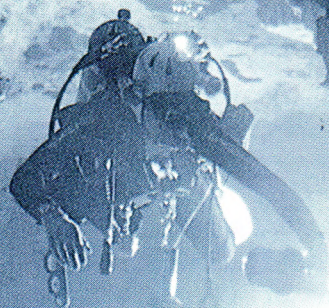




C.D.A.A. Newsletter GUIDELINES

No: 60 - FEBRUARY 1997



CAVE DIVERS ASSOCIATION OF AUSTRALIA
(Incorporated in South Australia)

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EDITORIAL

Welcome to Issue 60 of the Guidelines! As you would all know, the elections have created some interesting results. For the first time since I can remember, there is a very positive atmosphere about the CDAA, generally speaking, and its plans under the decisive leadership of Greg Bulling. Greg's pragmatic approach to problem solving will no doubt get the job done. There has already been a noticeable change in the motivation of the Directorate. Let us hope that this will continue.

Welcome also to Tony Davis who has undertaken the role of looking after advertising in the Guidelines. While we are on the topic of advertising, let us not forget those who support the Association by advertising in this publication. Whenever possible, please show them your support by your patronage.

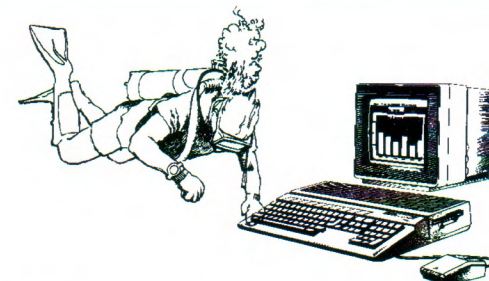
This issue of the Guidelines contains contributions from Australia and all over the world. We have reports from France and Austria and, closer to home, from the NSW divers in Jenolan and a Tank Cave report. It is good to see that cave diving exploration is very much alive, in spite of the general climate of regulation and threatened litigation. The achievements of some of these exploration groups are considerable.

You will also read a contribution by Peter Horne regarding the dedication to cave diving of Peter Stayce. Peter Stayce has made a significant and sustained contribution to the cave diving community since the 1970's. On a more melancholy note, this Guidelines also contains a personal contribution by Ian Lewis in memory of Doug McLeod who died in 1996. Doug was a well known and respected diver in the Mount Gambier region who will be very much missed by those who knew him.

Regarding the CDAA web page, as of the end of January, 56 people subscribe to the mailing list, with 90 new people reading our web page every week. Over 2,500 computer domains have requested access to the web page to date, with over 100 page requests made every day. About half the requests come from within Australia, with the remaining half mainly from the USA, but to date over 40 countries have made inquiries. This probably translates into considerably more interest in the CDAA than those numbers suggest, since many users may come from the same domain.

Safe cave diving.
Victor Kostiuk
Editor
Guidelines

CDAA WEB PAGE



<http://artemis.eng.monash.edu.au/CDAA/>

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Front cover:
Chris Brown in Tank Cave
- Photo by Peter Rogers

CAVE DIVERS ASSOCIATION OF AUSTRALIA

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GUIDELINES is a newsletter of the Cave Divers Association of Australia. All articles for the following issue are to be sent to the Editor, Victor Kostiuk, P.O. Box 290, North Adelaide, S.A. 5006. All articles and submissions shall automatically constitute an expressed warranty by the contributor that the material is original. We assume no responsibility for unsolicited material. Articles and information may be reproduced without prior permission provided reprints are accredited to the authors and GUIDELINES. Private advertising for caving and diving equipment may be advertised free at the discretion of the Editor. Opinions expressed in GUIDELINES are those of the individual authors and are not necessarily those of the C.D.A.A.

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and your enquiry will be passed on.

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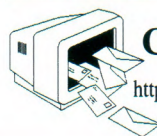
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CDAA WEB PAGE

<http://artemis.eng.monash.edu.au/CDAA/>

LETTERS TO THE EDITOR

1st January, 1997

Dear Victor,

As we discussed over the telephone recently, please find enclosed an article I have written regarding the cave-diving career of one of our most important members, Peter Stace. Peter was recently nominated as a Life Member in recognition of his efforts and support for the Association over the past 20 years or so, and I hope it is suitable for inclusion in Guidelines. Sorry I can't recall who took the attached photo of Peter "at work" during the Kilsbys Hole; it was most likely myself but I can't be sure now.

I would also like to take this opportunity to thank Chris Edwards for his kind comments in the last issue of Guidelines regarding the decision by myself, Phil Argy and Craig Ashwin to withdraw our nominations for the positions of Site Director and Business Director so we could support Gary Barclay's and Chris Brown's nominations to those positions - Craig, Phil, Gary, Chris and I have the same basic ideas to promote the Association, so it was a good way to help save the Association money. Despite problems that I have had with the previous Directorate, please be assured that I am more than willing to provide any assistance to the Association, especially via Gary Barclay, in relation to the various site access issues which he has inherited and with which I have been closely associated during the past 17 years, and I wish Gary well in his new role!

Congratulations are also in order to Andrew Cox for taking on the Treasurer's position and to Greg Bulling for winning the vote for the National Director's

position. I know both Andrew and Greg very well and have every confidence in their abilities and integrity ... I first met Andrew while we were both serving on the Committee in 1981/82 and I have worked with him on many research projects over the years (as well as spending six fabulous weeks diving in Florida with him in 1985), and Greg became an active instructor and research diver in the mid-80's, playing a major role in helping me to set up the S.A. Underwater Speleological Society (SAUSS) in 1986. I think it is terrific that we finally have a National Director who is both a highly-active and very experienced cave diver - as well as a man of integrity who strongly believes in the democratic principles of consulting widely and fairly, and accountability to the membership - and a management team comprising some of our most enthusiastic and dedicated cave diving members. In view of this refreshing political change, I am now VERY optimistic about the Association's future and offer these Directors my wholehearted support!

In closing, may I again congratulate you for striving to improve the quality of Guidelines ... but for the sake of getting it to 100% enjoyability, could you please get someone to actually proof-read it and check the grammar (not just run it through a spell-checker) before it goes to the printers?! I now look forward to reading more about real CAVE DIVING issues in future editions of our excellent magazine! Wishing you safe and happy cave diving, Peter Horne, member #719.

Editors Comment
I'll tri

3rd January, 1997

Dear Victor,

Re: Tim Collins' Correspondence to
National Director regarding 50 Hour
Cave Dive Attempt - January 1996 -
published *Guidelines* 59

For the benefit of the national membership and landowners alike I felt it important to comment on Tim's correspondence regarding the above event. It seems that the Landowner Liaison Committee - (which is NOT truly representative of the landowners, as many landowners chose not to be represented on the committee eg. District Council of Grant, Port MacDonnell District Council, owners of Tank Cave, Barnoolut Station, Swim Through, One Tree, Ela Elap, The Shaft, Bakers Cave, Hanns Cave etc.) - wields an amount of influence of direct inverse proportion to the sites it controls! Granted, sites like Piccaninnie Ponds, Fossil Cave and Pines are by one means or another government controlled and are therefore subject to government laws and legislation. However, I would not like to see the National Directorate of the CDAA **ever** given the authority to totally run and manage any special events, projects, or trips. Members of the Association do not need to be "managed" or "controlled" as Tim outlines in his letter - and why should they be?? We sign indemnities (God only knows how many), we seek out insurance - and many of us have personal or professional cover, and we have absolutely enough rules, regulations, by-laws and restraints, - I really do strongly believe that the initiative of members would be severely stifled by further rules, regulations and authority for the Directorate to wield over us.

How would Chris Brown have felt about having to apply to have his world record attempt in Cocklebidy "sanctioned" and then "controlled" by the then National Director Lisa Bernasconi, and Standards Director Ian Lewis???? How would Peter Horne have felt about all his mapping and research "managed" by the National Directorate??? I can just hear their responses!!

Members of the CDAA are just like members of any other special interest club - not needing or wanting to be managed, controlled or moulded into any one person or committee's idea of what we should be, how we should act, what we should say and who we represent. We are all members of the CDAA "club" because we have a common interest - individuals choose to pursue their interests in different ways as is their right within a democratic society - and we DO NOT need "Big Brother" watching over us.

What I do want is the freedom to be a part of a group of people who share common interests, to have access to sites to enjoy my pastime, to have the resources of continuing education available, to teach, help and to be able to enjoy the fellowship of others who have similar interests, to have faith in the leadership and future direction of the Association and the confidence that my membership dollar is being spent wisely for my benefit.

Karen Kennedy

Editors Comment

Karen Kennedy actively participated in the 50 hour cave dive - January 1996

A MESSAGE FROM THE NATIONAL DIRECTOR

I would like to begin, by taking this opportunity to acknowledge the work done by my predecessor Lisa Bernasconi. Since 1992 Lisa has been a member of the Directorate, with over three years spent as National Director. The current Directorate would like to thank Lisa, on behalf of the members, for the valuable effort she has made for the association.

On the January long weekend, all five members of the current Directorate met for extensive meetings, over a two day period. The agenda was diverse, and at times demanding, but excellent progress was achieved in a number of key areas.

I have outlined below a summary of the areas discussed, and an "action list" of resolutions made, with a reference to the Director responsible where appropriate.

• Director responsibilities

Action: All Directors agreed to comply with:

- Commitment to solidarity on decisions made
- Commitment to work together as a team
- An expectation of appropriate behaviour

• Standards and Procedures manual - review

Action:

- Training committee replaced by limited directorates including
 - Quality assurance officer
 - Instructor records officer
 - Materials officer
 - Penetration course coordinator
- Review and update of general course and instructor member standards. (Standards and National Directors to continue working on)

• Standards

Action:

- All course variations in writing. Standards Director must apply in writing to Directorate for personal course variations
- All course standards to include performance based objectives (Standards and National Director)
- Proposal for new course materials to be followed up (National Director)
- Flow diagram of Quality Assurance Procedures ratified. New QA forms to be designed (Standards and National Director)
- Ideal and isolation manifolds accepted at cave and penetration sites with the exception of Tank Cave, 3-sisters, Engelbrechts West and any other section of cave with narrow restrictions. Addition of manifold theory section to cave course (Business Director)

• Alternative Breathing Mixtures

Action:

- Draft standards of ABM to be presented to Police and Medical experts for comment (Business Director)
- National Director to officially inform all landowners of basic Nitrox implementation.

• "Guidelines"

Action:

- Limited directorate to be set up to oversee production and distribution
 - Terms of reference to be negotiated with editor (National Director)
- Directorate priority to be on punctuality of each issue.
- Advertising consultant to be approached by Business Director to increase advertising income

• Constitution

Action:

- Draft circulated in "Guidelines" for comment
- Business Director to inquire re corporate affairs requirements

• Regulations

Action:

- Regulation relating to 3-month cut off for breaches of constitution / regulations / standards & procedures **rescinded**
- Regulation added to ensure any alleged violations of constitution / regulations / standards & procedures manual is initially acted on by the CDAA, within 14 days of written receipt
- Updated list of CDAA sanctioned sites to be added to regulations - schedule H (National and Standards Director)
- Cross recognition/equivalence of diving and instructing to be added to regulations - schedule I (National and Standards Director)

• Site access

Action:

- Site Director and one other to attend Sinkhole liason committee meetings, depending on agenda
- Notion of dual rated sites agreed on
 - Murra-el-elevyn rated Cave/Penetration
- Application to landowner for increase in Shaft guide numbers by two (Business Director)
- Investigate Weebubbe access (Site Director)
- Site Director to follow up on numerous issues with various sites (Bakers, Hann's, Swim-through, 3-sisters, Hells, Allenes, Kilsby's, Pic's)

• Research/Special Projects

Action:

- CDAA Research/Special project group to be set up as a Limited Directorate

on a project by project basis. (Site Director to organise procedures)

• Insurance

Action:

- National Director to continue investigation of appropriate policies to cover the associations needs.

• Miscellaneous

Action:

- Investigation of e-mail facilities for Directors (Treasurer)
- Use of tele-conferencing where appropriate, to reduce meeting costs (Treasurer)
- Cave Diving Workshop idea accepted in principle (National Director)
- Data base/software upgrade (National Director/Treasurer)
- Forward business plan (Business Director/Treasurer)

Obviously there is a great deal of detail associated with many of the points listed. If anyone would like clarification on any point, please feel free to contact the Director responsible. If you would like to contact me at any time, please call 0412 209 706, rather than my home number.

The current Directorate has committed itself to work diligently to improve the association. If we are to succeed in making ours one of the best organisations of its type in the world, we will need membership support. An association like ours often relies too heavily, on too few. I would ask then, that you think about ways that **you** can help. Perhaps volunteer to help with "Guidelines" or possibly help organise a workshop, remember, we're always open to suggestions!

As a final note, the Treasurer Andrew Cox, is attempting to locate all CDAA equipment as part of an asset inventory. If you have anything which belongs to the association, could you please contact him as soon as possible.

Good Diving!!

CAVE DIVING NEWS

Body of cave diver located in New Zealand

News via Greg Ryan from Mark Bodt (markbodt@stss.co.nz)

From the New Zealand Herald Thursday January 9th, 1997

NELSON - The body of a cave diver which has lain in a deep cavern west of Nelson for the past 18 months has been recovered. Motueka police flew to the Pearse River below Mt. Arthur yesterday to bring out the body of David Weaver, who drowned at the Pearse Resurgence. Mr Weaver, aged 30, a caving and rafting guide from Waitomo had been trying to achieve a cave diving record on May 20, 1995.

His body was last seen on a ledge in an underwater cave more than 80m below the surface. It was considered too dangerous to recover the body at the time. Sergeant Jim Burrows said a letter written to the police by a diving team was delivered to Richmond Police on Tuesday night, telling them that Mr Weaver's body had been brought to the surface. Mr Weaver's parents, who live in England, were notified just before 9am yesterday that their son's body had been found. The coroner, Jim Fry, said an inquest had established that Mr Weaver died by misadventure, but a further investigation could now take place.

First Forest Ranger for SE Region

Primary Industries South Australia (PISA) has restructured its forestry group.

PISA has separated wood production for industry from its forestry services to the community, resulting in the appointment of a forest ranger to the South East region for the first time.

Experienced PISA forestry supervisor Trevor Wynnaiat joined PISA's Mount Gambier Forestry office.

Mr Wynnaiat, who has more than 20 years experience at Noolook Forest Reserve, will manage community use of the plantations and native forests.

Community use of the forests varies from walking to orienteering. A number of uses require permits including horseriding, cave diving, and firewood collecting.

He will also co-ordinate works in more than 20 Native Forest Reserves around the South East and enforce forestry regulations.

PISA's general manager of forests Ian Millard said Mr Wynnaiat's appointment was the first time a ranger had been employed in the South East region.

"We are committed to best practice forestry and I am confident Trevor will make a substantial contribution to the community use aspects of our forests in the South East region," Mr Millard said.

Mr Wynnaiat said he was looking forward to the challenge of his new job.

"South Australia's forests are a valuable asset to the community and I'll be doing all I can to ensure they are properly used and can be enjoyed by everyone, both now and in the future," he said.

For more information: Charles Moore, PISA's manager of community services. Ph: (08) 8303 9955.



Trevor Wynnaiat

Woodville Karst Plain Project (November, 1996)

News via Greg Ryan from Barry Miller
(millerb@freenet.scri.fsu.edu)

For the last 3 weeks, members of the Woodville Karst Plain Project have been conducting a series of dives in the Chip's Hole Cave System. The goal was to connect the Chip's system with the Leon Sinks System. Chip's was extended in 1991 to 10,444 feet by S. Exley, then a World Record Penetration. The final push team of Rick Sankey and Brent

Scarabin add 3660 feet of new line on a 300 minute bottom time. A connection with the Leon Sinks Cave System was not reached, however, a new World Penetration Record was achieved at 14,104 feet. The distance travelled was from another sink downstream from Chip's called Cal's. The total distance from Chip's was over 14,900 feet. There will be more info on these dives to follow, I just wanted to report the results of these dives to show what a TEAM can do.

Exley's Razor: On Defining Limits¹ by R.D. Milhollin²

Submitted to "Guidelines" by Greg Ryan and Richard Taylor.

Sheck Exley was one of the most outstanding explorers of his time. Within the field of cave diving, he was virtually peerless. He was concerned from the early days of the practice with identifying factors involved in cave diver deaths.

Exley was one of the first to use an analytical approach to assess the causes of cave diver failure. His actions helped define many of the commonly held limits in this field today. His business was limits. And he died diving in a cave.

Ockham's Razor: a principle formulated by William of Ockham, stating that terms, concepts, assumptions, etc. must not be multiplied beyond necessity. It is a limiting and simplifying guideline for inquiry and explanation, advocating parsimony over complexity. The admonishment to science has guided inquiry for over 600 years.

Exley's Razor: a proposal for discussion involving the nature of limits. One never truly knows one's limits until they are encountered. Once a limit is reached and exceeded, return is not always possible. This razor is dangerously sharp. It divides those seeking the knowable end from those who have found the ultimate destination.

The problem posed by this proposition holds great importance for the pursuit of cave diving. Some of the basic admonitions given to the student entering this pursuit deal with limits, specifically those of depth, horizontal penetration, gas supply, and reserve gas. The implications of breaking these limits are often assumed to be understood. They are probably better appreciated during the first few penetrations into an overhead environment than later, after a few dozen dives have been successfully completed. The idea of limits in cave diving can be approached in

many ways and may assume the following forms: horizontal penetration, vertical depth achieved, hours submerged, distance travelled, speed of travel, gas supply and consumption, gas component depth/time considerations (i.e. PO2 depth), fatigue, physical and emotional stress, task complexity and equipment considerations. Limits are imposed on students during training, and are impressed on novices by the cave diving community. There are limits imposed by landowners, by physics, and by the legal system. There are limits that are self-imposed, such as those related to practical, financial, or physical comfort. Some limits may be dictated by body size or health and fitness considerations. The limits to be addressed here are primarily those involving experience, mental and emotional states, family considerations, personal safety, and internal feelings of security. By analogy, limits may be envisioned as the ability for a particular material to recover its shape after being deformed by applied stress, a measure of tensile ability. Past some point the material will either break (fail) or will not be able to return to its original shape. Every cave dive involves stress in one or more of its forms, and the diver must strive to avoid reaching and exceeding the type of limit he or she might not be able to return from.

The least well known aspect of cave diving is the psychological. There are now and have been divers who will do things on a dare. For these people the ego may be fragile: once the ego is threatened, it can lead them into areas they know to be unsafe. The ego threat, if not controlled, can cause divers to exceed their own known limits of comfort. The fact that another diver completed a particular dive can be reason enough for the threatened ego of a weak individual to justify taking risks that might otherwise be avoided. A cave diver wishing to keep this potential threat under control might consider including "motivation" as part of the formal pre-dive planning process. This

could help by providing an opportunity for the diver to assess the reason he or she wants to attempt a particular profile, and a chance to modify that profile if sufficient justification is lacking. By consciously considering the reason for choosing to attempt a particular dive, the diver is making the first step toward defining and enforcing the personal limits that will enable him or her to be comfortable while undertaking this demanding pursuit.

It may be possible for properly trained (to standards) but ill-informed novices to get a false impression of how more experienced cave divers became that way. They see individuals going through training from beginning students to "full cave" certified in a surprisingly short amount of time, and assume this must be the best route to take. The instant gratification expected by the children of the instant culture of the 1950's onward comes into play. Mix a newly certified diver, lots of money (equipment), and the right amount of encouragement (from the instructor or through the social environment), and you have the potential for a cave diving statistic. Just add water! The fact that some lucky individuals actually survive while taking poorly calculated risks can boost confidence in underdeveloped skills and abilities, blinding them to the reality of their limited developed potential. There are novices who can see no difference between themselves and a diver who has been actively and patiently honing skills for 20 years or longer, building up a vast reservoir of reflexes and insights that will be there when needed.

The dividing line between the successful and the not-so-lucky will not be seen on the ideal dive, but instead, on the dive that had a problem. The experienced diver will know how to react when things begin going badly, and will be better prepared to recover presence of mind in time to make the crucial decisions that will save his or her life. This observation should be borne in mind by all cave divers, who must

¹ Reprinted with permission from March-April 1995 *Underwater Speleology* (Volume 22 Number 2), the newsletter of the National Speleological Society Cave Diving Section (NSS-CDS). For more information on the NSS-CDS or for subscription information to *Underwater Speleology*, please contact Bruce Ryan, NSS-CDS Main Office, PO Box 950, Branford, FL 32008, or at 71573.1073@compuserve.com. *Underwater Speleology* (UWS) invites your submissions and encourages your response to previously printed material (both members and non-members). Please direct such information to the editor of UWS: Shannon Sikes, 5721NW 84 Terrace, Gainesville, FL 32653, 74111.3006@compuserve.com.

² R.D. ("Dave") Milhollin (74301.1574@compuserve.com) is a graduate student in anthropology at the University of Texas at Arlington and is involved with archeological investigations in submerged caves in the Maya region of Mexico. He is a cavern diving instructor (#258) with the NSS-CDS and resides in Cozumel, Mexico.

inevitably assess their own capabilities and set their own personal limits. These limits must be set based upon the worst possible circumstance imaginable, not upon what is likely to be expected. Only by allowing the unthinkable to enter into consideration can the serious cave diver expect to survive the unlikely.

There should be a division drawn between the recreational cave diver and the cave diving "explorer", for lack of a better term. It is recognised that exploration assumes a wide spectrum of activity, and the term is applied in this instance to denote the highly experienced diver who has been expanding his or her capabilities to significant levels over a considerable period of time and has made a conscious decision regarding the importance of cave diving in his or her life. The true explorer must carefully and continually assess the limits of his pursuit, allow them to change depending on any number of factors, and keep them always in mind.

To how many cave divers does this apply? How many are truly willing to take the chance and walk the razor's edge? Probably not a lot if it really gets down to serious thought about consequences. Perhaps that is what is needed: serious thought among cave divers. This process should probably begin at the earliest level of instruction, when the effects of inappropriate decisions or poor technique are explained. An appropriate observation is that when things begin to go bad in one area, there seem to be an escalating number of things that go wrong or appear to go wrong in other areas. If this process is not stemmed in time, the result will ultimately be diver failure. Of course in cave diving, this most always indicates death. There is little possibility of escaping with injury. It is no accident that the open water training sequence features rescue practice while cave diving has a course in body recovery. The commercialisation of cave and other forms of "technical diving" makes this discussion even more difficult than would

otherwise be the case. The proliferation of "professional" instructors carries with it the implicit fact that they must earn a living and are hence prone to advertise their services to the general public, and may be less apt to deny a student with marginal skills or a poor attitude access to a course. The rent needs to be paid. Encouraging students to participate in cave diving courses not only defeats any serious attempt at screening for personality types not suited to the pursuit, but invites much greater damage to the cave environment than is absolutely necessary for training and learning. There is a cost associated with the commercialisation of cave diving that may not be readily apparent except to those willing to look past personal objectives to see the greater whole. The traditional cave courses were not openly advertised and students were not sold this form of diving as a product. Both of the major training organisations have discouraged the "promotion of cave diving," but have shied away from defining what "promotion" is specifically. New cave divers were once expected to systematically work their way from simple dives to more complex dives, slowly, over time. The idea of "progressive penetration" was espoused by those who had learned that way, and had accumulated impressive numbers of successful dives following this dictum. Of course, in the early days of cave diving, the idea of a serious dive was something much different than what is commonly imagined today. Some of the early pioneers racked up thousands of cave dives over relatively short periods of time, for these were quite short penetrations by today's standards. There have always been those who tested the limits, as can be attested to by the exploits of Wally Jenkins and his Wakulla Springs team, among many others. Given the same circumstances, it is unlikely that many of today's experienced cave divers would be able to (or want to) accomplish the same feats that were undertaken in the 1950's and 1960's.

Given the nature of cave diving limits, recreational cave divers should stay well away from where they feel their own limits might be to avoid the possibility of exceeding them. But how is one to know where those limits lie? As mentioned previously, students and novices have the benefit of ready-made limits handed down by more advanced and capable practitioners who have successfully gone through the learning process themselves. It should also be pointed out that the basic rules of accident analysis were derived from the observations of circumstances surrounding those who were not as successful. As the novice progresses, and experiences gained through time spent in the pursuit begin to add to his or her confidence and abilities, the task of redefining limits is encountered. How this is done is largely a personal matter, but it is likely that an honest appraisal of one's physical abilities and overall preparedness would allow most to define reasonable limits. Adherence to these standards, once drawn, is again a matter of personal integrity, and when to enlarge the scope of what one allows oneself to do is strictly subjective, for limits must be expanded as the diver grows. The immediate importance of achieving a goal can lead to extending beyond where one feels comfortable or safe; this is what needs to be avoided. Do limits need to be reviewed? Should the community address the subject of specifically recommended limits for novices versus "explorers"? One suggestion might be to have novices complete personal inventories during cave diving training detailing all they may have to lose if they were to die as a result of exceeding their limits. Spouse, children, other family, career, material possessions, the opportunity to make other dives, etc. would invariably crop up during this process and could help the introspective student realise the importance of adhering to known safe standards. Students and novices gaining experience should ask themselves honestly how they rate in terms of cave diving

wisdom and set their personal limits accordingly. The community might consider an attempt to further define limits for recreational versus exploration dives in terms of decompression times, number of cylinders, or any other arbitrary recommendations, but the ultimate responsibility for personal safety and comfort lies with the diver. Explorers have to set limits just as novices do, but they have more knowledge, time and experience under their belts, are generally capable of more efficient swimming, and have mastered more advance techniques. These are personal decisions with profound consequences. The nature of this type of decision is what should be provided to the student and novice through course content, the example of other divers, and possibly through signs similar to the type used to warn untrained individuals of the general dangers of cave diving. The recommendations of any outside group, whether governmental, training agency, diving community, or more experienced friends, will ultimately be just that: recommendations. We must realise that the best of recommendations are easily disregarded by the irresponsible, and that unfortunately the training of recovery divers will still be needed in the foreseeable future.

Sheck Exley exemplified the ideal cave diver to many people. His experiences are well documented through his years of service the NSS-CDS and to Underwater Speleology. His discoveries and successful ventures earned him the admiration of a diverse set of communities, from adventure seekers to scientific investigators. It is not ironic that his death can be looked upon as a source of information to be used to inform other cave divers, for this process is exactly the contribution that he made to the understanding of cave diving deaths. Exley's findings are not written in stone. They are subject to update. There is a blank space remaining under the fifth rule of accident analysis.

Tank Cave update by Tim Payne

In a paddock, which looks just like almost every other paddock in and around Mt. Gambier, is a small fenced region which contains a tank, a windmill and a small wooden hut. In front of the hut is a small metal door set into the limestone. Opening the door reveals a short ladder which provides access to a small chamber with a dirt covered floor. The walls and roof of the chamber are actually decorated with speleothems, but few notice as they crawl to the small muddy puddle at the far end of the chamber. Beyond this puddle lies another world. This paddock, which looks just like every other paddock, isn't, or is it?

Under this paddock is a maze of water filled tunnels which are unlike any other site in Australia. Is there another Tank cave in Mt. Gambier? Who knows. How big is Tank Cave? Nobody knows. First impressions of the cave as a diver, is of a number of main tunnels with smaller side passages, but as you begin to familiarise yourself with the cave (something which is well worth doing for both safety and aesthetic reasons) you begin to realise that those side passages cross-link the main passages and form a complicated network. This view of the cave is supported by the map, which shows that the lines through the cave form a gridwork of passages, but if you start to draw in the wall details of the passages, the map takes on a completely different form and is better represented by a large underground lake riddled with large limestone pillars. Neither of these views is strictly correct with the truth lying somewhere in between. The trick to exploring the cave has been to find the links into the next passage, sometimes these links are obvious, sometimes they are hidden around the side of a rockpile or through a narrow slot in the wall which looks identical to hundreds of other slots which don't go anywhere, but in Tank everything has to be checked, and then rechecked. The cave releases its secrets at a tantalisingly slow pace. 18 months ago, exploration of the cave was slowing, as divers believed the cave had released all its secrets, and then Richard McDonald and David Doolette found a small passage around a rockpile and discovered what is now called the NW passage. This passage and the cave revealed by it have led to the discovery of over 1km of new passage, but once

again the cave has chosen to conceal its secrets. Passages which lead off the main passage proceed for up to 50m, go around a bend and then abruptly stop. The cave seems to sense the purpose of the divers and deliberately frustrates them. Explorers looking for new cave invariably fail to find any, divers carrying out mapping invariably discover large previously unnoticed passages, but the big finds remain elusive. Typical of the cave's tendency to frustrate expectations, finds have recently occurred in the SE limit of the cave, a portion of the cave thought to have no more secrets to reveal, some of these leads have produced 70 or 80 meters of passage before terminating, and some are yet to be fully investigated, but the nature of the passage in the NW of the cave, at the end of the NW passage in a region beyond what is known as the gateway rockpile, is more promising. Sidemounts have become the preferred configuration for exploration, and even the die hard back mount divers admit that sidemounts provide an advantage for exploration; however backmounted divers are still making significant discoveries in the cave, and there are only a few regions that they cannot go.

Exploration of the cave is not the only work occurring within the cave. The current map is really only a road map of the cave, and doesn't truly give an impression of the cave. Only a small fraction of the wall details have been mapped, and there is an enormous amount of work to be done completing this task. Fixed lines throughout the cave are being maintained and improved, both for the sake of the cave and to maximise the safety and enjoyment of divers.

New circuits through the cave are being developed to increase the number of dive options, while lines through some passages are being removed to simplify navigation through the cave, generally because the lines are through small silty passages which are easily bypassed. Line arrows placed throughout the cave indicate the direction and distance back to the entrance, but although the directions are all correct almost all of the distances are incorrect as a result of the changing cave structure. Despite the quality of the divers, some of the passages are showing signs of traffic. The

Easter extension, which in one of the most attractive, interesting and rarely visited passages throughout the cave has been set aside to preserve it in its natural state. Although this passage was once at the extreme limits of the cave, it is now surrounded by other passages and is easily bypassed.

The diving in Tank is diverse, different parts of the cave seem to be made from different types of rock,

with different coloured silts. Divers typically pass through large chambers, followed by small low silty passages, rooms filled with spectacular clay blocks, or complex series of restrictions which weave through to another portion of the cave. In short, I have intensely enjoyed my diving in Tank cave, as I believe has everybody else. The diving is demanding, but worth it.

Tank Cave - Photo by Peter Rogers



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CAVERN COURSES October 21st - 3rd November, February 24th - 9th March.

SINKHOLE DIVER November 18th - 24th, April 7th - 13th.

Peter Stayce

- Profile of a pioneering Australian Cave Diver

by Peter Horne

Peter Stace has long been well-known and respected within the Australian cave diving community.

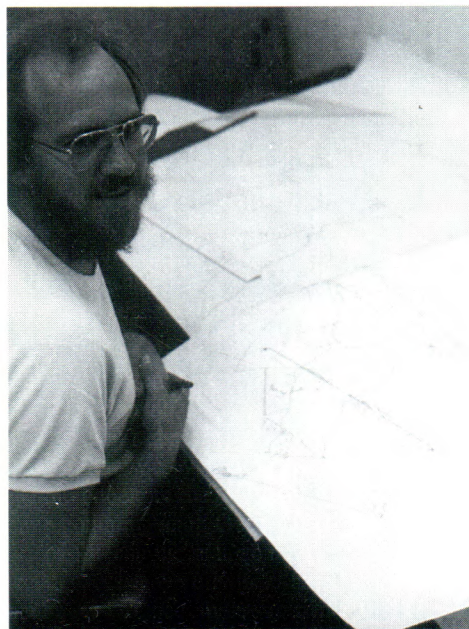
I first met Peter in mid-1979 while I was undertaking research into South Australian diving accidents. As President of the Cave Divers Association of Australia at the time and an active Examiner in the days before we had cave diving "instructors", Peter was an instantly-likeable, bearded and bespectacled fellow some two years my senior, with a very pleasant disposition and a great sense of humour.

Peter explained that he had undertaken his own basic investigations into the 11 cave diving deaths which plagued the Mount Gambier region during the early 1970s, and because he had personally known some of the victims he had a special interest in the many lessons to be learned ...especially the shocking multiple-fatalities in Alleyns Cave and the Shaft in 1972-73. I was able to utilize a lot of these reports and copies of coroner's investigations to dig deeper, discovering many additional aspects which I felt would help the community when I published my first diving book (SA Diving Fatalities 1950-80), and we soon became quite good friends as Peter held me in awe with his discussions about his many ground-breaking adventures and discoveries - especially the amazing penetrations which he and others had undertaken under the Nullarbor, and which almost nobody else knew about.

As a bored ocean-diver and underground-adventurer from ten years earlier, I was hooked; I just had to see these wonderful places for myself! So, after gaining my CDAA certification in late 1979 and in the company of my dive-buddies Mark Nielsen and Terry Reardon, I soon

experienced these amazing features personally, and it wasn't long before Peter and I were comparing notes and sketches about Mount Gambier's fabulous sinkholes.

Learning soon afterwards of Peter's intention to publish his ground-breaking book "Cave Diving in Australia" (co-authored by Ian Lewis) in 1980, I was quite honoured to be asked to proof-read the first draft and I was even more chuffed to discover, as a relative newcomer to this pastime, some apparent errors in the early maps - in particular, their Grade 2 map of One Tree (Wurwurkooloo), which I reckoned only showed about two thirds of the feature. Peter and the others doubted my observations until as a group of about 12 people, I think, we all went for a "checkup" dive in the sinkhole and



Peter Stayce

subsequently amended that map! This event really made me interested in these mysterious "holes full of rain", as Ron and Valerie Taylor had once called the sinkholes, and it played a major role in my decision to undertake research activities throughout the 1980s.

Peter first became interested in caves generally through his involvement with the Boy Scouts in 1969 and got interested in scuba diving about the same time. His first dive in a karst feature, like my own, was in Ewens Ponds, and the following day he dived One Tree (with two others and with a single torch between them) to about 35 metres, whereupon his single regulator ceased to function...a very useful introduction to just one of the many hazards which await untrained cave divers! He joined the Cave Exploration Group of South Australia and met Ian Lewis, who subsequently introduced him to Phil Prust and "veteran" diver Dave Warnes ("Mr CDAA 0001"), and through these other extremely experienced cave divers he learned of the existence of the vast waterfilled caves under the Nullarbor.

In the mid-1970s Peter also became interested in the political aspects of the CDAA and was first elected onto the Committee in 1976. Around that time, in the company of Phil, Dave, Hugh Morrison and others, he visited the Nullarbor for the first time and was one of the team to discover the major rockpile chamber at the 1,000 metre point in Cocklebidy Cave, and during the next few years Peter and his friends were instrumental in many significant discoveries in South Australia, interstate and in Tasmania. He was also one of the first Aussie divers to visit the caves in the Bahamas and Florida, and judging from comments I heard directly from Sheck Exley and others when I presented a paper in Branford in 1986, I know that Peter was very highly-regarded by many of our most prominent American cave-diving colleagues.

Peter organised the first CDAA conference on cave diving and the Association's first Occasional Paper, and he served as President in 1978, being a key player in many important negotiations and activities. One important discovery was Engelbrechts Cave; in February 1979, he, Ron Allum and Phil Prust were the first to explore it since a well-publicised dive in 1964, an event which Peter had found through an old newspaper report he had located. The cave was completely blocked by rubbish and took a lot of effort to worm through, but their first dive on the Eastern Side resulted in the discovery of the air-chamber, and they soon found the first 100m passage in the Western Side (Terry Reardon or Peter Rogers found the big airchamber some months later). Peter was also constantly checking out a large number of other features all through those years, as time and opportunity permitted. During the 1981-82 Christmas holidays, I worked with Peter exploring, rediscovering and mapping some of the lesser-known caves around Mount Gambier. Our efforts resulted in (for that time) the significant discovery of Sheathers Cave (affectionately-known as "144" after its CEGSA reference number), and we explored and mapped a number of other little-known sites. Through our mutual interest in documenting the environmental and morphological aspects of such sites, we both felt that a formal Research Group arm of the CDAA would be very worthwhile and Peter worked hard to get this up and running - it was accepted by the Committee in March 1983, when I presented the case to them on Peter's behalf. Peter was appointed Research Coordinator and Peter then set about organising the first detailed study - the mapping of Kilsbys Hole, thus opening the door for the first time since its closure in 1969.

The success of this mapping effort speaks for itself; the project report was an invaluable tool in my own successful

negotiations with the Ashby family in relation to their allowing CDAA members access to the 20-year-closed The Shaft to undertake a mammoth mapping project there, and through renewed contact with more responsible cave divers the Ashby family gradually agreed to open this fantastic site so that members can enjoy it the way we do today.

Peter also assisted on a number of research projects which were run by other divers, including the Piccaninnie Ponds mapping study and the mid-1985 Blue Lake studies I personally coordinated at the time, and even in an indirect sort of way, Peter was also responsible for the discovery by Mark Nielsen and myself in August 1983 of the true nature of Tank Cave. We had been driving past Fossil Cave one day when Peter casually waved his hand towards the paddock and said something like "Oh, there's a cave under that windmill" - a frequent comment between us whenever a windmill came into view in those days! - and while Peter believed that it possibly had a divable component (from rumour via Dave Warnes years before), I didn't know and Mark and I were desperate enough to stumble upon this spectacular place one cold night while we were in our "exploration prime"! In 1987, Peter moved away from Adelaide (and almost

everywhere else!) by going to Berri for his profession, and he subsequently found his cave diving opportunities being severely reduced. But he remained an avid supporter of the concepts of responsible cave exploration and research, and served on the new Tank Cave exploration team as well as a Shaft Guide in the early 1990's. It was therefore a real tragedy to learn that he had recently undergone a life-threatening operation to remove a large brain tumour-a major procedure which, through the necessary removal of tissue and major auditory organs, has forced him to look at taking an entirely new path through life.

Although Peter Stace's diving days may be over, the legacy of his dedicated efforts to benefit the caving, diving and scientific communities remains for our newer members to appreciate and enjoy, even if they can't know exactly who took those chances in the first place. His ground-breaking efforts and the pioneering seeds of research which he helped to plant will always be remembered and valued by people who, like myself, were so inspired by his ideas and encouraged by his attitude.

Peter Horne.

ATTENTION SINKHOLE DIVERS

For those of you who have been having difficulty getting information about when "Cave Diver" courses are being run, please ring Ian Lewis (mobile 015 284 051) as I can put you in touch with instructors running those courses. Since dual instructors are required, these courses are not all that frequent and it is difficult to hear about them. I will do my best to assist you.

Ian Lewis, Standards Director

CDAA NOTICES

PENETRATION COURSE NOTICE

Easter Penetration course to be run Good Friday to Tuesday after Easter - anyone interested to contact Glen Harrison on (08) 8386 3237.

LOST & FOUND

Found dive computer, please contact Phil Argy on (087) 23 0879

GUIDELINES DEADLINES

To ensure Guidelines is produced reliably and regularly, the following deadlines have been set for each issue. Please note that material will not be considered if it arrives after the stated dates.

Issue 61 May 1st deadline

Issue 62 August 1st deadline

Issue 63 November 1st deadline

Issue 64 February 1st deadline

Editor

CDAA INSTRUCTORS

Any Instructor wishing material contact - Peter Grills 0419 820 920

STANDARDS & TRAINING DIRECTOR: Ian Lewis
PO Box 359 Queanbeyan, NSW 2620
Mobile & Messages 015 284 051
(w) 06 203 2829 (h) 06 299 7064

INSTRUCTOR	CN	S	C	STATE	PHONE	INSTRUCTOR	CN	S	C	STATE	PHONE
NSW & ACT						VICTORIA					
Nick Jones	.	.	.	ACT	015 851 313 m	Stephen Arnel	.	.	.	VIC	(055) 26 5230 h
Ron Allum	.	.	.	NSW	(02) 9552 6348 h	Bill Bernhardt	.	.	.	VIC	(03) 9725 9716 h
Terry Cummins	.	.	.	NSW	(02) 9417 2800 w	Jane Bowman	.	.	.	VIC	(03) 9579 2600 w
Peter Grills	.	.	.	NSW	(049) 48 7848 h	Stan Bugg	.	.	.	VIC	(03) 9379 8791 h
Ian Lewis	.	.	.	ACT	See top of page	Brian Cornell	.	.	.	VIC	(059) 85 2514 h
Gary Norgard	.	.	.	NSW	(049) 68 4588 h	John Dalla - Zuanna	.	.	.	VIC	015 887 060 m
David Ogilvie	.	.	.	NSW	(02) 9977 4355 w	Chris Edwards	.	.	.	VIC	(03) 9579 4352 h
Andrew Robertson	.	.	.	NSW	018 412 563 m	Barry Heard	.	.	.	VIC	(056) 27 6474 h 019 401 469 m
Des Walters	.	.	.	NSW	(060) 411 405 w	John Mc Cormick Specialist Non-Teaching	.	.	.	VIC	(03) 9555 5777 w
Andrew Wight	.	.	.	NSW	(02) 9428 2176	Warrick McDonald	.	.	.	VIC	(03) 9579 2600 w
Liz Wight	.	.	.	NSW	(02) 9428 2176	Tony Richardson	.	.	.	VIC	
SOUTH AUSTRALIA						Bob Wealthy	.	.	.	VIC	(056) 858 338 h
Greg Bulling	.	.	.	SA	014 477 430 m (08) 8265 4978 h	Frank Ziegler	.	.	.	VIC	(055)23 6392 w
Glen Harrison	.	.	.	SA	(08) 8386 3237 h	WEST AUSTRALIA					
Karen Kennedy	.	.	.	SA	(087) 250 335 h	Marilyn Boydell	.	.	.	WA	(09) 349 5646 h
Max Marriot	.	.	.	SA	(08) 47 3360 h	Simon Jones	.	.	.	WA	(09) 344 4343 h (09) 344 1562 w
Richard Megaw	.	.	.	SA	(08) 8344 1733 h	Hugh Morrison	.	.	.	WA	(09) 409 99807 h
Richard McDonald	.	.	.	SA	(08) 8295 4140 h/w	Andrew Poole	.	.	.	WA	018 928 028 m
QUEENSLAND						Steve Sturgeon	.	.	.	WA	(09) 527 9211 w
Frank West	.	.	.	QLD	(070) 53 3575	John Vanderleest	.	.	.	WA	(09) 426 8623 w (0411) 184 211 m
Alan Jolliffe	.	.	.	S E Asia	Rep 61 773 3544 h						
Gary Bush	.	.	.	NZ Rep	(018) 318 837 m						

CDAA SITE ACCESS

Mixed gas Diving BANNED from all sites (Nitrox approval to be finalised but not yet completed May 1996).

Remember: Access is a privilege, not a right. Please be considerate of landowners wishes.

CN = CAVERN S = SINKHOLE C = CAVE P = PENETRATION

SITE	LEVEL	OWNER	ACCESS DETAILS
MOUNT GAMBIER - SOUTH AUSTRALIA			
Ewens Ponds	Nil	DENR P.O. Box 1046 Mt Gambier 5290 (087) 35 1177	Groups of 6 or more, phone/mail to Dept. of Environment & Natural Resources (DENR). Smaller groups, no need. Indemnity form to be completed.
Horse & Cart Tea Tree	CN CN	Peter Cunningham PO Box 643, Mt Gambier 5290	By phone or mail, 1 week prior. Ph: (087) 38 4003.
Little Blue	S	Port MacDonnell	Little Blue - permission not required - must carry card.
Allendale	C	Port MacDonnell	Obtain key from Mt. Gambier Tourist Information Centre.
Gouldens 2 Sisters Fossil	CN CN C	DENR P.O. Box 1046 Mt Gambier 5290 Ph: (087) 35 1177	General Diving: Divers to contact DENR and notify of date and site to be dived. Divers must have the correct CDAA diving endorsement for the site. The onus of proof of CDAA status is on the diver and is provided by presentation of CDAA membership card or DENR checking the membership list supplied by CDAA. If there are problems with the diver not being a current financial member DENR will not be chasing the records officer to sort out the problem. This will be the responsibility of the diver. The diver must have signed an indemnity with DENR before access is permitted. Training: Cavern and Sinkhole. The Instructor is to notify DENR of the date the sites are needed and to forward signed indemnities from each student and their temporary card number. Cave and Penetration: The Instructor is to notify DENR of the date the sites are needed and is required to forward signed indemnities from each student and their membership number.
Ela Elap One Tree	S S	Mr. Peter Norman Private Bag 67, Mt Gambier 5290	By phone or drop in before diving. Accommodation also available. Ph: (087) 38 5287
Swim Through	C	Valerie Earl PO Allendale 5291	Currently CLOSED pending new access arrangements.
Piccaninnie Ponds	S	DENR P.O. Box 1046, Mt Gambier 5290	Permit holders by phone. Be aware of delicate vegetation. Indemnity form to be completed. Ph: (087) 35 1177 Faxed copies of cards no longer accepted when booking.
Hells Hole Pines Mud Hole	S C C	Primary Industries S.A. (Forestry) PO Box 162 Mt Gambier 5290	Contact Primary Industries S.A. (Forestry) by mail, phone or fax to arrange permit. Collect permit from Regional Office, Jubilee Hwy., Mount Gambier. No diving on total fire ban days. Forest Work Bans may be applied by PISA Forestry if forest fire danger is expected to reach extreme. Such bans also exclude the public from entering the forest. If in doubt, please check with Trevor Wynniat, although signs are generally erected at diving sites on such days to indicate such bans. Permits will ONLY be issued Mon-Fri between 8.30am-4.30pm. Ph: (087) 242 887. Please use this number for all bookings and enquiries etc. Fax: (087) 242 885 Email: wynniat.trevor@pi.sa.gov.au. Written confirmation required.
Kilsby's	S	Landowner leased to S.A. Police	Restricted access conditions apply - refer Guidelines Issue 54. Twin tanks, maximum of 40 metres depth. Write to: P.O. Box 77, Mount Gambier, 5290, six weeks prior. 1996 weekends - 8 & 9 June, 27 & 28 July, 5 & 6 October, 7 & 8 December, 1997 - 25 & 26 January, 29 & 30 March, 26 & 27 April, 7 & 8 June. No animals permitted.
Shaft	S	Generally open two weekends a month L. Claridge P.O. Box 290 North Adelaide 5006	TIMETABLE FOR "THE SHAFT" GUIDES Saturday Feb. 22nd. Sunday Feb. 23rd. Saturday March 8th. Sunday March 9th. Saturday March 29th. Sunday March 30th. Saturday April 13th. Sunday April 14th. Saturday April 27th. Sunday April 28th.
Ten Eighty Bullock Hole Black Hole	S S S	Mr. Colin Traeger PO Box 12, Mt Gambier 5290 (087) 26 6215	Contact CDAA Records Officer for diving deed THEN mail Booking Form to Colin Traeger 2-6 weeks prior, stating names/qual. of all divers, and time slot Please include stamped self addressed envelope. Closed October to November for shearing.

CDAA SITE ACCESS

SITE	LEVEL	OWNER	ACCESS DETAILS
MOUNT GAMBIER - SOUTH AUSTRALIA (continued)			
Max's Hole	C	Mr T. Edwards P.O. Box 1319 Mt Gambier 5290	Phone or mail 1 week prior to dive. Ph: (087) 26 8277
Hann's cave	P	P & A Lasslett	Groups of four divers only apply in writing to Site Director. Limited groups will be allowed access over the summer months. The site is very delicate and therefore only limited access is available. Divers applying will be notified as to further access details. Please include a stamped self addressed envelope.
Engelbrechts - East - West	C P	Mt Gambier Council	Obtain key from Mt Gambier Tourist Information Centre. Access agreement must be signed prior to diving. Key must be returned by 5pm Sunday, 2 divers must sign out keys, all divers must sign in advising which groups they are diving with.
Three Sisters	P	Millicent Council	Contact Linda Claridge (Records' Officer). Access available for experienced Penetration divers only. Low profile or side mounted independent air systems required. Access agreement must be signed prior to diving. Please allow 4 weeks for indemnities to be processed.
Iddlebidy (5L250)	P	Primary Industries S.A. (Forestry)	5L250 open 1st & 3rd weekend of every month. 5L290 open every weekend. Max. 4 divers per dive per day, 1 dive per day for each site. Only Penetration divers completed practical in-water cross-over. Bookings from Forestry Office - key from Lady Nelson. Contact Primary Industries SA (Forestry) by mail, phone or fax to arrange permit. Collect permit from Regional Office, Jubilee Hwy., Mt. Gambier. No diving on total fire ban days. Forest Work Bans may be applied by PISA Forestry if forest fire danger is expected to reach extreme. Such bans also exclude the public from entering the forest. If in doubt, please check with Trevor Wynniat or Forestry Office, although signs are generally erected at diving sites on such days to indicate such bans. Permits will ONLY be issued Mon-Fri between 8.30am-4.30pm. Ph: (087) 242 887. Please use this number for all bookings and enquiries etc. Fax: (087) 242 885 Email: wynniat.trevor@pi.sa.gov.au. Written confirmation required.
Nettle-Bed (5L290)	P	PO Box 162 Mt Gambier 5290	
McKay's Shaft	S		Contact Phil Argy at Mt. Gambier as access can be arranged.
Tank Cave	P	Mr. DY CER	Apply in writing at least 3 weeks in advance to; CDAA Tank Cave Access, 19 Broadmeadow Drive, Flagstaff Hill 5159. (This access may be cancelled at anytime, at the discretion of the landowner) NB: New divers must first apply for an application form to; Paul ARBON, PO Box 290 North Adelaide. (See Tank Cave Access Information - Issue No. 57).
Baker's Cave	C	Temporarily closed.	
NULLARBOR - WESTERN AUSTRALIA			
Cocklebidy	C	Regional Manager	Must apply for permission to dive at least 4 weeks in advance of trip.
Murra El Elevyn	P*	C.A.L.M.	Ph: (098) 41 7133.
Tommy Grahams	C	44 Serpentine Rd,	*1 Murra El Elevyn rating currently under review
Weebubbie	C*	Albany 6330	*2 Weebubbie temporarily closed.
WELLINGTON CAVES - N.S.W.			
Limekiln (McCavity)	P/C		Both Penetration and Cave Level are being accepted for this cave depending on it's water level at the time. The cave has a restriction at the entrance which is underwater making it a Penetration Dive. During drought, the water level drops to form a small lake below the restriction allowing experienced Cave Divers access to this delicate cave.
Water (Anticline)	C		Affected by high CO ₂ levels during Summer/Autumn. Access arrangements are co-ordinated with an already commissioned research group. Contact Greg Ryan (02) 9351 4809 w, (02) 9743 4157 h, gregr@cs.su.oz.au.

Exploration diving in France

by Frederic Badier

(Email: badier@clamart.dowell.slb.com)

The following is a brief summary of recent exploration cave diving done in France. I have only included cave explorations to depths greater than 100m/330ft.

I hope you will enjoy reading these news from France, and I am happy to supply further details. All the divers involved in these explorations represent the top cave divers in France, with the exception of myself! Let us keep in mind that behind every diver mentioned, there are skilled teams involved. They too should be all associated with these successful explorations.

Cave: Fontaine de Vaucluse

Depth: -195m/-650ft

This was not really an exploration dive, as J.Hasenmayer stopped at 210m. However, Sylvain Redoutay (French) last weekend dived down to 195m on Trimix (decompression procedure unknown). Sylvain left his reels at 195m in preparation of a future dive, apparently to 250m. The total dive duration was 11 hours 40 minutes for a 30 minute bottom time.

Sylvain Redoutay has been practising long dive durations and has dived for over 20 hours. This dive was done during an exploration session with the ROV (see further article). The ROV is now entangled in Sylvain's line at a depth of 165m!! When last I heard, Olivier Isler will now attempt to recover the ROV, and Sylvain is no longer allowed to dive the Fontaine...

Cave: Goule de la Tannerie

Depth: -165m/-550ft

Olivier Isler (Swiss) reached a depth of

-165m about 1000m from the entrance of this cave in spring. The first 700m of the cave have an average depth of 10m. The dive was performed on Trimix with a decompression procedure calculated by J.P. Imbert. Further exploration is ongoing. Total dive time was around 10 hours at a water temperature of 13°C (55°F). A decompression habitat has been installed 700m from the entrance, but has not been used, due to technical problems.

Cave: Foux du Mas de Banal

Depth: -150m/-500ft

Pascal Bernabe (French) reached a depth of 150m 260m from the entrance after a series of dives. His reels are in place for future exploration. The dives were done on Trimix using the Doris decompression table. The bottom time during the dive was 20min and, the last dive lasted 9 hours with a water temperature of 13°C (55°F). Exploration of this cave is ongoing.

Cave: Font Estramar

Depth: -147m/-490ft

Cyril Brandt (Swiss) reached -147m, 1100m from the entrance using an Aquazepp DPV. The average depth for the first 800m is 50m. The dive was done on Trimix, and Brandt decompressed on Doris tables. The total dive duration was around 10 hours. At 18°C (65°F), this spring is exceptionally warm.

Cave: Resurgence de la Touvré

Depth: -141m/470ft

Ludovic Giodarno (French) reached -131m in the third shaft of this complex system. The dive performed on Trimix with decompression calculated by J.P.

Imbert. The total dive duration was 6.5 hours. Pascal Bernabe (French) then dived the second shaft down to 124m before he connected with the 3rd shaft. From there, he descended in the 3rd shaft down to 141m. Total dive duration was 8 hours (decompression calculated by J.P.Imbert). The water temperature was 13°C (55°F), and a decompression habitat was used. Exploration is ongoing.

Cave: Grotte du Diable

Depth: -137m/-456ft

Luigi Casati (Italian) reached -137m in the 3rd sump of this system. The first sump is 30m long at a depth of 2m, the second is 40m long at a depth of 5m. The third sump has been dived over a distance of 400m. The dive was done on Trimix and using Doris decompression tables. The water temp was around 8°C (46°F). Part of the team was J.J.Bolanz (Swiss). Exploration is ongoing.

Cave: Source de la Marnade

Depth: -121m/-403ft

Frederic Badier (French) reached -121m in the 3rd sump of this system; this

appears to be the bottom of the sump. The first sump is 400m long with an average depth of -30m. The second sump is 120m long with a depth of 7m. The third sump has been explored to a length of 350m. Total system length is 1200m. The dive was performed on Trimix; decompression calculated by J.P.Imbert. The duration of the exploration was 12 hours at a water temperature of 13°C (55°F). An Aquazepp DPV was used, and exploration is ongoing.

Cave: Resurgence de Gourneyras

Depth: -102m/-340ft.

Marc Douchet reached a depth of 102m, 1100m from the entrance. The average depth up to the 900m mark is around 65m, and the dive was performed on Trimix based on a Doris decompression procedure. The water temperature is 11°C (52°F). A decompression habitat and Aquazepp DPV was used. Exploration is ongoing.

That's all for now, but I am sure this summary will be out of date in a few months.

BUSINESS DIRECTOR'S REPORT

by Christopher Brown

This is my fifth term as an office bearer and hopefully will be the most rewarding. I see the association under the very strong leadership of Greg Bulling, our National Director, as a very positive thing towards getting the association back on track for what it was originally set up for, which is assuring our current membership can cave dive in as many sites as possible.

Our association has been plagued over the past few years with an excess of petty individual politically based fighting that

has very nearly sunk our association. I hope in the future that all members that take a position on the Directorship do so with the intention of helping to improve the association and not just to feed their ego.

In finishing, I would like to thank Warwick McDonald for his high level of commitment that he put into the Business Director's position that he held. I am having trouble trying to keep up to the standard that he has set.

OBITUARY

Doug McLeod (CDAA Penetration Diver and Mt Gambier Scuba Club Member)

Late last year, cave diving lost one of its most energetic and colorful characters. I received a phone call to say that Doug had passed away due to complications following surgery in hospital in Adelaide, and I attended his funeral in Mt Gambier a few days later. There was a huge number of people there, which is when we realised just how many people had been touched by his life - far more than we realised.

Doug had been a diver since his Navy days and an electrician by trade. He was an original instigator of the Mt Gambier Scuba Club and as its President had many years of first hand input into the development of the CDAA. He was vigorous and forthright and many debates and arguments about the CDAA were only finally resolved by quantities of amber fluid at the Mt Gambier Hotel after long Committee meetings! I remember one light plane flight from Mt Gambier to Adelaide for a CDAA Committee meeting with Doug and CDAA President Lance Mitchell crammed into the small cabin. Doug talked flat out for the two hour flight, even louder than Lance (almost impossible!) and louder than the plane engine! I had a headache for a week.

Doug was also very generous with his time and his energy. He was always available to organise club trips, working bees and materials for sinkhole and cave cleanups and fencing projects. Not so many years ago I was flat broke and Doug found me some odd jobs assisting him in the trade. He himself didn't have much spare cash, but he kept me going until I could get on my feet again. He had an inventive and industrious mind and was always fiddling around with ideas in his chronically cluttered workshop - there was a half built one-man submarine there for years full of chook feathers and spare parts etc! Through all of this, his wife and our dear friend Barbara tolerated it all.

The Mt Gambier Scuba Club has been around for a long time and the friendships run deep. I was deeply moved to see life-long friends and club members as pall-bearers at his funeral. Besides the divers, there were many Navy friends, fishermen, family and tradespeople, all saying goodbye - everyone stunned at his sudden passing. Doug was only 41.

In recent times he had come into a little extra money and had rebuilt his workshop and added a teaching room for Scuba instructing. He was due to complete an Instructor's qualification as soon as his operation and stay in hospital was over. Although he never got his long sought qualification, he had assisted, encouraged, taught and inspired many people in underwater activities. You already were an instructor mate. Sometimes I think my only real ability is with words, so it is probably appropriate that I write this on behalf of the club. Our thoughts and condolences are with Doug's wife Barbara and son Daniel. We have lost a great mate. Farewell.

Ian Lewis.



Progress at Jenolan by Greg Ryan (gregr@cs.su.oz.au)

Here is a brief summary of the diving at Jenolan this year. Full trip reports will be available in the SUSS Bulletin 1997.

SUSS (Sydney Uni Speleo Society) was able to get a permit for the last Friday of each month, March to November, for exploration and surveying of a series of sumps off the show caves. Dives were primarily by SUSS members, along with a couple of people from New Caves (see Guidelines article I submitted (<http://artemis.eng.monash.edu.au/CDAA/guidelines/issue59/nswcave.htm>)).

The main areas of interest were downstream in the Imperial streamway, (Northern limestone, Imperial Show cave, downstream from the concrete bridge), and River Lethe (up and downstream sumps in the Southern limestone, under the Baal in the area of the Mud Tunnels).

Downstream Imperial:

Earlier work there (in the late 70s?) reported blockage by timber of the sump. This must have cleared in some flood event as in 1993 Ron Allum and Kathy Savage pushed a long way downstream in the second sump to a restriction which Kathy managed to pass by removing her backmount setup, tying off just downstream of this restriction. Ron's knotted line/handheld compass survey put this point quite close (<10m) of the resurgence into the Blue Lake.

Richard Taylor and Dave Apperley were the main divers this year in this sump, using side mounts and investigating beyond the restriction. So far they have not found the connection to the resurgence. The sump needs a more accurate survey to evaluate how much further effort to put into pushing on from this point. It's reported to be quite tight.

River Lethe:

Upstream River Lethe was found to end at a constriction too small to negotiate.



*Jenolan - Ron Allum and Phil Prust
- Photo by Peter Rogers*

Downstream had a lot of potential. Work there in the mid 80s was stopped at a flattener. With side mounts, and moving of some gravel, Mike Curtis made his way through this constriction in May. Beyond the flattener the passage opened up and began to gently rise from -15m. But the walls and ceiling were covered in fine silt, which rained down in front making progress slow and incremental.

Over a series of trips with pushes by Mike Curtis, Keir Vaughan-Taylor and Merv Maher, the visibility improved beyond the flattener. On the November trip Merv and Keir made a final push and found another guideline, which led them back to the tourist caves in the area of Lucas, via a sump known as the Long, Low, Horrible, Flat Thing.

Downstream Lethe starts with a short shallow sump, coming up into a room from which another dry connection to the tourist caves was made on the November trip by Phil Maynard. Surveying has begun in Lethe, and with downstream Imperial, will be first survey projects off the rank in 97.

Other sites:

Preliminary work was done in the rockpile off the Exhibition Chamber in Lucas Cave. Ice Pick Lake in Mammoth was dived and found to now choke out with silt (perhaps its worth one more look as late 70s reports had this sump going). Overall the year was reasonably successful, and we're negotiating for further access in 97. Hopefully in 97 some attention can be paid to the remote sump in Spider Cave, along with revisits of some of the Mammoth Cave sites like Slug Lake.

CAVE DIVING IN AUSTRIA

by Marcus Kalmar

Email: Marcus.Kalmar@austria.ncr.com

This is a brief report about a recent exploration by Austrian cave divers which took place on Nov. 10/11th, 1996.

Austrian caves often have a strong flow after rain; therefore the best time to dive is in winter when the ground is frozen. Visibility in winter tends to be good about 8-15m.

Michael Jodel, Michael Jurkovic and I have been diving Nestelberg Cave, near the town of Gamming, 2 hours from Vienna. The water temperature is between 5-6°C, hence we use dry suits inflated with Argon. Austria has no cave diving organisation, but we collaborate with the Natural History Museum and the Hydrographic Institute of Niederösterreich. I was trained in Germany by a very experienced cave diver, Harald Schetter.

Nestelberg Cave

At the time of our dive, strong currents were running because of earlier rains. Nestelberg Cave has a restriction at 15m, another at 46m, and a final one at 50m. From there, it runs into a low, narrow tube with a very silty bottom, reducing visibility to zero. The cave ceiling becomes so low at this point that back-mounted doubles become impractical and only side-mounts will allow further penetration. Total bottom time on this dive was 13 min, with an actual push time of 4 min. Maximum depth at turn-around was 64m.

For the dive we used independent, back-mounted tanks to carry the deepest mix. For the intermediate tanks, both the tanks and regulators were marked with the mix, and consistently different brands of

regulators were used on each gas, to enable us to distinguish the gas by feel when necessary.

Decompression schedules were worked out using Pro-Planner and compared with Abyss, resulting in similar, reliable tables.

Gases

The gases used included 40%He Trimix, air, 50/50 Nitrox, and O₂. The switch back to air was done at 35m, to Nitrox at 21m, and to O₂ at 6m, never exceeding 1.6ppO₂. The helium and oxygen was donated by AGA gas company.

Deco stops:

1 min at 12m with Nitrox 50/50
2 min at 9m with Nitrox 50/50
4 min at 6m with Oxygen
8 min at 3m with Oxygen
Total dive duration: 44min

Future plans

The relationship between ourselves and the Museum of Nature is about three months old, hence we have only made 2 research dives. For the next year we are planning a new project in Brunnecker Cave which runs into a big sump. Its dimensions are quite remarkable for Austria; it was explored in 1983 to a depth of -50m and a distance of 200m. We plan to go deeper and longer into this sump. The problem is that you need to walk 3 hours to the sump, and that there are restrictions along the way. We need 15 people to transport our diving stuff to the position where we start our dive.

For further information, or to provide constructive, useful advice please contact Marcus Kalmar on:
mkalmar@ATTAAUST1.austria.ncr.com



PIC 2



PIC 4



Nestelberg Cave #1816/11

The Fontaine de Vaucluse "saga"

by Frederic Badier

Following my post about the deep cave dive push in France, I thought I would add some news about the Fontaine de Vaucluse 'Saga'...

The beginning of the story

First, some background about the situation as regards the Fontaine de Vaucluse. The cave has been dived down to 210m by J.Hasenmayer. Due to the risk associated with such dives, the local authority strictly controls access to the cave and does not give permission to dive.

Explorations of the Fontaine were then carried out using Remotely Operated Vehicles (ROVs), and several ROVs were sent to explore the Abyss. One imploded at 280m, while a second unit (called 'Renault') got jammed in 1986 at a depth of 250m with its umbilical cord still in place from 250m to 60m; this ROV is still in place. Then a new ROV (called 'Spelenaute') was used, and the bottom of the spring was reached at 308m. The same ROV was again used several times to explore the cave walls.

Last September, the association leading the exploration decided to send the Spelenaute on another mission to undertake some mapping of the cave. The ROV has a camera and sonar on it. This operation presented a welcome opportunity for some cave divers to dive the spring by assisting with the progression of the ROV at the cave entrance. During the preparation of this operation, Sylvain Redoutay (French) 'discreetly' set up a deep dive and in the course of this reached a depth of 195m (see other Guidelines article).

Not surprisingly, the local authorities were upset.... The day after Sylvain's dive, the ROV 'Spelenaute' was sent on its mission and got entangled at 172m in Sylvain's line and the old 'Renault's umbilical. This is too bad for Sylvain who will not now gain authorisation to dive the cave!

The (first) rescue

At this stage, the local association was looking for a diver to recover the ROV. Olivier Isler was contacted but not selected. So myself, Pascal Bernabe and J.P. Imbert proposed to set up a dive to recover the ROV. Our proposal was accepted, but first the association (for economic reasons) attempted to recover Spelenaute with a second ROV (called 'Achille', made by COMEX) which was equipped with a circular saw.

Unfortunately, the miracle that was expected did not happen. The Achille also got entangled at 160m in Sylvain's line and the Renault's umbilical. This was very embarrassing for the local authorities and they called us in to dive and recover the two ROVs ...

We had two days' notice before the dives took place and it was a lot of work for the team to organise such a dive (27-30 Sept 1996). The recovery operation was planned over 4 days to prepare the gas mix, set up the decompression line with a decompression habitat, perform two deep dives and set down the equipment. A portable decompression chamber was on the surface for safety. The team consisted of 12 support divers, Jean Pierre Imbert to calculate the decompression procedure, a surface manager, a surface team, a safety adviser and the caisson (chamber) master. A decompression line was installed for both divers on the same day, starting at 80m to the surface.

I did the first dive to evaluate the situation, and to start cutting/clearing the Renault's umbilical. On my way down, I staged a bottle at 95m for Pascal Bernabe's decompression who planned to do the next dive. I reached 161m and spent 16 minutes of bottom time working on the Achille ROV, cleaning up the place and preparing the second dive. The decompression required a first stop at 105m and pure oxygen at 12m,

9m and 6m in the decompression habitat. Decompression lasted for 8 hours.

The day after, Pascal Bernabe did the second dive to 174m to the Spelenaute and worked for 18 min cutting Sylvain's line. He left the Spelenaute disentangled, hoping that the ROV pilot would be able to surface it. On his way up he considered the Achilles' position, and Pascal decided to cut its umbilical and bring it back to the surface manually. Pascal surfaced after an 8 hour 30 minute decompression. The Achilles was then recovered but the Spelenaute could not ascend above 140m and still appeared to be entangled in something. Nevertheless, the diving team was very happy with the results, since the two dives went well and the situation was greatly improved. We were all tired because of the intense level of activities and the lack of sleep. So we proposed to set up another dive two weeks later to recover the last ROV.

However, the saga continued. The local association decided to fix the recovered ROV and send it back to deliver their toy (the Spelenaute ROV, still stuck at 140m). This time too, the miracle did not happen. Achille was again entangled, this time at 110m. It could have been a good laugh but we (the diver team) were very upset because of the local association's decision.

The (second) rescue

Finally, last weekend (12-13 Oct 1996), we set up another two deep dives. The operation took place over two days. On Saturday morning, the decompression line and the decompression habitat was installed. I dived early in the afternoon on the Achille to 110m, cut its umbilical and pulled it to the surface. My bottom time was 7 minutes, and decompression lasted for 3 hours. After my dive, Pascal Bernabe dived on the Spelenaute to 140m, applied the same procedure and pulled the ROV to the surface. His bottom time was 11 min and decompression lasted 4.5 hours. On Sunday, we removed all our equipment from the cave.

In retrospect, the team had a lot of fun, despite the 'saga' and the amount of work required. The decompression procedures calculated by J.P. Imbert worked well; Pascal and I felt in very good shape after every dive.

Gas mixes and equipment configuration

We used the following gas mixes:

Bottom mix for the 174 and 161m dives:

O₂ 9%, N₂ 20%; He 71%

For deep decompression between 115m and 75m. O₂ 12%, N₂ 20%; He 68%

For decompression between 72m and 48m: O₂ 20%, N₂ 30%; He 50%

For decompression between 45m and 33m: Air

For decompression between 30m and 24m: Nitrox 40%

For decompression between 21m and 15m: Nitrox 50%

For decompression in the habitat (12m to 6m): Pure Oxygen

The equipment configuration was the following (This is 'the French way' and may result in adverse reactions, but bear in mind that our environment is different from that of Florida).

We had two 201 tanks at 240 bars back mounted (independent) with Tekstar regulators (developed by COMEX for deep dives), two other 201 tanks (240bars) were chest mounted and kept on the diver at the bottom. Argon was used as insulating gas and an electrical heater was used at the decompression stops. Lights were mounted on the helmets. We used wings (Diverite or OMS) as buoyancy compensators and a neoprene dry suit (Northern Diver). The water temperature was 13°C (55°F).

I hope this long post was of interest for you. I am looking for a place on the Web to display picture or even AVI of the operation in the coming weeks. If someone is willing to welcome some crazy French cave diver on this Web domain, contact me: ;-)

Bonnes Plongees.

Frederic.

(Email: badier@clamart.dowell.slb.com)

COLLAPSE AT WEEBUBBIE

by Robert Brennan and Alistair Gifford-Moore

On 8th October, 1996, a dive team led by Robert Brennan were diving Weebubbie Cave situated in a remote area of the Nullarbor, Western Australia. The dive team consisted of Paul Doyle, Terry Moore, Alby Quinn, Charlie Angel, Trevor Alldritt, Alistair Gifford-Moore, Norrie Balacco, Colin Jevons and Bob Davis. During the dive, the dry section of the cave collapsed. The following account details the events as experienced by those divers.

After a successful trip to Cocklebidy and Murra El Elevyn we moved on to Weebubbie. We set up camp, dropped gear down the doline and humped it to the waters edge. It looked like a dive shop down there - scooters, torches, battery chargers and all sorts of miscellaneous gear. The next day we dived with some using scooters and some just swimming. We dived to the air dome, down the railway tunnel and enjoyed some really "spekky" diving using scooters and just generally having fun and exploring. Some of the side tunnels looked a bit dubious so they were left alone. The canyon along the left wall of the lake was an enjoyable finish to the dive. That evening we enjoyed stories around the campfire, and Alby now has the job as permanent camp cook after his legendary fruit dampers.

Tuesday was the first time that we had been really organised and we actually packed sandwiches to take with us to avoid the excess trips in and out of the cave. We filled tanks and started getting gear ready. There was a 4 year old girl and her grandfather down in the cave talking to us and swimming in the refreshing water. Paul and Terry had taken off from the end of the lake, and shortly after the tourists left. I was getting my gear together and started to suit up. Bob and Colin were in the sinkhole section and Norrie was ready to join them. I was ready to jump in when it happened!

The crashing and grinding of a rock-fall in the cave was an awesome sound. We were cast into sudden darkness and silence.

Time stood still before anybody said anything. The first words were "that didn't sound good" and proved to be the understatement of the decade. We dropped what we were doing and ran (??) up the hill to the bend in the cave where we saw light. A huge cloud of dust was rolling down the cave and for a while, until we got closer, the magnitude of the rock fall was not seen.

When we got there the area that the path had followed was buried under several metres of rock. This extended from the end of the large rock on the left side of the track down from the third ladder to the base of the flat area. The width was 5m in from the right side looking into the cave and about 10m from the left. Rocks the size of small cars had fallen. Thoughts then turned to the tourists that had left only minutes earlier, but as there was no sign of their car on the surface we could only assume that they were safe and well. It would have been all to close for them.

So down we went to the lake again to tell the others that were still diving - totally unaware of what had happened. We dropped a slate to Paul and Terry who were doing a safety deco saying "Last dive - the roof has fallen in." We had lost our brand new power cable and copper tube somewhere under the rocks, but luckily enough no other gear was missing. So now what do we do? was the question on everyone's lips. The cave would be closed at least temporarily, so we started pulling the gear out. Those of us who still had full tanks didn't want to carry them

from the cave - so we set off for the last dive of the trip down the railway tunnel. Once in the water it was a nice relaxing dive which led to thoughts of when we would be back. It only took a few hours to get all 10 sets of gear out into the doline where we could haul it up in the morning. There was still the odd rock falling so we skirted around the long way out of the cave. We left the gear in the doline, had a relaxing meal and a few drinks after which the rock-fall was reported to the police. There had been lots of tourists through that week including a large group of girl guides so safety was a factor in the decision.

Wednesday we finished hauling the gear out and were visited by the local police



Section of collapsed cave

Divers escape roof cave-in

Three South Australian cave divers have narrowly escaped being buried by a cave-in on the Nullarbor Plain.

The divers were exploring the freshwater Weebubbie Cave, about 15km north-west of Eucla on the Western Australian side of the border, on Tuesday afternoon.

Constable Tom Stafford, of

Eucla police, said the divers were under water and attached to a compressor by air lines when they became alarmed by a rumbling sound and surfaced.

A 30sq m area of the cavern roof collapsed, showering the entrance with boulders which crushed air hoses and damaged equipment.

Police closed the cave.

Article taken from the *Adelaide Advertiser* 10/10/96

Proposed Constitution by the Constitutional Committee

A considerable amount of work has been done by the Constitutional Committee to prepare the following proposed Constitution. It is published to generate discussion. The proposed constitution will go to vote at the next AGM. The Directorate wishes to acknowledge the hard work done by the committee.

CAVE DIVERS ASSOCIATION OF AUSTRALIA CONSTITUTION

1. **NAME:** The name of the Association shall be "Cave Divers Association of Australia Incorporated".
2. **DEFINITIONS:** In this Constitution and Regulations
 - 2.1 Association means the Cave Divers Association of Australia
 - 2.2 The Act means the Associations Incorporation Act.
3. **OFFICE:** The Office of Association shall be at such other place as determined by the National Committee. All changes to the office shall be distributed to the members within 30 days.
4. **AIMS AND OBJECTIVES:**
 - 4.1 The basic aims and objectives of the Association are to foster the development, advancement, promotion and research of underwater activities involving caves, caverns and sinkholes including safety, mapping, education, exploration and conservation aspects.
 - 4.2 Additional aims and objectives of the association include:
 - (i) to seek Government support and assistance for the attainment of the Associations agreed aims;
 - (ii) to accept subscriptions, donations, devises and bequests to enable the furtherance of the Associations aims;
 - (iii) to acquire, dispose of or otherwise deal with any real or personal property that may be considered necessary or convenient by the National Committee of the Association;
 - (iv) to liaise with land holders and other interested parties to promote cooperation and understanding with the Association;
 - (v) to promote and engage in other such activities and the provision of such other facilities as will enhance and are consistent with the stated aims and objectives;
 - (vi) to ensure adequate training and safety of all members and intending members.
5. **AFFILIATION:**

The Association may affiliate with any such other associations or bodies the aims and objectives or interests of which are considered by the National Committee to be in common with those of the association. It may also offer to such bodies recognised status by the Association, such status to be known as Affiliate Membership. Affiliate membership implies or requires no rights or obligations except contact and publication exchange; it serves to formalise official liaison for matters of common interest.
6. **INCOME:**

The income and property of the Association shall be applied solely to the furtherance of the aims and objectives of the Association as outlined in this Constitution and no portion of it shall be ceded to any of its members. This Association shall not be prevented by this clause from paying any members for any goods or services provided to it.
7. **MEMBERSHIP**

There shall be 3 categories of membership - General, Associate and Life.

 - 7.1 **GENERAL**

General Membership shall be open to any natural person. Any such applicant shall be deemed to be a member upon:

- i) Receipt of the completed application form and
- ii) Being accepted by the National Committee or it's designate as being a person having met the requirements of the association including:
 - (a) payment of the prescribed membership fee and annual subscription
 - (b) having passed the required certification level (ie cavern)
 - (c) any other requirements as set out in the regulations of the Association.

7.2 ASSOCIATE MEMBERSHIP

Associate membership shall be open to any person who is interested in the aims and objectives of the Association but does not fulfil the requirements of full membership. Any such applicant shall be deemed to have become an associate member upon:

- i) Receipt of the completed application form
- ii) Being accepted by the National Committee
- iii) Having paid the prescribed associate membership fee and annual subscription
- iv) An associate member may attend meetings of the association but has no voting rights.

7.3 LIFE

Life membership shall be open to any natural person who has contributed extraordinary service. A Life member shall be determined at the Annual General Meeting of the Association at which the motion may be nominated from the floor of the meeting. Life members shall have the same entitlements as general members.

8. CERTIFICATION LEVELS

- 8.1 Members shall be rated into levels of skill and experience. All members regardless of their level shall have equal membership rights and are eligible to stand for election with the Association.
- 8.2 Members shall only dive in a feature appropriate to the level of their certification.
- 8.3 The certification level of each feature shall be determined by the National Committee.

9. MEMBERSHIP FEES

- 9.1 Annual membership fees may increase by an amount not exceeding the current CPI as determined at an Annual General Meeting.
- 9.2 All fees other than Annual membership fees shall be determined at an Annual General Meeting.
- 9.3 Membership fees and subscriptions must be paid and a receipt issued before any form of membership is granted to any members.
- 9.4 Membership fees shall fall due on the 1st July annually. Any intending member who joins after the 1st May shall be deemed to be financial for the next financial year.
- 9.5 Any member whose membership fees are unpaid by 1st August shall pay a late fee. Any member whose membership fees are unpaid by 1st September shall cease to be a member. Any member so affected shall have the right to appeal to the National Committee.

10. RESPONSIBILITY

- 10.1 No member shall be authorised to represent the Association in any way or affix their name to any document relating to the affairs of the Association without the sanction of the National Committee.
- 10.2 No member shall carry out any resolution of any meeting unless requested by members at any meeting or by the National Committee.
- 10.3 No member shall make, authorise or issue any public statement whether written or verbal or in any way purport to represent the Association or its views on any matter, or make any statement which may in any way be associated with the Association except within the provisions of clause 10 of this Constitution.

11. RESIGNATION OF A MEMBER

Any member may resign by first giving 30 days notice in writing to the Secretary of the intention to resign, and upon expiration of that period of notice the member shall cease to be a member of the Association. Any member resigning from the Association or ceasing for any reason whatsoever (including expulsion) to be a member shall not have any right, title or interest in or to any property of the Association.

12. VIOLATION OF CONSTITUTION OR REGULATIONS

- 12.1 Every member undertakes to comply with the Constitution and the Regulations of the Association and any refusal or neglect to do so shall render such member liable to suspension, expulsion or any other penalty as set out in the Regulations of the Association or determined by the National Committee. Any member who has been penalised shall be notified in writing within 7 days of such penalty being imposed.

12.2 SUSPENSION

A majority ruling of the National Committee shall have the power to suspend a members cave diving certification for any breach of the Constitution or regulations, provided always that such member be given not less than 20 days notice in writing prior to the National Committee meeting to be held to deal with the complaint. That notice must provide full details of the nature of the complaint and the time and place of the National Committee hearing at which time such member is entitled to appear before the National Committee (with or without representation) for the hearing of the complaint.

12.3 EXPULSION

A majority ruling of the National Committee shall have the power to recommend to an Annual General Meeting or a Special General Meeting of the Association the expulsion of a member who is currently suspended for any breach of the Constitution or Regulations. The National Committee may suspend such a member pursuant to clause 12.2 of this Constitution until such time as the next Annual General Meeting or Special General Meeting, whichever be the sooner, is held.

12.4 APPEAL

Any member who has been suspended or expelled or penalised by the Association shall have the right to appeal such penalty, but such appeal shall be lodged with the Secretary within 14 days of written notice being received by the person. If any such appeal be lodged a Special General Meeting shall be held at which meeting the penalised member shall be summoned and who shall be entitled to explain their actions or answer the charges. A majority ruling of the members present shall decide on the penalty.

13. FINANCIAL YEAR

The financial year of the association shall end on the 30th day

of June each year.

14. NATIONAL COMMITTEE

The National Committee of the Association shall consist of the National Chairperson, Secretary, Treasurer, Site Officer and Standards Officer. These office bearers shall be elected in accordance with this Constitution. Subject to this Constitution, the National Committee shall manage the affairs of the Association and,

- 14.1 Shall make regulations in conformity with this Constitution as deemed necessary for the carrying out and managing affairs of the Association.
- 14.2 Shall fill any casual vacancy within the national Committee for a maximum of 3 months after which an election shall be called.
- 14.3 Shall deal with applications for membership and resignations of members.
- 14.4 Shall interpret the Constitution and Rules and Regulations of the Association.
- 14.5 Shall carry out all resolutions passed at any meeting of the Association.
- 14.6 Shall deal with any matters which may arise in the day to day running of the Association.
- 14.7 Recommend the penalty for any member who contravenes the Regulations of the Association in accordance with item 12 of this Constitution.

15. DUTIES OF THE NATIONAL COMMITTEE

15.1 NATIONAL CHAIRPERSON

The National Chairperson shall:

- i) Preside as chairperson at all meetings of the Association
- ii) Authorise all statements for publication or general release to the public
- iii) Prepare an Annual Report of the activities of the Association for distribution to the members not less than 21 days prior to the Annual General Meeting
- iv) Be responsible for legal and insurance matters relating to members, sites, landowners and other interested groups
- v) be an ex-officio member of all sub committees of the Association
- vi) have the casting vote at meetings of the Association
- vii) be responsible for all duties or responsibilities not otherwise undertaken
- viii) have the power to delegate responsibilities as the need arises.

15.2 SECRETARY

The Secretary shall

- i) assist the National Chairperson and in his/her absence or inability to act, exercise all powers and perform all of the duties of the national Chairperson
- ii) be responsible for the administrative organisation of the Association and the keeping of all records.
- iii) keep an up to date copy of the Constitution and Regulations and make copies available upon request
- iv) conduct all correspondence of the Association
- v) prepare all necessary agendas for any meeting and ensure that all mailings are distributed within the required time frames
- vi) upon advice, call all meetings of the Association and notify all relevant members
- vii) take minutes of all meetings and keep them in accordance with the Act
- viii) maintain a record of all Special Visitor Permits issued

- ix) provide a written report to the National Chairperson of any infringements, by any member, of the Constitution or the Regulations
- x) be responsible for issuing all certification cards
- xi) have the power to delegate responsibilities as the need arises.

15.3 TREASURER

The Treasurer shall

- i) keep all necessary account books
- ii) receive all monies belonging to the Association and within a reasonable time, deposit or arrange to deposit such monies with the Associations bankers.
- iii) authorise and pay all accounts as required
- iv) maintain a record of members including their financial status and advise members of any fees due
- v) prepare and submit the books of account to the Auditor each year
- vi) prepare and submit a duly audited Annual Report, Balance sheet, and other financial statements, and transactions and all bank balances, and a budget to be distributed to the members not less than 21 days prior to the Annual General Meeting
- vii) have the power to delegate responsibilities as the need arises.

15.4 SITE OFFICER

The Site Officer shall

- i) liaise with the members of the Association, landowners and other interested groups in respect to obtaining and maintaining dive site access
- ii) have the power to delegate responsibilities as the need arises
- iii) be an ex officio member of the "Mapping and Research" sub committee

15.5 STANDARDS OFFICER

The Standards Officer shall

- i) keep a list of members holding current Certification Instructor status
- ii) undertake and be responsible for ensuring compliance with the provisions of the Instructors Manual
- iii) provide a written report the National Chairperson of any infringement by an Instructor of the Constitution, Regulations, Instructors Manual or diving standards contained within the Regulations
- iv) consider any applications for Instructor appointments and at his/her discretion endorse the appointment
- v) have the power to delegate responsibilities as the need arises.

16. OFFICE BEARERS & ELECTIONS

- 16.1 Office bearers of the Association must be financial members of the Association and must be residents of Australia.
- 16.2 The Office Bearers of the Association shall be elected at the Annual General Meeting or a Special General Meeting of the Association and shall, subject to this constitution, hold office until the next Annual General Meeting.
- 16.3 At each Annual General Meeting the Chairperson shall declare all positions vacant. Nothing shall prevent retiring office bearers from re-nominating.
- 16.4 All nominations for the office bearers must be in writing and be signed by the Nominee, the proposer and the seconder. The proposer and the seconder must be financial members of the Association.
- 16.5 Members must be given not less than 45 days written

notice of polling date, calling for the written nominations of candidates for the Office Bearers. Nominations must be received by a Returning Officer not less than 35 days prior to the polling date. A list of validly nominated members shall be distributed not less than 21 days prior to the Annual General Meeting or Special General Meeting.

- 16.6 Any office bearer of the Association may at any time be removed from office by resolution duly passed at a duly constituted meeting of the Association. The position shall then be filled subject to item 14.2 of this constitution.

17. SUB COMMITTEES

- 17.1 A subcommittee may be formed as a need arises by the National Committee. Each subcommittee shall be accountable and be subordinate to the National Committee, and shall be formed for a fixed term.
- 17.2 A "Mapping and Research" sub committee shall be elected and be responsible to the National Committee. The Site Officer shall be an ex officio member of the sub committee.

18. PUBLIC OFFICER

A public officer shall be appointed from the general members of the Association and shall not be an Office Bearer. The National Committee shall be responsible for appointing the Public Officer.

19. MEETINGS

The following types of meetings may be held for the members of the Association as required by this Constitution or at the request of members:

- 19.1 General Meetings
- 19.2 Special General Meetings
- 19.3 Annual General Meetings
- 19.4 Committee Meetings

20. GENERAL MEETINGS

All general meetings will be held in a location determined by the National Committee that best services the majority of members.

21. SPECIAL GENERAL MEETINGS

A Special General Meeting shall be convened whenever the National Committee or the Public Officer deems necessary or upon a written request from not less than 50 members. The meeting shall be held within 35 days of the written request. The time for the meeting shall be determined by the National Committee and will be held in a location that best services the majority of members. Notice of such meeting shall be given in accordance to clause 24.a of this Constitution. No business other than that notified shall be transacted at the meeting. The written request shall be signed by those requesting and shall be sent to the Public Officer of the Association, and shall state the object(s) of the meeting.

22. ANNUAL GENERAL MEETINGS

The Annual General Meeting of the Association shall be held at a date to be fixed by the National Committee between 1 September and 29 September each year. The business to be transacted shall be in the following order:

- 1. Welcome and Opening
- 2. Present
- 3. Apologies
- 4. Acceptance of the minutes of the previous AGM
- 5. Business Arising from the previous AGM
- 6. Adoption of the Annual Reports
 - Presidents
 - Any others
- 7. Adoption of the Financial Reports
 - Financial Statements
 - Balance Sheet

- Budget
- Appointment of an Auditor
- 8. Elections
 - Personal voting
 - Results of postal voting
- 9. General Business
 - Election of Life Members
- 10. Close

The minutes, annual reports, financial reports and any other business to be transacted shall be distributed to the members not less than 21 days prior to the Annual General Meeting.

23. COMMITTEE MEETINGS

The committee of the Association shall meet at least 4 times per financial year. The meetings shall be open to the membership of the Association and the minutes and financial records of the Association shall be available to the membership on request.

The quorum for a committee meeting shall be 4 office bearers.

24. PROCEDURES FOR MEETINGS

Save where otherwise expressly provided in this Constitution the following procedures shall be complied with for any general meeting for the members:

24.1 NOTICE OF MEETING

Not less than 35 days prior notice shall be given by the Secretary to all members eligible to attend such meetings. Such notice shall be by prepaid post to each member at their address appearing in the records of the Association and shall state the place, time, and date of the meeting. An agenda shall be available stating nature of business to be voted upon 7 days prior to the meeting.

24.2 QUORUM

24 members personally present and entitled to vote shall constitute a quorum for the transaction of business at any meeting listed in clause 18. If a quorum is not present after one half hour of the time appointed then the chairperson shall arrange a further meeting in accordance with clause 24.1. No item can be voted upon unless a quorum is present.

24.3 MEMBERS MOTIONS

A member desiring to bring business before a meeting shall give 21 days notice of that business in writing to the Secretary.

25. VOTING

25.1 GENERAL

- i) A member is not entitled to vote unless they are financial.
- ii) Each member shall have 1 vote per question or motion at any meeting. Such vote may be personally, postal or by proxy.
- iii) The election of the Officers of the Association shall take place by ballot at the Annual General Meeting by personal, postal or proxy voting. The Chairperson shall appoint 2 scrutineers who shall report the result of the ballot to the Chairperson. A returning officer shall be appointed who shall report the result of any postal votes to the Chairperson. Each nominee may appoint a scrutineer for the counting of votes. The returning officer shall be a non contestant.
- iv) All questions shall be duly proposed and seconded and shall be determined by a show of hands unless a ballot is requested by at least 25% of voters present. The Chairperson shall appoint 2 scrutineers who shall report the result of the ballot to the chairperson.

25.2 PROXY VOTING

- i) A member not otherwise voting shall be entitled to appoint another member as proxy provided that both members are financial.
- ii) The form of appointment of proxy shall state names, addresses and CDAA numbers and shall set out the date of the intended meeting, and it must be signed and dated by the person appointing the proxy. The proxy shall be in the hands of the Secretary not less than 1 hour before the commencement of the meeting.

25.3 POSTAL VOTING

- i) A member not otherwise voting shall be entitled to use a system of postal voting except where otherwise provided for in this Constitution.
- ii) A postal vote shall only be made upon a form approved and provided by the National Committee for that purpose. That form shall protect the anonymity of the voter and be confidential.
- iii) A returning officer shall be appointed by the National Committee and shall be a non contestant.
- iv) Postal vote forms shall provide notice of the motion.

26. ALTERATIONS TO THE CONSTITUTION

The Constitution of the Association may only be altered at an Annual General Meeting or Special General meeting of the Association subject to the following:

- 26.1 The amendment shall be notified by the proposer in writing to the Secretary at least 20 days prior to the date of the next meeting.
- 26.2 The Secretary shall notify each member in writing of the proposed alteration.
- 26.3 Members unable to attend the meeting may submit their proxy votes. No postal votes shall be accepted for the Constitutional changes.
- 26.4 The Secretary shall advise all members in writing of the duly passed amendments within 14 days of it being passed and such alteration shall come into effect 7 days after the posting of such notice.

27. WINDING UP

- 27.1 If at any meeting a resolution for the dissolution of the association is motioned, then the resolution must be passed by no less than 80% of all financial members.
- 27.2 If upon dissolution of the Association, there remains after all liabilities have been discharged, any assets, those assets shall be distributed to any other organisation whose aims and objects are similar. Such distribution shall be determined by the members at a special general meeting to be held at or before the time of dissolution.

28. THE SEAL

- 28.1 The Association shall have a common seal upon which its corporate name shall appear in legible characters.
- 28.2 The seal shall not be used without the authorisation of the National Committee and every use of the seal shall be minuted in the minute book of the Association.
- 28.3 The fixing of the seal shall be in the presence of at least 2 Office Bearers and 1 other member of the Association.
- 28.4 The seal shall be kept in the custody of the Secretary or such other member of the Association as shall be decided by the National Committee.

29. NOTICES

Any notice required to be served in accordance with this Constitution may be served on behalf of the Association by posting it to the last address held on file by the Association. Where such document is properly addressed, prepaid and posted to a member it shall be deemed to have been received at the expiration of 3 clear business days from the posting.

Nitrox Update

Greg Bulling
National Director
Cave Divers Association of Australia
Ph: 0412 209 706
e-mail: gbulling@dove.mtx.net.au

7/2/97

To the Landowner,

This letter is a follow up to information circulated in "Guidelines" issue 59, relating to the use of Nitrox 32% and 36% breathing mixtures by CDAA qualified divers.

As a result of extensive discussion on the issue, the Sinkhole Liaison Committee endorsed the CDAA Nitrox policy during their meeting of November 4th.

CDAA divers who hold Nitrox certification with recognised agencies, will be able to have their CDAA card endorsed with this information in the near future.

There will be no requirement for CDAA certified divers to notify landowners of their intention to use Nitrox, unless specified by individual landowners.

If you have any queries in relation to this issue please feel free to contact me at any time, on the number above.

Yours sincerely

National Director.

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"Guidelines" magazine is circulated to over 1200 members and retail outlets.

Back page	2 colour	\$350.00
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		Cave Diving - A Blueprint for Survival. A book by the world-renowned cave diver, the late <i>Sheek Exley</i> , this is a case study of a number of accidents that have occurred in the USA and how to avoid them.	\$15.00	
		Basic Underwater Cave Surveying. The standard publication for anyone remotely interested in research and survey techniques used in water filled caves.	\$15.00	
		CDAA Occasional Paper No. 2, From National Conference 1981. Includes topics such as Fossil Cave, Belay Techniques and Cocklebidy 1979.	\$8.00	
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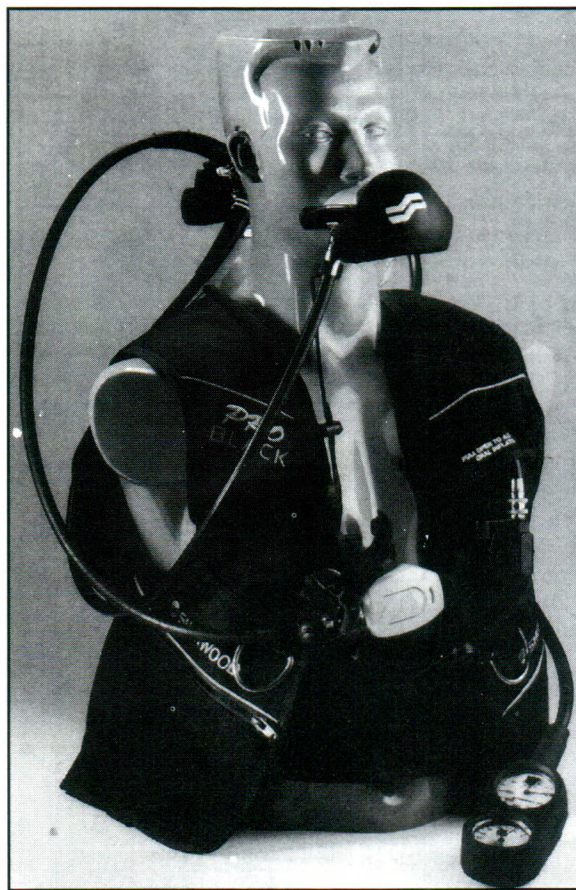
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