the tight extensions and offshoots, which should eventually connect to C113.

The O. section consists of passages filled with dirt and mud and all the passages end in a dirt or mud choke. On the way back towards the entrance we checked out a few leads for future surveying. Then we commenced the detailing from the entrance to Station 8. This section proved very time consuming as several measurements are required because of the holes in the floors and all the large boulders etc. After seven hours we headed out.

Sunday was spent searching the bluff for Eyrie, but again without success, although the dig Jack and Rick started looked very promising, and will have to be continued. After spending three hours looking for this very well hidden cave we returned to the hut for lunch and with the usual clean up, we headed for home.

CLIEFDEN.

Date: 3rd. - 5th. October, 1981.

Aim: Taplow Survey.

Members Present: T. Coleborn, T.L., Jack Charley, R. Brett, L.Coleborn, G. Webb.

Visitors: Blayne Webb.

Due to the Bathurst car races we decided to take the back road via Blayney, Tarana etc., and surprised ourselves by completeing the journey in 3 hours.

Saturday morning confirmed Murphy's Law - it rained, the power was offand did not come back on untill we had completed breakfast. At this stage the rain was pelting dow. About 9am the rained eased enough to attempt the walk to Taplow. Louise was very amused at our attire - to help keep dry we cut holes for head and arms in garbage bags and wore them - Robim Hood and his merry men or cavers ?

The day was spent in surveying the new section found off C., and redoing E. section, as it was incorrect. After surveying this section we completed detailing in this area. Fauan noted were a slater, cricket and beetle.

That night we added the section to the map and found it heading towards M. section.

Sunday morning saw the river up to waist level and running very strong - down to undies - gear in garbage bags - and across we go. We spent the day resurveying J. section to ensure its accuracy, and replace the markers that have since become part of the cave ecology. This section which is otherwise devoid of any sought of formation we found what may qualify as the world's smallest

helictites as the longest barely measured 2mm in length.

What was originally the I. section was resurveyed, as it was d difficult to tell whether the original survey was correct or not. It is now Q. section. When we returned to H8, Ricky found a lead which is now known as Ricky's Hole. This section now surveyed leads towards L. section and then doubles back under Rocky Point Road. Ricky found another three "Blue Columns" not far from the other Blue Column, but these are a little more hidden and not visible unless one climbs high enough to see them. This section is called the "Blue Romm" for reference, as naming the section helps us to locate and orientate ourselves with this increadable maze.

Monday we surveyed the H. section past the original impenetrable squeeze. Goodness knows where it was. This section added a further 80m of passage to the cave and heads towards O. section, and is about 45m from C113. Towards the end of this section at about H31 there is a small section of helictites and a beautiful translucent donkey tail and several small stalagmites sitting like small gods on the rocks and mud in the small chamber. The area from H31 to the end of this section has white cave postules in almost every crack and crevice. For Taplow Maze this section would be considered very well decorated.

On Sunday we found a gree tree frog Litoria caerulea at Q4 and Gary showed us the correct way to mark it for future reference to its distribution. This one from Q4 has been given the name "one one"

Taplow Maze now has 1,870m of passage and we are very hopefull of reaching 2km's at least.

We cleaned the hut and left for home.

BUNGONIA.

Date: 31st. October, 1981.

Aim: Search and Rescue.

Members Present: T. Coleborn, L. Coleborn, R. Brett, C. Skinn, B. Skinn.

Visitors: Chris and family (Friends of Mr & Mrs Skinn)

Due to the petrol strike only five of eight starters turned up, and as Louise and Carol worn't going underground, this left only 4

There was no point in carrying out the planned rescue work, so we went into Grill to initiate Chris into caving. We threw a rope down a 10m pitch near the Big Iron Ladder and all went to the bottom where we discussed the various methods that could be used to rescue someone caught half way down. In particular, for a person jammed on a knot, the best starting place for any sought of self help is to tie a foot loop just below the knot and then stand up in it. From here caneither make prussik loops from the end of the rope and attempt to climb out or rig a substitute descending method below the knot, and then continue down.

The afternoon was spent laddering in and out of B16, where Brian, Ricky and Chris went as far as the Spoke Shave Squeeze. Departed Bungonia at 6pm.

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