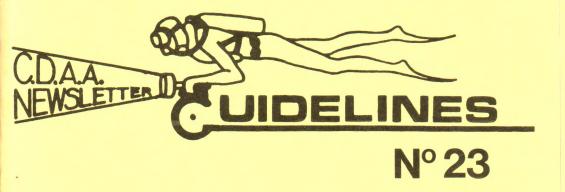
## DECEMBER 1985/JANUARY 1986



## CAVE DIVERS ASSOCIATION OF AUSTRALIA

(Incorporated in South Australia)

C.D.A.A.

P.O. Box 2161 T

G.P.O. Melbourne, 3001

C.D.A.A.

P.O. Box 290

North Adelaide 5006

## DIVER'S DIARY

#### SPECIAL GENERAL MEETING

C.W.A. Hall

Lawrence Street MOUNT GAMBIER

To Be Held On: 15th March, 1986 - See inside for more details

Closed until 30/4/85. But this will be reviewed in February.

EWENS PONDS

Re-opens 21st December

May be closed during the Summer. Be prepared if Reg Watson says NO!

CAT. 3 TEST

As Pics is closed until the end of April, the test usually held in March will either be held at a different venue or else deferred until Pics is re-opended. YOU WILL BE NOTIFIED.

#### COMMITTEE CONTACTS

South Australia:

Peter Ginnane (08) 382 2729 (H)

(08) 225 5852 (W)

Victoria:

Bill Bernhardt (03) 725 9716 (H)

The above numbers are provided should you need to contact the committee urgently and cannot wait for a postal reply. Please use these numbers thoughtfully and at civilized hours.

### **GUIDELINES**

### Newsletter of the Cave Divers' Association of Australia

#### ISSUE NO. 23 - DECEMBER 1985/JANUARY 1986.

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## **EDITORIAL**

This edition of Guidelines comes to you within a record time of the last one and at a record size! We have tried to supply you with as much information as possible on the issues currently facing the CDAA. The views of and actions taken by the Committee and other members are presented in full. Hopefully future editions can revert to more about cave diving and less about cave diving politics!. Meanwhile we hope that the information presented in this Guidelines will enable members to decide for themselves on what basis they would like the Committee and the Examiners to interact. It is the responsibility of all members to be involved in the decision making that now faces the CDAA. As Editors of Guidelines we would welcome any correspondence from the membership expressing individual views. Where room permits these will be published. Finally, every CDAA member should vote, whether in person or by proxy, at the special general meeting this coming March, where these issues will hopefully be resolved.

We wish you all a happy Christmas and lots of good cave diving in the New Year.

Cheryl Bass Judy Minervini

Co-Editors

## DIVER'S ROLE

"The Mt. Gambier sinkholes are unique because of the conditions of the surrounding rock. There are very few areas of the world with this pattern; we are fortunate to have access to these, and any efforts on our part to preserve and increase this access should be maintained".

from "Cave Diving in Australia" by Lewis and Stace.

#### CDAA NEWS

#### 1. Rules and Regulations

The rules and regulations concerning examining are near completion. All examiners, the committee, the South Australian Police Underwater Recovery Squad, and Landowners have been sent a copy (third week November 1985)

#### 2. Re-opening of Ewens Ponds

Ewens Ponds will re-open on 21st December, 1985 at 6.00 am. The purpose of closure was to encourage natural regeneration of aquatic vegetation within the ponds. The progress of this regeneration is being monitored by officers of this Department in conjunction with Dr N. Hallam of Monash University

In future it is likely that the Ponds will be closed temporarily for 3months annually from September to December. The Department of Lands is currently arranging for the replacement of the landing in Pond 3 with a more appropriate and satisfactory structure.

### 3. Recreation access to private land project

The CDAA has received a questionnaire to gather basic information for this project. The Department of Sport and Recreation have funded the Victorian Outdoor Education Association to research into the issues of recreation access to private land.

The project seeks to identify and suggest remedies for key legal, financial, social and environmental issue involved in recreation access to private land, through consultation with individual landowners, landowners association, recreation organizations, government departments and other interested groups. The focus is on recreation activities sponsored by organized recreation groups, rather than on access by individuals. The project aims to produce a public access kit containing a clear explanation of the legal and other issues involved in access to private land by recreation groups. The kit will be freely available to any organization or persons who wish to use it.

Peter Horne on behalf of the CDAA has replied to this questionnaire.

#### 4 . TEMPORARY CLOSURE OF THORNDON PARK RESERVOIR

South Australian members might be wondering about the recent closure of the Thorndon Park Rservoir to cave divers for training and testing purposes.

Recently, the Association was notified by the Campbelltown Cou ncil that the water had become polluted, and further enquiries with the Institute of Medical and Veterinary Science confirmed this. The problem as that the bacteriological levels had risen surprisingly high since the first winter rains, and it was recommended that divers should not ingest water or, in fact, even let it enter their ears until the levels had returned to normal.

The Council is continuing to observe the pollution level of the water and has promised to contact the Association as soon as levels have become acceptable again. This should occur around the summer period, when there is little or no inflow from surrounding creeks or drains.

#### 5 SPECIAL GENERAL MEETING

This has been convened to

report on; Next Review Committee Meeting scheduled for the end of February '86.

- vote on; 1) Acceptance of examiner rules and regulations based on or extracted from the proposed examiners manual.
  - 2) Other rules and regulations.
  - 3) Any requested constitutional changes.

Any member who wishes to have proposed constitutional changes voted on at this meeting must send their proposals to the National Secretary by 25th January, 1986 so that all member can be informed in writing 30 days prior to the meeting.

#### NATIONAL SECRETARY'S ANNUAL REPORT 1984 - 1985

This report of the administration of the Association over the past year includes items not mentioned in the President's report which need to be considered for the future.

Although the Association's administration proceeded relatively smoothly during the year, several problems and incidents occurred which I would bring to the attention of members.

These include:-

- . the communication problems that existed between the two State Committees and the examiners subcommittee. This was essentially due to the distance separating the committees and the lack of any full-time administrative support. The Association can only continue as a National body as long as future Committees recognise these problems and attempt to minimise their effects.
- . several 'incidents' during the year in which the Committee was forced to suspend or censure Association members. While these actions were unpleasant for the Committee, unless the Association can show itself to be capable of self-regulation, its standing as the recognised body governing cave diving in the Mount Gambier area will be diminished. If members wish to retain access to the sinkholes which the Association has negotiated with landowners, they must be prepared to abide by the Rules of their Association.

I would like to thank my fellow Committee members for their work over the past year and those members of the previous year's Committee for their advice and assistance.

# CDAA NEWS .. CDAA NEWS .. CDAA NEWS. \ LETTERS .. CDAA LETTERS .. CDAA LETTEF

THE EXAMINERS' PROCEDURE MANUAL .. P.P.GINNANE (a view from the majority of S.A. committee)

#### WHAT IS THE EXAMINERS' MANUAL?

It's a document commenced several times over several years to define the procedures for examiners and candidates during the processes of attaining various levels of categorisation.

During the last 2 years the NTO has input personal effort and resources to collate examiner input and produce the present compilation.

The contents are as defined on the index to the document.

#### IS IT NECESSARY? IF SO WHY ? \_\_\_\_\_

MOST DEFINITELY !! For the same reasons as any of the rules and regulations of the CDAA -- i.e. to have a common reference for all Committee, instructors, examiners and candidates to use for categorization purposes. Every involved member MUST adhere to these rules and regulations or suffer the consequences. In the past some persons have deliberately flaunted the rules and claimed that they have no written terms of reference and cannot therefore be held responsible.

#### WHY THEN THE DELAY ?

The document was presented, particularly to the divers in South Australia, in a manner that appeared suspicious and of undue haste, and those members who had enough interest and responsibility in the affairs of the Association wanted a look at these rules prior to voting for their inclusion as part of the CDAA rules.

The Committee was, and is, bound by the Constitution and 1985 S.A. Associations Incorporations Act to sanction and THEN recommend the appropriate action to the members at a form of general meeting. It is of interest to note that Committee members may not vote on issues in which they may have a direct or indirect pecuniary interest in the matter to which the vote is being applied. Where do the examiner committee members and dive shop franchise holder committee member stand when voting on a manual that is discussing examiners who must, by the examiner accepted rules, be a professionally qualified instructor with an approved body, and the shops will wish to run courses for cave divers that will be tested by these instructor/examiners.

The Committee of the CDAA is responsible for the affairs of the CDAA and all sub-committees. The examiners are represented by an examiner sub-committee.

#### OK, NOW THE COMMITTTEE HAVE SEEN IT, WHY HAVEN'T WE SEEN IT ?

The proposed manual contains many points of conflict involving examiner accountability to the Committee and CDAA members. and controversial changes to standards e.g. testing one's own students without an independant examiner present.

There are areas of the manual open to interpretation that allowed a shift of accountability and responsibility from the committee to the examiners, particularly to the NTO.

It is particularly important to note that the Committee can AUTHORISE the examiner sub-committee to function within a set of rules and regulations, but the COMMITTEE is RESPONSIBLE for functions performed by that sub-committee in the name of the

What are seen as critical areas appear to involve a lowering of standards and consequent affect on safety. This has to be resolved to cover not only the present but also future Committees and examiners.

It has to take in to account that examiners must now be qualified instructors. This means that the instruction will almost invariably be done thru' a dive shop and we must ensure that standards and safety are not relaxed for the benefit of pecuniary interests.

There are very real and welcome training benefits from using qualified instructors, but whereas it may be acceptable to have a candidate marginally pass an open water test, it is mandatory that a cave diver is assessed as competent to the level examined and has a definite pass rating. The shops MUST be prepared to fail candidates who do not reach the acceptable standard competently.

It removes from the committee the direct ability to reprimand and/or suspend an examiner from examining if deemed appropriate. This may not necessarily result in suspension as a categorised diver.

#### RIGHT. NOW WHAT'S BEING DONE TO ACCEPT IT ? \_\_\_\_\_

- .The controversial Constitution change ensures safe practices for the present.
- .The Committee are in the final stages of recommending changes to the manual. Some examiners have provided feed-back.
- .The structure of the manual is not logical and will require review following acceptance of the principles.

WHY CAN'T WE EXTRACT THE STANDARDS SECTION AND USE IT ?

## A LETTERS . CDAA LETTERS . CDAA LETTEF , LETTERS . CDAA LETTERS . CDAA LETTEF

#### PART 1 of the proposed manual: -----

The administration and accountability of the examiners is inextricably tied to the procedures of examining.

### PART 2 of the proposed manual:

The standards to which TRAINING should be done can only be a recommendation for all instructor groups. We can specify mandatory requirements but not how any organisation should conduct its affairs and TRAINING.

We CAN however, and WILL define how and to what standards the candidates are EXAMINED to attain a successful categorisation. The examiner sub-committee will be AUTHORISED to set those standards, but the COMMITTEE will be RESPONSIBLE for them.

### PART 3 of the proposed manual:

To assure consistency standardised forms identified in this section should be available concurrent to the release of the examiner/candidate rules and regulations.

ARE THE COMMITTEE TOO NARROW IN OUTLOOK ?

#### ON WHAT BASIS ?

On the basis that high standards of testing and safe diving practices are paramount.

Read the attendee list and events of the meeting of 16 November 1985 at Mt. Gambier called by NPWS.SA. These people all independently emphasised two major points:-

- 1. The CDAA has done a fantastic job and has been able to show more ability to control diving than landowners. Reg Watson of Barnoolut demands a person have in possession a current CAT card before permission will be given. i.e. a CDAA card.
- 2. There has been an observed lowering of standards and a fear of reduction of the level of safe practices.

#### NOTE FROM THE VICTORIAN COMMITTEE

The examiners manual is a manual of current examiner procedure. The manual does not change examiner standards. Standards have since been altered by the 1985 AGM.

The Victorian Committee strongly refute any suggestion that standards have been lowered. This is inaccurate and highly damaging to the CDAA. We believe that this statement stems from a few isolated incidents which should be balanced against the numerous instances where the standards have actually been raised. - 7 -

#### THE COMMERCIAL VIEW POINT

I find it strange that most people who are critical of the integrity of both shop courses and standards of instructor examiners have never taken the trouble to come and witness or be involved with any of these courses so that they can form an unbiased and accurate view of their content rather than make statements and suppositions without first hand knowledge.

Furthermore, it would be foolish and short term for any shop to lower standards and therefore to risk the possible disastrous outcome on the life or well being of a student, not to mention the possibility of litigation.

The CDAA committee and examiner body need to start working together in the near future to prevent further erosion of the credibility of the CDAA. The average cave diver is fed up with politics.

Please committee and examiners get together and resolve the problems.

John Bent SA Regional Director of FAUI Proprietor of A.S.D.C. CAT. 3 Diver (6 Years)

#### TO THE S.A. COMMITTEE.

When are you guys going to surface and let that nitorgen dissolve out of your brains; you must be narked to suggest the comments written by Mr. P. Ginnane and received by myself a few days ago.

Firstly get your facts straight. Instruction is mainly conducted through professional dive shops because the C.D.A.A. will not take the initiative to run cave diving courses themselves.

Professional dive shops make very little profit (if any) from courses. Profit is made from selling gear to students on completion of courses.

Dive shop proprietors often have many tens of thousands invested in the diving industry. To suggest that standards be "relaxed for the benefit of pecuniary interests", I find personally insulting.

Diving instructors and examiners have spent thousands of hours and three times as many dollars to qualify themselves to examiner status and can generally train and examine participants up to dive master qualification including deep diver and search and recovery diver to name two. However, Cat. 1 and 2 cave diving are different and an independent examiner is to be present. Once again the inference here is insulting and degrading and also increases course costs.

Come on guys come to the surface and start acting like a truely professional and national organization, start co-operating with the Victorian Committee and Examiners alike. Put some unity back into the C.D.A.A.

Could I also suggest that you put your energy into cave diver training or orientation courses and leave the selling of elbow swivels to the pro. dive shops (around \$22 not \$30).

> Russell Kitt Dive Shop Proprietor, Cave Diver Examiner, Regional Director FAUI. Past President C.D.A.A.

# LETTERS . CDAA LETTERS . CDAA LETTEF & LETTERS . CDAA LETTERS . CDAA LETTER

#### THE EXAMINERS MANUAL : THE REAL STORY!

I have purposefully refrained from commenting publicly on any of the issues currently involving the CDAA committee and examiners in the hope that common sense might prevail and a solution that was beneficial to all be found. This is apparently not to be. I would like to use this article to explain why an examination manual is essential for the CDAA, how I believe examinations and standards should be run and finally, to let the membership know how little the committe has assisted in the development of these ideas.

#### (1) What is the examiners manual?

As recently as two years ago examining standards were not consistent between South Australia and Victoria. Each State tended to produce its own guidelines for examining, both via State examiner meetings and each State committee. When I became MTO I undertook to produce one uniform set of guidelines that all CDAA examiners would work to. This was done in the form of a manual containing 2 sections, one outlining the testing procedures and standards and a second outlining the administration of the examiner body and its standards.

The CDAA examiner body includes many of Australia's most experienced cave divers, many of whom have international experience and standing. Most have served on the CDAA committee at some time. After a large amount of work a manual was produced that the majority of these people agreed to.

It should be noted that this was the first time that Victorian and South Australian examiners agreed on the same set of procedures and standards. The manual therefore represents a distillation of 10 years of CDAA examining techniques and experience coupled with the input of many of Australia's leading cave divers and professional scuba instructors.

#### (2) Involvement by the Committee

At the March, 1985 Category 3 test and committee meeting copies of the manual were distributed to all committee members who were present. Input, comments and suggestions were requested. None were received, then or subsequently. Leading up to the September AGM the CDAA had received informal criticism from more than one source concerning the lack of written standards (This criticism has surfaced more publicly in recent weeks). I had therefore hoped that following almost two years of work and negotiations and having handed the manual to the committee six months previously, that it would be accepted as the CDAA's formal standards document. I was more than a little disconcerted to discover that a major campaign to block the manual had been started in South Australia. A complete lack of input to the manual by the South Australian Committee was followed by sheer obstructionism that prevented the manual even being discussed at the September AGM. At the Victorian State AGM, the Victorian general membership passed a resolution that the manual should be discussed at the forthcoming National AGM. This was not done because the South Australian committee ruled the Victorian general meeting unconstitutional because it occurred one day earlier than it was supposed to!

Following the National AGM, at which outgoing committee members claimed that they couldn't discuss the manual because they hadn't seen it, the incoming South Australian committee found 3 copies in the committee files. Presumably, these had languished there since March, six months earlier.

Unfortunately, no action can be taken against those committee members responsible because there is no practical way in which the committee is accountable to the membership. The committee is never obliged to tell the membership what it is doing, and at the end of the year it steps down and thereby avoids all further consequences for its actions.

The examiners manual issue resolves down to one or two very succinct points of principle. These are:

- A. As stated, the manual represents the majority view of the CDAA's most experienced and highly qualified group of divers. These views represent an accumulation of over 10 years of cave diving and examining experience.
- B. Some members of the present Committee feel that the examiners manual represents a threat to their all powerful role within the CDAA. However, while in theory the CDAA Committee has always been all powerful (as defined by the Constitution), in practice this has not been the case. For example, non-examiner committee members have never used their power to over-rule examination results, even though it would be quite within their rights to do so. Thus, we have a ridiculous situation where people elected to a political position on the Committee have a right to interfere in the daily dealings of standards and examining, despite this task being officially designated to a specially selected group of highly qualified cave diving examiners.

While this system may have been acceptable when examining standards were not documented and varied from examiner to examiner, it is not so now. T believe that once a manual has been produced by the CDAA's most qualified examiners, it would be completely unacceptable for present or future committee members, with no examining experience and very limited knowledge of the latest theories behind instructional and examining technique to attempt to change the CDAA's examining standards, especially if it is against the advice of the examiner body.

One concern that has been voiced is that of control over the Examiner body. In fact little has changed here. The NTO acts as the executive officer for the examiner body, and must be re-elected every year. The manual also outlines the procedure for removing the MTO in mid-term should enough examiners wish to do so. In other workds, the NTO is far more accountable than the National committee. Each examiner appointment. censure and sacking must be ratified by the Committee prior to it happening. At no stage does any examiner gain immunity from the Committee. In other words the examination manual is an additional set of rules and regulations on top of those that already exist, and in no way reduces or negates the power of the Committee to control examiners as individuals. What it does do is to set the standards of the CDAA in such a way that the Committee no longer has the right to change them without agreement from the Examiners.

# LETTERS . CDAA LETTERS . CDAA LETTEF \ LETTERS . CDAA LETTERS . CDAA LETTER

In summary, let me say that I am deeply disappointed with the petty and negative attitude of some members of both the former and current South Australian committees. I have written this potentially damaging article because I feel that these people are not acting in the best interests of the CDAA and that the division that they have created between the committee and the examiners and more importantly between South Australia and Victoria is now beginning to alarm both government and private landowners. I would like to assure all CDAA members and landowners that as National Testing Officer I do not believe that there has been any lowering of standards. I also believe that the committee is unqualified to administer examining standards in a professional manner and now that these have been documented in a manual they should be formally accepted by the CDAA and left with the examiners to implement, as they always have been. Finally, I have gone into print on this issue in the hope that the general membership of the CDAA will start demanding that its committee does at least one of the jobs for which it was elected, without in the process destroying the examiner body and the CDAA.

PETER ROCERS National Testing Officer

### DOUBLE FATALITY IN NEW SOUTH WALES SEA CAVE.

Two scuba divers were killed and several others were injured in a sea-cave accident in N.S.W. which was reported in the July-September issue of the South Pacific Underwater Medicine Society Journal, from the files of "Project Stickybeak" (Provisional Report on diving-related fatalities in Australian waters, 1984).

The dive party consisted of nine divers, split into a group of four and another of five. The victims, who led the group of four, swam ahead of the other two in that group when an unexpected sea surge funnelled up the cave, throwing everyone around violently. The two divers near the cave's exit descended from the surface and attempted to leave, seeing the victims' torch still aglow in the darkness when a second heavy surge again forced them to the cave's surface, where one diver hit his head on the roof and the other lost her facemask. Despite the near panic, these two divers successfully exited the cave.

Outside the cave they came across other divers from the five-diver team who were supporting an unconscious member of their party and giving EAR; this proved to be a life-saving manoeuvre for this fortunate diver, who recovered successfully. A diver in the group of five was also badly injured in another part of the cave by the surge when he knocked his head, had his regulator torn out and his arm injured, being unable to replace his regulator. By chance he found himself close to another diver, who saw his predicament and commenced buddy-breathing as they exited. However, another surge separated them and dislodged the buddy's mask, but nevertheless he re-established contact and continued to buddy-breathe, holding the injured man's weightbelt to prevent further separation during their final exit.

The two experienced divers who remained in the cave perished when they had been thrown about the cave's walls, after their 1st-stage attachments had been damaged, venting their air supplies. It is noteworthy that although five of those involved had completed their training only 2 to 4 months previously, they acted in such a way that prevented at least two additional deaths, despite so many adverse factors.

This accident demonstrates once again that ALL caves, no matter where they are or how far they go, should be treated with the special consideration and respect they deserve.

Peter Horne.

## CDAA NEWS .. CDAA NEWS ..

FINANCIAL REPORT 1984/85

#### OPENING BALANCE:

SOUTH_AUSTRALIA		VICTORIA
(21/9/84)	\$2,262.19	\$3,905.33

#### SUMMARY OF INCOME:

Sale of T-Shirts, wind-	Sale of T-Shirts, wind- \$ cheaters, stickers,
elbow joints, guidelines 756	
Interest 28	3.12 Interest 136.46
Subscriptions 4150	.00 Subscriptions 3700.00
Sundries	.00 Sundries 120.00
\$4971 + Op. Bal. 2262	
\$7235	8.31 \$8271.79

#### SUMMARY OF EXPENSES:

Postage	900.62	Postage	166.70
Phone Calls	325.00	Phone Calls/Slides	89.20
Printing/Copying :	1219.07	GUIDELINES	1041.39
Hall Hire	90.00	Hall Hire	52.00
Stamps	253.34	Exam Fees	100.00
P.O. Box Reg/Redirect Fees.	68.40	Display Expenses	98.88
CDAA Research Group Costs .	319.88	T-Shirts/windcheaters .	862.00
Stationery/Elbow Joints	998.29	Stationery/Records	380.10
Typewriter Repairs	220.00	Committee Meetings	150.00
Guideline	267.00	Bank Charges	9.84
Sundries	196.00		
\$	4857.60		\$2950.11
_		less unclaimed cheque	,
		crieque	33.00
			2915.11
BALANCE AT 9/9/85 : \$2	2375.71		5356.68
			0000.00

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C.D.A.A. RESEARCH GROUP ANNUAL REPORT 1984 - 1985

During this last year, research work has continued with the completion of the report and map production for Project Number 2 (The Shaft) and the undertaking of the next major project - the mapping of Piccaninnie Ponds.

#### Project No. 3.

The Pics project proved to be very successful and enabled a number of members to participate for the first time in a survey project. I am sure that all the 18 divers involved found the work not only interesting but also very useful in advancing their general cave diving skills. As a result of this project the CDAA now has a detailed and comprehensive map of the Chasm and Cathedral sections of Pics. A report detailing the background of the study, history of the Ponds, survey methods used, survey results and the subsequent plan and section drawings was prepared by Peter Horne the co-ordinator of this project. The result is very gratifying and a copy of the report has been presented to the National Parks and Wildlife Service whose assistance in the project is greatly appreciated.

In spite of this survey work however, a great deal of further research needs to be done on Pics including mapping of other surrounding features and a detailed long-term biological and hydrological study. It is hoped that further projects will be organised in the future to build on the work which has so far been accomplished.

#### Project No. 4.

The next proposed major project is the detailed survey of Englebrechts Cave. This Category 3 cave is located in the suburbs of Mount Gambier and is a horizontal tunnel feature which includes three known air chambers of some size. This project has been given a priority for selection due to the recent development of the cave for public use and the possible excellent public relations which could eventuate.

For obvious reasons survey techniques will be somewhat different from most previous work in this region and only relatively small teams will be able to operate underwater at one time. It is proposed that Andrew Cox will co-ordinate this project which will include a detailed survey of the above-water section of the cave. Discussions have already commenced with members of dry caving otganisations which it is hoped will combine with the CDAARG in this task. This should provide an excellent opportunity for divers to learn cave survey techniques. Whilst only experienced Category 3 members are eligible to participate in the diving any member, regardless of their category rating, is welcome to assist in the above-water work.

#### Project No. 5.

It is anticipated that the survey of Englebrechts could take a considerable time, and because of its restricted nature it is planned to run other projects in Cat 1 or 2 holes simultaneously, to enable all interested members to be involved in such research work.

It is likely that the Little Blue Lake will be selected first since the Department of Lands, who own the land containing the sinkhole, are showing some interest in developing the area more for tourist use. This would give us another opportunity to promote cave diving as a safe and useful activity.

During the next few years it is hoped that all Cat 1 and 2 holes will be systematically surveyed by groups of CDAARG members following which the Cat 3 holes can be tackled.

## .. CDAA NEWS ..

If any CDAA member wishes to become involved in the Englebrechts or Little Blue Lake projects, or would like to register an interest in being involved in other research projects please WRITE to the Research Coordinator using the CDAA's postal address. Please state your present Category rating, address and phone number and briefly attach information detailing your area of interest and any specialised talents you may be able to offer.

> Peter Stace Research Coordinator CDAA Research Group.

## CDAA NEWS .. CDAA NEWS .. CDAA NEWS.

Over the last four months, four meetings have taken place down Mt Gambier. The important facts from these meetings have been summarized by Peter Ginnane for the information of all CDAA members and are reproduced here.

#### Annual General Meeting, September 1985

This meeting was unfortunately poorly organized and meetings in the future will be run along standard lines. All members must be financial to vote and in the event of a tied or near tied vote a show of Cat. cards may be called upon or else a list of financial members consulted.

There was polarization between the non-examiner members and examiner members. This was not thought to be because the general membership rejected the rules and procedures of the examiners but because the examiners appeared to be introducing procedures that made them non-accountable to the committee and therefore to the CDAA membership. The members were unhappy to vote in rules and regulations they had not seen and this was the major problem.

#### Constitution

All members have been posted a set of the amendment to the constitution. The key points were:

1. The constitution required and requires tidying up.

2. Members could not be suspended without expulsion. Pretty silly, so that was fixed.

3. The size of the quorum was reduced to ensure people who travelled all the way to Mount Gambier had more chance for a meeting actually happening.

4. The present categorization system was made mandatory by placing it in the constitution.

5. The examiners were officially designated a sub-committee.

- 6. Examiners must be appointed by a ballot of examiners then approved by the committee and ratified at the AGM. They can act as examiners The committee has access to personal records that normally the examiners do not and may have consideration over and above pure
- 7. Changes to examiner rules and regulations must go via the committee.
- 8. Changes ensure the committee are responsible to the members and examiners to the committee.

National Committee Meetings Mount Gambier 15th September, 1985

The Regional Manager for the South Australian Department of Lands for the South East attended for: Advice of Ewens Ponds annual closure To officially complain of an examiner breaking the rules in Ewens Ponds.

Office Bearers were elected.

President - Peter Ginnane (South Australia) Vice President - John McCormick (Victoria) National Secretary - Peter Horne (South Australia) National Treasurer - Judi Minervini (South Australia) Guidelines Editors - Cheryl Bass (Victoria) - Judi Minervini (South Australia)

President and Vice President names and phone numbers to be published in Guidelines for single State contact points.

Committee members' reimbursement increased to \$50.00 for each of four trips to the Mount Gambier National Committee Meetings each year. Research group given a financial float and copyright discussed. Indemnity form draft discussed.

Public officer required - has since been filled by Mr V. Zabo.

Millicent Council negotiations re entry into the Three Sisters discussed. The NTO, Peter Rogers stated his disappointment with the AGM results and stated after fulfilling his current obligations as MTO he would withdraw his services as examiner.

Ron Allum resigned as South Australian State Testing Officer to prevent any conflict due to being a Committee Member as well. The situation regarding the four Victorians caught diving illegally in Pines was discussed, 3 have been reprimanded and 1 suspended.

Five South Australian Divers suspended for 12 months due to considerably exceeding the 36 metre depth limit.

#### Mount Gambier - 16th November 1985

Vice President verbally resigned. Bill Bernhardt (Vic) new Vice

The Examiner who broke the Ewens Ponds rules was suspended for 6 months. A letter from the South Australian Department of Lands expressed satisfaction with responsible attitude by new committee in this matter. Guidelines and lack of them discussed.

CDAA indemnity - a solicitor drafted a version from Vic. to be put to the South Australian government.

Suspensions, inconsistency discussed.

Public statements issued again discussed due to articles in 'Skin Diving'

Engelbrechts accident call out list and key access discussed.

Accident contingency plans and first aid kit.

Application as an examiner from a VictoriaN Diver rejected.

Examiners proposed procedure manual discussed, discussion incomplete.

## CDAA NEWS .. CDAA NEWS ..

## MEETING TO REVIEW CURRENT SITUATION AND FUTURE DIRECTIONS OF THE MANAGEMENT OF FRESHWATER CAVES AND SINKHOLES IN THE SOUTH EAST.

This meeting was convened on 16th November, 1985 by the South Australian Department of Environment and Planning through the National Parks and Wildlife Service (NPWS). There were 23 attenders.

Official CDAA presentatives:
President - Peter Ginnane

Examiner Representative - Ron Allum

Representatives of South Australian Government Bodies:

Dept. Environment and Planning through NPWS

Dept. Lands

Woods and Forests

Police Underwater Recovery Squad (2 members)

Dept. Recreation and Sport

Representatives of the South Australian Local Government:
Mount Gambier Division and Port McDonald Division

Landowners

Manager of Barnoolut - Reg Watson

Representatives of the following groups:

Australian Underwater Federation (2 South Australian Representatives)

Scuba Diver Federation (SA)

Ewens Ponds Trout Farmer

South Eastern Scuba Club

CDAA interested Members:

Ian Lewis

Peter Horne

Andrew Cox

As a result of this meeting a committee of review has been formed with the following terms of reference.

- Review current usage of Freshwater diving in the South East Area of South Australia.
- 2. Assess the effectiveness of the CDAA system.
- Assess current legal requirements from both Landholders' and Divers' viewpoints.
- 4. Provide a co-ordinated approach to cave and sinkhole management.
- 5. Review the search and recovery procedures.
- Provide guidelines for effective development and management of all sinkholes and underwater caves on government land.

These terms of reference were pretyped and accepted unanimously.

Composition of Review Committee

The committee will consist of representatives from the following groups:

Landholders

South Australian government from NPWS, Woods and Forests (W and F) or lands, 1 Landowners, 1

Council/Local Government, 1

Users

CDAA, 2 (the President and an Examiner representative, preferably one of these will come from South Australia and one from Victoria)

Police underwater recovery squad, 1

C.E.G.S.A., 1 South Eastern Scuba Divers, 1

Local (Snorklers etc.), 1

South Australian Department of Recreation and Sport, 1 The South Australian Department of Recreation and Sport will be the

committee co-ordinator.

Summary of the Meeting

The Landowners unanimously expressed confidence in the CDAA system. There is a need for documented training procedures and testing standards. Legal implications have to be considered.

There has been a massive increase in snorklers and divers and a broader range of usage of the sinkholes. There has also been a number of instances where people have disregarded the CDAA standards.

Commercial involvement has increased the numbers involved and buses from dive shops have been observed at Ewens Ponds.

NPWS rules define a junior as under 18. Anyone who is a junior cannot Scuba in Piccinninie Ponds.

The local divers have a genuine interest and input and require consideration.

Should divers be subject to periodic review?

The items of conflict between the South Australian CDAA committe members who are not examiners and the examiner representative were tabled and expressed in full by the CDAA President. This was unanimously welcomed by the meeting and recognized as an honest and acceptable approach. The fact that examining rules and regulations were near to completion was a positive approach.

The S.A. government landowners will work together towards a standardized common permit system with penalties for breaking the permit conditions. The Department of Woods and Forests are currently drafting regulations and it is possible a user pays principle will be invoked. The private landowners will be approached to consider a common permit system.

Please note that your category card is NOT A PERMIT TO DIVE! It is acertificate of competency to the stated level. Only landowners or landcontrollers can permit you to enter and dive on their property.

The South Australian Police Underwater Recovery Squad require an assessment of cave diving and documented management and instructing procedures.

The Departments of Lands regional manager was concerned with the future of the environment and hazards as well as management of the holes and suitable signs.

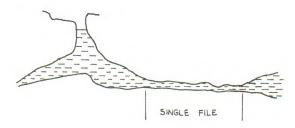
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#### PENETRATION DIVING

The CDAA was formed after a spate of diving accidents in the sinkholes of the Mt Gambier region in the early 70's. From that time till just recently the early adopted Category 1, 2 and 3 system has been an excellent foundation on which to base a skills and qualification system. Although definitions of Cat. 1, 2 and 3 overlap slightly the categorised holes of the south east region fall within the above categories.

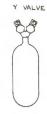
Recently access has become available to another dive and negotiations are being prepared for others. Unfortunately, the diving in Englebrechts cave and Sisters cave are technically more severe than other Cat. 3 holes.

These dives are "penetration dives" and involve restrictive passageways that require "single file" technique.



A gap filling exercise has been to allow diving access only to experienced Cat. 3 divers (i.e. Cat. 3 divers who have performed 20 other Cat. 3 dives). However, this is a far cry measure of ensuring that those divers not only have the skills to negotiate these restrictive passageways but also the skills and equipment necessary to perform an emergency exit (i.e. loss of air) from within.

The current Cat. 3 equipment requirements still lists a single regulator octopus or alternatively a "pony bottle" with independent regulator. I doubt if the latter has been used by more than just a few divers. Cat. 3 equipment should list a dual outlet valve on a single Y valve, a dual outlet valve or dual outlet manifold on twin cylinders "IDEAL MANIFOLD" and two regulators. One of the regulators should have a long hose (i.e. 1.5-1.8 metres) to enable air sharing with body following in "single file".





The principle of dual regulators sharing a single air supply is that each regulator is turned on and the other is ready for use should one fail. The most dramatic "fail" that can occur is a separation or rupture of your demand valve's airline. In this situation air from that regulator is lost instantly and although the first stage will flow on tank pressure is not lost immediately and air can be obtained from your own second regulators demand valve for some minutes after the rupture. This time is the saving grace to organize air sharing with your buddy and in conjunction with a long hose restrictive passageways can be safely negotiated in emergencies.

Englebrechts cave (West side) was first dived by a solo diver on 24th March, 1979. The air supply used on this dive was two cylinders each with its own regulator. The initial tight section when it was first negotiated was full of loose rock and silt. Confidence in this situation can only be achieved with knowing that you have two totally independent air supplies. By swapping regulators the top is breathed from each cylinder. No more than one third is consumed from either cylinder for penetration which will allow two thirds from one cylinder to return should one regulator fail. However, when silt or restrict passageways are negotiated the rule becomes one quarter for penetration so as to allow more air for emergencies. Now more divers are negotiating the tight section, the dive is less severe as turbulence created by finning and the ascending air bubbles has dispersed the silt and the loose rocks have been removed or settled into static positions. The transit time through is now just a few seconds as compared to the several minutes taken on that first dive.

Extreme caution must be taken when diving in new locations whether they be categorised or not. Always consider safety first and don't compromise.

Ron Allum

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## "DEEP SIX PLUS" THE STORY WE WERE THE FIRST

There are old cave divers - and bold cave divers - but there are no old, bold cave divers. I dedicate this article to all the cave divers of the early days of 1959-69, or better known as the first generation, wherever they are.

They alone paved the way, and put down the strong foundations on which the CDAA stands on today. Let us not look down on them, because the equipment of their generation was inferior or not even invented and their training was primitive when compared to today's training and equipment.

Today's cave divers will do well to understand that those first cave divers were a very, very dedicated bunch of men for their time. Just as we, the cave divers of today, have adapted our present equipment and knowledge to make cave diving a safe sport — so did they adapt their training and equipment to make their diving in caves safe. But they had one factor in their favour, the number of divers was far, far less than today.

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I feel that I can speak with some qualifications on this subject because as a first generation cave diver I was present and heavily involved then, and I am still around and diving today. So let me tell you, diving 25 years ago was anything but easy so remember:

Graham McKenzie 'Snow' Raggatt 'Mick' Potter

Colin Grimmond Bob Pulford Eddie Gurtner Brian Wilson J. Frances Noel Phillips

Alan Waldon

Alan Day

who through their efforts and thirst for adventure have made cave diving and this article possible. From all past and present cave divers, I say, thankyou.

#### THE EARLY DAYS. 1959-64

This is a true story! Only the locations have been changed! In order to protect today's cave divers.

Over the past 15 years I have listened to cave divers discussing cave diving and who were the first ever cave divers down the Mount, plus who were the mysterious 'Deep Six Plus' cave divers! Well to put the records straight I decided to sit down, take five and write this article. Hence the least you can do is also to take five and read it, it is not guaranteed to make you a better cave diver, but it will make you understand how the sport of cave diving first began.

The year was 1959, and although aqualung divers have been around in Australia since 1953-4, there were only a handful. Most of us were in fact skin divers or spearfishermen in those early days. However, a handful of us here in S.A. began Scuba Diving (aqualung) in those days, in the mid 50's.

During those early days we used to often go down to Robe and Port Macdonell, it was known then as the South-East, our prime objective then was Crayfish. It was whilst at Mt. Gambier that we used to engage in conversations with local people, and they used to tell us stories about cave sinkholes, Blue Lake monsters and even the Tantanoola Tiger. We thought it to be 'beer' talk, as the only cave we knew then was in the middle of the town known as Cave Gardens. Not one of us took it seriously. Hence it was on one such occasion in 1959 at a pub in Mt. Gambier that we were told about how two fellows named Snow Raggatt and Mick Potter had dived in these caves and sinkholes underground finding crystal clear waters with incredible depths. This was enough to fire our adventurous imaginations. Back at our caravan park old 'Blue' the caretaker was a wealth of information. He used to say to us, "So you blokes want to know where to find these bloody caves, do you? Well I know where they all are. Now how many Crayfish have you got, because it is going to cost you." Blue used to continue as he was sucking on one of our Crayfish legs. "This whole town is built on top of thousands of sinkholes - and caves. Then there was this mate of mine, one morning he walked out of his back door straight down into a sinkhole, 30' down, poor bastard, damn nearly drowned." Blue went on and on, and we kept the Crayfish coming. Boy, I never saw anybody demolish Crayfish like old Blue. "Some years back when I was your age, young and good looking, old Davo was driving his horse and cart down this big sinkhole. I'll tell you what also is there mates, The Blue Lake Monster, and you blokes that go diving in the caves, you must be mad! And bloody hell, you drongos ate all the Crayfish!" said Bluey.

This then was the background of local thinking. They surrounded the caves and sinkholes with an aura of mystery and great respect, but let me tell you, in later years we cave divers also learnt to respect them.

My records show that cave diving began down the Mount in the early 1960's and as I said earlier on, Mick Potter and Snow Raggatt were the first ever cave divers down there. To find, dive and explore most of todays caves and sinkholes, I and all the cave divers of my era credit these two modern day explorers as the men responsible for beginning cave diving as we know it today.

#### CAVE DIVING: THE FIRST DIVES

I myself, finally had my first meeting with Snow at Divers Service in 1961, where I was instructing Scuba Diving, for Don Cooper, who owned the shop. Hence, after talking to Snow, it was the Mount for me, the very next week. Snowy took us to dive in Ewens Ponds for our first dive - 'fantastic stuff' - Piccaninnie Ponds blew our minds apart - Devils Hole was a high adventure, hard to describe - the Bullock Hole was out of this world, and Hell Hole, one hell of a claim. We also dived 10/80 and One Tree Sinkholes.

This then was the magical caves and sinkholes that Snow had found so far, and within the next few months he and Mick Potter found more.

#### DIVING EQUIPMENT

To go into the equipment used on those early dives - well as I see it, it is not fair. After all, cave diving was only just born. Bear in mind that Snow only took very, very experienced Aqualung divers into those caves and sinkholes. Our equipment was basic Scuba gear of that era.

- 1) 1/4" thick wetsuits
- D/Hose regulators (some divers had the new single hose Dacor, with a contents gauge, I was the first to own one in 1960).
- 3) Home made underwater lights. One such system used was a tube with 3 car batteries in it, a 300' cable with corks every 5' so it would float, and a car seal beam.
- 4) Weight belts with one to three weights (depending on the diver).

To put it in plain English we had none of todays extra cave diving eqipment. They simply were not invented, and no shop or Manufacturer sold them — this had to wait for the inventors. And above all time and experience, and as time went on more and more safety equipment was invented.

Diving the caves and sinkholes in those early days, for us, was a high adventure. Also let me tell you that we serious cave divers, dived in those caves with great care and respect. You see, our generation, or should I say, the first generation of Scuba divers in this State were hard core disciplinarians, superbly trained divers who spent hours practicing safety diving procedures in the water. This made them equal to any tough Navy diver in knowledge and fitness, and hence superbly equipped to deal with any underwater danger, alert and finely tuned to emergency. I am only talking about the serious diver who joined a serious diving club, not the Spearos - come lung divers! Those of us in turn used to train other divers and passed on our knowledge. New divers also learnt from the experienced divers after they completed their basic course. Bear in mind that in those early days there was only a handful of divers in our State, hence it was much easier than today to keep check on how a diver was progressing. Also a diver was considered to be still serving his apprenticeship even after he completed his basic course, and up until he

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had logged 30 dives or 25 hours underwater. Such a diver was not allowed to dive at Mt. Gambier below 60' and only with a very experienced diver who had dived there before. Also remember that I am only talking about the Scuba divers we in the club could control. (Not all the divers who did not join clubs).

By 1964, Snow and Mick Potter and also a new diver Graham McKenzie, who Snow trained in cave diving, found more diving locations. Kilsbys (S78) The Pines (S91) The Rubbish Dump (Englebrechts) Kangarco Hole (known today as Fossil Cave) and Livingstones Caves (not open to divers, but Snow had dived it). As these new holes were found we would go down the Mount and dive in the company of either Snow or Graham. Hence Graham and I soon became close friends. We often used to discuss the safety of cave diving, and how we should form some club down the Mount to control cave diving, or at least come up with some kind of training for future cave divers, hence the 'Deep Six Plus' was born. One man must take the credit, it was Graham McKenzie, the 'Deep Six' was his brain child, and finally in 1965 it became a reality.

At a meeting in Graham's house seven of us became the Foundation Members of the 'Deep Six Plus', all of us experienced cave and sinkhole divers, and all of us involved in some capacity in training or instructing divers in our clubs. Present were:-

1. Graham McKenzie

2. Con Penglis

Mt Gambier Adelaide and Mt Gambier

3. Alan Day

Victoria

4. Bob Pulford

Mt Gambier

5. Eddie Gurtner

Mt Gambier

6. A. Waldon

Adelaide

7. Colin Grimmond

Adelaide

We soon put down a cave diving course on paper, it was the first such course anywhere in Australia, that I know of at the time. Our job was to educate Scuba divers in our clubs how to dive safely at Mt Gambier, plus all who wish to learn safe cave and sinkhole diving.

Con Penglis.

To be continued

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#### A LIGHT STORY ON BATTERIES

by Rino Dell'Antonio

In the diving fraternity, the main users of the vast array of torches available on and off the market are the cave divers.

As one becomes more experienced, the need for better and increasingly reliable, trouble free light sources increases. My regular buddies and I have gone down this track, as I am sure many of the readers have or will in the future. It goes something like this:

- sea diving a torch used infrequently for looking into ledges, overhangs and small caves, all of which are a haven for fish life and colourful marine growths.
- ${\mathord{\text{--}}}$  night diving  ${\mathord{\text{--}}}$  an extension of the above where one focuses only  ${\mathord{\text{--}}}$  on  ${\mathord{\text{--}}}$  what is lit up by their torches.
- Category l looking into small caves, helping to read a speedo in Little Blue, night dives.

- Category 2 to light up sections of Pic's, Blacks, Ten-Eighty, etc, when getting out of the daylight zones, to check air, depth, time and blind buddies
- Category 3 where two if not three lights are always dragged along. To see anything in Allendale, Pines, Fossil and Englebrecht's. To light up the passages and chambers in Englebrecht's western side, on both the inward and outward trips (hopefully!).
- real diving on trips to the Nullarbor where one needs to cave grovel prior to diving the mind blowing underwater systems. Where if your torch does not boil water while you are stationary it's not bright enough!!
- at home where all sick, outdated and underpowered torches end up.

In all of the above cases, and more, we are relying on our torch to light our way into and out of our diving excursions. How much do most of us know about our light systems, their power consumption, power source, light output, charge and discharge characteristics?

The following article is a summary of the above factors and has been written in order for people to become more aware of what they carry along on their dives in an attempt to make them more "de-light-full".

Basically there are two types of batteries around: non-rechargeable types (alkaline, carbon, etc) and rechargeable types. Assuming we are all aware of the reasons why rechargeables are most popular among divers, I will only consider the two main types of rechargeable batteries: ni-cads and lead acid.

These two types will be dealt with separately as they differ in many respects. It may, however, be of benefit to tabulate their main differences.

Variable	Ni-cad	Lead-acid	
Cost Life Single cell voltage Max recommended discharge Max recommended charge rate Charging type Self discharge	Moderate to expensive in excess of 1000 cycles 1.2 V 90 - 100% 0.1 x Capacity Constant current 30 - 40% in 6 months	Low to moderate 180 - 1200 cycles 2 V 30 - 100% 0.25 x Capacity Constant Voltage 50% in 3 - 15 months depending on battery condition	
Miscellaneous	Replaces standard batteries High rate, low temperature performance. Maintenance free, rugged	Maintenance free	

 ${\hbox{Note}}$  The above table is a good general comparison and values such as life and self-discharge vary among different brands.

#### TABLE 1 - Comparison of ni-cad and lead-acid batteries

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#### Understanding the Ah (amp hour) figures

All batteries have a quoted current output rating. This rating is the total amount of current (amps) the battery can supply at 20 degrees C during a set discharge time. This time is 20 hours for lead acid batteries and 5 hours for ni-cads. ie. a 10Ah lead acid is rated to supply 0.5A continuous for 20 hours. By increasing the amount of current drawn, one reduces the time a battery will last. eg. for a 10 Ah battery, drawing 2A results in a supply time of approximately 5 hours.

A 4Ah ni-cad is rated to supply 4Ah total in 5 hours, ie. 0.8A per hour.

Let's look at the basic power equation prior to continuing. Some time or other during our schooling, most of us were told that:

Power = Volts x Amps
In other words, 100W = 12V x 8.3A.

This formula can be used to calculate the power or current consumption of any of our diving lights. In performing such a calculation, one can arrive at an optimum battery rating as well as calculate approximate duration for one's dive lights.

Table 2 lists a few typical examples. Why not work out the same thing for your lights? (It certainly pays to know how long they will last).

Battery Type	Torch Type	Bulb Rating Amp	Batter	y Rating Ah	Power Consumption	Total Available Power	Expected Life (hours)
Ni-cad	Tekna 8 cell	0.5	9.6	0.5	4.8 Watt	4.8 W	1
Ni-cad	Ikelite	0.5	4.8	4	2.4	19.2	8
Ni-cad	Ikelite	1.33 Halogen	4.8	4	6.4	19.2	3
Ni-cad	Beuchat 3 cell	0.5	3.6	4	1.8	10.8	6
Ni-cad	Beuchat 3 cell	0.5	3.6	1.2	1.8	4.3	2.4
Lead Acid	Cat 2/3	8.3 Halogen	12	10	100	120	1.2
Lead Acid	perspex lights	4.6 Halogen	12	10	55	120	2.2
Lead Acid	CDAA design	9.2 Halogen	6	10	55	60	1.1
Lead Acid	CDAA design	1.33 Halogen	6	10	8	60	7.5

### TABLE 2 - Characteristics of Various Torches

This article although enlightening is lengthy so will be concluded in the next edition. You can look forward to all the info on lead acid and Ni-cad batteries.

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#### CDAA WINDCHEATERS AND T-SHIRTS

Windcheaters in Sizes 12 to 24, available in dark blue, pale blue, bright yellow, red and grey.

Cost: \$15.50 including postage and packaging.

T-Shirts in Sizes 12 to 24, available in bright yellow, red and pale blue.

Cost: \$7.50 including postage and packaging.

Send your orders to:

P.O. BOX 2161T, OR P.O. BOX 290, MELBOURNE, VIC 3001. NTH ADELAIDE, SA 5006.

## Elbow swivel joints can be purchased from the Association.

They are good quality chromed, brass type and can be attached to any brand of second stage regulator.

Send \$18.00 to: CDAA, P.O. Box 290,

NTH. ADELAIDE, SA 5006.

#### Articles for "GUIDELINES"

Articles on diving related topics (especially Cave Diving topics) are always welcome for publication in "Guidelines".

When submitting articles, please ensure that they are neatly written (typed if possible) using one side of the paper only, with the pages numbered. Handwritten articles should be double spaced if possible. Figures, Tables, Diagrams, Photos, etc should be provided separately and should be annotated on the back. Please include a contact phone number for any queries we may have.

Share your experiences with others - write an article for "GUIDELINES".

# **SCUBA DIVING ACCIDENTS**

## can include:

decompression sicknesspulmonary barotrauma

### FIRST AID FOR BOTH OF THESE:

- 1. OXYGEN
- 2. FLUIDS
- 3. ASPIRIN
- 4. OBTAIN EXPERT ADVICE

#### **CONSCIOUS PATIENT**

- 100% Oz mask. High flow
- Fluids saited and swestened 1 litre/hour
- Two tablets of aeptrin

#### **UNCONSCIOUS PATIENT**

- Intubate O<sub>2</sub> 100% High flow
- . L.Y. fluids (seline or Hartmann's Solution) 1 litre/hour

#### LOCAL CONTACTS

MOUNT GAMBIER HOSPITAL: (087) 24 2211 A.H.(087) 24 2213

ROYAL ADELAIDE HOSPITAL: (08) 223 2855

Ask for Intensive Care Unit.

**Duty Diving Medical Officer** R.A.N. School of Underwater Medicine 02-960 0444 (0800-1600 hrs) 02-960 0321 (after hours) Please state: The diving medical emergency - Ask for the Duty Diving M.O. to be contacted - Give your telephone number