

HIGHLAND
CAVING GROUP
CALCITE

SYDNEY UNIVERSITY SPELEOLOGICAL SOCIETY

MONTHLY JOURNAL OF THE HIGHLAND CAVING GROUP

EDITORIAL

In recent months there has been considerable discussion on the merits or otherwise of different types of rope. In this issue of 'Calcite' there is a report on a H.C.G. meeting, where it became evident that even well-known cavers from Sydney displayed a startling lack of knowledge of synthetic ropes.

H.C.G. placed a temporary ban on use of synthetic ropes until more information was forthcoming, while S.S.S. promised a testing programme on various ropes and knots. Then, at a lecture in Sydney by Sgt. Ray Tyson of the Police Rescue Squad, we heard a restrained but complete condemnation of all but manila rope. This was based on manufacturer's inconsistencies, and failure to achieve consistent breaking strains during scientific testing. In A.S.F. Newsletter, Elery Hamilton-Smith recommends, basically, the use of manila rather than synthetics in caving practice.

The weight of the above evidence and opinion tended to guide us into rejecting synthetic, and universally accepting manila.

However, on a recent S.S.S. trip at Jenolan, a member was injured as a result of a fall whilst abseiling - a fall due to manila rope breaking. It appears reasonably certain that the rope was locally weakened by the action of an acid.

The particular rope involved at Jenolan would have been used without question at any time by the editor of this mag., had the rope been offered for use on a trip; this confidence being based on what is considered as very good safety awareness among H.C.G. members, and, in fact, members of any recognised society.

We have, then, condemnation of synthetic ropes, and we have failure of a manila rope which has received normal care by a member of a caving society.

At this stage it is suggested that the rope problem is an A.S.F. matter, regardless of the competence of any individual person or any individual society to provide us with recommendations on the selection, usage and care of caving ropes.

With an A.S.F. committee conference being held in a few months, we would like to see a sub-committee formed, containing or parallel to the A.S.F. cave safety sub committee: to collect all possible information on the physical performance of all types of available rope; to evaluate the handling and knotting characteristics of each of these ropes; to provide clearly defined measures for the care of different types of suitable rope; and to recommend testing procedures to ensure that, every time a rope is used in caving activity, that rope is in safe condition; finally, to so publish this information in such form that every member of every society has this information presented directly.

OFFICE BEARERS OF HIGHLAND CAVE GROUP.

	<u>Name and Address.</u>	<u>Telephone Number.</u>
<u>PRESIDENT</u> -	E. Crabb, 121 Hoxton Park Road, <u>LIVERPOOL.</u> N.S.W.	Private - 6077038 Business - 6025237
<u>SECRETARY</u> -	E. Kaye 325 Edinburgh Road, <u>CASTLECRAIG.</u> N.S.W.	956146
<u>TREASURER</u> -	E. Powell, 148 Belar Avenue, <u>VILLAWOOD.</u> N.S.W.	
<u>COMMITTEE</u> -	A. Rose, 15 Kembla Street, <u>CHESTER HILL.</u> N.S.W. M. Kaye, 325 Edinburgh Road, <u>CASTLECRAIG.</u> N.S.W. G. Warren, 156 George Street, <u>CONCORD WEST.</u> N.S.W.	
<u>LIBRARIAN and</u> <u>RECORDS OFFICER.</u>	E. Powel	
<u>EQUIPMENT OFFICER</u> -	A. Rose	
<u>EDITOR</u> -	E. Crabb	
<u>CAVE DIVING</u> -	G. Warren	
<u>CAVE RESCUE</u> -	E. Crabb E. Kaye G. Warren	
<u>SOCIAL SECRETARIES</u> -	R. Schaffer, 22 Moir Street, <u>SMITHFIELD.</u> N.S.W. R. Russell, 25 Pallamana Road, <u>BEVERLY HILLS.</u> N.S.W.	

Future Trips:- 2nd, 3rd and 4th October. Mudgee - Apple Tree Flat.
(Leader - E. Crabb)

NOW THAT WE HAVE DECIDED TO ADVERTISE FUTURE TRIPS, HOW ABOUT LETTING THE EDITOR KNOW ABOUT THEM BEFORE THE NEXT ISSUE.

SEARCH and RESCUE TRIP - BUNGONIA

(17th - 18th July, 1965.)

A search and rescue trip was organised by S.S.S. to the Bungonia Reserve. The purpose of this exercise was to widen the experience of individuals connected with caving in the organisation and techniques of searches carried out in caving areas.

Members from S.S.S., U.N.S.W.S.S., S.U.S., I.S.S., C.S.S., and H.C.G. attended. One member from U.N.S.W.S.S. (Ian Wood) and one from H.C.G. (Roger Booth) acted as observers.

H.C.G. members attending were - Roger Booth, John Middleton, Robert Russell.

The search started at approximately 10.00 a.m. Saturday, with five parties of about six members, one of which was a radio operator. Four parties searched the main limestone belt, starting at B.1. and worked towards the Grill cave.

The fifth party searched the caves in the caretaker's paddock area and the Grill cave. As the majority of these caves were fairly small, the technique used was for two members to search one cave while the other two searched another simultaneously.

As each cave was entered, the radio operator informed the base camp. When it was completed, this too was reported and the information marked on a surface map of the area at the base, thus the entire search was co-ordinated.

After we had been searching the Grill cave for about two hours, we came across a second group which had been sent to help. Unfortunately, no official co-ordination had been organised and some parts of the cave were searched twice.

After searching the Grill (the last mapped cave to be done), our party withdrew from the search and returned to base for our first meal since breakfast. The time being 5.30 p.m.

The remaining parties then proceeded to "scrub bash" search for any un-numbered holes etc. After about forty minutes of this, the lost party was found in a vertical hole about forty feet deep near the Grill.

During the evening a discussion was held concerning the days activities, other methods of conducting searches and what possible actions should be taken in case of injury.

PERSONAL EXPRESSIONS -

I think S.S.S. did a good job in the running of this exercise in obtaining its objective (stated previously in the report).

I was disappointed in the number of H.C.G. members who attended, as they missed an opportunity of working with other societies and possibly widening their experience generally.

The only "sour" note of the whole weekend was the Sunday hurling of rather large rocks to their death from the top of the gorge - True the sound they made when they landed was impressive.

I am told by a member of S.S.S. who spent an hour or so in the gorge hiding from them, that they were bouncing off both walls of the gorge like shrapnel. This too must have been impressive (for him).

R. Russell.

BUNGONIA TRIP

(14th - 15th August, 1965.)

This was an S.S.S. affair on which the writer went as a visitor. (If any S.S.S. member ever comes on one of our trips, please remind our treasurer to extract 5/- trip fee so that H.C.G. gets even for me).

A fairly large group of S.S.S. members turned up. As a matter of fact it was a bit like one of the H.C.G. trips which we haven't had for a couple of months (hint?). The idea of the trip was to map the extension to Hogans Hole, discovered and excavated by S.S.S. over the last few weeks.

The extension consists of a 1,000 ft. crawl which finishes in a 100 ft. high chamber with a number of extensions. The cave continues down a 30-40 ft. drop, which was full of foul air. A few people pushed a further 300 ft. past this point. This was not the finish, but was as far as people could get into the Bungonia air.

The crawl section of the cave is dangerous for if it should rain heavily, it would flood and possibly silt up again, which would not be the most pleasant experience for any spelios inside.

On Sunday S.S.S. (with a little help from H.C.G.) dug out the B51 sink and found a cave of at least 100 ft. in depth but had to stop operations because of rather loose rocks which kept falling on Ben Nurse. (I believe a further trip has been planned to remove these inconsiderate rocks.)

A project of H.C.G. members was to use S.S.S. radio gear to pin-point the high point in the roof of Powell's Pot, so that we could possibly excavate this point, but due to one thing or another S.S.S. did not front up with a radio or an operator so this project will have to wait for a while.

R. Russell.

Continuation of this magazine depends on trip leaders providing the editor with their literary gems. However, only previously unpublished manuscripts will be accepted.

R.R.

Present:- E. Crabb, A. Rose, K. Speechley, R. Booth, W. Bryant, E. Powell,
R. Russell, G. Harrison, J. Kent, J. Gibson (E), R. Smith (E),
G. Mann (E), J. Middleton (E).

The purpose of the trip was to excavate in the B41 area; this activity starting early on Saturday morning despite the inclement weather. The debris that had collected in one possibility was burnt out. Seeing this success, a fire was applied to the debris in the "Letterbox". Digging started in three separate places, but was soon abandoned in two of them.

As the one hole could not accommodate all enthusiastic diggers, a start was made at B17. By Saturday night, B41 was down about 25 feet, while B17 had been excavated to about 12 feet.

Early Saturday night was spent by a few in continuing mapping in the Grille Cave, where it was noticed that the collapsing of the entrance area had progressed noticeably since the recent search and rescue trip. This subsidence, observed over a period of about eight years, now amounts to up to five feet, the greatest amount being in the last two years.

Sunday morning was spent in further excavation at B17, a quick "hit" at the suggested top access to Powell Pot and generally inspecting the excavation sites of S.S.S., U.S.W.S.S. and C.S.S. During this time, several more 'possibles' were noted, to the stage where practically every member present had earmarked a sink for themselves.

Overall, the trip was very successful; the excavators appearing to have excellent prospects. However, as these entrances are cleared, it would appear that some form of responsible control is needed. Much as we dislike carved descriptions of cave hazards at entrances, (there is a beauty near B3!) the opening of drop entrances greatly increased the hazards to usual visitors to the area. Any suggestions on this would be appreciated.

E. Crabb.

State of the Nation.

A.Y.S. is the society of Angry Young Speleos. The editor of Calcite has been besieged by these A.Y.S. to ~~cancel~~ ^{cancel} their ~~shots~~ ^{shots} on their real and imagined injustices, and this we will do (committee permitting) if the comments or statements have real foundation. For example, in the near future you may read about:-

- 1) A suggestion to close Edies Squeeze in the Munchbowl-Vee Jasper. On a recent trip a small, extensively decorated passage was opened up on a Saturday afternoon or Sunday morning. By Sunday night no formation was left intact.
- 2) A member's critical appraisal of average outlook towards safety and towards conservation.
- 3) Our own contact organisation.
- 4) Whether the setting up of a U.S.W. Cave Rescue Organisation is being slowed down at the administrative level or by lack of support, or whether progress is satisfactory.
- 5) Responsibility and irresponsibility in publication of reports and information on caves and caving and effect on efforts at conservation.
- 6) Punitive measures in speleological societies, and control of fringe members.

On Saturday, 22nd May 1965, a member of the Highland Caving Group died as a result of injuries received in a fall in the Drum Cave at Bungonia. He was John Lawrence Bryant, aged 18 years, from Chester Hill N.S.W.

It is far beyond the literary ability of the editor to suitably phrase a lasting and meaningful tribute to John; but each of us who knew and respected him are left with our own personal thoughts, and affections, and memories; these are treasured much more than the impersonal written word.

Extremely gratifying to all of us was the support, sympathy, and material contributions so quickly and spontaneously offered by speleos throughout the country; for this we say, simply but sincerely, "Thank you".

Report of the H.C.G. Fatality in the Drum Cave, Bungonia, Saturday, 22nd May, 1965, being a summary of the Trip Leader's Report and the Secretary's Report.

The trip was led by Jim Kerr and comprised nine experienced members and two less experienced members. The belaying number was Eric Kaye, the secretary of the club.

At about 10.30 members assembled at the top of the drop and were warned, both by Jim and Eric, of the dangers of the cave and the importance of using only bowline knots followed by a half hitch on the safety line. They were also instructed to use a Karabiner on a separate safety belt, to be snapped on the ladder should a pause occur in the descent or ascent. Eric Kaye was assisted by Eddie Powell and Jan Gibson at the top.

Three 40ft. ladders were lowered shackled together and fastened by one ton proof tested pennants to the log at the top of the drop. Roger Booth volunteered to be first down and completed the 120 ft. descent without incident. A brand new $1\frac{1}{2}$ " silver rope was used as the safety rope. Roger's only request was for a further rope to secure the base of the ladder and to belay members down the final 15 ft. of the cave.

John Bryant carried this rope and his camera gear down with him as he descended next. He tied his own safety rope before commencing and it was noted by all observers that the knot was correct before he left.

Following this, Margaret Kaye, Bob Russell, Jim Kerr, Ron Mellor, John Middleton and Rob Scheffer descended without incident.

At about 12.30 Jim Kerr called from the bottom of the cave to say that John Bryant was ready to ascend. On receiving confirmation that he was secure on his safety rope the ascent started.

John climbed slowly and evenly without any verbal communication. At a height estimated to be about 50ft. there was a sudden tug on the safety line. The belayer, who was braced securely for such an emergency, estimated the load to be less than 100lbs. About one second later the tricounis on John's boots hit the rocks below. Just before striking the bottom he was observed by Jim Kerr to be parallel to the ground.

Eric immediately shouted for the party to return to the base of the ladder and to inform him of the situation. Margaret Kaye reported five minutes later that he had broken both legs, had facial injuries, was unconscious but breathing.

Eric left the cave immediately to seek assistance; he ran to Roger Booth's car, drove to our camp, left a message and drove to the nearest farmhouse. They did not have a phone connected so he drove to the next, about 3 miles from the cave.

Goulburn Police Station was called at 13.05 and told of the accident and informed that we must have a doctor and a stretcher immediately and asked if possible to send Senior Constable Col. Hannsen. Consideration was given to calling Cave Search and Rescue-Sydney but it was decided that help from this source could not arrive in time.

Eric returned to the top of the cave at about 13.30 and was informed by Ron Mellor and Jim Kerr that John's condition was deteriorating rapidly, and that mouth to mouth resuscitation was being applied. To reduce the carbon dioxide concentration in the cave he instructed Jim to send up as many members as he could spare. Jim sent to the surface Margaret Kaye, who gave the first clear report on the accident, and later John Middleton. These two members, although severely shocked, climbed out without incident.

At about 2 o'clock Roger Booth and Ron Mellor stated that John Bryant had died. His heart had then been stopped for about 15 minutes, despite the fact that artificial resuscitation was being applied and efforts made to massage his heart.

At about 3 o'clock, Sgt. Wal Sowerby and Senior Constable Col. Hannson of Goulburn Police arrived in a rescue truck and two police officers from Marulan in a car. Members expressed dismay that no doctor had arrived and were told that none of the four doctors in Goulburn are prepared to enter a cave. Recovery of John's body started immediately. A stretcher was lowered and after John was secured by our members he was hoisted to the surface. Supervision of this operation was taken over by Col. Hannsen. An ambulance was waiting to take him away.

After this we lowered our gear again, and all of our members were belayed to the surface without incident. This operation was closely scrutinised by Const. Hannsen who expressed complete approval of the methods and gear used. Roger Booth was the last member to leave and brought up the ladder with him.

The gear was collected and we returned to the camp at about 8 o'clock that night. The Police took statements from a number of our members. At about this time John's brother Bill arrived from Sydney and was told of the tragedy. The Police cautioned us against travelling to Bateman's Bay to inform John's parents that night because of the state of shock of the whole party.

After a sleepless night the Kaye family, together with Bill Bryant, and Roger Booth travelled to Bateman's Bay to comfort as best they could Mrs and Mr Bryant.

SUMMARY OF INFORMATION AND DEPOSITION OF WITNESSES AT INQUEST,
AND CORONERS FINDINGS. L - 6 - 65

The first witness was Constable Alan John Wallace, from Goulburn, who stated that - at sometime after 3 p.m. on 22-5-65 he went to the Drum Cave at Bungonia, saw a group, and ascertained; that they were members of the Highland Caving Group, lead for the purposes of the expedition of by Jim Kerr. That the members listed had descended to the bottom of the cave between 9.50 A.M. and 12.30 P.M., with a description of the access to the cave. He went on to describe the 3-40ft ladders of wire rope with aluminium rungs spaced at 12 inches, and tendered one in evidence.

He then described the ladder anchorage to a "stout log" suitably placed, and the use of a rope as a steady at the bottom of the ladder; tendered was a waist loop with karabiner as used for resting, also the 1 $\frac{1}{4}$ " silver rope used as a safety rope, with a statement regarding the function of Eric Kaye belaying at the top of the ladder.

His statement then continued on to John Bryant wishing to ascend, being accompanied to the ladder by Jim Kerr who saw that the safety rope and karabiner belt were in place; the commencement of the climb, the tug then slackness of the safety rope when about 50 feet from the floor. There was no cry, but Eric Kaye's call was heard by Jim Kerr and Rob Scheffer, who saw John Bryant fall past. They found that he had a broken right leg, facial injuries and was breathing heavily. First aid was rendered and Eric Kaye called to obtain assistance. Mouth to mouth resuscitation was administered, the breathing became irregular, until at about 3 P.M. his heart stopped beating.

On request for assistance Const. Langley and Wallace proceeded from Marulan, and Sgt Sowerby & Senior Con. Hannsen from Goulburn with rescue gear. Arrangements were made for an ambulance.

On arrival, the police were informed of his death. The body was recovered by lifting it lashed to a stretcher attached to a rope.

A thorough examination of the equipment used was made by Sen. Con. Hannsen, formally of the Police Rescue Squad, who verified that this equipment was in new condition and of adequate strength.

The next witness was the Secretary of H.C.G., Eric Kaye, who outlined the caving experience of the members on the trip, with some detail of John Bryant's experience since becoming a full

member of H.C.G. in January 1964. He then confirmed the procedure in the Drum Cave as reported by the first witness, demonstrating to the court the tying of a bowline with half hitch. The coroner enquired to some depth regarding the use of a safety rope, and also confirmed the distance fallen by the amount of rope taken in. Eric then detailed how, without any verbal communication, the load on the rope tightened to an estimated 100lbs., then slackened.

A pair of boots were submitted as evidence, which were recognised as John Bryant's. It was noted that the heel tricounis extended beyond the leather heel piece. Eric described the normal ladder climbing method with the rung in the instep, confirmed by polished marks in the boots, and offered the opinion that the projection on the heel precluded John from lifting his feet. The remainder of Eric's testimony detailed his requests for assistance.

Next on the stand was a Government Medical Officer, Dr. B.W.Coombes. He described the injuries as both lower legs broken, and numerous abrasions on the back of the scalp with an underlying fracture of the scalp. Some haemorrhage had taken place from this wound. Pupils of both eyes were widely dilated. The opinion was formed that death had taken place due to intracranial haemorrhage following the fractured skull.

Jim Kerr confirmed the membership list, the previously detailed programme and procedure, to the time of the fall. He then gave evidence of his examination of the end of the safety rope, on which he noted a thumb knot 6 or 7 inches from the end, with no sign of a break. He estimated the fall as roughly 50 feet from the floor. After detailing the actions regarding assistance as previously reported, he described how the safety line was transferred directly after Rob Scheffer's descent to John Bryant for his ascent, confirming that everyone used the same safety rope. He explained that instruction in knot tying came from the club, and that some members undertake first aid instruction; in the incident in the Drum Cave he knew that Roger Booth had this experience, and allowed Roger to take charge of first aid assistance.

Rob Scheffer was next on the stand, confirming firstly that the same karabiner and waist loop was used by all members. This ensures that one person only is on the ladder at any time. He described how he passed the waist belt and safety rope to John, and how Jim Kerr made John re-tie his bowline on the waist loop, but didn't definitely check the safety rope. Roger Booth, who had been out of sight during the fall, confirmed to the Court his first aid training, and described the observed injuries as right leg broken, facial injuries and cut on the back of the head. John's breathing was wavering. He reported applying mouth to mouth resuscitation and that John did not regain consciousness. He stated that he believed that John died at about 3.00 p.m. some time before the police stretcher was lowered.

CORONER'S STATEMENT

From the evidence before me I am satisfied that the equipment available and in fact in use, by this party, was quite adequate. The instruction given to the members of the party I think might be regarded as quite satisfactory and proper in the circumstances having regard to the experience of the various members.

For some reason or other the deceased in using this equipment didn't use it effectively, whether this was due to a mistake in tying the knot, or whether he had in fact tied a knot in the approved fashion and for some reason whilst on the ladder untied the knot, is not clear but from the thumb knot left on the rope it would appear that the more probable explanation is that he made a mistake when tying the knot in the safety rope before he commenced to ascend.

As to whether it would be prudent to have all knots checked by another member of the party when some members were present, would I think depend upon the experience and ability of the cavers, and it does not seem to be a matter about which any recommendation should be made as to caving generally, as in the nature of things, both the skill and ability of the people engaged in this type of thing, will always vary.

I am satisfied that this was an unfortunate accident.

I extend my personal sympathy to the relatives of the deceased.

I formally find that on 22nd May, 1965, at Bungonia in the Goulburn Police district in N.S.W., the deceased died from the effects of injuries received accidentally from falling from a ladder which he was ascending in a cave at Bungonia.

REPORT ON H.C.G. MEETING HELD 30TH MAY 1965.

Present at the meeting were all 26 members of H.C.G., together with representatives from all Sydney Societies, including Ian Wood, Ben Nurse, John Steele, Henry Shannon. Chairman was Evalt Crabb. All other business was suspended to permit a full investigation into John Bryant's death.

The investigation was carried out in chronological sequence, starting with confirmation that there were no signs on the morning of the incident that John was not in good health. His general physical condition was accepted due to his acceptance in the C.M.F.; nor did he indicate any reluctance to descend the hazardous cave. It was confirmed that the party consisted of nine experienced members and two relatively inexperienced. Several members indicated that John had previously done a comparable ladder climb, and had quite some experience in absailing,

etc. The descent into the cave was reported as being without incident and there were no signs of perturbation or illness underground.

The CO2 level was checked by means of an ordinary candle, and it was generally agreed that this is certainly a safe indication. Determined so far was the fact that there appeared to be no physiological reason for the fall.

An attempt was then made to determine why John fell off the ladder. It was reported that John climbed at a reasonable pace and without pause until the fall; in fact there was no pause at all between the steady climb up and pressure appearing on the safety line. His boots were examined at this stage, and it was found that his heel tricounis were both loose, and overlapping the instep. Suggestions that he tended to position his feet from the front of the ladder, or on the ball of the foot, were negated by the rung impressions in the instep.

The discussion in the meeting revolved around the possibility of John climbing favouring his hands due to the possible trouble caused by the overlapping heel tricounis, and the rapid onset of fatigue under these conditions. Two members reported that the ladder rungs were unusually cold, which could result in a certain degree of numbness in the hand.

The next stage was discussion around the failure of the safety rope knot, which resulted in a thumb knot on the end of the rope.

The alternatives presented were -

- (a) the bowline knot was tied in incorrect form; as there was no definite witnessing of the tying of the safety rope, John's previous experience was probed, and it was indicated that he had in the past consistently correctly tied a bowline knot.
- (b) That the safety line was untied for some reason; as the line was taken from the previous climber, it could not have passed through the ladder, nor was there any delay in the ascent when a knot could have been untied.
- (c) That the knot was tied in correct form but loosely; this was discussed as a distinct possibility, as experiments with a loose bowline with too short tail, and with tension at a particular place had caused on random occasions a breakdown of the knot.
- (d) That the bowline was in fact correctly tied, but a bowline is not a suitable knot for the type of rope used. Although discussed at length, this point could not be determined, due to lack of information on the rope, and differing opinions of those present. From this confusion, representatives of all societies determined to seek more reliable data on caving ropes at an early date.

Despite the distress caused by the delay in arrival of requested assistance, it was agreed that this was a reasonable delay, considering the distances involved, and the many local responsibilities of police and of doctors.

This led to discussion on the pros and cons of removal of injured persons from caves; the trend being to favour leaving the injured person in a cave, and bringing in medical assistance. However, the effectiveness of this would depend on availability of such medical assistance, a problem to be sorted out by the Cave Rescue Organisation. The only other point discussed was whether John's helmet was retained by a chin strap and what effect this had on his injuries - however, there was no definite conclusion.

H.C.G. LATE NEWS

Welcome new members - Jan Gibson, Bob Smith, Dave Allen, Allen Moule.

Weekend party 9th-10th October - Ocean Beach - contact Grant Warren.

Photo competition - closing 31st October, for colour slides up to 2" x 2", black and white prints up to 9" x 6", black and white prints up to 20" x 16", in two sections, "Caves", and "Caving Activities", maximum 3 entries per class per section, 1/- fee per entry.

FUTURE TRIPS

23rd - 24th October - Bungonia - Trip Leader A. Rose?

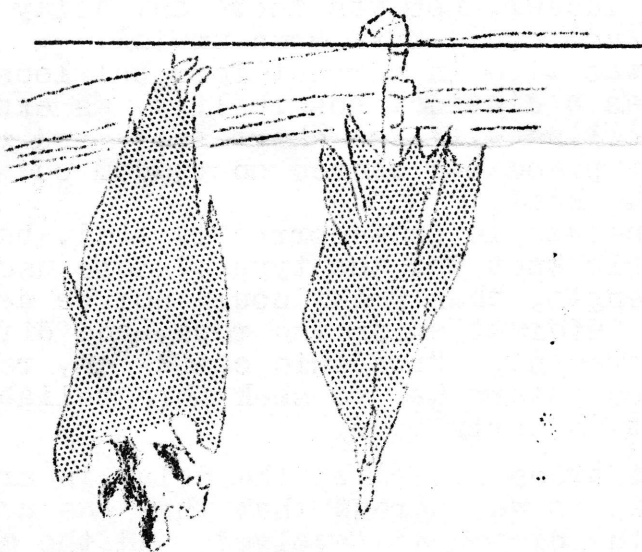
13th - 14th November - Timor - Trip Leader E. Crabb ?

4th - 5th December - Wyanbene - Trip Leader E. Powell

Christmas - To be discussed at next meeting

NEXT ISSUE

A resume of H.C.G. activity in the Mudgee district.



"NOT very talkative, are you?"