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No 4

## EDITORIAL:

The following extract has been taken from the publication "QUARRY VALUABLE SCENARIO" issued by the NATIONAL PARKS ASSOCIATION OF N.S.W.

"In the Southern Blue Mountains, beyond Jenolan Caves, are Kanangra Walls, the Kowmung River, Mount Colong, in a fine scenic area; long used for wilderness recreation, destined to be a NATIONAL PARK.

Within this area are some large deposits of Limestone, the major raw material for cement, and it intended to quarry one of these, although there are other large deposits in the state.

Development of the state has left very few scenic wilderness areas such as this, particularly close to main population centres, whereas growth of population will greatly increase the need for them.

The wilderness (primitive) areas we have now are all we will ever have. It is our duty to conserve them."

OUR CLUB HAS ALWAYS HAD A KEEN INTEREST IN THE COLONG AREA FOLLOWING THE TWO WEEK EXPEDITION IN JANUARY 1966. NEWS SUCH AS THIS HITS HARD, AND SHOWS HOW STATE GOVERNMENTS DESPITE MANY OBJECTIONS, WILL STILL PERMIT THE PLUNDERING OF OUR STATES NATURAL RESOURCES WITHOUT FULLY WEIGHING ALL FACTORS.

I DON'T THINK THAT I CAN PUT WORDS TO PAPER TO EXPRESS OUR CLUB'S DISGUST AT THE PROPOSAL TO QUARRY LIMESTONE IN A FUTURE NATIONAL PARK.

## TRIP REPORT:

After many inquiries and suggestion, I have decided to write up the trip report on the fortnight expedition to the Colong caves.

TRIP TO THE COLONG CAVES from I+I-66 to I5-I-66.

By members of the NEWCASTLE SPELEOLOGICAL ASSOCIATION.

## MEMBERS:

SMYTHE John  
DAVEY Keith  
SAVAGE Ted  
WOOD Kevin.  
LEYLAND Pat  
SAVAGE Colleen  
SAVAGE Mavis  
JACKSON Ray  
BERMAN Trevor  
LEYLAND Mike  
LEYLAND Mal  
DAVEY David.  
KEMP Peter  
HAYES Ted.

President and Trip Leader.  
Vice President  
Secretary.  
Treasurer.  
Committee.  
Committee.

## PROSPECTIVES:

RUDY Emil  
BRAUN Pete  
MLODOWSKI Rick

SAXBY Ken  
DAWSON Mick

VISITORS:

HAYES Kerry  
BROADBENT Dennis.

AIM:

- 1- To explore the system as thoroughly as a fortnight would allow.
- 2- To try and discover the myth of the fact of Woof's Cave.
- 3- To crack any River Syphons or any promising looking passage.
- 4- To map the system as far as possible, aiming at the clefts.
- 5- To produce a half-hour documentary film of the trip.
- 6- To make scientific tests to ascertain the growth rate of the cave formations; the calcium bicarbonate content in the water.
- 7- To test the humidity throughout the cave.
- 8- To test the CO<sub>2</sub> % throughout the cave.
- 9- To make a collection of the animal life to be found in the cave.

HISTORY:

- 1802- Barrallier mentioned the Limestone Bluffs and the outcrop in his report.
- 1893- Scrivner mapped Lannigan's Creek and mentioned the Bluff.
- 1899- Trickett examined Lannigan's Cave and gave the name Colong Caves. These caves were subsequently reserved as a result of Trickett's report.
- 1913- Fattorini and Hardy-Smith squeezes in the Onslow cave were penetrated.
- 1935- Onslow and Lannigan's Cave from King's Cross mapped to Entrances by Glandfield.
- 1945- Rest of the Northern Section mapped in October and November by I. Waske, P. Welch and R. Welch with R. Giovanelli.
- 1948- Bill Woof from S.U.S.S. entered the southern section via a siphon squeeze.
- 1956- A party from S.U.S.S. entered the southern section via the clefts.

information on History  
from S.U.S.S.

REPORT:

To gain access to the caves, a permit had to be sought from the Sydney Water Board, as the caves are in the restricted Waragamba Catchment Area.

On arrival at Batsh Camp from Oberon, our party went back up the road only a few hundred yards from the locked gate. Here a track, leading over a bumpy piece of ground, branched to the right. This led straight across the creek, and was only navigable by four-wheel drive vehicles.

From here the track, a very feint trail, led up the valley for a small distance, then turned to the right, up a short slope. When the top of the slope was reached, we bush-bashed our way to our left to go round the far side of Mount Moorain. By looking carefully, we found a blazed trail which led us over the hill and along a ridge to come back down to the Silver Walking Trail. From here the two tracks followed each other closely, except in places where the road had to deviate to by-pass obstacles which walkers could climb across. This continued for about half a mile when the road suddenly turned down a slope to the left to miss an outcrop of shale. Only just a little further on, the road steeply turned back to the right to climb up onto a spur to stop at the top of the slope of Moogan Spur which dips down steeply to Lannigan's Creek.

The track at first was of moderate slope, but as it advanced down the hill it became steeper and steeper, till it became quite precipitous. Trees afforded good hand-holds but still the flaky shale path gave way under every foot-hold. Nearing the bottom, the track was well over 45 deg. steep and one had to be extremely careful in making his way as a fall could have been serious.

After a third of a mile, the bottom was reached, and from here the track followed the smaller Caves Creek joining Lannigan's, for about a quarter of a mile upstream to the camp-site, on a flat, about ten feet above the river-bed under a grove of trees, sheltered by Arch Cave. Here the tents were set up and the beds were laid down. Unfortunately, stinging nettles were abundant and quite a lot had to be cleared. Stones, also in countless numbers were also cleared to make the ground comfortable to sleep on. A shower was set up two hundred yards downstream at an efflux where all the water for the camp had to be fetched. Wood, though not particularly abundant, was found reasonably close to camp, and enough was available to last the whole fortnight.

For the sake of hygiene, a latrine was constructed two hundred yards upstream, but as far away from the watercourse as possible. A permanent fireplace was also built, equipped with boilers and other useful cooking appliances, left for the use of future cavers.

#### LOCATION:

The Colong Caves are in the Parish of Colong, County of Westmoreland and the Shire of Wollondilly. They are situated in an extensive limestone outcrop, more or less continuous, for over five miles, with an average width from  $\frac{1}{4}$  to  $\frac{1}{2}$  mile.

The outcrop, in which the cave exist, is found between the junction of Lannigan's Creek and Caves Creek. Here the outcrop is at an angle (see map) to Lannigan's and is bisected where Lannigan's Creek passes through it to form a large, roughly triangular block of limestone.

The limits of this limestone is, five hundred feet high by one third of a mile wide and a little over one third of a mile long. The limestone is heavily folded, dipping about eighty degrees east and striking at fifteen degrees east of north. The age of the Limestone is Silurian and contains numerous fossils and on either side shale is to be found in thinly laminated deposits. The massiveness of the huge deposit can best be seen from the track leading down from the spur to where Caves Ck. joins Lannigan's Ck.

#### DESCRIPTION OF THE CAVES:

ARCH CAVE + There are three main caves, but only two can be used to gain access to the lower parts of the cave. These two are Lannigan's Cave and Onslow Cave. The other is the Arch Cave. It is about one hundred feet wide and about two hundred feet long. This was once a monstrous cavern occupying the valley in which Caves Creek now flows, as on the far wall small crevasses can be seen with quite noticeable formations, long dead and decayed, still standing in them. Also in the Arch cave can be seen huge rock falls and earth slips, which show that the cave is now disintegrating. The floor has also side slipped and in the future hundreds of thousands of tons of rock will avalanche into the valley of Caves Creek. On the higher parts of the Arch Cave small and medium sized passageways tunnel into the limestone and on future trips exploration may prove promising.

LANNIGAN'S CAVE + Above the Arch Cave and to the left is the five foot wide by three foot nine inch high entrance to Lannigan's Cave. This is reached by a number of well worn tracks

leading from the left of the camp up the steep hillside to the opening.

From the Entrance the tunnel opens out into a small chamber which goes in for about thirty feet where it narrows down to a small passage which comes into a huge chamber. At night this chamber is full of wheeling bats heading out into the dark night air on insect foraging expeditions. From this chamber, the passage, nearly circular in shape, leads down till a number of turns, one to the right then back to the left, are made. The passage widens out but remains at a constant height as it turns sharply to the left, to slope rapidly down to a dangerous section where one could easily become gravely injured. This is the slope which leads to a sheer twenty foot drop to the Mother and Child Formation in the Lizard Cave. Here the passage veers to the right and goes rapidly down to where the entrance of Lizard Cave joins Lannigan's. At this point the cave is quite extensive and the only thing which holds the whole place up are thin walls of limestone separating the different passages. From here a passage leads downwards all the way through a couple of flattens to a drop-off about six foot high. Here a squeeze through a damp section is negotiated. From the nature of the rock, it appears that this is the section which had been smashed through for the early explorers to go deeper into the cave. Immediately after this squeeze King Solomon's Temple is met. This is a wide and extremely high chamber with monstrous formations on the right hand side of the passage. These have been well named the "Totom Poles".

As you come to the end of King Solomon's, the route follows a well beaten track over the large mounds of bat guano till a steep drop is met. From here a passage on the right leading to the Lakes is seen, and a little further on, nearly at King's Cross another passage at floor level to the Lakes is passed. There is no definite spot where King Solomon's Temple ends and where King's Cross begins. They are one high cavern.

King's Cross is aptly named, a phenomenal number of large, medium, small and minute passages lead in all conceivable directions, radiating from a hub. It is near here that the Onslow Cave meets up with a passage leading straight to King's Cross.

ONSLow CAVE + The entrances to the Onslow Cave were very near to the camp. The wall of limestone which juts down into the camp separates the two entrances which go into it. They are to be found approx. fifty feet above the river level. Once inside the limestone, the two entrances meet and go down into the Piano Cave. Here vandals have really made a showing. The once magnificent shawls are shattered and ruined remnants of their former glory. Then the passage goes down over a shelf to the lower sections. From here a small crawling passage leads to a small waterfall, and by negotiating a few squeezes, a river section is found. This river is without doubt the same one which flows out at the eflux near camp. After travelling down this underground river for about one hundred feet a siphon is to be seen. (see Exploration Report). From back at the Piano Cave the path through to King's Cross is to be found.

KING'S CROSS ONWARD + As you enter King's Cross a passage to the left is taken. After only moving up this passage about twenty feet turn sharply to the right and a passage about five feet above the floor level in which you are standing faces you. This passage leads down to a "T" intersection. The passage up to the right leads up to the Onslow Cave, while the passage to the left leads down to the entrance of the Low Tunnel. This low tunnel is the start of the live section of the cave, and pools of water are to be met along this stretch.

At the end of the Low Tunnel is a Rockslide which has to be crawled through to reach the Amber Cave. From the Amber Cave clefts are met as the passage goes upwards to another small chamber. A flowstone passage which rises to a height of about ten feet has to be climbed. This becomes a flattener which is blocked two-thirds of the way along by a large steel gate. In the future we hope to get a key for this gate. ( We have now received one from Greg Middleton, 89 William Edward Street, LONGUEVILLE N.S.W.) There is also an alternate route past this obstacle.

After the gate is passed, the fun begins. The Clefts are encountered. They are very deep, and if one is not careful, quite a nasty, if not fatal, fall could occur. In this section of the cave it is very live, with thousands of delicate and beautiful formations hanging everywhere. Once a person has reached this part of the cave, it will all seem worthwhile. This section of the cave is as beautiful as any caving area in Australia. As you move deeper into the cave the more live, or wet it becomes, until water is virtually flowing down the walls and pools of water are to be found everywhere. The roof, the walls and the floor are encrusted with brightly coloured formations. Shawls, stalactites, stalagmites, columns, mulburrys, rim-pools, calcite pools, crystal encrusted floors, flowstones, straws and helictites abound in rich red, to orange, to white hues.

Small passages now lead off the main one, and care is needed not to take the wrong path. While travelling through, a Wallaby skeleton is seen cemented into a pool on the right. Once this is passed, you are nearly at your goal, and when the passage goes down past a few pools of water and along a flowstone floor, Woof's Cavern is only a few hundred feet off.

Soon some clefts are crossed. If a stone is dropped into the abyss it can be seen that they are about sixty foot deep. Once past this last obstacle the large cavern comes into view. It is truly majestic and stretches out in all directions. This is the huge master cave which Bill Woof discovered in 1948. In size, it is very similar to what the Arch Cave must have been like before it collapsed in upon itself. Up in the higher reaches of Woof's Cavern, the limestone stops against flakey shale beds. At this point the roof is highly unstable and a good knock could bring down whole sections of the roof. Most of the talus deposit on the floor consists of huge slabs of black slate.

In Woof's Cavern the formations are also spectacular. In the lower sections a river system runs through heading out towards the entrance of the cave. ( see Layout). This section of the cave is very live and quite large lumps of rock are all flowed under to form strange mounds and talus heaps. Because of the immense size of the cavern, there have been huge rockfalls and landslides. On one of the walls a large scree slope leads up into the very heights of the roof.

This is as far as the cave goes. Here the limestone runs out. Due to its immense size a caver has to be quite careful. If a mistake is made, the drops are quite large.

LAYOUT + From what we could ascertain, there are five main levels that are more or less distinct. The top level is very old and contains no live formations at all. As a matter of fact, the dead formations here are decaying away and this level in the future may collapse. This level can be reached by taking the steep slope up from King's Cross. It is also to be found in the upper limits of the Arch Cave.

The second distinct level is also dead except for the few occasional formations. This is also to be reached from King's Cross. We only made brief trips up into this area of the

cave but the area might have been promising. Future work here is warranted.

The third layer is the main level. Here all the access routes are to be found. Everyone travels along this level though it is possible to use the others. Along this level are to be found King Solomon's Temple, the main part of King's Cross, the Amber Cave, and most of the way into Woof's Cavern. Along parts of this level, access to the other levels is possible.

The fourth level is not so distinct. Parts of this are the lower passage from King's Cross going towards Woof's, the Maze and other small sections. These are very wet. In rainy seasons water would undoubtedly flow through them.

The fifth level is the level of the present river. This can be reached through Onslow Cave, the River Section, the Pools near King's Cross and deep in Woof's Cavern. Water is constantly flowing along this section. Most probably it will be found that it is possible to go from Woof's Cavern right through to the siphon-sink near the entrance. This would be quite a feat. In my mind there is no doubt that these belong to the one water-course.

#### EXPLORATION:

Although we had made great plans, exploration suffered due to the making of the film. This was a great pity as this cave shows great promise in this field. It is impossible to do too many jobs, and exploration suffered.

The only real claims to exploration could have been made by Trevor Berman, who cracked a siphon in the River Cave in Onslow. Because the water was very cold he did not continue any further, although it seemed that another small chamber might be found on the other side of the new sink which confronted him. Trevor also dived into the Lakes, and tried to see if they continued on under the water. He was not successful. On one of his exploratory excursions Trevor nearly had a bad accident. A tin of carbide in his pocket became saturated and the light from his helmet ignited the acetylene gas. There was rather a loud explosion and Trev was ver lucky that he wasnt burnt. At various times, small groups wandered off to look into nooks and crannies. A number of interesting things were found, but nothing that was very substancial.

#### MAPPING:

Mapping in a cave is very difficult due to the fact that you have to work in very dark light conditions. I found that the only way to success was to draw the map as you went. The only way to produce a good map is to be as accurate as possible. We used an Astro-compass and metal tapes. The plan was arrived at by drawing a side-elevation and then projecting it to give the correct distances for the plan. To us this method seemed very accurate, but it was painfully slow. Our rate of progress was something in the vicinity of two hours for every hundred feet of cave mapped. We mapped from the Entrance through to King's Cross following Lannigans Cave. In this map I tried to convey a scaled down replica of the system with every feature occurring appearing on the map. The final map was compiled from tracings taken from the originals done in the cave.

#### FILMING:

This proved to be the largest undertaking attempted on this trip. Unfortunatly, to produce the film a number of people were absorbed from the Exploration team. Although this was regretable, the finished film was well worth the effort.

Filming under such conditions was exceptionally difficult as all the lights had to be carried from place to place to set up for the next shot. Two volt house batteries were used to power the light source which consisted of 100 watt projector bulbs. Even though we had seemingly quite a fair bit of light being given out by the projector globes, the walls of the cave seemed to soak up the light. Wide Apperatures were constantly needed. To get film of the team at Woof's Cavern, it took a team of twelve people twelve hours to get all the equipment in and get the neccessary film. Working under such trying conditions takes quite a bit out of the workers. All were very tired after the ordeal. The finnished film was edited to a half-hour documentary and was shown on the A.B.C. 8th. January 1966 at 3 p.m.

Later this film was used as the supporting feature for the film "Wheels Across a Wilderness". This film, and the caving support, were shown in many capital cities throughout Australia.

It is interesting to note that quite a bit of this film was shot, using only carbide lamps as the light source. This gave quite a dramatic effect, but could not be used all the time as the lighting was far too harsh, and in fact did not give quite enough light to have the scene well lit. This technique could only be used for close-ups.

Still-Photography was also difficult. Flash had to be used in every shot. Where, in the cine-photography, a light-meter could be used. While taking stills only a flash-guide could be used. This made it very tricky. Walls of the cave had different reflective values, depending on a number of factors. Whether they were wet or dry; dark or light; with or without formations. Getting the focus right was also a major problem in the dark light conditions. Setting up to take still shots was not as difficult as cine, but a number of photos had to be taken in each locality. Unfortunatly both the cine-film and the still photos were taken as a commercial venture by the Leyland's and the club is without a permanent record of this trip as no other photographs were taken.

#### ANIMAL COLLECTION:

The animal life in the cave offers to the anateur and the professional entomologist considerable interest due to the inter-tangled complexity and the seemingly simple life-chains that bind this biotic community together. Without one form of life, the other might not exist. Parasitism, in one form or another, reigns supreme from the largest to the smallest animals.

Of major importance, and by no doubt, where the whole of the cave life-chain hinges, is the cave bat. At Colong, the Bent Winged Bat (*Miniopter us schreibersi*) was to be found. On its body were various forms of mites and wingless flies. In the Bat guano, a number of different specimens of fly and beetle larvae were discovered, and other small insects, as well as the larger Cave Weta, were feeding on the individual bat droppings.

Spiders, resting in their webs, waiting for the small blundering insects lived in the early dark sections of the cave. The insects came from two sources, some normally found in the cool, dark cave or the unwary insects, waifted in on the steady breeze caused by the breathing of the cave.

The spiders were definitely troglaphiles, and lived perminantly in the dark, reproducing their own species. Two such spiders that were examined ffor a period of four days remained in exactly the same position in their webs, and were not seen to move once during the period of observation. The webs that these spiders constructed were very dense, but not extensive, only being six inches across. The webs did not appear to be sticky and may have

only been used as a funnel-shaped lair, and somewhere to wrap the captured insects when caught.

Even though these spiders were in the dark zone, they were always to be found within a few hundred feet of the surface. As their livelihood depended on the number of insects that they could capture, their proximity to the surface was a direct result from the distance that the flying strayers from the surface could penetrate.

Upon returning to Newcastle, the collection was sent to Elery Hamilton-Smith Hon. Associate in Zoology South Australian Museum. The following letter was the reply:-

"This letter is to give you some preliminary notes. Many of the specimens belong to groups which can only be identified by a specialist in the group concerned, and some, I regret, belong to groups which need a great deal of research before precise names will be possible.

I. This tube contains a Nycteribiid fly and some Spinturnix mites. The former will be named in due course by Peter Aitken of this Museum, and I will give you the name. The mites are Spinturnix psi Kolenati - this species is commonly found on Miniopterus schreibersii throughout most of its Australian range.

2. The mites from the Weta are in fact mites, not ticks. They belong to the group known as Trombidiformes, in which the larvae often live in soil or guano while the adults are found on insects. They are of considerable interest, and I will take them to Brisbane with me in a few weeks to a specialist there.

3. Tentatively, I would identify this as Holonuncia cavernicola Forster, a harvestman found throughout many N.S.W. caving areas. I will send this specimen to Dr. Forster in due course for confirmation, as it seems that further study may show that more than one species is involved on closer examination.

4. This harvestman is a juvenile. Dr. Forster may be able to place it.

5. Dr. Richards of Sydney is currently describing the cave wetas of Australia and I will let her see this specimen. At present it belongs to one of the many undescribed species.

6. Cyclotenus abyssinus Urquhart - also common throughout many N.S.W. areas and apparently virtually confined to caves.

7. Juvenile spiders - will be very hard to identify, as our spiders are so imperfectly known.

8. A beetle belonging to the family Staphylinidae. I doubt if exact naming of this species will be possible for a long time, as beetles of this family urgently need further research.

9. Larvae of a fly. These are striking and interesting looking specimens. I will be able to get these identified to family level only - they look to me like Mycetophilid larvae, which would not be unexpected.

10. A beetle larvae, almost certainly family Staphylinidae again.

11. Ptinus exulans Erichson - this is virtually cosmopolitan beetle, commonly found in bat guano and also a pest of stored products such as grain.

12. A beetle which is completely new to me, but in the near future I will make a search and track it down, at least to family level.

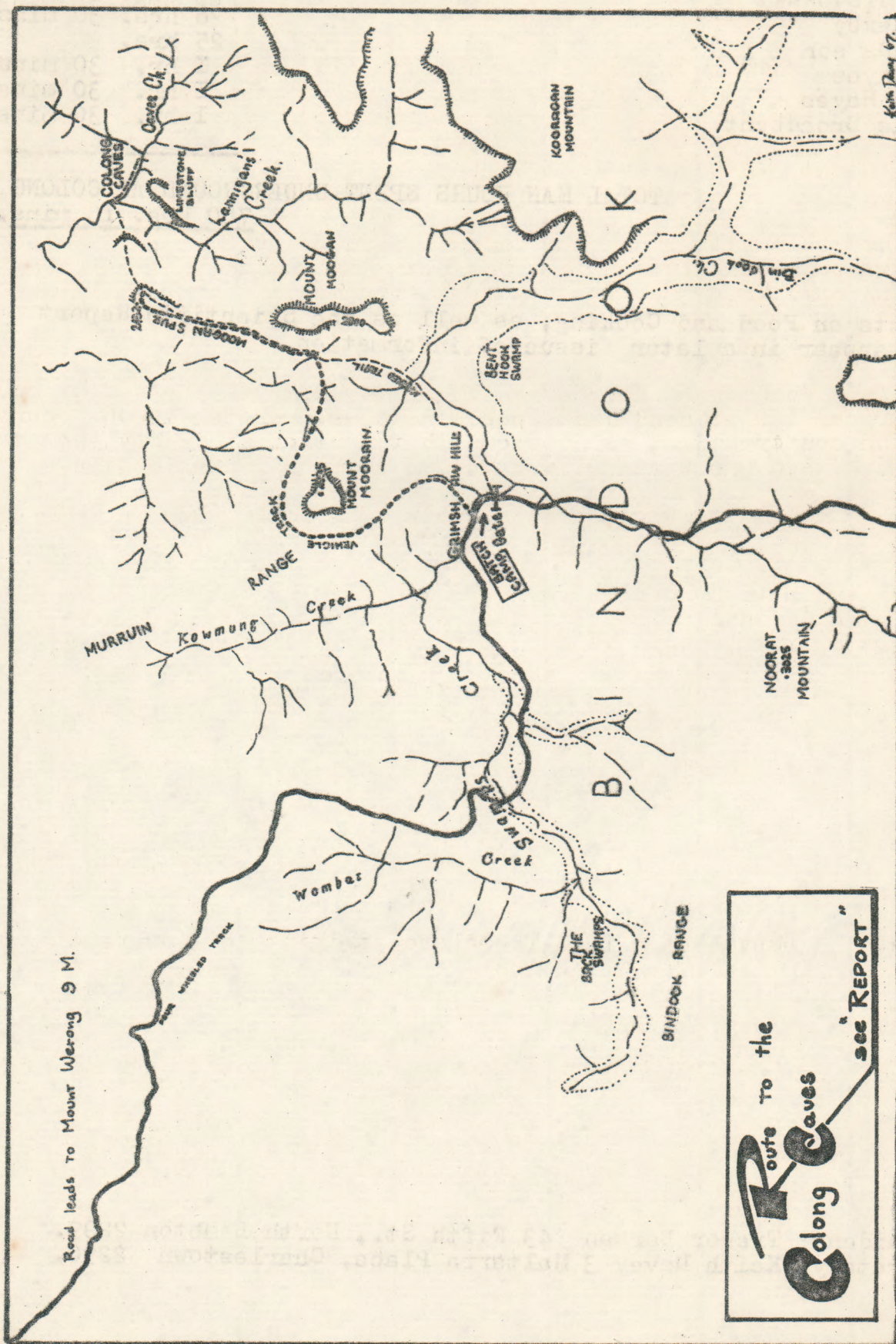


13. Larvae of a Tenebrionid beetle. These are not uncommon in guano, and like Ptinus, some species are also pests in stored grain. Many are soil dwellers, and others live in rotting vegetation. This is likely to be a larvae of a beetle belonging to the genus Pterahelaeus - several species are known from our caves. The adult will be a large black or dark brown beetle, possibly pie-dished shaped.

14. A fly - this will in due course certainly be identified to family level, but probably not further at this stage.

Sorry that it is not possible to give you fuller data at this point, but so many of our cave forms are little known at this point. I will certainly send you further details as I am able."

letter sent 31 st. May 66.



TOTAL TIMES SPENT IN THE CAVE:

John Smythe	President and trip leader	31 hrs. 05 mins.
Keith Davey	Vice President	84 hrs.
Ted Savage	Secretary	55 hrs.
Kevin Wood	Treasurer	46 hrs. 40 mins.
Pat Leyland	Committee	32 hrs. 05 mins.
Colleen Savage	Committee	46 hrs. 40 mins.
Mavis Savage		10 hrs. 30 mins.
Ray Jackson		23 hrs. 15 mins.
Trevor Berman		57 hrs. 30 mins.
Mike Leyland		60 hrs. 50 mins.
Mal Leyland		64 hrs. 15 mins.
David Davey		66 hrs. 30 mins.
Peter Kemp		30 hrs. 15 mins.
Emil Rudy		50 hrs. 35 mins.
Pete Braun		40 hrs. 35 mins.
Rick Mlodowski		28 hrs. 30 mins.
Ken Saxby		28 hrs. 30 mins.
Mick Dawson		25 hrs.
Ted Hayes		1 hr. 30 mins.
Kerry Hayes		1 hr. 30 mins.
Dennis Broadbent		1 hr. 30 mins.

TOTAL MAN HOURS SPENT UNDERGROUND AT COLONG  
780 hrs. 15 mins.

Reports on Food and Cooking, as well as the Scientific Report will appear in a later issue of inFormation.

President; Trevor Berman 43 Fifth St., North Lambton 2299.  
Secretary; Keith Davey 3 Maltarra Place, Charlestown 2290.