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AUSTRALIAN SPELEOLOGICAL FEDERATION



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EDITORIAL

Just as the last Newsletter was about to go out, the news arrived of the signal victory in the Bungonia case. This was a fine tribute to Warwick Counsell, to his unflagging energy and full time devotion.

But at least Warwick is fighting in a state which is increasingly environment conscious, wealthy enough to afford the middle class ethic of conservation in a pure non-materialist form, and sufficiently far-sighted to see the short term opportunity cost as an investment. Support came from around the country, as it did in the Colong dispute, and interstate cavers awaited the outcome as though it were a local affair.

Ten years ago, even five, it is doubtful that cavers in one state knew much of developments in another, much less understood the implications. This newsletter has in

recent years increasingly concentrated on conservation issues, especially the remote ones. The Newsletter, and the Australian Speleological Federation, fulfil their function well if they stir people to action not only over the here and now, but also the there and later, over South West Tasmania, Nullarbor, Fanning River. But we cannot rely for ever on the ASFS. Shannons, Mike Grahams, Kevin Kiernans, Lloyd Robinsons to do the work. Most worthy causes start off with a minority of one supporter, but you can't in the final analysis win without some organizational backing. The embarrassing plethora of single cause conservation bodies around Australia provide grass roots support but can be exploited by their opponents. We need a way of organizing cavers to action over Precipitous Bluff as well as Bungonia.

N O T I C E S

N I B I C O N I S C O M I N G - In fact it's nearly here. See Page 15

H I S T O P L A S M O S I S

Obtaining even more footage than the cave drowning in South Australia (see p. 5), the newspapers had a field day on the Wee Jasper Histoplasmosis scare. Headlines like "LURKING DANGER IN BAT CAVE" greeted buyers of Sydney's renowned evening newspapers. The facts, as nearly as can be established, are thus:

1. About 15 cases of Histoplasmosis capsulatum have been confirmed from Church Cave, Wee Jasper, N.S.W.
2. Histoplasmosis is a fungus disease affecting the lungs, occurs in soil and organic debris, and has been associated with fowl and bat excreta in warm humid environments.
3. This is not the first recorded occurrence of Histoplasmosis in Australia.
4. The disease is endemic in southern U.S.A. and South Africa, in which latter country it is a severe occupational hazard of caving. The strain found at Wee Jasper is not a severe form.
5. Church Cave is a bat maternity site and this must be kept in mind in determining any action to close the cave by gating.
6. More information is being sought.

N O T E O N " S P E L E O H A N D B O O K "

As noted last issue, the second edition of this enormous compendium on Australian caving is now under way in Melbourne. Apart from having greatly expanded and updated cave lists, the new edition will have several new chapters on aspects of speleological science and practice. There will be two editions this time - one with and the other without the cave list material, so that the latter will be restricted to members of Federation societies. The first edition was put together by a relatively small number of people in each state, some of whom provided assistance far beyond what might have reasonably been expected of them. At least in N.S.W., steps have been instituted to spread the load a little more evenly this time. Warwick Counsell and Andrew Pavey volunteered to collate and edit material for N.S.W.

A further screed was expected from the Handbook Editor, Peter Matthews, for this issue of the Newsletter. It will be enclosed as a supplement if necessary.

C U R R E N T P U B L I C A T I O N S O F A . S . F .

PROCEEDINGS, 8th BIENNIAL CONFERENCE, HOBART, 1970 - \$3 - write to TCC or SCS direct

THE CONSERVATION OF MULLAMULLANG CAVE, WESTERN AUSTRALIA - Submission of the Australian Speleological Federation to the Committee for Conservation through Reserves, Department of Environmental Protection, Government of Western Australia

- offset printed, available from J.R. Dunkley, 22/53 Alice St, Wiley Park, 2195 - 50cents

AN INDEX TO CAVE MAPS IN NEW SOUTH WALES - Catalogues all known maps of N.S.W. caves with full details. Over 700 entries, nearly 50 pages. ONE LOUSY DOLLAR from NSW LIAISON COUNCIL, P.O. Box 388, BROADWAY, NSW 2007. An invaluable reference which will save you resurveying what has already been done, and show you where you can get a map. \$1 only.

S O U T H - W E S T T A S M A N I A

THE SIGNIFICANCE OF THE PEDDER CAMPAIGN
FOR THE CAVES OF THE SOUTH-WEST

by KEVIN KIERNAN

The Gordon is in some respects the largest river in Australia. From an area experiencing an annual rainfall of over 100 inches it flows to carry at its mouth after a course of only 400 miles or so more water than any other river system in Australia, surpassed not even by the Murray-Darling system. Successfully navigated only once, by the late Olegas Truchanas in 1958 from Lake Pedder to the sea via Serpentine River, it has many fine sights including the Gordon Splits where the 200 - 300 ft deep gorge narrows to a corridor only 10-15ft wide with the river rushing through.

In at least one area the raging Gordon thunders through a limestone gorge 300ft deep, with undercuts that could engulf a house with ease, and closely spaced razor backs of jagged rock in the river waiting to pulverise the bottom of any misdirected craft. In recent years these great limestone areas have meant that the South-West is also becoming increasingly known as a land of caves, but these, although great, rank among its lesser attractions to most people.

Nibbling at the extremities of this wilderness we have found vast cave systems - Exit Cave at Ida Bay and the Junee - Florentine caves. Probing deeper, the 420ft shaft of Kellars Cellar at Mt Anne, and the promising caves of Precipitous Bluff. Not so long ago someone read a tale of a cave at the Cracroft River. Two trips later numerous entrances had been found, one explored for half a mile, and a belt of limestone with over 1000ft relief known to exist where sketchy maps had shown but a tiny patch of dolomite. And where else in this unknown land does limestone lie? A great, perhaps near continuous belt down the Franklin to the Davey country, and near the Denison, Albert Creek, south of Federation Peak, the Picton, New River, Lower Gordon, Jukes Darwin.

And where else? Even as we who appreciate it probe deeper into this wilderness, problems of time beset us. Also probing are the exploiters, following us to Ida Bay and perhaps Precipitous Bluff with their limestone quarries, to the Picton timber cutting and the Gordon for their power. We attempt to stave off their attacks by pressuring governments for national parks. But what happens? Half the Mt Field National Park is excised to let those timber cutters in, while for the Hydro-Electric Commission the situation is simpler, as their Act overrides all others. And it looks like Lake Pedder will go too.

Climb the Frankland Ranges one clear day and look westwards to the coast, east beyond Mt Anne, north to Frenchmans Cap or south past Federation Peak. Then the size of the South West sinks in. It is not very big. Then visualise the 200 square miles of water in the north and east that will be the Middle Gordon power scheme. Look and see the fast rising waters of that great swamp which is covering Lake Pedder now. Look towards Port Davey and contemplate the possible 57 square mile impoundment in the beautiful Davey Valley. Look to the west and think upon the 100 square miles of water proposed as the Lower Gordon scheme and engulfing the Gordon Splits. To Frenchmans and visualise the scars of a road into the Franklin gorge, plus the 45 square mile King / Andrew scheme further still, and the gorge boundary of the Frenchmans Cap National Park, flooded. All this, and the islands denuded of timber and scarred by roads with but tiny pockets for the aesthetically minded. Then wait 20 years and probably see all this in reality.

The water is rising on Lake Pedder and is now 14ft above normal level, rising 4 inches a day. By Christmas 1972, as you read this, it will be irretrievable.

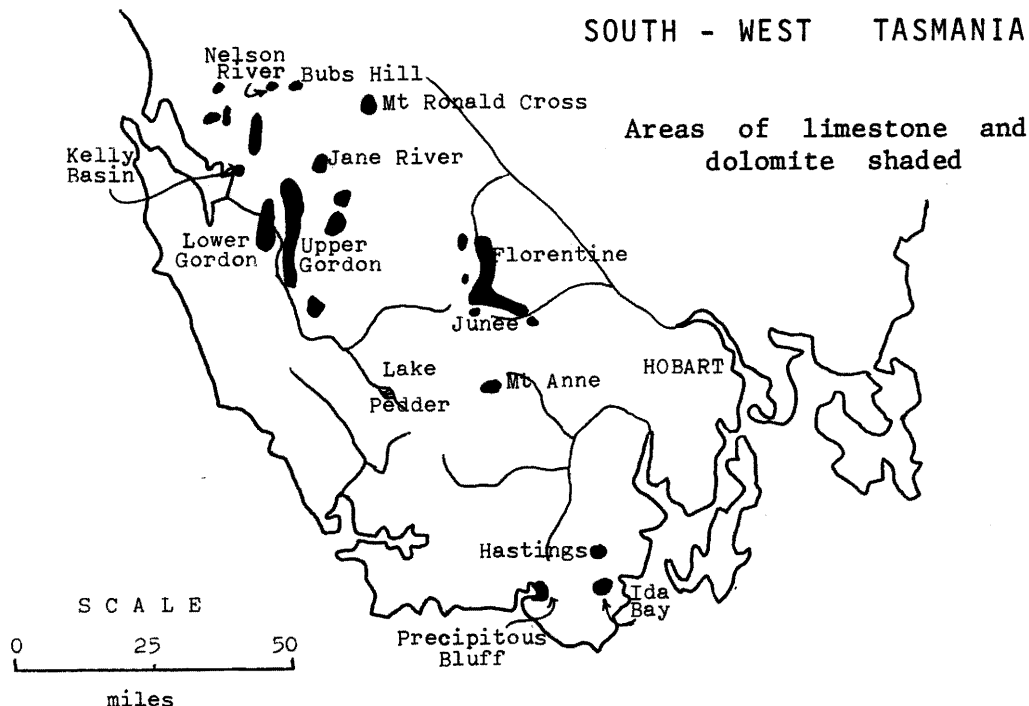
And so the question arises as to how the HEC, forestry, mining and recreation interests can share the South West. It seems to me the simple answer is, they can't. Two plus two will never equal three no matter how hard you pull and tug. Already the Tasmanian Log Hauliers Association is complaining that Lake Gordon is drowning over \$50 million worth of timber. The thousands of people who have visited Lake Pedder are complaining at the destruction, as are the air charter companies whose livelihood derived from the area's beauty, and the HEC who are complaining about all the other people who are complaining about all the other people who are complaining about what they are doing.

As beautiful Pedder, the gem of the South-west, sinks into oblivion the region has been dealt perhaps a mortal blow. In most minds Lake Pedder symbolises the South West wilderness; with the star attraction and symbol dying how can the patriots be inspired? On the mainland of Australia an environmental conscience seems to have first developed primarily from threats to comparatively minor areas, principles rather than possessions. But in Tasmania we are losing our richest slice of heritage. For us the best came first and we must now try to preserve what is to some minds perhaps second rate by comparison; still superb but without that symbolic strength.

We must now decide what is to befall the South-west, whether indeed as the last temperate (and shrinking) wilderness in Australia it does genuinely have the potential to be a recreational dollar earner like Yosemite and a wilderness, or would it really be better off a a giant hydro scheme complex with a life of a little over 50 years, or a woodchip plantation? Perhaps we should have a joint Commonwealth-State enquiry into land use in the area along similar lines to that into the Great Barrier Reef. We must certainly unseat the HEC from its pedestal as supreme head of South-west interests.

We can achieve this only if all who are concerned act. The decisions on the South-west must be made right now. It's urgent. What will now happen to the South-west is anyone's guess.

OF THE AREAS ON THE MAP BELOW, ALL BUT HASTINGS, IDA BAY AND JUNEES-FLORENTINE HAVE BEEN VISITED ONLY TWO OR THREE TIMES AT MOST BY CAVERS. THE POTENTIAL IS ENORMOUS.



TRIPLE DROWNING IN S.A. CAVE

by FRED W. ASLIN

On 9/10/72 at about 3pm, 4 members of the Adelaide Underwater Explorers Club entered a water filled cave off a sinkhole in a thick pine forest one mile off the Princes Highway, 15 miles north west of Mount Gambier. They were David Edmeads (40) Christopher Rands (17), Ronald Creeper (17) and Sandra Leach (18), all of Adelaide. All used SCUBA gear without a shot line (safety line from surface to divers). They must have gone through a small hole at the base of the entrance rock and mud pile, approximately 20ft below the surface, and into total darkness. Shortly after they found they had stirred up the silt on the floor and could not see the entrance, each other, or even their torches. Creeper was the only one to get out and he was reported to have only "4 breaths left" in his tank. Creeper is reported to have stated:

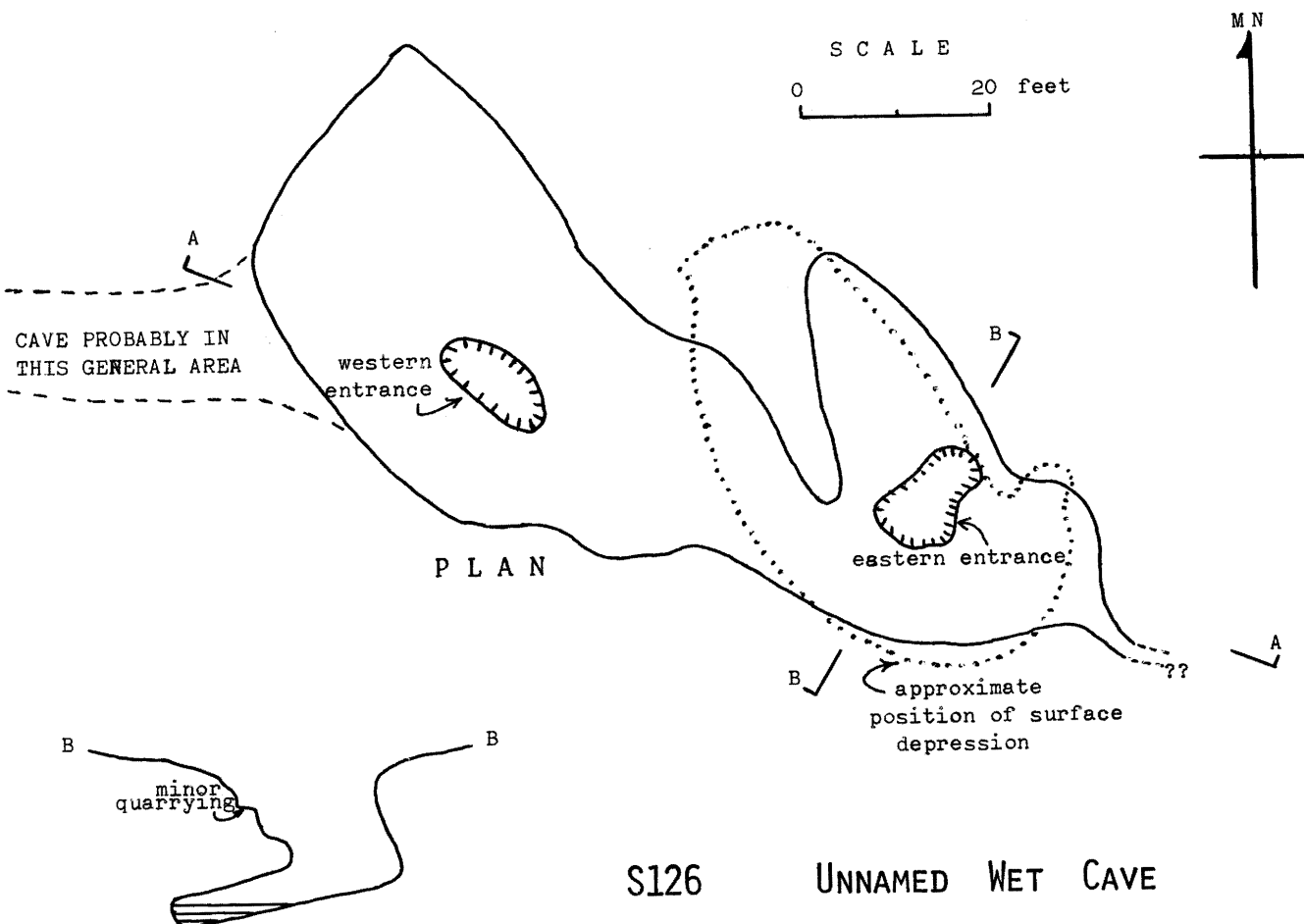
"Four of us and the parents of Sandra Leach went to the sinkhole on our way back to Adelaide on Monday afternoon. After checking our watches and gauges the 4 of us entered the water with full tanks - enough air to last about 1½ hours. After descending about 15ft we found an underwater entrance large enough for the passage of two people. We all went through. The water was still very clear. It was going to be a goof dive I thought. As we moved about in the cavern the mud began to stir and we decided to get out. No one panicked at this stage. We lost sight of the cave entrance and grouped together, signalling with our hands. The water around us darkened and visibility went from perfect to nil even with lights. Suddenly the other torches were gone and I realised that it was every man for himself. We had only been in the cave about 5 minutes. I began tumbling in the murky water, smashing against the cave wall, then I bumped into someone. We grabbed hands and I felt over this person's gear looking for identification. I heard the banging of an air tank and then I lost my companion. The banging noise stopped and I heard free flowing air bubbles, a sign that someone had lost their mouthpiece. I headed for the noise and bumped into another diver whose regulator was in his mouth. I purged his valve but he did not respond. Frantically I searched for the cave entrance continually checking my gauges. Somehow I found an opening and sunlight. By this time I was on my reserve tank. I followed the light and clambered on to the ledge at the cave opening".

(The Advertiser, 11/10/72)

The diver who recovered the bodies (in the order Edmeads, Leach, Rand) said they were in through several narrow openings and that he had trouble getting them out. They were some 80ft into the cave. Depth was not stated.

The hole was S126, unnamed wet cave, sect. 486, Hd. Hindmarsh, County Grey. I described and numbered it in a trip report dated 28/6/65. In fact I snorkelled around the cave for 40 minutes on 25/10/64. The water depth ranged from 1½ to 20ft. I noted on the bottom of my report that there are two places which could be pushed with SCUBA gear, and that "the water silted fairly quickly". Obviously the divers pushed through one of the places I noted as probable goers, and got into trouble deeper in (both laterally and vertically) into the caves.

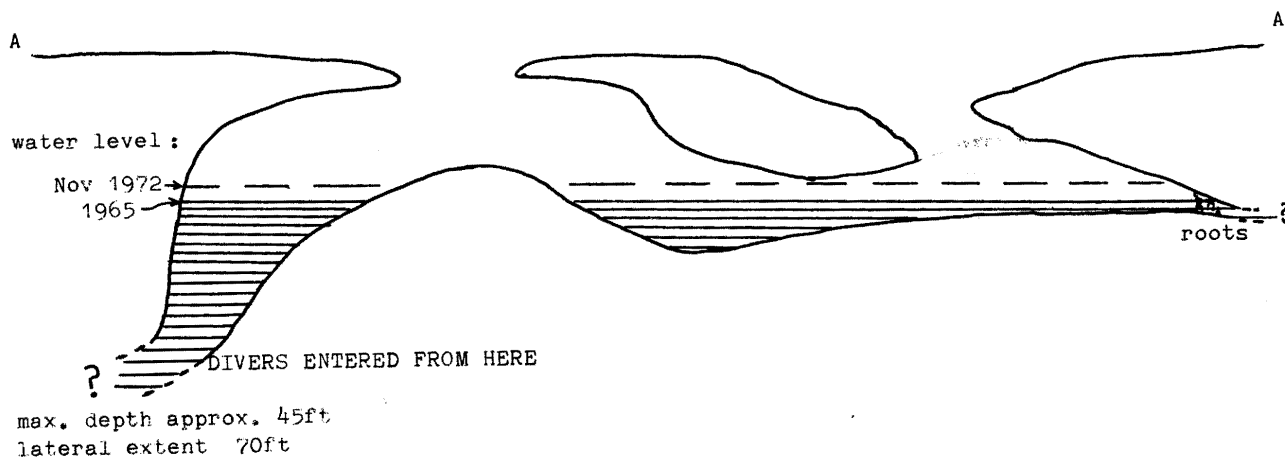
(Mr Aslin is currently gathering further information on this worst ever accident in an Australian cave. The divers had no connection with any member society of the Australian Speleological Federation. Contrary to popular belief, this cave was not very deep and the chambers were small)



CROSS - SECTIONS

Burrungule, Hd. Hindmarsh, Cty. Grey, S.A.

Surveyed: F.Aslin, K.Heyne, OCT. 1965



ON SITE ENCAPSULATION OF FOSSILS TO AID THEIR SAFE REMOVAL

by E. H. BAILEY

Since its inception, on site encapsulation has used Plaster of Paris as the main protective material. This has enabled many valuable specimens to be recovered, despite the weight penalty which was incurred. For above ground recovery, weight, bulky raw materials and long preparation time are not serious penalties. However, for below ground use, such as in cave systems, these penalties are greatly magnified. As a result, an alternative encapsulation system has been sought which would overcome, or at least minimise these drawbacks.

As weight reduction was the immediate aim, attention was drawn to considering a rigid plastic foam as an alternative to Plaster of Paris. The only foam system which is easy to produce without expensive equipment is a hand mixed polyurethane. Trial quantities of a polyurethane resin and blowing agent were obtained to assess the feasibility of this approach. The results to date are most encouraging, several very fragile specimens have been successfully recovered from the main bone chamber in the Victoria Cave system, Naracoorte, S.A.

Before describing the method of applying polyurethane foam, it would be useful to describe the preliminary work common to both types of encapsulation. When a specimen which needs encapsulation is first exposed, a moat-shaped depression is carefully cut around the specimen. The inner walls of the moat are undercut, so that the specimen, still partially buried, is supported by a mushroom shaped column of silt. The exposed portion of the specimen is then covered by several layers of paper tissue which have been dipped in water. This soggy mass acts as a cushion to isolate the specimen from the hard encapsulating shell. Strips of cloth, dipped in liquid Plaster of Paris are then laid over the specimen and round the column of silt. When hard, the enclosing shell complete with specimen can be lifted clear, turned over and further tissue, plaster and cloth applied to close the remaining cavity. The presence of the undercut allows the shell to support the contents whilst being lifted and turned over.

When polyurethane foam is used instead of plaster, the above process, up to the application of wet tissue, is still employed. It is necessary however to isolate the tissue and the silt from the foam, because moisture in the former would induce excessive foaming. Therefore, a layer of very thin polyethylene film is laid over the specimen and the surrounding silt. To contain the foam, an open-topped corrugated cardboard ring is stood on the plastic film, surrounding and standing higher than the specimen. A generous fillet of silt is then placed round the base of the cardboard to act as a support and seal. The two ingredients are then mixed and poured round and over the specimen. After a wait of approximately 10 minutes, the foaming and curing stages are complete, and the assembly can safely be lifted clear and turned over. A repeat foaming stage, after wet tissue and plastic film have been applied, will complete the encapsulation ready for safe removal. For larger specimens, more than two foaming stages may be necessary.

This free blown polyurethane foam is produced by mixing equal quantities of polyurethane resin and a di-isocyanate blowing agent. Carbon dioxide gas is produced when the di-isocyanate comes into contact with the resin. This is why a plastic film is used to isolate the foam from the wet tissue, as additional CO_2 would be evolved if the di-isocyanate contacted water. The mixing time prior to pouring is very limited. Only about 10 seconds is available before the reaction commences, therefore once started, the mixing and pouring operations must not be delayed or interrupted. For this reason, quantities used must be kept small; 150 grams of each ingredient has been found to be a convenient

maximum for hand mixing. This will produce a foam block of roughly 6000cm³. The size will vary slightly for differing conditions of temperature and relative humidity.

There are certain precautions which must be observed when handling and mixing di-isocyanates, as these are toxic materials, being both irritants and sensitizers. Minor contamination does not present a chronic hazard, a further reason for keeping quantities small. However, gross contamination can cause sensitization to the skin and/or respiratory system. For these reasons, the following precautions should be observed:

1. When handling or mixing di-isocyanates, wear rubber gloves.
2. Avoid inhaling fumes during mixing and whilst foaming is taking place.
3. Only use this technique when in large chambers, never in small blind passages that do not have a current of air passing through them.
4. Keep the quantities being mixed at any one time to no more than 400 grams total.

The toxicity of the di-isocyanates is directly related to their volatility. Therefore, the least volatile would be the least toxic. In fact, the lowest volatility is encountered with diphenyl-methane-di-isocyanate (MDI). This is used extensively for foaming in *in situ* insulation in buildings and the refrigerated holds of cargo ships. This type of blowing agent has been used for the experiments previously described. The other extensively used blowing agent is toluene-di-isocyanate (TDI). As this is more volatile and hence more toxic, it is not recommended for use in confined spaces. Therefore, care should be taken when obtaining a blowing agent for use in confined spaces that MDI is selected and not TDI. Note that the chemical reaction results in a foam which is non-toxic and can be handled with complete safety.

Despite the drawback in using polyurethane foam for on site encapsulation described above, commonsense and care in its use will keep the hazardous aspect to minimal proportions. The advantages to be gained are a great saving in weight over Plaster of Paris (approximately 95% less), much quicker application and easier extraction of the specimen in the laboratory afterwards. As an example, an extremely fragile *Thylacoleo* skull, needing a day's work to remove by the plaster method, was recovered in 2½ hours by the foam method.

R E F E R E N C E S

- BRYDSON, J.A. Plastics Materials , Iliffe Books Ltd, London
- (anon) The Safe Handling and Storage of Shell Di-isocyanates Shell Chemicals,
Plastics and Resins Bulletin no. 5615.

(Reprinted from CEGSA NEWSLETTER Nov - Jan 1973)

A B S T R A C T

MIOTKE, F-D. & A.N. PALMER : Genetic Relationship between Caves and Landforms in the Mammoth Cave National Park. University of Hannover, Germany, 1972.

Although there exists a rich European literature relating the development of caves to nearby surface landforms, comparatively few such attempts have been made in America. Cavern development in Mammoth Cave National Park has been controlled by the erosional and depositional history of the Ohio River drainage system during late Tertiary and Pleistocene. Major cave levels are correlated with valley terraces. Geological structure and lithology influence passage trends though not the elevations of major cave levels.

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ABSTRACT

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T E X A S C A V E S

- THE NEW LAKE PEDDER ?

by C. HENRY SHANNON

INTRODUCTION

The imminent destruction of these caves is the conservation problem in caves most closely resembling the Pedder affair; as at Pedder an area of outstanding scenic value is to be destroyed by inundation for the sake of a government-inspired project without economic justification and in the presence of alternative schemes which would allow the area to be saved.

The threat to the caves comes from the Pike Creek Dam, which will place the caves under 100ft of water, for the sake of an irrigation development for which no market exist, and which will be uneconomic still even if markets appear.

The dam is sponsored jointly by the Queensland, New South Wales and Commonwealth Governments. The defence of the caves has been mainly the work of the University of Queensland Speleological Society. The efforts of the UQSS have been hampered by the need to devote time to the still more serious struggle for the Mt Etna caves in Central Queensland, and it is particularly difficult for a Brisbane group to obtain a hearing in New South Wales. The matter has become urgent because tenders have been called for the diversion tunnel and the dam is planned for completion in 1975. Help is needed from all Austealians but especially NSW people, who could not stand by while their money is squandered on vandalism even if it is beyond the border.

It is not just the caves that are at stake but the last free running river of note in the Murray-Darling system, and even the long term usability of the Murray itself.

IMPORTANCE OF THE CAVES

1. S C E N E R Y

While the Glen Lyon - Viator caves complex is not the national scenic asset that Pedder is, they are most important when taken in their local context. It is the only significant karst area in southern Queensland. Their destruction would be environmental genocide. Caving and speleology are possible in Brisbane only because of this one reasonably accessible and extensive cave area (200 miles drive for 6000ft of cave passage). To destroy it is to deprive us of our daily bread. By comparison, the loss of Lake Pedder would not destroy bushwalking in Tasmania.

There is probably no other environment where the protection of just one square mile of land is so critical. Our demands could hardly be more modest yet they have been denied.

Karst scenery is just as distinctive and interesting as glaciated scenery, and just as important to understanding geomorphology. At Glen Lyon there is a superb karst landscape which shows one of the most complete assemblages of temperate karst landforms of any Australian cave area: several types of solution and collapse dolines, a compound doline, a cenote, a natural arch, two karst windows, splendid lapies pavements, rillenkarrren, grikes etc. The caves are the most extensive in Australia developed through underground cutoff of a meander loop. They can be dated with respect to alluvial terraces and also contain fossil bone deposits - a situation of great potential importance in determining Quaternary geological history. The Russenden Cave has the best display of cave decorations between Jenolan and Rockhampton, and is now visited by upwards of 500 people a year. This is a very large number considering the population and distance factors. The number of visitors has been increasing rapidly; the area was scarcely known 6 to 8 years ago.

2. B I O L O G Y

The rocky habitat provided by the limestone outcrop provides better shelter than the country surrounding, so the flora and fauna are uncommonly rich. The caves contain a number of cavernicolous animals; so far two species thought to be endemic have been located and work is continuing.

Since caves are so scarce in the region all major caves have at some stage been used by major bat colonies, and in the long run the colony probably requires all to be available for security. At present the most useful ecological function of the Texas Caves is the diversion it provides by steering people away from the nearby Riverton Cave. Riverton Cave was damaged by guano mining but still provides the breeding site for the bent-winged bat Miniopterus schreibersii. The maternity site is in an inner chamber that escaped mining but it is very vulnerable to human disturbance. The colony numbers some 50,000 individuals and covers the Western slopes from Inverell to Dalby.

Certain features of the life style of the cave dwelling bats show how shortsighted it is to risk wiping them out. (They could be wiped out even by hordes of people visiting Riverton).

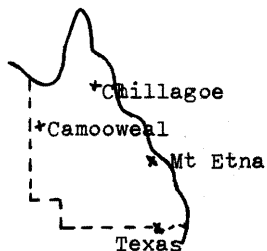
The bats live exclusively on night flying insects, particularly moths. This makes them particularly effective predators since the moth is the breeding stage of the caterpillar, and predation at the breeding stage is the most effective time for control. The bats aestivate over winter so their numbers are not limited by the lowest population season of their food supply. Their cave roosting habit and summer breeding makes for large numbers to cope with the seasonal maximum of the insect population. Their habits make their ecological niche extremely difficult for other predators to fill. It follows that the region will suffer loss of ecological stability along with the bat colony.

ADVERSE EFFECTS OF DAMMING RIVERS

Work by CSIRO Wildlife Section and in particular H.J. Frith has shown that the mere fact of artificial regulation of rivers interferes with the breeding of waterfowl. Dammed rivers also have a decline in native fish. Indications are that all the riverine ecosystems are adversely affected by the change in natural flow regime. Present damage must intensify as the last free running rivers are regulated by dams. As in any other environment, the riverine environment needs major examples left in the natural state, if only for experimental control purposes. The Murray-Darling system is already overdeveloped. As the Dumaresq is virtually the only major river in the Darling catchment that still represents the natural flow regime, it is the obvious one to reserve.

ADVERSE EFFECTS OF IRRIGATION AGRICULTURE ON THE ENVIRONMENT

The long term failings of irrigation agriculture have not been given the attention they deserve. It has caused the ruin of vast areas of arable land, mostly on fertile alluvial plains. River water in irrigation breaks the natural salt cycle whereby salt and silt from the erosion of the land are carried to the sea. Either the salt remains in the soil or, if water is applied more heavily, the water table rises and a salt crust forms on the ground. Or, if drains are installed, there is a brine disposal problem. History is replete with examples of irrigated land which had to be abandoned for such reasons.



THERE ARE ONLY FOUR SIGNIFICANT CAVING AREAS IN QUEENSLAND. MT ETNA IS BEING MINED AWAY. IF TEXAS IS LOST TOO, THERE WILL BE NO CAVES OF ANY SIGNIFICANCE WITHIN QUEENSLAND AND WITHIN 1000 MILES OF THE CAPITAL. JENOLAN, N.S.W., AND EVEN BUCHAN, VIC. WILL BE CLOSER TO BRISBANE THAN ARE CHILLAGOE AND CAMOOWEAL.

U.Q.S.S. HAS BEEN FIGHTING THIS ONE-SIDED BATTLE FOR LONGER THAN THE COLONG ISSUE HAS BEEN GOING. WHERE IS THE SUPPORT FROM THOSE CONSERVATION MINDED CLUBS WHO SO STRONGLY SUPPORTED MORE LOCAL ISSUES?

HAVE YOU AT LEAST BOUGHT "The Destruction of Queensland's Caves" FOR A LOUSY 20 CENTS?

D O W N U N D E R

A L L O V E R

. . . N E W S F R O M A R O U N D T H E S O C I E T I E S

C S S is looking a little more active. Several members assisted in an inspection of Pylon 58 Cave, Wee Jasper, by students of a second year Ecology class at Canberra College of Advanced Education, under the leadership of John Harris. Dr Harris's Ph.D. work was concerned with the ecology of bat caves (see report in ASF News1.). The Very Latest continues to appear and issue 6 (3) has an abstract of an old (1962) but still most valuable Sierra Club work on Wilderness and Recreation Resources, with particular reference to the Caves Resources Section.

CEGSA reports a trip to the Flinders Ranges on which two small caves in "intrusive rocks" were entered in Arkaroola Creek. The combined CEGSA / VSA Dinner at Naracoorte was highlighted by the Victorians fronting up "looking like a 1930 undertakers lodge meeting in antique tails and you name it". The Great Victoria Cave survey has been initiated and if ever an important cave needed a survey, this must be it - exploration has far outstripped any attempt at accurate mapping. Seems the crew may have to dig their tunnels as they survey, though.

CQSS Major new extensions discovered by a new member Mike Murray are reported in Johannsens Cave, estimates running to 1500- 2000 ft. meaning that this cave is now pushing the 3 mile mark, making it perhaps third longest in Australia. The Annual Report for 1971-2 notes a steady increase in number of members in Biloela. Conservation continues to employ the time and resources of CQSS, and no wonder when 99% of the caves visited by them are under Mining Leases! The club newsletter The Explorer continues as one of the most prolific in Australia, the 12 issues for the year to September 1972 totalling 169 pages. Convenience to the caves (only 15 miles from home) is reflected in the no less than 123 CQSS trips during the year, of which 102 went to Limestone Ridge where most work is concentrated.)

K S S record more anecdotes of winter rain, sleet, mud and bogged cars in the Upper Macleay. A couple of members recently took a leisurely vacation to Chillagoe and added to the southerners "calling in" at Rockhampton on the way back. A special trip to Kunderang was organized for Beverley Riley (SUSS) who reports huge cliffs of limestone still with tremendous potential for well-organized bush-bashing.

M U C C have been active in short bursts. Recent results included a Gr. 4 map of Mt Fairy Cave, digging through the sand trap in Dog Leg Cave (Wee Jasper) - it flooded again shortly afterwards!, and further work on the Wyanbene survey which now looks like it will top one mile. Speleograffiti for July and August have an interesting review of the calcite-aragonite problem and general processes of speleothem growth. The August issue details a practical invention to facilitate switching on and off of the Oldham Cap-lamp switch even with muddy gloves. The same issue continues an article on errors in compass bearings and ways of avoiding them, including modifications to an Esdaile prismatic compass to enable it to be levelled when sighting.

M S S

have reorganized their publications. There will now be an annual Journal / Yearbook supplemented by 5 regular newsletters. Most work continues on a systematic basis at Abercrombie, where several members slothing it in a caravan recently spent their entire annual vacation. Extensive surveying was done both on the surface and underground.

S C S

reports 40 caving trips in the year to April, a drop on last year but still quite commendable for a small club. Most trips were one-day jaunts with June - Florentine holding the most interest. The Society has acquired its own club rooms at 132 Davey Street, Hobart (rents must be a good deal lower than in Sydney or Melbourne!) Perhaps the most systematic work has been done at Hastings, tying in all known holes to a surface survey, and linking Trafalgar Pot (H207) with Erebus (Waterloo Swallet) via a muddy crawl.

S U S S

has spent most of the year at Jenolan, with the two major projects being in Wiburds Lake Cave and Barellan Cave. The former under Jim Seabrook has recently seen confirmation of a third and discovery of a fourth entrance to Wiburds, a Gr. 6 control traverse and separate levelling traverse of the main passages, further exploration in various areas, and laying of plastic sheets and a marked trail in Silverfrost Cavern. The Barellan project, led by Henry Shannon (UQSS/SUSS) and John Dunkley assisted by guides Newbould, Culley and Rawlinson, involved installation of a gate, laying a marked trail with rubber map steps, and a high grade survey. Following on the need to accurately locate with respect to surface features the innermost part of the Barellan, a theodolite triangulation of the Southern Limestone was commenced by Ludwig Muenzenrieder. The search is now on for caves likely to lead into the Barellan from the south and one good prospect is already down 60ft with lateral extensions requiring digging.

T C C

Late news is not good news. Khazad-Dum does not go. Duly evangelized by, and no doubt wary of the jumalist heavies from the mainland, an all-Tasmanian crew bottomed K - D at the end of October using only single rope techniques. The big new passage reported in ASF Newsletter 55 & 56 was found to be blocked by a rockfall, and prospects do not look bright. But what of JF14 - will it bypass the block? Wait for the next exciting episode during summer.

U N S WSS

Again the most active Sydney society, is rejoicing with the news of Vice-President Warwick Counsell's victory at Bungonia. The UNSWSS offshoot Speleotours, Ink, has orgy-nized another successful weekend at Newnes, where further unrecorded caves in sandstone have been located. This area also has some most unusually attractive pseudokarst phenomena and is well worth a visit. In August some well known UNSWSS identities made a last minute decision to go caving at Camooweal. They were undeterred by the distance and as late as the morning of departure were contemplating Tasmania until learning from Alberß Goede that it was snowing heavily right in Hobart. Only a few days previously they were all set for the Nullarbor and in fact one poor unfortunate left for Nullarbor a few days early without caving gear, expecting the rest to follow. They didn't. Seems he found attractions out there better than the caves anyway! Our heroes took off for Camooweal and did some more caving in Niggie Cave. Total cost of the trip included onw worn out Austin 1800, one clapped VW and another VW abandoned in the Queensland donga somewhere.

U Q S S

seems to be going through that period of soul searching common to most societies, of questioning the content and value of its newsletter. The editor rightly points out that brief trip reports are of little use to researchers so there is no point in just decimating the length of submissions. The August issue of Down Under details the cave records for Queensland. An appended note from R.M. Bourke notes that there is no real documentation in Papua and New Guinea, but gives some boggling statistics for known caves. These include the river cave with an entrance 300ft high and wide (is that the one into which a light aeroplane allegedly flew?). Readers trying to keep up with the avalanche of work at Jenolan cannot afford to overlook UQSS's significant contributions to work in Wiburds Lake Cave, Barellan Cave and on stream tracing. Most of this is the result of the long-term interest in the area by Henry Shannon, an interest amounting to an obsession almost, which has infected a good many people in Sydney and Queensland and maintained interest in the area.

V S A

The club has initiated a project to document all known caves in Victoria and position them on the National Grid. Initially this will involve purchase of dual copies of published topographic maps and, pending more accurate surveying, locating caves by reference to readily identifiable landmarks. Following a distinguished CEGSA tradition, VSA has begun a series of Occasional Dinners, the first of which on Guy Fawkes night, 5 November, was a great success. A Joint CEGSA/VSA Dinner was held in the Naracoorte Hotel on 24 June. In fact, one is astounded at the number of culinary as distinct from caving trips held by VSA; they even have a Wine and Food Appreciation Group! At Buchan, Conservation Pot is the big news, with hundreds of feet of newly found passage, plenty of scope for more, well decorated. Steps have already been taken to ensure the protection of this important system. Regular meetings are now arranged between representatives of all known caving groups in Victoria to discuss matters of mutual concern such as access to properties, gates, conservation etc. Finally, a recent editorial in Nargun states that VSA denies all connexion with the embarrassing piece of sensationalist journalism appearing in a recent issue of the popular magazine Australian Outdoors.

W A S G

The Western Caver has started flowing again more regularly and many trips are reported. A new outflow cave has been found in the aeolian calcarenite in the Witchcliffe region - a rare type of cave in this area. The issue for May-June 1972 (12(3)) contains a long, detailed account of an unusual maze cave developed entirely in laterite soil horizon, between the duricrusted A-horizon and bedrock schist. Cave genesis is said to be initiated by tree roots in the B-horizon which set off secondary processes to remove decomposed fill. In all there seems to have been a resurgence of systematic caving in the west and it is to be hoped that this will enable a proper contribution to replace the sparse material published in the first edition of Speleo Handbook. Some late news filtered through in the last few weeks to the effect that there has been a substantial breakthrough in Easter Cave, leading to hundreds of feet of passage even more superbly decorated than the presently known section, and that's saying a lot. No details yet.

C O N S E R V A T I O N A C T I O N

BARELLAN CAVE, Jenolan

by John R. Dunkley

(This is a short account of the conservation aspects of this superb cave. A full report on the cave is in preparation)

The Barellan Cave, a well-decorated upstream continuation of River Cave, Jenolan, was discovered and explored in the mid 1960s by guides Ron Newbould and John Culley. No new work was done from about 1967 to 1972, by which time the cave was deteriorating from the cumulative effect of numerous "private" trips. In 1972 UQSS / SUSS were invited to take up the work of exploration and mapping. Henry Shannon drew up recommended conservation practices (see Down Under 11 (3)) designed to arrest further deterioration and where possible restore damage already done. It was decided at an early stage that until the cave was properly protected and accurately mapped, no further exploration would be carried out. The programme, which is continuing, has thus far achieved:

1. Installation of a gate and recommended total blocking of a bypass.
2. Laying a "preferred path" of garden-type white tags topped with reflective tape.
3. Laying of rubber mats at every step in the decorated section (these will be checked later to ensure that they do not themselves deteriorate). They have the advantage of being removable.
4. A grade 6D survey fully drawn up on a scale of 1:200

With these precautions taken, exploration parties will be able quickly to reach the inner parts of the cave where exploration leads are waiting. SUSS has also taken the initiative in this practical form of cave conservation with a similar path in Silverfoist Cavern, Wiburds Lake Cave, by Jim Seabrook et al. Full reports on both of these projects are in preparation.

P R E C I P I T O U S B L U F F , T a s .

by KEVIN KIERNAN

It seems the first major conservation battle involving Tasmanian speleologists directly is about to erupt. The area involved is the placid shores of New River Lagoon and the looming bulk of 4000 ft Precipitous Bluff on the remote far south coast. And the issue seems to beholding enough emotion to threaten another burst of antagonism between conservationists and exploitation interests.

Gordon Limestone (Ordovician) outcrops extensively in the area. The limestone dips very gently, enclosed in a syncline striking generally north-south, underlain by quartzites and conglomerates and overlain unconformably by Permian sediments. The mountain is capped with Jurassic dolerite (Blake 1938). The limestone stands out high on the mountainside as bold cliff faces, while to the south it is typified by subdued relief and overlain by sand deposits towards the coast (Hughes 1957).

Many shafts are known, principally in the region of the unconformity, while numerous outflow caves are developed at the base of the mountain. The only caving trip to the area, by seaplane in 1960, explored only one of the eight principal creek systems draining into the lagoon from the limestone, due perhaps to the intolerably dense bush. This led to discovery of three caves, one of which was left unexplored, another pushed for a quarter mile past decoration and talus to a draughty point where a boat was needed for further exploration. There is clearly excellent scope. Unfortunately, it is in the purest limestone in Tasmania

Late in 1971 Mineral Holdings (Australia) Pty Ltd applied for an exploration licence in respect of 20 square miles of limestone country. Objections were lodged by several conservation groups but were declared technically invalid. The lease application was later rejected by the Mines Department as it impinged on the boundaries of South-West National Park.

Subsequently a further application was made for 25 square miles with modified boundaries. Numerous objections were lodged on a number of specific grounds. The objection lodged by the South East Cape Committee specifically mentioned caves but failed to meet the time limit. In returning the objection and fee, the Director of Mines, Mr Symons undertook that the objection would at least be considered "on an administrative basis".

Recently, Tasmanian Premier Mr Eric Reece appears to have been setting the stage for this issue before it reached the public eye, with a series of attacks on conservationists in general, drawing at least some criticism from Liberal Opposition Leader Mr Max Bingham. To warrant the effort required to establish a quarry at Precipitous Bluff, development on a massive scale would be necessary. Rumours about roads and railway along the coast from Cockle Creek, and about jetties and breakwaters near Prior Beach are prevalent. With a paid-up capital of only about \$8000, Mineral Holdings is clearly in no position to develop the site; it is clearly a sell-out proposal. The likely buyers are tipped as B.H.P. or Pickands Mather. One of the directors of Mineral Holdings, one Walter St Clair Manson, is former head of the Mines Department in Launceston, and his son-in-law was Mayor of Launceston from 1969-71.

The Warden's Court hearing is scheduled at Devonport on December 4, although at the time of writing only two of the seven objectors had been notified. Some did not even receive acknowledgment of receipt of their objections. The writer was assured (16 Oct.) in a 'phone conversation with an officer of the Mines Department, that the hearing date was 9 December, while in a letter to the S.E.C.C. the same Department gave the date as 10 December (a Sunday as it happens).

Objections are based on the aspect of valuable scenic asset, integral part of the South West wilderness, included in recommended additions to the National Park. The United Tasmania Group, political wing of the conservation movement, unsuccessfully sought a proper investigation.

R E F E R E N C E S

BLAKE, F. (1938) : Rocky Boat Harbour District (unpublished)

HUGHES, T.D. (1957) : Limestones in Tasmania. Geol. Survé Min. Res. 10 (Tas.Dep't. Mines)

N I B I C O N S O C I A L A C T I V I T I E S

* * * * *

Apart from the presentation of papers and the conducting of seminars, a wide range of social events have been organised during and after the Convention.

PHOTOGRAPHIC COMPETITION During the Convention there will be the annual photographic competition. Entry forms will be available at the Convention. If you cannot attend but wish to enter the competition, write to the organisers, Box 17, The Union, University of N.S.W., KENSINGTON, N.S.W. 2033 and request an entry form. Everybody can enter except the members and relatives of the organising committee. The categories are as follows;

A. ABOVE GROUND

- | | |
|------------------------------|---------------------------|
| 1. Best Humorous B & W print | 4. Best Other B & W print |
| 2. " " Colour print | 5. " " Colour print |
| 3. " " Colour slide | 6. " " Colour slide |

B. BELOW GROUND

- | | | |
|------------------------------|------------------------------|---------------------------|
| 1. Best Humorous B & W print | 4. Most Dramatic B & W print | 7. Best Other B & W print |
| 2. " " Colour print | 5. " " Colour print | 8. " " Colour print |
| 3. " " Colour slide | 6. " " Colour slide | 9. " " Colour slide |

Above ground photographs must be associated with caving or caving areas. Prints should be approximately 5" x 3", mounted and with at least a ½" border. 35mm slides only will be accepted. There is no entry fee, prizes will be announced at NIBICON and will depend upon the support for the competition. All entries will be screened on the evening of Thursday, 28th December and the winners announced. WINNING ENTRIES WILL BE PUBLISHED IN THE PROCEEDINGS. Deadline for entries is 12.00 noon, Wednesday, 27th December. All entries will be returned. The judges will be drawn from recognised photographic clubs.

SPORTING COMPETITIONS. There will be four sporting competitions held, laddering, prusiking, squeezing and an obstacle course.

LADDERING races will be held over a distance of 120 feet. **PRUSIKING** races will be held over distances of 100 and 400 feet. Can you beat the U.S. records of 35.5 secs and 6 minutes resp for these distances? Also, a fiendish **SQUEEZING** machine has been constructed to wheedle out the slippery customers and rubber men of caving. There will be an open competition and a handicap competition, the handicap being 0.75mm (note metrics) per lb (note British) body weight in excess of or less than 150 lbs - a far cry from the coat hanger and chair leg competitions of Hobart.

Of all the competitions, the **OBSTACLE COURSE** is the most sadistic. After running, walking, limping and crawling for one mile, the fully laden trog is expected to enter a tyre squeeze, ascend and descend a ladder, crawl through a 12 foot long 15" diameter pipe, then a large sloping greased pipe, a 1000 foot long stomach crawl, a 30 foot flattener and as a finale! dive into a bathtub sump with a 1 airspace. If you are foolish enough to take a carbide lamp with you then you have to keep it alight as well. Just to relieve the burden slightly, a haversack with an egg in it representing fragile equipment must be taken along with full caving gear. Breakage of the egg loses points. Also this will be a team competition comprising of 4 persons, one female. Teams should represent a club, area or group.

BEARD GROWING COMPETITION. Over the three days of the Convention, the guy (or bird) who grows the longest beard will win a trophy. Chins will be shaven at the beginning of the Convention and again at the Caveman's Dinner. The shavings will be rinsed and filtered. The highest weight wins.

CAVEMAN'S DINNER. Even though the special sruise ferry, "M.V. Lady Scott" was burnt to the waterline a few weeks ago, the "M.V. Radar" has been hired to hold the caveman's dinner. The Radar is not so well fitted out as the Lady Scott so that it will be necessary to hold a Smorgasborg style meal. An excellent menu has been prepared to make up the difference in cost. Wine to the tune of a bottle per head will be included in the meal. The ferry leaves on a Harbour Cruise at 6.30 p.m., giving the guests several hours to view Sydney Harbour, Middle Harbour and the Parramatta River by daylight. At dusk the meal will be served and the cruise will continue untill 11.00 p.m. A wide range of beverages will be aboard to satisfy the needs of the sophisticated, carefree and the downright boozy. Costs include the hire of the ferry, the food and the free refreshments and is only \$6.00. Bookings close 15th December.

NEW YEARS EVE. On New Years Eve, at Jenolan, a ball will be held in the Caves House. Dress will be collar and tie or equivalent (trog suit and tie?). so bring along at least one decent set of clothing. Other New Years Eve activities are being organised for the other areas but are still not organised fully, although the Bungonia show will probably be a hay ride.

SMOKE CONCERT. On January 6th a folk concert will be held in the Grand Arch at Jenolan Caves. This will be organised by the Jenolan Historical Society. Charcoal braziers will light the scene and give the concert its title. Local folk artists will entertain for several hours and it is usual for the Jenolan guides and often the spectators to join in as well.

FIELD TRIPS The objective of the field trips is to provide the majority of cavers with the caving they want not what is forced upon them. That is why the Registration Form asks so many questions. If there are 5 or 6 people who want to dig then we will provide them with a dig. Consequently, no rigidly controlled, specified trips have been advertised. There are four basic areas; Jenolan, Bungonia, Yarrangobilly and Cliefden. Houses have been rented in these areas to provide improved camping facilities such as kitchens, running water, electricity, bathrooms, toilets etc. If the houses fill up, priority will be given to families and some may have to camp outside. Area Directors will be in attendance so that you can move from area to area if you so desire. We do want to know however, approximately how many will be in any one area at a time so as not to overload or overdo our welcome with guides, property owners etc. Detailed information regarding each area will be sent to each person registering for the field trips.

N I B I C O N P R O G R A M M E

TUESDAY 26TH

- 2.00 p.m. Arrival of participants, allocation of accommodation.
- 5.30 p.m. DINNER
- 7.30 p.m. Meeting of outgoing executive, acceptance of delegates & proxies, free time for people to visit the city sights, Kings Cross etc.

WEDNESDAY 27TH

- 8.00 a.m. BREAKFAST
- 9.30 a.m. Biology Symposia
- 11.00 a.m. Special Symposia on Histoplasmosis, skin testing of Speleo's
- 12.30 p.m. LUNCH
- 2.00 p.m. OPENING CEREMONY, Mr. T. L. Lewis, M.L.A.
- 3.00 p.m. General Symposia Papers
- 5.30 p.m. DINNER
- 7.30 p.m. General Symposia cont., Photography in Speleology Seminar.

THURSDAY 28TH

- 8.00 a.m. BREAKFAST
- 9.30 a.m. Speleochemistry Symposia, Vertical Caving Techniques Seminar.
- 12.30 p.m. LUNCH
- 2.00 p.m. Speleochemistry Symposia cont., Speleopublications Seminar.
- 3.30 p.m. Speleosports! Laddering, prusiking, squeezing & obstacle races.
- 5.30 p.m. DINNER
- 7.00 p.m. Screening of Photographic Competition entries & prize awards.
- 8.00 p.m. Cave Physics Seminar

FRIDAY 29TH

- 8.00 a.m. BREAKFAST
- 9.30 a.m. Meteorology Symposia
- 10.00 a.m. Geomorphology Symposia
- 11.00 a.m. Hydrology Symposia
- 12.30 p.m. LUNCH
- 2.00 p.m. Maps & Diagrams Seminar, Survey Techniques Seminar
Conservation Seminar
- 5.00 p.m. Close of Convention procedures.
- 6.30 p.m. Harbour Cruise
- 8.00 p.m. Caveman's Dinner

SATURDAY 30TH

- 8.00 a.m. BREAKFAST
- 9.00 a.m. Field trip briefings
- 10.00 a.m. Some leave for field trips
- 2.00 p.m. Opening of A.S.F. Committee Meeting.

* * * * *

N I B I C O N I S N E A R L Y H E R E !!

P H O T O G R A P H I C C O M P E T I T I O N

J U M A R C O M P E T I T I O N

(Australia's first)

F I L M S a n d S L I D E S

S C I E N T I F I C S E S S I O N S

S Y M P O S I A a n d S E M I N A R S f o r a l l i n t e r e s t e d c a v e r s

F I E L D T R I P S - S e a C a v e s , J e n o l a n , Y a r r a n g o b i l l y e t c .

C A V E M A N S D I N N E R c u m H A R B O U R C R U I S E !!

There will probably never be another
Convention like this one. You cannot
afford afford to miss it - there is
something for everyone !

B A C K I S S U E S O F a . s . f . n e w s l e t t e r

The Special Offer on the back page has sold out. Also, a number of the scarce issues have been sold out completely. The following issues listed under 'VERY SCARCE' should now be transferred to 'OUT OF PRINT' : Nos. 3, 7, 26, 32, 38.

Future orders for the 'Special Offer' will be received at the same price, however there will be only 24 or 25 issues in the packet. The price will remain the same, but while stocks last, copies will be included of the booklet 'CAVING IN AUSTRALIA' and the report and submission on 'THE CONSERVATION OF MULLAMULLANG CAVE; WESTERN AUSTRALIA'.

A . S . F . N E W S L E T T E R F O R 1 9 7 2

We trust you enjoyed this year's issues wich, because of the acquisition of this microface typewriter, enabled publication of more material than ever before. The total cost, not yet detailed because all the bills aren't in, exceeded \$600. The budget was \$500. You can draw your own conclusions.

E R R A T U M : The text at the top of p. 16 of the September issue followed on from that on page 17. The map and photo of Earls Cave accompanied the text on page 15.

A C K N O W L E D G M E N T S

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