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SPELEOLOGICAL
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NEWCASTLE SPELEOLOGICAL ASSOCIATION.

Election of Officers.

At our annual meeting on 13th May, The following officers were elected for the ensuing year.

- President: Derek Burridge.
- Secretary: Keith Davey.
- Treasurer: John Kennedy.
- Vice President and Magazine Editor: Judy Burridge.

We would like to extend our appreciation to the previous office-bearers for the excellent job they carried out during the previous year.

As well as the activities covered by trip reports in this issue, the following trips have also been held this year.

During the weekend of 15-16 February, a party from N.S.A. went to Jenolan Caves with the purpose of exploring the Mammoth Cave. This did not eventuate as we found the lower entrance sealed and we had not taken adequate gear for descending the open entrance. We found an alternate cave and spent approximately 3 hours underground.

A full trip report will probably be included in the next magazine.

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During the Anzac weekend, a camping trip to the Warrumbungle Mountains was held. Saturday was allotted to walking to see the views. After a long trip up to the Grand High Tops, we were rewarded with a magnificent view of the area, which was formerly actively volcanic.

Many of us suffered severe aches and pains, as we had exercised many muscles not normally used. We all enjoyed breathing the clean, fresh air, and returned home, having benefitted from a quiet relaxing weekend.

A trip report of this weekend will also be included in the next issue.

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GRESFORD - SURFACE TROG.

Sunday, 25th May.

The Club had been invited to Warwick Faul's property at Gresford to surface trog an area which may contain caves. 23 people arrived during the day, and although nothing definite was found, everyone had a good walk. We were invited to return during the winter months, when possible entrances may be more easily located in the early morning.

The Club extends its thanks to Warwick and his parents for an enjoyable day and the further invitation.

THE PINNACLES - Abseiling 30-3-'69.

Present:

Trevor Berman (Trip leader)	Mavis Savage
Carole Berman	Paul Fowler
Ted Hayes	Keith Davey
Kerrie Hayes	Pat Longworth
Kevin Wood	Tony King
Mal Leyland	Dianne Wood
Derek Burridge	Bill Watson.
Judy Burridge	

With the caving trip proposed for the following (Easter) weekend, it was decided to hold an abseiling day to make plans and rediscover lost muscles and nerve.

At 9.15 a.m. on Sunday morning, five vehicles left Toronto Post Office and headed for the Wattagan Mountains via Martinsville. After an hour's drive all cars were parked at the bottom of the drop and keen bods and energetic sightseers set out for the walk to the top. We were surprised with fine weather and good visibility as the previous days had been wet and miserable.

After spending some considerable time wandering around in ever-diminishing circles, muttering things about being lost, we eventually reached the top. The drop, though not high -around ninety feet- takes off over a natural weathered arch giving the effect of an overhang and providing ideal practice. With the rope secured around a tree stump, Trev. jumped first to the loud clicking of many cameras. (The quantity of cameras would rival those at a Prime Minister's press conference; so may we look forward to a few good photos of the day).

The rest of the participating group, well padded and wearing leather gloves followed suit without incident until Paul made his descent. By some oversight at the top Paul was allowed to go over improperly prepared with the rope over the wrong shoulder. He struggled most of the way, out of sight of those at the top. As he neared the bottom, the rope was heard to "Zing" and an exclamation like '*x!.&.!x*' followed.

When I reached him, he was sitting among the rocks dazed and shaken. Although not badly hurt, Paul had discovered 'instant headache' and sported a cut on his head. After a sleep he attempted the drop again in the afternoon and was pleasantly surprised at the new sensation of landing on his feet. Paul learned to abseil correctly the hard way, and care must be taken to see that no-one else learns by these means.

We adjourned for lunch and a general lay-about in the sun before rechecking our methods on a practice-run down a gentle slope in the afternoon. With restored confidences we each did a few more drops over the main cliff to finish the day.

Apart from Paul's unpleasant incident, rope-burn and sore legs all round, we had an enjoyable day and a good attendance.

P.S. A movie coverage by Keith with a new Super - Duper camera ground to a stop when the batteries flattened after a few seconds of shooting.

- Bill Watson.

THE PINNACLES - Abseiling 11-5-'69.

A further abseiling day was held at the Pinnacles with 23 present. Several slings were made before practice runs over a small rock were attempted. After lunch, those interested made several jumps over the large rock face, this time without incident. Keith and Pat were very busy with the cameras and we hope they have some spectacular shots of Ted and Trevor, who ably demonstrated the skills of abseiling. Ted Hayes amused the group with his rock climbing - on a motor bike.

One often hears in our caves of the lack of distinctive and interesting fauna of caves in other countries. This may be so, but speleology is a young science and so far in Australia there has not been much systematic collecting.

Cave dwelling forms are of real interest for they are likely to be modified by the sheltered and isolated environment in which they live. Collection in caves should always be minimal for if large numbers are removed a whole area may be depleted and the species eradicated. The specimens which are collected should be sent to the museum for classification. Private collections are frowned upon. The South Australian Museum at Adelaide is now assembling a most comprehensive collection of cave material and all museums are sending their material for inclusion.

There are a number of terms which must be learnt to understand the language of the zoologist.

1- Accidental visitors; those which come accidentally into the cave. Carried in by water, fall in, or wander in and cannot reproduce to continue the species inside the cave.

2- Twilight zone dwellers; Those which shelter in the cool entrance of the cave but do not enter the dark zone.

3- Trogloxenes; Those which spend part of their life cycle in the cave. These include flies, moths, and bats.

4- Parasites; usually carried in by bats. Parasites may also be found on other cave animals.

5- Troglophiles;

species living permanently in the dark zone reproducing their own species. These may be broken down into two divisions;

First-order Troglophiles; Those which have also been recorded on the surface, as well as the cave.

Second-order Troglophiles; Those which have never been recorded on the surface but are morphologically similar to surface dwelling forms.

6- Troglobites; Those species which spend their total life cycle in the cave, and are so adapted to this environment that they are unlikely to be found elsewhere.

7- Micro-organisms; recent studies from other countries have shown the significance of micro-organisms in the soil of the cave but no studies have been made in Australia of this type.

Once an animal has become adapted to the dark zone - it tends to become sightless and colourless. They also acquire very long appendages such as feelers, legs and hairs to feel their way about. These mutations occur by interbreeding of small isolated populations and sudden changes of the environment from the outside world.

Epigeal; The surface.

Endogean; The soil immediately below the surface which is penetrated by the roots of plants and trees. Water here is surface water.

Hypogean; The region under the two other domains. Hypogean flora and fauna are included here which includes cave dwelling animals. Water here which fills pores in rocks is ground water.

Threshold; an area between the surface opening and the farthest limit of light penetration. Animals collected here should not be mixed with fauna collected in the dark zone.

SIGNIFICANCE OF CAVE FAUNA AND FLORA:

I will now give an outline of the special factors which distinguish a cave environment as a habitat for life;

1- Absolute Darkness; It is impossible for animals dependant on light to exist here. Green plants cannot grow without sunlight so here, the main source of food for animals has been eliminated.

2- Uniform Temperature and Humidity; The cave environment excludes all other species with other temperature ranges, but provides shelter from the extremes of the surface.

3- Extreme limitation of Food Supply; as mentioned above, green plants are absent from caves. Therefore food is only available in small amounts except in bat caves where insect populations live on guano. Without bats in a cave the size of the population is severely limited. Many species may be found by looking at food spots;

- a) feeders on fungi and microscopic organisms.
- b) feeders on debris. Vegetation, guano, dead bodies etc.
- c) predators.
- d) parasites.
- e) outside feeders eg, bats.

4- A neutral or slightly Alkaline environment;

5- Isolation of the cave; where no contact can be made with other caves so species inside the one cave interbreed and may produce new species by mutation. Sometimes caves provide shelter for primitive species eg. the Tasmanian Cave Spider and the primitive shrimp ANASPIDES also from Tasmania.

WHERE TO LOOK: Cave insects tend to be tiny and insignificant so careful searching is the only way to get results. Sources of food are good places to discover insects. Some species of spiders, wetas, Harvestmen and moths are found on the walls of the cave while beetles and centipedes may be found under rocks on the floor. The collector must be prepared to remain still for quite long periods of time for many species react against strong light and hide. Pools are worth special examination and many interesting species are to be found here.

EQUIPMENT: The minimum amount to be taken on a collecting trip is a small jar which contains 70% alcohol with 1% glycerine in which small forms can be collected.

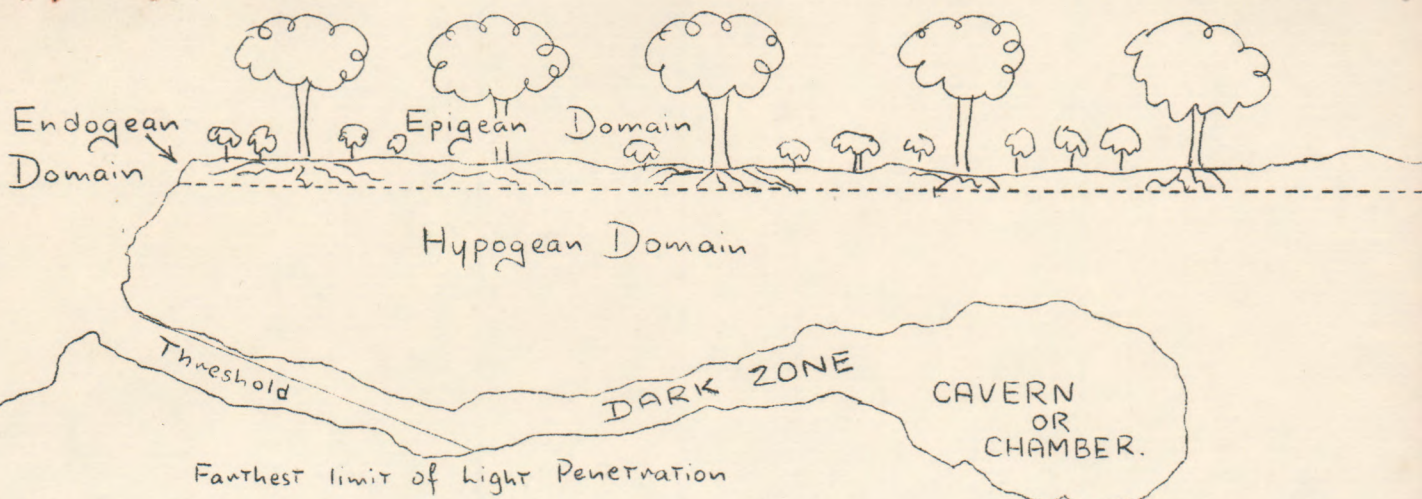
A normal kit should contain;

- Collecting tubes - usually glass which is fragile. three wet and three dry.
- Killing Bottle - Containing Pot. ferricyanide which is a highly dangerous Poison. Pellets covered with Plaster of Paris.
- Fine Pointed Forceps.
- Paint Brush- for picking up specimens. Moist the brush with fluid.
- Knife - for searching debris.
- Pencils and labels -
- Aspirator Bottle - for sucking up small insects.

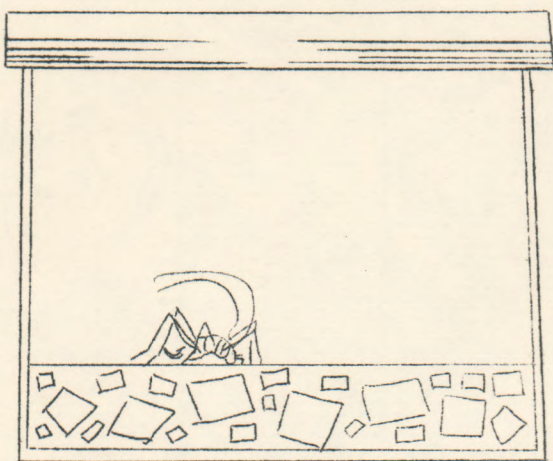
Winged forms should be kept dry, for moisture will damage wings. The Killing Bottle should be used with great caution for misuse can be fatal. For beginners Ethyl Acetate spilled onto a piece of blotting paper is very effective inside a jar. Don't use cotton wool as the insects tend to get tangled up in it.

ANIMALS TO BE FOUND IN CAVES;

Bats
Spiders, Mites and other Arachnids such as Pseudo-scorpions @ Opilione
Two-winged Flies
Wingless Flies (Parasites of bats).
Myriapoda, Centipedes and Millipedes
Beetles
Butterflies and Moths (Tineid Moth).
Springtails and Glow-worms (Mycetophyllid midge)
Crustacea (Slaters).
Earthworms
Slugs
Snails
Flatworms
Frogs and Tadpoles
Other small insects.etc.

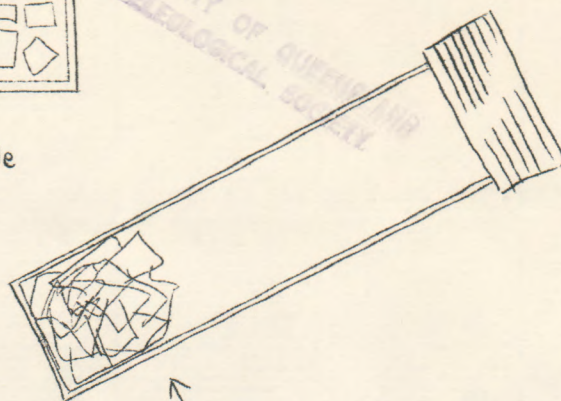


Screw-top Wide-necked bottle



KILLING BOTTLES.

Chunks of Pot. ferricyanide
in plaster of paris



Small screw-top bottle
with Ethyl Acetate soaked
blotting paper in bottom.

Note: Collecting Bottles should be
screw-capped so as to not spill
contents. Do not overfill with fluid
as expansion can split bottles.
Fill when on surface again.

ASPIRATOR BOTTLE.

made out of glass tubing with two corks.
The end sucked to be covered with fine mosquito-netting, so as
not to suck up insects into mouth from bottle. Upon capture
tip into killing bottle.

WYANBENE CAVES.

Present:

Ted Hayes (Trip leader)
Kerrie Hayes
Dennis Broadbent
Derek Burridge
Judy Burridge

Easter weekend 12-15/4/'69.

Allison Fisher
Paul Fowler
Peter Woods
Bill Watson.

QUESTION.

Should the members of a caving club always work intensively and untiringly for the advancement of speleology?

ANSWER.

The N.S.A. Easter Trip to Wyanbene Caves.

With various commitments or unhappy financial positions befalling many members of the club, only relatively few were available for the Easter Holiday Trip to Wyanbene Caves. Two cars and a Landrover were to provide transport and an early departure from Newcastle on Thursday night was planned. However, with Ted Hayes (a motor mechanic) up to his ears in work ensuring that no motorist would miss the holiday rat-race, our E.T.D. of 7 p.m. seemed a little ambitious when we finally left Newcastle at mid-night.

After enduring the Pacific and Hume Highway traffic for several hours, no-one needed any lullabies when we bunked down at the side of the road at Mittagong. Time - 4 a.m. Friday morning.

In spite of rising early at 9 a.m., a roadside breakfast and heavy traffic made travelling slow until we reached Goulburn. Now on open roads, good travelling at fast speeds took us through Braidwood and almost to Bendithera Caves. Unfortunately, we missed the correct turn-off. After asking directions at several farmhouses and back-tracking a few miles, we finally reached Wyanbene Cave at 4.p.m. on Good Friday.

Ted had visited the area seven years previously and thought we might have had to cross the swamp by Landrover. The local Council, or someone, had built a road through the swamp giving our cars and every other tourist and his dog easy access - almost to the cave entrance.

As might be expected, ours was not the only caving club to be visiting the cave. On our arrival, we met members of M.S.S. and S.U.S.S. who were surveying the surface over a wide area to pick up cave entrances. After introductions and a bit of a yarn, setting up the camp and preparing tea completed the day.

Some members of the other clubs volunteered to accompany us into the cave on Saturday so that we might see the best sections. Some parts of the system had been well toured.

At 10.30 a.m. on Saturday, all the N.S.A. members except Jude entered the cave. During a quick trip around the tourist section, we came across a great string of young boys scampering after a Pied Piper with a tilly lamp. Deeper in the cave we inspected the "Roman Bath". The crystal beauty of this pool would charm any Roman, even during the short time he'd take to freeze. The rope ladder climb into this section slowed down our travelling but it was well worth the time spent.

Probing deeper into the cave, the group split up, N.S.A. members continuing and the Sydney cavers returning to the surface. Peter and I chimneyed into the roof above the stream passage while the other members continued downstream as far as possible. The roof consisted of large fallen rocks locking themselves together but with adequate spaces through which to climb. Old river passages were encountered as we climbed upwards, and time rather than conditions prevented us from climbing to the limit - where ever it might have been. We descended and started heading back with the rest of our group. Four and a half hours after entering, we left the cave at 3 p.m.

Saturday night saw us around our camp-fire till conversation ran out, whence a few of us still awake and talkative visited our neighbours' fire. Here, U.F.O. discussions lasted until the firewood ran out and the cold night air forced us to bed.

A warm Sunday morning inspired no-one to go caving, so we sat around reading maps and listening to a radio. Our interest had been aroused by

talk of the nearby "Big Hole" which the other clubs present had visited previously. Dreading the Monday return traffic, we decided to leave on Sunday, thus giving us a head start and time to visit the "Big Hole".

The short diversion over a rough road rewarded us with a fascinating spectacle. The sheer sandstone sides of the Hole gave no clue to its mode of formation. Tree ferns 259 feet below us looked like a carpet of grasses covering the bottom. After spending some time taking photographs and just looking, we continued the journey home. In spite of intending to spend the night at some traditional riverside campsite (just north of Goulburn), somehow we finished up sleeping on the roadside gravel at Ingleburn.

Though leaving Wyanbene on Sunday might have resulted in lost caving time, dodging traffic and arriving home early Monday afternoon compensated for this. Certainly we set no caving records or did anything particularly outstanding; however, everyone really enjoyed the excursion. Maybe "enjoyed" is a keyword here and though speleology did not leap forward, the trip was voted a success.

Some Hard Facts.

- i) The distance from Newcastle to the caves is 310 miles.
- ii) Wyanbene Caves are located in a broken limestone belt stretching about 7 miles. The Cheitmore caves also lie in this belt while Bendithera Caves probably lie in an extension of the belt.
- iii) The "Big Hole" according to Trickett is $2\frac{1}{2}$ chains long by 2 chains wide and 250 feet deep. It occurs in horizontally bedded sandstone with friable and dangerous sides.
- iv) Time spent underground by each person was only $4\frac{1}{2}$ hours.

- Bill Watson.