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Lumen in Tenebris

SUSS

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NEWS HEADLINES

MEXICO Al Warild (UNSWSS) reports from the recent US expedition (in which Tony White of SUSS also took part) that they explored a new system called Nita Nanta, which was 900 m deep to its terminal sump. Al describes it as the grottiest cave he has ever been in. Lt Nita was extended to ~960 m to a sump, via a side passage.

KIMBERLEYS, WA Ian Mann and Roy Winstanley took part in a recent Victorian trip to the Kimberleys. They actually found some shafts, the deepest being 60 m to water. Full report next issue.

KOSCIUSKO The Draft Plan of management forthe Kosciusko National Park has now appeared. The bits relating to the caves at Cooleman & Yagby are reproduced in this issue. There is also much of interest to the cross-country skiing fraternity, so have a look at the copy in the SUSS library, and get your comments to Ian or send in your own submission. This is your chance to make your views heard !

JENOLAN The Heffalump Trap has gone ! Some spirited digging has given a 6m extension, complete with formations. Maybe we'll find the Southern Limestone Master Cave yet !

* *

REMINDER - All prospective memberships are now OVERDUE

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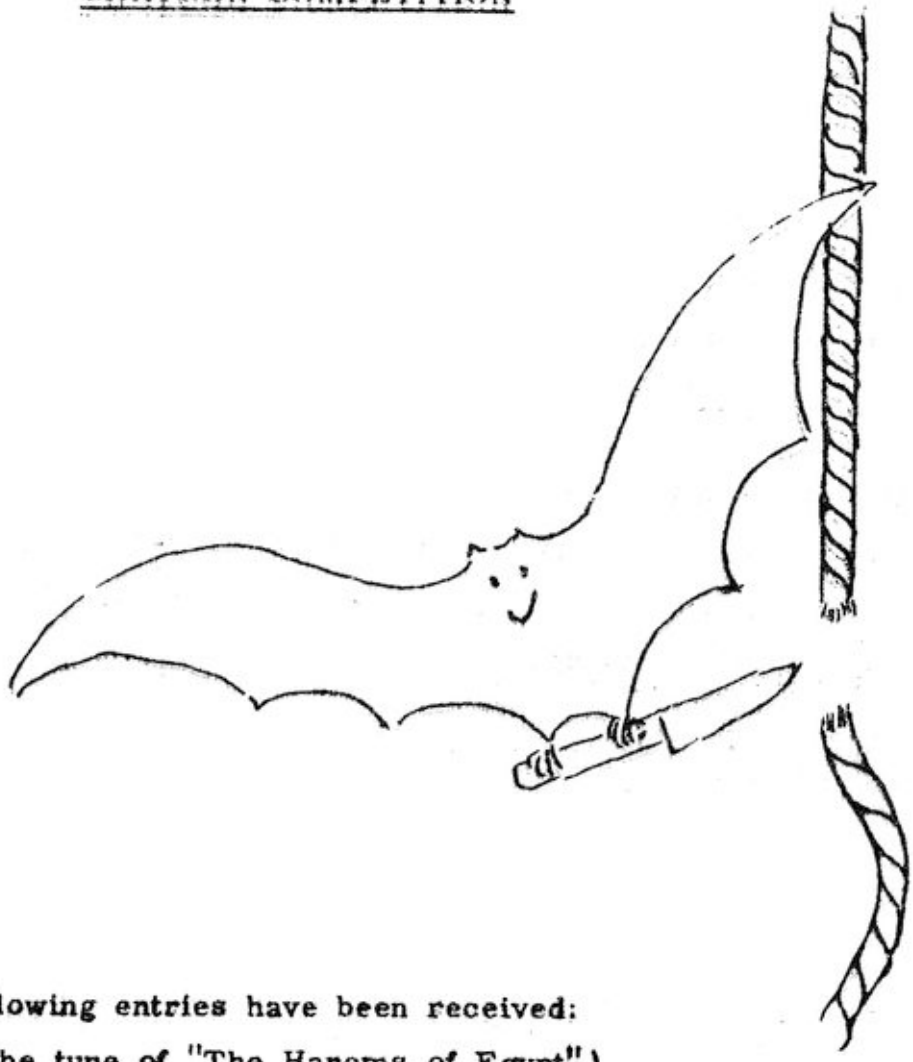
CARTOON COMPETITION



The following entries have been received:

1. (to the tune of "The Harems of Egypt")
(But the cream of this joke,
When apart it was broke,
Was laughed at for years by the czar)

For Abdul, the dope
Had left half of the rope
With Ivan Desailly - skavar. Mark Twigg

2. You'd have to be bats to do Kalang with Mike ! Anon.

3. "Well, Mike, I've heard some excuses, but I must say . . . . . " Anon.

The prize goes to Anon for No.2, and has been drunk by the editor on his behalf.

* * * * * * * * * * * * *

A historic newspaper article has been given to SUSS by Mr. Oliver Chalmers, retired mineralogist at the Australian Museum, through the good offices of Glenn Hunt. It is reproduced in reduced format on the next page. NB columns 4&5 continue overleaf.

FULL SIZE REPRODUCTIONS 50 cents FROM GUY OR BRUCE.

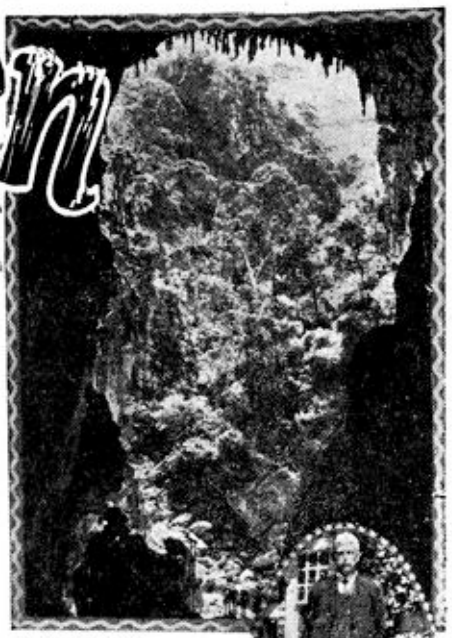
Cave Men

TOIL IN CORE of MOUNTAIN

Even dreams of marble halls become commonplace beside the dazzling magnificence of the chambers columned by glittering stalagmites and stalactites in Jenolan Caves.

But to be the first to tread many of those underground temples of clashing splendor has been the experience of James Wiburd, for 42 years a guide at the Caves. Here is the fascinating story of the perils and the triumphs that have been associated with the subterranean explorations of this Columbus of the Caves.

Flare illumines Devil's Coach-house.



Devil's Coach-house —from Nettle and Arch Cave.

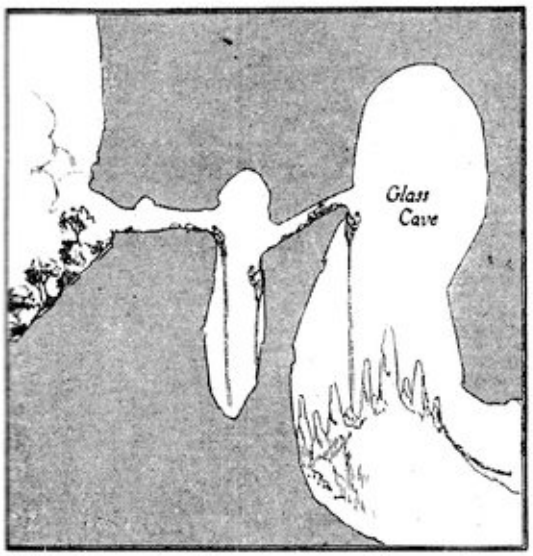
Mr. James Wiburd

SHADOWS as smothering as a flood of pitch. . . . Rocks of fantastic shape that seem to snarl like crouching beasts. . . . A livid glow dancing on bewildering glacial walls. . . . A muffling damp air as in a crypt. . . . An

Then floats up the sharp note of an explosive splash!

The underground river!

It sounds like Jules Verne's fantasy of a weird electrical sea in the core of the earth, or perhaps the reconnaissance of a couple of Palaeozoic



The skill of a trapeze artist and the eyes of a cat are needed in cave exploration—a typical experience of Wiburd and Edwards.

silence that seems to light on like a living thing. . . . Two men crawling through black prehistoric mud, panting, sweating, reeling. . . .

A geological color fantasy winking like the eyes of some monster in the black core of the mountain, and flaming hither and thither—a green will-o'-the-wisp.

* * * * *

Pieces of rock drop with the roar of cannon. Echoes crash and tumble along endless rock galleries. The mud slops sullenly. A crowbar clangs like a great cathedral bell. A candle splutters. Its blue flame leaps. A gust of cold damp air chills the cavemen.

A draught!

Where there's a draught there's a new cave. Mud-bespangled faces peer at each other in awe. The crowbar peals again. More rock crumbles and slides and crashes.

The candle wanes. The smile of triumph vanishes. The crowbar has gone. It is as if it were snatched by the outstretched tentacle of some monster lurking ahead in the black void.

The crawling men cling to a muddy ledge. Down crashes the crowbar, striking metallic echoes from the walls of a mighty chasm. Down, down, the echoes grow fainter to the tinkle of the hammers of elves.

scouts round a primitive rock fortress. It is a story quite as intriguing, yet Jimmy Wiburd will tell you it was simply an ordinary day's work of Edwards, his pal, and himself.

Wiburd is well and favorably known to a vast host of Sydney people. As chief guide at Jenolan caves he has in 42 years shown scores of thousands of Sydney holiday - makers the dazzling charms of the Orient Cave, and the treasure house of glittering jewels in the Left and Right Imperials.

But Wiburd is the Columbus of the caverns. He is more. He is the underground Vasco da Gama and Frobisher and Franklin. He has found north-west passages and south-west and north-east and north-by-north-west, and tunnels running from and to every point of the compass. With Edwards he has penetrated into new and magnificent chambers, sparkling with diamonds. Like Carnarvon in the tomb of Tutankhamen, he has been the first to tread mighty throne rooms of ancient Eastern splendor underground, flanked by stalagmite columns in white and crimson. With a flickering candle he has threaded his way through those geological jungles—a subterranean Stanley.

In the role of a modern Cortez it was he who lay sprawled on the muddy ledge of a narrow gallery and gazed down into the chasm through which flows an eerie river, for thousands of geological years muffled in inky shadows.

Victories of Peace

For Jimmy Wiburd is a cavenan in the most literal sense of the term. He knows his caves as a Covenanter knew his Scripture.

In darkness that could almost be felt he has pluckily shinned his way along a rope down declivities where dainty satin and snakeskin shoes now patter by way of concrete steps, and in the full glare of electric lights.

He has seen develop and helped to develop that intricate system of stairways and railings and walks through those jewel-crusted caverns. He has seen those winding galleries and pits gradually become as well-illuminated as the tiled tube of the city railway.

But of all his wide range of reminiscence associated with Jenolan, the perils and difficulties of cave exploration make the most fascinating chapter. With his henchman Edwards he has followed a draught of air in those tunnels with the keenness of a prospector shadowing a seam of quartz. For down there draughts can only filter from other caves. In his pursuit of this geological Eldorado he has experienced all the thrills of the mountaineer and the miner.

With Edwards, Wiburd burrowed through a plug of mud that clogged a gallery about 200 feet long. Crawling flat on their stomachs, with the jagged rocks of the ceiling above them tearing great scratches in their backs, they conquered the mud barrier. They were on the threshold of a momentous discovery.

Though they were unaware of it, they were tearing away the seal of a tomb, not a seal placed there by human hands, as barred the way to the sarcophagus of Tut, but a natural and inexorable seal. Their discovery was as memorable to geologists as the finding of Tut was to archaeologists.

Their victory over the mud and loose stones led them into a vast new chamber. The glow of their candles danced a mad cachuca on the colored rocks, and drew silver fire from the forest of stalagmites.

Above them yawned a black void. The eerie drip of water broke the awful silence. As they advanced across a sandy floor the weak glimmer of the candles lit up something yellow and sinister. Bones browned with age were embedded in the rock floor.

"They are bullock's bones," panted Edwards, in bated breath.

Down the Funnel

"How could a bullock get in here?" Wiburd shot back, also over-awed in the presence of those grisly relics.

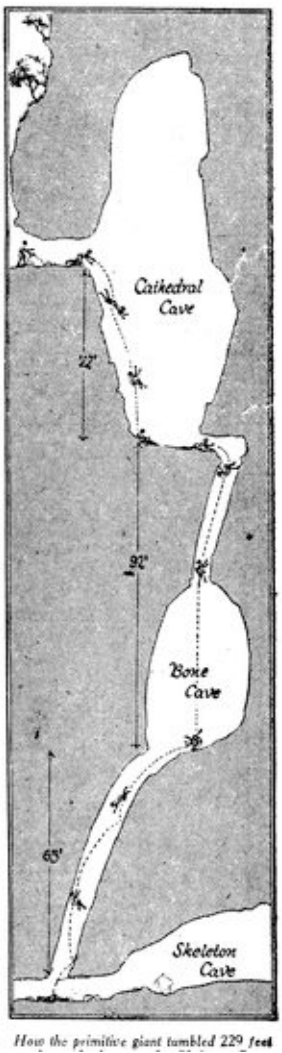
They were not bullock's bones. A skull lay there half-buried in rock—a human skull, with a great protruding brow and high cheek bones. Both men looked up at the black endless vault above them with a shudder. The owner of the yellowing skull had dropped down that awful rock funnel!

Geologists determined later that the skull belonged to an aboriginal, and was 6000 years old. But it was Wiburd who reconstructed that faraway tragedy of the mountainside.

Later discoveries of other galleries conjured the picture of some primitive man—a giant 6ft. 6in. in height—wandering through primeval forests, whose only remnant today is perhaps the imprint of a fern or a tree trunk on a rock wall. Attracted by the yawning black chasm in the mountainside, and threading his way through gigantic forests, that remote Australian got into the gal-

The skull of the skeleton.

Another great moment in Mr. Wiburd's career was when, after crawling painfully along a water-worn passage, he shouted aloud, and his voice rang eerily through a vast chamber in the darkness. This was the beautiful Temple of Baal with its white stalagmites and fanciful sacrificial altars of crimson.

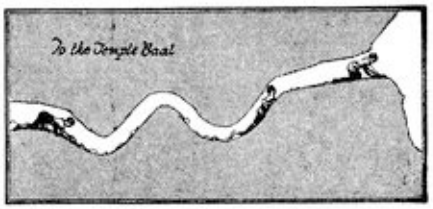


How the primitive giant tumbled 229 feet

lery leading to the Lucas Cave. He may have been pursued to the entrance by some fearsome monster of the forests.

Certain it is that he crashed down 72 feet into the Lucas Cave, and landed on a ledge. There he apparently stumbled to his feet, only to drop head first into that 92 feet pit of what is now Bones Cave, rebounding from the wall and hurtling another 65 feet to the floor where his bones in the centuries merged with the rock.

In this same eerie vault Wiburd and Edwards discovered a pool of water later called the pool of Cerberus. They struck the underground river, and after great difficulties made a crazy boat of a pickle box and two kerosene tins. In this fragile craft they crossed the steady flowing river in the bowels of the earth, a second Bass and Flinders in the Tom Thumb.



Clambering through the serpentine gallery leading to the Temple of Baal.

Investigation of the river cave led them to find the minaret and Esther, the weird stalagmite figure that resembles the shimmering Lot's wife in the Left Imperial Cave. It led also to the finding of an immense cavern with a sandy floor, showing that it had recently been covered by water, the "recently," of course, involving 5000 years or more geologically.

Wiburd and Edwards were the first to penetrate the tortuous paths that led to the sublime Orient Cave. He says he was staggered by the magnificence of the Indian Chamber when he first stepped into its death-like silence. They walked on a floor of jewels, and all round them seemed to be some glittering scene of Aladdin's Cave in a pantomime, and men in black braces might be expected at any moment to come and move some of those dazzling stalagmites.

"It seemed a sacrilege to walk on that sparkling floor," said Mr. Wiburd.

James Wiburd led the Duke and Duchess through the Left Imperial Cave last month. Among the many other distinguished visitors to whom he has shown the beauties of the Orient Cave are Prince Joseph of Battenberg, the Crown Prince of Brazil, Lord Bryce, Robert Louis Stevenson, General Pau, Lord Allenby, and General Birdwood.

TRIP REPORT - COOLEMAN PLAIN. Easter 1981

Present: G. Smith, R. Tunney, J. McKinnon, S. Bunton, D. Stoffels M. Laurendet, I. Lutherborrow, H. Turton, A. Wright, B. Pearce, A. Tawning, D. Denny & others.

Friday

Those that had arrived by 11am set off down Cave Creek to the waterfall area, then up to the right and along the top of the ridge to the junction of Cave Ck. and the Goodradigbee River. Two caves in the area were visited. Goodradigbee Cave is well decorated and currently dry. Shatter Cave is a lovely short through trip with a small stream. The late arrivals at camp went walkabout near River Cave. Most people went to bed early that night although a few managed to carry on with singing and other such frivolity.

Saturday

Rik, Anne & Janine went walking near Mt Selwyn, while a group of beginners took a late start and explored Cooleman Cave. Most of us set off on a magical mystrey tour, visiting Coolamine Homestead, Devils Hole sink, Cliff Cave, Murray Cave and River Cave. Some braved thesump in River Cave while others preferred to keep their ears dry. Mark decided that diving the sump wasn't important and so technically he wasn't piking. He copped heaps that night at a much revitalised campfire.

Sunday

Rik, Darlene & Helen went back to Mt Selwyn. A small group went down to Barbers cave while Mark, Steve & Dirk set off to restore Mark's self-esteem by diving the much longer and spookier Easter Cave sump (4 metres). Mark, having found sump diving to be simple, spent the rest of the day planning how to get an underwater photo of adive. They returned to camp and then did Zed Cave.

Janine and Anne went to River Cave. Macka forgat to take her wetsuit and so did the cave in shorts and T-shirt to prove how tough (senseless) she is!

During Easter 2 years ago Janine & I succeeded in pushing a downstream extension in Frustration Cave beyond "sump" 2 by pushing/digging a very tight bit. We were stopped several metres later by a third sump. Unlike Sumps 1 & 2 this is wet to the roof even in the current dry conditions in the area. Brian, Ian, Janine & I set off to push this sump. On the way in Brian had to return to the surface to throw up (yes, the cave is that obnoxious). I carried on to Sump 3, but Ian got stuck in the squeeze, and Janine remembered how long she was stuck for last time. I decided to carry on without them. The sump turned out to be about two metres long, about crawling size and easily negotiated with the aid of a face mask. I surfaced in a small section of passage

leading to a duck. I returned through the sump to yell back to the others that I was going on. So back through the sump again, through the duck, and into clean 'dry' stream passage. After about 2 this got a bit tighter, but still quite negotiable and roaring off into the distance. THINKS ! Here I am, no help this size of a bloody tight squeeze and a sump, and no confidence in my light. Time for a strategic pike. I returned through the sump and then the squeeze; 2 metres short of Ian my light died, proving the theory that cowards live to run away again. So there is a very much going passage just waiting for someone to make themselves famous in, by discovering "vast innumerable caverns" or better still an easier way out. The only qualifications needed to obtain such fame are to have short leg lengths, weigh less than 65 kg and to have no more than just enough intelligence to remember to hold your breath in a sump.

Several people had too much to drink that night.

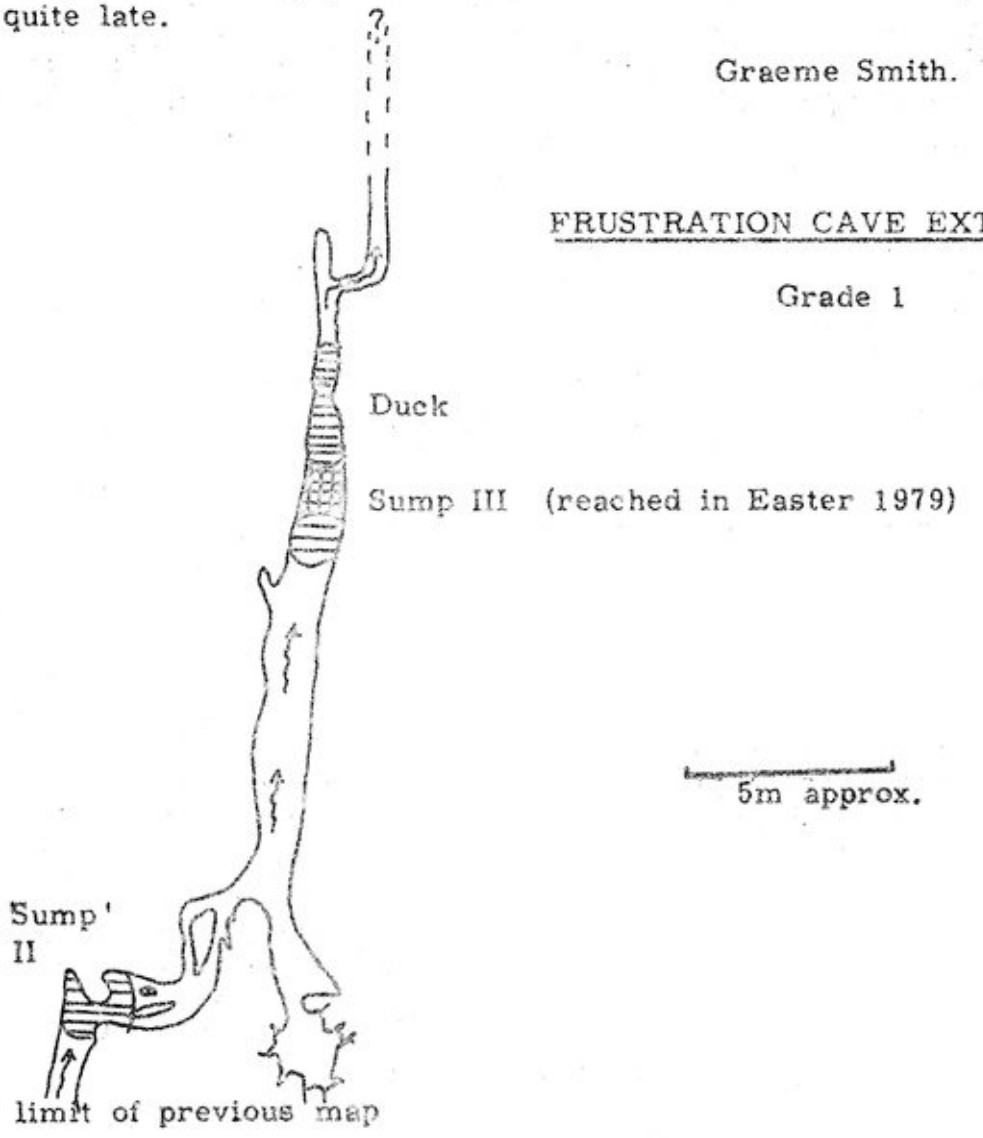
Monday

We packed up early and set off early to havea look at Cave Creek below Black Perry on the side of Talbingo Mountain. We dropped into Jounama Ck. and then climbed Cave Ck. for several hundred metres without finding any limestone. Any future attempts should come from the fire trails on the top and ignore the steeply descending part of the creek. We returned to Sydney quite late.

Graeme Smith.

FRUSTRATION CAVE EXTENSION

Grade 1



This is now in the SUSS library; the parts relating to Cooleman Plain and Yarrangobilly are reproduced below. SUSS will be making a submission, so if you have any comments, send them to Ian Mann.

1.3.4 Cooleman Plain Management Unit (7,700ha, A4 on Summary Map)

The outstanding natural resources of this area include:

- the Cave Creek gorge and waterfalls
- the Blue Waterholes springs
- many caves, sinkholes and related features on the limestone, which are of outstanding scientific, educational and nature conservation significance
- many other features of outstanding geological interest—including geological type sections, fossil sites and some particularly interesting mineral occurrences
- the sites of a very substantial number of internationally significant scientific research investigations—especially into the hydrology and geomorphology of limestone terrain, and into inverted treelines
- several Aboriginal sites
- scenery consisting of a broad grassy plain rimmed by a series of timbered hills and peaks
- a wide range of montane and sub-alpine vegetation
- numerous other natural features of considerable scenic interest and scientific, educational and nature conservation significance
- many special recreation opportunities, including walking, caving and fishing

The Management Unit contains a number of man-made features, including:

- the Coolamine Homestead complex, including the homestead and various outbuildings, introduced deciduous trees, fences and yards, and many other relics—in many respects the most outstanding single complex of historic buildings in the entire Park
- Harris and Bill Jones Huts, and the ruins of Spencers hut
- several small mining sites and prospects
- management tracks (shown on Summary Map)
- several old or illegal vehicular tracks (not shown on Summary Map)
- various fences
- scientific experimental sites and geological drill sites
- camping area, rubbish bins and pit toilet at the Blue Waterholes

Management of the Cooleman Plain area will take account of: the vulnerability of the caves to disturbance, and the extremely complex drainage network of the caves and entire limestone area; the sensitivity of the soils and plant communities to damage under some conditions; the outstanding value (and vulnerability) of the Aboriginal sites and historic places, especially the Coolamine Homestead complex; and the desire of considerable numbers of people to use the area for various forms of recreation.

Management of this area will be in accordance with the objectives and practices specified in 1.1 and 1.2 above, and will be subject to those other sections of the plan that are shown for this Management Unit in the legend on the Summary Map.

Proposed additional objectives

- to maintain the outstanding scenic qualities of the Blue Waterholes and Cave Creek gorge
- to maintain the waters and aquatic communities of the streams and cave systems in as natural a condition as possible
- to protect the caves and the significant features they contain from disturbance
- to maintain, present and interpret the outstanding historic character of the Coolamine Homestead area, and the other historic places

Proposed additional management practices

Cave management

The limestone caves and related geomorphic features of the Cooleman Plain area are of outstanding scientific importance. Some of the caves are extremely vulnerable to damage, and others are quite dangerous. Some have interesting historic associations, and some are quite suitable for any responsible person to visit.

Both the management of a series of caves with these many different attributes and the protection of the important features of the cave systems are complex. The configuration and nature of the caves means that presenting them to the public as conventional tourist 'show' caves (such as Yarrangobilly—see 1.3.5 below) is not practical. Management options for each cave include access for any properly equipped party, or controlled access for: groups with specially qualified leaders, speleological groups, and scientists. Whatever different options are ultimately implemented for each site, it is essential that the system of management controls be clear, consistent and, above all, workable. It is proposed that the Service, in consultation with speleological and other user groups, scientists, and other specialists, will prepare a detailed karst area management plan, which will include:

- a management classification of caves and related features, defining objectives and management practices for each
- an interpretation programme to provide visitors with an awareness of the natural features and environmental processes of the Cooleman Caves, and the scope to experience different aspects of them
- guidelines to ensure that the objectives for each class of features can be achieved
- specification of research priorities
- a list of management works or operations required to protect or rehabilitate any site.

Copies of the Cooleman karst area management plan will be available to the public.

Access

To overcome the present problems of erosion and track damage, the Blue Waterholes track will be relocated and reconstructed on the following basis:

- The section south-east of the Blue Waterholes will be substantially relocated well away from boggy areas into the timbered area above, and will cross Cave Creek upstream of the present crossing.
- Works will only proceed after environmental impact assessment has demonstrated that no significant fossil sites, mineral localities, or other important geological or geomorphic features will be damaged.
- Construction and reconstruction of the track will be to a single lane two-wheel-drive dry weather standard.
- Track construction and maintenance will include procedures to prevent siltation of cave drainage systems.
- The track will be closed in winter, and during or after wet weather.
- The old track, and all other vehicular tracks within the Management Unit (except for management tracks) will be rehabilitated.

Car-based camping

Large numbers of people camp at the Blue Waterholes; this is now leading to significant environmental disturbance, and alternatives will be provided. Two new camping areas will be developed off the Blue Waterholes track—both of them outside the catchments of the cave systems. One will be about 1 km off the Long Plain Road near the headwaters of Peppercorn Creek, and the other in the timbered area behind Pockets Hut. Each location has reliable water and firewood and will be equipped with fireplaces and pit toilets. In conjunction with the relocation of parts of the Blue Waterholes track, that part of the existing camping area among the Blue Waterholes themselves will be closed to vehicles; vehicle-damaged areas will be rehabilitated.

Most of the underground drainage of the entire Cooleman limestone comes to the surface at the Blue Waterholes, and any camping effluent, particularly from toilets, discharged in the catchment may quickly pollute the Blue Waterholes themselves.

The area will be managed to provide for public access to the features but to minimise the effects of visitor use on the fragile area. After the two new camping areas specified above have been developed, the Blue Waterholes area will be managed for day use. A car-parking area will be provided and areas previously damaged by camping will be rehabilitated. The pit toilet at the Blue Waterholes will be removed.

Back-country dispersed camping

There is more scope for dispersed back-country camping than for car-based camping, although some problems remain in a limestone area. Such camping would not be permitted at the Blue Waterholes, or near other features where there is risk of groundwater contamination. The Cooleman karst area management plan referred to above will specify areas in which no form of camping will be permitted.

1.3.5 Yarrangobilly Management Unit (17,000ha, A5 on Summary Map)

Outstanding natural features in this Management Unit include:

- Yarrangobilly Caves—an extensive complex of limestone caves of outstanding aesthetic, scientific, educational and recreational value
- Yarrangobilly gorge—a spectacular rocky gorge through the limestone
- many other interesting landforms developed on the limestone
- cave drainage systems and cave biota of special scientific interest
- a very wide range of plant communities and habitat types
- numerous other natural features of outstanding scenic interest and scientific and educational significance
- many special opportunities for recreation, including guided cave tours, caving, rock-climbing, walking, fishing and swimming in the thermal pool.

The Management Unit contains a number of man-made features:

- pathways, handrails, lighting and other development in some of the caves
- several walking tracks in the gorge
- the historic building and trees at Caves House
- a complex of buildings around Caves House in the Rules Creek valley, including information centre, picnic and toilet facilities, staff accommodation and a generator shed
- a workshop complex, staff accommodation and helipad above Caves House, and picnic and changing facilities at the thermal pool
- dam on Rules Creek and a hydro line
- the Caves access road
- various management tracks (shown on Summary Map)
- various old roads and vehicular tracks, including numerous sections of realigned Snowy Mountains Highway (not shown on Summary Map)
- several small mining sites and prospects
- the ruins of several old huts, and the former Jounama Homestead
- picnic and toilet facilities at the former Yarrangobilly Village site, staff accommodation (Cotterills cottage), DMR works camp, several modern ruins, sheds and huts
- a substantial proportion of the Jounama pine plantation
- the Upper Tumut Switching Station–Yass 330 kV power line, and several other minor power lines and telephone cables
- several large roadside quarries
- recording instruments at several sites in the limestone area

Management of this area will be in accordance with the objectives and practices specified in 1.1 and 1.2 above, and will be subject to those other sections of the plan that are shown for this Management Unit in the legend on the Summary Map.

Proposed additional objectives

- to maintain the outstanding scenic character of the Yarrangobilly gorge
- to protect the cave systems from disturbance
- to protect cave and stream biota, special plant communities, landforms and geological features from disturbance

Proposed additional management practices

The Yarrangobilly limestone area contains a remarkable array of outstanding natural features. Presenting them to the public and providing for recreation are important objectives. The following factors need to be carefully considered:

- the presence of an extensive limestone cave and karst system
- the outstanding scientific and educational value of the geomorphological and biological features within the limestone belt
- the vulnerability and irreplaceability of the limestone cave resource and its associated biota
- the existing high levels of visitor use of the developed tourist show caves and the thermal pool area, which are widely publicised as tourist attractions
- the extremely narrow physical confines of the tourist cave and thermal pool area, which are the focus of visitor use
- the use of the undeveloped limestone caves by speleological groups engaged in investigation work and/or recreation

- the need to balance the requirements of protection, education and research with continued controlled public access to caves

There will be continuing investigations to draw up final specifications for management action. Service staff, in consultation with user and community-interest groups, will undertake a study of management options, and copies of the resulting Yarrangobilly karst area management plan will be available to the public. The Karst area management plan for the Yarrangobilly Management Unit will have lower priority than that for the Cooleman Plain area; the scope and content of these two detailed plans will be different.

The following interim specific management practices will apply in addition to the general management procedures specified in section 1.2 above.

Cave management

The different management options for each cave and other karst features will be specified in a systematic management classification. This will result in a clear definition of opportunities for tourism, recreation, education, scientific research and other activities. Management emphasis for the existing show caves will be to maintain the highest possible aesthetic standards of any developments in the caves, and on protecting the environmental processes of the caves.

Camping

Further opportunities for car-based camping within a reasonable distance of the caves are needed. The present site at the former Yarrangobilly Village is unsatisfactory in several ways, not the least of which is that it is in an extremely cold frost hollow. The karst area management plan will include a detailed review of options and, if practicable, recommendations for camping areas that do not impose risks of contamination of cave systems or other karst management problems. It is likely that most new sites for camping will be developed outside the boundaries of the Yarrangobilly Management Unit.

Jounama pine plantation

(This section also applies to the Jounama Management Unit—C6, section 6.3.1). Most of the Jounama pine plantation is within the Yarrangobilly Management Unit. This substantial area of mature *Pinus* species lies within the catchments of the outstanding natural resources of the Yarrangobilly Management Unit and the special scientific resources of the Bogong Peaks Management Unit (see section 2.3.3).

The plantation is causing problems of invasion of adjacent forest and woodland by coniferous species. The plantation is already at a merchantable age, and the revenue from harvesting will offset the very considerable expense involved in rehabilitating the site and surrounding area. Harvesting and regeneration of the plantation will be undertaken with the following objectives: to remove the seed source for pine invasion of much of the northern part of the Park; to rehabilitate the area as closely as possible to a natural condition; and to protect cave systems and other important karst features.

The operation will involve the following procedures. Administration of the removal operation, rehabilitation of the site and treatment of invading trees in the surrounding area will be the first charges against any revenue derived from the sale of the resource. The plantation will be clear-felled in coupes designed for ease of revegetation and catchment protection. Coupes will be burnt and/or sprayed with herbicide to kill pine regeneration. Revegetation will be by a planting programme of nursery stock supplied by seed of native species from the area. The logging system will be specified by the Service, and will occur only during November to March, with closure in wet weather. The timber will be put to public tender on National Parks and Wildlife Service specifications. The Upper Tumut Switching Station–Yass 330 kV powerline will be protected. Research programmes will investigate the effects of such a major change in vegetation on hydrology and soils, especially in the karst area. The expertise of the Forestry Commission of New South Wales will be sought to assist in the preparation of specifications and the evaluation of tenders.

'Lookdown' building

The derelict 'Lookdown' building at Yarrangobilly Village, and the old shed at AMG 344529, will be removed and the sites rehabilitated.

BUCHAN (VICTORIA) 21-24-3.81 ROSS NEWBURY : PETE NEWBURY
JAN MANN : ROY WINSTANLEY

Here we are in the Belmont again, this time heading for Buchan, a bit of a late start 10.30pm instead of 8.00pm. Taking two hour stints at the wheel we arrived at Homeleigh at 8.30am. Feeling like death we had toast and coffee to bring us too, and then straight off to have a look around Dukes (84) with Tom Whitehouse and crew. Plenty of grunts and moans putting on dry and small wet suits, a swig of Pete's home-made Gin and we were set, armed with cameras and sections of the scaling poles.

Dukes a nice resurgence cave which feeds the Lind swimming pool right outside the entrance. The first section is a very fine stream-way which was about thigh deep with a silty bed, this soon gave way to the inevitable rock pile, which was not too bad to negotiate the sealing poles through. We then came to the first aven we were going to inspect. This was quickly looked at and we then continued on up stream, looking out for any other unvisited avens. Still mainly following the stream-way, sliping and sliding on the mud banks, we came to the Connection Sump. On the other side lay Fedral (87) an old tourist cave. Working in shifts we bailed the sump in forty-five minutes to a level where we could keep our noses out of this Glutenous Slime, and then for a retreat to look at a chamber called the "Roaring Silence". This has a rock pile floor and a large aven. There is a ledge at approximately fifty feet, which our poles were too short for, but it could be quite promising at a later date.

Back at the sump the level was holding, so the party decided to split. We were to take the poles through, for Fedral's entrance was a lot closer. Now covered from head to foot in this slimy sh-- we proceeded to have a quick look around. Still plenty of wire mesh and old lamp fittings could be viewed, some nice straws in one section, and up a small side passage a very pleasant collection of helictites also an interesting draught from a restricted passage close to here. There was no money left in the wishing well, so we headed out for a wash down in the pool A'H.

Time for a beer. The evening was spent at the Caves Hotel quite pleasant, except for the local lads who were a bit anti-social. So off to the top hut to sing a few songs around the fire . (Try!)

SUNDAY-We should have been doing Scrubby Creek, but all our V.S.A. Leaders had developed lethargic brains, so a quiet trip to Anti-Cline was on. This is really only one large chamber with a curved roof, (hence Anti-Cline). Shorts and caps seemed to be in order, a few photographs were taken of the formations, and that dam bat who would not hang still, yet again, and then back to Homeleigh to collect some walnuts and catch up on some sleep.

MONDAY-Ian's Hat was no trouble to find in the pot hole area. Two 10M ladders and telhers were used. We then free climbed two drops and followed a rift down to a small ledge. From here we rigged one of the ladders; at this point I just happened to notice a few rocks wizz past, and if Ian Hodges had not lost his hat at the entrance all those years ago, I'm quite certain he would have done here. Keeping a good sense of humour we moved on to find the ladder was 15 feet too short - more climbing to obtain the next ledge. From here the other ladder was rigged and Ross continued down to find a squeeze at the bottom. Through we sliped onto a rock bridge and from here on down was a fairly easy climb. We were greeted by a friendly frog who performed a few tricks for us, after which an uneventful exit was made. I think the cave was made sporting by the lack of equipment.

From here we were going to do Jam Pot but on the way Ross discovered an interesting hole. After pulling a few boulders out you could roll a rock down and here it landed in a large chamber with a mud floor. So the rest of the day was spent trying to dig and chip our way in, with no success prehaps next time!

TUESDAY MORNING-We only had time for a quick trip. So finding a tagged entrance close to the pot-hole area, we decided to have a look. A 3 Metre drop with a tight spot half way, which became the most interesting part. Removing battery belts we slipped in, to find it soon closed down and the rock covers very sharp. Now for our exit - Pete and Ross went first using a fine collection of well chosen words and the thrashing of legs they achieved their freedom. Then came my turn, no amount of the previous words seemed to help, so while I was jammed by my hips with my legs dangling in space, I had to wait for Ross to run to the car for his camera, to get a shot of what was now a red and painful expression on my face. The lads decided to give me a hand, so throwing me a tape they extracted me like a cork from a very poor wine.

One more cave was looked at, but even though this was a bit deeper the rock was still sharp. A short climb brought us to a few passages, and a small chamber, here we decided to call it a day and start the long haul back to Sydney.

ROY WINSTANLEY.

ANSWERS TO QUIZ

2. Reading between the lines. 3. Long Underwear Ω4. Receding hairline (SB) 5. Narrow escape 6. Downtown 7. Safety in numbers 8. Weeping willow 9. Man in the moon 10. Just between you & me 11. I underestimated you 12. Condensed milk 13. 6 feet underground 14. 15. Count Dracula 16. Elevator out of order 17. He's beside himself 18. Neon Lights 19. Cloud obscured 20. Sugar pretty please 21. No U Turn 22. 3 degrees below zero 23. Backward glance 24. Top of the morning 25. 3 blind mice 26. Mind over matter 27. Devoted wife 28 Raised eyebrows 29. Little house on the prairie 30. Suspended animation 31. Paradise lost 32. Distorting mirror 33. Middle age spread 34. Spiralling inflation 35. Getting up at the crack of dawn 36. Round of drinks on the house 37. Waving goodbye 38. Light socket 39. Take from the rich & give to the poor 40. See-through blouse 41. Double decker bus 42. Man overboard 43. Open & shut case 44. Cornerstone 45. Speleosports 46. Midsummer Night's Dream 47. Twelfth Night.

TRIP REPORT

JENOLAN 28 - 29 MARCH

PRESENT : Mike Lake (T.L.), Paul Greenfield, Bruce Welch, Paula Welch, Guy Cox, Judy Clarke, Richard McNeall, Michael Garben, Nick Mehuish, Guy McKanna, Phillip Cole, Stuart Craig, and the visiting U.S.A. members, Tom Porritt and Mara Silins.

SATURDAY

The new passage beyond Glop Hole Gallery rockpile, discovered by Judy Clarke and Guy McKanna a few weeks previously, was to be surveyed and explored. By dividing into two groups we were able to survey a total of about 150 meters of passage.

Some time was also spent in exploration. Richard and myself discovered a well decorated passage leading off the Coliseum rockpile and heading east for about 40 meters. A rockpile terminated the passage but could not be pushed as it is muddy and the way back necessitated a crawl across flowstone. This will be left for a future data when all remaining surveying has been completed.

SUNDAY

Sartorially attired in wetsuits, Guy Cox, Bruce, Paul and myself dived the sump in Spider Cave to explore the upstream rockpile. Guy, Phil, Judy and Nick met us on the other side of the sump via a 6 meter descent from the Coliseum.

This descent lands one on the western bank of the river and further north of the Wishing Well descent.

Paul discovered a promising way on through the rockpile and he and myself pushed this for a distance of at least 50 meters beyond the deep pool. We had followed a dry stream way via a small chamber but mostly through rockpile and ended at a difficult squeeze. The passage, which looks similar to parts of Central River stream bed in Mammoth Cave, continues beyond this squeeze.

Central River was dry when this was pushed but now that Central is flowing again we must try again - possibly a dye trace may establish a connection.

Many good leads were not checked out due to lack of time so further exploration and surveying awaits us.

Michael Lake

SUSS Songbook

With Winter coming on folks, it's that time of year again when there is nothing better than to sit around a cosy campfire singing heartwarming songs. Here are a few suggestions.

If I Ruled the World - Mike Lake
He Ain't Heavy - Mark Twigg
Climb Ev'ry Mountain - Phil Cole
Hey Jude - Judy Clarke
Most People I Know Think That I'm Crazy - Steve Bunton
We're All Alone - Geoff Innes and Bryan Cleaver
Short People - Helen Turton
Sixteen going on Seventeen - Nick (The Sandy Bay Kid) Melhuis
The Air That I Breathe - Bungonia Caves
I'm Down - Ross Franklin in Acoustic Pot
When You're 64 - S.S.S.
Too Young to be Married - Guy Cox
Fool on the Hill - Martin Smith
The Two of Us - Ivan and Judy
You Took the Words Right Out of my Mouth - Peter Winglee
Live and Let Die - Guy McKanna
Stayin' Alive - Guy McKanna
There's Got to be a Morning After - Forest Lodge
World's Greatest Mum - Mark Hunter
Teddy Bears' Picnic - Richard McNeall
The Things We Do for Love - Guy McKanna and Kristin Young
I Am Woman - Ian Mann
I'm in Love with My Car - Richard McNeall
High Society - Richard McKay
Care for Kids - Paul Greenfield, Bruce Welch
Candy Man - Mike Lake
Everybody's Talkin - S.U.S.S. Meetings
Knock Knock Knockin' on Heaven's Door - Guy McKanna
Long Tall Glasses - Ross Newbury, Roy Winstanley.

Compiled by Philip Cole
with additions by Mike Lake

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Dont forget that the best caving expedition report ever published in Australia -

CAVES AND KARST OF THE MULLER RANGE

Report of Atea 78

Is still available - $15.00 from Guy Cox

BUY YOUR COPY BEFORE IT SELLS OUT

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Notes on the Mineralogy of Herbots Pot Cave Mole Creek Tasmania

- Perculiar Types of Cave Gypsum

During the Tasmania trip in February 1981. S.U.S.S. Members visited Herbots Pot on the 10th February. The upper streamway passage was followed to a section containing many speleotherms and quite an amount of shattered rock and passage.

A filamentous speleotherm was observed called locally the "Sheeps Wool Formation". The formation had been extruded in a single threadlike form that had tangled and matted into "Cave Cotton". The threads were roughly parallel and loosely packed, forming curving filaments in a wave pattern. There was a note at the entrance to the section warning people to be careful of the formations as they were easily disturbed. We observed that they moved easily when people passed the formations even when this action was done carefully.

Great care is then required when visiting this area of Herbots Pot as local caver Peter Cover indicated the destruction of the formations is greater than their regrowth, due to the human traffic. Other formations were observed in this particularly pretty section, large needles up to 60cm long (singly or as very thin fascicles), thickets of small closely packed needles, massive crystals, irregular crystal blades, and very beautiful helictite clusters tinted blue-green from copper salt impurities.

Commonly speleotherms are formed of calcite or aragonite and less commonly of gypsum, dolomite, epsomite, opalites halite and saltpeter. After these come a list of other minerals mostly rare and inconspicuous and not often noted by the average caver. 76 cave minerals have been noted on the basis of material identified as formed in the cavern by chemical deposition. As the speleotherms in Herbots Pot were numerous and not observed in as great a profusion in any other cave in Australia. A very small sample of this "sheeps wool" crystal was taken for analysis. A sample of approximately 0.1 gram was selected from a broken section residing on the cave floor and put in a film canister for storage.

A single crystal was removed from the mass and it exhibited a clear prismatic and needle like structure. An initial Wessenberg Single Crystal Photograph (X-ray) indicated the crystal to be monoclinic with a prism axis unit cell size of approximately 6.3A^{o}, no twinning occured.

An X.R.F. analysis was then carried out on the sample mass and the only compound present was found to be Calcium Sulphate. X-ray Powder Diffraction analysis was then carried out on a very small fraction of the crystal giving a series of reflections at different angles of diffraction of the crystal each with a unique intensity. These results were compared with reference compounds and a matching crystal was found see table below.

dA^{o} Actual	dA^{o} Gypsum	Reflection h.k.l.
7.60	7.56	020
4.22	4.27	$12\bar{1}$
3.73	3.79	031, 040
3.26	3.163	$11\bar{2}$
3.00	3.059	$14\bar{1}$
2.78	2.786	$21\bar{1}$
2.695	2.679	022, 051
2.600	2.591	$150, 20\bar{2}$
2.500	2.530	060
2.125	2.080	$12\bar{3}$
1.728	1.778	260
1.688	1.684	$32\bar{3}$
1.524	1.522	$222, 13\bar{4}$

Gypsum: $CaSO_4, 2H_2O$

Crystal System Monoclinic 2/m

Cell Dimensions a = 5.68 A^{o}
b = 15.18 A^{o}
c = 6.29 A^{o}

These results were then in good agreement with the Single Crystal work.

The gypsum crystals were all found to be the same habit, prisms with (010), (120), ($\bar{1}$11), (101), vertical, with the needles averaging 0.05mm in cross section and as stated before up to 60cm long. Further studies are currently underway to study the gypsum crystals as so little is known of their crystallography or mechanisms of growth. Next months Journal will contain an article on the origins and occurance of Sulphate Minerals in relation to Herbots Pot Cave.

JEFF CRASS.

FUTURE EVENTS

June

Thursday 4th. SUSS General meeting. Slides of the recent Tasmania trip. Holme Building Common Room, 7.30

5th-8th. Queen's Birthday Long Weekend. Yarrangobilly. Contact : Ian Mann, 631 4321

13th-14th. Kempsey. Contact : Ian Mann, 631 4321

19th - 21st. Snowy Mountains - Skiing. Contact : Ian Mann, 631 4321

20th - 21st. Bungonia. Drum, Argyle, etc. Contact : Mike Lake, 524 5229

Monday 22nd. SUSS Committee Meeting, Bruce Welch's place - 21 Thompson Street, Marrickville. @ 7.00 pm NB !!

27th - 28th Jenolan. Surveying & pushing Spider, also Southern Limestone. Contact: Mike Lake 524 5229

July

Thursday 2nd. SUSS General Meeting, 7.30 pm, Common Room, Holme Building.

17th - 19th Skiing in the Snowies Contact: Ian Mann, 631 4321

Monday 27th SUSS Committee Meeting. Place to be announced.

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If you want to go on a trip, and there isn't one listed - contact any committee member and twist his arm.

If you need tackle - Equipment Officer is Judi Strickland- phone 692 2947 (w), 799 7264

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SUSS REGALIA

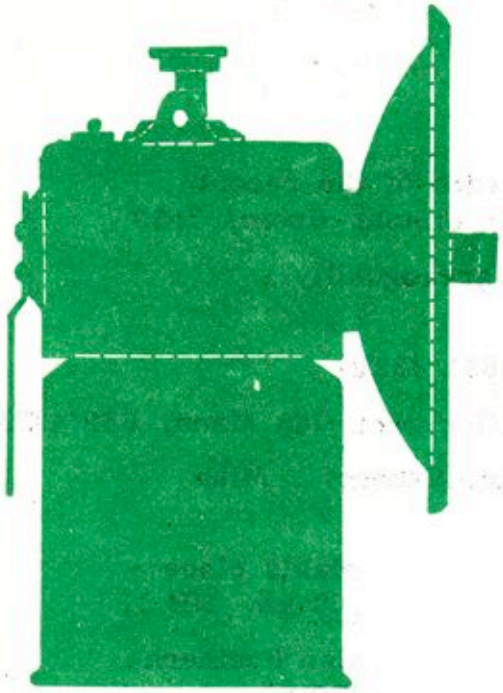
Enamel Lapel Badges - $ 1.50

Cloth Badges (for your overalls) - 50c

Car Stickers - $1.00

AVAILABLE FROM BRUCE WELCH AT MEETINGS OR THROUGH BOX 35, Holme Bldg, Sydney University, NSW 2006

Lumen in Tenebris



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CONTENTS