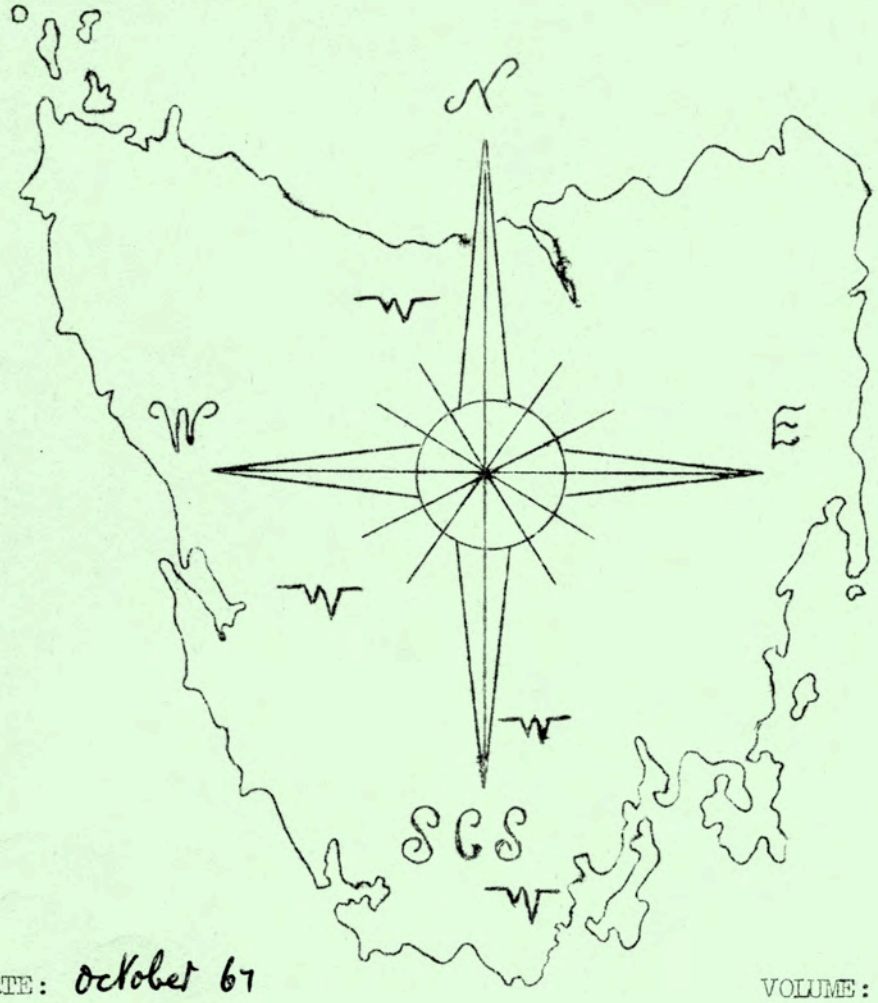
SOUTHERN



DATE: October 67

VOLUME: I

PRICE: 25c

NUMBER: II

CAVER

Published by the Southern Caving Society.
139 Augusta Rd., Lenah Valley, Hobart,
Tasmania. 7008.

SOUTHERN CAVER Volume I Number 2

October, 1967

CONTENTS:

EDITORIAL COMMITTEE:

ACKNOWLEDGEMENT:

The Southern Caving Society wishes to acknowledge the services rendered by the staff of Duplicating Services and the staff of the National Fitness Council.

AUSTRALIAN JOURNAL OF SCIENCE

Jennings, J .N. and James, B.N.

Underground Water Movements in the Lobster Rivulet - Mole Creek Divide, Tasmania.

September, 1967 Volume 30, Number 3, Page 108.

This is an account of the knowledge to date of the water movements in the Wet Cave System, Mole Creek.

TRIP LIST			PARTICIPANTS
August:	5 — 6	Hastings	(8)
	12 — 13	Mole Creek	(9)
	26 — 27	Hastings	(5)
September:	16 — 17	Hastings	(14)
	30 — 1	Mt. Ronald Cross	(4)
October:	1	Maydena	(9)
	14 — 15	Exit Cave	(2)
	21 — 29	(Mt. Ronald Cross	(4)
		(Mole Creek	(4)

AREA SUMMARIES

Hastings:

Trips through the Binney Tunnel and Christmas Cave have been organised for new members. It is noted that the Binney Tunnel is becoming very dry.

Scrub-bashing has been conducted on the N .E. side of the hill containing Newdegate Cave. The country is very steep and thickly covered with undergrowth but looks promising.

Mole Creek:

A small party of our most experienced members ventured once again into Dangerous Hole. As usual the scenery was found to be much rearranged. Some progress was made at the waterlevel to a point where running water can be heard quite clearly but the passage narrows off. A further attack has been made but to no avail. The talus collapse at the syphon in Georgies Hall has received further attention and scrub-bashing has been done at Liena and along the top of Wet Caves hill.

A new section of Maracoopa Cave was investigated from directions by Mr. T. Richardson. Further exploration is required in this extension.

Maydena:

Limestone outcrops on the Gordon Road have been investigated on the topside of the road. Reconnaissance climbs were made on several peaks of the Needles.

Exit Cave:

S.C.S. members were invited by the Tasmanian Caverneering Club to visit Exit Cave during October.

Participating members were impressed by the magnitude of the system and found the cave to be most challenging. Assistance was rendered with surveying and exploration of minor sections.

Mt. Ronald Cross:(near Mt. King William and Mt. Arrowsmith)

After discussions, with Mr. Bruce Gulline of the Mines Department three trips have been conducted so far to this area. Surface exploration has revealed great possibilities and further trips are planned for the very near future. A track has been marked from the Lyell Highway to the foot of the mountain and a car park and campsite have been prepared. Exploration to the plateau has revealed some most impressive dolines. Investigations along the edge of the

Mt. Ronald Cross: (cont.)

mountain plateaux led to the discovery of a series of drainage sinks. A track has been found which leads through the myrtle forest.

The head of the major valley between the ridge and the direction of Davis Creek contains many small streams originating from seepages in the rock faces.

There is a suspected underground creek joining the Surprise River which has yet to be investigated. The hill by the Davis Creek bridge contains much evidence of solution activity into tight rifts.

The major problems associated with the area are the Surprise River crossing, the weather and the steep topography. The river crossing is the only controllable problem and a flying-fox is under consideration to facilitate a full scale assault on the area. A tarn on the plateau provides an excellent campsite for exploration around the 3000 foot level as it is reasonably well protected from the wind.

AREA OFFICERS

The Society has appointed from its Party Leaders, Area Officers to organise and consolidate work in each particular area. All trips are to be arranged through the appropriate officers to facilitate the collection of detailed knowledge.

NORTH-WEST COAST & EAST COAST	- B. James, R. Cockerill
HASTINGS	- G. Wilson
FLORENTINE & GORDON VALLEYS	- G. Fry, E. Guinan
MT. RONALD CROSS	- R. Mann
IDA BAY	- R. Horner, J. Morley

EQUIPMENT

The Society has added a further 150 feet of ladder to its store together with 820 feet of 1½ inch circumference polypropylene rope.

New Exide batteries are being tested at the moment. These batteries are rechargeable lead-acid type with a rating of 7 ampere-hours which gives theoretical light supply of 21 hours. Dimensions are 5 X 5 X 2 inches and weight approximately 3 pounds. The only problem to be resolved is prolonged gassing after charging. Performance under field conditions is quite satisfactory.

NEW CAVE NAMES

MOLE CREEK:	Middlesex Sheet
	SUN CAVE - Ref. 328/861
	CORK HOLE - Ref.327/852
MAYDENA:	FROG POT - Location: between Rift Cave and Satan's Lair.

FAUNA & BONE COLLECTION

While working at Mt. Ronald Cross two specimens of cave cricket were found on the surface of the Lyell Highway late at night. These will be forwarded to Dr. Aola Richards for identification.

FAUNA & BONE COLLECTION (cont.)

Collections of bones were made in Sun Cave and Cork Hole at Mole Creek. These are being examined by Mr. Phillip Andrews of the Tasmanian Museum.

NEW FOODS

"Instant Breakfast" made by "White Wings" food manufacturers is a fortified milk powder preparation which is mixed with milk to make a nourishing drink. This is becoming quite popular as an adjunct to a normal caving meal.

"Instant Pudding" made by the same company is not yet on the market but is an "add water only" preparation which could find a place in field rations.

PERSONAL

Our congratulations and best wishes go to Andrew Campbell and Rosemary Mackinnon who are to be married in Melbourne on December 2 this year. Unfortunately we will suffer a loss as the couple intend to depart for Uganda after the wedding.

Andrew has been a hard working member and will be especially remembered for his work in Herbert's Pot at Mole Creek.

Bon Voyage Andrew and Rosemary.

LADDER CONSTRUCTION

An account of ladder making materials, test specimen construction, test procedure and results.

To aid in ladder design the Southern Caving Society, in conjunction with Mr. A. Christian of the Civil Engineering Testing Laboratory at the University of Tasmania, designed and constructed test specimens to assess as completely as possible, the strength of the proposed materials and ladder construction methods. The tests were performed during September, 1967.

LADDER DESIGN:

Thirty foot lengths of flexible ladder, two eyes at each end, with rungs of six inch length and ten inch spacing, secured to the cable with copper crimps above and below rung with spacing to allow inspection of cable for wear.

MATERIALS:

Cable: 7 X 19 strand 3/8 inch circumference flexible galvanised steel wire

Rungs: Aluminium tubing 5/8 inch O.D. 16 S.W.G. Six inch lengths.

Crimps: Copper sleeves (M.S.T.P. 237 CC) cut in half at central waist.

Eyes: 5/8 inch stainless steel thimbles secured with No. 3 Telurit alloy sleeves.

SPECIAL CONSTRUCTION TOOLS & JIGS

Bolt cutter type hand swage and standard gauge for M.S.T.P. 237 CC sleeves. Jig for standard rung spacing and jig for rung preparation.

TESTS

No. 1 Aim: to ascertain, in conjunction with test (4), the breaking strain of the cable.

Construction: Stainless steel thimble at each end of cable, secured with Telurit sleeves applied by 20 ton capacity hydraulic swage press. Length of specimen overall 18 inches.

Test: Strain applied by means of stainless steel U-bolts through eyes.

Result: At 1270 pounds one strand of cable broke adjacent to sleeve.

No. 2 Aim: To ascertain slide resistance of Telurit sleeve used in eye construction.

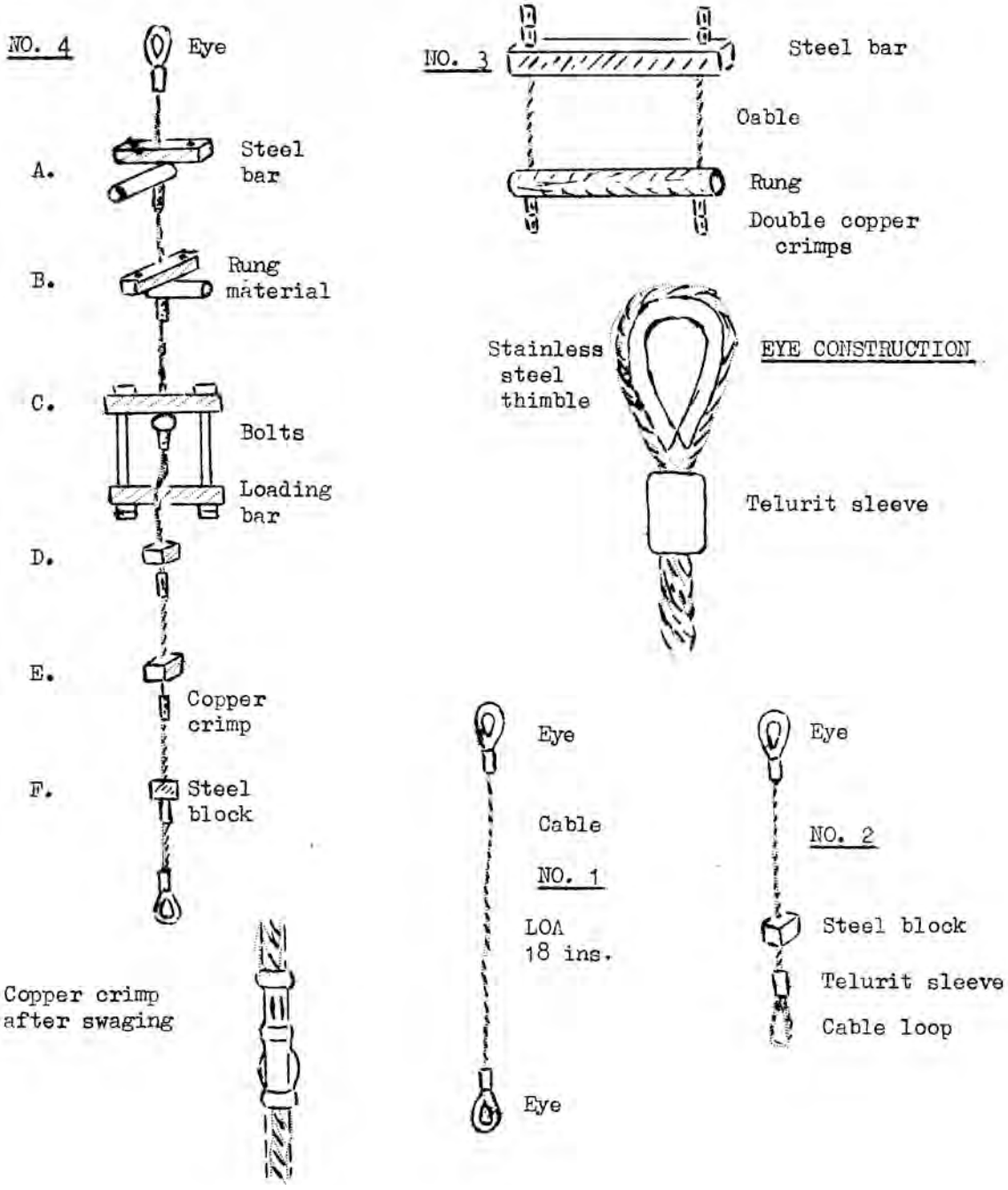
Construction: An eye was built on one end of cable which passed through a hole in the centre of a block of mild steel (5/8 X 5/8 X 3/4 inch). The other end of the cable was doubled back and a Telurit sleeve applied over the doubled cable to simulate eye conditions less thimble.

Test: Strain applied between eye and steel block.

Result: Sleeve began to move at 1070 pounds.

TEST SPECIMENS & CONSTRUCTIONS

Drawings not to scale



No. 3 Aim: To determine pressure required to bend rung to a point where it would be dangerously unserviceable and to find the pressure required to break the rung away from the cable.

Construction: Six inch length of rung material with 9/64 inch hole drilled 3/8 inch from each end.

Six inch length of 5/8 inch square mild steel bar prepared similarly. Bar and rung connected by two pieces of cable and secured by double copper crimps applied with hand swage. Distance between bar and rung 2½ inches.

Teat: Strain applied between bar and U-bolt over centre of rung.

Result: Rung bent to stage where it could not have a foot placed on it at 510 pounds. Loading continued until cable pulled out of the top edge of one end of the rung at 1090 pounds. However, the rung was still attached to both cables.

No. 4 (A,B,C,D,E, & F.) Aim: (i) To determine crush point of the rung end and/or pressure at which rung pulled over copper sleeve.
(ii) Strain at which the copper sleeve slipped on the cable.
(iii) Strain required to break cable under constructed ladder conditions.

Construction: Eyes and cable as for No. 1 but length overall 22 inches. Sections A, B, C, D,E, F spaced evenly along the length of cable.

D, E, & F : 5/8 X 5/8 X 3/4 inch mild steel block with 9/64 inch hole drilled through the centre for cable to pass through.
Copper crimp applied with bolt cutter type hand swage tool. Application pressure applied, crimp and cable rotated through 90 degrees and pressure applied again.
Crimp length is 5/8 inch, swage jaws ¼ inch thick - double application leaves 1/8 inch of crimp length unswaged at the centre of sleeve.

A, B, & C: 3 X 5/8 X 5/8 mild steel bar with 9/64 hole through centre of 3 X 5/8 inch face and ¼ inch hole drilled 3/8 inch from each end. 2 inch length of rung material with 9/64 hole drilled 3/8 inch from one end. Copper crimp (application and specifications as for 4 D, E, & F). Rung section sandwiched between bar and crimp.

Tests: (in order performed)

F, E, & D: Strain applied between U-bolt through eye at 4A end of cable and 3/4 inch length of bar against copper crimp.

C, B, & A: 3 inch bar connected by two 4 x ¼ inch stainless steel bolts to another 3 inch length of bar and strain applied by U-bolt through eye as before and lower bar. This caused top bar to push the rung section against the copper crimp, crushing the rung and causing fractures in the rung wall and then, with increased loading, causing the copper crimp to slide.

4 Cable: U-bolts through eyes at both ends of cable and cable stretched to failure point.

No.4 (cont.)

Results: (i) Rung sections crushed against crimp (some partial puncturing occurred) at:
4C 580 pounds force
4B 590 pounds force
4A 540 pounds force

(ii) Crimped sleeves moved at:
4F 1075 pounds force
4E 1200 pounds force
4D 1030 pounds force
4C 895 pounds force
4B 1020 pounds force
4A 1150 pounds force

(iii) Cable (4) failed adjacent to crimp 4F (one strand broken) at: 1180 pounds force.

NOTES & SUMMARY

Test procedure recorded failure or breakdown value after steady increase in load

Specimens 1, 2 and 4 represent one side of ladder only.

Low value of test 4C due to incorrect crimp application procedure

Failures that could cause ladder climber to fall from ladder occurred at loadings in excess of 1000 pounds.

Failures that would cause individual rungs to be unserviceable occurred at loadings in excess of 500 pounds.

THE SOUTH-WEST

As a result of road-building activities of the Hydro-Electric Commission the rugged South-West of Tasmania is becoming more accessible. This expands horizons for the adventurous speleologist and we will be looking more toward this area for new caving prospects.

Generally the limestone areas in the South-West are many solid hours walking from access roads. In July this year an S.C.S. party set out on a preliminary expedition to the limestone ridges of Mt. Anne (4,500'). Thirteen hours was the time taken to walk to the Huon River Crossing but weather conditions prevented further progress. Aerial photographs show this area to be very promising. The Tasmanian Caverneering Club has investigated the North-East ridge.

The Gordon River road * cuts through a limestone outcrop which has been investigated on the top side of the road. There is a fall of approximately two hundred feet to the valley floor below the road.

The Australian Newsprint Mills have, during their forestry activities, built an extensive road network throughout the Florentine Valley *, a short distance from Maydena. There are many deep caves in this area including Growling Swallet (560 feet), Satan's Lair (est. 470 feet) and Rift Cave (approx 430 feet). Much of the area remains to be explored.

THE SOUTH-WEST (cont.)

Around the Weld River to the east of the Port Davey track several impressive holes have been seen by bushwalkers but here, as elsewhere in the South-West, rainforest conditions prevail making exploration difficult.

Limestone in the South-West is also found at Precipitous Bluff and Adamson's Peak.

It will be many years before underground Tasmania has yielded all its secrets, so speleologists need have no fear of being a 'vanishing race'.

* Official passes are required for travel on these roads.

STEPHEN HARRIS

INVESTIGATORY TRIP TOWARDS MT. ANNE
August 26 - 28, 1967
Party: E. Guinan (leader) M. Cole, S. Harris

The aim of the expedition was to obtain a general impression of the area and conditions and to bring back photos of Mt. Anne and surrounds to aid the organisation and planning of future trips to the area.

At 8.30 a.m. on Saturday, August 26th the party left the Gordon Road hoping to proceed through Frodsham's Gap to the Port Davey Track and thence to the Huon Crossing where they would camp for the night in a hut marked on the map. Sunday was to be spent on the Mt. Anne track and if possible Mt. Anne itself leaving Monday for the return to the Gordon Road.

The party was accompanied the first 3/4 mile to the Port Davey track by R. Cockerill who provided transport to the area and would return at 8 p.m. on Monday night to take the party back to Hobart.

After crossing a small area of button grass a Myrtle forest was entered in which a stream was found. This stream dived underground but reappeared every few feet. The stream was followed fruitlessly for approximately three hundred yards both upstream and downstream. At this stage the weather broke and rain began to fall in heavy showers.

The track went on endlessly, gaining height slowly, interrupted by some steep valleys finally leading between two peaks Mt. Bowes and Mt. Bowes South through a long steep sided valley. Once these peaks were passed the Huon River could be seen in the distance and the track began a slow descent to the button grass plain below. After crossing the plain a low limestone ridge was encountered, The first camp was set up on the side of this outcrop at about 6 p m. amid heavy rain and wind.

On the second day some time was spent investigating the limestone before setting out along the track. The party went over the ridge and down into a swamp, here the track was very indistinct in places and members found that if they were not in mud up to their knees and water to their thighs they were off the track. Some deep creeks had to be crossed. This section is not recommended for tackling in failing light.

The track then rises into some hills and then descends to the river crossing. The party arrived at the Huon Crossing at 2.30 p.m. A search was made on both sides of the river for the hut but without success. The river appeared to be in flood so an elaborate camp was set up about a hundred yards up the track. A general survey was made of the country and photos of Mt. Anne

were taken. Cold, wet and gusty conditions prevailed throughout the day degenerating into a night of steady rain and wind.

On the third day the river level had risen two feet overnight, making a crossing very dangerous, so the members began to retrace their steps back to the Gordon Road, leaving camp at 8.30 a.m. amid pouring rain.

More photos of Mt, Anne were taken from various vantage points between the snow storms. There was snow on either side of the track for a good deal of the way and the wind increased. Snow storms alternated with showers. The water level in the swamp had risen about 1 foot and all streams were carrying much more water. The stream in the forest was flowing so strongly that little evidence of underground flow could be seen. The party arrived back at the departure point at 5 p.m., very cold and hungry.

Conclusions and Summary:

The scattered showers that were forecast for the trip were not scattered very well. In wet weather the track appears to be the main drainage system for some sections. The double-walled Andre Jamet French alpine tent with sown in ground-sheet that was initially considered to be too heavy to carry on such a trip proved to be a necessity and performed very well. The major exposure problem was cold hands and mittens should have been carried.

Under the conditions experienced the time taken to walk to the Huon Crossing was 13 hours in comparison to the return walk which took 8½ hours.

For underground investigations to be made on Mt. Anne a large party of experienced members would be necessary. Air drops of food, extra clothing and caving equipment would have to be arranged as close to the mountain as possible to reduce portage weight. A period of approximately ten or more days of reasonable weather would be necessary to achieve worth-while results.

EDDIE GUINAN

SURFACE INVESTIGATION - A hypothetical case to illustrate technique and procedure.

The old saw-miller was holding forth to all and sundry with the story that his father used to tell, "-- and when the tree came down it made such a noise that the horse bolted into the scrub. They searched for two days and finally found him at the bottom of a big hole in the ground." To the cavers in the group this anecdote was of special interest.

With judicious questioning they finally ascertained that the hole was in Black Stump Valley on the side of Myrtle Mountain.

Armed with this shred of information they visited the Mines Department to see if a geology map of the area existed. The next port of call was to the Lands and Survey Department for topographical maps and aerial photos.

As the geology map showed limestone in the area and the topographical maps showed evidence of a sizeable drainage area a field trip was organised.

Interviewing the local residents of the area substantiated the "horse in a hole" story. Permission to enter and cross the properties was acquired and the party set forth with high hopes. An intermittent stream was shown on the map so this was chosen as a logical starting point.

The scrub was typically thick and the country rugged and steep so for

these conditions the party donned heavy boots, strong trousers and heavy jumpers to combat the scrub, country and weather.

Trousers were tucked into long socks, because stinging nettles and leeches were, as usual, in abundance.

Safety-helmets, hand torches and field rations of chocolate and dried fruit were carried by each member and flexible ladders, ropes, machettes and geology picks were distributed through the party.

After leaving a note about departure, estimated time of return and direction of travel under the windscreen-wiper of the car the party headed into the scrub.

Spreading out in a line abreast the team proceeded to systematically search the area. Keeping within sight and calling distance of each other, dry creek beds, active streams, dolines, drainage sinks, and limestone outcrops were examined closely. Reports of progress and finds were passed along the line to the Leader.

Word of a creek coming from under a face brought all members to a halt. While two members made a short investigation of the underground section a third stood watch at the entrance to relay information. Meanwhile the rest of the party made a very thorough investigation of the immediate vicinity. The underground members returned to report that the water came from under a wall and further progress was stopped at this point. The surface members returned to report that a series of collapses existed further up the valley. At this stage a conference was held and it was surmised that the stream was cutting back up the valley and one of the collapses could contain a swallet entrance where the surface stream was going underground.

A quick look at the geology map showed a boundary between limestone and sandstone to be approximately 2 miles further up the valley.

The contour lines showed this to be approximately 400 feet higher in altitude so the members moved towards this point. Reports from the wings of the line indicated small streams and soaks contributing to the system.

After about three hours of rockhopping and log-sliding a stream could be heard ahead. Dampened spirits and jaded muscles were quickly revitalised and the party hurried towards the sound. Bright were the faces and broad were the smiles as the members stood on the edge of a large doline with a stream cascading into the depths.

As time for the day was running out a weary but jubilant party blazed a track back to the car discussing prospects and planning a full scale underground expedition for the next weekend.

Unfortunately surface investigations seldom culminate as above but the chance of a find such as this makes scrub-bashing a rewarding activity. Unknown caves do not have signs at the entrance saying "Here is the entrance to a cave" so surface exploration or scrub-bashing as it is more commonly termed, is a necessary and vital part of speleology.

The place names "Myrtle Mountain" and Black Stump Valley" used in the text are fictitious.

GEOFF FRY.

O for a deep cool cavern
With headlights shining bright
O what a beautiful Haven
Where there's no day or night.

Where the straws hang free
Flowstone across the floor
Where the Stalactites seem to be
Hanging down more and more

The underground river never ends
Through countless bends it winds
As if to say my friends
Follow me and you will find.

The beauty of the cavern
Has always seemed a friend
With the good times we are having
I hope it shall never end.

BOB HORNER