

AUSTRALIAN CAVER

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EDITORIAL

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Front Cover Photograph:
Old Homestead Cave.
In the Springs Series. Oct 1991.
Photograph by Steve Milner.

It has been an eventful few weeks since the last issue of A.C. Old Homestead Cave reaching 23km, mining of Yessabah halted, the report of the D9 bulldozer, which digs the trench for the optic fibre cable that is being laid across the Nullarbor, breaking into a chamber of a previously unknown cave. Exit cave coming under increasing threat from mining, an accreditation scheme for cavers being investigated for implementation in S.A., as well as major exploration occurring in the north of the continent. All this raises issues about what is happening to our karst areas.

The issue of resource use and access is an increasing area of debate nationally, brought about by increasing public awareness of environmental damage, soil losses, scarce and polluted water resources, suggested privatization of our National Parks and the recent Resource Security legislation. This new awareness has brought with it funding for research into how ecosystems work, but in the case of karst this funding seems to come about only when caves are about to be mined or flooded. This "campaign" funding suggests that karst and its environmental importance have a long way to go before becoming an area of significance for funded research. We do not have, for example, a centre for Karst Research attached to any academic institutions, and what research is done is more often than not done in our spare time. Mind you, our spare time efforts have resulted in the development of a national database, well done, but let's keep going. There seems at present a need for a more co-ordinated approach to the work that we do. Why map the same cave five times when little is known about its fauna. The ASF needs to tap into the funds that are available from such organisations as the Murray Darling Basin Commission (which covers most of the NSW Karst areas), the Land, Water Resources Research Development Corporation, the Heritage Commissions of each state, just to name a few, and lift the public image of a cave being a hole in the ground, a place for the dumping of rubbish or a place you can mine. We have a lot of work to do, so let's think about doing it an organized manner. Bring your ideas to the Jindabyne Council meeting.

Big thanks to those who sent some feedback on the last issue. The address list has now moved to Steve Brooks, WASGA. He wants to know if you have changed addresses, write to 6 Kidbrooke Place, Westfield, W.A. 6111.

I am still waiting desperately for those words of wisdom from all those clubs that are part of the ASF, just what do you all get up to, what is going on in Qld these days? I will be at the ASF conference at the end of January so I look forward to meeting you. Deadline for the next issue is **February 14**, Valentine's day.

Clare Buswell

P.S. I've not awarded the \$20.00 for the photo on the front cover, I don't consider one photo as a fair contest. So either you are all rich or recession proof or I don't offer enough money to get you to send me the results of a roll of black and white film put though the ol' box brownie! So the prize for the next issue jackpots to \$40.00. Just remember to put your name, address and phone number on the back of the photo and details of what and where the photo was taken. Very importantly, send a correctly stamped addressed envelope so it can be returned to you. No envelope, no stamp - no photo will be returned.

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WEST AUSTRALIAN CAVE EXPLORATION IN THE 90'S

by Rauleigh Webb

Many people ask "Why do you go caving?" or "What is the attraction of caves?". The answer is never simple but it generally involves explaining the thrill, the exhilaration of finding and exploring a new cave or passage. It is this excitement that drives many cavers to go caving.

The 1980's has seen an explosion of individuals and groups conducting outdoor activities. These activities have been very diverse in nature and caving has been one of these boom activities. Many of these 1980's cavers are not members of speleological groups but rather drawn to caves by the thrill of the unknown.

Organised caving started in Western Australia in the late 1950's. In those days very little of the underground wilderness of our state was known. The fledgling Western Australian Speleological Group was formed and its members started to record the exploration of many caves throughout the state. In those days the number of cavers or speleologists was very low. One of the activities of cavers was not spending 50% of their free time responding to management plans that would affect their caving future. Instead the unknown beckoned and cave exploration occurred at a rapid rate, unhindered by cave managers.

As a result this period resulted in the discovery and exploration of many caves from Cape Range to the Nullarbor. In general the method of cave exploration was not a topic that cavers discussed. It was quite straight forward. If a new cave was found you entered it and explored it. In general these new finds were enthusiastically written up in The Western Caver and hence were documented for posterity. The impact of exploration on the cave was also not a topic that was widely considered.

The 1970's saw a bout of cave mapping emerge from the WASG. This mapping has continued until the present time where we find that the majority of the known caves in the South-West region (from Eneabba to the Leeuwin-Naturaliste National Park) have been mapped one or more times. Generalising again it can be said that the majority of these maps were produced well after the cave was known and explored. Exceptions to this generalisation have occurred but infrequently.

Some explorations that took place by cavers were totally unnecessary. If the majority of the cave survey had been completed prior to exploration of some of these delicate areas then it may have been clear that exploration of these regions could not lead to further extensive new cave. Unfortunately these type of measures were not undertaken and as a result some areas/regions were trogged unnecessarily.

Not only were new areas trogged needlessly but even areas that could clearly be avoided were heavily damaged or destroyed. Examples of this type of damage are the

Snowflake passage in Strong's Cave (recently described as being destroyed by F. Loveday - one of the surveyor's of the cave) and Tom's Folly in Easter Cave (this area was so named after Tom suggested, that it should be cleaned of hundreds of wayward footprints, at a WASG meeting).

The 1980's was the decade that saw significant amounts of track marking appear in many of the caves of this region. Cavers were beginning to understand that they were the cause of much of the damage in delicate caves by not restricting visitors to clearly marked paths. Unfortunately the majority of this track marking was placed in caves after the damage had occurred.

THE FUTURE

With the major cave explorations in the South-West regions complete speleological groups should now be examining new areas that have not been extensively explored. Activities such as digging to find new caves are also now common. As new caves are found in these new areas and by digging, the techniques of cave exploration should be seriously considered by the speleologists that enter these new caves.

An examination of the damage that has been caused in the exploration of many of the caves of the South-West reveals that cavers have a lot to answer for. So how can we improve our exploration techniques? The most important action that an individual or group can take upon discovering a new cave is to ask one question:-

Do we have the necessary equipment with us to explore this cave -

WHILE HAVING THE MINIMAL IMPACT ON THE CAVE?

If the party cannot answer yes to this question then they should not enter the cave but obtain the right equipment and return at a later date when they are fully prepared. Even if this means a return trip of 1000's of kilometres - DO IT! Remember, think:-

Cave FIRST - cavers SECOND.

To ensure that you have the minimum impact on the cave you should do the following:-

1. Maximise your initial goals, surveying and track marking should be the minimum number of tasks undertaken.
2. Keep your exploration/mapping party small. Carefully consider the skills of your party members. If the cave is likely to contain bone material ensure that someone can identify bone material and hence ensure that it is not trampled on the initial exploration.

3. Map as you explore.

(Cont'd p. 9)

FIRST RESPONSE FOR CAVING ACCIDENTS

Introduction

Someone in your caving team has just had an accident. What are you going to do? I am sure that this thought has occurred to you, as it certainly has to me, so I have put together this article to outline some of the more important aspects of First Response to caving accidents.

First Response is the set of actions that your caving team should follow from when the accident occurs to when the rescue team arrives and takes over. The rescue team might be fellow cavers or an official rescue team such as the Police or State Emergency Services. There are five main stages to First response.

1. First Aid: DRABC
2. Record Important Information
3. Assess the Situation
4. Stabilisation
5. Evacuation

First Response begins with the DRABC action plan of the St. John Ambulance Association. I assume that you have a First Aid certificate. First Aid knowledge means that you will be able to look after your fellow caver as best you can in the event of an accident. In case you don't, I will cover the DRABC briefly then the other four stages of First Response in more detail.

Please note that the First Response guidelines outlined here are designed to assist you in remembering what to do. They will not cover what to do in every caving accident. It is up to you to stop and think, calmly and rationally. This will install confidence in your fellow cavers and is one of the characteristics of a good Trip Leader.

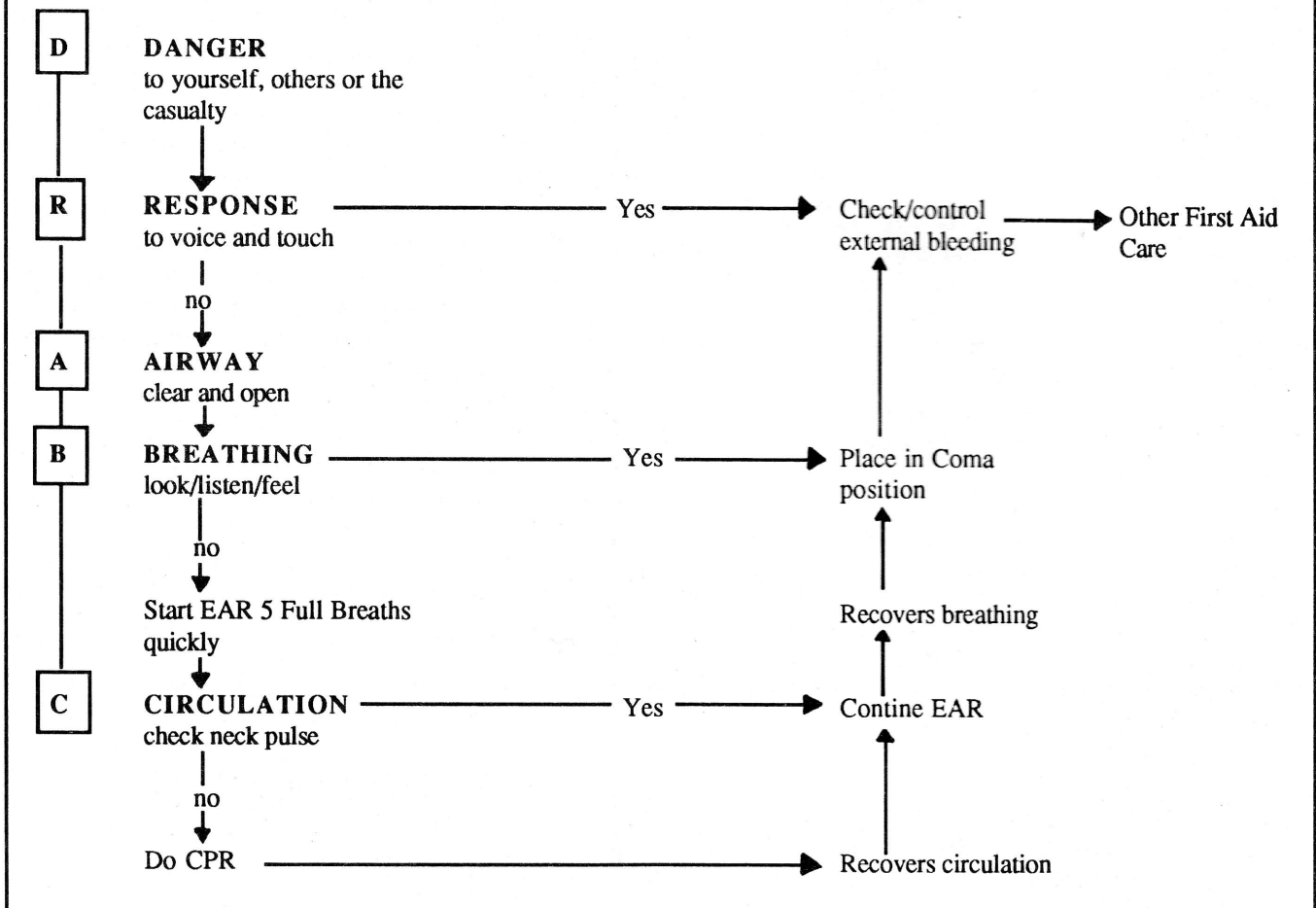
1. FIRST RESPONSE GUIDELINES

Danger: Check for danger to yourself, others or the casualty. Danger to yourself or others might arise from a rockpile collapse, flooding, or foul air. Your immediate concern should be to ensure that you or others are not the next casualty. Then ensure that the casualty is not in any further danger. This may mean removing the danger (eg removing loose rocks) or if necessary moving the casualty from the danger (eg suspension from a rope). If you move the casualty beware of possible spinal injuries!

Response: Check for a response from the casualty. Gently shake and shout. If the casualty responds then check and control serious external bleeding. If there is no response, proceed with ABC.

Airway: Open the mouth and clear if needed. Clear and open the airway.

DRABC: THE FIRST AID ACTION PLAN



FIRST RESPONSE FOR CAVING ACCIDENTS

Breathing: Look for the lower chest or abdomen rising and falling. Can you hear breathing sounds? Can you feel breathing? If the casualty is breathing but not responding, place into the coma position. If the casualty is not breathing start expired air resuscitation (EAR).

Circulation: If present, continue EAR. If absent, start cardio-pulmonary resuscitation (CPR).

As you can see there is a lot to learn in First Aid and I am not an instructor. It's best to go and do a short First Aid course. Let's now move on to the second stage in First Response.

2. RECORD IMPORTANT INFORMATION

Time of Accident:

Location of Accident:

Caving area

Cave name/Entrance number

Location of casualty (good description is required)

How long will it take to reach the casualty?

Is any equipment required to reach the casualty?

How did the accident occur?

Casualty Details:

Name

Age

Sex

Notify

What Injuries are there?

Caving Team Details:

Name of team

Number in team

General experience

The above information must be written down. Experienced cavers should have paper and pencil on them (it also comes in handy for doing a grade 0 map of that newly discovered passage).

The time that an accident occurred is important because Ambulance personnel will be able to judge the probable condition of a casualty from the injuries described and the time elapsed since the accident.

The EXACT location of an accident is required. Often caves have multiple entrances so you need to specify what entrance should be used. The time it takes to reach the casualty and any equipment required will be important information to tell the rescuers.

How an accident occurred can provide an indication of other possible injuries to be aware of. For instance a broken ankle

due to a fall down a small pitch would alert medical personnel to look for compressive fractures in the spine whereas the same injuries due to slipping would be unlikely to result in spinal injuries.

Casualty and caving team details are important for the medical personnel and rescue teams who will then be able to plan ahead. Of course you may wish to include more information than what I have indicated.

3. ASSESS THE SITUATION

Assessing the Situation is one of the most important judgements that you will have to make. Some of the questions to consider are: Will the casualty be able to assist themselves once they have been treated? Will you be able to do a self rescue or will outside assistance be required? Will the casualty exit the cave the same way they came in or is there an easier way out? Are there tight or wet passages, vertical sections or difficult traverses?

Often a casualty will be able to assist themselves, especially if they are an experienced caver. In this case a self rescue may be possible. However, if you decide that self rescue is possible and subsequently find that the casualty's condition deteriorates, or that the rescue is more difficult than anticipated and outside assistance is required, then crucial hours will have been lost. Remember that outside assistance may take many hours to arrive, so if you think you may need help, call for it early.

As a general rule if the casualty requires assistance to move and is:

(a) trapped, or

(b) in a tight cave, or

(c) more than 30 minutes from the surface,

then outside assistance will probably be required.

At the end of the situation assessment you will probably have come to a decision on what you are going to do. If you are going to do a self rescue because of the minor nature of the injuries then you will need to ensure that the casualty is stabilised, then commence the evacuation. If you decide that outside assistance is required because of the casualty's injuries or the difficulty of the cave then your role will be to stabilise the casualty until that assistance arrives.

4. STABILISATION

Stabilisation is concerned with ensuring that the casualty's medical condition does not deteriorate. There are two situations. Stabilisation of minor injuries before a self rescue and stabilisation of more extensive injuries while awaiting outside assistance. The latter is more difficult because of the longer time that will be involved and because the casualty's injuries might be more severe.

Stabilisation prior to self rescue:

FIRST RESPONSE FOR CAVING ACCIDENTS

Before you attempt to evacuate the casualty from the cave you must ensure that the casualty's medical condition is stable enough. For a self rescue it is unlikely that the casualty had any airway, breathing or circulation problems so all you would need to do would be minor First Aid. For instance, if the casualty had a cut you would bandage it to reduce bleeding and provide protection to the injury on the way out. When the casualty is stable proceed to the evacuation stage.

Stabilisation while awaiting outside assistance:

Stabilisation in this situation is more difficult and will extend for a few to several hours. There are four basic things that you will need to do.

- (a) Arrange for a First Aid person and one other to remain with the casualty.
- (b) Accompany or send the remaining persons out of the cave with clear written instructions on what to do.
- (c) Contact the appropriate authority and inform them of the accident, passing on the information recorded earlier.
- (d) Arrange for the transport in of equipment to stabilise the casualty.
- (e) Arrange for someone to remain on the surface to lead medical personnel and rescuers in to the accident site.

Choose someone in the caving team that has a First Aid certificate or First Aid knowledge to remain with the casualty together with one other if possible. Then you can exit the cave to arrange the rescue. Alternatively, if you need to remain with the casualty then make sure that you give clear written instructions on how to arrange for help with the persons you send out of the cave. The First Aider should check and record the casualty's pulse, breathing and general condition every 15 minutes.

The other persons in your caving team don't need to be in the cave. It is better to send them out to obtain a decent meal as they might be needed during the rescue. Although it may not always be possible, try not to send people out alone. They will be as anxious as you are about the condition of the casualty and will probably try to exit the cave as fast as possible. This is just asking for another accident to occur at the worst possible time!

Make sure that the person you send out knows WHO to contact and HOW to contact them. In some areas this may be the Ranger, the local landowner or the Police.

There is considerable equipment to be brought into the cave to aid in the stabilisation of the casualty, support those remaining with the casualty and assist the rescuers. Some of

the things that you would carry into the cave would be:

Sleeping bag
Closed cell foam mat or Therm-a-rest
Space blanket
Extra First Aid equipment
Notebook and pencil
Spare lights or batteries
Food, water and warm clothing for others
Track marking material

Injured or immobile persons easily succumb to hypothermia. Reduce this risk by placing the casualty in a sleeping bag with an insulating layer underneath. A space blanket around the sleeping bag might also be useful. While this equipment is being procured the First Aider must attempt to keep the casualty warm with any spare clothing or their own body heat.

Extra First Aid equipment might be brought in as well as more notepaper for recording the casualty's medical condition regularly. This will be valuable for the medical personnel when they arrive as they can then consult your notes and see if the casualty's condition is stable or not.

You might also need spare lights or batteries and some food, drink and warm clothing for persons staying with the casualty. If you have some trackmarking material (brightly coloured tape, rope or reflective tags) then this could be used to delineate the way in for the rescuers.

It is important that when medical personnel and rescuers arrive that they know how to reach the accident site. Remember that they are probably unfamiliar with the cave and are probably not cavers. A person who knows the cave well can lead them directly to the casualty.

5. EVACUATION

Evacuation of the casualty from the cave will be done either by yourselves in the case of a self rescue, or it will be done by a professional rescue team if you have called for outside assistance.

Self rescue is usually done by whatever persons are with the casualty at the time. However, if you have enough personnel you might send some out to bring in some more vertical gear or First Aid equipment. If there is a local Ranger close by it is a good idea to inform him or her that your group has had an minor accident that you are handling it yourselves, and you will keep them informed.

Remember to regularly monitor the casualty's condition and occasionally re-assess the situation. Providing encouragement and presenting a positive attitude toward the casualty is very important.

Rescue by an official rescue squad will be a considerably

FIRST RESPONSE FOR CAVING ACCIDENTS

larger affair and falls outside the realm of First Response by cavers so I shall not cover it here.

Conclusion

Let's now summarise the stages of First response to caving accidents:

1. First Aid: DRABC
2. Record Important Information
3. Assess the Situation
4. Stabilisation
5. Evacuation

Now that I have laid out all these guidelines one by one in a sequential order I am now going to tell you to THINK CONCURRENTLY. At the same time that a First Aider is

doing DRABC, delegate someone to record the important information while you assess the situation. While your group is organising equipment to take underground, contact the local authority and inform them of the situation.

Hopefully your group will never have a serious caving accident, but if it does occur your First Response actions will ensure that the casualty receives the optimum treatment and care during their journey to the surface.

Yours in Caving,
Mike Lake,
Convenor
ASF Safety
Commission

S.A. CLUBS FORM A SPELEOLOGICAL COUNCIL

Since April this year two representatives from each of the five (known) caving clubs in S.A. have been meeting bi monthly. The Council, has taken steps to formalise the processes undertaken so far and pressure by the S.A. National Parks and Wildlife Service for input into Cave Management Policies by the Council has provided additional incentive to complete this task as soon as is possible with such a volunteer body.

Amongst the roles of the council is 'to foster relations between the caving clubs in S.A. and other bodies and to speak on behalf of the caving clubs as a united voice and to represent the ASF in South Australia.

The clubs represented are the Cave Divers Association of Australia, (CDAA), Cave Exploration Group of South Australia, (CEGSA), Cavex Inc., Flinders University Speleological Society Inc, (FUSS), and the Scout Caving Group of S.A. (SCG). This includes two full and two Associate members of the ASF.

The most recent and perhaps the most wide reaching matter that the council has been involved with is the introduction by the S.A. NPWS of the "Cave Access Policy".¹ This policy recognises the Council as the governing body of caving in S.A. and has a clause which states:

Although the cave classification system provides guidelines to determine appropriate purposes for entering caves it does not determine who should be given permission to enter caves. It is therefore necessary to adopt an accreditation system to assist managers in providing appropriate access opportunities. Accreditation will be provided by the S.A. Speleological Council. The development and implementation of this SASC accreditation system

will be subject to acceptance to the SANPWS.

The Council has been given approximately nine months to design and implement the accreditation scheme. However several issues including the legalities to training and approving people as qualified cavers are still to be resolved.

The council has also undertaken a Pilot Caver Impact Study during the Old Homestead Expedition. Clare Buswell, Peter Kraehenbuehl and myself attended the "Caver Impact Forum" in Sydney and thought that the expedition presented itself as an ideal time to capture baseline data. So, with the co-operation of the members of the expedition we used the rare opportunity to take samples from pristine cave knowing that 'no person has ever gone before'. These samples are now in the hands of scientists. We trialed several new innovations and as we sort and compile the information we will keep you informed.

The format of the Council is still shaping itself into existence however, the general direction is to have three areas of cooperation, Caver Impact, Cave Classification and the management of the S.A. Cave Database, and the Accreditation Scheme. These are seen as the major issues facing caving and the Council intends to keep abreast of developments in these areas.

The representatives are working well together and the formation of the Council can only improve relations between our clubs and provide a united force as we move into the environmentally aware and legislated future.

Alan Jevons

1. Previously known as the Draft Policy on Public Access to Caves in S.A. National Parks, released last year for public comment.

EXIT CAVE

is closed to all users for the duration of the compilation of the Management plan by Mr Ian Household. Ian is due to start work soon and will be seeking any relevant input into the plan from interested individuals or organisations. So get your thoughts together folks. How would you like to see Exit Cave managed? How do you want Exit Cave to look in five, ten, twenty years' time?

PANNIKIN PLAINS CAVE

in the Nuytsland Nature Reserve, W.A., has been closed to the public since the freak rain storm and subsequent runoff caused a major collapse of the entrance doline in December 1988. It appears that further collapse has recently occurred and that the entrance rockpile is still in an extremely unstable condition. The W.A. Dep't of Conservation and Land Management (CALM), wishes it known that entry to the cave will continue to be prohibited until further notice.

SUSS

has been particularly busy exploring, surveying, publishing and saving caves from quarrying since you last read about us in 1988 (Australian Caver 118).

At Jenolan Caves exploration has focussed on searching for the fabled "Hairy Diprotodon" between Mammoth Cave and the Jenolan Tourist - Spider Caves. SUSS divers managed to pass the tight Sump 6 below Jubilee Cave, a tributary of the underground river in the tourist caves. New passage named Far Country was explored and surveyed beyond Sump 6 before progress was stopped by an even tighter Sump 7. The map of Far Country reveals that the tributary drains the eastern margin of McKeowns Valley below Aladdin Cave [SUSS Bull 29(3)]. The upstream sump in Spider Cave has been dived to a depth of 30m against the upwelling "Hairy Diprotodon", through 2 underwater squeezes which required digging. Further progress has been stopped by another tight underwater squeeze. Slug Lake, the downstream sump in Mammoth Cave has also been dived, but without any breakthroughs so far. The above water cavers have discovered a few small extensions in Mammoth Cave and northern Spider Cave. The hydrology of Mammoth Cave during floods and its speleogenesis have also been investigated.

Recent exploration in Serpentine Bluff at Jenolan has been frantic. Right Nostril Cave was connected with Diggins Diggins Cave, new chambers were discovered in Diggins Diggins and at the end of the Rambling

Rockpile Extension in Little Canyon Cave, and then a small cave J38/131 was reinvestigated and enlarged to form the connection between Little Canyon Cave and Diggins Diggins Cave. All of these caves are now parts of Serpentine Cave, a system with nine entrances. Digging in the NW part of Diggins Diggins has passed 3 squeezes, discovering 40m of new passage and exploration is continuing. As a result of all of these additions, the now enlarged Serpentine Cave is being resurveyed. Elsewhere at Jenolan in the Southern Limestone, maps have been published of the SUSS cave diving extensions in the southern part of the Jenolan Tourist Caves in Baralong Cave as well as some other small caves [SUSS Bull 28(2)].

The cave divers have also been busy exploring and surveying underwater in Cathedral Cave and Lime Kiln Cave at Wellington Caves. The considerable extent of the sumps has lead to the development of a new underwater surveying technique.

At Tuglow, SUSS is nearing the completion of a major study of the caves and karst. Nearly 2km of passage has been surveyed in Tuglow Cave with the discovery of a few minor extensions. The smaller caves T2, 3, 6n/s and newly assigned tagged caves T20, 21, 22, 23, 24 have also been surveyed.

The continued silting up and growing boulder scree slopes beside Bungonia Gorge caused by the Marulan limestone quarry, led to a publicity led demonstration at Bungonia Caves in May 1990. A large sign was compiled on one of the scree slopes for televising by numerous media crews in helicopters and on top of the Gorge. Despite the media coverage and the mailing of letters and boulders from the mine scree to MPs, disappointingly nothing seems to have changed since the demonstration.

At Yessabah,

the caves and bat maternity sites are threatened by limestone quarrying. Numerous SUSS visits to Yessabah have surveyed and mapped some of the caves threatened by the quarrying, confirming that Yessabah is a significant and important karst [SUSS Bull 31(2)]. SUSS member and mining engineer Ian Cooper assessed the mining plans and a court challenge was instigated by SUSS member Keir Vaughan - Taylor, supported by the work of numerous SUSS members including barrister Patrick Larkin, legal aid through the Environmental Defenders Office and evidence from academics.

Cont'd p.18

WESTERN AUSTRALIAN CAVE EXPLORATION IN THE 90'S

(Cont'd from p. 3)

4. Consider the location of track markers very carefully so that they do not have to be shifted in the future. Poor track marking will lead to unnecessary cave degradation.

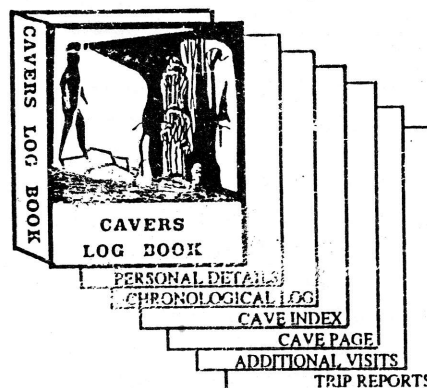
5. If the cave entrance has been completely opened by digging then CLOSE THE CAVE ENTRANCE when you leave the cave. If the cave is not to be gated to restrict entry then ensure that all visitors reseal the cave after visiting. The effects of opening new cave entrances may have a dramatic impact on the cave's speleothems as well as the caves fauna (Hamilton-Smith 1972).

I hope that these few points have stimulated your thoughts. If you are a caver who is genuinely concerned about CONSERVING, not PRESERVING, the caves that you visit then I implore you to think about the above few points and others that impact the cave environment. Think carefully about how you can improve your own caving techniques so that your personal impact on the cave is minimised. I also strongly encourage each and every member to become involved in at least one cave conservation or restoration project. It is then that you begin to realise the impact that cavers have on caves. In particular newly discovered delicate caves, are easily damaged through poor exploration techniques.

Let's ensure that the WASG as a club recognises the damage caused by cavers and takes action to educate its members on the finer points of exploring new caves and extensions.

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KARST WORKSHOP AT BUCHAN 8-9TH FEBRUARY 1992

At present there is a lot of karst geomorphology and hydrology research going on around Australia, much of it being carried out by cavers. However, because of a lack of communication, it is often difficult to find out what people are doing. In an attempt to remedy this situation, we are going to hold a weekend workshop at Buchan. Everyone who is actively conducting research on karst geomorphology hydrology, or just interested in these topics, is invited to attend.

One of the reasons for holding the workshop in a karst area is so that people can go on field trips conducted by researchers active in that area. With this aim in mind, the Saturday of the workshop will consist of surface and underground field trips looking at the variety of karst features present at Buchan, and how these can be integrated into the landscape evolution of the area.

On the Sunday there will be 20 minute presentations given

on recent karst research around Australia. As the Nullarbor is currently a focus of interest for many people, we would particularly request papers on that area. However, we will be happy to accept papers on any aspect of karst geomorphology/hydrology from anywhere in Australia.

Accommodation will be provided at Homeleigh, the cavers guest house at Buchan, and there will be a dinner at a local restaurant on Saturday night. Breakfasts and lunches will be supplied at a cost to be determined.

If you would like to attend, please write or phone:

John Webb
Dept of Geology
La Trobe University
Bundoora Vic 3083
Ph (03) 479 2485

NOTES AND NEWS FROM THE ASF COMMISSIONS

ASF and ACKMA - A Continuing Partnership

Many speleologists are members of ACKMA, the Australasian Cave Karst Management Association, and more should be. I thought perhaps it might swell your esteem as a speleo to know that it came about as the result of 15 years of spadework by cavers as well as cave staff.

In July 1973 the Australian Speleological Federation organized a Conference to bring together speleologists and the owners and operators of tourist caves around Australia.

As the most appropriate venue we chose the most visited and best known tourist caves in the country, Jenolan Caves, and the NSW Department of Tourism & Jenolan staff were generous with their money and time to make it a great success. ASF subsequently formalized a Commission which organized similar Conferences in Hobart (1977), Mt Gambier (1979), Yallingup (1981), Lakes Entrance (1983) & NSW (1987). In 1985 we had ambitiously crossed the Tasman for the 6th Conference in Waitomo, so successfully that another was held in NZ in 1989.

In the early years most of the organizational burden was carried by speleologists, who also provided much of what could be called an infusion of ideas about the protection and sound management of caves. In time though, full-time professional cave, karst and resource experts were able to take over. By 1987 it was clear that a separate organization was needed, and the Australasian Cave and Karst Management Association was formed.

One of my concerns was that ASF and ACKMA should not drift apart, and in 1989 I had a meeting with the respective Presidents Lloyd Robinson and Ernie Holland, along with Andy Spate, at which we thrashed this out. There have been some positive results in recent months. Workshops on cave management issues were held at the last ASF Conference, the ASF Council Meeting unanimously resolved on co-operation with ACKMA (see below), and the NSW Speleological Council and ACKMA jointly hosted in Sydney a well attended forum on the impacts cavers have.

This close relationship can only benefit the cause of cave conservation & management as well as bring together cavers and managers. Both ASF & ACKMA hold highly successful biennial conferences and we've discussed trying to align them at least occasionally. Trouble is, speleologists tend to have vacations when most of the population does, in summer. This is just when cave management staff are most needed at their caves. When they are free, cavers are working or studying.

So, what to do? The NSW initiative was a welcome step towards encouraging regional or issue-based forums and

seminars where speleologists and managers could get together. What do you think?

John Dunkely

INTERNATIONAL RELATIONS

The Bureau of the International Union of Speleology meeting was held at Città di Castello, Umbria, Italy. Thanks to sponsorship of the Bureau by the Speleological Society of Italy the meeting was exceptionally well attended.

Present :

Hubert Trimmel (Austria) - president
Camille Ek (Belgium) - general secretary
Derek Ford (Canada) - immediate past president
Bernard Geze (France) - foundation president
Julia James (Australia) - senior vice-president
Gerald Declaux (France) - vice-president
Ivan Fodor (Hungary)
Peter Beron (Bulgaria)
Russell and Jeanne Gurnee (USA)
Paolo Forti (Italy)
Andrew Eavis (United Kingdom)
Shouyue Zhang (China)
The only absentee was Franco Urbani (Venezuela).

The Bureau noted with regret the death of the delegate from the USSR, Tomas Kiknaze and sent a letter of condolence to his wife and family.

Much of the debate at the Bureau meeting concerned the future activities of the International Union and its major conference and congress in the next two years. First, the 1992 European Conference of Speleology - Hélécine.

The discussion on this conference was mainly to ensure that its program and fees would be such that younger sporting cavers would be able to attend.

The European Conference of Speleology will be held in Belgium, from the 20th to the 23rd of August, 1992. It will be organised by the National Belgian Federation of Speleology (F.N.B.S.-N.S.V.B.), which includes the French-speaking Union Belge de Spéléologie (U.B.S.) and the Flemish-speaking Verbond van Vlaamse Speleologen (V.V.S.). The meeting is sponsored by the International Union of Speleology.

The meeting will be held in Hélécine, a village of the central province (so-called Brabant); Hélécine lies 30 km east from Brussels. The program will include scientific, cultural, sporting and social activities the emphasis will be

NOTES AND NEWS FROM THE ASF COMMISSIONS

on the last three as it is hoped to encourage the sporting cavers to participate. It is anticipated that many cavers from Europe will not be able to afford to participate in the Congress in China.

The registration fee and accommodation costs have been kept low and camping will be allowed. The first circular is prepared and at present is being translated from French to English. The participation fee 6000 BF (includes access to all congress sessions, accommodation in a student hostel or at a camping ground, meals and one excursion).

Copies of the first circular can be obtained from:

Jan Vloeberghs - President FNBS
Place Willems, 14
1020 Bruxelles.
Tel 32.16.23.78.99.

Discussion on the 11th International Congress of Speleology, Beijing, China 1993 was much longer. The Congress has to be held in China as it was the country voted for by the National delegates at 10th Congress in Budapest, Hungary, 1989.

The Congress has the support of the Chinese Government and a number of public organisations. For the field trips - a number of restricted areas have been approved by the Chinese government for pre and post congress speleological expeditions.

The date of the Congress is 2nd to 8th August 1993. The location within China is Beijing despite a number of protests and the strong suggestion that Guilin would be a better place. It was pointed out by the Chinese delegate to the Bureau, that the size of the Congress (expected attendance 400 foreign participants and 200 Chinese) makes it impossible to hold the Congress in any other karst area than Guilin and that August is the wet season in the Guilin area and access for such a large number could be limited by the bad weather. In addition, Beijing has 104 international flights per week which connect with 30 cities all over the world. It is also the hub for domestic flights and trains to the karst areas for the field trips. It is also the only possible destination in China for large chartered planes (possible from the USA and Western Europe) and trains (possible from the Eastern block countries).

The Chinese delegate assured the Bureau that student accommodation would be available for Congress participants. However, the cost of the best hotels (****) at present is \$US50.00 and I would advise Australian participants to stay in this superior accommodation for the duration of the Congress. Copies of the first circular are available from myself or the editor of Australian Caver.

As the main Congress is to be held in a city and during the

Congress there will only be a couple of visits to caves (not very exciting ones) it is hoped to encourage some sporting cavers to attend by having a strong caving techniques program and I have indicated that Australia will be prepared to assist in the construction and design of single rope obstacle courses for speleo sports. Beijing also allows for visits to the Forbidden City and The Great Wall of China. The Chinese are also negotiating with the following countries as to the possibility of additional field excursions to Japan, Indonesia and South Korea.

Julia M. James

AWARDS COMMISSION

After what seems like an eternity all past awards matters are now up to date. In an effort to halt the eroding effects of time, Certificate of Merit awards are to be formalised in the month of September prior to the ASF inc Conference. This will allow the certificates to be prepared in advance for presentation at the conference's 'Cave Persons Dinner', when it has become traditional to announce award recipients.

Those who have been made Fellows of the Federation do not receive anything tangible in recognition of this award. This is to be rectified in the near future.

Nominations for the Federation's awards can be received at any time. However, the Awards Commission is hesitant to bestow an award on any one who is a member of the ASF Inc. Executive at the time.

Recipients of awards announced during the Cave Leeuwin Conference in Margaret River, Western Australia Dec. 1990/Jan. 1991, are:

Fellowship of the ASF Inc.

Nicholas White.

For many years of long and dedicated service to the Federation and in particular to conservation.

Certificate of Merit.

Alan Cummins.

For exploration, surveying and documentation of caves in North Queensland and for services to the Chillagoe Caving Club Inc.

David and Jacoba Lowry.

For exploration, surveying, documentation, geological and biological study of caves in Western Australia.

Lex Bastian.

For exploration, study and documentation of caves in Western Australia and for leadership and services to the Western Australian Speleological Group Inc.

Lloyd Robinson

Convenor

SPELEO SYNOPSIS

March 1991 - July 1991

by Peter Ackroyd

AUSTRALIA

Speleo Spiel 267 (Jan-Feb 1991) Rolan Eberhard gives a detailed description of the history of exploration of Niggly Cave [JF-237]. He includes a rigging list, maps and his own hypotheses on how this significant, recent find in Tasmania fits into the complex karst system of the Junee-Florentine area.

NEW ZEALAND

NZ Speleo Bulletin (153) (Mar 1990) In an issue mainly about the caves of the Ellis Basin on Mt Arthur, the exploration histories of both Falcon Cave (471 m deep) and Tomo Thyme (402 m deep) are described. Other caves described are Black Sabbath (Takaka Hill) and Coopers Cave (Te Pahu).

NZ Speleo Bulletin (154/5/6) (Dec 1990) This special three-in-one issue gives a blow by blow account of the exploration and surveying of the remarkable Bulmer Cavern (Mt Owen, South Island). The cave currently stands at 34.3 km long and 749 m deep. It has six entrances and is both the longest and deepest cave in New Zealand. For those intending to visit the cave there is also a route guide for the main routes and a small plan and profile map in the rear of the issue.

EUROPE

Descent 99 (Apr-May 1991) Just to demonstrate that new caves can still be found in the UK, a 4km cave, Slaughter Stream Cave, was discovered in South Wales after a major digging effort. Recent discoveries have also been made in the USSR, with a summary for 1990 presented in this issue. Underground bivouac techniques are examined in detail with considerable attention paid to conservation, and whether one should bivouac at all. Agen Allwedd and Daren Cilau draw inexorably closer in South Wales - recent discoveries beyond the Priory Road section in Aggy take the caves to less than 50 m from each other. An article by Paz Vale describes the discoveries made by a combined British and Russian team in the central Asian mountains at Uzbekistan, with several 200 m deep caves and a 4 km frozen streamway cave found. Peter Bolt has written an article which really spells out the dedication of British cave diggers in "Mendip Wednesday Nighters". Motorized winches and steel shoring are just the starting point for these addicts.

Cave Science 17(3) (Dec 1990) In this issue: Triassic paleokarst in Britain; water tracing in Picos de Europa, Spain; caves of South Nordland, Norway; Mayan cave archaeology, Belize; phytokarst and photokarren in Ireland.

Caves and Caving 51 (Spring 1991) This issue opens with a description of a sport trip down BU-56 in North Spain. Located quite close to the Pierre St Martin (which is just over the border), BU-56 is 1,338 m deep and

has potential for more vertical range. Andy Hall describes a trip to the giant gypsum caves of the Ukraine where the 108 km long Ozernaja and the 178 km long Optimisticeskaja were both explored and there is a brief report on a visit by a British/Russian team to the central Asian caves Boj Bulok and Festivalnaja. In the UK, push dives in Blaen Hepste Resurgence (Wales) and Dry Gill Cave (Yorkshire) are described. The extensive dig at the Clydach Gorge (Wales) looks to be close to opening an underwater connection into the bottom end of Daren Cilau and Agen Allwedd. A lengthy article by Bob Machin finally alerts British cavers to a new user friendly explosive that was introduced to Australian cavers by Peter Ackroyd in 1988. The virtues of the excellent ICI product "Powergel" have been recognised by Bob in 1991.

Ipoantropo (1990) (Journal of the Speleological Group of Emilia Region, Italy, in Italian. Summary provided by Gabrielle Grusovin of VSA.) This issue contains articles covering the activities of the various speleo groups in the Emilia Region in Italy. Caving articles include the caves of Vezzano which are in Miocene chalks, including a comparative photo of Monte del Gesso (mountain of chalk) in 1913 and in 1990 showing the massive changes wrought by quarrying. Other articles include a gadget which detects when your carbide flame goes out on your Petzl Lazer, and turns on the electric light automatically, the construction details of a speleo telephone, comparison of batteries suitable for various underground tasks and a discussion on nomenclature of caves. Special articles describe a huge clean-out of discarded camping and caving gear from Spluga della Preta near Verona (three tonnes), and an experiment in taking a group of children under five years old caving.

Descent 100 (Jun-Jul 1991) The British cave diggers never cease to amaze. In Mendip, cavers have pooled their money to hire a full-scale tracked backhoe (a Hymac) to dig up dolines. Hymac Hole, which now boasts a concrete pipe/manhole entrance, was the first cave found as a result. Austria claims to have the world's deepest through trip (1,485 m vertical height from entrance to exit) with the discovery of a top entrance to Lamprechtsofen, a particularly nasty tight tortuous cave by all accounts. Trip reports in this issue include caving in the Philippines, recent extensions in Slaughter Stream Cave (Gloucester) and caving in the Caucasus Mountains (USSR) where the depth potential exceeds 2 km. The issue wraps up with a brief article on cave entrance location using temperature imaging methods in cold weather.

USA

NSS Bulletin 51(2) (Dec 1989) This issue deals exclusively with various scientific aspects of the caves of Black Hill, Dakota. Principal caves discussed are Jewel Cave and Wind Cave.

NSS News 49(1) (Jan 1991) This issue marks the 50th anniversary of the NSS and consists entirely of

SPELEO SYNOPSIS

historical photos, written works and documents, generally from the 1940s.

NSS News 49(2) (Feb 1991) The feature article in this issue concentrates on recent work in the world class gypsum caves of New Mexico. Also in this issue is a thought provoking article by Don Coons called "Solo - An Alternative".

NSS News 49(3) (Mar 1991) McFail's Cave is owned by the NSS, and this issue details recent extensions discovered by digging and diving teams in the New York State cave.

NSS News 49(4) (Apr 1991) There is a fantastic cover photo on this issue. Inside we find an article on the exploration, then the co-operative preservation of, Stanley-Carden Cave (Alabama) which is owned by a large industrial company. This is followed by an article talking about 2,000 year old turds in Big Bone Cave (Tennessee).

Nylon Highway 31 (Jan 1990) This issue is the first by new editor, Maureen Handler. It contains an item on a fall energy absorbing system devised by a Russian. It relies on the now discredited squeeze brake principle and should only be read for interest, and a chance to examine the excellent standards of Russian drafting skills. An interesting trip report by Dale Chase describes the 1990 Close to the Edge cave expedition to Canada. The cave has a 240 m stepped shaft and plenty of prospects for increased depth. Most of the efforts of this ten day expedition went into blasting a restriction at the bottom leading to a further 3.5 second drop [about 50 m - PJA]. Other items describe a modified Italian hitch for use with emergency belay or lowering systems and a worthwhile discussion by Bill Klimack on the strength of climbing systems, taking into

consideration the maximum forces able to be tolerated by the human body.

Nylon Highway 32 (Jun 1991) A very important article in this issue looks at standard mechanical belays and their deficiencies when it comes to rescue systems. The author indicates that only a jammer of some sort (eg Gibbs) can be relied upon to provide a safe belay. Sticht Plates and the like all failed dismally!

Speleonics 16 (May 1991) Electronic items discussed in this issue include ultra sonic distance measuring devices for cave surveying, measuring ground conductivity using low frequency cave radio, a means of restoring 'dead' gel cells and early experiments in using cave radio, going back to the 1920s. The main article of interest is an update on Global Positioning Systems (GPS). Now more available to civilian users than ever before, the devices allow absolute co-ordinates (± 25 m) to be established using the navigational satellite system.

Compass and Tape 8(4) (Spring 1991) This issue reiterates two well known cave surveying principles - plot your survey as you go and don't try to read your Suunto compass at an incline angle greater than 20-25 degrees if you want reasonably accurate surveys. The rest of the issue contains an index for Volumes 1-8 of Compass and Tape.

NSS News 49(5) (May 1991) The Letters page of this issue continues the extraordinary argument about gay cavers in the US. John Schweyen, who actually goes caving instead of agonising over gay cavers' rights, has an excellent article on Locust Creek Cave (West Virginia) - a 3 km cave accessible only to divers.

ASF COUNCIL MEETING JINDABYNE. NSW January 25 - 27 1992.

ACCOMODATION: Family units at the Jindabyne Sport and Recreation Camp. Meeting to be held in the recreation room at the same venue on the Saturday and Sunday.

COST: \$20.00 Per person for the two nights accommodation (i.e., Saturday and Sunday nights). This includes morning and afternoon teas at the meeting on the two days.

Plus \$10.00 per person for a two course dinner on the Saturday night will include pre-dinner drinks.
Vegetarians will be catered for.

PAYMENT: All monies are to be sent to Ian Mann (cheques payable to ASF newsletter), no later than 31-12-91.

No late payment will be accepted.

MIDDLETON'S TRICKETT - A TRIBUTE

Andy Spate,*

Investigations Officer, Karst, NSW National Parks and Wildlife Service.

Oliver Trickett Doyen of Australia's Cave Surveyors, 1847-1934, 1991, Gregory J. Middleton, Sydney Speleological Society Occasional Paper No. 10, published by the Society in association with the Jenolan Caves Historical and Preservation Society; viii + 156 pp, 104 figures and plates (including five coloured maps). \$29.50 + \$5.00 postage, from the Society (P O Box 198, Broadway, NSW 2007).

Greg Middleton supported me, having torn my knee ligaments falling from a tree trunk bridging the Exit Cave rising, from Exit Cave to Benders Quarry, Ida Bay, Tasmania. During the painful ascent and descent he lessened the pain by telling me of his longterm effort to write a biography of Oliver Trickett. Later that night in a Hobart hospital he showed me an early draft of his book.

My major emotion was jealousy as Trickett had long been a hero of mine and an investigation of Trickett's life and times had long been a project which I wished to pursue. The writing of the biography, a labour of love over a 20 year period, could not have been in better hands than Greg Middleton's. His new book is a triumph: a copy should be in every caver's hands as Trickett is an authentic leading light for every New South Wales' caver. Those Australian cavers in other states would also have good cause to look to Trickett as a role model.

Trickett became responsible for caves in New South Wales in 1896 at 49 years of age. How many active cavers of 49 are there today? There is no evidence to indicate that he had any interest in caves before this time. He had a predecessor, W S Leigh, who was the one and only "Superintendent of Caves" in New South Wales from 1888 until 1896. [My own position, created in 1981, in the NSW National Parks and Wildlife Service might be considered to be the third "superintendent of caves" but only over part of the NSW karst areas; I hasten to add that any comparison between Oliver Trickett and myself as a cave explorer, surveyor and documentor will have Trickett several hundred lengths in front.] Leigh was also an interesting figure but does not appear to have had the breadth of experience, enthusiasm and knowledge that Trickett possessed however, Greg you should start on his biography!

Trickett was never given an official position as a cave manager or investigator, a fact that may have rankled judging by the marginalia in his Scrapbook which I have had the pleasure to peruse, courtesy of his great-grand daughter, Jennifer Herrick. The marginalia, various reports and letters (especially to newspaper editors) indicate that Trickett was periodically somewhat disenchanted with others taking the credit for his efforts. This emotion will be well known to public servants. He ultimately occupied the position of Draftsman and Surveyor in the Mines Department.

Trickett's interests ranged from rowing and tennis to the documentation of Aboriginal engravings, compilation of bibliographies on caves and on the mineral locations of New South Wales, cave mapping, the construction of unique (for their time) three dimensional models of caves and mines and of Sydney City and Harbour and the drawing of maps which give a proper geomorphic perspective to the scenery they depict. Trickett's perspective map of the Blue Mountains came to the attention of G. K. Gilbert, an eminent American geomorphologist, who wrote to Trickett to congratulate him on his work. This would be a similar honour to Charles Darwin writing to an Antipodean zoologist of the time.

Trickett was shipwrecked on his way from Melbourne to Sydney to take up his position, worked in private enterprise as a "Sharebroker, Property, Land and Mining Agent" and had many other adventures throughout his career.

The mine models and the perspective maps gained him international acclaim. Trickett was awarded a Gold Medal in 1915 for his model of the Broken Hill lode exhibited at the Panama Pacific exposition in that year. Whilst this may seem an insignificant event to our late 20th century eyes it was clearly of some importance and was reported as such in the Sydney Morning Herald and elsewhere.

Trickett was clearly a cave discoverer, a cave documentor, a fine draftsman, and an highly accurate surveyor. His brilliance in measuring and depicting cave shapes and volumes is virtually unsurpassed in Australian cave investigation although the work of Joe Jennings and the very hightech approaches now being used at Jenolan, for example, have introduced new horizons in cave surveying. There are, however, some small problems in Trickett's work. Consider, for example, figures 41, 53 and 64 in Middleton's book. These show Jersey Cave at Yarrangobilly in relation to the road to Jillabeanan (and therefore in relation to the cliff line). In the former two the Cave is shown correctly; in the latter drawn 18 years later the Cave would be poking out the cliff face. In all cases the north arrows are parallel to the line of the Cave. However, this is a very minor quibble. The accuracy of Trickett's surveys is without question as has been shown by the very many connections between chambers at Jenolan dug following his surveys. The two prime examples are, of course, the Binomea Cut providing access to the Orient Cave at Jenolan and the Nangwarry Cut into the South Glory Hole Cave at Yarrangobilly.

In this regard it is interesting to read Trickett's, and others'

*This review was first published in the Journal of the Sydney Speleological Society Vol. 35 (10), Oct 1991 and is republished here with permission.

MIDDLETON'S TRICKETT - A TRIBUTE

views on the possible impacts of tunnelling in an exchange of letters to the editor of the Sydney Morning Herald in February and March 1927. There are some lessons for today here. His conservation interests and feel for caves are exemplified by his 1897 report on the "mutilation" of Coppermine Cave at Yarrangobilly.

In addition to the cave and surface mapping and the models, Trickett wrote guidebooks for Abercrombie, Wellington, Bungonia, Wombeyan, Yarrangobilly and Jenolan. Some of these ran to a number of editions. Trickett was also a photographer of note and an associate of Charles Kerry. A number of his photographs were used as postcards, usually being published by Kerry.

Not surprisingly, Trickett's many achievements, dedication to his duty and to the caves attracted the attention of many high level public servants and academics. Chief amongst these is Professor Edgeworth David, a leading geologist of the time. Edgeworth David is another remarkable story with adventures and research in Australia, Antarctica and elsewhere to his credit. Perhaps I should tell the story of

Edgeworth David, Spate and the South Magnetic Pole! Very many of these associates of Trickett wrote glowingly of his abilities in both the Victorian and NSW public services.

Greg Middleton's book will tell you more, very much more, about this fascinating and energetic person than the few anecdotes I have mentioned here.

This book will be one of the most used and quoted books on New South Wales caves. There is a wealth of detail and interest, much of it visual as a result of the hundred odd sketches, maps and photographs included. In addition, there is Trickett's own bibliography of NSW caves (to 1897), a bibliography of Trickett's published works and, unusually, a very creditable index.

Greg Middleton, the Sydney Speleological Society and the Jenolan Caves Historical and Preservation Society are to be commended for the preparation and publishing of this significant milestone in Australian cave publishing. Whilst the price may seem high it isn't and I commend it to every Australian caver and cave manager.

THE ACKMA CONFERENCE 1991

by Rauleigh Webb

The previous ACKMA conference was held at Punukaki in New Zealand and the number of New Zealanders attending the conference was obviously high. However the 1991 ACKMA conference was again well attended by the New Zealand contingent with nine representatives. The Kiwis started the numbers rolling and the conference attendance was one of the highest ever with about 50 attendees.

Every Australian state was represented with only the Northern Territory not having a representative. The Queensland contingent were from Olsens Cave and at their first conference they put up a good case for the 1993 conference to be held at Rockhampton and they were successful.

The conference started at Yanchep just north of Perth with a visit to Crystal Cave. This tourist cave has received steady visitation of about 64,000 per annum over the last 6 years. Conference attendees were shocked by the level of damage caused to the cave by management practices. The concrete and wooden pillars throughout the cave, the wooden shoring, the constructed concrete and wood tunnel, the large number of imitation rock walls and finally the EARTHQUAKE SHELTER! As only the first cave of the conference it could not have attracted greater criticism.

Then travelling in buses the conference moved to the South-West of Western Australia. The conference accommodation and lecture hall was at a hostel called Glen Brook.

The conference was jam-packed with 25 papers presented in 5 days accompanied by field trips to the four tourist caves on the Leeuwin-Naturaliste ridge. Besides visiting Yallingup, Mammoth, Lake and Jewel caves we visited the three main "adventure" caves - Calgardup, Giants and Bride Cave. A future potential adventure cave in Moondyne Cave was also visited.

The papers were extensive in their coverage of management matters. From using vacuum cleaners to clean caves, lighting techniques, guiding of children, cave classification, access policies, to the impacts of cavers and cave managers on caves.

This was my fourth Cave Management conference and the most important single point that I can draw from these conferences is the stronger and stronger commitment from cave managers to constantly improve their knowledge of cave management and actively apply that knowledge in managing caves under their control. As in all walks of life opinions differ on a variety of aspects of cave management but the clear goal of all cave managers remains focussed and consistent - THE CAVE AND KARST RESOURCE!

Managers are fully aware that conservation is the most important factor when making management decisions that have the potential to adversely impact the resource. At times committees and boards may make political decisions that have adverse impacts on caves and karst, and managers must continue to strive to educate these people on the importance

THE ACKMA CONFERENCE 1991

Cont'd from page 15

of placing the conservation of cave and karst resources ahead of political or monetary gains.

Having said all that, I believe that one of the most constructive discussions to ever occur at an ACKMA conference was the very constructive criticism leveled at the managers of the tourist caves of the Leeuwin-Naturaliste ridge. All of the points raised were recorded and it is planned to have a local workshop of ACKMA members to try and address these points.

I cannot stress enough that this criticism was very constructive, giving management a wider and different perspective on management issues that they cannot generally obtain from local experience and expertise. I am sure that Keith Tritton (Conference Convenor) was very happy to accept the minor constructive criticism given all of the very positive comments that were made regarding the overall management by the Augusta-Margaret River Tourist Bureau.

Overall I would draw attention to the excellent papers of Susan Hardy, the joint paper of Elery Hamilton-Smith and Andy Spate and the two permit/access papers of Neil Taylor (CALM, WA) and Brian Clark (SANPWS).

Susan's paper was entitled "Stalactites, Stalagmites and Vegemites" and dealt with the issues of cave guiding with respect to children of all ages. Her main point was that here we have an opportunity to educate children at a very young age about the fragility of the cave environment. The guides present were rewarded with a number of techniques to improve their guiding of children.

The paper entitled "Do cavers have an impact?" by Elery and Andy was not only well presented, with both authors presenting parts of the paper, but I believe that it succinctly summarised the vast range of impacts that cavers have on caves. This paper should be read by every caver so that they fully appreciate the impact that they have on the cave environment.

Finally the papers by Neil and Brian. Both of these papers provided insights into the difficulties of managing caver access to caves. Neil's paper was the result of two years of meetings by the WA Caves Management Advisory Committee to provide the framework for a permit system for cave access in the Leeuwin-Naturaliste National Park. This paper generated a large number of questions and plenty of comment. Brian's paper was in a similar vein but provided some background information regarding the South Australian situation. This system differed from the proposed WA system in that the newly formed SA Speleological Council was expected to provide the SANPWS with the methodology for caver access to caves.

These papers clearly indicate the need for area/regionally

specific management strategies depending on the management objectives for that area. The different management objectives for caves in the Leeuwin-Naturaliste National Park and the Naracoorte National Park were clearly evident by the resulting systems.

To summarise: the lack of attendance by members of speleological groups clearly indicates the disparate objectives of cavers and managers. Cavers must come to the realisation that if they are going to continue to have access to caves in Australia that they have to become "cave managers". They must fully appreciate their impact on caves and how to minimise that impact. They must also understand the views and objectives of managers and strive to better those goals.

A final comment comes from a manager who attended both the ASF conference in January 1991 and the ACKMA conference. When asked to compare the two conferences the quote was "... that only one paper at the ASF conference was directly concerned with cave conservation methods and techniques whereas the entire ACKMA conference concentrated on methods and techniques of cave conservation. The difference was very obvious."

Think about that point and consider carefully the caving techniques that you employ - your caving future may depend upon your deliberations.

OLD HOMESTEAD EXPEDITION

As the deadline for this issue fell just in time for the expedition's return, and the fact that it will be at least March before all the data is analysed, the major report of the trip will appear next year. Suffice to say that the expedition was a success, with major new passages being found and mapped, including a totally new area which was found a couple of days before the expedition was due to finish. During the course of the three weeks, camp size averaged around twenty five people. Everybody maintained a full schedule of surveying, cooking, riding bikes around the place to help with the above ground surface survey, drawing up and even taking the odd shower fourty kilometers away in Forest! There is still a great deal of exploration to be done in the cave. Around \$7000.00 worth of sponsorship came in from all over the world. This sponsorship included Mazda supplying two vehicles, Sunto Compasses, FX2s and food.

A Caver Impacts study was piloted during the course of the expedition. This involved keeping a log of the number of people who visited the cave during the three weeks of exploration, taking soil samples at lunch spots, in pristine passages and in heavily trogged areas. These samples are currently being analysed to see what microbiological organisms are present. C. Buswell

ACKMA WANTS YOU!!

The Australasian Cave and Karst Management Association was formed in 1987, during the Seventh Australasian Cave Tourism and Management Conference in NSW. The Association was founded because it perceived that there was not enough interaction amongst Management groups between Conferences. Previously, the biennial conferences, which commenced in 1973, were organised by a commission of the Australian Speleological Federation, but it was subsequently felt that Australasian Cave and Karst Managers needed an organisation of their own.

The aims of the Association are:

- * To develop improved standards in the management of the cave and karst heritage of the Australasian region.
- * To provide for liaison between services to and joint action by those interested in cave and karst management.
- * To carry out or cause to be carried out any scientific research which may further the improvement of standards in cave and karst management.
- * To formulate and promote policies and initiatives in cave and karst management.
- * To do any other things which are conducive or incidental to the attainment of the above.

Membership is open to all persons or organisations which subscribe to these aims, regardless of whether or not they are professional cave or karst managers. Cavers are particularly encouraged to join.

Members are eligible to attend the biennial A.C.K.M.A. Conferences. The 9th Conference was held at Margaret River, W.A. in September 1991, while the 10th Conference will be held at Rockhampton, Qld. in May 1993. Members regularly receive a 28 page Newsletter. The annual subscription is only \$30.00.

The Australasian Cave and Karst Management Association.

Membership Application Form.

To the Executive Officer.

Dear Sir/Madam,

Please accept my membership of ACKMA. I subscribe to the aims of the Association.

Name: _____

Address: _____

Postcode: _____ Phone No: () _____ (Bus)
() _____ (Home).

Please find enclosed payment for \$30.00 (one year's Subscription), or \$60.00 (two years' subscription).

Signed: _____

RETURN TO: Elery Hamilton-Smith, Executive Officer,
P.O. Box 36, Carlton South, Vic. 3053

TAS TROG 1993

The 19th Biennial Conference of the Australian Speleological Association will be held in Launceston, Tasmania from 4th to 8th of January 1993. It is being hosted by the Northern Cavekeepers.

Papers and guest speakers will be telling stories tall and true. Nobody can afford to miss the photographic competitions, the cavers dinner, speleo sports and lots of socialising.

Free child care is being provided.

Pre and post conference field trips are planned for Mt Crips, Mole Ck, June Florentine, Lune River and Gunns Plains. Some walking trips, pre conference, are also being planned.

Accommodation is at Glenara, the conference venue, and at a nearby motel. This is budget accommodation and an package deal on meal and accommodation will be offered.

Bookings can be made on the car ferries, 'Able Tasman' and 'Sea Cat'. Block bookings are being arranged, mention the conference if booking.

More details in the next A.C. For further details contact:

TAS TROG 1993

Northern Cavekeepers.

P.O. Box. 315, Launceston, Tas 7250

Ph: (003) 341885.

NOTICE TO THE OVERWORKED AND UNDERLOVED CLUB SECRETARY

The number of representatives that corporate members have to ASF council meetings has changed due to the adoption of a new constitution by the ASF. The number of representatives is one for every fifteen members. One representative holds one vote. Your organisation is allowed up to a maximum of six representatives or six votes.

So make sure that your club has sorted out its reps and votes for the council meeting in Jindabyne. If no one is going to represent your organisation then make sure you have put your proxy votes in.

If you have any quierries about the above situation then ring the ASF Secretary Chris Dunne: Ph (02) 6057003

The case seemed clearcut as the quarrying operation did not have a mining lease. However, the Mines minister decided to grant a lease in early January 1991. The granting of the lease without a EIS and the company's plans to expand the area and intensity of mining were taken to the Land & Environment Court. The judge placed an injunction limiting the expansion of the mine, but did not find the granting of the lease illegal. In the Supreme Court of Appeals on the 6th September 1991, Keir appealed about the granting of the mining lease and the mining company cross - appealed about the restrictions to its operations. We are waiting for the judgement as it promises to be an important case for future mining practices and protection of caves in NSW. (see p. 20 - Ed.)

Across the Tasman, SUSS has been exploring caves at Waitomo and in the alpine karsts of New Zealand [see SUSS Bull 31(3) special issue]. In 1989/90 SUSS members joined NZSS expeditions to Bulmer Cavern and prospecting on neighbouring Mt. Bell. Gormenghast (previously 525m deep) was connected with Bulmer Cavern, and at Mt. Bell numerous shafts were explored including Scream (105m deep) and Shout. Shout is a new cave with 3 pitches (59m deep) and is particularly significant in having permanent ice formations. A SUSS expedition to the Ellis Basin followed, discovering a 340m long extension (Peregrine Rift) to Falcon Cave which deepened the fifth deepest cave in New Zealand to -497m. Falcon Cave was resurveyed and the map has recently been published (see accompanying page). Meanwhile the really big finds were occurring in Exhaleair with Kiwi Keiran McKay. Exploration down 9 pitches led to a shaft which intersected large old phreatic passages and a maze of leads heading in all directions. SUSS members returned in 1990 and 1991 to help with the continuation of its exploration, which saw the discovery of the main underground drainage for the Ellis karst and an extensive phreatic network. Early in 1991 we learnt that Exhaleair was connected

with Tomo Thyme forming a 790m deep system, the second deepest in the Southern Hemisphere.

Martin Scott

TASMANIA DOES NOT DO IT AT ALL IT DID DO SOMETHING ELSE HOWEVER -

Niggly cave is the third deepest in OZ at 371 metres. Number one is the Growling Swallet/Ice Tube system in the Florentine Valley at 375, second is Anne-A-Kananda (AAK) on Mt. Anne at 373 metres.

Niggly was discovered in late 1989 by Nick Hume and Leigh Douglas. Subsequent exploration trips culminated in a bottoming trip in April 1990 by Stefan and Rolan Eberhard with several long pitches being descended including 85 metre and 103 metre shafts, giving the total depth of 371 metres.

Following from that and the associated surveying, an hour or two perusing the computer screen revealed the possibility that a longer shaft may exist at the end of a known and cursorily explored horizontal rift beyond the first of the "original" pitches.

The purported long pitch proved to be just that. In June 1991, Dean Morgan descended the shaft, with Nick Hume waiting at the top, and found it to hang free for about 185 metres and be about 190 metres deep!! The previous longest shaft in Oz was in AAK Mt. Anne at 118 metres, but most of that is not free hanging. A second descent of the 190 metre shaft was carried out in July 1990 with Rolan Eberhard from TCC and Stuart Scott and Paul Steane from Tasmania Police Search and Rescue Squad (both are competent vertical cavers in their own right). On this trip the pitch length was actually measured with a Topofil (string Measuring device), and proved to be as estimated - 190.5 metres!! So there we are. The shaft was actually discovered on a computer screen by Stuart Nicholas and bottomed initially by Dean Morgan with a second trip by Rolan Eberhard, Stu Scott and Paul Steane.

Stuart Nicholas

**Material for Australian Caver can be sent to the Editor in many formats:
Hand written and typed manuscripts must be double spaced.**

**Disks: Please send in ASCII, on 3 1/2" or 5 1/4" - Macintosh or IBM.
Packed in lead and covered in concrete so that they can't be bent by the post.
Please send a hard copy of the article with it just in case the concrete breaks!**

Material should be sent to the following address:

Clare Buswell

C/- Politics Department Flinders University Bedford Park S.A. 5042.

Fax: (08) 2012566

Or via

Electronic Mail heiko@cs.flinders.oz.au

GETTING IN TOUCH

ASF OFFICERS ADDRESS LIST

Please Write or Phone the Officer Concerned.

Public Officer Garry Mayo (06)2316862
21 Gaunson Cres, WANNIASSA 2903

EXECUTIVE COMMITTEE MEMBERS

President Lloyd Robinson (042)296221
167 Mt Keira Rd, MT KEIRA 2500

Past President John Dunkley (06)2810664
3 Stops Pl, CHIFLEY 2606

Vice Presidents Peter Berrill (079)271068
32 Hogan St, N. ROCKHAMPTON 4701

Pat Larkin (02)6841714
4 Holland Pl, DUNDAS 2117

Lloyd Mill (03)3798625
11 Warner St, ESSENDON 3040

Rauleigh Webb (09)3867782
16 Loftus St, NEDLANDS 6009

Secretary Chris Dunne (02)6057003
PO Box 388, BROADWAY 2007

Assistant Secretary Derek Hobbs (02)6521767
Cairnes Ln, GLENORIE 2157

Treasurer Brendan Ferrari (03)3290479
122 Hawke St, WEST MELBOURNE 3003

CONVENORS OF COMMISSIONS

Administration Miles Pierce (03)8908319
42 Victoria Cres, MONT ALBERT 3127

Awards Lloyd Robinson (042)296221
167 Mt Keira Rd, MT KEIRA 2500

Bibliography Greg Middleton
PO Box 269, SANDY BAY 7005

Documentation Peter Matthews (03)8761487
66 Frogmore Cres, PARK ORCHARDS 3114

Cave Diving Ron Allum
C/- 19 Willshire Ave, CARLINGFORD 2118

Cave Safety Mike Lake (02)8882927
14/16 Cottonwood Crescent, NORTH RYDE 2113

Cave & Karst Management John Dunkley (06)2810664
3 Stops Pl, CHIFLEY 2606

Conservation Arthur Clarke (002)282099
17 Darling Pde, MT STUART 7000

Conservation Con't Craig Hardy (079)279016
P O Box 1459, ROCKHAMPTON 4702

Rauleigh Webb (09)3867782
16 Loftus St, NEDLANDS 6009

International Relations Julia James (02)5191415
41 Northwood St, NEWTOWN 2042

John Dunkley (06)2810664
3 Stops Pl, CHIFLEY 2606

Library Cathy Brown (06)2882819
13 McDonald St, CHIFLEY 2606

Newsletter Manager Ian Mann (047)591890
28 Stephen St, LAWSON 2783

Newsletter Editor Clare Buswell (08)3886685
C/- Politics Dep't Flinders University
BEDFORD PARK 5042

Survey & Mapping Standards Ken Grimes
P.O. Box 362 HAMILTON 3300 (055)748225

CONVENORS OF AD HOC COMMITTEES

Beginners Manual Alex Kariko (03)3377680
c/- VSA, GPO Box 5425 CC, MELBOURNE 3001

Codes & Guidelines Evalt Crabb (02)6072142
PO Box 154, LIVERPOOL 2170

Jenolan World John Dunkley (06)2810664
3 Stops Pl, CHIFLEY 2606

Heritage Nomination Structure & Organisation Lloyd Mill (03)3978625
11 Warner St, ESSENDON 3040

Derek Hobbs (02)6521767
Cairnes Ln, GLENORIE 2157

Cave Leeuwin Rauleigh Webb (09)3867782
16 Loftus St, NEDLANDS 6009

TAS-TROG '93 Steven Collins
28 Upton St, WEST LAUNCESTON 7250 (003)311153

CONVENORS OF STATE SPELEOLOGICAL COUNCILS

NSW Speleological Council Derek Hobbs (02)652176
Cairnes Ln, GLENORIE 2157

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(Courtesy of Rauleigh Webb) (09)3862041

W H A T' S O N

Jan. 25/27 1992 - ASF Council Meeting Jindabyne, NSW. Register your accommodation now, \$30.00 due by Dec. 31. Contact: Ian Mann. Ph (047) 591890. See details this edition page 13.

Feb. 8/9 1992 - Workshop on Geomorphology and Hydrology. Buchan, Victoria. Contact: John Webb. Dept of Geology. La Trobe University. Bundoora Vic. 3083. Ph (03) 479 2485. See details this edition page 9.

Mar. 14/15 1992 - Rescue 92. 18th Cave Rescue Seminar. Bungonia State Recreation Area. NSW. Contact: Ron Poulton P.O. Box 122. Bankstown. NSW. 2200. Ph (042) 564663 wk. Applications close Feb. 28th 1992.

Aug. 20/23 1992 - European Conference of Speleology. Contact: Jan Vloeberghs Place Willems, 14 1020 Bruxelles. Ph 32.16.23.78.99. See details this issue page 11.

Jan. 4/8 1993 - Tas Trog 93. 19th Biennial Conference of the Australian Speleological Federation. Launceston Tasmania. Contact: Rosie Shannon. TAS TROG Sub committee. Northern Caverneers. P.O. Box. 315, Launceston. Tas. 7250 Ph: (003) 341885.

Aug. 2/8 1993 11th International Congress of Speleology of the International Union of Speleology, Beijing, China. Correspondence to: Secretariat XI International Congress of Speleology Institute of Geology Chinese Academy of Sciences. P.O. Box 634. Beijing 10029 China. Ph (861) 2027766 ext: 361. Fax (861) 4919140. See details this issue page 11.

Exit Cave Threatened by Benders Quarry Extension

Current plans to extend Benders Quarry in early December is threatening numerous caves in the Exit Cave catchment area. As the boundaries presented in the Quarry Development Plan have constantly been changing it has been difficult to assess exactly what caves are going to be mined. It seems however, the proposed extension south into the saddle will mine on three sides of March Fly Pot, (IB46) and within 10 metres of the entrance. March Fly Pot includes Pleistocene deposits of extinct macropod fauna, the remains of *Thylacines*, the extinct *Sthenurus*, and *Macropus gigantus* (which has never been previously recorded south of Hobart).

It is expected that caves also consumed by this new extension will include Little Grunt (IB23), Track Cutters Cave (IB211), an important invertebrate fauna site, Fly Wire Cave (IB101), Exits Nostrils, a drafting cave at the back of the quarry, and a natural arch (IB124), as well as other unnumbered smaller karst features.

A Rhodamine W T trace from Little Grunt has been found in the Eastern Passage of Exit Cave. Fluorescein traces originating from holes in the working area of the quarry

STOP PRESS.

MINING AT YESSABAH HALTED

FRIDAY 16 Nov, Sydney. Three Judges of the Court of Appeal of the Supreme Court have ordered a halt to all mining at Yessabah. The Court unanimously held that the granting of the mining lease to David Mitchell - Melcann Pty Ltd was unlawful because it had not obtained an environmental impact statement.

The case is a landmark decision as mining leases for every mine, even existing mines, are now subject to control by environmental laws. This means that every 21 years or so even existing mines must prepare a new EIS, considering their likely environmental impacts of future operations, in order to justify their continuation. The court also decided that a mine cannot move sideways into undisturbed land without an EIS.

It has been a long fight but we've won. Well done team. Anyone wanting further details contact Keir Vaughan-Taylor (02) 8197153.

have been traced into Bradley-Chesterman Cave, north of the quarry and the Eastern Passage of Exit. These traces were carried out by hydrology consultants for the Dep't of Parks, Wildlife and Heritage.

Further to this dye tracing, on the 20th of November Rolan Eberhard, Ian Household, Vera Wong and Stefan Eberhard discovered a **major passage (of at least 1 km), leading from Little Grunt to a rock fall.** The main conduit route is an average of two metres wide, (railway tunnel type). This find will make Little Grunt the second longest cave in the Ida Bay Area. The passage contains 6 large dripping avens and a flowing stream along much of the main conduit route. There is also 800 metres of side passage which runs back towards the quarry, almost parallel to the main conduit, which is heavily decorated and heavily silted with several other passages also silted.

This is a clear indication that Exit cave is effected by Benders Quarry, and that no scope exists for either extension or continued operation of the quarry. The mine extension is due to occur following the acceptance of the Environmental Management Plan. Negotiations are occurring between speleologists and the gov't.

For further information contact Arthur Clarke. (002) 282099

Letters of protest over the mining of Exit Cave and the extensions of the quarry should be addressed to:

Hon M. Field. Premier of Tasmania.

GPO Box 123B Hobart. Tasmania 7001.

Hon H. Holgate MHA, Minister for Parks Wildlife and Heritage. State Office Building 10 Murray St Hobart. 7000.

Hon M.W. Weldon MHA Member for Resources and Energy. State Office Building 10 Murray St Hobart. 7000.

Hon F. Bladel MHA. Parliamentary Offices, Franklin Square Hobart 7000.

Hon Ros Kelly (Department of Arts, Sport, Science, Environment and Tourism)

Parliament House Canberra. ACT 2600.

Insert for Australian Caver No. 129, 1991.
BACKGROUND TO EXIT CAVE AND EXIT CAVE QUARRY.
URGENT ACTION REQUIRED.

Compiled by A. Clarke and C. Buswell

Please feel free to use this information when writing letters, etc.

Exit Cave and Mystery Creek (Entrance) Cave were discovered by timber loggers in the 1880-1890's. Both caves form part of a major network of underground channels draining waters from both sides of Marble Hill (Caves Hill) into the D'Entrecasteaux River, which flows through part of Exit Cave. Cavers commenced their exploration of the Ida Bay Karst, particularly Exit Cave, in 1947. The whole area of Ida Bay Karst is contained within an area of State Forest, proclaimed in 1937. Exit Cave partially protected by State Reserve, gazetted in 1979.

During the 1987/88 Helsham Inquiry into the Lemonthyme and Southern Forest, the Exit Cave system was acknowledged as a site of World Heritage Significance. The surrounding Karst and its catchment was recognized as having a contributing influence to this World Heritage site with much of the karst essentially forming part of the Exit Cave system. In order to maintain the integrity of Exit Cave and the operating karst processes, the whole Ida Bay karst area (including Benders Quarry) was nominated for inclusion in the extended World Heritage Area which was listed in November 1989. The Ida Bay karst was the only area recommended by the Helsham Inquiry for WHA status purely on the basis of its significance as a karst area. Following the WHA listing, the Ida Bay karst became part of the extended Southwest National Park (Proclaimed in June 1990) surrounding a 77 hectare resource use area: the Marble Hill Conservation Area which incorporated the Benders Quarry operation. The quarry was to operate within acceptable limits established by the gov't in consultation with the Minister for Mines and Resources, Bender, Dr. K. Keirnan and A. Clarke. These limits were: the saddle/divide.

Prior to WHA listing, an increasing incidence of flyrock from quarry activities was noticed south of the Marble Hill/Lune Sugarloaf saddle, especially near March Fly Pot. Earth moving equipment began operating south of the saddle. A massive mudslide soon developed from a waste dump associated with road works. It cut a wide swathe through the rain forest engulfing the walking track to Exit Cave and threatening other caves including Little Grunt (a 130m deep vertical cave). Following a wave of protest a moratorium on quarry expansion was announced and the quarry was confined to its present area, north of the saddle. The caving community specifically stated that mining must not broach the Marble Hill/Lune Sugarloaf saddle and recommended that the operation be either scaled down or relocated. A moratorium was declared in 1988 but the mine continued operating under conditions laid down by the Federal and State Gov'ts.

The State Government announced their intention to conduct a number of studies to examine the impact of quarrying and limestone extraction on the entire karst system and investigate alternate limestone sources before a final decision is made regarding the quarry's future. Most of the studies were limited to areas adjacent to the quarry but the hydrologic/geomorphic studies included all the Ida Bay karst. These reports from Parks, Wildlife and Heritage (PWH), and the Division of Mines and Mineral Resources (DMMR) have found the following:

1. Surface mapping indicates that the swallets, National Gallery and Little Grunt are two of a number of similar inflow caves and other karst features following a structural orientation in the limestone from the Quarry to Exit Cave.
2. Absence of efflux springs south of the quarry and high levels of calcium carbonate in eastern tributaries of Exit Cave suggesting long distance source of waters from eastern extremities of limestone near present quarry.
3. Presence of turbid (muddied) waters in Eastern Passage of Exit Cave after periods of heavy rain: suggested source as runoff from the present quarry.
4. Pollution in Bradley-Chesterman Cave: one metre deep mud and silt, evidence of hydrocarbons (oils etc.), and a dearth of aquatic cave fauna due to effects of quarry operations.
5. Presence of palaeokarst features in the present quarry, possibly early Devonian age and therefore some to the most ancient geological examples of karst in Australia.
6. Internationally significant deposit of fossil thylacine material in March Fly Pot, only metres south of the present quarry.
7. One of two most diverse assemblages of troglomorphic invertebrate cave fauna in cool temperate Australia: 12 species classified under IUCN guidelines as rare.
8. Cave fauna south of quarry similar to species in Exit Cave suggesting mobility of fauna through subterranean biosphere and supporting concept of karst connectivity.

9. Rare plant species: *Trochocarpa disticha* (an epacrid heath) around south west side of quarry.
10. Favorable DMMR report of high grade (95-96% CaCO_3) reserves in limestone area near Maydena. Report apparently not forwarded to Government for consideration.

The Economic Situation.

1. Pasminco E-Z, the company to which Bender has a contract, has stated that its 40-50,000 tonne demand for limestone used as a neutralizing agent for its Zinc operations, will be halved over the next decade, possibly as early as the end of 1991 due to improved production techniques. The Pasminco E-Z contract expires with Bender on June 30th, 1992. Bender has stated that the supply is already down to 30,000 tonnes.
2. Pasminco E-Z request for a high grade (94% CaCO_3) limestone to increase production efficiency and reduce their Jarosite waste. (Jarosite is a toxic waste product largely composed of the insoluble part of limestone. E-Z has been known to dump Jarosite at sea contravening the International Convention on the Prevention of Marine Pollution by Dumping Waste or Other Matter (also known as the London Convention), of which Australia is a signatory (Environmental Protection (Sea Dumping) Act 1981). This high grade limestone is available from Mole Creek or Railton and even higher grades (98-99%), from overseas. BHP already imports limestone from Japan and it has been suggested that this could be landed in Hobart @\$8.00 a tonne cheaper than Bender can supply it. High grade limestone is also available from South Australia at Rapid Bay owned by Adelaide Brighton Cement Ltd.
3. If necessary, Benders Quarry can be relocated to Risby Basin or Maydena, provided that accurate karst assessment and environmental impact statements are made. EMP consultants suggest this will take too long!
4. No job losses would be expected if the quarry closed due to availability of Federal monies for rehabilitation of the World Heritage areas. Benders employs five people and subcontracts 4-6 truck drivers from Brambles.
5. The continuation of the Benders Quarry calls into question Australian commitment to the Preservation of World Heritage areas; any extension makes the ALP governments' stance, both State and Federal, on WHA a farce.

Latest Events.

A motion to the State ALP Conference on the 23/4th of Nov. reiterating the ALP policy that the Quarry should be closed was **not** re-affirmed and was passed onto the Policy Committee for consideration. Answer due back the middle of January.

Consultants for Bender, who are preparing the EMP, convened a public meeting in Hobart on the 2nd December. At this meeting they denied any damage to Exit Cave caused by the quarry, as there is no evidence of speleothem damage or contamination of water flows. They gave the impression that not only will the quarry continue to operate but that acceptance of the EMP is a matter of formality by the Gov't and the extension to the quarry will occur. They also admitted that the quarry was already mining into Exit Cave and there was no evidence to prove or disprove that turbidity in Eastern Passage was not a natural event.

Little Grunt (IB23) now mapped to within 250 metres of Exit Cave. Unique gypsum and calcite speleothems found in IB23 extension, including 15 inch (37cm) long gypsum flowers which move in the cave draught. Also mauve coloured formations, "cotton wool" gypsum balls, etc.

The ABC 7.30 Report is covering this issue nationally during its Summer Edition, 16.12.91.

**THERE IS NO NEED FOR THIS QUARRY. IT MUST BE STOPPED.
YOUR CONTRIBUTIONS MAY SAVE IT. DO IT NOW.**

Environmental Management Plan (EMP) is due out 16.12.91 for a six week period for public comment. Request copies of EMP from Dr. J. Mc Cambridge, Ph. 002 302652 and B. Chesterman, Ph. 002 306504. Request an extension of time for submissions. Six week over the Christmas period is not long enough. Send submissions against EMP to Dep't of Environment and Planning. Hobart, Tasmania, 7000 Letters to: Paul Salmon, Chairman, Pasminco EZ, Risdon, Tasmania. Ph: 002 784444. Bob Hawke, Premier Field: to editors of newspapers and as specified on the back page of Australian Caver 129, 1991.

For further information, Ph: Arthur Clarke 002 282099 and Bob Burton 002 234910