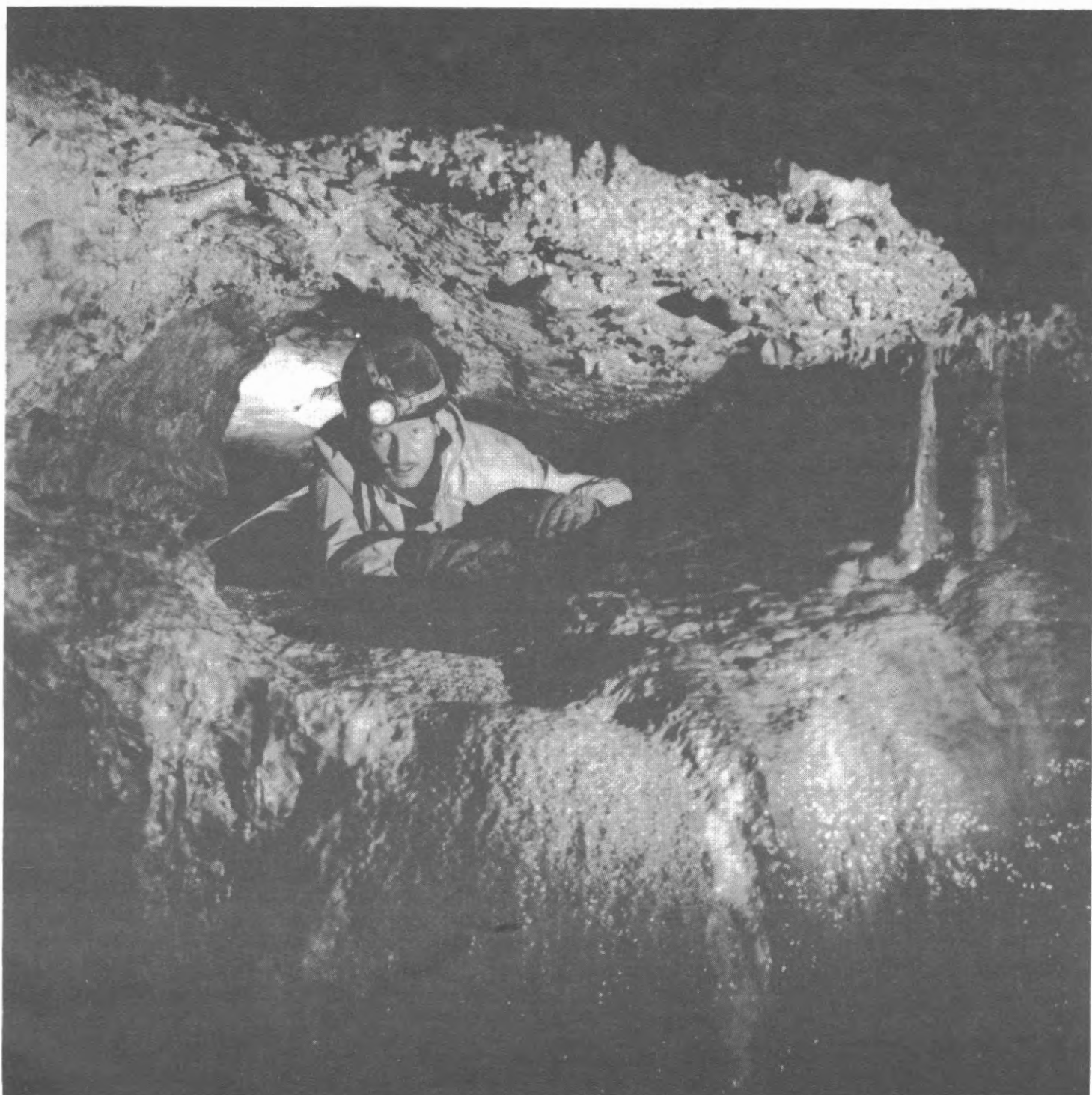


AUSTRALIAN CAVER

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EDITORIAL

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Front Cover Photograph
Allan Jevons in
East Deep Creek
(Y4) March 1991.

I would like to thank Ian Mann for keeping the Australian Caver up and running over the past few years and for handling the postage side of this issue. The task of editing and distributing a national magazine is complex and Ian has done an admirable job given the constraints placed upon AC. Well done Ian.

You will notice a few changes to this issue, most are cosmetic, if you dislike the format then let me know. If I start to print things sideways or with bits missing then send me a letter suggesting that I've been chained to the Mac for too long and that I should spend sometime underground re-orienting the world. If you have complaints about the content of the AC then get on the word processor and write me something. If you don't have any complaints then still write me something, the in tray is empty. The newsletter is only as good as what is in it. I need somebody/ies to write something on geology, hydrology, survey equipment, post Mt Etna environmental law, gear evaluations, humour, club news and anything else you can think of.

I am in need of photos for front covers, center spreads, back covers, a complete photographic journal, a national travelling exhibition I prefer **black and white** or colour with good contrast, slides are far too expensive to make bromides from. So can you please run some black and white film through your camera as soon as possible and send me the best of the bunch. In fact I will donate **\$20.00** to the best black and white photo per issue and publish it on the front cover. Peter Ackroyd is not allowed to enter for the next four issues unless I have to ring him up and ask for a cover pic. Make sure you 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.** I also reserve the right not to award the \$20.00 for an issue and so increase the award for the following issue.

As from the next issue you will see, I hope, some advertising grace these hallowed pages. The Perth ASF Committee meeting decided that the AC should try and broaden its funding base so as not to draw so much on the Federation's funds. I support this move as the ASF as an organization has an important role to play in speleological issues in this country and it should make wider use of its funds in carrying out its work. I would like to devote space in the next issue to some debate concerning the role of the ASF and possible future directions. In particular I would like to hear from those who think "the ASF is dead, long live the ASF" types, as it may give the forthcoming Council meeting at Jindabyne some direction, to that aim the debate is to be constructive. Comments on the papers in this issue are most welcome.

Waiting desperately for your words of wisdom (even if only a couple of paragraphs on what your club is doing), photos and anything else you wish to send me. Deadline for the next issue is October 15th.

Clare Buswell

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CAVE RIGHTS FOR TROGLOBITES

NORMAN POULTER *

Speleological Research Group Western Australia.

Abstract

Prior to, and during, our Bicentennial year it became increasingly popular, even trendy, for the media, politicians and individuals, to recount the continuing struggles of the Australian Aborigine - the original owners of Australia - for land rights. Now, a couple of years after that monumental non-event, it is becoming fashionable to talk land rights again. This time, amongst others, there are those who are calling for land rights for Koalas!

Even though membership of speleological societies has declined in recent years, the pressure on caves and their faunal inhabitants has increased to the point where, in some caves, there is urgent need to raise more than a word or two about land - or more precisely - cave rights for troglobites, the original 'owners' of caves.

Have we mere terrestrials, who are infrequent cave visitors but who often perceive ourselves as the best or logical custodians of caves and all they contain, lost sight of the fact (either through arrogance or ignorance) that troglobites and their troglophile cousins have rights too?

Through eons of time people have entered caves for a variety of reasons ranging from habitation, art, religious rites, curiosity, impulse, recreation, mining, study or vandalistic intent. All these activities can and do have a detrimental effect on a cave and its environment or fauna, either through ignorance or sometimes callous indifference.

In recent times some people - especially cavers - have become aware of the physical damage that can and does happen to caves and have moved to protect them, often citing fauna or habitat protection to add plausibility to their argument.

All too often we talk about caves as if they are 'ours' and that we can do just about anything we like in them.

We lock them up to keep everyone but ourselves out.

We talk about being the custodians of caves for future generations to enjoy.

Future generations of 'us' - but cave fauna?

I think not.

However, talk about preventing or restricting some or all of 'us' from going somewhere in a cave, or perhaps a whole cave, and all hell breaks loose. "You can't prevent us from going caving - we're cavers! We have a 'right' to go caving!" Do we?

We try to regulate our activities in certain areas and sections of caves. We certainly try to regulate the activities of others in caves, but do we really regulate ourselves very well in relation to a particular cave and fauna it may contain? Do we really care?

How many amongst the general cave and cave diving

community have taken the time to question the immediate and cumulative effects of their activities on a cave's fauna or food supply? How many have given more than a passing thought to bat guano, so often contemptuously trodden underfoot in the haste to explore a cave's confines, excrement that may provide sustenance to a multitude of cave fauna, especially when so few cavers take the time and effort to look for such creatures, much less understand their life cycle or needs.

Indeed, who would have thought that even degraded bat guano serves as a food source for cave fauna, as has been found recently in some caves of the Nullarbor Plain, and no doubt elsewhere. Have cavers, where there is no option but to proceed through guano, established a single file trail, even to the extent of walking in others' footsteps?

The point to be emphasized is that even the simple activity of tramping indiscriminately through vulnerable habitats like guano, litter and soil/mud deposits degrades them by breaking down their open structure to form hard compact substrates in which nothing can live. Hence the need for creation of trails which cause minimal disturbance within the cave.

A somewhat different but graphic example of the effects of indiscriminate tramping is to be seen in Roaches Rest Cave, a cave few cavers put much value upon. It once harboured a large community of troglobites (including cockroaches and spiders) which died out, probably with the close of a past moister climatic regime. The evidence for this lay in the accumulation of preserved troglobite carcasses that once littered the cave floor and formed a quite unique historical record of a community now extinct. A couple of decades of visitation and trampling has turned the cave floor into a dust bowl lacking any evidence of the former inhabitants (Gray, pers. comm). Part of the reason for this sort of destructive happening is that invertebrates are relatively invisible - better awareness becomes very important here.

Equally important, any other source of organic material in a cave should be left undisturbed. Such materials form vital energy 'hot spots' on which the cave biota depends. Even plant root systems whether alive or decaying and so often found in caves provide food and shelter for cave fauna.

Casual perusal of literature reveals that there is a higher percentage of recreational rather than 'scientific' caving (SRG is no exception). However, recreational caving is not being criticized as such by this paper. What is being criticized is the indifference towards caves and of the need to take special care of these subterranean environments.

**The assistance of Dr Brenton Knott, Dep't of Zoology, University of Western Australia and Dr Mike Gray, Australian Museum, in the preparation of this paper is gratefully acknowledged.*

CAVE RIGHTS FOR TROGLOBITES

A case in point is the area known as the Dome in Mullamullang Cave, Nullarbor Plain. It has become the 'macho rite' amongst visitors (ASF members or not), to 'do the Dome' (complete the arduous 10km return trip in a day). Indeed, many seem to go the Mullamullang Cave for no other purpose than to prove that they can 'do' the Dome. As Ken Boland of the Victorian Speleological Association so aptly puts it, they came under the influence of the 'Dome Syndrome'. At the moment little has been done to cure people of this detrimental condition. It is now thought that the Dome's fauna, *Tartarus mullamullangensis* (spider) and *Trogloblattella nullarborensis* (cockroach), are either extinct or have suffered a massive population decline due to habitat disturbance as a result of this increased human activity. A high price to pay just to satisfy people's egos. Thirty years ago the Nullarbor Plain was a very remote area and may have been visited by speleologists only once or twice a year. Such trips often took months to prepare. Today numerous expeditions to the Nullarbor are staged each year often with repeated intense activity at certain caves - in keeping with popular practise to areas closer to home. When, at the suggestion of Dr. Mike Grey of the Australian Museum, SRG proposed a 10 year ban on entry to the Dome in an effort to allow any remnant population to re-establish itself, the howls of 'What about us' were very loud indeed.

Between 1982 and 1987 the troglobitic species of Nurina Cave had been lifted from one to seven making it one of the most important biospeleological caves on the Nullarbor Plain. It also has one of the region's highest visitation rates due to its proximity to human habitation and ease of access. Shortly after the discovery of aquatic amphipods in the cave (a Nullarbor first) and news had disseminated around the caving fraternity, a member of one caving party went to the cave with the express purpose of 'photographing the amphipods' (information extracted from visitors book September 1985). This sort of activity should be discouraged due to the risk of habitat disturbance and possible death of the subject/s. An alternative would be availability of studio photographs of (scientifically) collected specimens.

It is important to ensure that an example of our unique Nullarbor cave ecosystems survives as intact as possible. Nurina Cave provides an excellent opportunity for this. It contains a uniquely rich and representative sample of the 'typical' Nullarbor troglobitic fauna and should be a prime candidate for special conservation status and restricted entry.

As a more immediate measure, it has become a practise for societies and individual members of societies to keep some cave locations or sections of caves 'secret' from the general caving community (and their own members) in an effort to protect the contents. SRG has joined this trend somewhat in relation to Nurina Cave except that we are letting people know about it and why. While recommending to the possible future cave manager, Dep't of Conservation and

Land Management (CALM), that the cave be gated, SRG is restricting access to the map that shows the location of the Fauna Chamber and Arachnid Alley to scientific perusal only and asks readers to respect this action. The Fauna Chamber and Arachnid Alley are not conducive to exploration caving, aesthetic photography or even the ASF recommended minimum sized party due to the arduous nature of the passage ways and the diverse troglobitic fauna that resides there. A sign (FIG1) has been placed at the entrance to these passages asking accidental discoverers of the extensions to respect the rights of the fauna beyond and not to proceed further. The sign also mentions that the spiders' webs that would be encountered are virtually invisible to direct lighting. These webs quite often occupy several cubic metres and can be destroyed before a person realizes one is there or by small air currents generated by nearby body movement.

Conclusion

We are cavers and no doubt wish to continue enjoying being underground for whatever reason. Due to the increasing pressures of population we find ourselves competing with other interest groups for a scarce non-renewable resource. Quite often we have to negotiate with land managers, be they government, semi-government or private owners, in order to gain access to caves and adhere to ever restricting rules and regulation. Gone are the days of frontiersville - well almost.

People join a caving club for a variety of reasons in addition to achieving a common goal which is access to caves. The duty of the more experienced members of these clubs is to train the less experienced members how to enter and traverse the confines of any given cave without injury to themselves, their companions or the cave. Perhaps it is time that all club members were made aware that apart from being trained not to injure the cave, they should be trained to take greater care not to injure the cave's natural inhabitants.

The NSS once adopted a quote reading in part "*leave nothing but footprints*". That could leave a trail of death and destruction depending on where the foot was placed. It is understood that this quote has now been changed to "*leave nothing but memories*". Does that mean Americans 'float' through caves?

The ASF carries a message on its letter head saying that "*What we have now is all there ever will be*". The present author is suggesting that "*what we have now is less than we had yesterday*" would be a more appropriate remark and one that all cavers should bear in mind on entering a cave.

Wherever there is a food source in a cave - it is possible there is also a faunal ecosystem. In times past we have argued the right of a cave to exist. It is about time we acknowledged that the fauna within a cave (no matter how much fear or contempt we may harbour for that fauna), also has a right to exist - and that existence must be protected and respected.

CAVE RIGHTS FOR TROGLOBITES

HI

YOU HAVE ENTERED THE AREA KNOWN AS THE "CALCITE CRAWL" AND ARE ASKED
NOT TO PROCEED ANY FURTHER.

A RICH AND DIVERSE TROGLOBITIC FAUNA COLONY EXISTS NEARBY AND YOUR PRESENCE
CAN EASILY DISTURB OR DESTROY THEM OR THEIR HABITAT.

THE FOOD BASE IS THE DEGRADED BAT GUANO FOUND ON THE FLOOR AND SHOULD NOT BE
TRODDEN ON UN-NECESSARILY.

VERY RARE AND DELICATE SPIDERS OCCUR. THEY AND THEIR WEBS ARE INVISIBLE TO DIRECT
LIGHTING.

THE PASSAGE BEYOND THIS POINT BECOMES QUITE NARROW AND DOES NOT OPEN OUT TO
ANYTHING THAT MAY BE PLEASING PHOTOGRAPHICALLY.

IF YOU WANT FURTHER INFORMATION REGARDING THE FAUNA OF THIS CAVE INCLUDING COPIES OF
SCIENTIFIC PHOTOGRAPHS YOU ARE URGED TO CONTACT:

DR. MIKE GRAY
AUSTRALIAN MUSEUM
COLLEGE ST. SYDNEY 2000
(02) 3398111

OR

NORMAN POULTER
SRGWA
P.O. BOX 120 NEDLANDS 6009
(09) 2762495

PLEASE DO NOT PROCEED BEYOND THIS POINT

IF YOU ARE INTERESTED IN CAVING CONTACT :

THE SECRETARY
AUSTRALIAN SPELEOLOGICAL FEDERATION
P.O. BOX 388 BROADWAY 2007

WESTERN AUSTRALIAN SPELEOLOGICAL
GROUP.
P.O. BOX 67 NEDLANDS 6009
(09) 3867782

SPELEOLOGICAL RESEARCH GROUP WESTERN
AUSTRALIA
P.O. BOX 120 NEDLANDS 6009
(09) 2762495

WITCHCLFFE AREA SPELEOLOGICAL SUB-GROUP
(097) 555324

Figure one.

Postscript.

At the ASF Committee Meeting the day after this paper was presented the following resolution was accepted:

"In view of the perilous state of certain troglobitic fauna in the Dome of Mullamullang Cave on the Nullarbor, the ASF recommends to all its members and to the public that, for at least the next two years, only entomologists and essential assistants visit the Dome so as to

give the relevant fauna populations a chance to recover".

The resolution will be reviewed at the next ASF Conference to be held in Tasmania.

It is the intention of SRGWA to place a sign featuring this resolution in the entrance region of Mullamullang during July this year and it is hoped that visitors will respect the intent and explore elsewhere in the cave.

ADVERTISING RATES.

For ASF members and Affiliates - free. For the general public, traders and institutions:
Camera ready copy: Quarter page: \$70.00 Half page: \$120.00 Full page: \$200.00
Special rates apply for spot colour and a special deal applies for full gloss colour.
Extra charges apply for typesetting. Ring the Editor: C. Buswell (08) 388 6685

DOWN UNDER ALL OVER

SRGWA

Two major trips have taken place over the past few months. One was to do a fauna survey to Stockyard Creek Gully National Park near Eneabba, north of Perth, the other was the two week Nullarbor expedition.

At the behest of the University of Western Australia's Zoology Dep't., Norm Poulter led a trip to Aiyennu (E9) and Beekeepers (E10) in June so that an Honours student could collect another amphipod, discovered several years ago by WASG member Mike Newtown, for further study using a new technique. While there Norm discovered crayfish in both caves - there had been no previous reports of them although gilgies have been collected from the Hill River region some 40km to the south.

Although it was initially thought that the crayfish were a new species with some cave adaptation due to their eyes not responding to light, they have now been identified as Chreax destructor an eastern states species introduced through the wheatbelt during the 1960's. It is not known at this stage what effect the Chreax destructor may be having on the cave's native fauna but it is yet another example of introduced species 'getting away' and invading native habitats. The land managers, Conservation and Land Management (CALM), have yet to be notified.

Despite rain, low temperatures and high winds, SRG's Nullarbor Expedition was a great success. Fourteen people ultimately participated representing two states and Sweden. While on the South Australian side to the Nullarbor, the party found a new cave with some side passages and dry calcite decoration. Robert Poulter found a troglobitic pseudo-scorpion in the cave.

Members of NUCC, fresh from their discovery of a mummified body in Mullamullang Cave, bumped into SRG in Thampanna Cave and on exiting the cave to find members of FUSS encamped nearby - talk about Pitt Street on Saturday night.

SRG started placing reflective number tags on Nullarbor caves and at this stage only those in W.A. are being tagged with their positions hopefully published in the next edition of CEGSA's Nullarbor Atlas.

Complementing the ASF resolution encouraging ASF members and the public not to enter the Dome region of Mullamullang, explanatory signs were placed at the Dune, Camp One and just outside the entrance to the Dome asking visitors not to enter the Dome but to explore elsewhere. The visitors book

placed in the Dome by NUCC to replace the one confiscated by the Police was removed and a new one placed near the sign outside the Dome along with a permanent facsimile of the visitors book ranging from January 1969 to April 1989. The transcription of the old book and associated scraps of paper was carried out by Steve Brooks of WASG with lamination by Cameron Eldridge of SRG. A new visitors book was also placed beside the sign at Camp One. Two notes dating from 1964-65 were removed from under rocks of the One Mile Cairn for preservation and replacement with laminated reproduction sometime in the near future.

It was disappointing to discover nearly 2kg of spent carbide dumped between Camp One and the Drop Off. Haven't carbide users learnt to take their waste out of caves yet?

Norm Poulter

CEGSA

is going to the Nullarbor in September to do a major survey of Old Homestead Cave. The trip is now full but there is going to be a report of it in the next A.C.

The Top End Speleological Society successfully obtained a grant from the National Estates Grants Programme to help them put together an inventory of karst in the Northern Territory over the next three years.

Mr Ian Household has been appointed as the Karst Investigations Officer to Parks, Wildlife and Heritage in Tasmania. Ian's major task is to draw up a management plan of Exit Cave.

SKELETONS FOUND IN MULLAMULLANG CAVE.

A party of NUCC members recently found skeletal remains of a person of small stature at the side of the last rockfall before White Lake, nearly 2km into Mullamullang Cave, Nullarbor. A few weeks later investigating police located a second skeleton about 100 metres closer to White Lake. Our latest news suggests that the bodies were identified as one young and one somewhat older, and that death seems to have occurred after recorded discovery of the cave in 1964. No lights were found.

As far as we know this is only the third case of

Cont'd p.18

QUARRYING, KARST RESEARCH AND LAND TENURE AT IDA BAY

ARTHUR CLARKE

Preamble

The Ida Bay area has been the focus of considerable karst research in the last twelve to eighteen months since the region became part of the extended World Heritage Area, but with a working limestone quarry included. The Ida Bay Karst (and the quarry) are in an area of State Forest which came under scrutiny during the Commonwealth Government's Helsham Inquiry into the Lemonthyme and Southern Forests in late 1987 and early 1988. During the course of the Inquiry, a number of areas or sites were assessed in terms of their World Heritage significance. Exit Cave and the surrounding Ida Bay karst were recognized as one of several significant areas. The continuation of mining in a World Heritage Area was obviously going to be a contentious issue. An immediate outcome of the Helsham Inquiry was a call by conservation groups for the closure of Benders Quarry at Lune River (or Ida Bay).

The terms of the Commonwealth-State Government agreement in November 1988 assured the continuation of quarrying providing "... that acceptable limits are set to the scale and development of the operation." Prior to the installation of operating guidelines for the present development, environmental management and monitoring of the quarry, some assistance was sought from speleologists. Members of the Tasmanian Cave and Karst Research Group offered several suggestions for these guidelines including recommendations for a detailed study and survey of the karst, particularly the underground drainage. A number of other speleological studies were also suggested including possible instrumentation in caves to monitor the effects of shock waves from blasting.

Prior to World Heritage Area (WHA) listing or proclamation in November 1989, cavers became increasingly concerned about the incidence of flyrock south of Marble Hill/Lune Sugarloaf saddle (or divide). In addition to the flyrock, a southerly expansion of roadworks along the saddle and beyond was pushing overburden in the March Fly Pot (IB-46), doline and on the steep hillside above the Skinner Track, to Exit Cave, uphill from Little Grunt (IB-23). Little Grunt is a 130m deep vertical cave located about 100 metres south of the divide. Following a mudflow avalanche which engulfed the walking track and almost reached the entrance to Little Grunt, considerable alarm was raised by caving groups.

Limestone Quarrying

Following approaches to Ray Bender, the operator of Newland or Benders Quarry, he revealed details of a mining plan with proposals to re-develop and extend the quarry south into the Potholes Region further towards Exit Cave. Bender stated that, in order to continue as a viable operation, the quarry would have to extend further south beyond the divide, or close down because limestone reserves were supposedly running out on the north side. The expansion proposal also involved major earthworks,

removal of forest and overburden to the west, north of Marble Hill, extending across to Mystery Creek Cave, which contains a major feeder system connecting to the Exit Cave system.

Karst impacts were not considered during formulation of the expansion plan for quarry operations. Ray Bender believed that Exit Cave was: "... miles away on the other side of the hill." The expanded development proposals were included in a "mining Plan" designed by the previous Department of Mines and were primarily aimed to increase the productive yield of limestone 'ore' by mining into the higher grade, (and cavernous) "grey band". A secondary aim of the proposal was to avoid mining against the strike of shear zones, areas of considerable fracture and jointing associated with zones of structural weakness in the rock and hence reduce the size of waste dumps of clay contaminated limestone. The sheared or strongly jointed areas of the Ordovician limestone are either cavernous, contaminated with clay or both. However, the clayey pockets, including deformed fossiliferous sediments, also occur as infillings in paleokarst: a series of ancient solution cavities of different geological ages believed to date back to early Devonian times.

At the present site, the quarry operates on four major benches which run east-west, parallel to the surface divide. The new development proposal involves the construction of twelve east facing quarry benches, re-aligned to a north-south orientation, with a massive 150m deep excavation into the eastern side of Marble Hill, south of the divide. The twelve benches would extend from about the 325m contour down to the 160m level at the present quarry floor base, eventually consuming the whole saddle area, leaving a gaping hole between Marble Hill and Lune Sugarloaf. The expanded quarry operation would extend the present quarry floor over 400m south through the Potholes Region and closer to Exit Cave. The quarry is already less than 800m from mapped passages of Exit Cave. In the proposal for the southern extension, the quarry benches would be encircled by roads: an Eastern Haul Road, an inclined Southern Haul Road (near Pseudocheirus, (B-97)) and a Western Road connecting to a 2km long low angle Western Haul Road which doubles back to the present crusher site. The western haul road would be constructed across the karst north of Marble Hill with a (turning circle) bend virtually above Mystery Creek Cave.

Following public pressure and unfavourable media coverage, a moratorium on quarry expansion was announced and "temporary limits" were imposed on the operation, subject to the outcome of a study in the area. Eighteen survey pegs were placed around the southern perimeter of the present quarry exposure in August 1989 to mark the limits of the present operation. Ray Bender was only prepared to accept a six month moratorium, but since the variation of operation condition was not formally

QUARRYING, KARST RESEARCH AND LAND TENURE AT IDA BAY

scheduled till November 1989, the moratorium was extended till May 1990. An unsurveyed western boundary was arbitrarily placed along a line continuing north to the former Ida Bay tramway, from the eastern boundary of the Exit Cave Reserve. This western boundary line was barely 400m east of Mystery Creek Cave (the boundary is now a further 300m west).

Karst Research

To assess the likely impacts of continued quarrying on the Ida Bay karst and Exit Cave and to consider the viability of expansion or relocation of the quarry to another limestone region, a series of studies were initiated. The intended research was referred to as the Ida Bay Karst Study. The project was conducted by two Tasmanian Government departments: Parks Wildlife and Heritage (PWH), and the Division of Mines and Mineral Resources (DMMR), a section of the new Department of Energy and Resources.

Most of the study initiatives were instigated by PWH with research and inventory studies conducted by a number of professional consultants. The PWH studies included the karst geomorphology and hydrology, cave biology, cave paleontology (fossil mammal bones), archaeological resources, surface botany, visual impacts of continued or expanded quarrying and a study to estimate limestone reserves within the existing quarry limits and the viability of continued quarrying without expansion. Additional information relating to the recreational aspects of the karst was volunteered by caving groups.

The Division of Mines and Mineral Resources Studies

Two studies were initiated by DMMR: research into the effects of blasting on "nearby cave systems" from the Lune River quarry at Ida Bay and an 'in house' reconnaissance study to locate an alternate quarryable limestone area in southern Tasmania. The aim of the second study was to select a site with a reserve size potential of about 10^6 (1 million) tonnes of limestone. The geological appraisal was conducted in the Florentine Valley and Maydena areas with nominated preference being given to a site 2km southwest of Maydena due to lower grades in the former area. The terms of reference for the Ida Bay karst study included an investigation of favourable limestone reserves from alternate areas, but for reasons unknown, this Maydena report was not forwarded as part of the overall study. However, the limited, but favourable results of field investigation at the Maydena site on Australian Newsprint Mills (ANM), land in the Risby's Basin area were outlined in another DMMR report, along with brief mention of known reserves at Railton, Mole Creek and Flowery Gully.

The DMMR report considered the economic implication of the closure of Benders Quarry. The brief five page report was primarily an evaluation of the options: continued operation in accordance with the Mining Plan, revocation of

the mining lease and compensation, cost of relocation and rehabilitation of the present site and research into an alternative source of limestone. The report indicates the suitability of the Maydena site in terms of reserve size and quarrying potential based on the limited assessment from

surface grab samples in part of the 1.5km^2 outcrop. However, the report states that, although the development potential of the site has been closed (at \$200,000), further study is required to choose a quarry site. Despite concerted efforts by the DMMR's limestone geologist, the core sample from a single 500 metre deep hole is yet to be assayed 16 months later. The cost for dismantling and relocation of the existing Lune River crushing plant is another \$480,000. The DMMR manager of resources describes the Maydena site (the preferred option of PWH) as "too expensive" for the present quarry development despite the apparently good calcium carbonate grades (92 to 95%), access to sealed road or rail transport and closer proximity to Pasminco's electrolytic zinc (EZ Industries), plant at Risdon.¹

The DMMR consultant's report on quarry blasting basically considered the effect of shock waves on two cave systems: Mystery Creek and Exit cave. Although mention was made of other isolated caves and potholes, the report failed to recognize their significance in terms of being an integral part of the karst system which is drained by Exit Cave. The report found that there was "no established evidence of any form of blast damage ... to caves outside of the quarry" due to either of the four main effects: ground shock waves, air shock waves, flyrock and gas-lift. It was suggested that the ground motions due to the effect of natural seismicity in the area would exceed those due to blasting. The likely effect on caves was based on the maximum ground velocities, generated from ground shock waves which might exceed the prescribed limit for Class 1 structures (historical buildings and monuments and buildings of special value or significance). In a summary of findings, the report admits the present blasting practice at Benders Quarry "... produces maximum ground velocities at nearby potholes such as March Fly Pot and Little Grunt that substantially exceed the prescribed limit for Class 1 structures ...".

Although the report contains more emphasis on damage to cave structure rather than the speleothems, some mention is given to the "... range of stalctite types which will resonate to varying degrees when subjected to ground motions caused by blasting ... to the extent that significant stresses are induced". It is suggested that "delicate features" may have been damaged in March Fly Pot and Little Grunt. (In March Fly Pot, flowstone has separated from cave walls, most of the straw stalactites have been reduced to short stumps, there is evidence of recent structural movement and the lingering fumes from cordite and other explosives have been noticed on several occasions.) The blast damage report states that delicate features may have

QUARRYING, KARST RESEARCH AND LAND TENURE AT IDA BAY

been damaged in Exit Cave due to blasting practices at Blayneys Quarry in the 1940's when ground velocities substantially exceeded the prescribed maximum value for Class I structures. The assessment of the effects from blasting was based on a study of past and present blasting practices, a consideration of simple analytical models in addition to limited surface study in the quarry area and unsubstantiated statements from cavers. The study did not venture underground: there was no investigation of "damage" in caves or instrumentation in caves to monitor blast induced vibrations. The report included a recommendation that monitoring devices be installed in some caves to record the "blast frequency spectra" if the "... possibility of damage due to blasting is to be considered further".

Parks Wildlife and Heritage Studies

The studies of the Ida Bay karst by geomorphology consultants to PWH indicate a probable link between the karst and caves adjoining the quarry and Exit cave. A hydrological connection into the Eastern Passage (of Exit Cave), was proven after two successful dye traces from National Gallery (IB-47), a swallett entrance 275 metres southwest of Benders Quarry. National Gallery is one of a line of swalletts and vertical caves which extend from the southern border of the quarry toward the Eastern Passage in Exit Cave. Additionally, in periods in heavy rain and surface runoff, muddied waters flow into one of the (unmapped) northern tributary passages to Eastern Passage, suggesting drainage from the quarry site, or perhaps somewhere in between the quarry and Exit Cave. In the study of limestone reserves within the present quarry limits, the consultants stated that a hydrological connection into Exit Cave from parts of the quarry should be assumed to exist until proven otherwise. This appears to be confirmed by the preliminary results of an unpublished study which indicates that the underground drainage divide is slightly north of the surface divide and within the working area of the quarry. Clarke's research reveals that the water table has a relatively steep hydraulic gradient tending southwest from the underground divide with a more gentle gradient towards the north.

The impact of poor waste disposal management was mentioned by at least three of the PWH consultants. To the north, direct runoff from the quarry can be seen entering a swallett (IB-127) which also drains one of the clay dumps. IB-127 has been dye traced into Bradley-Chesterman Cave, (IB-4, 5 & 6). Pollution in this cave has been reported several times, including mention of oil and other petroleum products. The dearth of cavernicoles in this stream cave attests to the severity of environmental or ecological disturbance.

Rich and Rare Flora and Fauna Found

The biospeleological studies indicate that the Ida Bay karst has the second richest assemblage of cave species in Tasmanian caves (Tasmanian caves are recognized as having the richest faunal assemblage in temperate zone Australia).

In the polygonal karst south of the quarry, some caves contain troglobitic (obligate), cavernicoles including species similar to those recorded in Exit cave (and Mystery Creek Cave), suggesting the mobility of species through minute cracks and voids in the subterranean biosphere. These findings add further support to the notion of connectivity between the karst near the quarry and Exit Cave in addition to the proven hydrological connection. The cave deposits in March Fly Pot (IB-46) and Pseudocheirus (IB-97) contain significant deposits of mammal remains. An isolated artifact, a stone flake, the remains of seven Thylacines and the extinct *Sthenurus*, a giant macropod and member of the Pleistocene megafauna have also been found in March Fly Pot.

The karst south of the surface divide, in the area of proposed quarry extension, is composed of a series of uvalas, dolines and ridges and has been described as a form of polygonal karst, apparently rare in temperate zones. It is thickly covered in Myrtle rain forest and wet sclerophyll forest and in the area adjacent to the quarry, mainly on the north-western side, the vegetation includes the rare endemic Epacrid (heath) species: *Trochocarpa disticha*.

The numerous vertical caves in the polygonal karst area were described by Andrew Reeves, the DMMR's former manager for Resource Development (and main protagonist for continued quarry operations and expansion), in simple terms as "an area with a few potholes".² Andrew Reeves has prepared a draft submission, for consideration by the Premier and Cabinet, listing the options and issues concerning the operation of Benders Quarry, but favouring the status quo. Additional comments were added to the submission by PWH. Andrew is keen to emphasize that this submission is only a document for consideration of the facts, stating that no final decision on the quarry's future will be made at this stage. PWH are keen to see a decision made especially since the prospect near Maydena appears to be a viable alternative located outside the World Heritage Area.

Summary

Access to these DMMR studies has required Ministerial approval and to date this has been denied despite their consultants' free access and reference to published (and unpublished) speleological reports. All the studies are now public documents and a summary of some of the pertinent aspects of the PWH studies is included in the "Tasmanian Wilderness World Heritage Area 1991 Draft Resources and Issues" released in late July as a supplement to PWH Draft Management Plan. The Resources and Issues document states that "... expansion beyond the present quarry confines should not occur".

Land Tenure in the Ida Bay Karst Area

Land tenure in the Ida Bay Karst area appears complex despite the area's inclusion in the extended WHA, listed in November, 1989. Most of this WHA was incorporated in

QUARRYING, KARST RESEARCH AND LAND TENURE AT IDA BAY

the Southwest National Park, proclaimed on June 27th, 1990. This new national park includes the original Exit Cave State Reserve (in two portions), and part of the small portion of Southwest Conservation area between the two former reserves. The new WHA National Park surrounds a resource use area which includes the present quarry. Benders Quarry is now part of the Marble Hill Conservation Area (C.A.), an area of 77 hectares, which was also gazetted in June 1990. This was the area previously defined in the 1984 License to Operate as required for future mining operations. (The boundary limits virtually coincide with the mining plan area for extended quarry operation and include the haulage road north of Marble Hill.) Most of the karst in the extended national park to the north, east and south of the former reserves and the new Marble Hill Conservation Area retains its status as State Forest.³ A large part of the Ida Bay karst area (and National park), remain incorporated in the 487 hectare mining lease (69M/1981). This lease, held by Benders Spreading Services, is reportedly due to expire on June 1, 2003.

The boundaries of the Marble Hill Conservation Area extend over 250m south of the divide, beyond March Fly Pot and Little Grunt into the Potholes Region towards Exit Cave. The divide is slightly south of the present quarry. The western boundary has impinged on the former Southwest Conservation Area and now lies on the 4⁸⁸ Easting gridline, (barely 100m east of Mystery Creek cave and only 180m east of Midnight Hole, IB-11). The s/west corner lies within the catchment to National Gallery (IB-47). The Northern boundary follows the course of the old Ida Bay tramway extending east to a point near the IB-127 swallett. The old railway ran from the former Commonwealth Carbide (Blayneys), quarry site.

Conclusion

In summary, the karst had been divided into three tenure regions: cave reserves, conservation area and State forest reserve. The surveyed passages of Mystery Creek Cave and Exit Cave are situated in two areas: The two portions of the Exit Cave State reserve originally gazetted in 1979, and secondly, a portion of the Southwest Conservation Area, gazetted in 1980. (Most of these two areas are now in the National Park. A portion of the eastern side of the Southwest C.A. is now included in the Marble Hill C.A.)

The draft management plan for the Tasmanian Wilderness World Heritage Area (released in June, 1991) states that "... the future extent and operation of the quarry will be subject to an environmental management plan agreed to between the Division of Mines and Mineral Resources, the Department of Environment and Planning and the Department of Parks Wildlife and Heritage and approved by the TWHA Ministerial Council." As mentioned, the latter issued *Resources and Issues* document states that mining should not occur south of the Marble Hill/Lune Sugarloaf divide.

The DMMR and quarry operator believe that expansion must occur to maintain the continued life of the quarry. The PWH, conservation groups and most cavers believe the operation should be wound down or closed and the site rehabilitated, with limestone quarrying relocated to another area, such as Risbys Basin on ANM land near Maydena, providing an adequate environmental assessment is performed. Although an accurate karst assessment has not been made in this latter area, the present knowledge of karst resources in the Risby Basin region suggests that the level of sacrifice would be far less than in the present Ida Bay area.

Endnotes.

1. EZ, the major limestone user, has stated that its 40-50,000 tonne demand for limestone as a neutralizing agent will be halved over the next decade, possibly even by the end of 1991, due to improved production techniques. The Pasminco-EZ contract with Bender currently expires on June 30th, 1992.
2. Andrew Reeves was once a keen caver with the now defunct University of Queensland Speleological Society.
3. National Park status overrides State Forest status, but revocation of the latter requires Parliamentary approval or ratification.

References

- Allan P., A Proposal for the future development of the Lune River Quarry. Unpublished Dep't of Mines Technical Report. 1978.
- Baynes F. J. and Underwood R., Newlands Quarry: Initial assessment of the Effects of Blasting upon nearby cave systems. A report to Division of Mines and Mineral Resources for the Ida Bay Karst Study. 1990.
- Baynes F. J., Ida Bay - Benders Quarry: and initial assessment of the effects of blasting upon nearby cave systems. A report to Division of Mines and Mineral Resources for the Ida Bay Karst Study. 1990.
- Calver C. R., Limestone Resources of the Maydena Florentine Valley Area. DMMR Report 1990/06. 1990.
- Clarke A. K., Idabase, a karst data base for the Ida Bay area. In: Household I. and Spate A., *Geomorphology and Hydrology of the Ida Bay Karst Area*. Vol. 3. Appendix 5. 1990.
- Clarke A. K., Some Environmental Aspects of Karst: the Sensitivity of Karst Hydrologies to Human Impacts. Report submitted to the Tasmanian Department of Environmental Planning. 1989.
- Clarke A. K., Caves and Karst and the Ida Bay region of the

QUARRYING, KARST RESEARCH AND LAND TENURE AT IDA BAY

World Heritage Area. Report to the World Heritage Planning Team. Parks Wildlife and Heritage 1990.

Clarke A. K., Protection Requirements of Karst Areas. In Final Submission to the Commission of Inquiry into the LEMONTHYME and Southern Forests. Exhibit 184B 28pp. 1987.

Clarke A. K., Underground Water Flow at Ida Bay Tasmania. A summary of Findings. Forthcoming. 1991.

Cullen P., A survey of the Vegetation. Parks, Wildlife and Heritage. Report to Ida Bay Karst Study. 1990.

Department of Parks, Wildlife and Heritage. Tasmanian Wilderness World Heritage Area: Draft Resources and Issues. 1991.

Department of Parks, Wildlife and Heritage. Tasmanian Wilderness World Heritage Area: Draft Management Plan. 1991.

Division of Mines and Mineral Resources. Economic Implications of closure of Benders Quarry, LUNE RIVER. DMMR Report 1990/29 for the Ida Bay Karst Study. 1990.

Eberhard S. M., The cave Fauna at Ida Bay in Tasmania and the Effect of Quarry Operations. Report to Department of Parks, Wildlife and Heritage, for the Ida Bay Karst Study. 1990.

Eberhard S. M., Richardson A. M. M. & Swain R., The Invertebrate Cave Fauna of Tasmania. Zoology Department University of Tasmania. 1991.

Household I. and Spate A., Geomorphology and Hydrology of the Ida Bay Karst Area. A report to the Department of Parks, Wildlife and Heritage. Three Volumes. 1990.

McGowin A., Archaeological Resources of the Ida Bay Karst and the Impact of Limestone Quarrying. Parks, Wildlife and Heritage. A Report to Ida Bay Karst Study. 1990.

Weldon M. W., Ida Bay Quarry: Terms of Reference for Study. Minister for Resources and Energy. 11.12.1989.

Editors note: A map showing the boundaries of the Conservation Areas, WHA, and cave locations was also sent to me as part of this article. I decided not to publish it in accordance with the policy expressed in the Draft Management Plan for the WHA. p. 81.

CAVER IMPACTS CONFERENCE

In June of this year I attended a conference organized by the NSW Speleo Council and the Australasian Cave and Karst Management Association, titled Caver Impacts on Caves. The conference was well attended by around eighty people mostly from NSW but there were representatives from South Australian ASF affiliated organisations and from the VSA. Cave Management was represented by Andy Spate, NPWS, Ernst Holland, Jenolan Caves. A number of papers were presented in the morning with the afternoon session being given over to workshops on cave management. The aim of the conference was for cavers and managers of caves to highlight some of the different ways in which both perceive karst, our impacts upon it and to set about finding some solutions to minimise those impacts.

Andy Spate presented a paper co-authored with Elery Hamilton-Smith which reviewed the literature on human impacts in caves. The paper is comprehensive and aims to present a broad perspective on the impacts of human use and possible solutions to those impacts. The users range from biologists to rock hounds and the solutions to dealing with impacts ranged from hardening the environment in order to reduce the impact of visitors to exporting the demand [to go caving] to other countries.¹ The paper concludes on a positive note in that, in Australia we have the opportunity to avoid the British experience where, "...no cave now exists which has a human sized entrance and

undisturbed biology or sediments ...". We should make use of our national organization to develop a Low Impact Caving Ethic and make it widely available to member societies, equipment shops, land managers.²

Martin Scott from Suss presented the cavers points of view by trying to answer the question: why do we all go caving. His answer revolved around finding out what is there and to document and publish it.

Nick White from the Victorian Speleological Federation presented an overview of the current karst management and speleological issues in Victoria. The reasons that management practices have been successful is due to the importance of having strong governmental support for karst management over a long period of time, the close involvement of the VSA in the development of those management strategies and having only one government department which looks after karst, the Dep't of Conservation, Forest and Lands. This has resulted in most of the Victorian caves being in Reserves, and those that are not are required to be managed as if they were. In 1986 there was a major cataloging and classification (using the Worboys system) of all known Victorian caves. This document, *Management of Victorian Caves and Karst*, has formed the basis of current management practices. (Con't p.12)

NOTES AND NEWS FROM THE ASF COMMISSIONS

CAVER IMPACTS CONFERENCE

Con't from page 11.

Ernst Holland presented a management view and in the afternoon workshops set in motion some ideas to get the caving fraternity to measure the impact they are having on the caves they visit. Some examples of the type of experiments that are going to occur are: Changes in air/water flow; humidity levels; soil compaction in passages; monitoring visitation levels via visitors books and electronic people meters; photographic monitoring; monitoring speleothem breakage; mud/clastic sediment transfer and track marking, does it lessen impact? These experiments are to occur over the next year with the another conference being convened to discuss the results.

One of the most important recent legislative moves to protect Karst was also launched at the conference by the Minister for the Environment, Mr. Tim Moore. The Legislation was originally introduced into the NSW Parliament as an amendment to two Acts, the National Parks and Wildlife Service Act and the Wilderness Act. On the second reading of the legislation in early July, the two amendments were amalgamated and the legislation is now known as the National Parks and Wildlife Service Karst Conservation Amendment Bill, 1991, No. 2.

At present, the only way the Service could conserve a significant limestone cave area was to obtain title to the land above and rely on the Common Law principle that title to a parcel of land extends "to the centre of the earth". The aim of the legislation is to establish underground National Parks and Wilderness Areas at a certain depth under the surface land; by allowing the NPWS and the Wilderness Service to acquire, through purchase, the underground area. In effect, strata titleing.

The current process of declaring a reserve around the immediate entrance does not protect the catchment areas. In order to protect the catchments of seepage flows and the chemistry of seepage waters, the protection of surface areas, via conservation agreements or wilderness declarations, to areas larger than the immediate entrance is to occur.

The legislation is currently on public display and comments on it should be into the Minister by the middle of September. Write to the Minister for the Environment, Mr. Tim Moore. Parliament House, Sydney. NSW. You can also phone his office for further details. (02) 368-2888. He wants feedback from the caving fraternity.

C. Buswell

1. Spate A. & Hamilton-Smith E., Caver's Impacts: Some Theoretical and Applied Considerations. Paper presented at the Caver Impacts Conference Sydney. June 1991. passum.

2. Ibid. p. 22.

3. Management of Victorian Caves and Karst. A Report to the Department of Conservation and Lands. Prepared by Applied Natural Resource Management. Canberra. 1986.

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AUSTRALIAN KARST INDEX

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CAVE LEEUWIN

Results of the Photographic competition.

It was disappointing to note the apparent lack of interest from outside Western Australia with only three people (from NSW) entering the competition.

Despite early release of the photographic competition details, only three people took advantage of the fact that non-attendees of the conference could enter the competition.

NOTES AND NEWS FROM THE ASF COMMISSIONS

Few Conference attendees seemed aware that photographs of all vintages were eligible, in other words 'Golden Oldies' were acceptable so long as they had not won prizes at previous ASF photographic competitions.

The results of the Slide competition were as follows:

Surface:

- 1st - Russell Bridge SSS
- 2nd - Paul Drew SRGWA

Entrances:

- 1st Mark Bonwick SSS
- 2nd Margorie Sargeant SRGWA

Passages/Chambers:

- 1st Rauleigh Webb WASG
- 2nd David Graves WASGSG

Decoration:

- 1st Rob Klok WASGSG
- 2nd Rauleigh Webb WASG

Scientific:

- 1st Margorie Sargeant SRGWA
- 2nd Rauleigh Webb WASG

Action/Technical:

- 1st Lucinda Coates SSS
- 2nd Margorie Sargeant SRGWA

Humorous:

- 1st Rauleigh Webb WASG

As outlined in the competition rules, if there were insufficient entries, some or all categories could be suppressed or absorbed into an Open Class. With only one entry in the Black and White section, it was abandoned.

There were enough entries in the Colour Print Passages/Chamber section to have a competition, all other categories were absorbed into an Open Class the results of which are listed below:

Passages/Chamber.

- 1st Gordon Howieson WASG
- 2nd Michael Pimm WASGSG
- 3rd Russell Waugh WASG

Open Class.

- 1st: Gordon Howieson WASG
- 2nd: Michael Pimm WASGSG
- 3rd: Russell Waugh WASG

There was provision in the rules for a Grand Prize to be awarded if a photograph in any category was deemed to warrant further praise. The award as such, was not presented. The framed line drawing (donated by Francis Laveda WASG) was however presented as an encouragement award to Russell Bridge as being the only person who entered every category of the slide competition.

Norm Poulter.

Cave and Karst Management.

The Commission's membership informally consists of Clare Buswell, Peter Berrill, Chris Dunne, and myself, John Dunkley as Convenor. I have taken the liberty of verbally co-opting Rauleigh Webb, Ernie Holland, Elery Hamilton Smith and Andy Spate, although this might be the first they know of it!

We are hoping to contribute a short column regularly to Australian Caver, depending on the response to the questions at the end of this article. These are purely my own views! Anyone interested is invited to join the Commission, just drop me a line. I'll outline later some of the material we can distribute to any interested club or member, but right now I want to mention the workshop exercises on cave management from the meetings in W.A. and Sydney, and some recent NSW karst protection legislation. Write if you want any copies.

What impact do cavers have on caves?

The NSW Speleological Council and the Australian Cave and Karst Management Association recently co-hosted a forum at Sydney University to address this most pressing question. An assortment of past and present 'experts' were heard, and two of the more reticent and indeed downright modest of these contrived to get themselves invited to chair the sessions.

At this point you probably think, here comes another lecture on the impact of caver's boots on the lovely decoration, the bugs and the sediments. Good grief, Norm Poulter says troglobites have rights, now Dunkley is about to make out that so do varved clays, scallops, stalactitic Flintstones and the rocky likeness of the Madonna or even THE Madonna.

Well, the immediate impact of the forum will probably be to push right off the front pages of this Australian Caver any news from the real world of caving. I'm sure someone else will oblige you on that score, so I'll just say this about caver impacts:

A MAJOR IMPACT CAVERS HAVE HAD ON CAVES IN AUSTRALIA IS TO HELP RAISE THE STANDARD OF CAVE MANAGEMENT TO MAYBE THE HIGHEST IN THE WORLD.

How to justify this modest claim?

First, most of the consultant reports on caver and karst management have been initiated and prepared by active cavers, most of these under the name of ASF. Second, ACKMA, the Australian Cave and Karst Management Association is one of ASF's great successes. It was originally organized as an ASF Commission which became

Cont'd p. 17

SAFETY AND TECHNIQUES

Welcome to the new Safety and Techniques section of the Australian Caver. As the new Convenor of the ASF's Safety Commission I shall attempt to ensure that each future issue features something interesting on the topic of cave safety or caving techniques. The Safety and Techniques section is also available as a regular forum for cavers across Australia to discuss any issues involving cave safety and techniques. Although I will endeavour to write something for each issue life is a lot easier if I receive lots of material from the caving community. So send in your articles or suggestions please. I would like to thank the outgoing Convenors, Ann McLaren and Ian Lutherborrow, for the tremendous job of rewriting the ASF Cave Safety Guidelines, which are now a very coherent and comprehensive set of standards.

For those of you that don't know me a few snippets about my caving background might be appropriate. I started caving in 1977 with the Sydney University Speleological Society and I am also a member of the Sydney Speleological Society. Most of my caving has been in NSW, however, I've also caved in Victoria and Tasmania. Several years ago I joined the NSW Cave Rescue Squad so if I am not out caving with SUSS or SSS I'm usually participating in a cave rescue exercise.

Talking of cave rescue exercises..... last December the V.S.A. held a cave rescue exercise in Honeycomb Cave (M41) at Buchan, Victoria. This was recently written up in the May, 1991 edition of Nargan by Peter Ackroyd and Alex Kariko, (VSA Rescue Practice 1990, Nargan Vol. 23, No. 10, p. 87). The article is well worth looking at as it

discusses in excellent detail the difficulties of their exercise and the procedures they adopted to effect a successful rescue.

If any other caving groups have recently held a cave rescue exercise perhaps they could post me some details. You'll find my address in the ASF Officer's list on the inside back cover of this issue.

In this issue you will also find an Accident/Incident Report Form. This is a revised version of the previous ASF form. The revision has been done by Steve Brooks and Norm Poulter from Western Australia and myself. Steve has distributed the new form throughout Western Australia and hopefully groups elsewhere will use it to document accidents or incidents. Documentation would benefit the ASF because at present we don't know much about the frequency of accidents in Australia. Please photocopy the form printed on the back cover of this issue.

Please don't be afraid to send in an accident/incident report form if you or your group have an incident. From my own experience most groups have had some accidents and many incidents. Rather than indicating that you or your group is unsafe it probably means that you go caving more often than other armchair cavers!

Yours in Caving,

Mike Lake,
Convenor
ASF Safety Commission

FOR THE RECORD

PETER BERRILL

Central Queensland Speleological Society

Central Queensland Speleological society (CQSS), was formed 23 years ago to spearhead the effort to preserve the caves and karst of Limestone Ridge and Mt Etna. Finally the issue is at an end, with the inclusion of Mt Etna, or what is left of it, in the Fitzroy Caves National Park. This marks the end of an era for CQSS and I feel that it is my responsibility to report on it. I apologize for the lateness of the report, but I have been unable to put pen to paper on anything to do with Mt Etna until now.

Over the past twenty three, years, many groups and individuals have contributed much toward the struggle for Mt Etna, but CQSS 's past and present members have been relentless in their effort to preserve Limestone Ridge and Mt Etna. Our first reward came in the late seventies when Limestone Ridge was gazetted as Fitzroy Caves National Park, but only after a great deal of work. We had to prove that "the Ridge" was worthy of national park status. So some twenty caves were registered, many of them surveyed and mapped, a booklet was produced by the University of Queensland Speleological Society, and we had also to buy

eighty acres of land adjacent to the Ridge and give it to the Gov't. After all this, Central Queensland Cement (CQC), was pressured into surrendering its leases over Limestone Ridge. Once the Ridge had been gazetted we concentrated our efforts on Mt Etna.

Over the years the campaign followed the usual course of events. Media statements, talks with CQC, the government and Nationals Parks (QNPWS). Then in the late seventies and early eighties the club slipped into disarray due to declining membership and internal discord. All the while CQC were busy quarrying Mt Etna, reaping a huge harvest of destruction to its unique caves, flora and fauna.

The QNPWS were doing nothing to help us, quite the opposite, but of course they were bound to the will of the corrupt Queensland National Party government in power at the time. A CQSS member was a zoologist within QNPWS, he was responsible for the Park's management and was also the authority on the bats of the caves area. At this time he was in a very delicate and difficult position, so

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much so that it came to me from a CQSS member that he was misleading us and carrying information back to CQC. This speleologist has been caving and studying bats for decades and has the same feeling for caves, flora and fauna as any long time dedicated caver, but this was the type of paranoid garbage circulating within the club. CQSS was in a real mess and no threat to CQC.

Then, in late 1984, we began to sort out our problems and function as a responsible organization again. In June 1987 we believed that CQC would soon be wanting to commence mining the cavernous face of Mt Etna. We decided to step up the campaign and try to bring it to a head. We needed direction and so we invited up Bob Brown of the Wilderness Society, and Pat Larkin, Conservation Secretary of the Australian Speleological Federation, who was also its legal advisor. We decided that we had to do something before it was really too late, but what and when we did not know.

Then on Friday the 12th of December 1987 CQC unknowingly provided us with the perfect opportunity. They put down about twenty drill holes on the cavernous side of Mt Etna in preparation for the road building so as to gain access for quarrying. The next day CQSS members and other conservationist along with media filled in the drill holes. So began the final push in the Mt Etna Saga.

For the next month the campaign was very vigorous. Finally in late January, the government announced what they said was the balanced solution. The then new National Party Premier, Mike Ahern, still triumphant over his defeat of Bjelke-Peterson, ascended the Mountain, along with the media, to make this great announcement. With some fancy phrases and some even fancier flourishes of his hands he declared a D&O reserve over 17 hectares of Mt Etna, thereby protecting Bat Cleft and most of the caves. But what about the western cavernous face and "Speaking Tube" cave, the essential overwintering site for the endangered Ghost Bat? Of course the decision was a big con-job between CQC and the Government, arrived at without consultation with CQSS or any other body of conservationists.

We had been expecting this type of announcement and had laid plans for further direct action. So during April of 1988 we mounted a blockade of Mt Etna. Aided with various so called, "radical nomadic greenies", we managed to keep people hidden in caves for forty days, preventing CQC from blasting and quarrying Mt Etna. At the same time we constantly pressured the government. In June of 1988 we entered into a moratorium with the company in order to assess the scientific value of the mountain. *This was to prove our greatest mistake.* During this period of three to four months we were lulled into a false sense of security. We prepared our reports and presented them to the government and the company. Neither had any intention of changing their decision to mine "Speaking Tube" cave.

At this time they had been talking and planning and at 9.00 am on November second, 1988 they detonated vast quantities of explosives in the entrance to "Speaking Tube" and under what they believed to be the Ghost bat aven. CQC promptly announced that the issue was all over because "Speaking Tube" had been totally destroyed. They were wrong: the cave had sustained surprisingly little damage. Only the entrance had been destroyed. The roost site was undamaged. We mounted another blockade. This one was in a more strategic position, in "Speaking Tube" cave itself. Months earlier, "Speaking Tube" had been heavily stocked with supplies, though the water containers had burst in the blast. This blockade lasted two weeks, and after flushing us out they cemented closed all entrances to "Speaking Tube". We made a public statement as to the end of Direct Action and again CQC announced to the world that it was all over.

But we speleo's are a determined lot, and we don't die easy. Legal action was in the wind. Legal action, however cost big dollars. The company had that, but we didn't. We'd just come through two blockades which cost us tens of thousands of dollars and we weren't very financial. The conservation movement was very keen to see us go ahead and test the "Fauna Conservation Act", but they had to support us financially. They eventually did. After lobbying for support physical and financial at the ASF Conference at Tinaroo, we also gained overwhelming support from speleo's across Australia. Legal action commenced after advice from our solicitors. The argument went from the Magistrate's Court to the Supreme Court and finally to the High Court of Australia and then back to the Supreme Court. Things were progressing well until we were ordered to pay a further \$45,000 in security. We had already \$30,000 in security and also raised \$36,000 for our solicitors, but this amount stopped us and we were forced to discontinue the legal action. The case of breaches of the "Fauna Conservation Act" was never heard. Right or wrong is of no consequence, what matters is whether you're rich or poor. Corrupt capitalist society had won once again.

With the lifting of the work injunction, CQC commenced drilling the roost aven, and at approximately 1:30pm on June 12th 1989 Central Queensland Cement finally destroyed Speaking Tube cave. It was all over.

All that now remained to do was to face the enormous costs of court action. We were finally presented with and account totaling almost \$240,000. We had \$30,000 in security for CQC, and they asked us if a settlement were reached, to keep it confidential. Our answer was "No". There could be no secret as to the terms of settlement. Too many people all over Australia had an interest in the case and had given generously to support us. We could not betray them by entering into secret negotiations with a willfully environmentally vandalistic mining company. CQC doesn't like bad publicity, especially the kind where a

FOR THE RECORD

large mining company is squeezing a small and unfinancial club.

Through the help of Legal Aid, our solicitors' accounts have been paid. The amount came to about \$165,000. The total cost of the issue to us and the conservation movement has been enormous. In the beginning I didn't think it was at all financially possible, but we made it possible with the help of thousand of generous individuals and groups - people from all walks of life. The ASF has been very generous. The Clubs and members have given much financially and physically. Without the ASF we could not have begun legal action. A big thank you and well done to all those ASF supporters.

Of course when all these people came and went, the CQSS had to stay and continue to carry the full weight of the campaign. The active membership numbered no more than twelve. For some of us it has been very costly, financially and emotionally. It has even changed some of our lives forever.

At the ASF Biennial conference at Tinaroo in January 1989, the CQSS was presented with an Award of Merit for its dedication to the conservation of Mt Etna.

The Society's greatest supporter has been the Pershouse family; Norm, Doreen and Geoff. They have never wavered in their support for us all through this lone issue. It has been very costly for them in both fiscal and emotional terms. The enormous illegal detonation of Speaking Tube cave on November 2nd showered them with fly rock and shook their houses to their foundations. Norm started legal action against CQC but was forced out due to costs. Once again justice has been swept aside in favour of money. The company has tried repeatedly to turn Norm against us with sweet talk and abuse, and has even tried to buy him out, but he has been unswerving in his support for us. The CQSS has bestowed honorary life membership on him. Small reward for such an admirable effort.

Well, Mt Etna, or what is left of it is now included in Fitzroy Caves National Park We hope that it is now protected forever, because when we raised this issue twenty - three years ago, Mt Etna was a Recreation Reserve, the then equivalent of National Park status, the National Party government revoked this protection in the name of progress.

It has been a long arduous effort for those of us up front and we will never forget what CQC and the National Party have done to Mt Etna.

We are entering into our twenty fourth year, the dawn of a new era for CQSS. All we can do is to look to the future and try to rebuild the CQSS.



**The final blasting of Speaking Tube cave,
Mt Etna**

CLUB SECRETARIES

**ASK YOUR MEMBERS IF ANY OF THEM
ARE HAVING TROUBLE GETTING HOLD
OF THEIR COPY OF THE**

AUSTRALIAN CAVER?

**IF THEY ARE
THEN SEND IAN MANN THEIR
LATEST ADDRESS.**

DO IT NOW.

Thanks to the following in helping to get this edition together.

All those who stayed up late at night,
slaved over a hot keyboard and sent me the
consequences.

Heiko Maurer for prufe reading and
Andrew Mc Hugh for advice on printing.

All those people in SA, NSW and Victoria
who listened to my ideas and
suggested better ways of doing things.

NOTES AND NEWS FROM THE ASF COMMISSIONS

so successful that a separate organization became inevitable.

Third, we need only compare ourselves to other countries. By our standards, French caver attitudes to conservation are antediluvian, (topofil thread and rubbish litter the deeper caves, and have you seen the recent film where they hung hammocks from convenient stalagmites and bolts in flowstone?) In Britain there is said to be not a single cave with undisturbed fauna or sediments, there has been massive destruction of decoration, and a pervasive yobbo anti-authoritarian attitude. Lastly, in the last 20 years we have been amazingly successful at caver - cave manager education and at infiltrating experienced cavers into influential senior academic and public posts.

This is not to say that we can be complacent - indeed things could be a lot better still. We lag behind the best which the Americans can show (though well ahead of their worst!). Maintaining solid relations with ACKMA must be a high priority, and in this regard the initiative of NSW cavers must be applauded (see Separate article).

Proposed Cave Protection Legislation in NSW.

Elsewhere in this issue are details of this novel legislation, introduced by Minister for the Environment, Mr. Tim Moore. Tim, who combines work with pleasure by doing the odd bit of caving and seems unusually liberal for a Liberal, has sent copies of the proposed legislation and of the Hansard extract of the first and second reading speeches. I can make copies for anyone interested. In future articles some of these issues will be explored further, depending on response to these questions, so get your pens out:

1 Comments, criticism and suggestions about the motion (see next item below), from the last ASF Council Meeting?

2 Re the cave management workshop exercise. Should they be overhauled in light of the Margaret River and Sydney meetings and circulated to all clubs to use as they wish? Should they be published somewhere? If so, where - Australian Caver, ACKMA Newsletter, one of the club newsletters?

3 Would you or your club like to see regular columns in Australian Caver on cave management? Would you prefer mailing to clubs, (more expensive)? Both?

4 Do you, perhaps, think there's too much emphasis on these aspects, at the expense of news from the real world of caving?

The following motion was passed unanimously by the 1991 Council meeting Margaret River, W.A. of the ASF Inc.

Recognizing that:

1. All caving activity has some impact on caves.
2. Cave owners, guardians and managers have a responsibility to plan and manage the long-term use of the

resource.

3. ASF, its members and associates have a vital role to play in the documentation, surveying, preparation of inventories and study of caves and karst areas, and in their on-going management.

This meeting resolves that the ASF Inc:

1 Is committed to co-operation with ACKMA and other relevant organizations in the drawing up of consistent and comparable national standards, guidelines, criteria or procedures for the management of caves and karst areas; and

2 Calls on ACKMA and other relevant organizations to ensure that ASF members are involved in all study teams and in the preparation of consultant reports in relation to caves and karst areas.

Comments Please.

John Dunkley

Introducing the READING ROOM the ASF Library Notes.

Yes the ASF does have a library.

Thanks to the previous librarian Andy Spate, facilitator John Dunkley and former UQSS librarian Ken Grimes, the ASF library is a research facility well worth having!

The library was moved to John Dunkley's house in Canberra last year where I assisted him in compiling a list of holdings. John arranged to supplement these holdings by acquiring the library of the now defunct UQSS. As a result, the ASF library now has long runs of most Australian caving journals, and some overseas ones, as well as quite rare cave management material.

The present list of holdings or "catalogue" is simply by journal title and issue number. I plan to put this list on PC before the end of the year and to expand the indexing of new material to include at least one subject per article.

While I'm talking about new material, thanks to those faithful clubs that send their journals regularly, and to the newer clubs such as Savage River Caving Club who recently supplied a copy of their journal Speleopod.

To those clubs who have stopped sending material, please start again, or at least tell me why. The library is a resource for present and future cavers, please help to keep it up to date.

Cathy Brown. ASF Librarian.

Skeletons found in Mullamullang Cave

Cont'd from p. 6.

deaths in dry caves in Australia. The first was in Drum Cave, Bungonia in May 1965, the most recent in 1990 when a teacher and two students drowned in Mystery Creek Cave, Tasmania. Before the CDAA was formed to regulate training and access, about 11 divers drowned in South Australian water-filled caves during the 1970s.

TASMANIA DOES IT AGAIN!

Deepest pot in the Southern Hemisphere found in Tasmania, surveyed to 371 metres. The cave contains 600 metres of inclined passages followed by a series of pitches with the last and longest one being a pitch of 190.5m. This shaft is approximately 12 metres wide. The 190.5m pitch was discovered by Roland Eberhard and two members of the Police Search Rescue Squad.

AUSTRALIAN TEAM DISCOVERS WORLD'S TALLEST COLUMN.

The Thailand 1990 expedition led by CSS stalwart Neil Anderson explored and mapped Tham Lot (or Tham Nam Lot), a through stream cave traversed by the Nam Khlang Ngu (Snake River), about 300km north-west of Bangkok. The cave is in remote country reasonably accessible only by boat across Srinagarind Dam and a 4km walk. A map of the cave (incorrectly labelled Tham Nam Khlong Ngu, which name actually refers to longer caves some distance upstream), appears in an article by Ken Boland in Nargan 23 (7), Feb 1991. Ken modestly wrote "... by triangulation. The column ... was measured at 61.5 metres. Someone cast doubt on its connection. We can really only say it appears to join, but if it doesn't then it's a mighty high stalagmite".

The Guinness Book of Records claims the world's tallest column, in China, is probably 39m, and the tallest stalagmite, in France is 29m. In either case this discovery in Thailand is exceptionally noteworthy.

UNIVERSITY SPELEOSPORTS

**Saturday 14 September 1991
8.30am to 5pm.**

**The Village Green
University of NSW
Anzac Parade, Kensington NSW.**

The categories in each competition are for individual and mixed teams. There can be one or more individual members from each club. The mixed teams from each club are made up of four men and or women. One member of each team is the team leader.

Each competitor should have a helmet with a chin strap, a light a harness and abseiling gear. The individual competitors or team leaders should have prussiking gear. One member of each team should have basic surveying experience.

A BBQ at the Sam Crackwell Pavilion adjacent to the Village Green will be held after the day's events.

Registration for the Speleosports will close at noon sharp for team events. However individual registration will be taken throughout the day. A registration fee of \$10.00 is being charged and includes a sausage sizzle and a free drink at the BBQ at the end of the day's activities. If you are not competing then the BBQ is available for \$5.00. Cold drinks will also be for sale.

Only University caving groups and caverneering groups are allowed to enter.

For further information contact

**Jane Peterson on
(02) 4712811 (W) or
(02) 3989065 (H).**

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.

Material should be sent to the following address:

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(Courtesy of Rauleigh Webb) (09)3862041

CAVE ACCIDENT AND INCIDENT REPORT FORM

Your Name (optional): _____
Your A.S.F. Affiliation: _____
Today's Date: _____ Date of Incident: _____
Address (optional): _____

Phone (optional): Home () _____ Work () _____

Please tick as many boxes as required for the following questions:

Source of Information:

I am the: Victim ☐
Witness ☐
Rescuer ☐
Uninvolved ☐

Contributing Factors:

Gear Failure ☐
Unsafe practice ☐
Bad luck ☐
Inexperience ☐

Injuries Sustained:

None ☐
Minor ☐
First aid required ☐

Hospitalisation req. ☐
Very serious ☐
Fatal ☐

Number of people injured _____

If known please supply a brief description of injuries.

Use the back of this form if necessary.

If rescue was required how was it undertaken:

Self rescue ☐ Assistance required (unofficial) ☐

Assistance required (Cave Guide etc.) ☐

Assistance required (Police/Official Rescue Group) ☐

Cave Description:

Name and number (if known) or physical location (if known)

Wet (deep standing pools or running stream) ☐

Dry (no water or slight seepage and shallow pools only) ☐

Horizontal: Under 200m long ☐ Over 200m long ☐

Vertical: Pitches less than 30m ☐ Pitches more than 30m ☐

Party Description:

Size of group: 1 - 4 ☐ 4 - 10 ☐ 11 plus ☐

ASF affiliated group ☐ Non-ASF affiliated* ☐

* Please supply details if known here:

Has the incident been written up in a journal/circular/letter etc ?

If so please supply references here:

Please supply any further details that you consider relevant overleaf (attach extra sheets if necessary). Also if available please enclose with the form copies of referenced articles.

When this form is completed please send to:
A.S.F. INC., P.O. BOX 388, BROADWAY, NSW 2007

Thank you for your assistance and cooperation.