OOLITE

BLUE MOUNTAINS SPELEOLOGICAL CLUB
P.O. BOX 37
GLENBROOK, N.S.W. 2773

BLUE MOUNTAINS SPELEOLOGICAL CLUB JOURNAL

OOLITE

Journal of the Blue Mountain's Speleological Club.

Post Office Box 37,

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EDITORIAL.

Well here we are already a quarter of the way through I970. This year we hope that B.M.S.C. WILL have some outstanding trips, by active participation of all club members we hope to do some very interesting work in the Abercrombie area. Not forgetting the work that has already started in the Tuglow Area by means of several digs and surface direction of the system. We hope to introduce a system by which we can set up a recording card index of al known caves to B.M.S.C. We hope we can study the caves observing water flow, insect life ect, and also gain knowledge of the orgin of the caves. The committee hopes that some time during the year we will be able to carry out a rescue from Tuglow. I would like to welcome new members to the club and hope that they can get full enjoyment from, as well as making some contribution to speleogy. Once again I must stress that for B.M.S.C. to advance in speleology we must have the full co-operation of all club members to fulfil the work the committee has mapped out.

Just a reminder that the I970 fees are now due so please see that the Treasurer has them as soon as possible.

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I970 ANNUAL ELECTIONS.

The annual general elections were held on the I6th Jan I970 with the following positions being appointed.

PRESIDENT.....KEN PICKERING.
SECRETARY.....IAN BOGG.
TREASURER.....STAN THOMAS.
EQUIPMENT OFFICER...RON THOMAS.
LIBRARIAN.....JOHN INGLETON.
JOURNAL COMMITTEE...BARRY Mc WILLIAMS.
DAVID WARD.

I hope that the club will help the above committee in any way so that they can advance speleology in B.M.S.C.

PRESIDENTAL REPORT.
I969.

B.M.S.C. has now completed its fourth year of formal existance and I take this opportunity of thanking each and every member who has contributed in his or her own way to the club's continual growth and improvement. Growth has been evident in all phases of the club's activity, in membership, number and duration of trips, and in the quality of the sporting and Scientific caving carried out.

Meetings have been held regularly (3 in Sydney) and have been well attended.

Two journals of a high standard have been produced. Several members have undergone St. Johns First Aid COURSES. Firm contact has been established with the Tourist Bureau. A very succesfull film night and an enjoyable christmas party were again held this year.

New equipment was purchased-360ft. nylon rope, 50ft. ladder, and a comprehensive first aid kit.

On the debit side, it should be remembered that we have lost at least six members or potential members in the last year. We cannot afford this and all members should actively encourage all present and future members so that they become dedicated SpeleologistS.

High standards for membership, trip leadership, and safty were introduced in I969.

Members should think in terms of even greater projects for I970, expeditions to remote areas such as the Nullabor or New Guinea, specific jobs for the Australian museum or even the creation of a movie on Speleology-(e.g. filming, done by Roselands Car Club.)

In conclusion I would like to thank all other office bearers for the time and effort they have put into making I969 such a successful year.

Ken Pickering.

President.
I6-I-70.

4th ANNUAL SECRETARIAL REPORT.

It is with much pleasure that I present this, the 4th. Annual Report of the Blue Mountains Speleological Club.

In reflection, if we review the past twelve months we will find, that in many ways it has been an exciting year for the club. If we stop and ask ourselves, what have we as a club achieved in I969? we would, I feel find it very gratifying.

The year began on a high note when B.M.S.C. was finally admitted as a member society into the Australian Speleological Federation. This was the culmination of a lot of hard work by the foundation members of B.M.S.C Notable, Dr. Graham Nelson. However I feel some misgivings as far as the A.S.F. is concerned and in particular, the N.S.W. Co-Ordination Sub-Committee, there has been very little action in I969, especially as they are the 'guiding light' as far as Speleology is concerned within Australia and N.S.W. One can be optimistic, and hope that things will improve in I970.

The early part of I969 saw the introduction of revised and up graded membership and trip leader requirements, and introduction of safty and conservation codes. In view of the revised membership standards some individual members set themselves the task of attaining these standards, which they have achieved and surpassed particlarly, in first aid. Six members have completed the St. John's First Aid Course, this year, a noteworthy achievement.

The club membership has grown from 24 to 33 members and as a result, presented the club managment with many challenging problems. I refer to the nature and variety of the past trip programmes. During the year there were 28 trips organised, all of which were all well attended The majority of these trips were two days duration and as a result B.M.S.C. visited many caving areas namely: Wee Jasper, Bungonia, Wyambene, Abercrombe Jenolan, Timor, Colong, Cliefton, Walli, and Tuglow.

As a result there is a harmonious, diversified Speleological interests beginning to emmerge, particularly in the field of cave science, resulting in a usful liason being established with members of the Australian Museum and Dr. Joe Jennings at the Australin National University Canberra.

Trip reporting through out the year steadily has improved. It is good to see trip reports containing relevant rather than irrelevant detailed information. At this time it is worthwhile to note some excellent trip reports, namely:-

Wyambene 25-27thJuly,I969
Colong I3-I4thSeptember,I969
Harry's River.. .. .. .. 27thSeptember,I969.
Abercrombie. .. .. I5-I6thNovember.I969.

In an attempt to advance Speleology as a sport and as a Science, there were film and entromological lecture evenings arranged. Also the club was represented at a survay lecture evening organised by a fellow society to which an invitation was extended to B.M.S.C.

Regarding "OOLITE" there has been some criticism, which has helped to promote a high publication standard. Unfortunately, there has only been two issues in I969, with the latest issue a monsterous 45 pages publication with enough diversified spelo material to make it interesting reading. We can be proud of our journal when compared with other spelo publication. However we must not be complacentin this regard but strive for improvements in both material and publication,as "OOLITE" is the offical B.M.S.C. journal and as such, it will promote an image of us, either good or bad.

At this stage I would like to take the opportunity to thank, Ken Pickering, for his Presidential guidance, Ron Thomas, with that everwathfull equipment eye, Stan Thomas, as our financial controller, John Fitzgerald, for the indexing of our library material. Lyn Bogg as our faithful journal typist. Finally as we are now becoming a Speleological club, rather than a mere caving club, only with the continued help and co-operation, participation and enthusiasm of our members can B.M.S.C. survive to advance Speleology as a sport And Science, and to promote conservation and safty in caves amongst Speleologists as a whole.

Thank you,
Ian Bogg.
(hon. Sec.)
I969.

BLUE MOUNTAINS SPELO CLUB.

Statement of income & expenditure for year ending 31.12.69.

INCOME.		EXPENDITURE.		
	£.C.			£.C.
Balance b/fwd 1968	22.49.	Equipment.		
		Wire Rope.	6.00	
		Araldite	3.29	
Membership Fees.	99.50.	Nylon Rope	36.43	
		First Aid Kit	11.00	
Trip Fees.	39.40.			56.72.
Other Income. (film Night, Sale of Transfers ect.)	18.45.	Olite, Paper etc.		24.95.
		Secretarial, postage ect.		37.87.
		A.S.F. Affiliation		8.50.
		Helectite Subscription		11.40.
		Colong Committee, Subscription & purchase shares A.P.C.M.		8.00
		General Expenses		11.81.
		Balance, carried forward.		20.59.
	179.84.			179.84.

Stan Thomas.
Treasurer.

NOMENCLATURE.

A bare limestone surface eroded by surface run-off, carved into holes and pits and groved and fluted, is called a limestone pavement (known also as a clint in Northern England, a lapiaz in France, and a lapies in The United States.) The large, shallow, funnel-shaped depressions are called entonnoirs. (funnels) in France, and are also known by many local dialect names (sink-holes in the United States and shake-holes in Yorkshire.) In most areas the larger depressions are called dolines, after those in the Karst of Yugoslavia. A vertical hole or succession of straight-sided holes occuring in steps is a pot-hole or a ghyll in England, and a gouffre, abaime, aven or chouroum in the dialects of Southern France. Horizontal galleries lead into chambers, rooms or halls. A chamber with an outside opening is a cave or cavern, a grotte or baume.in France, and a Hohle in Germany. The point at which a river vanishes underground is called a swallow-hole or swallet in England and United States, a perte, goule, or embout in France a Saugloch in Germanyand a ponor in Yugoslavia. The point where the river reappears from the ground is a resurgence or rise-pit, or guier or gillard in dialect French.

Cave-system is the expression most generally used for an underground network of galleries and vertical gulfs. The French terms gouffre and grotte are also widely applied, the first to systems where vertical drops predominate over galleries, and the second where the galleries are more important. This usage is not recommended: gouffre should imply merely a chasm, and grotte, an open cave-chamber.

The word stalactite has a Greek derivation meaning 'drop by drop' There is too, a general term 'dripstone' which is used to cover all formations. In German a similar term, Tropstein , is used.

Corrosion of the surface forms limestone plateforms and sink-hole or karst plains (karst-from the Karst or Carso area of the Adriatic coast near Trieste). The topographic features characteristic of a Karst region include disappearing streams or sink holes , Dolinas, solution pans, numerous sink-holes and sink-hole ponds, perhaps numbering hundreds to the square mile;swallow-holes, compound sinks, and blind or closed valleys.

Eventually, as most of the limestone is removed from the area, only isolated hills or groups of hills willremain. These residual hills are analagous to the monadnocks produced in the last stages of a fluvial erosion cycle. In the Yugoslavian Karst they are called hums; in Puerto Rico, where they are very common, they are known as pepinos or haystack hills; and in the Causse area of France, they are buttes temoines of Puerto Rico vary in height from 200 to 300 feet, a few in Cuba stand over I,000 feet and are honeycomed with caves.

from Larousse Encyclopedia of the Earth. p.57ff.

Published by Paul Hamlyn. I967.

Extracted by Ken Pickering.

MEASUREMENT OF STREAM FLOW.

Members of B.M.S.C. might find a variety of uses for the measurement of stream flows both inside and outside caves. The following note tries to give a few helpful pointers.

The unit of measurement most commonly used is the cusec, or cubic foot per second. To calculate this, one obviously needs to know the rate of flow and the average cross sectional area of the stream.

Select a part of the stream that is as long, straight and uniform in depth as possible and which is without eddies.

To measure rate of flow, drop a small piece of wood or buoyant material and measure the time it takes to travel a known distance, say 30 feet. This gives the surface velocity (or"V") and should be expressed in feet per second.

To measure the average cross sectional area, take the width and depth at four or more places along the selected part of the stream. Multiply these out and then take the average value as the average cross sectional area ("A") of the stream, expressed in square feet.

Approximate stream flow in cusecs is then given by multiplying 4/5 VxA. The fraction of 4/5 is used to allow for the fact that the surface velocity at the centre of the stream is greater than elsewhere owing to drag along the banks and stream bed.

If the stream has only a small flow, it might be better to check the time taken to fill a container of known capacity at some spot where the whole streamflow can be captured, such as natural weir. This measurement can be converted to cusecs by using the factor I gallon per minute equals .00267 cusecs.

Other useful conversions factors are:
I cusec-375 gallons per minute -22500 gallons/hour-540,000galls/day-I,984 acre feet/day.

KEN PICKERING.

TUGLOW CAVES.

From the Jenolan Caves Southerly as far as Wombeyan Caves a distance of 35 miles, there are numerous outcrops of limestone, which are honey combed by caves. The main Tuglow Caves are situated in a limestone bluff overlooking the Kowmung River, at end altitude of 3,200 ft above sea level, 10 miles south of the Jenolan Caves. There are two openings from the surface to this cave. One represents perpendicular drop of perhaps 100 ft, the other, a few feet distance, reaches the same point by a descent which is easier, but requires the use of rope. still descending a massive "Curtain" some 25 ft long, decorated with calcite crystals is passed, and the main passage to the main cavern is reached at 280 ft from the surface probably representing a drop of 200 ft from the surface. A channal in its floor is the waterway for a considerable body of water, which if confined to the surface would apparently run down the Horse Gully Creek, but now finds its way easier by a shorter route underground, to the Kowmung River. Passing down the cavern, one is faced by a massive terrace similar to the " "Diamond Wall" at Jenolan. Further at (330-260 ft from the surface.) on the right side of the cavern is a grand collection od stalactites, "Draperies and Shawls". One of the latter is some 6ft long by 2½ at its base. It is unusually thin for such great width, which adds to its beauty. Beyond this chamber to the left (370ft), the water passes over a cascade formed of "Basins" which are like huge swallows nests. The sound of the water as it tumbles over the edge of one "basin" into the next is heard a considerable distance away. Turning to the right and rising some 20 ft over a heavy deposit of bat guano, a collection of columns of reddish tinge is reached. They resemble formation which are likened to organ pipes in other caves. From thence, running north easterly is a passage 2½ ft to 5 ft high and 7 ft wide which (500 ft from the surface) Ultimately becomes too small to follow without excavation. The floor in this chamber is ripple marked in places on its left hand side (410-420ft.) are a series of grottoes, which contain a varied and beautiful collection of stalactites. From the miniature pencils forms to snowy white groups of larger size. One of these groups is fringed by a reddish "Drapery".which gives a pleasing effect to the white formations. The caves probably contain other interesting chambers which have not yet been discovered.

Extract from a report by O. Trickett. 1899.

RECENT DISCOVERIES IN THE RIO CAMUY CAVES. OF PUERTO RICO.

by the B.M.S.C. Roving Reporter-Graham Nelson.

PART 4

Incidently Russel Gurnee the discoverer of the Rio Camuy and leader of the expeditions to explore it, was here on Sunday. He is planning to get National Geographic to fiance a trip by rubber raft down the Rio Tamana, a large river which passes underground five times. The longest underground section being about IOOOft. I should get to go on the trip if he manages to organize it. I also met Watson Munro, the head of the Geological Survey in Puerto Rico and a life member of N.S.S. He is about 60 has mapped Geologically most of the Karst area here. He knows of hundreds of cave enterances but does little exploring himself. You may recall that he wrote the article in the N.S.S. bulletin on limestone in Purto Rico. You may also remember that he wrote a river which goes underground several times and which both he and I had linked with "Boca del Infierno". I have now located the river and all its cave entrances. They occur something like as I have sketched below. The dotted lines show the areas I have explored.

The cave is a bit frightening because it is only Ioft high and there were green twigs in the roof. The 4000ft from the entrance 5 was particually frightening because after 3000ft the river dropped 20ft through a hole and below there the cave clearly filled up very frequently and we had to swim most of the way. We travelled upstream. from entrance 4 but were stopped by a waterfall about IOft high at the end of a long (300ft) swim. The farmer at entrance 3 claims he has been 2KM into that cave but it looks as it should link with 4. Watson Munro has been 800ft into 3. There is another large stream which flows into entrance 7 then roars down a low passage for 300ft into a big room with a 20ft diameter hole. (entrance 8) in the roof. From there it goes into a deep blue pool in a cave with a very low roof. The noise, low roof and deafening roar of water were enough to keep us from going until a drier period.

Our main effort has been in trying to reach the bottom of a 60ft diameter collapse sink hole which is overhang on all sides and has a small stream and presumably large cave in the bottom. Our first effort was with 80ft of ladder. You have to climb down 30ft before you can see the bottom of the ladder and it was clearly at least 15ft from the ground. On Saturday 8th November 1969, Gus Zeizig went down with 115ft of ladder and just reached the bottom. When I had 90ft to go, abseiling down, a bush flicked my glasses off and they sailed down to the rockes below incredibly without damage. We found however that we were on a wide sloping ledge which dropped another 50ft to the base of the pit and the trees below still prevented us from seeing any caves although we could hear the stream and later saw many bats emerge from somewhere below. However our day had only begun because when we went to climb out we found that our doubled saftey rope had jammed somewhere above and we couldn't belay from below. I knew I had climed 100ft out of B7 at Bungonia without a belay but, I didn't want to risk it in this cave. (I'm heavier 20lb and weaker now) so we waited. There were only two other people who knew where the hole was, but we knew our wives knew who they were. However it was 2am before 4 guys from work arrived and after a quick course in belaying from 110ft below we were out. The experience had quite a remarkable effect in that the guys are all keen to get to the bottom of the hole and were all practising ladder climbing and getting equiped. If Gus can talk his wife into letting him out again I think he'll be a good caver. He is certainly very excited about it all. Incidently we are going to Aguas Buenos (warers good,) the cave you asked about, next Saturday. It is 2½ hours drive from here and was the second largest cave here after Rio Camuy but I think it is 5th behind Humo, Les Chorros and the cave I called 5 on page 3.

Actually because I can't find cavers with B.M.S.C. ability I have never actually been underground for more than about 4hrs at a time over here and I certainly have done nothing as hard as Tuglow although danger of flooding makes easy trips here more trying than trips twice as long underground in a well behaved cave.

THE CAVERS TEN COMMANDMENTS.

I. Thou shalt not enter a cave by thyself, for it is an abomination, to enter or otherwise explore a cave thyself.
2. Thou shalt have on thy body at least two sources of light.
3. Thou shalt carry on thy head a bash hat and exersize caution at all times.
4. Thou shalt not partake of caving if thou have any diverse disease like leprosy, chronic constipation, or falling sickness, which would endanger thy fellows safty.
5. Thou shalt not adulterate the natural beauty of any cave decoration, or verily, the sins of those who doeth so shall surely be visited opon them, even until the 3rs generation.
6. Thou shalt wear on thy feet sturdy boots.
7. Thou shalt not use thy carbide lamps or stone to make a graven image of thy name on any cave wall.
8. Thou shalt not despoil the virgin beauty of any camping area for unclean creeping creatures shall rise up against you.
9. Thou shalt set an example for the gentiles to see that thou art verily a "trog", thou shalt fast, keep the sabbath and forsake the ways of the "demon rum".
IO. Thou shalt remember above all
"TAKETH NOUGHT SAVE PHOTOGRAPHS AND LEAVE NOUGHT BUT FOOTPRINTS.".

The journal of Gymea High School Geological Society.

.....

There were a group of caver's,
Who people thought were raver's,
They bragged about the country side,
The sink holes and the limestone,
The enterence's to the mighty caves,
That they could call their home.

Colleen Ward.

NEWS FLASHES OF CAVES & CONSERVATION.

CAVEMAN'S BONES.

A woman archeologist, Dr. Vera Csank has found the remains of a skelton resembling the Neanderthal man near Buda pest. It could date back to 50,000 years.

CAVES GIVE UP ANCIENT SECRET.

Thousands of flint tools, some possibly dating back I00,000 years to Neaderthal man, have been discovered in caves along the Lebanese coast near Beirut, a Columbia University Anthropology professor has revealed. The caves, long known but never before excavated, have already yeilded about I80,000 flints and chips, and 43,000 bones and pieces of bone.

Finds in the Masloukh cave include a tooth identified as probably belonging to a Neanderthal man, about 70,000 years old, and teeth of a Rhinocerous now extinct in Lebanon. The site at Nahr Ibrahim called the Asfourieh Cave, is actually three caves facing the sea about I00 yds away.

REPRIEVE FOR THE REEF. S.M.H. 2I-I-70.

The Queensland Premier has agreed to a commonwealth State enquiry into oil drilling on the Great Barrier Reef, although the Prime Minster has ignored the Queens-Land Goverment's suggestion made 20 months ago that the Commonwealth join such an inquiry. Ampol has offered to suspend drilling operations.

THE MYALL LAKES. S.M.H. 23-I-70.

The Myall Lakes National Park of 36,000 acreas, (including Lake beds) will fall far short of the 96,000 acres demanded by the conservationists, moreover beach mining will be allowed in part of the park, although only a very small part.

Since the present State Goverment has been in office six natioal parks and two state parks have been proclaimed, which together have added over 330,000 acres to our wilderness area.

CABINET APPROVES NATIOAL PARK OF 20,500 ACRES. S.M.H. 28-I-70.

The new park will be in the Weddin Mts., II miles south-west of Grenfell and would bring a total of parks and reserves controlled by the National Parks and Wild-Life Service to more than three million acres.

BREAK A BONE S.M.H. 29-I-70.

Russians are able to buy a dark brown ooze which is claimed to heal broken bones twice as fast as conventional treatment. It is a 2,000 year old folk remedy called "mummy Balsam" which is found high in mountains, caves and Grottoes. It containes amino acids and more than

4 micro elements. Mummy enlivens the blood and kills germs better than penicillin. 66

EDITORS NOTE.
"So dont complain next time you fall into a pile of bat gauono-its possibly only "Mummy Balsam".

PEOPLE SPOIL A CAVE. S.M.H. 3I-I-70.
A strange mould began attacking the I6,000 yr old red, black and ochre paintings of prehistoric animals at Lascaux in I960. When the caves were opened to the public after World War 2, up to I25,000 people a year visited them and each footstep brought contamination substances from outside. When air conditioning was installed in the caves, rapid contamination of the walls began. The cave was closed to the public and Biologist, Geologist, Speleologist and Arch Eologists spent years making tests to devise a spray which killed the fungus, but did not harm the paintings.
The cave were discovered by four boys near the village of Montigac, Dordogne in I940. The paintings are amoung the best preserved examples of the upper Prehistoric art in the world. The animals vary in length from 8 inches to I8 ft.

LIGHTWEIGHT LADDER

A new British light ladder with alloy rungs held in slotted webbing supports, is now available.
Available in any length, or specially designed for any particular operation, it has securing loops at both ends and has application in a wide range of industrial, marine, safety and sporting tasks.
The webbing is rot-proof, rust-proof and abrasion-resistant, the rungs being secured by a process of shrinking of the slotted webbing to provide an extremely strong and durable connection. The ladders can be rolled and carried easily - a 9ft long model making a roll ab 4ins in dia and weighing 2½ lb.

TRIP REPORTS

December I969 to Feb I970.

TEN DAYS-TUGLOW AREA.

AIM; Trogging of surrounding areas.

TRIP LEADER - Dave Ward

Our party camped on Tuglow Hole Creek flats after entry to area via Shooters Hill etc., (used Land Rover and two wheel drive.) Friday night 26th a familiarisation trip to the Window, Moonmilk and Plasticine caves was carried out by some members of our party. Lionel Baker being appointed trip leader.

Saturday 27th,

Party decided to start the ten days off on the right foot with a trip to main Tuglow which was entered at 9.30am.
A short time was spent examining the skull in river chamber to see if it had been damaged at all,(and only slight damage noted.) From here we prodeeded to extreme end of Upper level system to further explore system, especially a right hand passage found by our club for the first time over twelve months ago. It was noted thatthis passage may be pushed further and so add to the glories of Tuglow.

Sunday 28th,

The Land Rover was taken up to Horse Gully Creek at the back of Tuglow Main to examine sinkholes and to trace the flow of the creek. The creek disappears into the gravel bed approximately 60 yds to the right & 200yds upstream from the sinkholes and volume of water in creek was thought to be same as that flowing into Upper level Tuglow. In the afternoon the Land Rover was driven up the river flats of Tuglow Hole Creek and then onto second fire trail to a point where it crosses the creek. There were no outcrops of Limestone found in this area.

Monday 29th,

The Land Rover was taken up to the sinkholes of Horse Gully Creek, where it was left for the day. From here the party proceeded across the back saddle of Tuglow Mountain to Tuglow Farm caves on the Tuglow River. (They are also known as Dunnfield Creek Caves or Sheepstation Caves. Dunnfield & Sheepstation creek being one and the same.)

By talking to a drover we found we were on private property, also we were told of some other caves which may or may not be Tricketts Arch. An hour was spent looking at main outcrop on Tuglow Farm but caves dont appear to be of any real significance. We then followed the river and limestone outcrops towards the Hollanders & Tuglow junction.
One outcrop running into water level and an outcrop nearly opposite but halfway up hill would bear further investigation. This outcrop is roughly mid-way between Tuglow Farm & North Tuglow Bluff caves.
North Tuglow Bluff caves & outcrop were by passed with no more than a look, (nobody wanting to swim across or walk all the way round.) No more Limestone was seen from here to the junction.
We proceeded from here back to the Rover by way of the top of the mountain for most of the journey, two extra sinkholes being found on the opposite side of Horse Gully Creek ie., Bottom of Tuglow Mountain.

Tuesday 30th,
The idea was to go into Tuglow main with another two members who were caving for the day,(but most of the day was spent removing a broken rear axle from the Rover.)
In the afternoon we went for a trog down Tuglow Hole creek to the junction of the Kowmung, again no limestone being found. The junction was noted to be granite bluffs as were Tuglow, Hollanders & Kowmung junction as seen on previous day. The return trip, which took half the time was over the top of the range, and again no limestone.

Wednesday 31st,
Ron, Stan and Lionel went trogging over the Southern side of Tuglow Hole Mountain where they found two outcrops, which, although not yeilding in the way of caves, should prove very interesting as digs.

Thursday 1st,
It rained.

Friday 2nd,
Rained worse than Thursday.

Saturday 3rd,
Some went caving with Ken Pickering Party Rest of party examined a limestone outcrop off firetrail that had been found by Barry Mac. Again no caves but two possible digs.

TUGLOW MAIN - 3.1.70

AIM; Familiarisation for prospective members.

TRIP LEADER - Ken Pickering

Cave entered at 10 O'clock and a quick trip was made to the junction of main passage & left hand extension. A large bat colony was noticed near the junction, as the party proceeded up the extension a small solution tube on the left hand side was entered, it proved to be approx. 50ft in length, it was interesting to find some roots in this area one of which was calcified. The passage ended in a rubble collapse.
The party the returned back to main water passage and followed it to its end where the right hand extension was entered and explored.
One member became ill with a gastric attack, this has happened before a few times. Interesting point. Is this co-incidence or does Tuglow cause this. Future trips may tell. Two minor accidents on this trip stressed the fact that members be properly equiped & phisically fit, to safeguard the party as a whole & as individualls.

TUGLOW 24 - 25th January

AIM; Familiarisation & observation.

TRIP LEADER - Lionel Baker

The party started the day by taking photographs of Tuglow bluff & surrounding area, from the Kowmung River. Partly up the bluff a small passage was found behind a rock pile, a short time was spent digging but after a turn the passage became too small to allow progress. Four fellows from Illawara District were met at T1 entrance. Upon arrival at ladder pitch a ladder was found belayed to the belay point with the use of a small shackle around a rung of the ladder, the rung taking all the strain, was bent. Safely belaying our ladder the party moved on to the anvil room where more horrors waited for us. One of the other party's ropes were retied with a torbuck instead of two half hitches.
Here we met more of the Illawarra party. In the small chamber at the bottom of chimney human excretion was seen and smelt. What sort of people enter caves at times. The cave was not as wet as it was at Christmas, also two bats were seen in the anvil room.

Photos were taken of the skull and various speleothems. Back at the bottom of rope pitch members of Granville Tech. College were met. Also another Speleo Society was met and a discussion followed when they couldn't distinguish their own ropes.
Upon leaving river cavern we noted that "this is the spot to leave all your rubbish!"
A short time was spent on the surface digging at T.5 and also a trog around the right side of bluff. Nothing outstanding was reported.

WYENBENE - 14 - 15th February 1970

AIM; Was to be helping M.S.S. in measuring wind velocity at back end of extension.

TRIP LEADER :- Dave Ward

Because of arriving late we missed entering with M.S.S and therefoe our aim became one of general exploration. A quick trip was made to rock pile entrance to Gun Barrell no trouble encountered at squeeze at end of water crawl. Very little air movement was noticed up to this point. In the Gun Barrell it was noticed that more water was falling than on previous trip. A slight amount ofair movement was detected, apparently flowing into Gun Barrell from entrance.
From here the party decided to look for Ceasars Hall, which was tried without sucess. No air current was detected round these areas nor was any cave life found.
It was near bottom of keyhole on entrance side that four bats were seen but a lot more were heard.

TIMOR CAVES.

28th-29th Feb. I970.

Members Present,
Barry, Dave, Col, Stan, Lionel, Allen Phill, Ken, and five visitors.

AIM.

To study the formation in the roof of Timor Main and photograph other parts of the cave. Also to climb up the false floor and try to dig the floor and see if there is any formation above the cystal roof.

We arrived at the campsite at I2-30 am on Sat, and set up camp for the night. Next morning we doned our caving gear and set off for Timor Main. We arrived at the entrance at 9-I5 am and climed dowm the ladder and headed for the cystal roof. Dave, Lionel, Stan and myself started to study the intriguing roof. Colleen took the rest of the party through the system as she was the only one that has been there before. At one stage we thought that she was a guide from Jenolan, but alas we surely were wrong when after a short while Colleen took the party in a small hole in the floor on their hands and knees, surely a guide would'nt do this. And now back to the roof. Dave had climbed onto the false floor and proceeded to look around the walls. I followed up the incline to observe the stratified cystals on the walls. We noticed a small cleft in the wall which has flowstone coming from it. Most of the walls and floor were built up of these stratified cystrals covered by bat guano end cave dirt, also the guano seemed to disolve the cystals. Firstly it was thought that the flowstone would possibly feed the formation below but this is difficult to know. After some more study of the area we decided to photograph the formation again. We then returned near the entrance to have a close look at the unsuual colouring in the roof After meeting the rest of the party we all returned to the campsite for lunch. Later in the day some members decided to enter the other caves in the area namely the Helecite, Shaft, and Belfrey. After tea the Hill Cave was entered and while some of the party took photographs the others tried their hand at the lower level. Nexy morning we arose early for the tip home. A good weekend was enjoyed by all.

Barry Mc Williams.

OOLITE

BLUE MOUNTAINS SPELEOLOGICAL CLUB
P.O. BOX 37
GLENBROOK, N.S.W. 2773

BLUE MOUNTAINS SPELEOLOGICAL CLUB JOURNAL

"OOLITE".

Journal or the Blue Mountains Speleological Club.
P.O. Box 37 GLENBROOK. N.S.W. 2773.

CONTENTS.

VOLUME 2 Number2 July. I970.

LIMESTONE AND DOLOMITE CAVES.

These rocks contain the largest caves and the largest number of caves on the earth's surface. They are all secondary, having been made by the solvent action of circulating ground water.

These calcareous rocks, slightly soluable in pure water, are more rapidly attacked if the water has brought organic acid or carbon dioxide from the surface in it. The circulation occurs chiefly along the usually horizontal bedding plans and the commonly vertical joint cracks, the water moving under gravity to lower levels and to eventual escape as springs and seepages. The sides of these primitive passages are attacked and the dissolved material removed, thus enlargement results. From perhaps a multitude of such early water routs, integration of the subterranean water system proceeds by greater enlargement of more favourably located routs and abandonment of less favoured ones.

Limestone and dolomite caves have been discovered in well drillings below the water table(upper level of saturated rock)
Some caves are entrable in the dry weather only, being completly filled during the rainy season. Many are traversable at all times, although they carry perennial streams on their floors. Some lack streams entirely but possess shapes and wall sculptures that indubitably are of solutional origin.

The qu estion therefore arises as to whether in calcareous rock caveshave been made in large measure by solutional and abrasional stream work on the floor while only air occupied the upper part of the cave, and thus have been deepend and perhaps widened in the manner by which surface streams enlarge their valley's, or (2). have been made at some time earlier when the water table was higher in the rock, the cave being completly filled at the time.

Lowering of the water table occurs in any region as the surface streams deepen their valley's and thus provide lower exits from seepages and springs. Thus, buy this second view, enterable Limestone and Dolomite caves, with streams on their floors, are going through a second episode in their development. They are still water routs, but their enlargement now is occuring only in the basal portion.

The many caves possesing solutional shapes on their ceilings seem to require, for their origin, at tube-flow like that of a water main. The ground plan of many caves, suggests that a street system of a city,

a multitude of narrow, linear, intersecting passages having been developed along two or more sets of nearly vertical joints in the rock. This lack of integration into one main water course with tributary courses argues strongly for origin in the satarated zone below the water table.

Limestone or Dolomite caves therefore is, or was a subterranean water course, its length far greater than its width or height. During a large part of its development it fuctioned like a pipe line, the flow occuring under hydrostatic conditions.

After lowering of the water table, the cave became like a roofed valley, with a free surface stream on its floor for a time, perhaps to the presant.

..by Colleen Ward...

WHAT IS A CAVER.?

A caver is one who at times to the amazement or disgust of his fellow sun and fresh air loving creatures, can be found in remote places. Underground, in unseenly positions, digging, scratching, crawling, creeping through passages and clefts, sometimes too narrow, too muddy, too dusty, toosharp, to find himself facing a bottomless pit, a dead end, daylight, water, more mud, more dust, someones rearend, or somewhere he's been before.

EDITOR'S NOTE.

In the next issue of "OOLITE", we hope to have some more information from Dr. G. Nelson, in Puerto Rico. We can be sure that some more exciting discoveries have been made in the Rio Camuy Caves.

INTERESTING CAVE DECORATION) TIMOR MAIN CAVE.

Towards the end of last year a trip to Timor main cave was made, the writer having entered the cave for the first time on this particular occassion,

Although a considerable amount of vandalism was evident, particularly in the amount of writing on walls and formation, the attention of a group of our members was drawn to an unusal crystal roof formation which is to be seen about two thirds of the way into the main chamber on the right hand side of the cave.

The crystal appears on the underside of an overhang which is topped heavily with a thick deposit of bat guano and cave dirt.

Although the initial visit left the party with the impression that the particular formation was the underside of a false floor, a subsequent visit has shown that immediatly above the location of the crystals there appears to be solid limestone, and another trip is planned to further investigate this in the near future.

The crystals are of the "dog tooth spar" variety and have developed in concentric circles descending from a central core which has the appearance of being the broken base of a stalactite, although the core never seems to protrude beyond the ends of the crystals surrounding it, and there is no sign of the characteristic "core hole" to be normally expected on a stalactite.

The centre of the formation is formed as the top of a shallow dome, and the concentric rings of crystal each form slightly below and out from the inner rings.

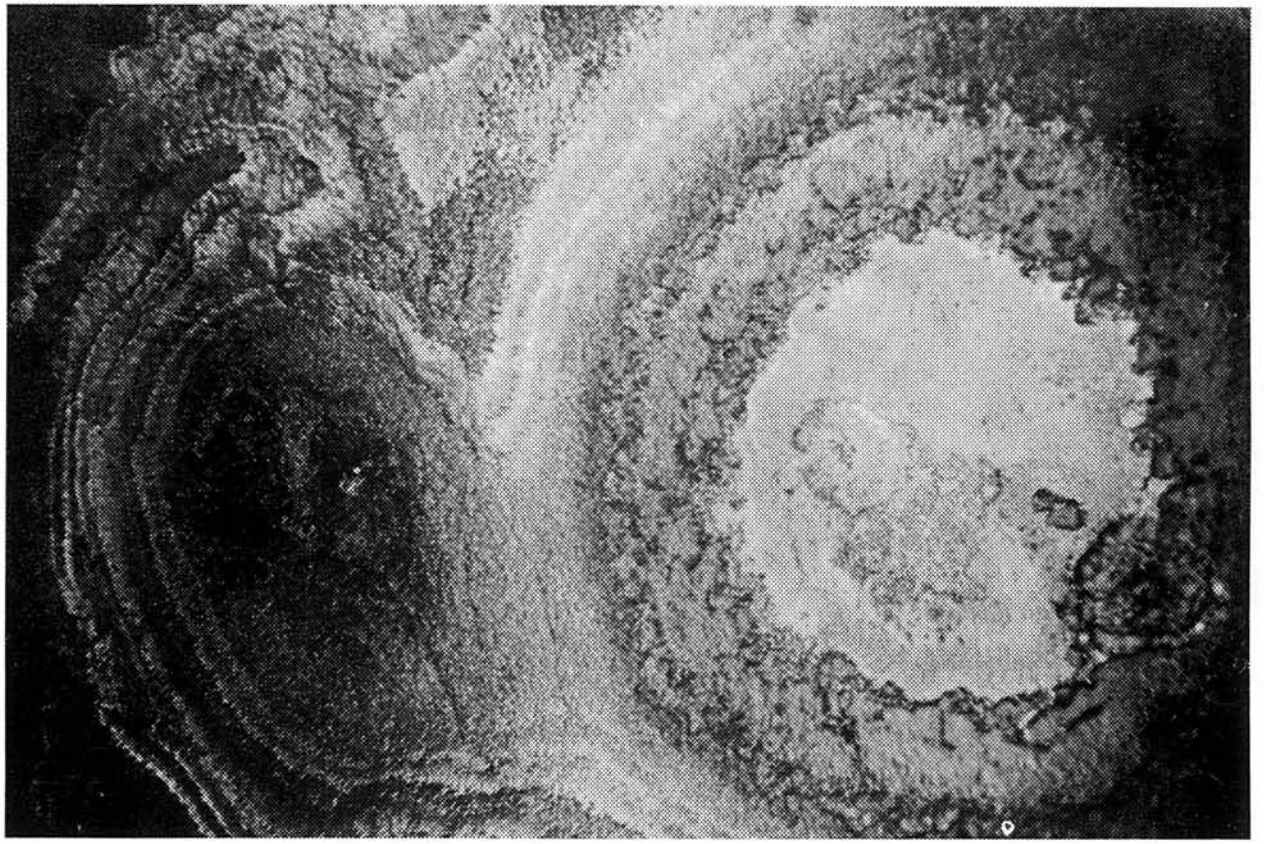
A theory that slowly decending water could have contributed to the formation seems to be contradicted by a secondary development which appears as a "sun-Burst" on the wall of one of these domes.

This is in the form of a spray of crystal radiating upwards from the bottom on one side of the outer ring.

There are two of these "dome" formations, each six to eight feet across, occuring alongside each other although one is more clearly shown than the other in the accompanying photograph.

A slide of the formation together with a description was sent to Dr. J.N. Jennings, Professorial Fellow in Geomorphology at the Australian National University, and he has been kind enough to reply with some observation.

Dr, Jennings suggests that in the absence of information on the top of the overlay above the formation the decoration could be the underside of two stalagmatic masses which formed near together and then merged into one large mass.



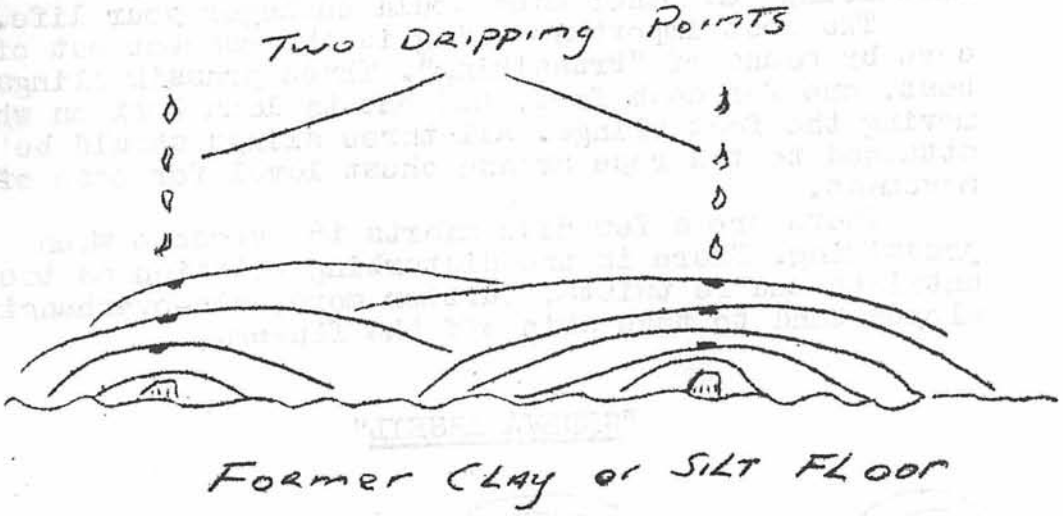
ROOF FORMATION TIMOR MAIN CAVE—Photo by Barry McWilliams

The sand or clay on which they had formed may have washed away, and what we now see are the growth zones of the stalagmites.

He goes on to say that he can see no basis to assume that the "sun burst" formation is a later development than the original crystal, but he suggests most definitely that a further examination of the top floor above the formation is necessary before further theory of development can be advanced.

As mentioned earlier in this article, a later trip has been made, but reports particularly associated with old as well as current water drainage patterns on this side of the cave encourage still further investigation.

To explain the theory of formation advanced by Dr. Jennings, the following sketch is appended, and the writer will welcome the interest and comment of members. Thaks are particularly due due to Dave Ward and Barry Mc Williams who were responsible for observation from the second trip, and to Dr. Jennings for his informative interest.



Ken Keck.

CAVE ABSEILLING

One of the best methods to Abseil into caves is by the "Geneva" method. If you dont belay a ladder down, the the best way to climb out is by means of Prussiking. This method requires to Abseil in on one rope only as twin ropes create more friction than one rope. By this way the caver can be self belayed by means of loosely attaching a chest loop by a prussik knot to the rope. The knot is tied loosely so that at normal speeds of decent, the knot will slide freely. If the decent becomes to fast, the knot will catch, and saftely belay the caver by means of the chest sling.

Proficency in tying and untying the prussik knot must be achieved in the field before attempting the Abseil.

Some method of communication between base of pitch and the top of pitch is required, possibly field phones or a whistle, or just yelling your lungs out. Here are some points worth noting.

(I). Manilla slings rather than Nylon, would be more suitable, due to the large amount of heat produced.

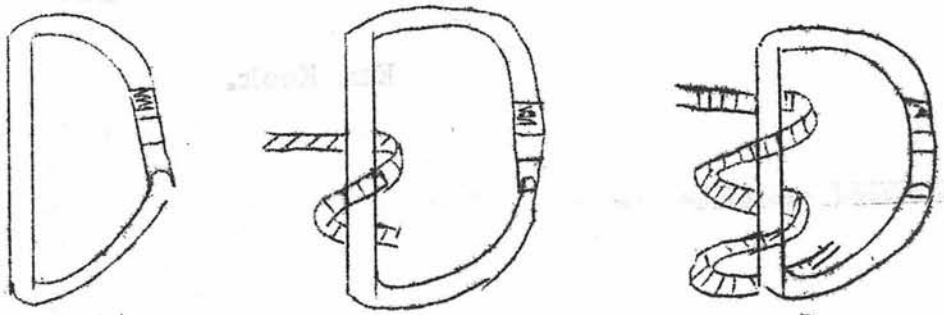
(2). Long Abseil ropes are required as prussik slings cannot be used to get past knots.

(3). Make sure that the ropes are only used for Abseilling as other uses could endanger your life.

The most important thing is the asscent out of the cave by means of "Prussiking". Three prussik slings are best, one for each foot, and one to lean back on while moving the foot slings. All three slings should be attached to the rope around chest level for ease of movement.

There are a few discomforts to overcome when prussiking. There is the disturbing rotation as the rope untwists and re twists, further more, non-overhanging slopes tend to take skin off the fingers.

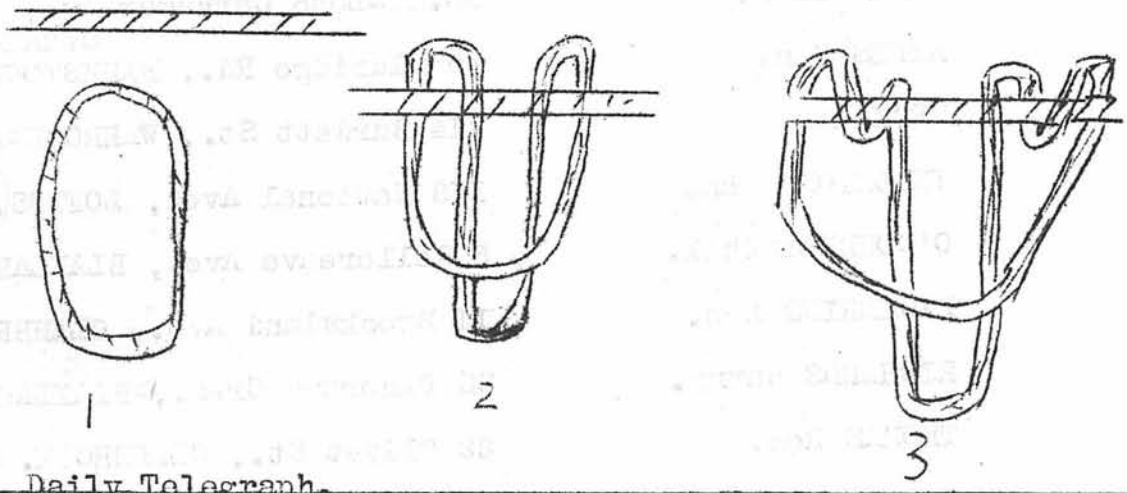
"GENEVA ABSEIL"



Be sure to keep the rope on the opposite side of the gate.

"PRUSSIK KNOT".

Use as small a rope as safely possible.
BE SURE TO PULL KNOT TIGHT.



Daily Telegraph.
3-8-70 GOVERNMENT DESTRUCTION?

I have read some sickening stuff in my time but the address by the N.S.W. Minster for Conservation (Mr Beale) at the official opening of C onservation Week I970 takes the cake. Theaddress is full of such sparkling gems of thought as "Conservation concerns us all" "Our country is a treasure house of natural resouces "We must continue to conserve the natural splendor or our heritage so that we can walk with beauty and wonder at nature. The strange thing is that in all his catalogue of advise given or work done for farmers or his details or staff expansion not one mention is made of Colong Caves Reserve. arsenic pollution of the Tonalli River in the Warragamba catchment from takeover of the Far South Coast by one of land ushers: chipmilling. Nor did he mention the present rape of the beautiful Boyd Plateau nor his department's grab of 5006 acres of Reserve NO. 67062 on the Boyd. In a document dated June II he describes this area as having been reserved for "recreational use". In fact it was reserved "for preservation of native fauna and flora.

Continued page 7.

BLUE MOUNTAINS SPELEOLOGICAL CLUB ADDRESS LIST.

BAKER Lionel.	P.O. Box 44 ENGADINE. 2233
BOGG Ian.	29 Scott St., SPRINGWOOD. 2777
COOPER Gary.	26 Rogers St., LAKEMBA. 2195
DEVINE Bill.(snr)	17 Coughlan Rd., BLAXLAND. 2774
GALLARD John.	22 Gregory Terrace., LAPSTONE. 2773
GILL Allan.	No. 2-Lot6 Carramar Ave, CARRAMAR. 2163
HYNES Ken.	25 Eldridge Rd., BANKSTOWN. 2200
KECK Ken.	114 Burdett St., WAHROONGAH. 2076
INGLETON John.	118 National Ave., LOFTUS. 2232
O'CONNELL Phil.	5 Bellereave Ave., BLAXLAND. 2774
PICKERING Ken.	11 Brooksland Ave., GLENBROOK. 2773
RICHARDS Barry.	32 Panorama Cres., BLAXLAND. 2774
THOMAS Ron.	22 Olivet St., GLENBROOK. 2773
THOMAS Stan.	24 Cook Ave., DACEYVILLE. 2032
WARD David.	P.O. BOX 86 ENGADINE. 2233.
McWILLIAMS Barry.	P.O. BOX 78 ENGADINE. 2233
NELSON Graham.m(dr.)	Arecibo Ionospheric Obsrevatory P.O. BOX 995 Arecibo., PUERTO RICO. U.S.A. 00612.

GOVERNMENT DESTRUCTION Cont. from page 6

Mr Beale said when he opened Conservation Week last year: the greatest current need in conservation is an active awareness of what is involved. At the moment, it is the wildlife in the public reserves on the Boyd Plateau that has the most active awareness of what is involved in Mr Beale's version of conservation.

Peter Bryant.PYMBLE.
This article has been edited.

SOME INTERESTING FILMS AVAILABLE FROM THE NEW SOUTH WALES FILM COUNCIL.

The Black River.
(I95I black &White I8mins.
Exploration of the Padirac River in South Western France.

A NEW SCIENCE. (I946 Black & White 2Imins. -Spelunking.

UNDERGROUND WATERS.
Gt Britian I958 Colour I8mins.
Exploring underground rivers Sth France.

SECRETS OF THE CHASM.
Adventure Gt Britian B/W I965 26mins
English entering into the Gouffre Burger in the French Alps. Deepest known cave in the world.

LES FLEURS DE LA CIGALERE.
I964 Colour IImins.
Pyneenees & discovery of the Cigalere Grotto.

BATU CAVES.
Malaya I4mins. A group of school childern explore Batu Caves in Kuala-Lumpur & discover interesting wildlife examples.

LIMESTONE CAVERNS.
IOmins. Caves as used for early man. How the ground water disolves the rock. How the roof colapses & finally lowering the whole of surface land. Taken around the mounds of Wisconsin U.S.A.

AUSTRALIAN ABORIGINES.
TITLE. White, Clay & Orchre. Aust Museum field research of Aust Aborigines of cave paintings in Western N.S.W. Cave floor excavated for radio carbon eg-Finger, brush Stencil.

OPERATION CAVE RESCUE.
Available early January I97I.
Filmed by the B.B.C. Producer Don Haworth. Runs for 50 mins. Could be located with the Aust National Library.

QUESTION. What did the Limestone say to the Geologist?
ANSWER. Dont take me for Granite.
Daily Newspaper.

NEWS FLASHES ON CAVING AND CONSERVATION .

SUN. 26-6-70. MAN SPENDS YEAR IN CAVE.

A 35 year old Belgrave man completed a year of isolation in a cave today. Milutin Velijkovic, whose hobby is cave investigation, broke the world record for self-imposed isolation in caves last October when he logged 110 days in a sealed up cave in the Svrljig Mountains. He plans to stay there till September 29th .

The cave is packed with Scientific insruments, but he has a cat, dog, and a lot of fowls for company.

SCIENTIST WARNS ON CAVES MINING.

Dr. B. O'Brien warned that if you destroy the Colong Caves Reserve , and things like it, then it is difficult to get them back. He said that, the Colong Caves, threatened by Limestone Quarrying, was one of the finest natural Reserves accessible from Sydney, "we dont want a concrete jungle, we want as many wildlife Reserves as possible.

DAILY TELEGRAPH. July 3rd

ALTERNATE LIMESTONE LEASE UNLIKELY.

A mines departement showed that it is unlikely to find economic alternative Limestone deposits at Murrin Creek.

The survey shows that here is a total of 34.61 million tons would be available at Murrin Creek, compared to 49 million tons to Mt., Armour-Church Creek deposit.

The survey has been taken to see if Limestone, deposits in the Murrin Creek area formed a possible mining alternative to the Mt., Armour -Church Creek. Limestone there had been confused in the past as to which Limestone deposits constituted the "Murrin Creek" area.

A copy of the report has been handed to the Associated Portland Cement Manufactures (AUST) Limited.

DAILY TELEGRAPH. 8th July

NEW NATIONAL PARKS.

The State Government will set aside a 65 mile strip of the Southern N.S.W. Coastline for National Parks and Nature Reserves. Total area is 53,630 acres. The Government is also reserving as park areas,

a total of 39,000 acres Inland.
Inland areas of the far South Coast to be reserved for Parks, comprise Egan Peaks(5,000 acres), Mt., Imlay (9,000 acres), Mt., Wog Wog and White Rock(IO,000 acres) and Mt., Nungatta (I5,000 acres).

.....

I stirred in the grey of the morning,
On the dawn of a beautiful day,
The song of a small bird woke me,
A sound so carefree and gay,
A creature so small and so gentle,
Its beauty a joy to behold,
It flitted onto my open sill,
As out of my warm bed I stole,
I placed my hands on the window,
To study this sweet darling thing,
Its feathers so soft and so pretty,
I paused as it started to sing,
The sound of its throat was so joyous,
The rest of the world appeared dull,
I suddenly slammed the window,
And crushed its bloody skull.

QUESTION..
Are Cavers this kind of Conservationists. Editor.

Author of poem unknown.

.....

PREHISTORIC ART.
THE AUSTRALIAN April 22nd I970.

The remarkable face engravingd examined by Robert Edwards, at Thomas Reservoir in the Cleland Hills, west of Alice Springs, and done by early man, (aboriginal or earlier), show remarkable resemblance to those in Siberia found by Professor A. Okladnikov, were they are believd to represent marsk worn in religious rites of initiation into sefret societies.

In all over four hundred identifiable designs have been found at Cleland Hills alone. More than fifty "sites " of ingravings were found in N.T. W.A. S.A. and local natives said the ingravings were done in the "DREAM TIME" and not by them. The formost thought of Edwards and party at end of trip was :QUOTE We have established that there is a continent wide distribution of pre-historic art, now how can this heritage be protected?, time has already destroyed enormous quantities of history, and still more is in danger of destruction through mineral development, neglect and vandalism. It is imperative that we, the Australians accept the responsibility for it's preservation and protection before its to late. End quote.

BLUE MOUNTAINS SPELEOLOGICAL CLUB TRIP REPORTS.

ABERCROMBIE CAVES.

Date of Trip. I4th-I5th March I970

AIM. General exploration, survey potential assessment and the start of catologuing of all known caves in the reserve.

SATURDAY.

Entry into the "Long Tunnel" was not difficult as Grove Creek was almost dry. A large colony of Bats were found approx. 250ft into the cave , I50 bats approx. were found in the "Long Tunnel".

From the "Long Tunnel", a vertical solutinn passage was found which could interconnect with the Cathedral cave,to be investigated further.

The Bushrangers cave was fully explored.A colony of bats, and wombat remains were found and speculated over. Cave decoration was found to be inactive.

The Grove cave, and later King Solomon's extention was explored(as tourists). This extention would be the most extensively decorated within the Arch.

SUNDAY.

Group A. Surface exploration of the S.W. outcrop and surface correlation.

Group B. Archway photography,

Four caves were found by group A.

Three members, with permission, entered the Eastern Gallery Extention and then Kohinoor Cave, Kohinoor Cave has signatures and romantic poems, in the old "Copperplate" style of writing, Dates if authentic date from I885.

CAVE LIFE.

As mentioned there were three colonies of bats present. Fresh guano in conjunction with flood debris, would account for the abundance of cave life such as spiders, flies, mosquitoes, beetles, crickets and centipedes, all of which could be found on the ceilings, walls, and floors of the Threshold, Twilight and Dark zones of the Abercrombie Archway systems.

TRIP LEADER. Ian Bogg.

BELUBUULA CAVES (WALLI).
27th 30th March. I970

AIM. Familarisation of area.

TRIP LEADER. Barry Mc Williams.

The 50ft, ladder was securerly belayed and Dave tied his belay rope and started to climb down the ladder, the Horse Cave (WA-I9). On reaching the bottom, he found the ladder about 5ft short, nowhere near the 80ft of ladder required in the A.S.F. handbook. On reaching the floor, we found that we were on top of a rock pile. Several bone deposits were found down the rocks & at the base, there was a small passage about 30ft in length leading to dirt choke. This was the only passage in the cave.

Later on in the afternoon, we crossed Larkins Creek to investergate WA-5 & WA-29, . In the OOlite Cave we found a large flowstone with rimstone pools and its base which were dry from water but a large number of "OOLITE'S" were admired by all. We found a tight passage to a small squeexe in which Dave had some difficultly to pursue. After some hard work he squirmed through the squeeze. Barry was next to try & after several moments of trying to push a large body through a small hole he decided to retreat.

Dave decided to continue on, as we thought that it lead to another exit possibily by a shaft to the surface, but some distance up the hill from the "OOLITE" Cave.

Lionel Col & Barry then returned through "OOLITE" to locate shaft exit. Dave emerged to tell what he had been through after leaving the squeeze from "OOLITE", he found himself in a small chamber, from this, a large a vertival passage lead to a tee juntion from which a chimney lead off some 30 to 40ft, from floor of cave. He climbed the chimney for about 60 odd ft, were he found a horizontal and difficult squeeze which after some negotiating lead to the surface.

Saturday morning, we entered the Deep Hole, some difficulty was encounted about half way down, due to the ladder getting caught in some eye bolts embeded in rhe rock. Some time was used to explore around the ladder pitch. Further on we whent through a small window like section to a maze of passages. There we founf some very good examples of Speleothems, particulary some blue to green flowstone.

That afternoon the party entered a very dry and dusty Piano Cave, the main passage was followed to a large chamber which contained some large inactive formations(eg. The Twins).

Quite some time was spent exploring near by maze passages, which lead back to main chamber.

Sunday morning the Deep Hole was again entered for photography purposes.

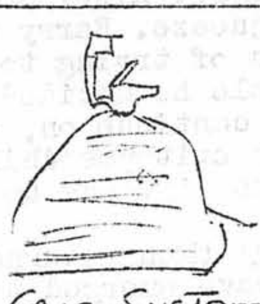
The "OOLITE" Cave was re-entered for all members to push the squeeze leading to the shaft, after some anzious moments we were all through the squeeze and small chamber walking along the vertical passage to the tee junction were Dave,Col,& Barry climbed the chimney. Lionel, returned to shaft, exit via "OOLITE", with the gear, to wait for us. The shaft is not an easy climb, although hand and foot holes were plentiful Some of us found the horizontal squeeze at the top a little tight but not much trouble was encounted.

Monday morning we trogged down stream, were some interesting holes were seen, only one looked promising.

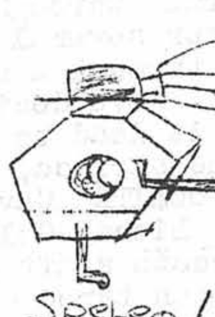
Barry Mc Williams.

= Things to Find in a Cave = ST, LB, BG, KH, DW, CW.

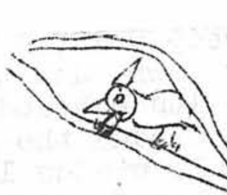
Chimney



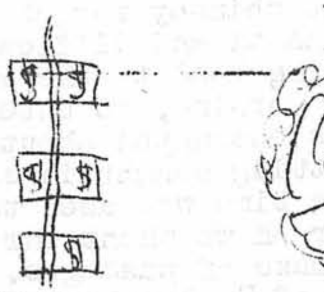
Cave System



Speleo!



Rat-hole



Doline

Cave Pearl

TUGLOW AREA - IIth- I2th APRIL I970.

AIM...

I) To visit the Red Amphitheatre, a limestone outcrop shown on the Hollanders River map drawn by Myles Dumphy.

2) To ladder the pitch of the large entranceshaft at Tuglow Main to determine the posibility of using the shaft for rescue purposes.

MEMBERS...

B.Mc Williams, D. Ward, L. Baker, A.Gill, K.Pickering, (trip leader).

Camp was made about midnight on Friday at the top car park & an early start made on Saturday morning to walk to the Red Amphitheatre, the route taken was down BossMt. to the junction of Box Creek & Kowmung , up the Kowmung to Tuglow- Hollanders River junction, through Chardon Canyon to the limestone outcrop. Total distance about I½ miles but the country is rough and steep.

A certian person who shall remain nameless got a bit shakey going through Chardon Canyon which is a very impressive gorge. The granite walls are sheer for 200ft or more & the water is deep & cold, with no real alternative but to swim through. However we found at least 3 other routes- just shows what initiative can do. The limestone outcrops for about 300yds along the Hollanders & at one place forms a red coloured cliff 50-60ft high for about 70yds. There signs of seepage though the limestone, but no caves or effluxes at river level. There are no real sink holes on the hillside above the cliff face either.

We returned to camp by about 2-30pm & moved on to Tuglow Main. In what remained of the afternoon we located several of the UNSWSS survey pegs & poked about in the Horse Gully Creek sink holes & the 2 small caves We also looked at the point where the water sinks in normal times & in flood times. That night the more energetic ones extended the dig (T-5) by removing some more loose boulders. Sunday morning we put the 2 clubs ladders of 30ft & 35ft down the large daylight shaft & found these just long enough. We then rigged Barrys ladder for the next pitch & found it about 8 ft short of the floor at a point between the Diamond Mine entrance & the top of the big Mud Slope leading to the Anvil Rock. It would be practicable in future to join the third length of ladder to the first 2 instead of belaying it separately

as we did on thetrip, The ladder pitches are roomy enough & there are convenient ledges to provide useful staying points in the event of having to winch a person out of the cave in a rescue stretcher, The mud slide would not present any problems, From the Anvil Rock down to river level the best route appears to be the near vertical shaft to the left, rather than down the usual chimney. This was not actually tested on this trip, however as we wished to leave for home at lunch time. It should be proved on the next trip to Tuglow.

On the way home, going up the 5 mile hill from Jenolan a large red cliff face was noticed not far from Balds Creek, This is probably the limestone we looked for unsuccessfully on our previous trip into this area & could be looked at some time in the future.

KEN PICKERING.

Who's Going?

CHRISTMAS 71.

CONTACT BARRY McWILLIAMS for DETAILS.

TUGLOW MAIN.

Date of trip. 25th April I970.

Trip Leader. Barry Mc williams.

Aim. To Ladder pitch the Shaft along side Anvil Room and carry out mock rescue from Book Chamber.

A suitable belay point was set up, and part of party decended into the River Cavern while some new members explored the Diamond Mine. After a period, oftime all members met in River Cavern then proceeded to Book Chamber.

Because of lights failing the aim became general exploration.

CONCLUSION. Despite the fact that the mofk rescue was not carried out, several conclusions were drawn.

I. A rescue would not be as difficult as first thought, because the ladder pitch gives an easier exit for lifting patients than the Chimney, (speed being the main advantage). From the Anvil Room the Daylight Shaft would be used for bringing patients to surface. The drop from surface to River Cavern being approx. 230ft.

The ladder drop down the shaft is approx 70ft. About 30ft down the shaft divides into two parts, one side is free hanging and the other side tucks itself under a ledge. The belay point for the ladder is obviously not a good point to attach to. THe ladder is drawn in close towards a narrow cleft, which would make it difficult to haul a stretcher up, it needs a ring bolt fixed in a central point above the shaft. Another belay point would also be needed for the person who is belaying the lifeline.

FIELD TRIP TO NATURAL SANDSTONE ARCH.
24th May I970.

TRIP LEADER. Barry Mc Williams.

AIM. To locate arch ane general exploration.

The Natural Arch is located on a small creek in the vercinity of Balmoral, aprox 6 miles from Mittagong, on the back road to Picton. We had no difficul ty in locating the Arch, as a sign post pointing about due east from the road stated that it was 500yds down stream.

On reaching the start of the Arch, we found the entrance to be about 20ft wide by 6ft high, .

The roof was inclined about I5 deg. and remained constant through out its entire length. The Arch was aprox. I50 to 200ft in length, and was a slight s-shape. Daylight could just be seen at the other end. The first 60ft, of the roof remained at a mean 6ft in height, some spots we had to crouch to move forward, about ¾ way through, the wall became vertical and the water formed a small pool about I5ft by I0ft, and 2 to 3ft deep. On the other side of the pool, there was a large sandy floor area, and then a 25ft waterfall at end of arch.

Water emerged from the arch into a small canyon about 30ft high and 50ft wide. The area was of a sub-tropical nature with heavy undergrowth and tall straight trees, reaching for the sun-light. We proceeded down stream for about 400yds were we saw another sand stone bluff about 50ft high, being about 6 to 8ft deep. In the roof of this overhang some sandstone formation (calcite) about 3 to 4inches in length were seen. Some of them were stalagites, and some columns, also some rust formations. Not a great deal of formation was seen further down the bluff, The creek follows the base of the canyon for several hundred yards, at some places it varies from 20ft to 60ft, inhoight, a good place for some abseiling.

Barry Mc Williams.

ABERCROMBIE. 6th 7th June I970

TRIP LEADER. Ron Thomas.
AIM. To locate, measure, and tag all entrances worthy to be called a cave, begining at the Arch.
To be done by three seperate parties.

The program for the week-end was outlined to Bill Cutting before the group split up to cover the areas where cave entrances had been noticed on previous trips Ken Keck and Keith Oliver to the Arch, and the caves contained there in. Barry Mc Williams, party went to the outcrop and entrances at the other end of the Arch, Stan Thomas's party to the Grove Cave, and surrounding outcrop. Phil O'connell, Barry Richards and myself covered the first two outcrops downstream from the camping area first, then covered the outcrop opposite the Grove Cave.

In this way, our parties covered a large area and most of the work was completed by 3-00pm.

Twenty four entrances were tagged, and still more were found and left for future trips. Keith and Ken. K. took many photoc's and the result will be shown to the ranger.

With our aim finished for the week-end, we relaxed on Saturday night.

We measured and tagged and located as our aim required, AI6 had as a point of interest, a Red Back Spider, at the end of the cave which was over 20ft, in from the entrance, from AI7 a skeleton that had been found on a previous trip, was still held together and has been handed to the ranger who said that he thought it was the remains of a Wild Cat that had inhabited the area. Phil reported that AI8 becomes very narrow but is still quite high and could go on (maybe next time someone slim might check this possibility)

The second bluff downstream has revealed no caves at all. We arrived back at camp by I2.00 and finding no-body there, set out for the Arch. Here we met the party from the Grove Cave and talked about the mornings events. Opposite the Grove Cave is another outcrop with several obvious holes.

These tagged and measured, one being 33ft, long and having a small cavern with formations, partly active, there was no insect life noticed.

After lunch, investigation of the Crevis that starts from the Grove Cave, and runs off parallel to the bluff and droppes down into a cave. I returned to the surface for somebody else to accompany me and Garry appeared and offered his help. Together we measured and mapped the twisting tunnels and squeezes and noted sone dry formation in several places. The main chamber would be 20ft high and 4ft wide.

A sloping tunnel filled with soft dirt drummed when stamped on, so we left the cave only partly measured to gather shovels, and more recruits. Our hopes were soon squashed by others of the members who informed us that it means nothing at all.

However, I00ft has been measured so far, and at the end of the large cavern, which is forming a tunnel I2x 4ft, it is rubble,filled and appears to be leading further into the bluff and could be the key to something big in this out-crop. It will be interesting to see how it runs in relation to the Grove Cave.

Ron Thomas.

Stan's party & Barry's party completed the aim of the trip also, by finding, tagging, exploring, all the caves in their respective area's.

As a cave was entered, a trip report sheet was completed, as much as knowledge and available equipment would allow, noting mainly length of passage, number given to cave, and name if any, and recording various types of cave life if seen. A sketch of each cave was also done, noti ng things of spelo interest.

These report sheets will be completed on future trips, with permission of Tourist Bureau , and caves will be surveyed and any more caves found will also be entered on an area map. These reports will be made available to Tourist Bureau for their records and use.

It is hoped a copy of these records will be used as a basis for a seperate publication by this club.

Editor.

WEE JASPER.

I3th to I5th June.I970

AIM. Familarisation and introduction to caving of four potential members.

TRIP LEADER Lionel Baker.

Because of other parties entering cave, the ladder was placed down the 65ft pitch of NO.4 series of the Dip Cave. No trounle encounted by the prospective members on the pitch. The party moved into N05 series to take photograph 's. The party split into two groups, one heading for the Dismal Chamber, were approx. 40 bats were encounted. The other party doing minor exploration . Upon regrouping, a ladder was dropped from the Rat Hole into sereis 2 were a number of scouts were photographing

(this film was apparently shown on T.V. the following week?)

Two of the members, owing to light trouble, departed from the cave. The remainder, exploring series I and 2, (a bat colony was found in series 2) the party then returned to camp.

The following day, we entered the Punchbowl. During the time of setting up at the mouth of the cave, a party of senior scouts arrived, with number balanced by the fairer sex. This same party was encounted on a previous trip to Tuglow. Knowledge was exchanged with regards of knott tying, and ladder belaying, and we feel the knowledge which we were able to pass on to this group has made their trip worthwhile. It was distressing after one climber had began to decend that a group of free lance caver's saw fit to make themselves objectionable by excessive noise while the ladder belaying was in progress.At this point, the leader of the scouts exercised opportunity to advise how to behave on the ladder pitch. He was also concerned to know whether they had any intention of entering the cave without equipment and very little lighting, the idea of entering the cave was abanded.

With the party saf:ly at bottom of pitch, we moved toward the Ball Room, were bats, spiders, and crickets were found. Fom here we moved to the Loxen Chamber, and the slippery dips. In two sections, slings had to be used, this showing new members the full advantage of carrying a sling and being fully equiped.

The party moved off to the Anti Chamber where photographs were taken, then returning to ladder pitch.

Ladder Pitch being safely negotiated for the second time , all members taking a hand in ladder belaying over the entire week-end.

In the evening, I½hrs, was spent in the Signature Cave, for relaxation, and entertainment.

Lionel Baker.

OOLITE

BLUE MOUNTAINS
SPELEOLOGICAL
CLUB JOURNAL

"OOLITE"

JOURNAL OF THE BLUE MOUNTAINS SPELEOLOGICAL CLUB .

P.O. BOX 37 GLENBROOK. N.S.W. 2773.

CONTENTS.

VOLUME 2. NUMBER 3 DECEMBER 1970.

Journal Committee

Dave Ward.
Barry Mc Williams.

Typing Colleen Ward

MAYAN CAVES DISCOVERIES.

Two years ago the Explorers Club and the American Broadcasting Company entered into a contract for the filming of scientific exploration work in the caves of Alta Verapaz, Guatemala, which were and are used by ancient and modern day Maya civilizations.

The Maya civilization existed approximately from 1.200B.C. to 900 A.D. It is thought to have included 2 million people and was the highest civilization in Pre-Columbian America.

The Maya envolved a notation system, only slightly less useful than the Arabic notation, an advanced form of writing and systems of chronology. They studued astronomy and had rich artistic expression.

The decline of the Maya civilization is thought to have been caused by the loss in fertility of the tropical soils because of the characteristic slash and burn method of cultivation, and also by suppression of the Spanish invaders (1520-1545) and the diseases introduced by them.

Early in 1968 a team was fielded, including 11 explores,a Guatemalan liason and his assistant, two cooks, a camera man, and eight of his crew from the A.B.C. and many muletters. The members included an archaeologist, a geologist, a biologist, an ornithologist. two doctors and two photographers.

ARCHAEOLOGY.

Eleven caves were inspected. Ten contained human cultural remains, and three of these had never before been entered by non-indians. In the clay on the floor of some of these caves were human footprints, still soft and pliable, yet made thousands of years ago.

Five caves contained remains of hearths associated with dramatic natural cave features, such as large flowstone formation and stalagmites. In most cases there were streaks of melted candlewax nearby, indicationg recent use as alters. At one site there was evidence that such alter hearths were used by the ancient Mayas.

Broken pottery was discovered in close proximity to all the altar hearths found in these caves. Nobody is certain whether the pottery was part of the ritual.

In one of the most important caves, about 30 feet from its entrance is a remarkable masonry staircase. Stones have been cut and fitted to make a broad six foot wide staircase winding down into the cave for about 60feet. The staircase was

ALL THE more unsusal because its entire lower length was cov ered with a coating of calcite the dripstone commonly found in caves. Some sections were covered with five inches of deposit. A sample of the flowstone, analyzed by Radia Carbon 14 showed that the deepest layer had been laid down 2.800 years ago(350 years) before the building of Rome or Carthage

The Kekchi indians, modern day Maya of the region, regularly use some of these caves to perform rituals of sacrifice. They burn large amounts of resin of the copal tree, called POM and numerous candles. The sooty appearance of the altars and the ceilings above them suggest that POM was also sacrificed in ancient times.

Indian ceremonies involving POM incense, is a type of historical survival of traditional Maya rituals, transformed some what by the infusion of certain elements of Catholicism.

Four of the caves visited contain human skeltons, and in one cave there was definite evidence of an intentional burial. Here a skelton was laid out in an extended position in line with a small alcove inside a small but spectacular room in the cave. Apparently,owing to water dripping from above, the bones were in poor condition. Next to this skelton, in a small depression were the bones of a small animal. It is thought that both were ritual figures of some kind because there was an altar at the opposite end of the room.

Three caves were found with traces of habitation, actually they were more like rock shelters than caves and the residues mainly charcol potsherds. (uncoated ware like pottery) and snail shells were always at the entrance and terrace in front and never deep inside.

There is no doubt that the ancient and modern Maya went to extraordinary lengths to explore caves. In a remote passage about 600ft inside one of the largest caves a solitary obsidian flake, left by an ancient visitor was found. Most remarkable of all, inside another cave, some pottery was found in a position high on a sheer limestone cliff which could only be reached by roping in from at least 50feet above and negotiating an overhang in the process.

Around one site there are Indian MILPAS (slash and burn fields) which extend high up the mountain slopes. This technique of farming was practiced by the ancient Maya. One such MILPA extends upslope to within about 200 meters of the cave entrance. It was probably easier for the ancient working MILPUS to visit the cave for water than to go down the mountain and back up again.

Today the Indians use the cave for this instead, they carry water (and other liquid refreshments) up with them in old Pepsi-Cola bottles with strings tied around the necks for carrying.

GEOLOGY.

The Alta Verapaz area lies in the middle of a great belt of limestone karst in Central Guatemala. On the north it is bordered by the jungle lowlands of the Peten and on the south by the broad cultivated valley of the Tia Polochic.

At Lanquin the Rio Cahabon rises at an elevation of about 300 meters. The Karst plateau rises to more than 1800 meters near Senahu. A fortuitous combination of thick limestone, high relief, and heavy local rainfall has produced a variety of well-developed tropical karst landforms such as conical hills, sinkholes, and caves.

The most obvious landforms in the limestone of this tropical area are the steep sided, heavily vegetated, generally continuous range but are isolated from each other. Between these hills are funnel shaped, steep sided dolines.

Thick residual red soil(terre rosa) in the dolines has made them suitable for cultivation of coffee and corn. Hilltops and adjacent doline bottoms may differ in elevation by more than 250 feet. This type of topography is known as kegelkarst, and is common to all tropical limestone regions.

Rainfall in the Alta Verapaz is heavy, frequently more than 150 inches per year. Although there are rainy and dry seasons, the natives say that it rains 400 days a year. Even with such high rainfall, most of the karst is drained internally. A few streams arise from small springs or cave openings, and sinkholes, and sink after running a short distance across the surface. However, one through-flowing major river system drains most of the area.

The most spectacular spring in the area has an estimated flow of 5,000 gallons per minutec comming from a completely submerged passage into a large partly open room which opens to the outside. During the wetter part of the rainy season, flow probably exceeds lo.000gallons per minute. It drops sufficiently during the dryer years to allow penetration through the siphon into the main cave beyond.

The upper levels of some of the caves have been vandilised by tourists and natives. The altars are used by natives for annual spring planting ceremonies.

FAUNA.

Guatemala is the hub of two extensive areas that contains large populations of cave animals. Mexico to the north and the Antilles to the south.

The Alta Verapaz area in particular represents a challenge to cave biologists for several reasons. First, it represents a transitional bio-geographical zone between the fauna of North America and that of South America.

Before this particular expedition, and despite the great pot ential for an extensive fauna, practically no collecing or study had been done in the caves of Guatemala.

Until 1968 there had been one speleological expedition to Guatemala. This was in 1959 when six members of the National Speleological Society visited ten caves. Apart from collecting done by several mammalogists studing the distribution of Central American bats, no serious attempt to study Guatemalan cave life had ever been undertaken until this Explorers Club expedition.

Many organisms were found during the expedition, but few of them could be considered troglobitic. Troglobites are those animals that are totally adapted to living in caves and have little chance of survival outside a cave environment.

In temperate latitudes the twilight part of the cave(area between the entrance zone and dark zone) is a well delineated, transitional area between the extroms of the surface environment and the constancy of the dark zone. In the tropics this delineation is not as conspicuous. Even in the dimmest portion of the twilight zone are to be found birds nesting amidst entwined lianas, as well as nests of rodents, snake dens and colonies of lizards. Tracks found in the interiors indicate that many of the small mammals and lizards foray into the dark zone for food. Because of the concentration of biota at the entrance and twilight zones, there is a greater nutrient input than in temperate caves.

Previously the entrance to one of the caves was used as a goat pen and was much disturbed.

BATS.

Bats represent a broad range of adaptions to tropical existence. Four major types were among the nine species collected)I. insect eaters. (2) species that eat seeds and fruit. (3) nectar drinking bats and (4) the notorous vampire bat which lives exclusively on blood.

The biggest bat found was a STURNIA with a 17inch wingspan.

To collect bats the expedition members decided not to shoot them but rely largely on capturing them alive with Japanese mist nets employed by the ornithologist for trapping birds in banding operations. Not many bats blunder into a net. It was only when a 35foot net was stratched across a clearing in the forest that the jackpot was struck. Vampire bates were attracted by the horses and burros of the expedition members.

Several bats entangled themselves in the net, a large fruit bat, a long nosed bat and two big vampires. After photographing the catch one of the members, who had removed his gloves in order to operate his camera more easily, began capturing the bats and dropping them into plastic bags. He pulled a bag over his hand as one of the vampire's projecting incisor teeth slashed through the plastic bag and gouged a hole out of his palm. The injury slight but it could be fatal if the bat was rabid.

Insecrorivorous bats are very rarely rabid, but if the deaths of horses and cattle from vampires is any indication then it is highly likely that many of them are dangerous.

It was imperitive that the bat be taken to Guatemla City to determine whether it was rabid.

It was kept in the plastic bag and was heard flopping around during the night. Dawn brought a grim discovery. The bat was dead and hald devoured. Army ands had cut their way through the heavy plastic and thousands of them were inside the bag. consuming the bat. The ants were removed and the bats head appeared to be intact. This was important for it is the brain tissue that is needed to determine whether the bat is capable of spreading rabies. However they were worried about the rate of deterioration of the tissue.

The dead bat was pluged into a bottle of alchol and the best riding horses selected to get back to where the vechiles were left. Then a 40 mile landrover trip had to be made to the nearest airstrip. Altered by radio, the lab was waiting for the dead vampire bat.

The victim was soon assured that the test was negative, but as a final safeguard, mice had to be inoculated with tissue from the salivary glands. If the vampire really was rabid, the inoculated mice would die within 10 to 12 days, in sufficient time to begin prescribed inoculations.

The victim was not looking forward to the treatment which, if he had to undergo, was a shot in the arm, ranged from " "no worse than a bee sting for 15 minutes" to" like an injection of molten lave".

Happily, the mice did not die.

MEDICAL.

Five of the members of the expedition contacted Histoplasmosis, through not all cases were proven. Man and animals can be infected by this, and it is caused by the inhalation of dust contaminated with spores produced by a fungus which, because if its small size, can float easily in the inhaled air as far as the air sacs of the lungs. Soils contaminated or composed by bird or bat dung are particularly rich in spores.

Epidemic outbreaks have occured in groups cleaning chicken houses, silos or exploring caves. It is probable that most of the reported cases of "CaveSickness", some ending fatally have been due to Histoplasmosis.

Susceptible individuals going to infected caves for the first time will continue to catch Histropasmosis unless masks to filter out the spores from the inhales air are made Meanwhile spelunkers will continue to get their primary infections without even becomming aware that they have been invaded by a fungus.

The explorers Club hopes that its expedition to the Guatemala Caves and the preliminary studies resulting from it may shed light on the practices of the early Maya in his relationship to the caves. It lends support to the possibility that, hidden beneath the hills of Central America, there are other undefiled sancturies containing a store of the artistic, cultural, and historical remains of these most remarkable people, the Maya.

EXTRACT from Rucksack. No4 Summer Edition 19 68-69.

.....

B.RITCHARDS.

RECENT DISCOVERIES IN THE RIO CAMUY CAVES OF PUERTO RICO. PART 5

By the B.M.S.C. Roving Reporter Graham Nelson.

The new sink that we explored is just like Tres Bueblos, 300ft deep with the Ria Camuy west Tributory flowing in the bottom. Downstream after a 600ft swim, it sumps out and there is little possibility of getting through to the main parts of Ria Camuy, although it looks as if it is open about 80ft up. I gather from the locals that the water sometimes rises that high in the sink during hurricans, so maybe it flows over the top at those times. (very frightening.)

Upstream the walking is only knee deep or on gravel beds for 1000ft. The passage is then blocked by a huge series of flowstone and what must be some of the biggest rimstone pools in the world, often over six feet deep and ten feet across and filled with the clearest water I have ever seen. The river flows out from a small side passage about 5ft wide and with a roof 6ft above the water. The water is very deep but the passage sumps out after 300ft. Our attempts to climb over the flowstone failed on our first trip, but the nest time we made it and found an incredibly clear pool 30ft wide and 200ft long, to deep to walk and with a roof only 20ft above. I should mention that nowhere in the rest of the 6000ft of virgin cave that we explored, that day, was the roof lower than 100ft. Beyond the clear pool was a huge dry room and then 60ft below, the main river again. Downstream and upstream, the river sumped out again, almost at onee, but a huge dry passage 300ft long led down a muddy slope to a clear stream which flowed into the main river. From then an upstream the cave was mostly like a canyon, after only 20ft wide and over 100ft high. Now and then a big room had been formed by huge rockfalls and at least one other tributory entered the main stream. As we progressed the water begun to sink more and more, reminding us of the water in Humo although our compass had suffered by repeated immersion in water we knew every step that we were not far from Humo and that we had at last linked the river in Humo with the west tributory of Ria Camuy. At a point above 5000ft from the entrance we were blocked by another sump but the sump is in a huge room full of rockfall and a way on is quite possible. In addition we had passed several upper passages which could easily be reached by climbing up the heaps of huge fallen rocks but we had buypassed them in favour of following the main stream. At this point we were cold and very tired after much swimming and decided to head straight out and return again some other day to map and explore firther. In one day we had nearly doubled the explored sections of the

Ria Camuy and if we tentatively admit that Humo is also Rio Camuy then we have more than doubled the explored sections of the cave during I969 . I am going to have some brass plates made saying when each section of cave was found (by B.M.S.C. and N.S.S.O and will fix them in some suitable place in each cave.

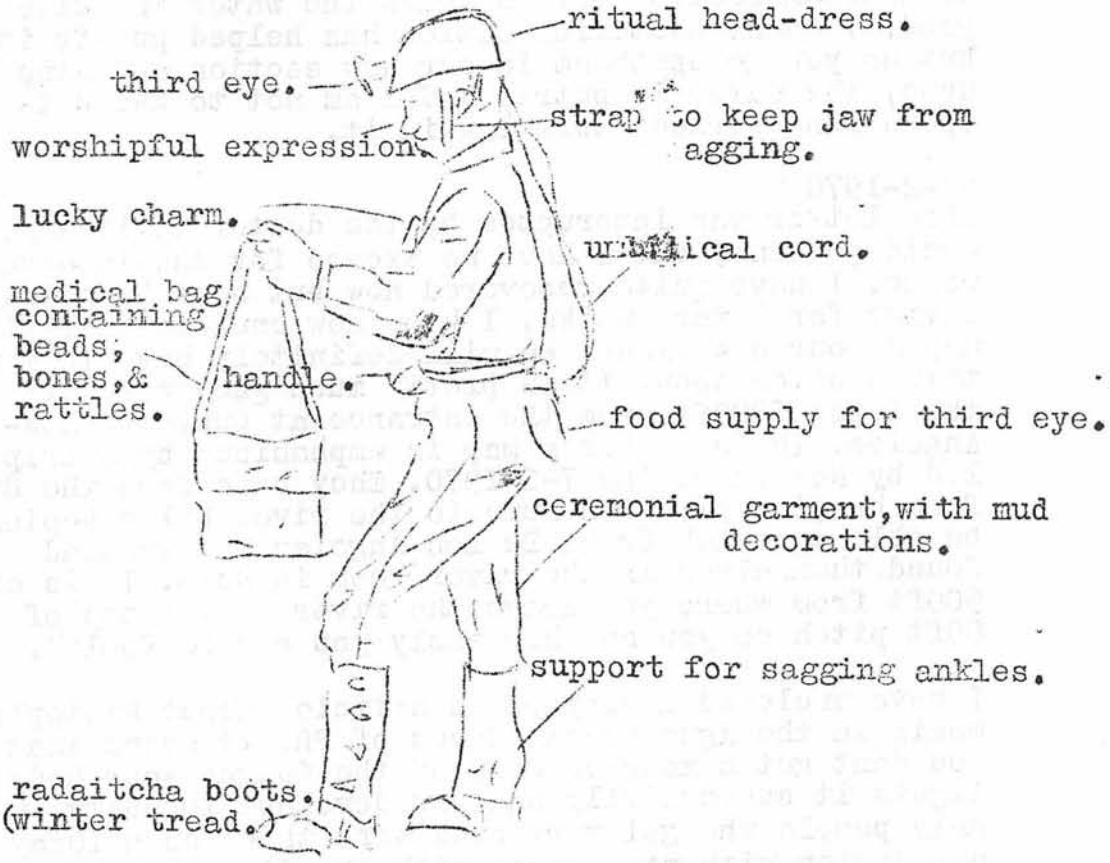
This latest sickness however has knocked me about a lot so I am giving caving away for a bit. I am not even sure if I will do too much more over hear. The polluted water in Rio Camuy hadn't worried me before. I had only worried about Schistosomiasis and Histoplasmasis before but I have recently found that a slaughter throws all its entrails etc into Rio Camuy. In the downstream sections of the cave the water is quite good. I guess bacterial action has helped purify it , but as you go upstream in our new section and also in Humo, the water is putrid and I am not to kneen to spend long periods swimming in it.

24-2-I970
This letter was interupted by the doctor telling me I could go home, but I have no excuse for the intervening weeks. I have quite recovered now but wont be going caving for 3 more weeks. I have now enclosed a l tter map of our new finds. We will definitely have to map this section soon. It is pretty much guesswork after the first I000ft from the entrance at Cueva De Los-Angeles. The need for a map is emphasised by a trip led by Norman on the 7-2-I970. They came down the 80ft free hanging pitch in Humo to the river below hoping to be able to reach Cueva De Los Angeles but instead found themselves in the river room in Humo. It is over 500ft from where you leave the river to the top of the 80ft pitch so you see how easly you can be fooled.

I have enclosed a copy of an article about Histoplosmosis in the Agus Buenas Caves of PR. It seems that if you dont get a massive dose of the fungus your body fights it successfully and you develope immunity. The only people who got very sick were those on a I0day expedition with no contact with the disease preveously All of us "day a month" type cavers are probably well and truly immuned by now. We are all going to have skin tests soon to check.

I havealso enclosed the club's copy of the Rio Camuy Development Proposal.It gives little detail of the exploration of the caves but the pictures and drawings give some idea of the immense size of the caves and sink holes. I have essentially no photos of the caves

or the entrances. Both are really beyond my ability. The sink holes need aerial photos to show their fantastic collapse structure and the reason they are hard to find even from very short distances. The Empalme sink hole on page 35 cannot be seen from either of the two roads which pass within 30ft of it and it must have come as a great suprise to the truck driver, who left the road several years ago and then found nothing for the next 400ft. The drawings of the Typical canyon like cave opposite page 54 and of the "big Room" opposite page 61 could never be replaced by photographs.



AN ATHROPOLOGICAL STUDY OF HOMO?SAPIENS?

VARIETY SPELEO.

MUDGGE MUDDLER.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.

WILDLIFE IN AUSTRALIA Volume 7 no. 3.

HOUSE OF REPRESENTATIVES.

SELECT COMMITTEE ON WILDLIFE CONSERVATION.

This committee has been appointed to inquire into and report upon.

A) The need for an urgent and comprehensive survey of wildlife populations including birds, mammals of the land, and water, and reptiles, and their ecology to enable conservation measures to be effectively applied to threatened species.

B) The adequacy of the several systems of National Park, reserves. etc, of the states and territories, to ensure that at least minimum areas of the major animal habitats and the wildlife of the continent are preserved, held securely, and are properly managed in the National interst.

C) The effect of pollution and the widespread use of pestercides on wildlife populations.

D). The effect on the population of Kangaroos as the trade in meat and hides and the effect of other industrial exploration on wildlife .

E). The need for international and interstate agreements for the effective conservation of migratory animals.

F) The threat presented to Wildlife by the large numbers of domestic animals gone wild, particularly in Northern Australia, and

G) The need for a Commonwealth widelife conservation authority.

The terms of appointment require that the committee recognise the control in these matters exercised by the states and their co-operation in all relevant aspects. Any organisation or person wishing to express a view on these matters is invited to forward a written submission to the undersigned. as soon as possible. The committee proposes holding public hearings in all states in due course

L.M. BARLIN, CLERK TO THE COMMITTEE HOUSE OF REPRESENTATIVES, CANBERRA, A.C.T. 2600.

As speleologists are well aware of, many articles and papers have been published in their societies journals, A.S.F. dublications etc. on the many aspects relating to cave conservation. With the appointment of the "Select committee on wildlife conservation this affords the Australian Speleological Federation, and more particulary the affiliated club and societies of the A.S.F. a wonderful opportunity to express their policies, views etc re conservation of the

speleosphere. At this point, I would like to remind readers of the excellent conservation paper in the A.S.F. handbook by Elery Hamilton Smith, with particular emphasis on section 5 "Recommendations for Action."

PUT PEN TO PAPER AND FIGHT FOR THE PRESERVATION AND CONSERVATION OR OUR SPELEO SPHERE"

IAN.BOGG.

"THE MYSTERY OF THE LIMESTONE CAVES IN NATIONAL PARK.

The largest cave is a shelter cave about 25ft deep by 25ft high which occurs in Hawkesberry sandstone common around sydney. Never the less, all the typical structures such as stalactites, and shawles are to be seen, though not developed to any extent .

The sandstone is made up of tiny grains of quartzcement together and contains no free calcium carbonate, so the origin of the calcareous material that provided the formations has posed a problem.

It has been suggested that as limestone beds are not known in Hawkesbury sandstone, the calcium carbonate has been derived from a now eroded mass of Wianamatta calcareous sandstone. However other evidence shows that the calcium carbonate could have come from the Hawkesbury sandstone itself, probably originated from a calcereous cement.

The published history of the Birthday Shaft of the Balmain Colliery at Sydney throws some light on the subject. Between the 442 foot and the 768 feet levels the ground waters are so rich in calcium carbonate that with in a fortnight a 2" pipe taking water from the 768 foot level became almost completrly blocked with calcite. Wooden pipes 3" square were then used and had to be taken apart freq uently and the mess inside removed. No ground water above the 442 feet level or below the 768foot level showed any appreciable dissolved material.

A point of resemblance in the National Park Cave is that the waters bearing Calcium Carbonate seem to have issued from a horizontal fissure at the back of the cave and about 25ft above floor level. No calcareous structures are found in other caves above the level of the fissure. Perhaps these

probably initiated by running water beneath the glacier, melting afterward.into the ice and cutting slightly downward into the subglacial floor. Seasonal warm air enters and produces most of the present cavern volume. Some later enlargement my occur through stream-water invasion. The scallops present in these caves resemble the "stream Plates" of limestone cavern's, but are bigger and appear to be developed through atmaspheric processes. Deeply undercut flakes, sometimes long, and wieghing may tones are a specific hazard of glacier cave exploration.

Collapse sinks are not common. The most dramatic onifices of the system are "Moulins" rounded chimney like structures one to ten feet in diameter,often groved like the downpit of limestone caverns.The caves largest ice columns form below these moulins which drain glacier surface streams.

SPELEOTHEMS.

Most forms of Speleothems occur with, stalactites of ice several feet long. ½The caves store vast quantites of cold air each winter. When melted water from outside finds its way into the cave, it freezes into drip stone and flowstone. When warmer air replaces the cold the formations melt and they are usually all gone by mid-summer.

OTHER ICE CAVES.

Members of Cascade Frotto Cave found a curious insect population in another ice cave. In the Carbon Glacier which is several miles long, a huge, but short cave filled by a rushing river has been found and plans exist to visit it in the coldest weather possible. The imagination boggles at the potential Glacier Caves of Alaska, Greenland and Antartica. This appears to be a limitless new branch of speleology.

EXTRACT from Studies in Speleology Vol 2 part 2
July I970.
AUTHORS. W.R. Halliday. & C.H. Anderson.

sandstones at National Park correspond to those between the critical levels in the Birthday Shaft but a complete correlation is difficult as any limiting lower level beyond which caves do not contain stalictite structures, is not yet known.

Extract from Australian Museum Magizine. March I5th I95I. AUTHOR. J.F.LOVERING.

"GLACIER CAVES" A NEW FIELD OF SPELEOLOGY.

Two years of study by the Cascade Grotto of the National Speleological Society (U.S.A.00) have demonstrated the existence of large beautiful and complex cavern systems within glaciers. The paridise Ice Cave, the primary site of this study, is traversable from glacier start to headwall, with about a mile and a half of passage mapped and another mile explored but not mapped. Several inviting side passages have not yet been entered and the main corridor itself has not been penetrated to its end. Explored passages average about I0 feet high and 20feet wide. A number of chambers have been discovered, the largest to date 250ft long and 90 ft wide about 25ft high.

The Paradise Ice Caves are situaded at an alltitude of 6500ft on Mt Rainier Washington State U.S.A. they have been a tourist attraction for may years, yet no one seems to have gone beyond the twilightzone until late in I967. Blue light filtering through the thimner sections of the glacier makes the caverns entrancingly beautiful.

Cascading waterfalls, loose boulders, strong air currents and chill water were problems in explorations, except near orifices, air temperatures varied from 32 ° to 36 ° with water temperatures one or two degrees higher. The three mile hike to the cave from the visitors centre was frenquently by compass through fog or swirling snow since trips were made in the winter when water levels in the cave were lowest. Only about half the expeditions reached the caves and in I968 one mwmber died when caught in a blizzard .

SPELEOGENESIS.

As with many limestone areas, the size of the passages appear disproportionate to the streams in them and some are stream free. Low arched segments between large chambers suggests that these passages are not primarily to product of stream action. Each passage was

MUDGEE. 3.4.& 5.I0.I970

On Friday night Mudgee was invaded by three tribes from the other side of the hill. When question these strange beings admitted belonging to either B.M.S.C. H.C.G. or M.S.S. tribe. After putting up their wurlies most went to sleep, however, some remained awake to scare the local milkman.

At sunrise the heads of the tribe woke the rest and after everone had sent up smoke signals, burnt offerings were consumed in the breakfast hour. When questioned the strangers remarked "We're Spelios!". A look of puzzelment on the face of the questioner brought the further statement "You Know, Cavemen"!"Upon noting many males without mates, Mudgee locked up her daughters

The initiated males after entering their wurlies emerged wearring strange garments and an extra eye on their foreheads. These were taken to be ritual garments bedaubed with mud ornamentations of unknown signifigance. They then entered their four-wheel drive chariots, taking with them rope, ladders and other unique artifacts.

Local spies following them noted they gave secret passwords to landowners to gain access to properties. Upon reaching their ultimate destination they all gathered around holes in the ground. (Some form of Worship?). After much ritual preparation and the tying of sacred knots said Males descended into the unknown depths. Could this be a test of manhood comparable to the killing of Lions by the Watusi of Africa or are they secret temples. As none of the local spies were brave enough to enter these bottomless pits we can only summise as to the real significance of the activities.

When they eventually emerged with their third eye shining, they seemed strangely elated and uttered many strange words. Our local Etymologist reports hearing excited cries of "Dolomite! Belay! Oolite! Guano! Ropeburn! Trog! and Never More! "(Your author at this stage is unable to provide a translation.).

Upon return to camp they were seen to be devouring raw steaks, whether through preference or because of a total fire ban is as yet unknown.

They departed after a couple of days. However it is hoped that Mudgee shall become a regular stop on their migratory route as the discovery of these three hitherto unknown tribes has our local Anthropologist Etymologist and Police

Department agog with excitement.

THE MIDGEE MUDDLER.

JENOLAN CAVES ARCH.

The road passes through a thick, steeply dipping bed of limestone with the ancient rock fall on the left of the arch entrance. Stalactites occur near the exit of the arch. The Cave's limestone is nearly 900ft thick and extends north for more than seven miles and south for ten miles. Although poorly bedded, the massive limestone is strongly jointed. Typical outcrops can be seen on the second (higher) car park above Caves House. The caves occur in a valley, is typically v-shaped with steep grades and steep walls. The Jenolan & Harry's River and a tributary have cut their channels across the thick bed of limestone.

The limestone resists mechanical weathering but is weathered easily by chemical means. The streams now pass through the limestone by natural tunnels dissolved in it.

The comparative resistence to mechanical disintergration of the limestone, relative to the surroundings slates, explains the high wall of limestone blocking the valley The various caves level represents successive levels of the stream's channels as they cut their way downward from the original surface level.

Visit the caves. Study the variety of calcitic growths. (stalactites,etc.) which have developed and the formation of underground streams (they are often related to joints). Such streams are quite rare in rocks other than limestone.

Extract from Geology of New Soth Wales.

Author Branagan.

LIONEL BAKER.

BOOK REVIEW.

Perhaps some of the following publications could be of reading interest and also hand reference to B.M.S.C. members who want to further their studies and knowledge in Speleology.

MANUAL. OF CAVING. by The Cave Research Group.
EDITED BY Cecil Cullingford.
PUBLISHED BY Routledge & Regan Paul in London.
COST. $8.40 Australian, plus postage.

Manual of Caving Techniques was compiled by a team of 21 writers, all of whom are considered to be leading cavers and experts in their fields. It is divided into 21 chapters and is concluded by notes by the contributors and a general glossary. Items covered include Route finding, Personal Equipment, Clothing, Ropes, Knots, and Splices. The chapter on ladders gives a very detailed summary of the many types of ladders designed for caving.

Another chapter talks about water in caves, underground - camping, mechanical aids, communications, and digging for caves.

There are also chapters on exploring new caves, medical aspects, leadership, and party managment, teaching caving. The book concludes with cave rescue, conservation, and access.

This book os of considerable merit, broad in its outlook, and of considerable use to cavers all over the world.

MISSION UNDERGROUND by Norman Casteret, a novel of caving in delux style. (american $I.95.)

PENGELLY CAVE STUDIES ASSOCIATION STUDIES IN SPELEOLOGY. The philosopher is to publish papers written by spelialists to review their fields for non-specialists. All issues normally kept in stock.

NOW AVAILABLE. VI. NoI 1964
VL. No 2-3 1965
VI. No 4 1966
VI. No5 1967
$3.35 each.

THE BIG CAVE by Abijah Long & Joe Long, The discovery of, and early history of CARLSBAD CAVERNS, and told by one of the discovers. Also a tourist type description of the cave.

$1.80.

THE CAVE by Robert Penn Warren. An adult novel revolving about a cave rescue.

$1.50.

Caving books from Edmund Taylor, [illegible] I42 Lloyd Ave. PITTSBURGH, Pa. I52I8,U.S.A.

.....

B. McWILLIAMS.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.
NEWS FLASHES ON CAVING AND CONSERVATION.

DAILY TELEGRAPH. I3-II-I970

NEW DAM.

Legislation to provide for the building of the I2 million Windemere Dam passed through its second reading.

The Minister for Conservation (Mr Beale) said the water Conservation and Irrigation Commision, seeking the most suitable site to meet the needs of the Cudgegong Valley and the Macquarie Valley, had chosen a spot I4 miles from Mudgee.

The dam will provide supplementary irrigation of 22.000 acres.

THE SUN. 29-9-I970.

FROM HIGHEST TO LOWEST.

An II member British expedition has set off into the Himalayas hoping to find the world's deepest caves.

The leader, Dr. Anthony Waltham; a 28-year-old geologist from Trent Polytechnic, Nottingham, said before leaving the Central Nepal hill town of Pokhara that the main aim would be to examine Himalayan limestone formations for the first time.

LEADER. 2-9-I970.

FOSSIL REMAINS ARE UNCOVERED.

Fossilised remains of a giant Kangaroo have been discovered in the St George district.

They were found by Mr. Rex Gilroy, director of the Mount York Natural History Museum at Mount Victoria.

The remains include a number of large molar teeth and some skull and other bone fragments.

Mr Gilroy was investigating fossil layers laid down by volcanic activity in the Pilocene period. He said he had also located fossilised kangaroo footprints and recovered a number of other marsupial teeth in the same area. The remains belong to the Pliocene period and could be three million years old, said Mr Gilroy. They have been identified as being the remains of the sthenurus, a kangaroo up to I2 feet tall which could have cleared 20 to 23 feet in a leap. It became extinct, with other giant marsupials at the close of the last ice age, about I5.000 years ago. Mr Gilroy said a volcanic lava flow had apparently overtaken escaping marsupials and also covered their footprints. That had occur ed before a river had flowed through the Pliocene layers in the past million years.

Mr Gilroy said that the river might have been part of the modern Georges River, but had since dissappeared.

The remains were among the most ancient marsupial fossils in Australia and were identical with others found in the Granville and Liverpool regions, he said.

DAILY TELEGRAPH. 8-II-1970.

CONSERVATIONISTS IN COURT.

BIG COAL WAX PROJECT IS ON NATURE RESERVE.

A court action starts in the Suprem Court of Western Australia next Friday that threatens the future of a world ranking montan wax project, and places in jeopardy any mineral prospect on alienated Crown Lands.

: jurisdiction of the Mini-ingWarden in the granting of a recommendation for a mining lease over part of a C Class nature reserve in the Jerramungup area on the coast east of Albury, Western Australia. Jupiter minerals NL 89 percent owned by the Newmetal Mines group- has applied for four adjoining prospecting areas totalling I2,000 acres on the Fitzgerald River The prospect is a massive lignite coal deposit which has great potential as a source of montan wax. The area applied for are smack in the middle of a nature reserve. The Nature reserve covers a total of 604,300 acres of scrub country, and is largely undeveloped for any purpose, the Western Australian Department of Fauna and Fisheries has joined a solid group of consevationists in seeking to find that the Mining Warden at Jerramungup has no power to grant the applications on the grounds that the area was already alienated from the Crown for nature reserve purposes. A decision in favor of the conservationists will thus throw open the question of mining and exploration title rights to other nature reserves and other alienated Crown land such as stock routes, and native reserves througout Western Australia.

SYDNEY MORNING HERALD. 13-11-1970

COMPANY STOPPED DROM DRILLING NEAR RESERVE.

Associated Portland Cement Manufacturers (Australia)Ltd had built a road and drilled near a reserve at Marulan without consent, the Minister for Mines, Mr Wal Fife said yesterday.

He daid that when he became aware of the operation the company was told to stop drilling and remove all equipment without delay. Mulwaree Shire Council had also told the company to stop drilling. The area covered by an interim development order, and council consent was necessary before any operations were started. Mr Fife said this in a written reply in the Legislative Assembly to a question from Mr F.J. Walker (Lab Georges River)

Mr Walker asked on October 20 if a road had recently been constructed into reserve 2755 and drilling operations carried out.

Mr Fife said the access track and drilling operations "may or may not" be within the area of the reserve. He said it would be necessary to survey the area to determine if the operations were in the reserve.

Mr Walker said outside the House that the reserve was a public one. It was a scenic area over which the Bungonia Caves reserve lookout had a view.

Mr Walker said his information was that a road six chains long had been built. He had been told a survey by an engeneer had shown that drilling took place at least 1ooyds inside the reserve.

The managing direstor of Associated Portland Cement Manufactureres (Australia)Ltd Mr. F. E. Taylor said last night "We seriously exploring Marulan as an Alternative to the Colong Caves area. "Inadvertently we went over the boundaries of our leases. As soon as it was brought to my notice we w itndrew everthing.

PENRITH PRESS. 17-11-70
BREAKERS FINED.

Three Penrith men who entered a cave illegally at Jenolan Caves, were fined a total of $120 recently at Oberon Court.

The information was laid under the Public Trusts Act. The court was told a complaint had been recieved by a cave guide that four men dug their way into an unused cave and had broken away rock formation. Three men were charged with entering an unoccupied cave at Jenolan Caves without authority and illegally excavating land at Jenolan Caves. They pleaded guilty to the charges.

The fourth man had pleaded guilty to both charges, but not guilty to offering a gratuity to a cave guide. He was remanded until December 4.

DAILY MIRROR. OCTOBER 16th 1970.
MINERS SPOIL PARKS.

Perth Friday, The Labor M.L.A. for Albany Mr Wyndham Cook has called for systematic safeguards to be applied when companies want to mine on a public reserve. Speaking at a conference of the Lower Great Southern Regional Council he suggested that as soon as a company perged an area on a reserve a team of specialists consisting of an ecologist, a biologist,

A naturalist, a botonist, and a geologist should completely survey the area.

They should make recommendation to protect the reserve he said. Mr Cook said one of the great problems for conservationists lay on trying to show the advantages of both development and conservation. The advantages of conservation could not be expressed in dollars. But this did not mean that conservation was any less advantageous to the community, Referring to the Fitzgerald Reserve near Albany, Mr Cook said that its declaration as A class did not ban minning. It only prevented alienation of the reserve for porposes other than those for which it was vested except by act of Parliment He said the present aplication before the mining warden was only the first of many such applications. Cast areas of the reserve were pegged. If the right to mine was given, to one a precedent would be extablished that other companies would also be given the right to mine. Delegates at the conference said hire-purchase companies and other financial institutions were charging farmers and otherpeople interest rates of up to 14 or 15per cent andeven higher. They said the high interest was aggresive and the financial plight of farmers who were expereincing drought and low prices for their products.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.

"Extract from THE BIRDSTRIKE PROBLEM. byG.MARCUS LANGLEY.

In SCIENCE JOURNAL AUGUST I970.

This article deals with the problem of birds in flight, colliding with planes and causing damage and/or death. This is a well known problem, but another friend of Speleo's is adding his own weight and numbers to this problem, quote

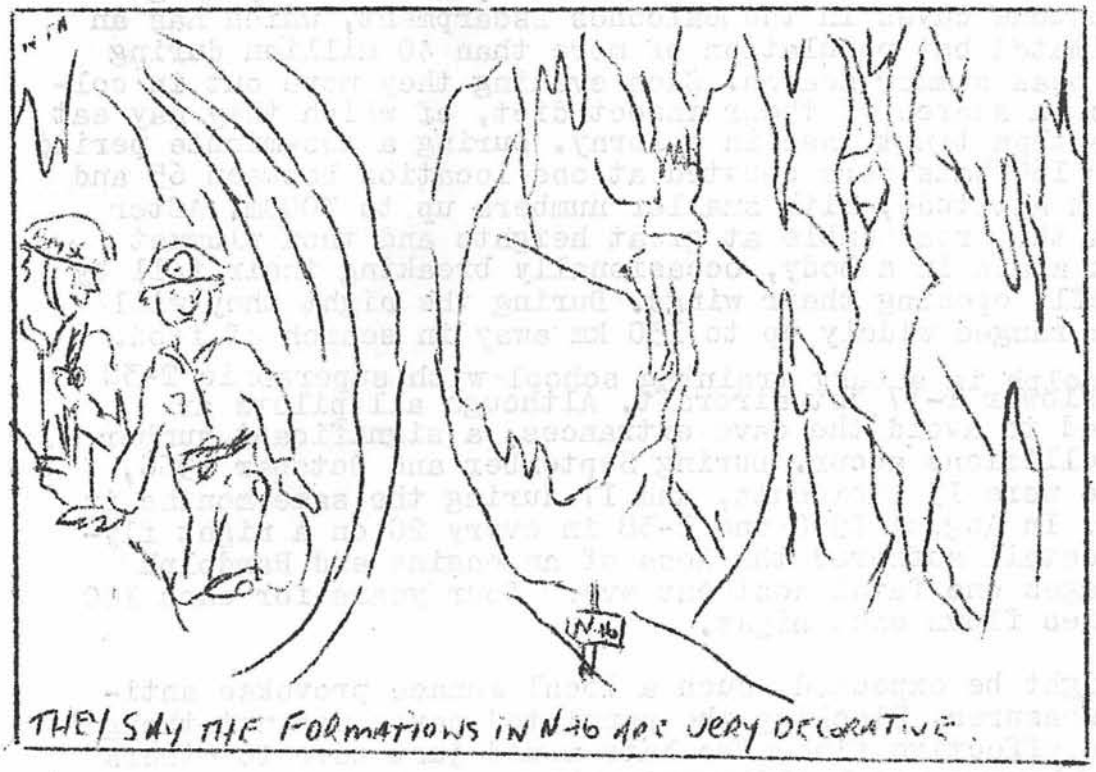
Bats are also a problem, in many local regions. One of the most severe and long standing of these conflicts occur at Randolph Air Force Base near San Antonia, Texas. About I8 km from the base is Bracken Cave, one of many large limestone caves in the Balcones Escarpment, which has an estimated bat population of more than 40 million during the peak summer season. Each evening they move out in columns in search of their insect diet, of which they may eat more than ten tonnes in a foray. During a two-minute period over I60 bats were counted at one location between 65 and 650 m altitude, with smaller numbers up to 3000m. After dawn they reassemble at great heights and then plummet down again in a body, occasionally breaking their fall by briefly opening their wings. During the night they will have ranged widely up to I30 km away in search of food.

Randolph is a busy training school with supersonic T-38 and slower T-37 jet aircraft. Although all pilots are warned to avoid the cave entrances, a significant number of collisions accur. During September and October I966, there were I3 incidents, and I7 during the same months in I967. In August I966 one T-38 in every 20 on a night flying detail suffered the loss of an engine and Randolph averages one fatal accident every four years for each I00 sorties flown each night.

As might be expected, such a local menace provokes anti-bat measures. Blocking the populated caves was not thought to be effective since the bats would just move to others or to houses and buildings in the area where they would not be welcomed. The local farmers and ranchers have a high regard for the bats cause of their insecticidal prowess and they would oppose any destructive measures, bats are cheaper than DDT and have no side effects- at least to them.

The problem has been studied by T.C. and J.M. Williams of the Smithsonian Institution. They recommended that the concentrations of flying bats should be precisely identified by radar so that they may be avoided, and that the J85 engines of the T38 should be modified to improve resistance to bat

ingestion. They note that the bats react more strongly to the piercing high pitched sounds of a T-37 trainer and avoid it, but appear to hear a low flying T-38 before it is upon them. This fact may be related with the "cricket chirping" of the Electra airliner and it underlines the apparent importance of the acoustic waveform and frequency. It could be that the big bang of a pyrotechnic device is not the most economical use of energy for bird and bat dispersal. Selected frequencies would probably be at least as effective and this may account for the success of recorded distress signals. END QUOTE.



SPECIMEN IDENTIFICATION.

In February, this year, during a trip to the Timor Caves (N.S.W.) some bone material was collected from the Shaft and Belfry Caves.

Most of the remains are of the Rock Wallaby, PETROGALE PENICILLATA. Also, among the remains, were those of the Wombat, VOMBATUS URSINUS, and the Rat Kangaroo (or Potoroo) POTOROUS TRIDACTYLUS.

The identifications were made by Dr Jeannette Hope, (Palaeoeontologist), Australian National University, Canberra.

During the year also, Fossil remains were collected from the Deep Hole, WA 17 at Walli(N.S.W.) and have been provisionally identified by Dr. Alex Titchie, curator of fossils Australian Museum, Sydney, as those of the THYLACINUS CYNOCEPHALUS, included in the assemblages from Walli were reptillian remains which to date have not been identified.

FOOT NOTE.

Dr Jeannette Hope is ready, willing and able to work on cave marsupial faunas. She is a keen speleologist, and prior to coming to Canberra, she carried out extensive research on cave material in Victoria.

.....

IAN BOGG.

The club welcomes the following prospectives as full members MEMBERS.

Alan Gill
Joe Dalzell
Ken Hynes
Gerry Macinante
Adrian Sivertsen.

B.M.S.C. FINANCIAL MEMBERS SEPTEMBER 1970 REVISED.

ARMITAGE Bob.	Farm Rd., SPRINGWOOD. 2777
BAKER Lionel	P.O. BOX 44. ENGADINE. 2233.
BENNETT Paul	42 Edgbaston Rd., BEVERLY HILLS 2209
BOGG. Ian	29 Scott St., SPRINGWOOD 2777
COOPER Gary	26 Rogers St., LAKEMBA. 2195
DALZELL Joe	Flat 2b/55 Darling Pt Rd., EDGECLIFF
DAVIES Jim	32 Lawson St., LAWSON. 2783
DEVINE Bill (snr)	17 Coughlan Rd., BLAXLAND 2774
DEVINE Bill (jnr)	17 Coughlan Rd., BLAXLAND 2774
FAIRWEATHER Alan	23 Byrne St., LAPSTONE. 2773
FITZGERALD John	8 Evans Rd., LAPSTONE. 2773.
GALLARD John	No 2 Prince St., GLENBROOK. 2773
GILL. Alan	No. 2- Lot 6 Carramar Ave., CARRAMAR 2163.
HYNES Ken.	25 Eldradge Rd., BANKSTOWN. 2200
KECK Ken	114 Burdett St., WAHROONGA 2076
MACINANTE. Gerry.	74 George St., PENHURST.
McWilliams Barry	P.O. Box 78 ENGADINE. 2233.
NELSON. Graham	Arecibo Ionospheric Obsrevatiry, P.O. Box 995 Arecibo PUERTO RICO U.S.A. 00612
O'CONNELL Phil	5 Bellereave Ave., BLAXLAND. 2774
PICKERING Ken	11 Brookslands Rd., GLENBROOK 2773
RICHARDS Barry	32 Panorama Cres., BLAXLAND. 2774
SIVERTSEN Adrian	5 Upper Cliff Rd., NORTHWOOD.
THOMAS Ron	22 Olivet St., GLENBROOK 2773
THOMAS Stan	24 Cook Ave., DACEVILLE 2032
TREHARNE Michale	21 Bobadah St., KINGSGROVE
WARD Colleen	P.O. BOx 86 ENGADINE. 2233.
WARD. David	P.O. Box 86 ENGADINE. 2233.

TUGLOW.

DATE 25-26th JULY. 1970.

TRIP LEADER S.THOMAS.

AIM. General caving and familiarisation for new members.

On the way to the cave from the lower car park, the trancevers were tryed out. Very clear from ridge to ridge with some minor interference caused by position of sets on way to cave. Sleeping equipment was carried and duly placed into the Window cave. Tl was entered at 11.00am. and travelled to the River Cavern. Then proceeded to upper level as planned. The party arrived at the upper level about 12. noon after a steady but safely pace. The rest of the party arrived about 20 minutes later only to report a fall of 15ft by one of their members. The member was experienced and it shows how easy it is to have a fall.

Some photoe's were taken on the way to the left hand extention. Water temperature was recorded at 6deg and air temperature at 57deg on the return trip. Several of the group encountered problems climbing the rope from the River Cavern up the chimney.

.....

S.THOMAS.

AVALON BEACH.

DATE. 25-7-1970.

TRIP LEADER. L.BAKER.

AIM. To locate St. Michals Sea Cave.

The party arrived at the cave after lunch. Some other people were extracting fossiles from the Sandstone Rock Face.

The cave is a impressive feature, which originated by weathering of a Large dyke, at the sea level. This was followed by a collapse of the materials and a gradual blockage of the cave mouth. The original dyke material of the roof has been replaced by dark-grey pebbly soil. In the furthermost exposure of the dyke, some weathered volcanic material has been found, some sort of light is needed to reach this point.

The cave being 45ft across and 60ft to 70ft high and gowing back some 350ft.

Later on we climbed down the cliff about 1 mile from St Michels Cave using a small rope, the cave basically is only a crevice at water level. We made our way on a ledge about 15ft from water level until we were stopped by a point where we would get wet so we returned to the cars.

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L.BAKER.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.
WYANBENE.

DATE. 15th-16th AUGUST 1970

TRIP LEADER. B.McWILLIAMS.

AIM To locate "Ceasers Hall", and view the roof of the "Gun Barrel".

Upon arriving at the Rock Pile leading to the "Gun Barrel", we moved to the left of the Rock Pile, the passage leads to some mud slopes, and onto a fairly large chamber, which has another Rock Pile.

The way to "Ceaser's Hall" goes from this chamber, SOME WHERE Several small passages were investigated to no avail. One such passage was found and followed for about 150ft. This seemed to be an old stream passage, and it meandered in several different directions, to lead to a chamber about 30ft by 20ft. and approx. 30ft high.

More than an hour passed before the passage to "Ceaser's Hall was found. The passage brought us out into a large talus slope about 150ft. long, and in the centre of it. The hall would be approx. 300ft long but from the base it only appeared to be 60ft in heiGht. We climbed down the talus slope, which was dry, and covered with small rocks. On reaching the base, we sat down to set up the spot light from three caving batteries to gaze at the enormous size of the hall. Pure white calcite crystals covered the roof and high up the wall. The floor is covered with a huge amount of rubble and large rocks.which had fallen from the roof. The air temperature was recorded at 60o, some of the members decided to find the stream passage again, which leads to the section that is known as the "Diarrhoea Pot".

The way to the "Pot" is down a 15ft. mud shute to an area of thick sticky mud about 25ft-30ft long. It was quite humorous to watch your fellow speleos trying to traverse the mud without falling in it. All members stepped into the mud, which makes some of the joys of caving.

After leaving the "Pot" there are a series of small climbs up over rubble, which fills the fissure, but still allowes the stream flow to go beneath. One such drop is the "Chamber Pot" of about 20ft high. The rope was belayed at the top, because of the mud slope, and a mud pool about 5ft in dia at its base. Each in turn, we passed the rope through the karabiner to steady our climb down the mude slope. At the base, a small traverse is required over the mud to the passage;all members managing to avoid falling or stepping in the mud.

After a short while, the stream passage becomes to small to follow, so we backtracked to chimney, up the crevice at a point called "Anderson's "Wall" which is a large area of rubble and rock, in the fissure about 25ft.-30ft. high. The fissure at this point, being four to five feet wide. Once on the passage we continued for about 20ft. to overlook the 50ft ladder pitch.

Due to the fact that we had no gear, we decided to return to the "Gun Barrel".Upon entering the "Gun Barrel", the spot light was again set up to the three caving batteries, and aimed towards the roof. At last we were the first to see what the roof of the "Gun Barrel" was like.On one side the walls were sheer to the top, on the other side, what appeared to be a large ledge was seen approx. 30ft from the top, the roof appears to be made up of possibly black shale,with boulders imbedded in it. After approx. 2 minutes looking, we could not distinguish the roof through the vapor from our breathing. Next time we will take a stronger spot light.

C.S.S. reports roof to be 340ft High.

Barry McWilliams.

ABERCROMBIE CAVES.

DATE. 29-30th AUGUST. 1970

TRIP LEADER. IAN BOGG.

AIM. Continuation of surface exploration of the limestone within and outside the Caves Reserve and the correlation and numbering of all caves known and located to and by B.M.S.C. respectively.

Group 1.
AIM Surface exploration north of Arch along Grove Creek. The party followed the western bank upstream for approx. ½ mile with no success. The party then headed downstream on the eastern bank locating a small limestone outcrop about 300 yards above the large sweeping left hand bend in Grove Creek, north of the Arch. Three very small caves were located and appear to have no further prospects. The only other cave located working downstream was on the western bank of of the sweeping bend in Grove missed earlier due to the party climbing up and over the spur. Again, no definate prospects to this cave.

When the party reached the Stable cave they made their way up the creek which runs through the old Horse Yards. About 100 yards up the creek, beside the old road, another cave was located and entered. The cave must be negotiated by crawling, with the initial passage entered it was found to be sloping down at approx 45° for 12-15ft. which then turns to the right and basically runs horizontal for a further 20 ft. From this cave the party headed up the creek, working bo th sides as they moved, untill no more exposed limestone outcrops were encountered. Three small caves were located one of which contains a chimney approx 12ft dia. and 15ft deep blocked with cave fill. This cave has good potential; requiring an ardent digging crew to push it to its limits. The party then headed back to the camp for lunch.

Group 2

AIM. Surface exploration south of the Arch along Grove Creek down to the Grove Creek Falls if possible.

The party headed downstream untill they reached the S.W. outcrop within the reserve where they spent many hours trogging only to re-discover the caves known to the club. With a thorough search concluded the party returned to camp for lunch.

After lunch the two parties combined to visit the Stable Cave to hopefully push beyond a sump in an extention which on a previous trip was water filled. This extention can only be entered by climbing down a 30ft ladder of which the initial 8 ft. is against a face with the balance a free climb. With the bulk of the party down the ladder the mud passage was followed to the sump where the smaller members of the party were able to get through to the small chamber beyond, only to find that there were no more passages leading of. The party then returned up the ladder and continued down through the cave to the lower entrence at creek level.

It is interesting to note that in the extention, solution pockets (scallops) averaging 1½ins. in length can be seen. To date, no others have been sighted in the rest of the cave. These solution pockets indicate that the passage was formed by a stream moving at a velocity of 1 foot/second (assumed to be a representative average) penetrating the cave late in its history. Ref. Speleology, the study of caves by Moore and Nicholas, page 11.

On returning back to camp the party stopped to investigate the northern face of the Grove Cave bluff. On previous visits to A.C. this was not explored owing to reports from other fellow speleo's that no caves exist in this face. This was found to be incorrect as many entrances were located. It was at one of these holes that Lionel met with misfortune by

FALLING 10ft. and spraining his ankle owing to an insecure belay. After getting Lionel out of his predicament the bulk of the party headed back to camp, leaving Ian, Ken and Brian to continue the exploration. A description of each cave is as followes.

No1.
Entered via a 10ft. chimney. The bottom is cave fill and has two solution tubes leading off, one of which is blocked, the other, following a gentle downward slope for approx. 50ft. which becomes to small to permit further progress. As this tube ends in soft earth it could be possible to dig ones way through.

Cave now numbered No. 28.

No2.
Entered via a chimney approx. 8ft. x 6ft deep. From the bottom a solution passage leads off which then branches into two. One is blocked and the other was followed for 30ft untill blocked by a loosely knit, fibrousmaterial which can be very easily removed.

Cave now numbered No. 29.

No3.
Small cave approx 15-20ft long and now numbered No. 30.

No4.
This cave has a horizontal entrance passage for some 6-9ft which then drops vertically for 11ft. This chimney is difficult to negotiate as it is approx. 18x 30ins. in cross section and does not allow much movement for climbing. From the base of the chimney a small hole leads off into a solution tube which slopes downward approx. 25- 30° for 10ft. and once again drops vertically for 18-20ft. which requires a ladder to negotiate the pitch. It was necessary to run the ladder belay back to the entrance as there are no natural belay points in the cave between the ladder pitch and the entrance. The pitch leads into a chamber with three passages leading off at floor level. One passage which is a solution tube(meandering) was followed for some 60-70ft. untill a sharp 90° dual squeeze was met. Another passage was followed which leads off in the opposite direction, and after 10ft. was found to branch into three other passages from a small chamber, two of which eventually return to and open out at the face of the bluff overlooking the lower entrance to the Abercrombie Archway. (quite spectacular at night). The other passage was followed and found to surface again, adjacent to the Grove Cave (this entrance was numbered No 23 on the previous trip). Retracing our path another passage was followed and after 12ft. opened into a small chamber. From here two leads were followed, one of which

enters the Grove Cave behind the gate and the other, a solution tube, was followed for 18-20ft. uhtill another squeeze was met. Again, this squeeze was not pushed, as smaller members are required to push past these two squeezes. The party left the cave some time later, the same way it had entered, via the ladder and chimney.

Cave now numbered Nos 31 and 32.(and 23 previously)

Sunday morning we headed off down to the falls to continue the exploration of the southern limestone outcrops above the Grove Creek Falls. No sucess.

After lunch, we numbered caves, located in this trip and others left outstanding from the previous trip.

The additional assigned numbers are:-
No8 Small cave above Hill cave. (Bushrangers) 15ft long.
No20 Small cave beside old road. 30-35 ft. long.
No 33 25ft deep pot- joins No. 34.
No34. Large doline- joins No. 33. (Trickett's opening to surface.)

NOTE.
Cave locations have been marked on the enlarged area map.

IAN BOGG.

JENOLAN CAVES RESERVE.

DATE. 12-13th SEPTEMBER 1970

TRIP LEADER. K. PICKERING.

AIM. Surface exploration and mapping of cave found on a previous trip by J.Gallard. (southern limestone.)

We walked down into Camp Creek, a drop of about 700ft. in a ¼ of a mile, and looked at a cave which is about 120ft. long, and has a fair sized stream flowing through it. A lot of decoration, but it is still all discoloured. All side passages etc., were pushed but no extentions not previously noted were found. The cave has a wide and obvious entrance and could be used as a camping cave. There were a few bats present, some hanging in clusters and some singly.

There is an interesting feature almost opposite this cave, an efflux issuing from the base of a cliff in the northern

bank of the creek, with a considerable amount of water. However a search around the base of the cliff failed to reveal anything else.

We proceeded to the cave found by John Gallard on the western bank of Camp Creek, about 150ft. up the bank. When everyone bottomed the ladder, and looked around we were disgusted to find no extentions, just a chamber about 12ft. in dia. At the bottom of the 30ft. entrance shaft we did notice an interesting inscription on the wall, "S.Sealy, E Cook, V. Wiburd, 11.1.98 which is probably genuine.

KEN. PICKERING.

MUDGEE.

DATE. 3-4-5-OCTOBER. 1970.

TRIP LEADER. DAVID WARD.

AIM. To prove that C.R.C. can work, as far as a mini, confrence is concerned, and group participation on field trogs by C.R.C. To trog various area's of the Mudgee district.

This is a B.M.S.C. report only.

B.M.S.C. split into various groups. My party went to Mr Lawson's Skinner's property at Cudgegong were we were told of an extremly large dolomite deposit. After a Land Rover trip to the area, we found that it was not apparently dolonite, but some type of Metomorphus rock. The only dolomite found was very isolated spots at creek level. No caves, or dolines.

Saturday night, we went to our mini confrence, which was a great success, and will be reported on by C.R.C.

Sunday. Hanging Rock
Mr Clarkson's property 13 miles south of Mudgee. Dolomite outcrop , reports on caves as followes.

Barry's report. Cave on right hand side of outcrop looking down from top of hill. Basically a shaft, about 40ft with a number of small passages not extending for far. The cave was mainly solution activity with mostly inactive formation. Several small animal bones were located in some of the passages. Some initials which seemed authentic were noticed in a passage. Some of the passages were filled with rock.

Total passages possibly would be about 20-30. Also in this cave, the walkie talkies were tried out to the surface and preformed very well. After this, general exploration of this area was carried out at this time, also a party led by Keith Oliver arrived to see the cave and help tag this area. I think four more caves were entered but none of any great potential.

Lionel's Report.
The second main cave being a drop of 4ft down to a earth floor which then went down a 15ft traverse to a long narrow squeeze. Members felt it necessary for a ladder. After the ladder was securly belayed, members climbed down a 25 to 30 ft. pitch over flowstone, into a chamber about 20ft long and 8ft wide. At the bottom of the pitch, there was a stal-igmite approx. 2" across and about 18" high with a large number of Oolites in a series of pockets on the top of the formation. Other formation noted were stalictites, stal-igmites, moon milk, all very attractive.

Our party left this area feeling that with 20 people and two more days we could possibly cover all of this area, con-isisting of approx. ½ mile by 250 yds. We covered an area approx. 200yards square.

An area containing four pot holes at Queen's Pinch was also investigated.

DAVID WARD.

JAUNTER. (TRICKETTS ARCH.)

DATE. 24-25th OCTOBER. 1970.

TRIP LEADER. DAVID WARD.

AIM. To find Tricketts Arch, and two other known caves in immediate area.

Throughout the day, parties combined then split up again to cover different area's.

The cave on the efflux side of the Arch, in the bank which is approx 130 ft. long has a tight squeeze approx. 40ft from the entrance. It contains all types of formation, and is still active, and is very impressive.

This was the only major cave entered, excepting the "Arch", I felt the "Arch" was a bit of a let down as it is not an "Arch" at all, in that you carn't go from one side to the

other. Total length is around 200ft with approx. 30ft of near centre unnegotable, formation is old, and not a great deal of it. The "Arch" from outside looks quite impressive with an entrance of about 5ft. by 4ft.

One other cave of note was entered at top of hill, which after 20ft ends at a dig.

All holes that were found, and you did not have to look for them were marked or mapped on a area map, also to the extremities of the outcrop eg. 300yds. wide, by nearly ½ mile long. This area will need many more trips before we can say the surface holes and what they contain can be well known.

On the way home, we went to Horse Gully Creek at Tuglow, and found that the sink holes barring three, had been filled in by a Bulldozer, on a land clearing project. Approx. 20 acres have been cleared and leveled.

DAVID WARD.

COLONG.

DATE. 6-7th NOVEMBER. 1970.

TRIP LEADER. R. THOMAS.

AIM. To introduce members of the Baptist Boy's Brigade to the sport of caving.

Just before entering "Woof's Cavern", a white spider was collected from the side of a stalagmite. It will now be submitted to the Museum for identification. In "Woof's Cavern", the visitors book was signed and we had a good look at the decorations. The flowstone and rimstone pools in the actual stream section are very beautiful, unfortunatly the only camera with the party had been forgotton on the way in. Some large caverns extending down the stream, were entered by some members, but not pushed to far. We all returned to "Woof's Cavern" had a bit to eat and started out in order to get the boys back home reasonably early that night.

FOOTNOTE. The following details on Colong have been taken from Australian Museum Magazines VOL.111 No 6. "The Colong Caves" by C.J. BARRIES.

The limestone is about 500ft wide and heavily folded, dipping 80° east and stri king about 150° east of north. The first white man to see the limestone must have been Ensign Barrallier in 1802 when attempting to find a route over the Blue Mountains. Mr Lannigan who was a cattleman in the area was probably the discoverer of the caves. Trickett examined Lannigan's Cave in 1899 and suggested the creation of the Caves Reserve. He suggested the name "Colong Caves" after Mt Colong. The name is derived from the Nature World "Colong", signifing the home of the "Bandecoot". The caves were also known as the Bindook Caves.

RON THOMAS.

MAMMOTH CAVE. JENOLAN.

DATE. 14-15th NOVEMBER. 1970.

TRIP LEADER. B. McWILLIAMS.

AIM. To search sections of Mammoth Cave for distrabution of cave Fauna.

The party proceeded to the Skull and Crossbones" on the side of Railway Tunnel. On the way through the old water and sand passage, we found some cave weetas, they were not collected as there were only a few. At the "Skull and Crossbones" we dropped the ladder down, and proceeded into the lower passages. The start of these passages were dry at this time, a little further on we decided to stop for lunch. At this point some more fauna were found, but could not identify them. Also the air temperature was recorded at 56°. Just note that the air temperature of the "Railway Tunnel" was also recorded at 54°.

After lunch, we followed this passage some distance through a stream passage at stages coming in contact with the Central River. This however was approx. only 200ft. long and flowing at a steady trickle.

A little further along this passage coming from a small hole, quite a noticable air flow was encountered in places this passage became moist with some patches of mud. Some small deposits of a moss like structure were noted and soon we came to a junction of two passages. We decided to follow the right hand one, only to end up in some pools of water, The passage was pushed as far as possible only to find that it narrowed down to a size which could not be negotiated.

This passage at the far end was in a seni shale and limestone deposit. We then back tracked to the junction were some members decided to wait while others continued on.

This again was a stream passage at a reasonable size which soon became constricted to a low crawl then to a level squeeze, which wasn't to difficult as it had a sandy and small pebble floor. T houghout the passage very good speleotherms were noted, particulary straws some 18" in length The end of the passage seen us climb up a mud slope. Some members thought that this was as far as we were going but one member would not conceed defeat and soon lead us back to another lower and more muddyy passage only to find that this ended in a mud slope and rock pile. We decided to return to the other fellows and leave the cave.

BARRY MC WILLIAMS.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.
WEE JASPER MOCK RESCUE.

DATE. 28-29, NOVEMBER. 1970.

TRIP LEADER. S.THOMAS.

AIM. Mock rescue of patient from known section of Punch-Bowl.

CLUBS PRESENT. H.C.G. M.S.S. S.T.C.C.C. CANBERRA H.C.G. B.M.S.C.
Week-end organised by C.R.C.

The patients entered the cave at 4-15am and proceeded to the crystal pools where they prepared themselves for at least a two hour wait.

The first rescue party consisting of Dave Ward, Leader, B.M.S.C. B. Patrick H.C.G. S. Mahonay S.T.C.C.C. S. George S.T.C.C.C. Entered cave at 5.45am and proceeded to where the patient was reported to be situated. Material with party consisted of Stretcher, (Railway type) First Aid Kit, Splints ropes and slings.

When they reached the patients they found Graham had no light and Keith Oliver suffered a possible fracture to the right knee cap, possible broken hip, also slight concussion, They quickly applied first aid, splints, etc, and began the task of moving him through the squeeze then up through a 15ft, chimney.

Upon reaching the top of the chimney Graham was taken back to the entrance by another member after being given a torch At this time the second party arrived consisting of B. Rich ards. B.M.S.C. P. Richards M.S.S. Leader, J. Dalzell B.M.S.C T.Hele H.C.G. Equipment carried field phones, (set up at Snicket) ladders, sling, and 1 20ft of rope. The phones were extremly useful tothe rescue although there was a break down in direst comunication from patient to surface controller, B. Mc Williams B.M.S.C. . This was because of a shortage of cable for field phones.

The party tied Keith on to the stretcher, the original idea of the second party releaving the first party was found to present the problem that a four man team was not enough, and that at least six would be needed for efficient safe working

From this area they went through the laundry shutes, and then into the Loxon Chamber, where the third party met them.

Third party consisted of Stan Thomas leader, A. Gill B.M.S.C J. Eager S.T.C.C.C. and A. Silertsen BM.S.C. equipment carried, food supply for the patient, while Keith was enjoying

a tin of Baby food and an orange, the first party made their way back to the entrance taking some gear with them, at this point it should be noted that the first aid kit should not have left the current rescue team as later it was needed, for one of the rescuers, who suffered a cut to the hand.

After Keith had eaten, we proceeded into the Strawberry Shortcut, were we found it impossible to manouver him while tied to the stretcher. He was removed from stretcher and was man handled for about 40ft, down about 15ft. then along the horizontal slit for about 20ft. then down six feet, to a dusty floor . At this stage we met the fourth party, consisting of N. Patrick. leader, B. Miller, H.C.G. P. Lee R. Albon S.T.C.C.C. equipment carried? two blankets, this was another very important point, that the patient should have had blankets from the first party, as after the duration of time, stapped to the stretcher, the patient was suffering from cold even though he had more clothing than normaly worn on a trip.

The second party then left the cave. Keith was once more placed on the stretcher, and we proceeded without any great difficulty back to the Snicket, during this time the fifth party arrived, (photographic) Evalt Crabb, H.C.G. and L. Albon S.T.C.C.C.

Once again Keith had to be removed from the stretcher and man handled through the narrow squeeze which is the Snicket once through, he was again placed on the stretcher and carried back to the entrance chamber thus completing the rescue.

Collen Ward B.M.S.C. remained at camp, to keep the fire going, and have food and drink ready for rescue party intervidual returns. Lionel Baker B.M.S.C. was recorder of equipment and personal entering and leaving the cave.

GENERAL COMMENTS.

The rescue party should contain six members. A survival party consisting of two should proceed with first aid kit, blankets, and possibly a hot drink, while the other four members of the first party bring stretcher, splints, ropes, ladders, etc, also goggles are essentual to protect patients eyes and helmet should have chin strap. The gear should not proceed ahead of patient coming out of cave.

STAN THOMAS.

WEE JASPER.

DATE. 12-13th December 1970.

TRIP LEADER. ALLEN GILL.

AIM. General Exploration.

In the Dip cave, we proceeded to the 25ft. ladder drop, the order came to me, being trip leader to tackle the tricky free climb in order to get to the top of the ladder pitch, and so belay the ladder on.

After entering series 3. from the Rat Hole, the party split up, one party went down a hole in the floor, and my party went into series 4. then to 5. After locating fresh sites, of bone breccia and again observing the unknown Jaw Bone, we proceeded back to series 4. and then into the Dismal Chamber. The smell upon entering was quite distastful, and approx. 2000 bats peeled of a section of the roof, approx 20ft., square and up to six inches deep, it was quite noisey and at some stages we had to cover our faces to avoid being hit, radar or no radar, we were collected a few times. We made our way back to series 3. and met up with the other party. Stan reported that he had found a bat tag near remains of a bat skelton, this will be forwarded on to athorities concerned.

Foom here we went back to camp. On Saturday night, we got six starters for the Punchbowl. After being belayed in, the party retraced the steps which the rescue parties had taken on their mock rescue two weeks before. This was done to enable all members to actually encounter problems that croped up during the rescue, and familiarise themselves with the methods used to overcome said problems.

From here, we made our exit from the cave.

ALLEN GILL.

BLUE MOUNTAINS SPELEOLOGICAL CLUB.

VOTING IS PEOPLE POWER

As every member knows, the Annual General Elections will be held on the 29th January. The most important man in our club, the President, will be elected. We have the power to choose him, along with the other members of the committee who will represent us.

On Election Day -29th January, 1971- you may vote for any candidate you wish. No one else can cast your vote, or tell you how to vote. Yours is the privelege to decide and then, at Election time, to make yourself heard, for only you can make democracy work.

When a member exercises his constitutional right to vote, he makes a judgment and registers his choice, often after anguished consideration. His vote is his personal act of power. By voting he takes part in the running of his club. This way as one of the Club Members he can say "we" instead of snarling "they". Casting a vote doesn't mean that the voter will get all that he wants all of the time; because interests compete, even conflict, then compromises must be made. However, everyome in a democracy has the right to expect that his interests and his opinions will be taken into account by committee members before Club decisions are made. Unless you express your opinion, by your vote, you cannot expect those who direct our club to know how you feel.

YOUR. THE primary instrument of political power in a self-governing club.

A symbol on equality.

YOUR. weapon for self protection.

VOTE. YOUR tool to get things done.

YOUR assurance that your voice will be IS heard-even after Election Day.

ARE YOU one of the "Puppets"?

VOTE and the choice is YOURS.

DON'T vote, and the choice is THEIRS.

VOTE. VOTE.

IAN. S. BOGG.