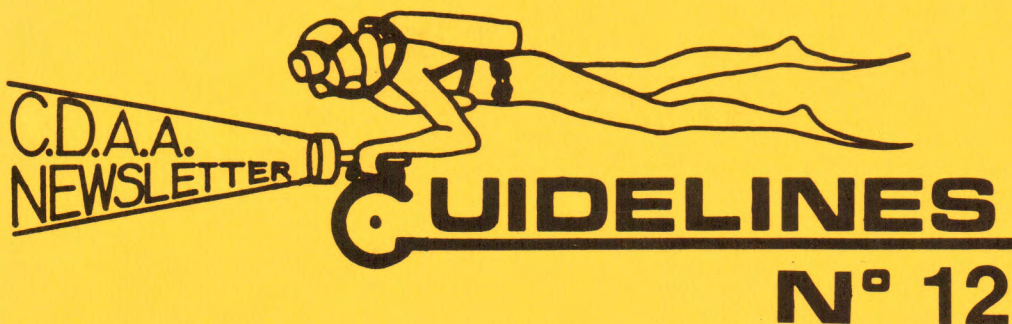


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NOVEMBER 1982



**CAVE DIVERS ASSOCIATION
OF AUSTRALIA**

(Incorporated in South Australia)

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GUIDELINES

NEWSLETTER OF THE

CAVE DIVERS ASSOCIATION OF AUSTRALIA.

No. 12 November 1982

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Editor Jenny Hiscock

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EDITORIAL

The 1982-83 Committee of the Association was dutifully installed at the Mt. Gambier Annual General Meeting in late September by some 60 dedicated members of CDAA. Of the eight member team, four new faces have appeared on the scene - Andrew Cox and Richard Wirski in Victoria and Peter Horne and myself in South Australia.

It was a good turnout; the CWA Hall in Lawrence St. was pleasantly buzzing with people. Following a short meeting, divers from all over South Australia, Victoria and Mt. Gambier were able to chat over a cup of coffee, buy a T-shirt or book and meet Committee members. It was evident that the position of Mt. Gambier Representative has been very successful with many local divers in attendance.

Pleasing also was that members in attendance were greater in number than in the previous three years when around forty were recorded - even in 1979 at the last Conference only 45 members attended.

The attendance at the Special State Meetings however was somewhat less than expected - the response in Victoria was particularly poor. In 1981, the Constitution had been changed to encourage more divers to become involved in the election of Committee and other decision making processes. Only twelve (12) months after this change has been instituted, very few members took advantage of the situation. This in spite of Committee efforts to provide an excellent speaker and films at least in South Australia.

Perhaps the Association is running so smoothly that divers feel little requirement to attend these meetings. If this is the case, those actively contributing to the Association feel that members' attendance at one meeting a year is not too much to ask, to show their support.

Jenny Hiscock



DIVER'S ROLE

Reference to cave diving and cave divers :

"It is a stable tourist industry : these people tend to 'spend up' while in the area."

'Border Watch', 19/8/82.

CDAA NEWS • CDAA NEWS • CDAA NEWS • CDAA

1. CDAA COMMITTEE 1982 - 1983

The following persons were elected to the CDAA Committee for the year 1982-83 at the September Annual General Meeting held at Mt. Gambier. At the National Committee Meeting held on Sunday 19th September their respective positions were allocated.

President	John McCormick (Vic.)
Vice President	Ian Lewis (S.A.)
National Secretary	Steve Collett (S.A.)
Vic. Secretary	Andrew Cox
" Records Officer	"
" Treasurer	Richard Wirski
" Testing Officer	Barrie Heard
S.A. Records Officer	Peter Horne
" Treasurer	"
Editor 'Guidelines'	Jenny Hiscock (S.A.)
Mt. Gambier Representative	Jenny Ploenges

2. CDAA EXAMINER PERSONEL FOR 1982 - 1983

National Testing Officer	Robin Garrad (S.A.)
S.A. Testing Officer	Keith Evans
Vic. Testing Officer	Barrie Heard

Please direct all communication on testing and qualification matters to the Records Officer c/o CDAA Box number in your state.

3. MEETING REPORTS

3.1 SOUTH AUSTRALIAN SPECIAL GENERAL MEETING

The 43 CDAA members who attended this meeting were treated to an excellent talk given by Dr. Swain on 'First Aid Treatment for Suspected Decompression Sickness'. A brief summary does not do justice to the information presented to the divers, however the points covered included :

- 1) Oxygen given on the surface to a person suspected of suffering from decompression sickness, is the best first aid divers can offer.
- 2) A litre of fluid containing salts/sugar (eg. orange juice or salt/sugar added to water) should be consumed by the affected diver.
- 3) A couple of aspirin taken shortly after leaving the water.
- 4) The affected diver should be kept still and quiet and medical aid brought to the site. Request that the ambulance bring oxygen with them - do not allow other gas be given to the diver to relieve pain (eg. nitrous oxide).

We hope to provide a full account of his talk and other relevant material on first aid treatment of decompression sickness at Mt. Gambier at a later date.

Following the speaker, reports of the year's activities were given by the S.A. Committee members and Jenny Ploenges, the Mt. Gambier Representative. Most of this information can be found in the Annual Reports 1981/82 published in this issue of 'Guidelines'.

Six nominations were received for the 1982/83 Committee positions and Steve Collett, Ian Lewis, Peter Horne and Jenny Hiscock were successfully elected as Committee nominees.

3.2 VICTORIAN SPECIAL STATE MEETING 9/9/82

At a small gathering of Victorian CDAА members, the Vice President of CDAА gave an account of the past years activities. Those not covered in the Annual Report in this issue, are as follows :

- Windcheaters and T-shirts with the CDAА logo have been printed and are available at a cost of \$12 and \$5 respectively.
- Procedures for obtaining permission for 'Barnoolut' and the Pines sinkholes have not been adhered to. Members asked to follow the well-documented procedures.

An account of current Category 1,2 & 3 training and examination procedures in Victoria were given by the National Testing Officer. Discussions of the current Category 2 standard and pre-requisites ensued. Amendments to the Category 3 theory and practical tests were announced.

General Business included :

- 1) Possibility of CDAА issuing Piccaninne Ponds permits direct is not acceptable to the S.A. Department of National Parks and Wildlife Service.
- 2) Representations to re-open the Shaft have failed.
- 3) Access to some sinkholes only available via Committee for special (scientific) purposes eg. Tantanoola.

Six nominations for the 1982/83 Committee were received and Andrew Cox, Barrie Heard, John McCormick and Richard Wirski were elected.

3.3 ANNUAL GENERAL MEETING - Mt. Gambier 18/9/82

A short but smoothly run meeting was held with 57 members in attendance at the CWA Hall. Annual Reports were presented by those 1981/82 Committee members present with apologies from Ian Lewis and Barrie Heard. Contents of Reports are published in this issue of 'Guidelines'.

General Business included :

- 1) Alan Joliffe (N.T.O.) commented on the high standard of the Category 3 Test.
- 2) Enquiry as to qualifications to become a Category 3 Examiner.
- 3) Russel Jeavons thanked divers for their support of the East Lynn Hotel.
- 4) A brief report of Hugh Morrison's Nullarbor Expedition in Cocklebiddy cave was given.
- 5) J. Hiscock raised the proposal of National Committee Meetings be held apart from Category 3 test weekends. The following motion was passed

'Two National Committee Meetings be held per year in either Adelaide, Melbourne or Mt. Gambier. Satisfactory reimbursement to committee members to be met by the CDAА. This proposal is to be costed and reviewed at next AGM.'

- 6) A member present suggested raising membership fee. Committee indicated it was not necessary at present.

cont. 5

All positions were declared vacant and the Special State Meeting nominees from both states were elected as 1982/83 Committee.

Jenny Ploenges was reappointed as the Mt. Gambier Representative.

Meeting closed at 10.20 for coffee and sales of T-shirts (including the Nullarbor T-shirts), books and CDAА publications.

4. CATEGORY III TESTS 1983

The dates for the two Category III tests to be held at Mt Gambier in the next year are : 19th March 1983
: 17th September 1983 (also Annual General Meeting)

Candidates wishing to take part in either of these testing programs must apply in writing at least one month before the practical test date above. Applications must list the pre-requisite dives for Category III - that is 20 freshwater dives to Category II standard and eight (8) of these with a guideline reel and tether. All candidates must achieve a satisfactory pass in the theory exam before being able to proceed to the practical test.

The theory test has been re-written to include topics such as hypothermia, air embolism, EAR/ECC, shock, CO poisoning, and diving at altitude.

It is recommended that candidates undertake the Cat. III test in their usual buddy pairs.

March 1983 Test in brief :

Close of Applications	19th February 1983
Theory Examination	2nd March 1983 (Wed.)
Practical Examination	19th March 1983
- at Piccaninnie Ponds	
08.30am	Examiners assemble
09.30am	Candidates assemble.
Fees for test	Theory paper \$5 (for marking)
.....	Practical \$25

Applications should be sent to the CDAА post office box in your state.

5. LANDOWNER CONTACT - MAX'S R HOLE

Category 3 divers wishing to dive in Max's R Hole are asked to contact the following landowner in writing or by telephone :

Trevor J. Edwards
P.O. Box 1319,
MT. GAMBIER 5290.

His residence is called 'Bush Haven', just off the Nelson Rd., Caroline. Telephone number is (087) 26 8277.

- from the Association

I. ARE YOU INVOLVED?

There is good evidence that many divers, who are members of the CDAA, have been diving in sinkholes for which they are not categorised. Some divers have been presenting the evidence in their logbooks and attempting to count the diving time as a pre-requisite for the next category. Mostly, the Committee members have heard of events from other divers and clubs or have seen divers at certain locations.

This illegal diving is of considerable concern to the Committee. In the past, where divers have presented logbook evidence of such diving, a letter has been written pointing out the breach of established guidelines. Also, the time spent on these dives is not eligible to be included in pre-requisite time.

We are not concerned just by the fact that rules are being broken but that the divers seem to have forgotten why the guidelines were laid down in the first place and thus why they should do their best to follow them. The main offenders of the Category system appear to be Category 2 divers who are diving in Category 3 sinkholes. The following is a brief resume of the rationale behind the placement of sinkholes in the Category 3 classification.

Category 3 sinkholes which are listed in the Information Bulletin and described in 'Cave Diving in Australia' (1), show a variety of form from the small Fossil cave to the much larger Bullock Hole and to the tunnel-like cave of Englebrecht's. Each sinkhole contains the following three features although they do not consist entirely of these features (for example Bullock Hole has an open sinkhole section as well).

To dive 'safely' in a cave with these features, a diver needs to have appropriate equipment and training. The CDAA definition of 'safely' includes that divers be able to recover from an unforeseen incident in one of these locations in a calm and controlled manner. This means that they must be competent and practised in guideline reel handling, they must be carrying sufficient and adequate light (a primary 6V torch and a back-up) and able to use their torch in combination with a reel, and they must be aware of means of avoiding silting, or of continuing the dive through silt without panic. Category three holes then, are those which hold the most danger to divers in the event of something going wrong and contain features which are contributative to such events.

- i) There are passages from which a diver cannot ascend directly vertical to escape. A diver must retrace his ingoing path to reach the surface.
- ii) It is often completely dark
- iii) There are readily accessible areas where silting can occur; in some instances the visibility is reduced to zero and this is in a confined area.

The categorisation system is not perfect and compromises were made in its inception. However, there have been no fatalities at Mt. Gambier since 1974 when the system was introduced. To give the best chance that this fatality-free period will continue, the least the divers can do is act responsibly and within the guidelines set down.

This means that Category 2 divers do not dive in Category 3 holes until they satisfactorily complete a Category 3 Test Program. Any Category 2 diver (with appropriate pre-requisites) who feels that he/she is competent in reel handling and silting techniques, is invited to attend a Category 3 Test Program. Whilst being a test of relatively high standard, it is not a difficult test for those with practice and competence in these skills.

The Association has the power to revoke the membership of persons whom it considers have acted against the interest of the CDAA and will use this power if warranted. This is an appeal to the members' sense of responsibility to themselves and their fellow divers to dive only in those holes for which they and their buddies are categorised. If current illegal diving is not curbed however, the Committee will take appropriate action.

In summary, there is a categorisation system based on sound reasoning which has contributed to the fatality-free period since 1974. It is the responsibility of all diving members of the Association to stick to the system to help ensure a fatality-free future.

- (1) Ian Lewis & Peter Stace, 1982
'Cave Diving in Australia' revised Edition,
ppgs. 132-145.



II. WOODS AND FORESTS PERMIT PROCEDURES

Recent communication between the CDAA and the S.A. Woods and Forest Department have resulted in agreement to tighten up the procedures for divers entering sinkholes under their control. This is in response to the problem of uncategorised divers entering and visiting sinkholes without permission or permits.

The Department has agreed to :

- 1) Erect suitable signs at sinkholes on Departmentally-controlled land, informing divers of the requirement for a permit, the local Forest District location and the Classification of the dive.
- 2) Increase patrols of sinkholes, on a random basis, to detect divers without permits.
- 3) Ensure that prior arrangements of time and location for issuing permits are met.
- 4) Ensure that all Forest District staff are aware of their requirements to check CDAA certificates before issuing permits.

To ensure that you have a permit (for Pines & Elaines - Cat. 3, and Hells Hole - Cat. 2), divers must :

- 1) Contact the appropriate District offices several days before arrival and arrange a mutually convenient time to issue permits. (Department Officers do not normally work on weekends.)
- 2) Show Department Officers current financial card of the appropriate category.
- 3) Abide by CDAA diving rules on Departmentally-controlled land. (ie. Appropriate equipment, personnel and depth limit.)

Members wishing to contact Department staff please note the following addresses and telephone numbers :

Tantanoola area :

District Forester, Tantanoola Forest Reserve,
Tantanoola, S.A. 5290.
Telephone : 087 34 4098

Caroline area :

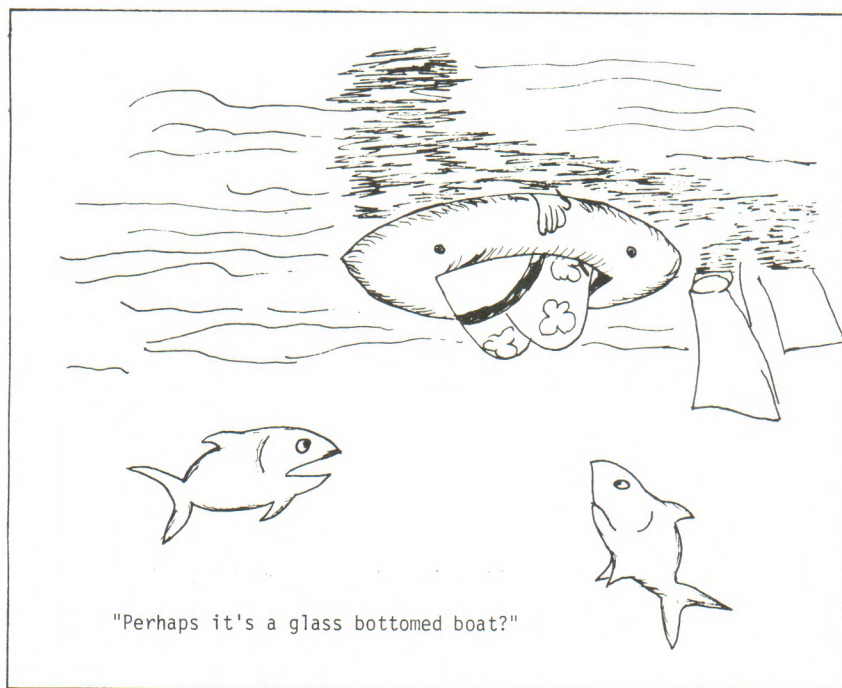
District Forester, Myora Forest Reserve,
P.O. Box 116,
MT. GAMBIER S.A. 5290
Telephone : 087 25 5622

South-east Regional Office :

Jubilee Highway East,
P.O. Box 162.,
MOUNT GAMBIER, S.A. 5290.
Telephone : 087 24 2711.

It has been agreed that L97 or Elaine's Hole, a small silty sinkhole in the forest opposite Pines, is to be classified as a Category 3 dive, and that CDAA members should obtain permits as per Pines, to dive in this location.

The CDAA would like all appropriately categorised divers who wish to dive in the Pines and Elaines to obtain permits from the Woods and Forest Department before doing so.



ANNUAL REPORT 1981 - 1982

COMMITTEE

President	Ian Lewis (S.A.)
Vice President	John McCormick (Vic.)
National Secretary	Robin Garrad (S.A.)
Vic. Secretary	John McCormick
" Records Officer	" "
" Treasurer	" "
Vic. Testing Officer	Barrie Heard
S.A. Records Officer	Steve Collett
" Treasurer	" "
" Testing Officer	Ron Allum
Editor 'Guidelines'	John Hansen (S.A.)
National Testing Officer	Alan Joliffe (Vic.)
Committee Member	Andrew Wight (Vic.)
Mt. Gambier Representative	Jenny Ploenges

MEMBERSHIP

VICTORIA	SOUTH AUSTRALIA	
420	288	
	8%	Category 1
approx.90%	66%	Category 2
	26%	Category 3

PRESIDENTS REPORT

As this report is being prepared, the CDAA is entering a most significant period of its history. The October long weekend just past was the tenth anniversary of the first media-saturated cave diving deaths in so-called Death cave, where 3 divers of a party of 4 drowned, lost in a silt-out. Next May is the tenth anniversary of one of the world's most disastrous sport-diving accidents where 4 divers out of 8 drowned at great depth in the Shaft. Thus this Presidential Report takes the form of a review of CDAA activities to this time, and an opportunity to examine the future direction of the Association. A President's responsibility is more along the lines of an overseer and guiding hand than of day-to-day administration, covered by other committee members in this issue of 'Guidelines'.

What have we attained in 10 years of operation? Because the CDAA is a self-regulating and representative body for one particular diving interest, its achievements are less obvious than (for example) the past history of a diving club. However, the list is pretty profound -

1. No sinkholes have been closed to cave divers apart from those already restricted when the CDAA was formed.
2. Contact has been established with all landowners, private and government, so that the CDAA's credentials are widely known.
3. Category Test programs have been constantly updated and supervised by 2 sub-committees of S.A. and Victorian cave diving examiners, who represent within the Association a vast resource of Australian cave diving experience.

4. Periodical publicity with the media, at national and international diving conferences and television programmes (ABC & Channel 9) have helped the general public to appreciate the attractions of Mount Gambier sinkhole diving. This dispels the image of 'suicidal mud-grubbers' that the notorious cave diving incidents generated a decade ago.
5. The Information Bulletin, articles in diving magazines by various cave divers, widespread distribution of the book 'Cave Diving in Australia' and the continued production of the Association's newsletter 'Guidelines' provide a wide coverage of information about sinkhole diving, undreamed of 10 years ago.
6. Legal negotiations have aimed at establishing the acknowledgement of the CDAA as a competent representative organisation for safety and training in this sport. Continued contact with the S.A. Underwater Recovery Squad regarding techniques and equipment and CDAA local knowledge of caves and sinkholes has been an important achievement.

In summary, a 10 year analysis shows that the CDAA 'has it's act together', and a membership exceeding 1000 indicates that it has done its job well to date. What can the Association anticipate over the course of the next 10 years? Some major issues are :-

1. The continued effort necessary to ensure that cave divers of the future are as well-trained as those already categorised. Training and testing divers who are interested in cave diving is preferable to mass-producing divers with just another cave diving badge.
2. Consideration regarding excess diver damage in environmentally fragile ponds such as Ewens, Piccaninnie and some of the small coastal ponds. Fanning and cave diver training contribute largely to this damage, although significant regrowth has been observed over the hot months.
3. Renewed and more vigorous attempts be made to obtain access to the Shaft, given the safety record of the CDAA and the quality of its Category 3 divers.
4. Some method of affiliating interstate cave divers exploring remote cave diving locations - eg. the Nullarbor, Tasmania and New South Wales. Although these numbers are very few, they should be encouraged by the national cave diving body.
5. The establishment of a semi-scientific and historical research branch of the CDAA, charged with the task of learning more about caves and sinkholes, and assessing the impact of divers upon them. Recent initiatives have commenced on this matter.
6. Close contact with other training bodies who may wish to award cave diving qualifications within their own systems (FAUI, PADI, NAUI & others). The CDAA's authority over Mt. Gambier cave and sinkhole diving should not be diminished in the light of its extensive contacts with Government and the public.

Obviously, much of the above has and will involve continued negotiations in which future committees will be extensively involved. Given the solid reputation of the Association earned thus far, even controversial matters should be able to be decided upon, using the collective experience of the membership. We've come a long way from meeting number one in the Allendale Hall.

NATIONAL SECRETARYS REPORT

Having decided to step down from the position at the 1982 AGM, this report covers the three year period 1979-82 during which time I have spent two years as the CDAA National Secretary and one year as S.A. Secretary (1979-80).

Coming into the Committee in 1979, I found a well established organisation, then six years old, which was undergoing a transition : founding members of the Committee had relinquished their posts and the Association was taking steps based on principles established over the last six years. It is a tribute to the founding Committee members that the principles they established were soundly based, and thus continuity between Committees has never been a problem.

The background task which Committees over 1979-82 of which I have been a member, have been preoccupied with is the establishment of the Association as a viable long term proposition. Structurally this has involved several important changes :

1) Examiners

The CDAA has established a body of expert cave divers to whom it has delegated the task of supervising its category tests and assessing members' ability. These examiners are appointed on a non-commercial basis, unaffiliated with any external organisations to provide independent, unbiased testing.

Examiner status is not a diving qualification, examiners are appointed only on a needs basis - the Association must need extra examiners to justify appointing more. This acts to keep the number of examiners small, allowing tight control of standards and preventing divergence of opinion.

At present there are 24 examiners appointed by the Association : 10 in S.A., 11 in Victoria and 1 in each of W.A., N.S.W. and Qld..

2) Examiners Committees

In each state of South Australia and Victoria, committees of examiners have been constituted and charged with the tasks of :

- 1) ensuring that CDAA standards are maintained
- 2) joint appointment (with the Committee) of new examiners
- 3) self-policing of examiners
- 4) monitoring of current test strategy and innovation of new tests where appropriate
- 5) organisation (logistics) of test venues

Although the examiners committees cannot unilaterally make policy, they are envisaged as major providers of stability and continuity. With the majority of examiners being ex-committee members, the system has worked well to date.

The positions of State Testing Officer (S.T.O.) and National Testing Officer (N.T.O.), are now co-opted committee positions, with incumbents being elected by the examiners for an annual term.

S.T.O.'s are responsible for the organisation of Category 1/2 testing within their state as well as organisation and chairing of State Examiners Meetings.

The N.T.O. is responsible for overall CDAA policy implementation with regard to Category tests, Examiners and standards. He/she is expressly responsible for the organisation and logistics of Category 3 tests. National Examiners meetings generally occur biannually, to review Cat. 3 tests, and are chaired and organised by the N.T.O..

Under the direction of Alan Joliffe (N.T.O. 1980-82) new Category 3 tests have been researched and implemented by national meetings of examiners. Streamlined application procedures have also been instituted.

3) Records

The records have often been referred to as 'that problem'; a tide against which many Records Officers have battled. It is around the Records that the qualification system of the Association is based, and thus although a thankless task, it is a system which must work well.

During his period as S.A. Records Officer and Treasurer, Ron Allum instigated a trial period of subcontracting the bulk of typing, card updates and filing. This left the Records Officer with more time to follow up individual problems and oversee the operation of the system. The new system proved to be effective and was also adopted by Victoria. Many alterations to the individual systems have since occurred, but the basic principle that this is a service well worth paying for has proved to be sound.

It was on the basis of having such a records system that arrangements such as the Pics mailing cards were able to be supported.

4) Access Negotiations

Over the last 3 years, the Committee has moved to formalise access agreements to many diving locations.

- 1) Piccaninnie Ponds : anomalies have been removed and a streamlined procedure instituted. With the excellent co-operation of the S.E. Office of the National Parks and Wildlife Service this procedure is running smoothly.
- 2) Tantanoola Lake Cave : after negotiation with the N.P. & W.S. restricted access for bona fide research is possible through Committee recommendation.
- 3) Englebrecht's Cave : following negotiation with the Mt. Gambier City Council, the CDAA has retained a law firm to draw up an Access Agreement. This agreement is currently before the Council for consideration.
- 4) Swim-Thru Cave : access for CDAA Category 2 divers has been established established via normal landowner contact procedures.
- 5) The Sisters, Gouldens, Horse & Cart and Tea Tree Hole : as above (4) for Category 1 divers.
- 6) Max's R Hole : as above for Category 3 divers.
- 7) The Pines : Following negotiations with the Woods and Forest Dept. access is to be tightened to ensure that only Cat. 3 divers are able to dive (see article page 7)
- 8) Elaine's Hole : The Woods and Forest Dept. has agreed to this hole being categorised as a Category 3 sinkhole available for diving. (see article page 7)

As part of CDAA landowner relations (and for ease of diver access!) a gating program was instituted which is nearly complete. Under this program, the Association has negotiated for, and placed gates into fences surrounding the following holes : 1080, Black Hole, Bullock Hole, Gouldens Hole, One Tree, Swim-Thru (style over fence).

Fences are now protected from having divers clambering over them, and divers are protected from barbed wire.

After months (years?) of negotiation with the S.A. Department of Recreation & Sport, new signs were provided for all S.E. sinkholes warning inexperienced divers of the dangers of diving.

5) Local Mt. Gambier Divers

To end the 'freeze' on relations between local divers and the Association, approximately two years ago the Committee began actively promoting the role of local divers. Category 1&2 testing was held in conjunction with Cat. 3 tests and cave diving courses were encouraged.

Today, the local divers are represented on the CDAA Committee by a locally elected CDAA Mt. Gambier Representative - Jenny Ploenges. As many of the membership have found, the value of having someone 'on the spot' is invaluable to the Committee.

Over the last twelve months, Jenny has been actively involved in training and testing programs in the area, with the view to being appointed an examiner. When this occurs, Mt. Gambier representation in the Association will take another step forward.

FINANCIAL REPORT

	VICTORIA	SOUTH AUSTRALIA
Balance at October 1981	\$2009.77	\$1446.01
Income 1981/82	3099.55	3222.12
Expenses 1981/82	2669.32	3513.35
Balance at 18th September 1982	\$2440.00	\$1154.78
Major Incomes		
Annual fees + interest	2094.55	2021.27
Sales (t-shirts, publications, guideline, etc.)	1005.00	450.00
		750.85 (from Vic)
	\$3099.55	\$3222.12
Major Expenses		
	VICTORIA	SOUTH AUSTRALIA
Printing	\$ 276.00	Printing \$1002.63
Records Office	206.30	Secretarial 495.93
T-Shirts	771.00	Electric Stapler 415.95
Postage	269.50	Postage 258.81
Stationary	177.67	Stationary 204.65
Telephone	28.00	Telephone 167.57
Test Fees	16.00	Testing 55.00
S.A. Fences etc.	750.85	Signs and Fences 312.00
		Filing Cabinets 247.00
		G.P.O. 58.00
		Hall Hire 34.75
		Guideline 211.50
		Misc. 49.46
	\$2669.32	\$3513.35

NATIONAL TESTING OFFICERS REPORT

Seven candidates attempted the Category 3 test in March 1982 with five being successful. The forthcoming test (September) has approximately fourteen candidates presenting.

Over the past twelve months, the Cat. 3 practical test has been amended to include an octopus test, undertaken towards the end of the blacked-out line following test through the Cathedral with some obstacles introduced. Buddy breathing has been re-introduced on one leg of the reel test. This test is now conducted twice, once using an octopus reg., then buddy breathing. An additional buoyancy control test has been added to the existing test requiring the candidates to fin approximately one metre off the bottom for a distance of approximately 10 metres.

The Category 3 theory paper has been re-written to include such topics as hypothermia, air embolism, EAR/ECC, shock, CO poisoning, diving at altitude and cold water.

The Category 3 test is constantly under review to take into account equipment and technique changes.

MT GAMBIER REPRESENTATIVES REPORT

Over the last twelve months it has become very convenient for the diving community and the general public to have a resident CDAA representative in Mt. Gambier, to obtain information and advice, especially the National Parks and Wildlife Service who have had many questions and requests.

My duties have included the organising and the checking of the erection of the large signs at Little Blue Lake and Pines, and the walk through gates at Black Hole, ten-Eighty and Bullock Hole.

Up to the present date negotiations are being made to have a walk-through gate at Gouldens and One Tree, and a style at Swim-Thru - which hopefully will be finished by the AGM.

The Department of Lands (Mt. Gambier branch) requested suggestions of information for a sign to be erected at Ewens Ponds as a warning to divers and all others of the freshwater dangers. Information has been sent and we are awaiting the outcome.

I am currently holding signs for all the other sinkholes (small wooden signs supplied by the Department of Recreation and Sport) which will be erected in the near future.

I am able to keep in close contact with the landowners, and advise and keep the CDAA up to date on the happenings in and around Mt. Gambier. Also my assistance has been given to the Committee by arranging bookings and organising meeting places in Mt. Gambier.

I'm sure the decision to have a representative in Mt. Gambier has been very beneficial to the CDAA.

BATTERY CHARGER

Colin O'Donnell

Here's an interesting project that will present an exciting challenge for any grounded cave diver with time on their hands - a tailor made battery charger suitable for sealed Lead/Acid Batteries. These circuits are based on well known and time proven principles, and I will be happy to provide backup support if any problems are encountered. If you have to buy all components, I estimate the cost to be in the region of \$35 to \$40.

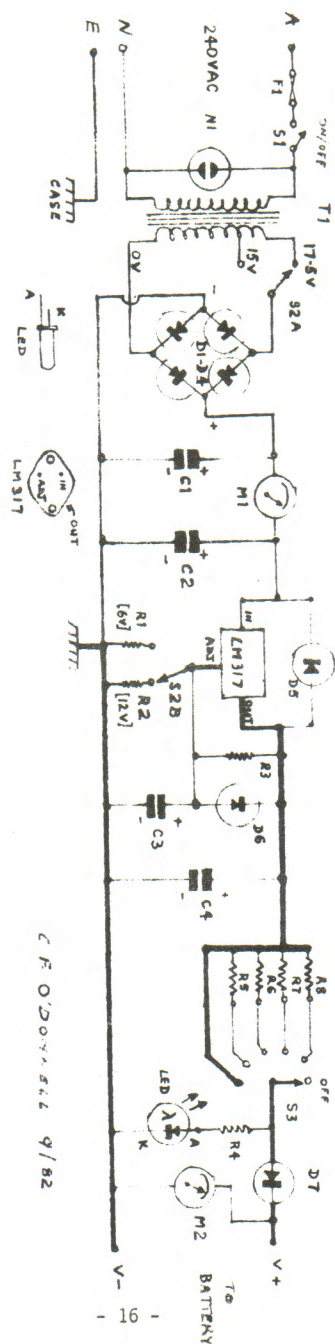
These days state of the art power supplies use integrated circuits, which help to simplify construction enormously. This circuit will provide over 2.0 amps current at a stabilised, regulated voltage that is switchable from 6V to 12V, to suit whatever system you are using. This is more than adequate for our needs.

The IC LM317 has internal current limiting, is protected from thermal overload in case of short circuit, and provided it is used with a reasonable heatsink and within manufacturers specifications, it is essentially indestructible. See diagram on page

PARTS LIST

Part :	Catalogue No.	Description
F1	S 4204	250 - 500 mA Fuseholder
S1	S 1198 or S 1503	Standard on/off - separate neon Illuminated switch incorporates a 240v neon
S 2A & B	S 1393	DPOT switch
S 3	S 6306	Rotary switch
T 1	M 6672	240V/multitapped/1 Amp (17.5V/15V sec.)
IC	LM 317	(TO-3) case Integrated circuit
IC	H 1918	TO-3 Cover
IC	H 1917	TO-3 Insulation Kit
D1-D4	4 x IN 5404	Silicon Power Diodes
D5&D6	2 x IN 4002	Diodes
D7	Z 3240	MR 110 10A. Power diode
LED	TIL 220	Red, green or yellow. (You may prefer a flashing red LED - Cat. No. Z 4000)
M1	Q 2030	0 - 5A Ammeter
M2	Q 2040	0 - 20 Voltmeter
C1	5600uF, 35VW	Capacitor (electrolytic)
C2	1uF, 35VW	Capacitor (Tantulum)
C3	10uF, 35VW	Capacitor
C4	100uF, 25VW	Capacitor
N1	S 3550	240V Neon Bezel
R1	560 ohm 1/2watt	resistor - 2% tolerance or better
R2	1.2K ohm 1/2watt	" " " "
R3	120 " "	" " " "
R4	560 " "	" " " "
R5	0.25 " "	NI-Chrome wire
R6	0.5 " "	" " " "
R7	1.0 " 2w	" " " "
R8	4.7 " 1w	" " " "
	H 3422 or H 3471	Heatsink
(see text	* R 6901 5 ohm, 3w	Rotary Pot alternative)
	H 2741 to H 2744	Metal Cabinets.

Available from Dick Smith's, Wright St., ADELAIDE & branches.



The mains switch S1 should be used with a neon bezel N1 - indicator or can be self-illuminating (S 1503) as an alternative. T1 is a multitapped mains transformer, the 17.5V and 15V taps being switched by S2 for 6 & 12 volt application to help reduce power dissipation in the IC LM317. T1 output is rectified by 4 x 3 Amp silicon diodes D1 - D4 and is initially filtered by C1. The Ammeter M1 incorporating a 3 ohm shunt, has a 0 - 5 Amp full scale deflection. While this is too much for our requirements, it is the best value for money available and only has 2% error.

C2, C3 & C4 provide supply decoupling and improve transient response ripple refecton and stability. Diodes D5, D6 & D7 provide overload and inverse voltage protection and must not be eliminated. Resistors R1, R2 & R3 must be at least 2% preferably 1% tolerance for correct voltage regulation, also note the heavy duty wiring marked . R1 provides 6.9V output, R2 13.8V. Resistors R5 to R8 may or may not be necessary for fine control of the charging current, depending upon variations of circuit values, the Amp/Hour rating of your batteries (with consequent variations in maximum initial charging currents and the depth of the discharge of the battery to be charged. Trial and error is the final answer. R5 to R8 and S3 may be substituted by a variable wire wound potentiometer R 6901* rated at 3 Watts.

The LED and R4 provide an indication that current is passing to the battery and may be eliminated - but you'll only save 50 cents! M2, a 0-20V voltmeter is an optional extra. Lastly, the casing of the LM 317 must be insulated from the heatsink and chassis with a T0-3 insulation kit. Refer to your battery data sheet for charging voltages, currents and the time requirements.

In summary, whether you are charging one 6V battery or 2 x 6V in series (12V) the initial charging current should not exceed the rate specified by the manufacturer. In fact, I feel the rate should fall well short (say 75%) of the recommended maximum initial charging current rate for long battery life eg. 6V 10 Ahr Yuasa batteries are rated at 2.5 amps max. initial charge current. This should, I feel, be reduced to 1.5-2 amps maximum. The 6V 8 Ahr Yuasa, rated at 2.0 amps should be charged at 1 - 1.5 amps, and the Gould Gelyte 6V 8 Ahr battery not to exceed 1 amp maximum. End charging currents will also vary according to Ahr rating, battery condition, rate of charging, etc. but normally will vary between 100-500mA. Once again check your battery specification charts and avoid overcharging and undercharging as best as possible.

Good luck.

Colin O'Donnell, ph 336 6996.

NOTE :

The battery charger detailed above is designed to be plugged into the mains electricity supply and is different to the battery charger advertised for sale on page 19 which is designed to plug into a car cigarette lighter.

1. MEDIA WATCH

1.1 'S.E. mecca for cave diving'

- "Border Watch", Tuesday 19th August 1982 (Mt. Gambier)

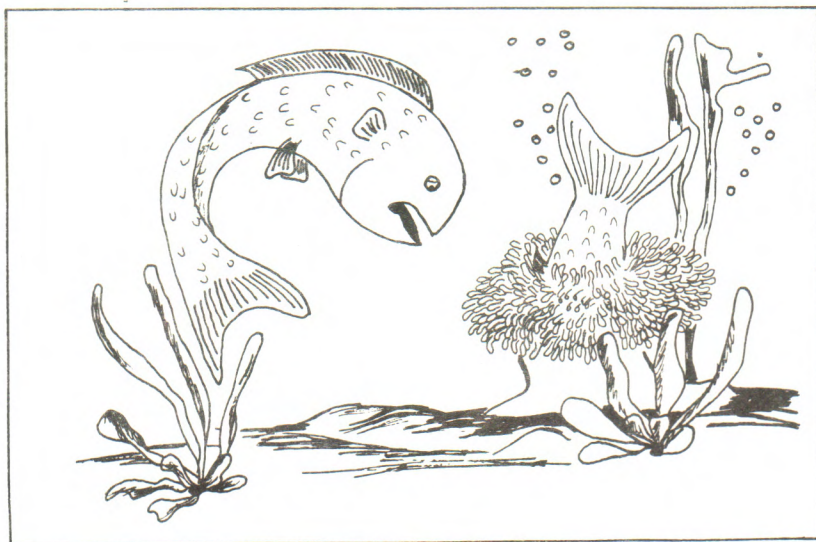
Article on upcoming AGM with several incorrect dates! Also mentioned "There are between 40 and 100 divers in Mount Gambier every weekend of the year". The article was a good advertisement for the Association from the "spokesman" as to our uncompromising testing procedures / careful instruction and other attributes.

1.2 'Scuba group sees light at last'

- "The Advertiser", 11th September 1982, (Adelaide)

Report on the Gilles Plains Community College course attended by cave divers to fabricate acrylic boxes for underwater lights and 'plastic reels for their tracing lines'.

1.3 Reproduction of 'Tantanoola cave' article from 'Guidelines' No. 11 in 'Skindiving in Australia and New Zealand'.



"Sidney, I warned you not to smell the flowers!"

2. COCKLEBIDDY : A NEW WORLD RECORD

Peter Rogers

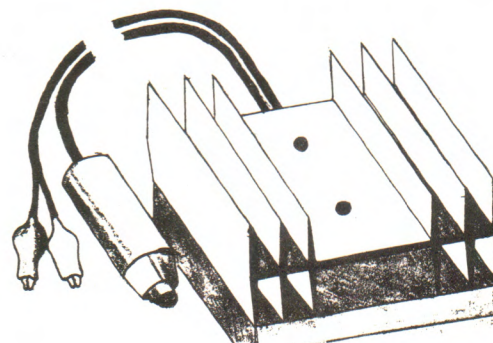
On Wednesday September 8th 1982, a new long distance cave diving world record was established in Cocklebidy Cave, West Australia. A West Australian expedition, organised and led by Hugh Morrison, and including New Zealand and South Australian divers, provided the backup that enabled three 'push divers' (Hugh Morrison, Ron Allum and Peter Rogers) to extend the record by one kilometre, increasing the total length of Cocklebidy to some four and a half kilometres.

In an underground trip lasting sixteen (16) hours, eight (8) of which were spent underwater, the three divers added 550 metres of new underwater passageway to the record before surfacing into a new air chamber. From this point Cocklebidy continues above the water table (the new chamber has been named Toad Hall!) for about another 500 metres before submerging again.

The next expedition to Cocklebidy, planned for 1983, hopes to use Toad Hall as an overnight forward base camp for a further attempt to prolong the worlds longest cave dive.

A full account (including map) of this expedition will appear in the next issue of 'Guidelines'.

3. BATTERY CHARGER
CRYSTALTRONICS



- . 7.5 volt / 2 amp max.
- . Current limited
- . Reverse Polarity protection
- . Approved circuit for CDAA design underwater lights
- . Plugs into car cigarette lighter
- . available in kit form (\$25)

Cost of made-up item : \$35.

Send cheque / money order or write for further details to:

CRYSTALTRONICS
6 Doonoon Ave.,
Hazelwood Park,
5066, S.A.

Allow 14 days for delivery

DIVERS DIARY



March Category III Test Program

Close of Applications	19th February 1983
Theory Examination	2nd March
Practical	19th March

ANNUAL GENERAL MEETING (Mt. Gambier)	17th September 1983
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September Category III Test Program

Close of Applications	17th August 1983
Theory Examination	31st August
Practical	17th September

WHAT IT COSTS?

CDAA Joining Fee	\$ 5
CDAA Annual Membership Fee or Biannually	5 \$10
Category 1&2 Test Fees (S.A.)	
Theory	5
Practical	\$10
Category 3 Test Fees	
Theory	5
Practical	\$25