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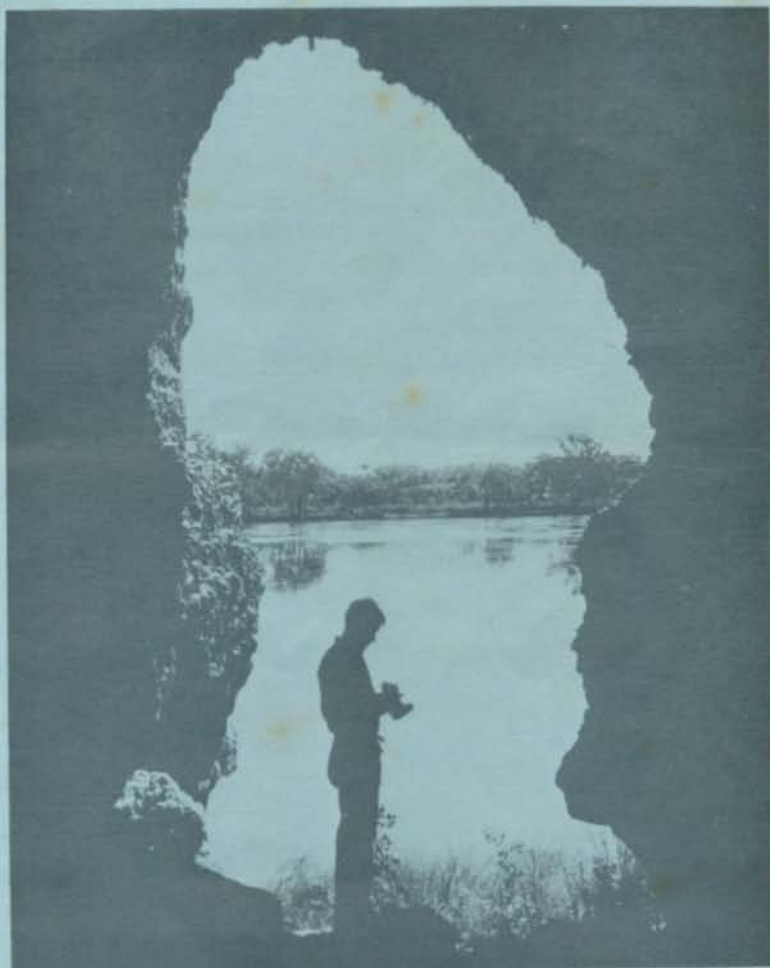
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NEWSLETTER

Punyelroo Cave
South Australia

Photo:

E. G. Anderson



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Editorial.

THE SIXTH BIENNIAL CONFERENCE OF THE FEDERATION WILL OPEN ON DECEMBER 27TH. AT MIRBOO NORTH IN THE STRZELECKI RANGES OF THE GIPPSLAND DISTRICT, VICTORIA.

THE VICTORIAN MINISTER FOR LANDS AND MINISTER FOR CONSERVATION, THE HON. J.C.M. BALFOUR M.L.A., WILL EFFECT THE OPENING CEREMONY.

NOT ONLY IS THIS THE SIXTH BIENNIAL CONFERENCE, BUT ALSO THE TENTH BIRTHDAY OF FEDERATED CAVING IN AUSTRALIA. IN DECEMBER 1956 SOCIETIES THROUGHOUT AUSTRALIA GATHERED TOGETHER TO FORM AN AUSTRALIA WIDE ORGANISATION FOR THE COLLECTION AND DISSEMINATION OF SPELEOLOGICAL INFORMATION.

CONSIDERING THESE TEN YEARS OF FEDERATION, THE EARLY ORGANISERS WHO ARE STILL ACTIVELY PARTICIPATING OR STILL IN CONTACT WITH THE FEDERATION, CAN ONLY LOOK BACK TO PRE-FEDERATION DAYS AND VIEW THE PROGRESS ACHIEVED SO FAR. CERTAINLY ALL THAT HAS BEEN ACHIEVED HAS NOT BEEN ACHIEVED EASILY, BUT ONE THING IS CERTAIN (AND EVEN THE FEDERATION'S CRITICS CANNOT DENY THIS) THE POLICIES AND ACTIONS OF THE FEDERATION HAVE BROUGHT ABOUT A STABILITY IN AUSTRALIAN SPELEOLOGY AND A GREATER AWARENESS OF THE ROLE AUSTRALIAN SPELEOLOGISTS MUST PLAY IN THE MANY PROBLEMS WHICH ARISE IN THE PRESERVATION AND CONSERVATION OF CAVES AND ALL THEY CONTAIN.

SOME WOULD ARGUE THAT INSUFFICIENT PROGRESS HAS BEEN MADE DURING THIS PERIOD, HOWEVER, IF THE HUMBLE BEGINNINGS AND THE FRUSTRATIONS OF THE FORMATIVE YEARS BE COMPARED WITH THE RAPID EXPANSION OF THE LATER YEARS, THEN IT IS ONLY POSSIBLE TO LOOK TO THE FUTURE OF THE FEDERATION WITH A FEELING OF EXPECTATION.

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NOTICES

Member societies are requested to note the following address changes;

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THE KOSCIUSKO STATE
PARK, MASTER PLAN

with particular reference to Yarrangobilly Caves.

by J. Dunkley
S.U.S.S.

Late in 1965 the Kosciusko State Park Trust made available its "Proposed plan for the Preservation and Development of the Kosciusko State Park".

A brief resume of the principles of the plan, together with the proposals with regard to the Yarrangobilly and Coolemon areas and comments thereon, is set out below.

In this scheme, zones provide for activities varying from intense commercial and general recreation to wilderness areas which are to be preserved as far as possible in their natural state. Other areas are set aside for special reasons such as historic sites and unique natural areas, while the special position of the Park means that provision also had to be made for hydro-electric areas. The Yarrangobilly Limestone Area and the Cave Creek Scientific Area are examples of the provision for Unique Natural Areas.

The former" contains all the known and probably most of the unknown limestone caverns in the vicinity of Yarrangobilly, as well as the upper Yarrangobilly Gorge." This is obviously the best that speleologists could hope for, so far as the preservation of the caves is concerned, and with proper administration would be the ideal situation. The public may be excluded from these areas except under permit.

Near Coolemon, the Cave Creek Scientific Area does not seem to be aimed at preserving caves at all, but rather" ecological evidence present at the junction of the limestone and shale geological types." This does not appear to provide sufficiently for the preservation of the caves at or near the Blue Waterhole. It would surely not be too much to expect that the trout fishermen can find areas at least as good as the Blue Waterhole elsewhere. There would then be less pressure to improve the access tracks to the area, a policy which attracts not only the fringe caver who will quite probably go in any event, but also tourists, the presence of which has been amply proven to upset the geological and ecological balance, even if not consciously, of cave areas. Although the present plan under consideration by the Trust does not provide for what responsible speleologists would regard as the ideal situation at Yarrangobilly to Coolemon, nevertheless it would be a good second best to have the status quo preserved in both areas.

MULLAMULLANG
REVISITED

by John Dunkley, S.U.S.S.

Another lightning trip during August-September, 1966 to Mullamullamang, very capably organised and led by Peter Hawkes of CEGSA, was attended by three Sydney and three Adelaide cavers. In addition, contact was made with David and Jacquie Lowry of WASG who are working on the Nullarbor at present. Transport by Holden Panel Van with trailer was remarkably trouble - free.

The aim was to extend beyond known limits, the Easter 1966 Extension and to survey it, plus any allied observational work. Because of the labyrinthine passages, surveying was carried out as exploration proceeded and in this way 4000 feet was added to the cave, bringing its length to approx the six mile mark. The end is not yet evident while distance barriers are once again becoming a barrier.

Work in the area included:

1. Exploration of another new collapse doline north of Mullamullang (N37), tentatively named "Roaches Rest" on account of the numerous dead cockroaches discovered.
2. Examination of Helictite growths in the Easter Extension have been now ascertained to be composed mostly of $NzCl$ and possibly some KCl .
3. Sediment studies in the sand dunes, indicate that the entrance passages have contained about 8 feet of standing water over a period.
4. Discovery of some unexplained tracks, possibly of a marsupial cat or other small animal, well into the Extension, at least $\frac{3}{4}$ mile from the entrance.
5. Further botanical, geomorphological and meteorological observations to add to the growing mass of information about this remarkable cave.
6. Inspection of Nurina Cave (N46), near Madura Six Mile South Cave, a classic example of phreatic development along joint planes.

Publications regarding Mullamullamang (N37) are presently being prepared by SUSS and CEGSA, whilst a paper on the geomorphology of the cave will be presented at the 1966 conference of the Australian Speleological Federation

Another trip is scheduled for January 1967. The possibilities are still unlimited and a close examination of the walls of the Main Passage may be fruitful, while the south doline may yet be forced.

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SUBTERRANEAN
RADIO PROPAGATION

Reprinted from "Stop Press" July 1966 Sydney Speleological Society
by Harry Pemble (VK2ZHP)

Tests on underground Radio Propagation were carried out at Walli Caves on the 21-22nd May, using three frequencies: 27 Mc/s, 8.5 Mc/s and 3.7 Mc/s, with transistor and valve Walkie Talkies of power approx. one watt on each frequency. A number of units were available on each of the 3 frequencies. Also to hand was a small Japanese 3 Transistor Handie Talkie with a crystal Modulated Oscillator of 10-20 milliwatts, and a Super-regenerative receiver. All larger units had a superheterodyne receiver.

On the surface, over hilly country, the small 3 transistor unit in conjunction with a one watt 27 Mc unit gave readability 5, strength 5, signals both ways over a 1 mile range, and contact was not lost even with intervening hills. With the small unit underground in the Bone Cave (depth approximately 50-60 feet) and the larger unit on the surface, a maximum range of approximately 150 yards from the cave was achieved before contact was lost. Using a 3.7 Mc 1 watt in the same cave and one on the surface, contact was maintained even when negotiating the bottom of a creek gully half a mile away, and over an intervening ridge from the cave. Poorest signals both ways were then R3-S3. In the final experiment one unit on all three frequencies was set up about 100 feet below the surface in a cave and also on the surface up above, and it was established that all frequencies were giving R5-S9 signals both ways. However, about 200-300 yards away at the entrance of another small cave 27 Mc was R4-S4, 8.5 Mc somewhat better and 3.7 Mc still R5-S9. Next the cave was descended to some 20 feet depth and 40 feet in, and contact again established in 3.7 Mc, giving R5-S6 signals both ways, while on 8.5 Mc carriers could just be detected both ways, i.e. R1-S1, but no signals could be detected in either case on 27 Mc.

The 27 Mc and 8.5 Mc units used 4 foot whip antennas, while the 3.7 Mc units used a 5 foot centre loaded whip. Even so the 3.7 Mc unit would have had the least efficiency and the 27 Mc the highest. The largest possible underground caverns were chosen for the experiments, so as to minimise changes in antenna characteristics. Again the 27 Mc would be the most advantageous in this regard, and the 3.7 Mc the most affected. Vertical polarisation was used mostly, but some odd rotations of the plane of polarisation were noticed, particularly on the higher frequencies as might be expected.

These experiments dramatically illustrated the increasing ground wave attenuation with frequency, despite the increasing antenna efficiency. As a result the Society is seriously considering changing all of its BC-611 Walkie Talkies to a frequency in the 2-3 Mc region, which we believe is in the vicinity of the optimum frequency between attenuation and antenna efficiency for these and similar type sets.

It is hoped to carry out other experiments in the future in the 6 and 2 meter bands.

It is also possible that the increased attenuation can be overcome by using greater receiver sensitivities, antenna efficiencies and higher antenna gains to be realised with the use of Yagi beam antennae, which at these frequencies should be small enough to erect underground.

Further experiments at lower frequencies below the broadcast band will be conducted if some small portable high efficiency antennae can be devised for these frequencies.

ICE FORMATIONS
AT YARRANGOBILLY

by John Dunkley, S.U.S.S.

On October 2nd, a combined SUSS-SSS party exploring the Western Eagles Nest Cave, (Y2), at Yarrangobilly, N.S.W., located some extensive ice formations. Such phenomena have been noted at Yarrangobilly before, both in this cave and the Glory Arch. Both of these caves have a more or less southerly or south easterly aspect and the sun never reaches the entrances.

It is believed, however, that this is possibly the most extensive ice formation yet found.

The ice occurred in several locations up to 300 feet into the cave, in one place the main passage was almost blocked by several 3-4 foot stalactites and a number of smaller stalagmites. In several other places there were flows of several square yards in area and up to 4 inches deep, whilst in another there was a flow approx. 15 feet long. The ice was mostly quite opaque with numerous fractures, presumably due to melting and subsequent re-freezing. The weather at the time had been fine and warm for several days, with a temperature outside of about 55-60°F and cave temperature of about 40-45°F. Night temperatures during the time we were there did not fall below freezing, although there was an unseasonably heavy snow-fall the night after the observation.

NOTES ON THE COLLAPSE IN
THE ENTRANCE OF THE GRILL
CAVE, BUNGONIA. N.S.W.

by E. Crabb
H.C.G.

The first general observations of a possible collapse in the entrance chamber of the Grill Cave (Bungonia Cave) were made in the period January-March 1965. This was observed when favourite "seats" appeared to change and the various squeeze routes directly below the entrance were noticeably altered. Over the following year, these changes were kept under close surveillance. It soon became apparent that a definite change was occurring.

Since January 1966, dimensional checks have been maintained, however, due to errors in locating the source of the collapse, the checks were of limited value.

Initial observations suggested that settling was occurring on the left-hand side of the path immediately inside the entrance. Several check point were established. During one period of 8 weeks, a 2 inch change was noted in this area. However, it became apparent that the area on the right-hand side of the path, immediately inside the entrance was collapsing at a much faster rate to the extent that a fist size hole in the floor has opened to a size of 4 feet by 2 feet and a former antechamber is now part of the main chamber. Rocks around the entrance have collapsed, leaving the entrance grill unsupported. A large boulder, 5 feet in diameter, at the entrance was found to have little support and constituted a major hazard to the innumerable casual visitors. This has been eased down to a safer position.

It is now considered that the collapse was initiated by a slow lateral movement of the base boulders, loosening the soft cementing in the floor of the entrance chamber. This in turn is effecting the wall between the entrance chamber and the doline, including the path outside.

At this stage it is difficult to predict the ultimate extent of the collapse.

ABSTRACTS AND REVIEWS

ROSE, P.V. - AN INTRODUCTION TO THE YARRANGOBILLY CAVES, NEW SOUTH WALES,
AUSTRALIA.

Part 1 : Cave Science, 5 : 203-216 (Oct. 1964)

11 : Cave Science, 5 : 239-249 (Apr. 1965)

111 : to be published in a forthcoming issue of Cave Science

The more experienced cavers in all parts of Australia will remember Paull Rose, who departed Australia in 1963 and is now treasurer of the British Speleological Association. During his caving in this country, Paull became perhaps best known for his explorations of the Yarrangobilly area in company with Hugh Myers, and his resultant encyclopaedic knowledge of the area.

His present series of papers on Yarrangobilly are especially welcome, serving to pass on his accumulated experiences. I personally have a strong regret on reading them - that similar work on Australian areas is virtually non-existent. Perhaps only the Nullarbor and the Victorian volcanic caves have been as well documented. More adequate description of Australian cave areas is urgently needed, both to record existing knowledge as a base for further work and to prevent the meaningless repetition of exploration which continues in many areas.

Paull's first paper deals with the general description of the area, and suggests that the limestone may be divided into four watershed areas:- the Coppermine drainage, the Deep Creek drainage, the Eagle's Nest drainage, and the Southern drainage, which includes the present show caves. A map of the plateau indicates these four areas clearly, whilst a sketch map of the Coppermine drainage and a section from Y10 and Y12 is provided. The known caves of the drainage are described, with a number of suggestions forwarded for further exploration. (See "Water Tracing at Yarrangobilly " A.S.F. NEWSLETTER, 32, 11-12 (June, '66)

In the second paper, the Deep Creek and Eagle's Nest Drainages are described, again with details of the known caves. A hypothesis regarding the sequence of cave development in the Deep Creek watershed is presented. Regrettably, the only map included is that of the Restoration Cave, although maps of Y2 and Y5 have been promised in the third paper, which will cover the Southern drainage.

These papers provide an excellent example of the useful speleo-geography as they not only give useful cave descriptions, but place the caves into their landscape, dealing with the area in a logical sequence. Places where further explorations are most likely to prove fruitful are indicated, and a number of suggestions are offered regarding drainage patterns. One hopes that this publication will prove a spur to further exploration in the area, and will also avoid the time-wasting coverage of old territory which otherwise would so often occur.

DOWN UNDER ALL OVER

. . . Caving slackens off towards the end of the year as members of societies find themselves committed to more important activities such as studies.

This is reflected in the reduction in size of the "Down Under All Over" column in this issue.

With the coming of the Christmas season, and the annual holidays of the greater portion of Speleological Society members, there is no doubt that an upsurge in caving will occur.

The results of this upsurge will be reported in the March issue of the Newsletter.

In this issue we are able to report a cave discovery at Wombeyan, the continuation of excavation work on the Bungonia Efflux, (both in N.S.W.), and major cave discoveries in Tasmania and South Australia.

CAVE EXPLORATION GROUP (SOUTH AUSTRALIA)

Members of the society have spent some time caving on Kangaroo Island off the South Australian coast. The objective of the trip was to survey and further explore a recently discovered cave on the Island.

a surface search in the area located another ten sink-holes most of which required excavation to penetrate beyond their first initial chambers.

In one cave fossil remains were uncovered; as yet, not identified.

The society reports that members will be concreting the entrance pipe of Sand Cave (largest known cave in the South-East of South Australia) to prevent surface sand from blocking the entrance.

ORANGE SPELEOLOGICAL SOCIETY

Cliefden

Two trips to the Cliefden area have been made by this Society recently.

The first of these was to prepare photographs to accompany material being prepared by a S.U.S.S. member for the caving magazine THE SPELEOLOGIST* and to carry out surface exploration at a location east of the main caving area.

Two worthwhile dolines were located, the first having an opening under a large boulder. A drop of about 5 feet was observed, the rock not permitting entry further. The second doline consists of a depression on the peak of a hill. Several other outcrops were observed but not investigated.

Another trip to the area was spent in the Boonderoo Cave where exploration of the fissure in the 'Milk Bar' was the main objective. A very unstable rock jam in the fissure was forced to give access to a moderately sized room one side of which is formed from a boulder and soil fill. A further upward lead could not be forced with the equipment available.

The society's magazine "DESCENT" reports that plans to build a dam on the Belubula River which would flood the Cliefden Caves has been shelved.

* "THE SPELEOLOGIST", c/o 24 Southernhay West, Exeter, Devon, U.K.

UNIVERSITY OF N.S.W. SPELEOLOGICAL SOCIETY
AND METROPOLITAN SPELEOLOGICAL SOCIETY

General activities in exploration and survey preparation at Wee Jasper, Wyanbene, Bungonia, Jenolan and Tuglow.

Jenolan

The M.S.S. has made several trips to Jenolan over the past few months the main objective being initial familiarization with the area. Only the cave systems around the main tourist area have so far been entered; the intention being to work upstream over a period of time.

Bungonia

M.S.S. has progressed further in excavation work outside the reserve with the addition of several more holes, one of which shows promising results to date.

M.S.S. also entered Argyle Pot (B31) as far as the third pitch level and now the two groups plan a further descent as M.S.S. has now manufactured sufficient ladder to cover those UNSWSS ladders destroyed for safety reasons.

In conjunction with the Highland Cave Group, M.S.S. has placed a warning sign on the entrance gate of the Grill Cave (B13) to advise parties entering the cave of the dangerous condition of the entrance chamber. (See page 5).

Tuglow

UNSWSS had made one further trip to Tuglow, filling in more floor and wall details in the passage above the 30 feet waterfall. September and November examination periods appear to have stopped further caving.

SYDNEY UNIVERSITY SPELEOLOGICAL SOCIETY

An extension to the Fig Tree Cave at Wombeyan as a result of survey work. Trips to the Central West of N.S.W., and Timor Caves in the Northern Tablelands.

Wombeyan

S.U.S.S. has been surveying in the Fig Tree Cave at Wombeyan over the past few months.

During one survey trip, an extension to the cave was discovered by forcing a rock pile in one of the lower stream passages. The extension contains excellent formation and "remarkable solution features". A compass and tape survey has been taken as a preliminary to the higher grades being used in the other sections of the cave system.

Central West

Several areas in this district have been the subject of attention by SUSS members.

An outcrop of limestone at Bakers Swamp was visited but no caves were located, however, at Stuart Town two caves were located. The report suggests that both caves are the remnants of a past, larger cave system as they both contain considerable amounts of old, weather-worn stalactites and flowstone.

One larger cave was located and investigated briefly.

SYDNEY SPELEOLOGICAL SOCIETY

Jenolan

Excavation work in J41 continues to play a major role in the society's activities at Jenolan, although survey training trips appear to have been prominent. Scaling poles have been employed in Frenchman's Cave.

In J41, the 'dig' continues at the bottom of the 'Pit of Babel' and a considerable draught has kept interest high. However, on the last trip to J41 the 'dig' was flooded so progress has been halted temporarily.

The Frenchman's Cave (J18 & J23) has been known for many years but the roof had never been systematically searched. Investigations with a scaling pole failed to open up any new caverns, and a 'dig' at the bottom of a rock pile was pushed until work became dangerous. The elusive second entrance to the Jubilee System still remains a goal for future activities.

Bungonia

The trench to the Efflux pool has been deepened further. The Society began work on the efflux eleven years ago and has excavated a total of 35 feet in vertical height at the cliff face. Calculations indicate that a total of 220 cubic yards of rock and soil or about 330 tons have been removed during this period. A quite formidable figure!

Colong

A repeat Grade 5 CRG survey in Woof's Cavern was carried out linking the points fixed with the Radio Direction Finding Equipment at the West end of the cavern, to a survey station in the approach passage just beyond North East end. These two sections of Woof's Cavern have now been plotted in relation to each other.

The passage leading off the Beach Cavern was mapped and found (as was expected) to link up with the Pulsating River region of the cave system.

Wombeyan

The river cave below the Glass Cave was mapped and a topographic survey between the Glass Cave and River Cave carried. The surface survey was extended to the efflux on Mares Forest Creek. This was then continued back over the ridges to the River Cave, a total distance of approximately 8,000 feet. It is now intended to continue the surface survey to include all the known caves on the reserve and also those on the private property leased by Industrial Rock Mining Ltd.

Cheitmore

Thirteen members visited the Cheitmore Caves, the Big Hole and the Marble Arch. At Cheitmore, a small extension was dug out in the main cave whilst at the Marble Arch a colony of 4-500 unbanded bats were reported in a cave system which is entered via an abseil down the gorge wall.

TASMANIAN CAVERNEERING CLUB

During the last three months, great discoveries have been made in Tasmania.

In Exit Cave, Ida Bay, a breakthrough in the Talus pile at the far end of the cave has been made. A further half mile of stream passage has been discovered with prospects of more if a way through the Talus can be found.

A number of side passages have not yet been explored. The new discovery makes Exit Cave approx. $1\frac{1}{2}$ miles long, the longest in Tasmania and possibly the second longest in Australia. The known end of Exit Cave is now considered to be only 1200 feet away from the end of Mystery Creek Cave. A connection would make the combined system at least $2\frac{1}{2}$ miles long. Survey work is being carried out in both the previously known cave and the new extension even though exploration is a great attraction at present.

Following this major discovery, a flow-stone wall at the far end of the known extent of Khubla Khan Cave at Mole Creek has at last been scaled and the extension found has yielded a chamber 600 feet long, 100 feet wide and 80 feet high. Extensive decoration includes one column 40 feet high and 10 feet in diameter. Helictites abound in profusion, together with awe-inspiring displays of flowstone, stalagmites and stalactites, all contained in a series of chambers extending beyond.

Notwithstanding the achievements in Exit and Khubla Khan Caves, the club has been quite active in other areas.

Maydena

Following up a request from Paull Rose, an ex-Australian caver now in Britain, members of the club entered Pillingers Creek Cave in an attempt to rediscover a possible route found by Paull and others through Talus whilst surveying the Cave during the 1958-59 A.S.F. Conference. It was blocked by collapse as they tried to explore it. Twelve members of the club spent a day probing the Talus near the bottom of the cave without success.

Kelly Basin

A combined trip with members of the West Coast Outdoors Club, saw 38 persons combing the Kelly Basin area for caves. Only one cave was located, it being small in dimensions and only 200 feet long.

Mole Creek

Several trips have been made to Mole Creek with visits to Marcakooopa 1 and 2 Caves, the Devils Earhole and Devils Pot. In Devils Earhole, an attempt was made to scale a vertical wall using expanding wall bolts.

In Devils Pot, the Northern Branch of the society has reached a depth of 350 feet. Further trips may result in breaking the Australian depth record of 560 feet accredited to Growling Swallet, in the Florentine Valley of