

**C.D.A.A. Newsletter**

**No. 116 - JUNE 2011**



**CAVE DIVERS ASSOCIATION OF AUSTRALIA**

**(Incorporated in South Australia)**

**Print Post No. PP 381691/00020**

**SENTINEL**



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## CONTENTS

|                                  |       |
|----------------------------------|-------|
| Editorial - David Bryant         | 5     |
| National Director's Report       | 12-13 |
| Standards Director's Report      | 27    |
| CDAA Instructors                 | 40    |
| Courses Update / Tank Cave Dates | 41    |
| Site Access                      | 42-43 |
| CDAA Products                    | 44-47 |

### Articles...

|   |       |
|---|-------|
| Cave Diving Fatalities - Richard Harris       | 6-7   |
| Karst Geology; Nullarbor - Ian Lewis          | 14-18 |
| Agnes Milowka - by Liz Rogers                 | 19-21 |
| Florida & NSS CDS Workshop - Ken Smith        | 22-23 |
| Guests in Their Home - Pippa Waterworth       | 28-29 |
| Easter 2011 Advanced Cave Course - Peter Wolf | 30-39 |



### Cover:

**Easter Bunny  
Fossil Cave**

**Diver:  
Aggie Malkowska**

**Photographed by:  
Luke Baade**

## CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

P.O. BOX 290, NORTH ADELAIDE 5006

GUIDELINES is a newsletter of the Cave Divers Association of Australia. All articles for the following issue are to be sent to the designer, David Bryant, Email: [seapicsdavebryant@gmail.com](mailto:seapicsdavebryant@gmail.com)

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### CDAA INSURANCE

Policy Type: Combined Liability Insurance Policy# SY-CAS-08-041140  
Insurer: Liberty International Underwriters ABN: 61 086 083 605  
Level 27, 1 Macquarie Place, Sydney NSW 2000  
Name Insured: Cave Divers Association of Australia  
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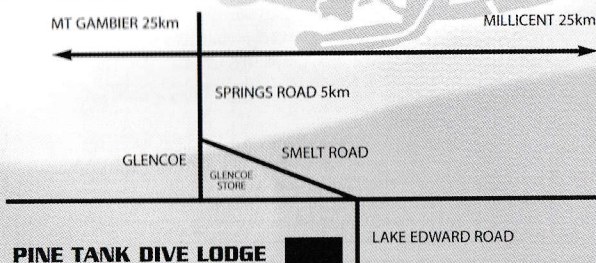
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## CAVE DIVERS ASSOCIATION OF AUSTRALIA

### Editorial

Hi all,

I would like to take this opportunity to introduce myself to CDAA members. My name is Rick Nash and I have been appointed to the combined position of Publications and Records Director / Records Officer until the 2011 AGM, when a new P&RD will be elected. It will then become the new P&RD's call as to whether the positions remain combined.

My appointment became necessary due to the previous P&RD's choice to relinquish the position due to personal reasons. Thanks Jason, on behalf of the CDAA Directorate and Members, for the countless hours you worked in the term of your appointments as P&RD and RO. All for the betterment of the CDAA, and importantly, all voluntary.

You were instrumental in negotiating cost savings and upgrading of the Guidelines publication, as well as, in conjunction with Damian Georgiou, forming the new CDAA website and administration database. It is only on becoming involved in this position that I have come to appreciate the amount of time that you must have spent on these areas.

We have also had a change of personnel in the webmaster side of things with Damian stepping back from day to day maintenance of the website to concentrate on admin application development. Sincere thanks for your voluntary efforts to date, and hoping your reduced work load will result in the formulation of many new ideas for the future. Fantastic effort!

Simon Roberts has volunteered his services in carrying on day to day upkeep of the main website and forum. Simon is an IT guru from Melbourne and keen cave diver. I don't know what is in the water in Victoria to make such a sensible sounding person take on this job? Good luck with it, I'm sure we will be talking on a regular basis.

Finally, in the thanks department, we come to the previous Records Officers, in Rob Lee and Nicole Johnstone. Please come back!!!!? A very time consuming and thankless task. With hundreds of renewal applications to process in a short time frame I'm sure you would have been tearing hair out at times. Well done.

I have not been in the position long enough to provide a detailed P&RD's report but suffice to say that with the changes to Guidelines, and the movement to the new Website, a strong base has been established to continue to build and strengthen this area of CDAA activity. Guidelines is only as strong as the articles provided by members, so anyone out there with ideas for an article contact myself, or editor Dave Bryant, and give it a go.

Cheers Rick Nash



Giddy all CDAA members - Another financial year has come and gone and I still can't believe one of the most amazing people I have ever met can't be with us any longer. I know you all hear a lot about Agnes but let's face it, she was an amazing person, adventurer, writer and laid back lady. I understand not everything she did was the way you or I would dive but it re-inforces the safety aspects of diving in caves, or even when I go it alone under a pier. What I will miss most though is her amazing stories & pictures which appeared in Guidelines. This publication is becoming a fantastic colourful magazine known for quality editorial, awesome travel writing and general news articles. Many members have commented why shouldn't we drop Director's Reports and some other things from the mag, and have more space for great editorial, travel stories and general interest articles, so it's just a matter of time I guess. It's been a pleasure designing Guidelines for the past 8 years and I hope we can make it even better in the months and years to come.

All the best, Dave Bryant, Designer.





# Richard Harris: Cave Diving Fatalities - Lessons learned from friends lost.

**Since the Piccaninnie Ponds double fatality in 1984, the CDAA has prided itself in its subsequent flawless safety record. We have had a few bent divers, we have had a few injuries and we have probably had some near misses. But the lack of a fatality in 26 years of busy cave diving has given us a perception of being a world-class organisation from a safety perspective. We have been quick to brandish this safety record to defend the sport, comparing ourselves favourably with overseas cave diving communities who have been less fortunate or lucky. We congratulate ourselves on our excellent training, our strict access protocols and vigorous self-regulation...**

Then suddenly it has all come crashing down. Firstly with the loss of CDAA member Rob McAlister in Kilsbys Sinkhole in March 2010, and then a year later with the death of Agnes Milowka in Tank Cave. The CDAA experienced the loss of two of its members in a short period of time. The media are interested in us again, the landowners are nervous and the Directors are reviewing standards, procedures and regulations. So are these the accidents that had to happen? Were we overdue for such events or is it possible to indefinitely participate in risk-laden adventure past times without losing our friends?

I am writing this article not because I have the answers to these questions, but because I feel we cannot ignore the elephant in the room. We need to acknowledge these events and be able to discuss them amongst ourselves. Two experienced and much loved members of our association have died and we owe it them to reflect on what has happened and to respond in a responsible, positive but NOT hysterical manner. It is not the time for knee jerk reactions, but it is certainly a time to scrutinise everything we do. We must examine the facts of these accidents and determine if our divers have been let down by a lowering of training standards, a general loss of "watermanship" compared to the previous generation, by a creeping change in techniques or technology, or by an insidious element of complacency that comes when everything is too good for too long. Exley's Blueprint for Survival is as relevant today as it was when it was written — depth, guideline, lights, training and gas reserves. Ignore these at our own peril.

Because of my involvement professionally (as a diving medicine physician with an interest in accident analysis), through being an office bearer of the CDAA (as Safety Officer), and personally (as a friend of Ag's), I am not at liberty to reveal many details of the accidents which are obviously the subject of police and coronial enquiries. However it is clear that some issues are going to be discussed and examined in close detail by the association, and that we are going to be scrutinised by the authorities with regard to certain areas. This is an inevitable and necessary part of any fatality investigation. We should embrace this process and take the opportunity to improve any deficiencies that are revealed. Issues like depth, solo diving, sidemounting and evolving technologies like rebreather use will all come under the microscope again. As I said, we need to consolidate our current training and policies and not make any rash decisions about these areas.

Some small positives have come from these terrible events. The relationship between the South Australian police and the CDAA has been strengthened enormously. A number of meetings with SAPOL's Water Response Unit beginning 2 years ago to discuss these exact scenarios meant that when the deaths occurred liaison was swift and efficient. Having valued members like SE Representative Grant Pearce immediately available to the police during the Kilsbys recovery was very helpful to the police divers. Grant was able to assist with gas analysis, discussion of equipment configurations, the site itself and typical cave diving procedures all of which made interpre-

tation of the scene and the evidence much more straightforward for the police. Grant's role (and the burden he shouldered) should not be underestimated and the association owes him our thanks.

The relationship between the CDAA and SAPOL was truly tested with Agnes's death in Tank Cave. For the first time in the history of Australian cave diving, the police divers were faced with a recovery that they could not complete themselves. Australian commercial diving standards restrict police diving activities to equipment configurations and procedures that are simply not compatible with long distance penetrations, or depths below 50m. There has been an unwritten (in fact almost unspoken) agreement between the police and the cave divers that in such a situation, it may become necessary for volunteers like our members to assist with a recovery or rescue. In the USA, a body known as the IUCRR (International Underwater Cave Rescue and Recovery Organisation) responds to all cave diving incidents. Under the direction of the police, members effect the recovery with appropriate attention to evidence and preservation of the crime scene. In France the SSF performs the same role. In New Zealand and the UK, established cave rescue organisations regularly assist the authorities. Australia is well behind these countries because of legislative issues and infrequency of events.

Once Agnes was located the police were faced with three options, all of which were seriously canvassed. Close the cave, dig a hole down to where Agnes lay, or allow CDAA members the opportunity to attempt the recovery. By allowing us to proceed, the police put an enormous amount of trust in the group and also exposed themselves to significant risk if a further accident occurred. I understand authority came from the highest levels on a day-by-day basis to allow the operation to proceed. Again, we should not underestimate the burden SAPOL shouldered to allow this to happen.

On the day the alarm was raised when Agnes was overdue, it was fortunate that a number of experienced sidemount cave divers were in the Mount that weekend. Intimate knowledge of the part of Tank Cave Ag was exploring was held by John Vanderleest and Jurgen Gehrler, so a preliminary search was quick to locate a new line 600m into the cave where Ag was diving. From that time sequential dives occurred until the sad discovery was made. Nine divers worked closely with the police for the next 5 days to safely recover Agnes and her equipment from the cave. The experience for all concerned



was traumatic, but valuable should another similar event ever occur. Importantly, we demonstrated that volunteer cave divers can be utilised to perform recovery work under the supervision of the police, and I believe this will help cement the relationship that we are continuing to build.

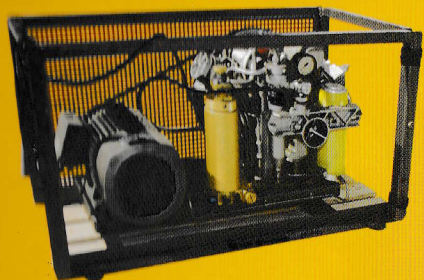
The team learnt a number of important lessons and techniques and these will be documented with the police during future meetings. It is hoped that this recovery will provide the impetus for an MOU to be drawn up to formalise an arrangement between cavers and SAPOL. Another lesson learnt was the care required in dealing with media. Unfortunately on both occasions CDAA members spoke to the media without the knowledge or authority of the police or the directors. This could have caused a great deal of unnecessary anguish to the families of the deceased and difficulties for the association. If in doubt, say nothing!

Whether by good luck or good management, the CDAA has had a long period of fatality free diving. Sadly that era has finished and time will tell whether the fatalities were down to bad luck or bad management. Regardless, it would be inexcusable if we allowed these events to pass without each and every one of us stopping to consider our own diving styles, our approach to risk management and our personal limits. I hope the members and directors respond in a sensible and appropriate fashion to these terribly sad events. In the fullness of time, I hope we can discuss the deaths calmly and openly, and learn from the lessons that might be revealed.

Stay safe,  
Richard Harris  
#1360  
Safety Officer



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## NOTICE TO MEMBERS

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Terri Allen,  
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CAVE DIVERS ASSOCIATION OF AUSTRALIA Inc.

## NOTICE OF 2011 ANNUAL GENERAL MEETING, ELECTION OF OFFICE BEARERS AND VOTING FOR MEMBER MOTIONS AND CONSTITUTIONAL AMENDMENTS

This notice is issued pursuant to Clause 32 of the Constitution and serves to advise members that the Annual General Meeting of the Cave Divers Association of Australia Inc. will be held on **September 24th** at the **Port Education Centre, Port Melbourne Victoria**. The Annual General Meeting will commence at 6:00pm and will conclude no later than 7:00pm.

### This notice also serves to call for:

\*Nominations for **National Director, Publications & Records Director** and **Site Director**

\*Member motions

\*Amendments to the Constitution

The Returning Officer must receive nominations for the Directorate positions no later than the close of business **Friday August 4th, 2011**.

Mail to: CDAA - PO Box 286, Fairfield VIC 3078

The Business Director must receive member motions and proposals for amendments to the Constitution no later than close of business **Friday August 4th, 2011**. Items received after this date will not be accepted nor will any extensions to this date be granted.

Mail to: Business Director - PO Box 286, Fairfield VIC 3078

Members intending to nominate for an Office Bearer position must be eligible, paid up members of the Association as defined in the Constitution. Nominations should be accompanied by a précis not exceeding two hundred and fifty [250] words detailing skills, experience and achievements relevant to the duties and responsibilities of the nominated position. The responsibilities of Office Bearers are contained in the Constitution of the Association. Nominations must be in writing and be signed by the nominee, the proposer and the seconder all of whom must be eligible, paid up members of the Association.

The polling date close for the election (if required) is **Monday 19th September, 2011**.

The election of Office Bearers and voting on amendments to the Constitution will be conducted entirely by postal ballot. If you wish to vote you must be an eligible, paid up member of the Association and you must only use the ballot papers to be provided in the next issue of Guidelines (#117) or by special mail out.

The ballot papers must reach the Returning Officer no later than close of business, **Monday 19th September, 2011**.

Detailed voting information will be provided with the ballot papers.

Questions may be directed to the Returning Officer.

Andrew Cronan, Business Director - [business@cavedivers.com.au](mailto:business@cavedivers.com.au)



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# SYMPOSIUM 2011

*This years' members' Symposium will be an exciting event once again with international guests speaking on various topics.*

*We hope to see as many members as possible.*

*The AGM and Symposium will be held in Melbourne.....*

## PLEASE NOTE:

At the time of publication, Guest Speakers for the 2011 Symposium were still being organised. The event will be on September 24th and 25th at the Port Education Centre, 343-383 Lorimer Street, Port Melbourne Victoria. Check the CDAA website in early July for the finalised itinerary and times, plus a full list of Guest Speakers.

## Articles for Guidelines

- **Send articles by email or on disc in the mail!**
- Email to [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au) and [seapicsdavebryant@gmail.com](mailto:seapicsdavebryant@gmail.com)
- Text files should be saved as Word files or Simple Text and pictures as separate jpegs.
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*John, Sharon and Erica.*



# NATIONAL DIRECTOR'S REPORT

STEVE TREWAVAS



**The most exciting news to report is the CDAA's purchase of Tank Cave on 26th May 2011. We now own an asset that I hope will ensure the financial viability of the association for years to come.**

I would like to take this opportunity to acknowledge the contribution of several people who have been instrumental in the purchase.

**Warrick McDonald** - It is important to recognize Warrick's role in the financial management of the CDAA over the last 10 years. When he became National Director he injected funding into the association from his personal finances, which ensured that the CDAA was able to continue operating successfully. From there we have now become arguably the most successful cave diving management organisation in the world. Warrick was also influential in the negotiation stage of the Tank Cave purchase. The day after he stood down as the National Director I asked him to approach the owner on our behalf. I still recall his excited call announcing that Mr Rob Dycer was prepared to sell. The rest is now history...

**Rob Dycer** - As the landowner Mr Dycer has, for many years, allowed CDAA members to dive his wonderful cave site. He has been supportive of the sale and advised on council and state government issues so that we could successfully receive permission for the non-complying subdivision allowing the sale to progress. I would like to thank him not only for his assistance but for his perseverance and support of cave diving in the SE of South Australia.

**Andrew Cronan** - Negotiating the minefield of legal and financial papers without the assistance of Andrew would be a near impossible task. His expertise in managing the financial aspects of the negotiation resulted in the favorable outcome, for which the CDAA are indebted.

We as directors are often in the difficult position of needing to weigh the impact of restrictive policies up against the safety of our members and the long term stability of our sport. We have received some great input by members on the online forum and these ideas have been considered in the final document. There are a number of new regulations that are about to be announced, and it is important to note that we have not made these changes without some angst and a lot of debate amongst ourselves. Please make yourself aware of these via the website under CDAA Regulations. Most pertinent are those that relate to solo diving, sidemount and rebreather prerequisites.

Solo diving has never been endorsed as a main stream overhead diving methodology. Recent events have brought this practice under the spotlight and as a result we felt compelled to make a number of changes. The aim behind these amendments is to address any shortcomings within our regulations, prior to the release of coronial findings. This preventative measure will hopefully ensure that we can continue to self govern as an organisation. I want to be clear that intent of the 'solo diving policy' is not to restrict exploration. It is a measured statement to ensure that divers remain in a position to assist a buddy if it becomes necessary. What this means practically is that one diver is able to dive an area as the team member remains in a position to support in the event of an emergency. The distance and support method is left to an individual dive team to manage. I trust this is a workable policy that maintains local community and landowner confidence, yet allows productive and safe exploration. What we wish to address is a diver entering a site solo and conducting a complete dive in solo fashion, with no person in a position to assist. This is a liability concern.

Constitutional amendments will be announced in the next issue and we encourage members to vote on

these long over due changes to ensure the viability of the club. I would like to thank the constitution committee for their immense contribution to the work undertake on this document.

As mentioned by David the designer, we are working towards improving our magazine. The look and feel of 'Guidelines' has evolved from a club based newsletter allowing members communication with one another, to a world class cave diving magazine. We now have many international divers, landowners, Government departments and caving organisations that receive it quarterly, allowing them remain updated with what is happening 'downunder'. To that end we are working at keeping politics in house and publishing Guidelines as a non-politicised Magazine, representing us as a group of divers any member would be proud to be a part of.

Discussions on the online forum highlighted an interest in workshops directed for both rebreather divers and sidemounters. We are working towards including these workshops at this years' AGM and have

pencilled in several facilitators for the Sunday of the event weekend. This will allow both our instructors and members to be upskilled, and thus benefit us as an organisation. Additionally with the help of the safety officer, Richard Harris, we are intending to run a number of diver recovery workshops and plan on bringing out an international instructor to further educate those who are interested. For those of you who are, please contact the safety officer via email.

It has further been suggested on the online forum that state meetings need to be held. I intend to arrange them in the near future, however not all directors will attend each state. This will enable us to meet members face to face and address concerns they may have or act on suggestions they wish to express. Please visit the website for those pending announcements.

Take care  
Steve Trewavas

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Email: [darren@justabedlodge.com.au](mailto:darren@justabedlodge.com.au)

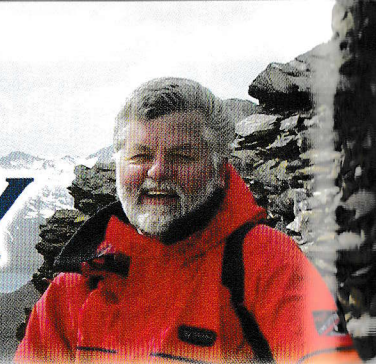
Lot 7, Capiro Rd, Compton (via Mt. Gambier)  
PO Box 9286, Mount Gambier West, S.A. 5291

**Tripod**  
**available**  
**for use!**



# KARST GEOLOGY

WITH IAN D. LEWIS



## The 'Wombat Holes' of Glencoe

In this article I'm going to look at a different aspect of limestone, faultlines and volcanic effects not very far away from the Sinkholes of Mount Gambier but very different in terms of prospecting for cave diving sites.

### Forces on the Mount Gambier Limestone.

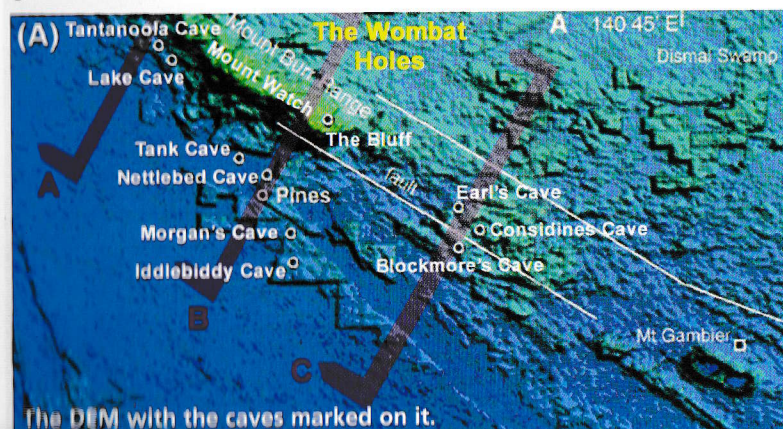
Last year I wrote about an increasing understanding of the interaction between limestone, faultlines and volcanoes in the Mount Gambier region. Before that, cave and sinkholes here were generally thought to be only formed by groundwater movement through the limestone to the coast. Now we know a lot more about faultlines, especially the large deep ones like the Tartwaup Fault and the Nelson Fault. Their strong relationship to caves in the region was discovered in my research about the 120-km long Kanawinka Fault to the east and north which I linked directly to the formation of the larger Naracoorte Caves. This has given us a bigger picture of why caves and sinkholes across the whole region are clustered together in lines and groups. At Naracoorte the large dry caves all align exactly along the Kanawinka Fault zone. In the case of the Sinkholes around Mount Schank, we have identified that their huge volumes were dissolved by deep acidic volcanic gases coming up big faultlines from below and activating the groundwater near the surface within the limestone.

### Small Caves - Changes in Cave Diving exploration.

This article concentrates on the smaller, flatter lower cave systems below water level and the potential in the region to find more of them. One reason for looking at this is that cave diving itself in Mount Gambier has changed remarkably over the last 10-15 years or so. When we set up the CDAA and the training techniques, even Penetration divers were still on air with large tanks and limited to passages of that size. This has all changed with the appearance of sidemounts, small-diameter tanks and the simple fact that serious cave divers have to work a lot harder to explore systems than we did when the CDAA formed and when discovery of new caves and passages was fairly easy. Small caves and holes and dolines were simply bypassed then but are now being closely examined by the new breed of cave divers who have real skills in this searching. Therefore knowing something about the geology of small systems to predict discovery zones will be very useful, and I am going to concentrate one significant cave area in the Mount Gambier region where I reckon the prospects for discoveries look very good but which has been almost completely overlooked over all the years.

### An intense zone of cave development.

There's a whole scattering of known caves and surface solution features running WNW from Mount Gambier (Fig 1). I have only marked a few of the well-known ones, which are roughly in groups. They all range from approximately 10-35m deep and most of



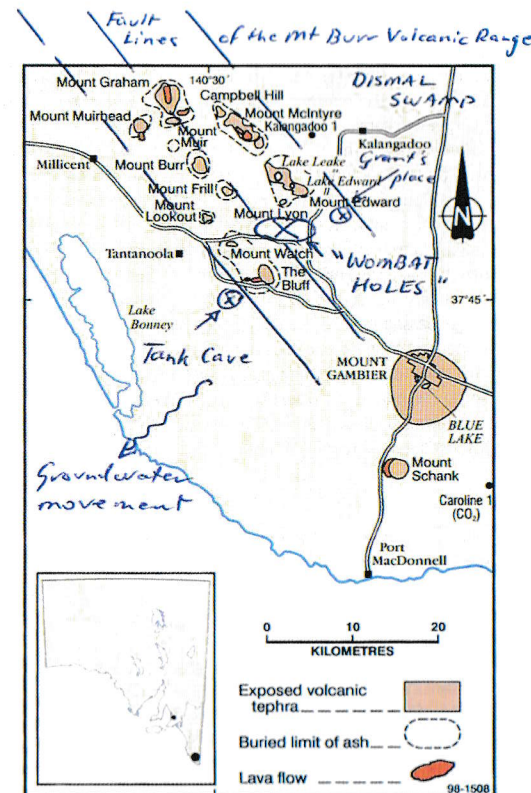
them reach below the water table. Generally the deeper ones are on the coastward side (Fig 4 - cross-sections). The whole area is relatively flat limestone with one enormous exception - the huge volcanic block of Mount Watch and The Bluff, which are the south-eastern end of the Mount Burr volcanic Range (Fig 2). These volcanoes are far older than Mount Gambier and Mount Schank. They forced their way up through the Gambier limestone, fractured the limestone all along their edges where caves are now found and because of their rock type and their orientation, they completely disrupted the local groundwater movement from Dismal Swamp towards the coast. Therefore water had to find its way along and around the edges of the volcanoes.

### The "Wombat Holes" - dolines everywhere!

I have marked the area known as the "Wombat Holes". They are nothing like wombat holes!!! They are an intense doline and sinkhole field - at least 50 steep cone-shaped depressions all across the northern slopes of The Bluff and Mount Watch, down onto the southern edge of the Glencoe valley (Fig 3). Anywhere in limestone country which has a concentrated cluster of dolines and depressions is a magnet for cave hunters. Some of these dolines are seriously big and have pine forests planted right through them. One or two were used by the locals as a rubbish dump for many years until disposal of rubbish on karst country was prohibited by law as it pollutes the rural groundwater (CDAA members and research had an influence on the declaring of this State legislation). You can hike or drive all up around the northern slopes of The Bluff and Mount Watch and as far west as The Three Sisters Cave and see dolines everywhere!

### Why are the Wombat Holes there?

The Bluff may be up to one million years old (although dates for the Mount Burr volcanics are not very certain) so the waters of Dismal Swamp from the northeast built up over a very long time against this barrier or tried to drain around its eastern end but could not because the land surface there is an old sea coast dune ridge (Fig 4: cross-section C-C). So the swamp and groundwater could only pond up against the north edge of the Bluff and sink into the limestone. This would have accumulated for a very long time but the really important thing is that the groundwater would also have picked up acidity from the minerals in the ash layers of The Bluff and Mount Watch as it sank into the limestone. Just as significantly, the limestone was heavily fractured by the upthrust of the volcanics and the forces through both faultlines. This meant the groundwater had an increased capacity to dissolve limestone and more fractures in which to do so. Groundwater standing around acidified for a long time could then easily dissolve complexes of low flat limestone tunnels and mazes. Does this sound familiar? Yes - it's similar to Tank Cave and even Englebrechts Cave very close to another volcano, Mount Gambier itself. Over longer time, this charged groundwater could also dissolve larger volumes into which the Wombat Holes have collapsed, meaning there will also be series of larger pre-collapse rooms under this area. In addition to this process, rain falling on the volcanic slopes of either side - north or south - of The Bluff and



### The whole volcanic range showing three main fault zones in biro.

Mount Watch couldn't soak in, so it ran down off the sides for perhaps a million years into the surrounding limestone, forming simple stream-passages down to the groundwater. A combination of these systems and larger rooms has created the space for the intense cluster of large collapse dolines that form the Wombat Holes. The predicted systems on multi-levels, slope angles and larger rooms are shown in dotted form on the right-hand sides of the cross-sections in Fig 3. The Wombat Holes got their name not from the large multiple dolines but the small passage entrances and rock ledges at the bottom of many of these, where exploration prospects are best. Only wombats have had a good look in these so far!

### Relationship of Tank Cave to the Wombat Holes

The main passage directions of the 7000 metres of Tank Cave do not run towards the Wombat Holes (ie in the direction of groundwater flow) but at right angles to this and parallel to the Mt Burr volcanic Ranges. That is, Tank Cave runs mainly along the direction of the fractures in the limestone caused by the volcanos forcing themselves up the nearby faultlines. This will be the same for predicted passage patterns underneath the Wombat Holes doline complex, with the additional likelihood of downhill drainage passages caused by the runoff from the mountain.



The key to Tank Cave's length is the numerous short and small cross-passages which connect each main line together. It is likely that these connectors exist because they were formed or enlarged by chemically active water runoff draining down the southern side of The Bluff and that without The Bluff being there, these cross-tunnels and the multiple main fracture passages of Tank Cave would hardly exist at all. There are a number of long thin fracture caves further south out on the limestone plain towards Kongorong and the coast which are single linear passage systems up to several hundreds of metres long, with underwater sections, but with no known adjacent similar parallel passages or evidence of containing any cross-passages as sideways connections. This seems to be the pattern for caves in the undisturbed limestone plains, compared to the limestone next to the mountains which has been subjected to huge levering forces by the emerging volcanoes. Therefore the same patterns are highly likely on all sides of the volcanoes.

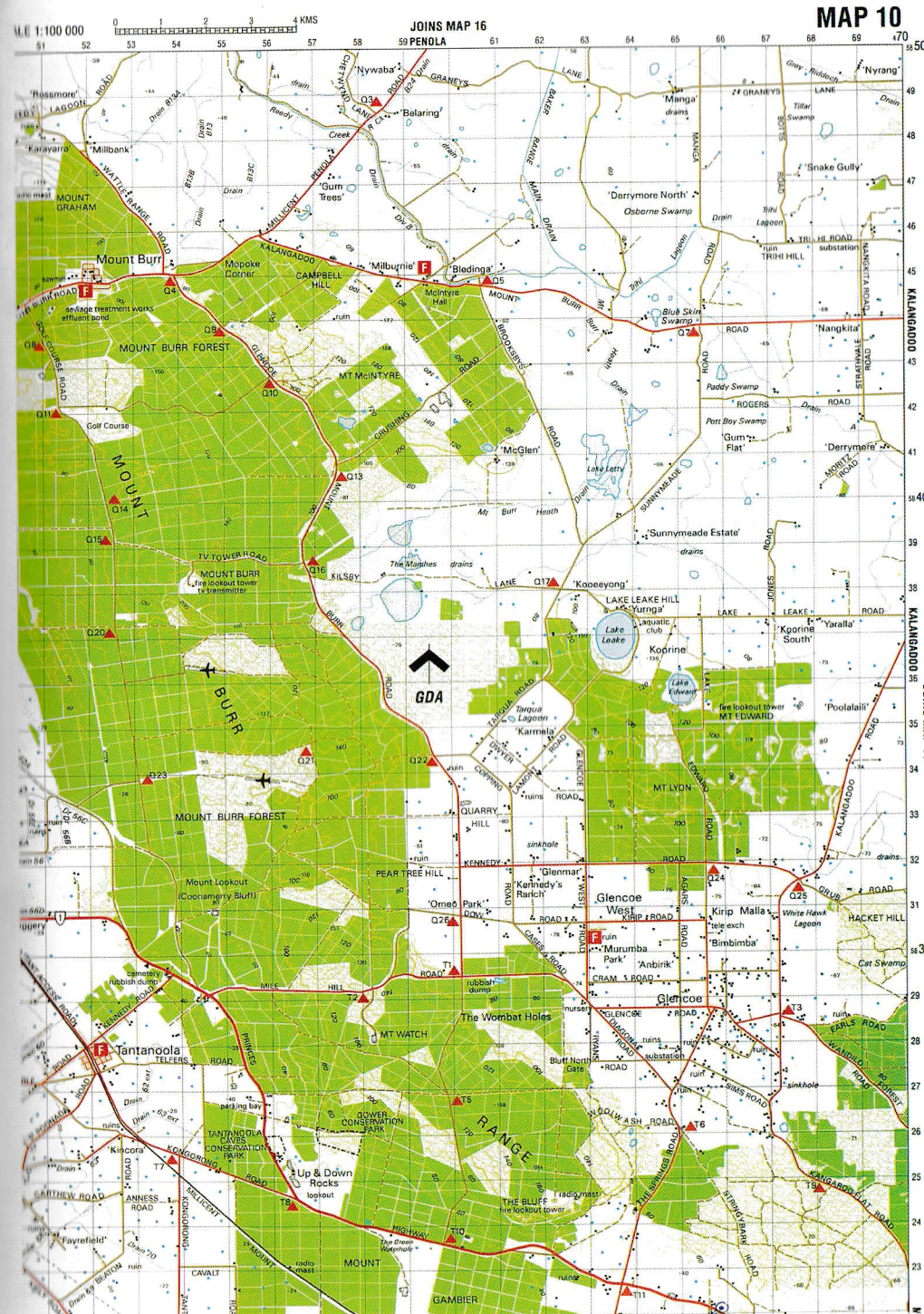
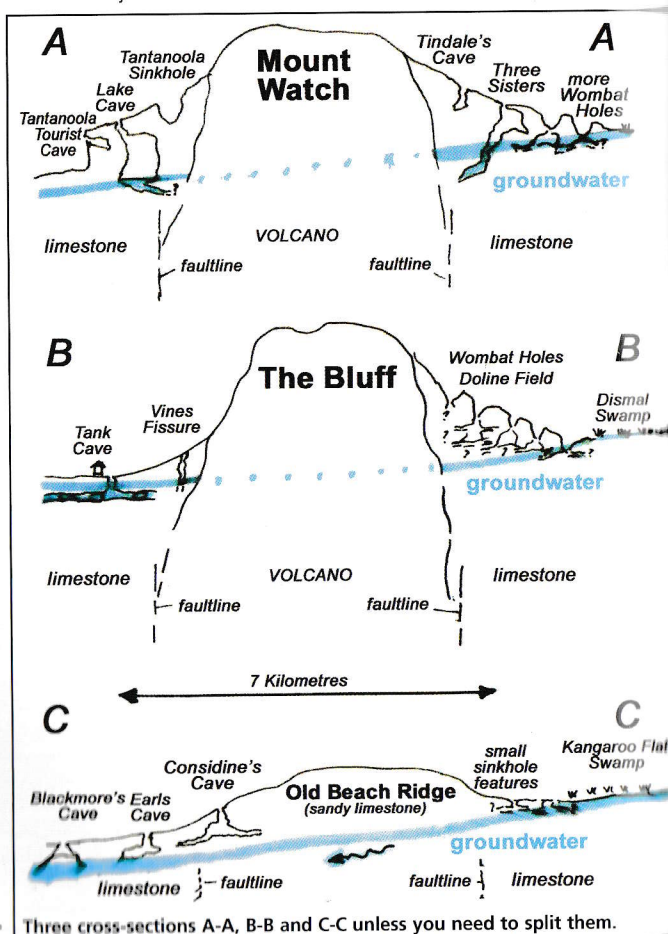
### Larger rooms to the northwest

I also mentioned that larger passages and rooms are likely lower down under the mountainsides. These are more likely towards the western (Mount Watch) end where the Three Sisters Cave is found, and the larger size of Tantanoola Sinkhole and Lake Cave on the southern side flanks of the range are evidence of this trend. The faultline running generally through the Tantanoola zone generated enough heat and pressure which "cooked" the limestone around the Tantanoola Tourist Cave locality and transformed it into another rock type - dolomite - which is a lot harder and has many fractures. It is a beautiful pink building stone which is quarried at Tantanoola near the Tourist Cave there and features in the Jens Hotel, the Mount Gambier Hotel and the Town Hall complex right in the heart of Mount Gambier city. It is likely that the effect on the limestone of more intense pressures around Mount Watch caused by its emergence and which generated this rock alteration (effectively metamorphism) has allowed water to develop larger rooms in this zone (section A-A) than further down range (section B-B), which may also explain why Tank Cave does not have large rooms or deep passageways.

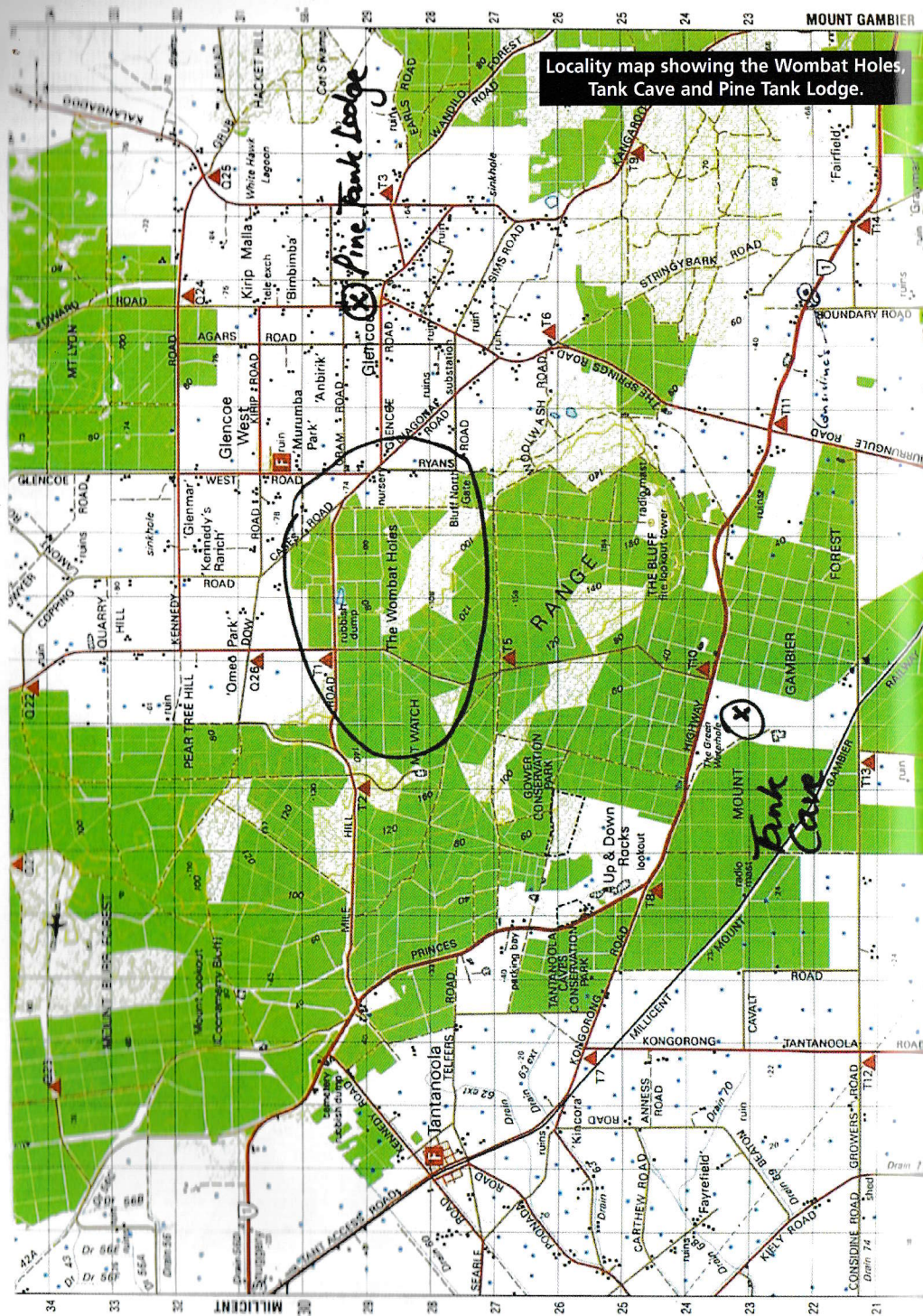
### The potential of the Wombat Holes

What potential do the Wombat Holes offer for new caves and underwater tunnels? Effectively there's a whole mountainside of sloping drainage passages merging downwards into a series of shallow flat maze systems which will be at or just below water level with the likelihood of part-flooded larger rooms towards the Mount Watch western end. Also, from the cross sections A-A and B-

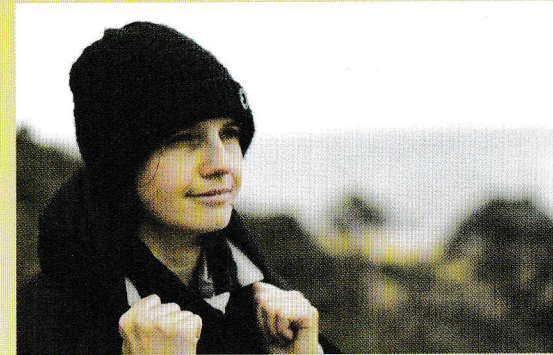
B you can see that the blocking effect of the volcanoes means that caves will not form continuously across the 7 kms from the Wombat Holes area right through to Tantanoola (A-A) or through to Tank Cave (B-B) but could do so from Kangaroo Flat through the dune limestone ridge across to Considine's cave and also Earls and Blackmores Cave (which both reach water). The high concentration of the spectacular dolines of the Wombat Holes tells us that the potential occurs over at least 10 square kilometres along the northern flanks of the mountain, an area approximately 5 times that of the entire Tank Cave cleared land down towards The Pines Sinkhole. This is a very large area for maze networks to develop! Today's breed of cave divers have developed skills and techniques to push smaller passage systems but these skills do not have to be restricted to underwater - the base of many of the Wombat Holes require a bit of sand and rock rearrangement to get down the edges of the rockpiles beneath the passage systems and ultimately to the water table. No-one has even mapped the pattern of all these dolines yet, to see where the lines and clusters are most intense (patterns are everything to a karst geologist). Grab a G-pick and a GPS and go for it!







# Liz Rogers: Agnes Milowka



I joined the Melbourne University Underwater Club in 2003; Ag was President that year. It wasn't until a few years later, when I was President, that I better understood and envied the natural talent she had for getting hungover students enthused about getting up early and going diving. In February 2005 we did our Cav/Sink course together, with Dave Scarlett and Roy Solterbeck from the Club, and Terri Allen instructing her first CDAA course.

In mid-2005 I headed off to England for 18 months. Back in the country in 2006 Dean Chamberlain, Ag and I were over in Mt Gambier every 2 to 3 weeks, practising for the Pen course. We were all still determinedly backmounted at this point, removed by Ag on one notable occasion to facilitate an exit from the bottom of Mudhole. Neither of her buddies was too impressed with the unscheduled and unpracticed manoeuvre, but Ag was unfazed by what ifs – she was comfortable and under control.

On the Easter weekend in 2007 we set out on our Pen course, progressing through the Goulden's training dives and stress test. The first site dive in Pines saw Ag and I buddied together. With blindfolds applied down past the stop sign, we began to return to the surface, reaching the first of our jumps between the "permanent lines" laid for the course. After a few minutes of hanging on Ag's arm, I realised we weren't going anywhere, and moved her over so I could have a go.

By this point the spool was wrapped three times in each direction around the line, and definitely not

coming off. Ag had another go at it, while I had a bright idea – to pass the dive, we needed to bring out the jumps – I should cut the knot! Not the brightest idea, as the end of the line attached to the surface slipped from my fingers. Blindfolds came off and we proceeded to the surface for a strict talking to, followed by drunken rationalisations that night at the Avalon.

Ag and I were both distraught at our failed attempt – maybe we weren't meant to be cave divers? We had a lot of discussions about that dive, and why we were both so focused on "passing" the dive that we forgot the ultimate aim was to exit the cave. The lesson that stuck with me was that every learning experience you have with someone there to rescue you is one to be grateful for. I firmly believe that a regular reminder of the limits of your skills and decision-making abilities under stress is the best gift for every cave diver.

Later that year we had another go at the site dives, which went without mishap and we were free to explore. We were still heading to Mt Gambier



every three weeks or so, clocking up pre-requisite dives for Tank Cave. Unfortunately for Ag this happened right as she headed off for a year in Florida, and she didn't have the time to get into Tank. This was naturally accompanied by very little sympathy from any of us, and justifiably so as the email reports began to come home.

While in Florida Ag did over 200 cave dives, mostly in Ginnie on her way home from work. Not being able to find buddies every evening, Ag began solo diving more frequently. This culminated in her doing solo exploration beyond the end of the gold line restriction at 4000ft, and thus getting herself banned from the park shortly before myself and two cave diving friends turned up to visit her. The time we spent with Ag was punctuated by her answering the phone, a brief pause, then "Yeah, it's true! Unbelievable, right?"

With her employer Dive Rite shutting down operations for two weeks over Christmas, and banned from her favourite dive site, Ag was forced to find something else to do. This turned out to be finding her way through a restriction in nearby Baptising Cave, and two weeks of knotting line, filling tanks, diving virgin cave and not much sleep. Nearly 2km of new passage put Ag in a fairly exclusive club among cave divers, and her write up of the cave is a very good read.

Following these exploits (and in no particular order), Ag joined Wes Skiles's Bahamas project for the National Geographic, and talked her way into a job as a stunt double for Sanctum. She got herself trained on two different rebreathers, and came down to Tassie with us to put some more line in Tiger's Eye Cave in 6 degree water. Ag finally got into Tank, completed the familiarisation dives and went on to find new passage off C tunnel. She joined Stu Macgregor's trip to the Blue Holes in Queensland, and on a subsequent trip to Florida connected her line in Baptising Cave to Peacock Cave with James Toland. With Jim Arundale she discovered over 1km of new

passageway and 6 sumps in Elk River in Gippsland, the most significant find in Victoria in decades. Joining the Cocklebidy push expedition, she surprised the rebreather boys by turning up at the end of the third sump on open circuit, well past Chris Brown's line. She also dropped an underwater camera in another sump for over six months. Surprisingly enough, it didn't work when extracted, but she did talk Canon into replacing it for her under warranty. As those who have had to deal with the Canon warranty department will understand, this may be her most significant achievement.

Mixed in with all of this, Ag managed to do some naughty things on another Nullarbor trip and get herself banned by the CDAA for a year. That ban expired last October, and in early February we drove over to Mt Gambier for a Tank Cave weekend. Capitalising on her modelling skills acquired during her time with Wes, I got some excellent shots in F tunnel before helping her to map her new areas in C tunnel.

Two weeks later on Sunday February 27th, I was leaving Piccaninnie Ponds to return to Melbourne when we were contacted to say that Ag was late back from a Tank Cave dive. Over the following week, I was part of the team of CDAA divers who brought her body to the surface. The CDAA is blessed with little experience in this area, and the excellent co-operation and assistance of the Police made our grim task much easier.

The recovery team divers completed a short statement before leaving Mt Gambier, which was cleared with the Police. Some of you may have seen this on various internet forums, and it is reprinted in this issue. With Ag's death reported to the Coroner, this is all that can be said at this time.

In the time since that week, I have done a lot of thinking about Ag, her diving, the recovery process, and about my own diving.

A lot of people facilitated Ag's journey to become the diver she was – she influenced, persuaded and

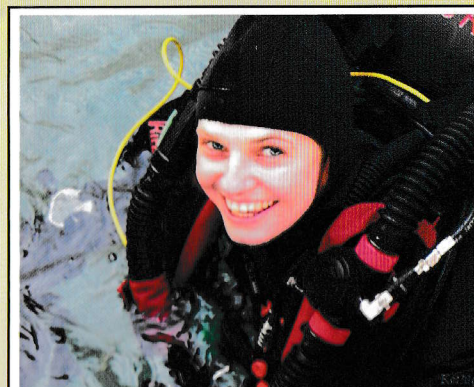
convinced an impressive list of people to help her out, with a big smile and her winning personality. She made a lot of friends and put a lot of energy into communicating her passions to others.

Ag had natural talent in the water, both in her skills and in her mental approach. She put serious thought and effort into her training, skills and dive trip preparation, which was not always evident to those who saw the speed at which her diving was progressing. I never knew her to panic on a dive. The risks she took were rational and calculated, underpinned by her comfort underwater and her confidence in her own abilities.

When exploring new caves, we balance the fear of things going horribly wrong against the excitement of what's around the corner. The emotions at the time influence our attempts at the rational decision to continue or to turn back given gas supplies, gear configuration, physical and mental comfort and the cave environment. Without fear to influence the decision, that rational choice may be harder to find. Knowing when to be afraid is essential to cave exploration.

For my diving, it has been brought home to me that I never want one of my friends to have to stand with my mum as she cries next to a cave entrance. And so my exploration will be more considered, involve more redundancy, and a much greater willingness to call the dive. I would ask every member to reconsider the risks you take, because they're not just your risks. Should you die in a cave, your troubles are over. For the divers who will try to bring you out to your family, the difficulties are just beginning. Please, dive safe.

Liz Rogers  
#3987



## Statement and award details

On Sunday 27th Feb, Ag was exploring in Tank Cave, using sidemounted steel tanks. She tied off to the existing cave line and reeled out.

Ag unclipped one tank to pass through a series of restrictions. At some point she made the decision to leave this tank to make further progress. Ag continued to explore before turning to come home. Coming back in silty conditions, she appears to have been unable to navigate a restriction. She ran out of air before she could return to her tank.

Her body was brought to the surface by cave divers on Wednesday 2nd March, co-ordinated and supported by the SA Police and with help from the SES. A full investigation is being undertaken by the Coroner.

Ag was an inspirational diver who accomplished many impressive feats in a short space of time. She will be sorely missed by her Mum, Dad and many friends and buddies.

In recognition of Agnes' remarkable achievements and legacy, The **Agnes Milowka Memorial Environmental Science Award**

has been established by *Mummu Media* for underprivileged schools in the area of science, marine studies or exploration.

Donations are warmly welcome to the bank account below:

BSB: 063-128

Account: 10431497

Account Name: Mummu Media - Agnes Milowka Memorial Award.

For more details see:

<http://www.agnesmilowka.com/index.php/awards.html>



# Florida and the NSS-CDS Workshop, May 2011 by Ken Smith

*On Friday May 20th, 2011 Forrest Wilson and I left Atlanta for "Cave Country" in Florida. Forrest has looked after me well since he first took me to Florida in 1982 and this trip was no exception. Forrest's van was piled high with cylinders and scooters. We had a week of cave diving to do before the NSS-CDS\* workshop on Saturday 28 May.*

We dived many of the popular sites and I had the chance to make some new friends as well as meeting good friends from previous trips. We dived Manatee Springs upstream from Catfish Hotel and the winding passage, combined with reduced visibility, made for some interesting scooter riding. James Toland described it as "Motocross Scootering" which is pretty accurate. After 48 minutes we turned and the strong current made for a quick exit

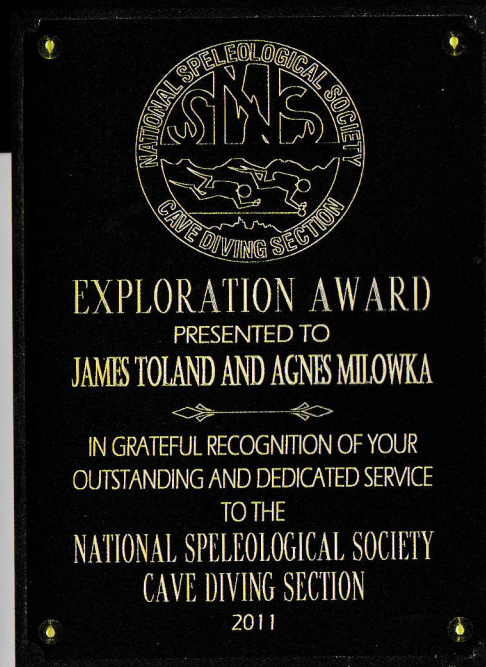
MichealAngelo Gagliardi and I scootered 2700 feet upstream in Ginnie Springs where we parked the scooters and stage cylinders. A long jump to the left took us into the "Insulation Room" where cave bacteria form large yellow mats, just like fibreglass insulation. There is no current here and large pieces of bacterial mat hang eerily in the clear water.

In Peacock Springs we swam the long, low, sandy passage that eventually connects to Baptizing Spring. This connection was made by Agnes Milowka and James Toland in August 2010. The passage has a steady current flowing south from Baptizing, which keeps it reasonably clear of fine silt. We swam a long way but had to turn before we reached the new line laid by Agnes and James. Floating back with the current I

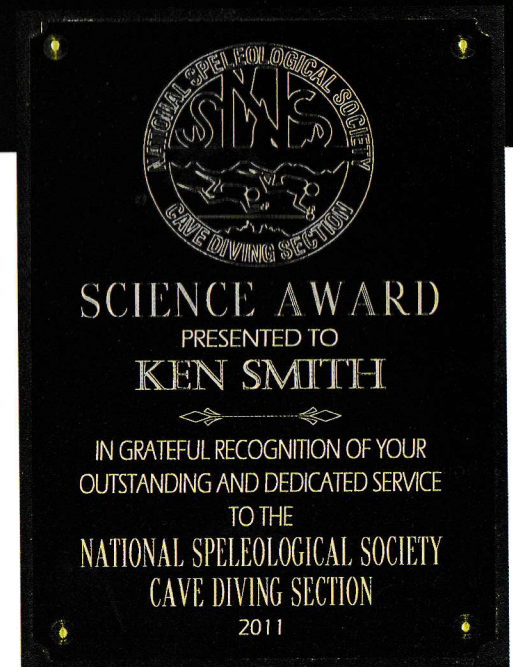
James Toland receives the Exploration Award from Kelly Jessop



Exploration Award presented to James Toland and Agnes Milowka



Science Award presented to Ken Smith



thought about Agnes and how excited she would have felt as she came back this way after making the connection. My buddy Tom Johnson, who knew Agnes well, paused to write on his slate. "can you feel Agnes". Yes I could... I guess we were both thinking about her, and how much she achieved in such a short time.

The workshop on Saturday 28 May was a big event with more than 200 people attending and displays of gear from a wide range of suppliers. We heard some fascinating talks and the day concluded with presentation of awards. James Toland accepted the Exploration Award which was jointly awarded to him and Agnes Milowka for

their work in connecting Peacock Spring to Baptizing Spring. I was honoured to receive the Science Award for development of the radiolocation "Pingers" which have been used in the USA and the Bahamas in recent times.

It was a great week! My thanks to the NSS-CDS, Forrest Wilson and my many friends in Florida! Now I just have to work out how to go again next year?

Ken Smith

\*National Speleological Society – Cave Diving Section



**CDA#** NUMBER

# CAVE DIVERS ASSOCIATION OF AUSTRALIA

(INCORPORATED IN SOUTH AUSTRALIA)

# Membership Application Form 2011/2012

**Mail to: Records Officer, PO Box 144, Henley Beach, SA 5022.**

Surname: \_\_\_\_\_

Given Names: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_ P/code \_\_\_\_\_ Mobile: \_\_\_\_\_

Phone: (h) ( ) \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Gender: \_\_\_\_\_

(w) (\_\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_

**Please  
email jpg  
or attach  
1 photo**

In consideration of me being accepted as a member of the Cave Divers Association of Australia Inc. ('CDA'):

1. I agree to indemnify and keep indemnified the Association, its directors, officers, employees, agents and contractors against any liability, loss, expense, damages, claims, suits, actions, demands, costs or proceedings whether arising out of statute or at common law in respect of personal injury (including illness) or death arising out of or in connection with or caused by any activity, function, event, dive, expedition, training or administrative task or obligation, including but not limited to equipment failure, damage of equipment during transportation, failure to check equipment adequately prior to entering the water, physical loss of equipment, lack of emergency, rescue or medical personnel or equipment at the site of an accident, loss of usable breathing gas, breathing gas contamination, incorrect measurement of oxygen concentration in breathing gas, incorrect measurement of gas fractions in breathing gas, running out of breathing gas, use of inappropriate breathing gas, mask flooding, becoming physically stuck underwater, collision with physical objects, line problems, including line entanglement, cut line, losing the line, line belly failure, line routing failure, lack of line junction, failure in line following, unexpected removal of line, route finding failure, unrecognised destinations, visibility failure, including poor visibility, deterioration of visibility, physical or mental health problems (pre-existing or otherwise), including hypothermia, blocked sinus, unable to clear ears, respiratory illness, physical or mental impairment due to alcohol or other substance, mental impairment due to narcosis caused by breathing gas, lack of diver fitness, sudden medical emergency, pulmonary barotrauma, fatigue, lack of sleep, animal attack (above and below water), lack of food, dehydration, vomiting underwater, psychological disturbance as a result of being present when a diving accident or other related activity occurs, traumatic injury or acute medical condition, weather problems, including underground and underwater flooding, cave problems, including falling natural and unnatural objects above or below water, physical changes in the cave whilst diving, strong currents, falling whilst entering or leaving the water (underwater or otherwise), falling underground whilst beyond a sump, air contamination in confined air spaces above water, nearby use of explosives, procedural problems, including inadequate or incorrect pre-dive planning materials, failure to observe gas margins, failure to interpret decompression tables correctly, inadequate understanding of decompression techniques, failure to observe correct decompression profile, failure to observe correct ascent or descent rates, lack of personal judgment of personal capabilities to execute a planned dive safely, communication failure between divers underwater, confusion over the expected actions of other divers whilst underwater, public interference by a non-diver, failure to locate alternative breathing supply during swapping of breathing supply, obstruction of alternative breathing supply during swapping of breathing supply, loss of above ground communications or lack of or unexpected loss of underground to surface communications.

2. **WARNING UNDER THE FAIR TRADING ACT 1999 (Vic).** Under the provisions of the Fair Trading Act 1999, several conditions are implied into contracts for the supply of certain goods and services. These conditions mean that the supplier named on this form is required to ensure that the recreational services it supplies to you are:

Rendered with due care and skill; and As fit for the purpose for which they are commonly bought as it is reasonable to expect in the circumstances; and Reasonably fit for any particular purpose or might reasonably be expected to achieve any result you have made known to the supplier. Under section 32N of the Fair Trading Act 1999, the supplier is entitled to ask you to agree that these conditions do not apply to you. If you sign this form, you will be agreeing that your rights to sue the supplier under the Fair Trading Act 1999 if you are killed or injured because the services were not rendered with due care and skill or they were not reasonably fit for their purpose, are excluded, restricted or modified in the way set out in this form. NOTE: The change to your rights, as set out in this form, does not apply if your death or injury is due to gross negligence on the supplier's part. 'Gross negligence' is defined in the Fair Trading (Recreational Services) Regulations 2004.

**3. I have read and understand the Constitution and Regulations of the CDAA and am in support thereof. I hereby apply for membership.**

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Membership Renewal Instructions

- 1) Please print and fill out the Membership Application Form **OR RENEW ON-LINE**
- 2) **Enclose a stamped self-addressed envelope**
- 3) Include **1 Photograph** and please write your name on the back of the photos or email a good quality photo as a **jpeg** (3cm x 2 cm) to **records@cavedivers.com.au**. Please do NOT staple to the form.
- 4) Enclose your payment. Save time, money and hassle, join for more than one year, no limit!
- 5) If you wish to have **Non Active** membership pay **\$35/yr**. You keep your membership going, receive copies of Guidelines, but cannot dive with such a membership and you do not receive a card so don't need a photo.
- 6) **After August 31st any unpaid renewals will incur a \$45 late fee.**
- 7) Anyone wishing to add a Nitrox or Trimix Endorsement will need to include a photocopy of their certification.
- 8) **Memberships cannot be processed until everything is sent in.**
- 9) Please send all questions by **email** only to **records@cavedivers.com.au**

**Please tick applicable boxes**

- ☐ I wish to pay **\$70** Renewal Fee **2011/2012**.
- ☐ I wish to pay \$ \_\_\_\_\_ being CDAA Membership for \_\_\_\_\_ years
- ☐ I wish to pay **\$35/yr** for Non Active Membership (no diving) for **2011/2012**.
- ☐ I wish to pay **\$35/yr** for Associate Membership (non diving) for **2011/2012**.
- ☐ I wish to pay **\$45/yr** being for \_\_\_\_\_ back fees (max 5 yrs)
- ☐ I wish to pay **\$45** being for late fee (Aug 31st onwards)
- ☐ TOTAL cheque / money order for the amount \$ \_\_\_\_\_
- ☐ I have electronically transfered \$ \_\_\_\_\_ on date \_\_\_\_ / \_\_\_\_ / \_\_\_\_ to account:

Bank: NAB BSB = 085-070, Account No. 69-701-2377.

**PLEASE INSERT CDAA No. in HEADING**

Account Name - CAVE DIVERS ASSOCIATION OF AUSTRALIA INC.

- ☐ Please charge to my credit card for the amount: \$ \_\_\_\_\_
- ☐ BANKCARD    ☐ VISA    ☐ MASTERCARD

[illegible]

Expiry Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Office use only: Database: Payment: Card:



# Cave Divers Association of Australia purchases its first cave diving site

It is with great pleasure that the CDAA directorate announce that on 26 May 2011 after an exhaustive 12 month process involving multiple State and Local Government applications, the CDAA has purchased Tank Cave (5L230) on the Millicent Road, Mt Gambier, South Australia. This asset purchase of arguably the country's premier diveable underwater cave system, ensures the sustainability of our sport for years to come. The purchase includes almost 5 acres of land surrounding the cave entrance and includes highway access. This area is soon to be fenced and gated for our members' private use.

Tank Cave had been known by divers in the area since the 1960's, with Dave Warnes being one of the first to negotiate the nasty entrance restriction in an effort to discover what lay beyond. It wasn't until August 1983 that it was dived to any extent by Peter Horne and Mark Neilsen. They made a short excursion discovering approximately 70m of passage through the dirty entrance restriction. The siltiness discouraged further serious diving and it wasn't until May 1989 that Phil Prust, Chris Brown and Paul Arbon consciously entered the scene that serious discoveries began. In a 4 month period the cave was extended to in excess of 4 kilometers.

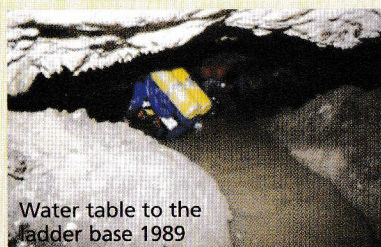


Entrance 1989

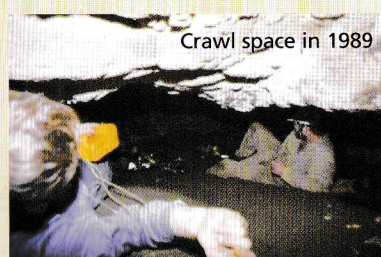
Today Tank cave has a mapped length of approximately 11 kilometers and there is no other cave of this magnitude in the Mount Gambier region.

Initially little will change at the site with regular guided weekends being set up and managed under conditions similar to the prior landowner controls. Andrew Cronan has convened the Tank Cave Committee with the scope of designing a workable diving system and managing necessary infrastructure on site. We anticipate allowing access to suitably qualified persons on a more varied arrangement but also need to manage and conserve the site. We look forward to presenting to the members, a management plan that is both convenient and viable in the very near future.

Steve Trewavas  
CDAA National Director  
References:  
Peter Horne & Chris Brown  
Photos courtesy Chris Brown.



Water table to the ladder base 1989



Crawl space in 1989



June 2011.....

With much talk about Advanced Cave Programs of late, it was great to see 9 of our Members participate over the Easter long weekend. I'd like to congratulate Heather & Mark Pardoe, Steve Fordyce, Andy Barton, Marc Saunders, Peter Wolf & Justin Chimes for successfully completing the Program after a long 5 days!

Rob Lee, Alex Boulton & Tim Payne interned as Instructors, and Rob has now completed his required training and is a certified CDAA Deep Cavern Instructor. We will no doubt see him out teaching in the near future and look forward to Alex & Tim joining the ranks later this year.

There seems to be renewed interest with Members moving forward with their training, as another Advanced Cave Program will run at the Nullarbor during July. Although it would be nice to think it's purely divers wanting to increase their knowledge & skills, perhaps it's also due to the Association now owning Tank Cave!

The revised Cave Course has taken longer to complete than originally thought, with lots of input from current Instructors. We'd like to do it the right way from the start, rather than releasing a course that then needs amending soon after.

Many of our Instructors have also reported an increase in numbers of those completing Deep Cavern Courses, so it will be interesting to see if we have an increase in Membership numbers after renewals are due on July 1st.

Please don't forget that when you renew, that you should also complete and sign a new indemnity for the DEH to cover diving in Gouldens, Sisters, Fossils and Piccaninnie Ponds. The original form must be sent to the DEH by post, as it is not acceptable to fax or email them.

Finally, vale Agnes, a character whose personality was larger than life, and someone who will be sorely missed.

**Jane Bowman**

CDAA Standards Director., CDAA Advanced Cave Co-ordinator  
CDAA Advanced Cave Examiner 1880

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# Pippa Waterworth: Guests in their Home

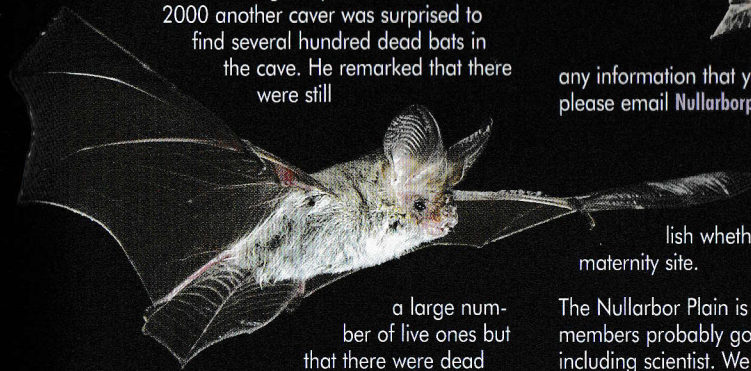
*Many of us enjoy diving in caves on the Nullarbor Plains. However, it doesn't matter how often we go to these caves, we are always going to be guests in the home of other living creatures. One of these creatures is the bat: A nocturnal animal that is both awe-inspiring and very unusual. Bats conjure up many images and feelings, some link to our childhood and the unknown - the scary creature that flie's in the night and others to the bizarre differences between mammals.*

Two species of bats that are often found in Nullarbor Caves are the chocolate wattled bat, *Chalinolobus morio*, and the lesser long eared bat, *Nyctophilus geoffroyi* (Eberhard & Moulds, 2007). Both species are called micro bats, as they belong to the family *Microchiroptera* meaning 'little hand-wing'. They are also both insectivores, dining on insects that they find by echolocation. Although the *C. morio* is usually a tree dwelling bat, it uses caves for shelter and breeding in the Nullarbor region, probably due to sparse foliage, and is therefore considered a cave-form of the species (Finalyson & Hamilton-Smith, 2003). Bats have been recorded within twenty nine caves in the Nullarbor region, four of which are accessible to CDAA members (Murra El Elevyn, Cocklebidy, Tommy Graham's and Weebubbie). Murra El Elevyn and Weebubbie, along with Warbla and maybe Thampanna caves have extra significance to bats in the Nullarbor, as they are classified as maternity caves (Moulds, 2006; Richards, 1971). Maternity sites are areas where young bats are born and raised until they are independent. Temperature is a very important factor of birth habitats because the pups are born blind and naked, and therefore are very vulnerable for the first 6-8 weeks of their lives (Churchill, 2009). Adult bats cluster around the young to create a protective environment; their body temper-

ature heats up the localised area, or if the population is large they can raise the temperature of the whole cave. Bat Cave, a small cave at Naracoorte (South Australia) has a population of around 70,000 bats which produce enough heat to raise the overall temperature of the cave considerably. Given the right environmental conditions, usually associated with high domed chambers where the heated air is trapped, the temperature can increase by as much as 10°C. (Moulds, 2006).

Bats have many strange habits. For instance copulation is often independent of fertilisation, the female can store the sperm until the conditions are right and then fertilisation of her eggs takes place (Churchill, 2009). Also, in low temperatures when insects are scarce, bats can go into periods of extended torpor; where they lower their heart, breathing and general metabolic rate, as well as their body temperature (Finalyson & Hamilton-Smith, 2003). This enables them to reduce their energy output and therefore need for food. However, it has not been determined whether bats in the Nullarbor region use extended torpor, as the climatic conditions are not thought to warrant this energy saving behaviour. Recently we were reminded that it is important to respect the occupants of caves - after all, we are guests in their homes. Many species of bats are under serious pressure because of habitat loss and global warming, and therefore these animals are a somewhat fragile part of our ecosystem. If they are severely or repeatedly disturbed they may abandon their habitat or in some cases die. There are a few simple steps that can be taken to minimise our impact on the bat colonies: Firstly, avoid areas where bats are roosting; avoid shining lights directly on the bats; try to reduce noise pollution by minimising cracking cylinder valves, purging regulators or using a compressor or generator too close to the Cave; keep the number of people in the cave to a minimum; and also, consider planning your trip to avoid the maternity season, (November to January (Finalyson & Hamilton-Smith, 2003)) if you are planning to go into Murra or Weebubbie. Disturbing the bats during the maternity season can cause panic flight which may dislodge young from the ceiling or from their flying mothers

(Finalyson & Hamilton-Smith, 2003). In most cases young that fall to the floor are not retrieved and subsequently die. Disturbances at this time may also cause pregnant females to abort their unborn pups (Murray & Kunz, 2005). Apparently it used to be common to see bats in Murra, during maternity season their numbers were in thousands (Finalyson & Hamilton-Smith, 2003). I was told by a caver that he observed 700 bats flying out of the cave during a trip in 1982, and in 2000 another caver was surprised to find several hundred dead bats in the cave. He remarked that there were still



a large number of live ones but that there were dead bats on the floor and hanging from the roof. Klaus Tiedemann, from the Esperance office of DEC, mentioned it was only immature bats that died and that it was thought to be the result of a particularly cold winter. In 2003, Dr Tim Moulds visited the cave to look for insects on bat guano; he remarked that the guano looked old and he didn't see any bats during his visit. A DEC group using a detector reported some bats at the site in 2009 but there was no mention of the number present. This progression of observations seems to imply that the number of bats using Murra may have decreased over time.

Do bats still roost in Murra El Elevyn and is it still a maternity cave? To attempt to answer these questions we have been given permission to survey the bats over the next 12 months. Roosting can have seasonal fluctuations therefore we will visit the cave every 3 months to confirm if the bats roost in the cave and whether their numbers change during the year. This is going to be done by direct observations and also when possible by recording echolocation calls: Night vision scopes will be used to observe where the bats roost within the cave, there will be visual counts of bats exiting the doline after sunset and some recordings will be made using an Anabat bat detection device. In conjunction with this data loggers will be used to record temperature variances within the cave. We would also appreciate anyone who dives in Murra keeping a look out for bats. If you see any or have



any information that you think might be helpful, please email [Nullarborproject@hotmail.com](mailto:Nullarborproject@hotmail.com). This information will help us to identify the pattern of usage and the numbers that are using the cave. It should also establish whether the bats still use Murra as a maternity site.

The Nullarbor Plain is a remote place and CDAA members probably go out there more than most, including scientist. We can help preserve this unique environment by keeping our eyes open and passing on what we observe.

I would like to acknowledge and thank: Dr Kyle Armstrong from Specialised Zoological; Terry Reardon, a scientist with the SA Museum; Klaus Tiedemann, DEC Esperance; Dr Tim Moulds, Ecologist with GHD; Robert Susac, Conservation Officer for Western Australian Speleological Group (WASG); Alan Poore, WASG; and Ross and Jay Anderson, Cavers Leeuwin Incorporated (CLinc) for the information they provided. I would also like to thank Terry Reardon for kindly letting me include two of his photographs.

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# Easter 2011 Advanced Cave

## Lunatics, Broken Bones, and Ninjas in the dark...

by Peter Wolf #4419



The crew

### PART 1 - Why?

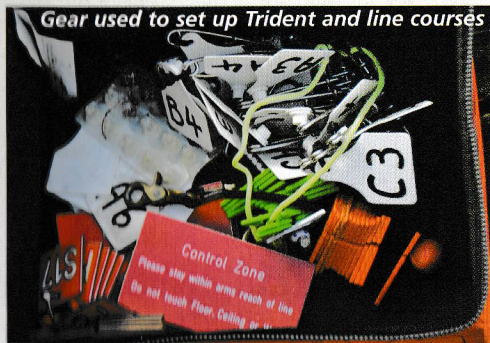
A few days before leaving for Mt Gambier to undertake my Advanced Cave Course, I found myself pondering how I had come to this point in my life. I have been diving recreationally since the late 90's, but it wasn't until late 2005, when I met a CDAA member, Rob Lee, that I even became consciously aware that Cave Diving existed. While his descriptions sounded appealing, when Rob first showed me a video of diving in Mt Gambier, any remote desire to go exploring in cold, dark, underground caves vanished instantly. At the time there was no doubt in my mind –

cave divers were absolute lunatics!

And yet, merely a handful of years later, here I was, about to undertake the highest level of Cave Diver training and assessment. And the people around me (with the exception of maybe Andy Barton) weren't lunatics at all. So why do we do what we do? It's a question my claustrophobic wife asks me frequently, and it's not an easy question to answer, as we all have different motivating factors. A cave diving buddy of mine once summed it up well when my wife asked him the same question – "Maybe it's because our wives won't follow us!"

### The Lead-Up

This year was the biggest AC course that has been run – with a whopping nine candidates. Many of us had never even met, yet we were all expected to dive cohesively with one another once the course began. So we followed the advice of the old and wise who came before us – and organised a number of practise (aka torture) sessions. With some proficient, and highly sadistic AC divers kindly donating their time to put us through our paces, by the time we were ready to



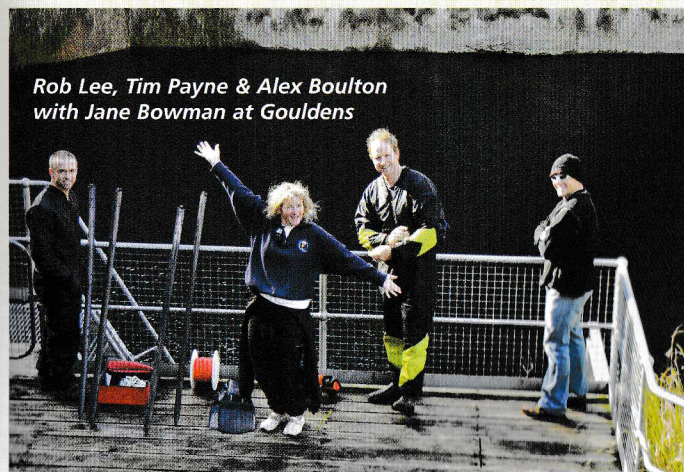
Gear used to set up Trident and line courses



head to the Mount we were all visions of aquatic elegance personified – uber competent at every skill test we were likely to encounter... Honestly! (Rick – please delete any video of our pre-course training session!!!)

So in the days before Easter, in drips and drabs we all rolled in to Just-a-Bed Lodge. Despite D-day looming ominously closer morale was pretty good.

Enter the 3 instructors. Like fairytale creatures straight from some Tolkien novel; a Giant with a fearsome reputation (Andy Higgins), a Hobbit with a mischievous grin (Warrick McDonald), and a crazy haired Devil-Woman (Jane Bowman), they were surrounded by 3 flying monkeys from the Land of Oz – the instructor interns Rob Lee, Alex Boulton and Tim Payne. With over a century of diving experience between them, these six would be our evaluators, inquisitors and mentors throughout the course.



Rob Lee, Tim Payne & Alex Boulton with Jane Bowman at Gouldens



### Day 1 - Gouldens:

We would be the first victims of the new AC Course structure – we weren't quite sure what to expect. The first surprise was that our pre-assessment dives in Gouldens would be diving solo, allowing the instructors to evaluate us on an individual basis. With 3 instructors per diver, even if you did your best impression of Mr Plough and cowered in the silt, there was nowhere to hide. So on that first evening, when we were called into the "slaughterhouse" one at a time to face

the instructors for our individual debriefings, all our shortcomings were laid bare. But sitting in that room, looking at the stern faces of our six evaluators critique my performance and watching their mouths move, all I could hear was the melodic voice of Mel Brooks- "The inquisition – what a show! The inquisition – here we go!"

### Day 2:

What a day this turned out to be! On the program was another "solo" dive, fol-





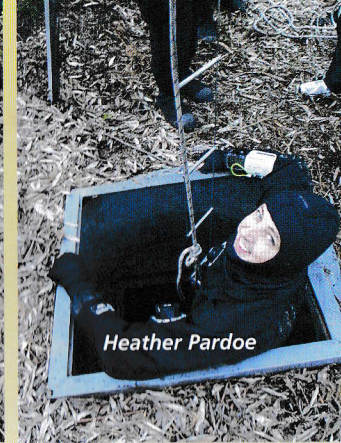
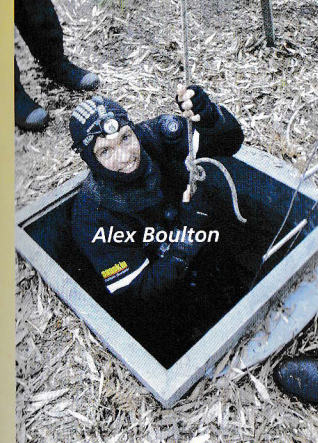
lowed by the infamous "Stress-test". As it turned out, the so called "Stress-test" was actually not too difficult! Let's face it, simultaneously having your mask ripped off, running out of gas and being forced to buddy breathe, while negotiating your way back through a maze of jumps, then removing your kit to get through a restriction, is a hell of a lot easier than trying to get to sleep while my buddy Marc "Daddy" Saunders cuts wood on a nightly basis!!! Now that was stressful!

The real pressure was on the instructors. With 9 students, the work load was HUGE, and they were spending gruellingly long hours in the water! As a result, the instructors began to come up with increasingly ingenious ways to get a moment's rest. When Warrick received no sympathy for flooding his drysuit, he cunningly sabotaged Marc's low-pressure inflator,



leading to a change in the order we'd be diving, and forcing Andy Higgins to take another consecutive pair of students. Like a miniature Flash Gordon, the instant the rest of the instructors submerged, Warrick was down to his undies, sunbaking in the hot Mt Gambier sun on a banana lounge on the landing, complete with a Pina Colada.

(Please note: at this stage in the proceedings, it is possible that fatigue, and increasing levels of Post-Traumatic Stress Disorder may have begun to skew my perceptions of the events as they were...) Despite being exhausted after an epic session in the water, Jane decided she would upstage the boys once and for all. In a reportedly spectacular fall going up the stairs, Jane broke her wrist in several places. This would earn her a rest from the diving for the remainder of the course – and demon-



strate the level of commitment she is famous for. Warrick might have won the battle, but Jane definitely won the war!

It is also worth noting, that on this same evening, two of the interns, Rob and Alex, showed their true generosity in supporting the local Mt Gambier community, by kindly donating over \$600 to the local constabulary.

### Day 3:

Most of us thought that because we'd successfully completed the stress test on day 2, the pres-

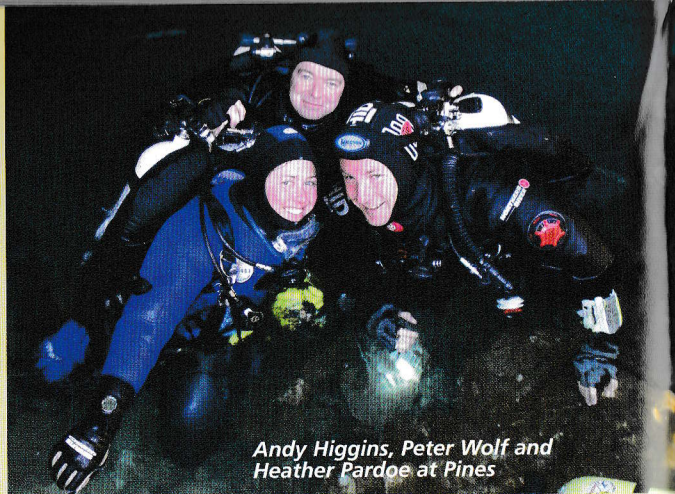
sure was off. But we were sadly mistaken. Day 3 would be "make or break" – if you screwed up on this dive, you were going home. So when instructor intern Tim "Major" Payne came up with an unfathomably sadistic dive plan that had the other instructors shaking their heads in disbelief, we knew we were in trouble. It was a complex plan involving 3 jumps, mask exchanges, blackouts, line retrieval, manifold failures, primary gas failures, stage bottle failures, air sharing through a restriction AND gear removal through a restriction (plus a free set of steak knives), all in



Andy Barton, Heather Pardoe, Mark Pardoe, Steve Fordyce, Rob Lee & Mark Saunders at Pines

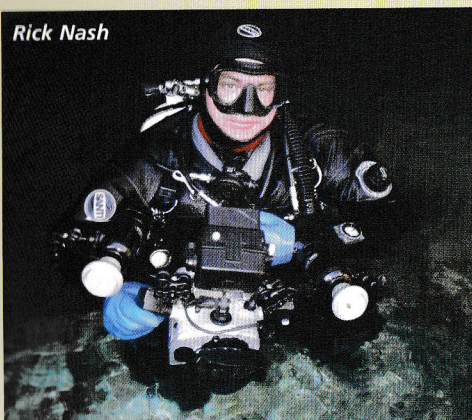


one dive!  
Unlike the previous days, there was very little banter before the dive. Everyone went over the plan repeatedly with their assigned buddy, and with a lot of effort, 8 students completed this task loaded dive successfully. While the majority of us would be going on to the site dives, the success was somewhat bittersweet. Not only did we have to say fairwell to one of our own, the reality hit home that a simple mistake could put the success of the course in jeopardy for any one of us....



Andy Higgins, Peter Wolf and Heather Pardoe at Pines

Rick Nash



## PART 2

### Finally - a real Advanced Cave site!

With the Gouldens dives finally over it was time for us to move on to some real Advanced Cave

sites. I woke up on the fourth day of the course feeling refreshed and positive (thanks to the ear plugs Marc had given me). During our morning briefing for the upcoming dive in Pines, there were smiles all round. We were instructed to "Undertake the dive as if you were just doing a regular dive with your buddies". I don't know what the instructors get up to in their spare time, but I'm pretty sure that me and my buddies aren't in the habit of slapping blindfolds on each other during the best part of a dive! I was buddied up with Heather Pardoe. She was developing a reputation on this course for all the partners she was going through. Maybe it was due to her affinity for "tactile" communication, but we got through the dive, the majority of which wearing a blackout, pretty efficiently. (Just keep your hands off her spool!) Her husband Mark (or "Pea" as he is affection-

ately known), also on the course, was not so lucky. As part of the written exam, we'd been asked the meaning of the term "buddy cork". Most of us, including myself, had no idea. So during the Pines dive "Pea" took it upon himself to demonstrate. For those who don't know, a "buddy cork" is when the lead diver gets stuck, trapping their buddy/s behind them. While blacked out and exiting the Penetration section, Pea inadvertently got himself stuck, no thanks to some clever line laying by the instructors, in a small dead-end crevice. Thinking it was surely the way out, and with his buddy Marc, by now, starting to fizz behind him, Pea did what has been described as a good impersonation of a human auger. Unfortunately, determined as he was, he was never going to move several tonnes of limestone. With 3 minutes to spare, he realized his navigational error, and the two successfully made it out of the cave in one piece! For our first dive in a "real" cave site, as we'd been warned, the margin for error given was considerably less. Again, though most were successful, the relief was somewhat bittersweet, as by the end of the Pines dive we were down to 7 students.



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## Iddlebidy & the Ninjas

Next on the agenda was a dive in Iddlebidy. Just another "dive with mates" I told myself. Having survived thus far, I was actually beginning to feel a little bit confident. As we prepared to enter the solution tube, Warrick's face took on an unusually serious demeanour. "Oh, I almost forgot to mention" he said, "If you touch the floor or the ceiling of the cave, you FAIL....".

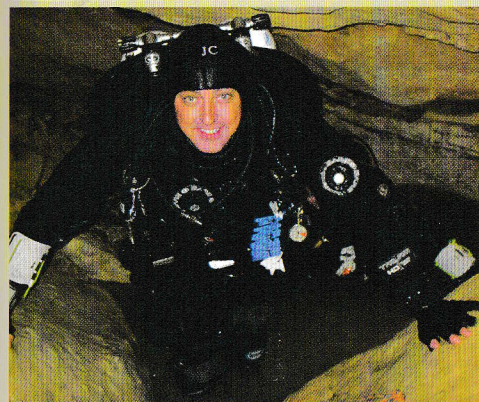
In the ensuing silence the word echoed all around us. I'm glad I was wearing my P-valve because I'm sure a little bit of wee came out.

Even after the dive began, I could not shake the feelings of nervousness. I think my buddies on this dive, Justin Chrimes and Steve Fordyce, were feeling the same way. This was soon compounded even further by the apparitions that moved silently amongst us. Four instructors swam around us, and without their lights on, they were like Ninjas in the night. If we came too close to any outcropping of limestone, they would come



gliding in like silent shadows, shattering any ounce of confidence we possessed, before once again fading into the darkness.

The main "skill" required on the dive was to swim out the entire length of the cave with only one diver's back-up to light the way. Though funny in retrospect, Justin and I were none too amused when heading out on Steve's back-up, he misinterpreted an instruction from Andy Higgins and turned it off as well, leaving us in total darkness. Though it was only a matter of



seconds, Warrick's warning repeated like a megaphone in my head... "If you touch the floor or the ceiling...you FAIL....". When Steve realized his error and flicked his light on again, and we were all still mid water. I breathed a sigh of relief. Only one diver seemed to get through the Iddlebidy dive unfazed by the swim out in darkness. On the second team, Andy Barton raised a number of eyebrows, when he powered ahead of the team, unfazed by the darkness, with only the glow of his Liquivision to light the way. Either that boy eats way too many carrots, or he has some weird bat-like sonar! It was quickly becoming clear, that the only thing faster than Andy in his Nissan, was Andy in a cave!

Despite being the least "punishing" dive to date, as well as the site I had most wanted to dive, I didn't enjoy the Iddlebidy dive at all. I can't wait to go back without the Ninjas!

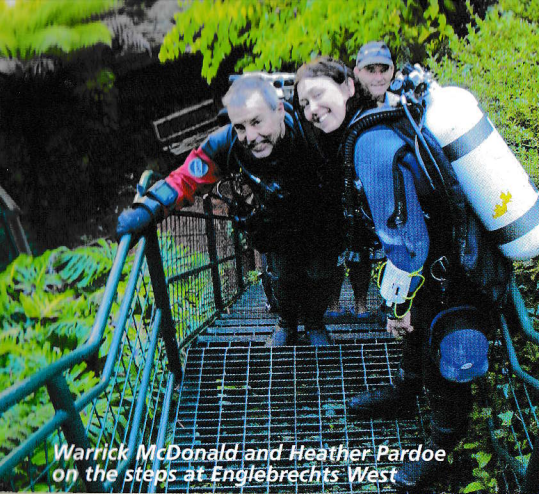
Oh, and just a final word of warning to any future AC candidates. Doing a wee in the dry chamber of the cave can be damaging to the limestone. Doing it while there is an instructor on the ladder below you can be even more damaging to your chances of passing the course! (No – it wasn't me!!!)

## Engelbrechts West – Only one dive to go!

Engelbrechts East is my favourite of the "Cave" rated sites, so I couldn't wait to get into "Wests". After going down half a million stairs, we arrived at a puddle about the size of a bath. We climbed down in single file, and eventually it was my turn to enter the water and proceed head down through the restriction. Jane's prediction of "exceptional" visibility was a little wide of the mark, and in the first tunnel it ranged from half a metre, to a couple of metres in places. Surely Marc, my buddy ahead of me couldn't be responsible for this mess? In reality, the week of rain we'd had prior to the course had left its dirty brown stain, with copious amounts of storm water flooding into the cave. Thinking that this visibility must be the norm, by the time we got to the restriction before the dry chamber, I was feeling a little disillusioned.

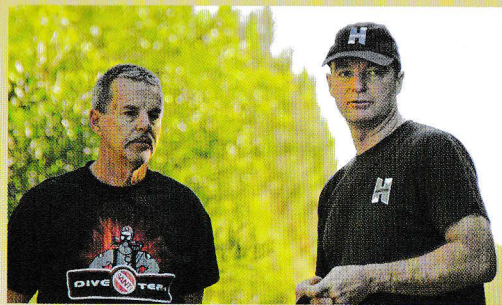
We climbed in silence over the rock pile, and when we submerged in the second sump, that slight feeling of disenchantment vanished. The water was gin clear, and it was by far one of the





Warrick McDonald and Heather Pardoe on the steps at Englebrechts West

most beautiful places I have ever dived - even with the Ninjas gliding around us. After running out a reel and a half, with almost no Ninja intervention, we reached the end of the passage. I was completely awe-struck, and everything we'd been through so far was rewarded. It was at this moment the instructors pounced. I'm not sure how many "simulated" failures Marc and Andy were hit with, but by the time we'd got back to the start of the second sump, I'd had 3 manifold failures, completed two mask swaps with my buddies, and had my mask ripped off again just



for good measure. (I'm convinced Warrick was just sending me a warning to keep quiet about the banana lounge incident at Gouldens). And we'd put enough knots in the line that even mapping guru Tim would have been proud! However, contrary to the Iddlebidy dive, I somehow found time to enjoy the cave during the moments I wasn't getting assaulted by the Ninjas!

As we climbed over the rock pile back towards the first sump, we knew that there was still an air-sharing exercise to complete. As we were diving in a team of 3 (students), for the swim out of the cave I would be buddied with Alex Boulton and one of the instructor interns. Before entering the nasty restriction heading back into the first sump, Alex turned around and signalled he was



out of air. I chuckled to myself. Having been at the mercy of six fiendish instructors for the past 5 days, I should have foreseen that the place we'd have to air-share would be through the restriction. I donated the long hose, and after taking a moment to get ourselves sorted, we went head first down the six metre long vertical fissure. About half way down, Alex stopped. With my head between his feet, I reached forward and squeezed his leg twice. He kicked twice in response, and then swept his fin across my face, sliding the edge of his fin under the skirt of my mask. I knew what he was up to. With an uncannily precise flick of his ankle, my mask was at a 45 degree angle across my face. Again, I chuckled to myself. It was at that moment, stuck upside down in a restriction behind my buddy, air-sharing, with my mask dislodged, and able to find humour in the situation, that I realized how far I'd come in the last few months. How far we'd all come.... and how much further we still had to go. And most importantly, how fun it was going to be!!!

#### Thank you...

I'd like to say a massive thanks to our instructors Jane Bowman, Andy Higgins, and Warrick McDonald. True professionals, they led by example throughout the course, and by far had a much tougher job to do than any of the students.

Also to the instructor interns; Alex Boulton - a consultant on Technical Diving to PADI, Tim Payne - a mapping guru, and my long time mate, Rob Lee - the guy that introduced me to cave diving. These guys bring so much skill and

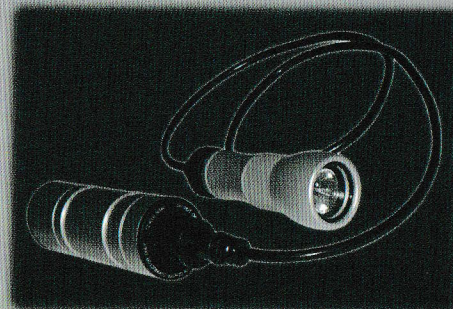


knowledge to the CDAA, and will make the instructor pool of the CDAA so much richer. Rick Nash, our current Publications & Records Director, who sacrificed his Easter and whose help was invaluable in setting up the dives and filming our evolution as AC divers. Sharing such an experience will always bring people together, so thanks also to the other students - I think the tongue-in-cheek expression "Pea" planned to use in the event of failure works just as well in success - "It's been an amazing Journey!" :P

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Contact: John Vanderleest  
jfv@tpg.com.au 0419 775 771



# CDAA INSTRUCTORS

| NAME  | Deep Cavern | Cave | Adv Cave | NAME   | Deep Cavern | Cave | Adv Cave |
|---|-------------|------|----------|--|-------------|------|----------|
| <b>A.C.T.</b>   |             |      |          | <b>VICTORIA. cont.</b>   |             |      |          |
| APPS, Heike (CDAA 2776)<br>BH 02 6249 9170<br>AH 02 6291 0566<br>E: heike.apps@ga.gov.au          | Yes         | Yes  | Yes      | DALLA-ZUANNA, John (CDAA 236)<br>Penetration instructor<br>Phone: 0407 887 060<br>Email: jdz@paintandcustom.com.au | Yes         | Yes  | Yes      |
| <b>SOUTH AUSTRALIA</b>  |             |      |          | HARDMAN, Lorraine (CDAA 2824)<br>Mob: 0418 304 120<br>E: PALdiving@people.net.au                                   | Yes         |      |          |
| COSTELLO, Peter (CDAA 3378)<br>Mob: 0417 494 771<br>soudiv@southerndiving.com                     | Yes         |      |          | HIGGINS, Andrew (CDAA 3329)<br>Mobile: 0413 569164<br>E: ah3329@gmail.com  | Yes         | Yes  | Yes      |
| SELBACH, Steve (CDAA 3495)<br>Phone: 0413 134 827<br>Email: steve.selbach@mac.com                 | Yes         |      |          | LESLIE, Paul (CDAA 3184)<br>Phone: (03) 9879 2868<br>Email: info@melbournediving.com.au                            | Yes         | Yes  | Yes      |
| TAYLOR, Ian (CDAA 3568)<br>Phone: 0411 118 134<br>E: ian.taylor4@defence.gov.au                   | Yes         | Yes  | Yes      | McDONALD, Warrick (CDAA 1882)<br>BH: (03) 9579 2600<br>E: info@abocean.com.au<br>Mobile 0408 374 112               | Yes         | Yes  | Yes      |
| <b>VICTORIA</b>   |             |      |          | MONACO, Rubens (CDAA 1731)<br>BH 03 5984-1799<br>E: info@idcscuba.com.au<br>Mobile: 0413-429-533                   | Yes         | Yes  |          |
| ALLEN, Terri (CDAA 3483)<br>Mob: 0419 176 633<br>E: terri.allen@baker.edu.au                      | Yes         | Yes  |          | <b>QUEENSLAND</b>  |             |      |          |
| BARCLAY, Gary (CDAA 1735)<br>AH (03) 5565 8793<br>E: garinda@tpgi.com.au                          | Yes         | Yes  | Yes      | FEATONBY, Tim (CDAA 3372)<br>Mob: 0402 129 253<br>E: tim.featonby@defence.gov.au                                   | Yes         | Yes  |          |
| BOWMAN, Jane (CDAA 1880)<br>BH: (03) 9579 2600<br>E: info@abocean.com.au<br>www.abocean.com.au    | Yes         | Yes  | Yes      | <b>WESTERN AUSTRALIA</b>   |             |      |          |
| CLARIDGE, Linda (CDAA 2214)<br>Mobile 0408 052 070<br>E: garinda@tpgi.com.au<br>AH (03) 5565 8793 | Yes         | Yes  | Yes      | PAYNTER, Geoff (CDAA 3784)<br>Mob: 0407 445 112<br>E: gpaynter@geo.net.au  | Yes         |      |          |

**INSTRUCTOR ADVOCATE: PAUL LESLIE.**

# UPCOMING COURSES

## DEEP CAVERN Courses

• Wednesday, 20 July 2011 - Saturday, 23 July 2011  
Full time course offered entirely in Mount Gambier SA. All theory, dives, dive permits, wireladder climbing and rope workshop included. All membership and joining fees with the CDAA included and all specialised equipment supplied. For more info or to schedule your own course please contact ...  
Instructor: Linda Claridge (2214) Phone: 0408 052 070 Email: garinda@tpgi.com.au

• Thursday, 28 July 2011 - Tuesday, 2 August 2011  
Course includes all theory (12 hours), 3 hour pool session as well as gear critique and land drills in Melbourne. Get everything sorted before you drive over. Mount Gambier 6 dives in Caverns and sinkholes. Will run course with 2 students or more. Contact me to set your own dates if this doesn't suit.  
Terri Allen 3483 Mobile: 0419176633 Email: terri.allen@bakeridi.edu.au

• Thursday, 14 July 2011 - Sunday, 31 July 2011- Sydney & Mt Gambier  
Course includes 12 hours of theory and exam, 3 hour session in a heated pool to get your gear and skills sorted out over a weekend in Sydney. Then we head to Mount Gambier for 3 days of diving and 6 dives in cavern and sinkhole sites over a long weekend. Can supply twin tanks, harness and wing, lights.  
Course cost around \$650 depending on numbers. • First weekend at Mt Gambier July 30-August 1 (full).  
• Spots available for second weekend in Mt Gambier to complete course August 26-28 (definitely running).  
Instructor: Terri Allen 3483 Phone: 0419176633 Email: terri.allen@bakeridi.edu.au

• Sunday, 14 August 2011 - Sunday, 28 August 2011 • Sunday, 4 December 2011 - Sunday, 18 December 2011  
Course includes theory, full gear critique and assistance with modification as well as a 4 hour pool session. This is all completed in Melbourne. Then a 3 day weekend away where you will complete 3 Cavern Dives and 3 Sinkholes in Mt Gambier. Twin Tanks required for all dives.  
If dates don't quite suit, arrange 4 of your dive buddies and I can run a course to suit you.  
Paul Leslie (3184) Mobile: 0407785591 Email: paul@melbournediving.com.au

## CAVE Courses

• Monday, 22 August 2011 - Sunday, 28 August 2011  
2 nights theory and exam in Melbourne. 3 day weekend in Mt Gambier  
Including use of safety spools, jump reels, line arrows and personal markers.  
Full manifold use and theory taught if required.  
Instructor: Terri Allen (3483) Phone: 0419 176 633 Email: terri.allen@bakeridi.edu.au

• Sunday, 13 November 2011 - Sunday, 20 November 2011  
Course includes theory, full gear critique and assistance with modifications including use of Finger Spools, Arrows and Cookies. This is all completed in Melbourne. Then a 3 day weekend away where you will complete 6 Dives including 3 Cave Sites in Mt Gambier. Twin Tanks required for all dives. If dates don't quite suit, arrange 2 to 4 of your dive buddies and I can run a course to suit you including midweek courses.  
Midweek courses will be run over 4 days in Mt Gambier.  
Paul Leslie (3184) Mobile: 0407785591 Email: paul@melbournediving.com.au

## ADVANCED CAVE

Please download the latest application form from the website.  
[www.cavedivers.com.au](http://www.cavedivers.com.au)



## CDAA SITE ACCESS - [www.cavedivers.com.au](http://www.cavedivers.com.au)

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

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

| SITE   | LEVEL | OWNER  | ACCESS DETAILS  |
|--|-------|--|---|
| <b>MOUNT GAMBIER - SOUTH AUSTRALIA</b>   |       |  |   |
| <b>DEH SITES</b>   |       |  |   |
| Ewens Ponds  | Nil   | DEH<br>P.O. Box 1046<br>Mt Gambier 5290<br>(08) 8735 1177    | Groups of 6 or more, phone/mail to Dept. for Environment & Heritage (DEH)<br>Smaller groups, no need.<br><br>Fax: (08) 8735 1135  |
| Gouldens   | CN    | DEH  | <b>General Diving:</b> Divers to contact DEH and notify of date and site to be dived.<br>Please make requests by phone or fax only.   |
| 2 Sisters  | CN    | P.O. Box 1046  | Divers must have the correct CDAA diving endorsement for the site and carry current   |
| Fossil   | C     | Mt Gambier 5290<br>Ph: (08) 8735 1177<br>Fax: (08) 8735 1135 | financial CDAA membership card. The diver must have signed an indemnity with DEH before access is permitted and original copy must be received by DEH prior to diving.<br><b>Training:</b> The Instructor is to notify DEH of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number. |
| Piccaninnie Ponds  | S     | as above   | Permit holders by phone or fax. Be aware of delicate vegetation. \$26/dive or annual Permit \$60.<br>NOTE: Indemnity form to be completed with m'ship renewal & lasts same length as. M'ship.   |
| <b>NOTE: Divers should renew their Piccaninnie Ponds indemnities at least 2 weeks prior to their intended dive date.</b> |       |  |   |
| Horse & Cart   | CN    | Peter Cunningham   | By phone or mail, 1 week prior. Ph: (08) 8738 4003.   |
| Tea Tree   | CN    | PO Box 2168,<br>Mt Gambier 5290                              |   |
| Little Blue  | S     | District Council of Grant                                    | Permission not required - must carry card.  |
| Allendale  | C     | District Council of Grant                                    | Obtain key from Lady Nelson Tourist Information Centre.   |
| Ela Elap   | S     | Mr. Peter Norman   | Visit the house before diving.  |
| One Tree   | S     |  | If no one is home - no dive!  |

### FORESTRY SA SITES

|                      |     |   |
|----------------------|-----|---|
| Dave's Cave          | C   | Maximum 3 divers all weekends between May & November inclusive (check and update on CDAA website).            |
| Hells Hole           | S   | At least 4 divers in group - 1 with previous site experience.   |
| Pines                | C/P | Unrestricted days or numbers - Cave rated divers must not enter Penetration sections (stop signs)             |
| Mud Hole             | C   | Unrestricted days or numbers.   |
| Nettle Bed           | P   | Open every weekend. Maximum of 4 divers per weekend undertaking 1 dive only (check an update on CDAA website) |
| Stinging Nettle Cave | P   | Open every weekend max 3 divers per day undertaking 1 dive per day (check an update on CDAA website).         |
| Iddlebidy            | P   | Open every Saturday max 4 divers, 1 dive only (check an update on CDAA website)                               |

Owner: Contact Forestry SA by email: [conservationandrecreation@forestrysa.com.au](mailto:conservationandrecreation@forestrysa.com.au). Fax: (08) 8724 2870 or Phone: (08) 8724 2876 or book on-line via the CDAA website to arrange permit. Divers must advise FSA of their online booking. Collect permits from the Forestry Office, RHS of driveway to Carter Holt, Jubilee Hwy, Mt G.

### IMPORTANT:

- No diving on Total Fire Ban Days.
- Permit also required to run compressors during fire danger season.
- Keys for Hells Hole, Nettle Bed, Iddlebidy and Stinging Nettle Cave can be obtained from Lady Nelson Visitor Centre on presentation of Forestry SA permits.

|          |   |                          |   |
|----------|---|--------------------------|---|
| Kilsby's | S | Landowner leased to CDAA | Access - We have access fortnightly. Minimum of 3 divers in the water at one time.<br>Refer to CDAA website. Twin Tanks - Maximum depth of 40 metres on Air.<br>Meet at gate of property at 8.55am or 12.55pm. Book on-line at <a href="http://www.cavedivers.com">www.cavedivers.com</a> or contact Craig at <a href="mailto:kilsby@cavedivers.com.au">kilsby@cavedivers.com.au</a><br>No animals, visitors or mid-week diving allowed. <b>No diving on Total Fire Ban Days.</b> |
|----------|---|--------------------------|---|

## CDAA SITE ACCESS

| SITE   | LEVEL | OWNER   | ACCESS DETAILS   |
|--|-------|---|--|
| <b>MOUNT GAMBIER - SOUTH AUSTRALIA (continued)</b> |       |   |  |
| <b>BARNOOLUT SITES</b>                             |       |   |  |
| Ten Eighty   | S/C   | Scotts Agencies P/L   | Access:<br><br><b>ALL BARNOOLUT SITES ARE CLOSED.</b>  |
| Blacks Hole  | S/C   | Scotts Agencies P/L   | Mt   |
| Shaft  | S/C   | Generally open one weekend a month.<br>Trevor Ashby   | For access dates refer to Guidelines or the CDAA web page. Nitrox as a diving mix is not allowed in the Shaft unless a trimix endorsement is held but deco mixes attached to the shot line are permissible. Refer to Shaft access bulletin within CDAA Regulations. Divers applying to dive in the Shaft for the first time must document dive experience with twin tanks<br>Download form off website.<br>Email: <a href="mailto:shaft@cavedivers.com.au">shaft@cavedivers.com.au</a> (Terri Allen, Mobile: 0419 176 633)<br>Obtain key from Mt Gambier Tourist Information Centre. Access agreement must be signed prior to diving. 2 divers must sign out keys, all divers must sign in advising which groups they are diving with. Diving should be avoided after heavy rain due to possible water contamination. Diving hours are now restricted to 8am to 8pm CST. |
| Engelbrechts                                       |       | Mt Gambier  |  |
| - East   | C     | Council   |  |
| - West   | P     | Lessee  |  |
| Contact: Brenton & Kemelee                         |       | Ph: 08 8723 5552  |  |
| Three Sisters                                      | P     | Millicent Council   | Download Indemnity from Web Page. Access available for experienced Penetration divers only. Low profile systems advised. Access agreement must be signed prior to diving. Please allow 4 weeks for indemnities to be processed.  |
| McKay's Shaft                                      | S     |   | Contact Email: <a href="mailto:site@cavedivers.com.au">site@cavedivers.com.au</a> .  |
| Tank Cave  | P     | Mr. DYCE  | Access Manager: Noel Dillon. Email: <a href="mailto:noel.dillon@macquarie.com">noel.dillon@macquarie.com</a>   |
| Baker's Cave                                       | C     | Manager: Brad Dibble<br>E: <a href="mailto:site@cavedivers.com.au">site@cavedivers.com.au</a> | Please write to the Site Access Director to dive in Baker's Cave. Include stamped self-addressed envelope. Climbing equipment required. Only open October to April.  |

### NULLARBOR - WESTERN AUSTRALIA

|                 |     |   |
|-----------------|-----|---|
| Cocklebidy      | C/P | Apply in writing for permission to dive at least 4 weeks in advance of trip to: District Manager, Department of Environment and Conservation (DEC), PO Box 234, Esperance, W.A. 6450.<br>Phone: (08) 9083 2100 Fax: (08) 9071 3657.   |
| Murra El Elevyn | P/C |   |
| Tommy Grahams   | C   |   |
| Weebubbie       | S/C | DPI<br>The Department for Planning and Infrastructure, Midland, State Land Services South East.<br>PO Box 1575, Midland 6936. Contact Kim Allison, Email: <a href="mailto:kim.allison@dpi.wa.gov.au">kim.allison@dpi.wa.gov.au</a><br>Phone (08) 9347 5047 Fax (08) 9347 5004 |

### N.S.W. - WELLINGTON CAVES

|                     |       |   |
|---------------------|-------|---|
| Limekiln (McCavity) | P/C   | Both Penetration and Cave Level are being accepted for this cave depending on its water level at the time. The cave has a restriction at the entrance which is underwater making it a Penetration Dive. During drought, the water level drops to form a small lake below the restriction allowing experienced Cave Divers access to this delicate cave. |
| Water (Anticline)   | C     | Affected by high CO <sub>2</sub> levels during Summer/Autumn.<br>Access is co-ordinated with the Wellington Caves management by Greg Ryan - <a href="mailto:greg@cs.usyd.edu.au">greg@cs.usyd.edu.au</a> . Phone (02)97434157   |
| Rum Jungle Lake     | S     | Unrestricted access currently exists - Please refer advice Guidelines #68 or check CDAA website.  |
| Burrinjuck          | S/C/P | This is a tri-rated site. Please see details in issue No. 73. There are no specific access arrangements.  |



# CDAА PRODUCTS CATALOGUE

|         | ITEM   | PRICE                       |
|---------|--|-----------------------------|
| DVD'S   | <b>A Cave Diver's Story</b> - Steve Bogaerts<br>Venture into the life of cave divers as they map the unknown underwater caves of Mexico. These underwater cave systems in Mexico are more extensive than anywhere else in the world. In fact, 11 three of the planets longest submerged cave systems are found on the Caribbean coastline. Follow Steve Bogaerts through some of the most amazing cave diving footage ever filmed. | \$35.00                     |
|         | <b>Australian Cave Diving - A Contrast.</b> By Tony Carlisle. Four short documentary-type videos on Warbla Cave, Three Sisters Cave, The Road to Toad Hall and Tank Cave.  | \$25.00                     |
|         | <b>Axsis Mundi.</b> A unique expedition into the inner jungles of the Yucatan. For over a decade, explorer Curt Brown and his team of cave explorers have been pushing deeper into the inner jungles of the Yucatan in search of unexplored cenotes.   | \$35.00                     |
|         | <b>Cave Diving Beneath the Ozark Mountains – DVD</b> - with footage of Ginnie Springs and the Gasconade River in the Ozark Mountains, Missouri. Over four days the team reach 2000 feet in, 200 feet deep, using scooters which they drag through restrictions using ropes. In this DVD they extend the survey of the cave.  | \$30.00                     |
| DVD'S   | <b>Cave Diving Mount Gambier – DVD</b> - from Novice cavern sites, to the much more intriguing penetration dives, 'Cave Diving Mt Gambier' will take you to places that are only accessible by trained cave divers and rarely seen by others. Featuring 15 of the most popular dive sites in Mt. Gambier.  | \$40.00                     |
|         | <b>China - Beneath the Wall – DVD</b> - Sichuan Province in central China is home to some of the world's biggest cave systems. This film follows a team of British explorers as they attempt to link together two of the most spectacular caves and complete the tantalizing through trip. But as with so many expeditions into the unknown, things don't quite go as planned... A great film about dry caving exploration.        | \$35.00                     |
|         | <b>Down Deep Down Under.</b><br>A spectacular film by Alex Wyschnja. Discover the hidden secrets of Mt Gambier's famous fresh water caves. Tucked away in S.A.'s Sth East are some of the country's best known freshwater caves. The physical challenge of cave diving makes Mount Gambier a diver's mecca.  | \$25.00                     |
|         | <b>Facing Darkness</b><br>Following some of the greatest cave divers in north Florida, Facing Darkness invites you to discover the underwater caves and how divers safely explore them. About the geology, the danger and the passion.   | \$35.00                     |
| POSTERS | <b>Wookey Exposed.</b> Filmed and produced by Gavin Newman, this award-winning film looks at the spectacular discoveries made by successive generations of explorers and joins the latest team to take up the challenge. Using specially designed camera systems we follow the divers to the very limits of the exploration as they attempt to push on into the darkness beyond the end of Wookey Hole.                            | \$35.00                     |
|         | <b>WKPP Push for the Connection – DVD</b> - Explorers from GUE's Woodville Karst Plain Project resolve to establish a link between two of the largest underwater cave systems in the world. Following a series of previously unimaginable dives, exploration divers push nearly 7km into the extreme depths of the Wakulla & Leon Sinks cave system  | \$35.00                     |
|         | <b>THE SHAFT &amp; TOMMY GRAHAM'S MAPS</b><br>Both are 45cm x 30cm in size.<br>To view either of these posters visit the online store.   | \$12 ea<br>incl.<br>postage |

# CLOTHING, POSTERS, STICKERS

|          | ITEM  | PRICE    |
|----------|---|----------|
| CLOTHING | • <b>Embroidered Crew Neck T-shirts.</b> Black and Navy - S, M, L, XL, XXL  | \$25.00  |
|          | • <b>Embroidered Polo Shirts.</b> Grey with black trim or black with red trim. Look very smart!   | \$35.00  |
|          | • <b>Embroidered Hoodies.</b> Black only - Available Sizes: S, XL   | \$70.00  |
|          | • <b>Embroidered Hoodie with Front Zipper.</b> Black Hoodie with Front Zipper. Embroidered with the CDAА Logo on the front and Cave Divers Association on the back. Available Sizes: M, L, XL & XXL | \$70.00  |
|          | • <b>Embroidered Trekka Jackets.</b> Black only - Available Sizes: S, M, L, XL, XXL   | \$135.00 |
|          | • <b>Polar Fleece Jumpers.</b> Colours: Blue, Black. Original logo. Keeps you toasty warm & smart!  | \$60.00  |
| MISC.    | • <b>Polar Fleece Vests.</b> Blue, Black. Original logo. Great to wear as extra layer under the drysuit!  | \$50.00  |
|          | • <b>Ladies Contrast Tee.</b> Ladies stylish cut in Grey with Navy Blue sleeves. Available Sizes: 10, 12 and 14.  | \$25.00  |
|          | • <b>Ladies White Stretch V Neck Tee.</b> With embroidered logo. Available Sizes: 8, 10, 12 and 14.   | \$25.00  |
|          | • <b>Caps and Beanies.</b> Black only. \$20 each!   | \$20.00  |
|          | • <b>CDAА Key Rings.</b> Blue with gold motif. CDAА P.O. Box on back.   | \$5.00   |
|          | • <b>Round Sticker.</b> CDAА logo over line arrow.  | \$1.00   |
|          | • <b>Bumper Sticker.</b> Featuring photos by Dean Chamberlain.  | \$1.00   |
|          | • <b>Log Book Folder.</b> With embroidered CDAА logo on the front cover.  | \$35.00  |
|          | • <b>Tank Cave Poster.</b> Full Colour 14.5" x 25" poster of Tank Cave by Peter Rogers. Price includes p&h.   | \$8.00   |
|          | • <b>Tank Cave Map.</b> Premium matt or gloss 120g paper \$96.00 (laminated \$22.00 extra, silver back \$132.00)  |          |
|          | • <b>CD of Guidelines 1-94</b> All Guidelines as searchable pdfs on CD.   | \$10.00  |
|          | • <b>Stubby Holders</b> - high quality 5mm neoprene with CDAА logo  | \$8.00   |
|          | • <b>Travel Mugs</b> - great for having a cuppa on the run  | \$12.00  |
|          | • <b>Mask Slap Straps</b> - fully embroidered with CDAА logo  | \$16.00  |

**ALL ORDERS ARE NOW TO BE MADE ON-LINE  
ON THE CDAА WEBSITE!**

[www.cavedivers.com.au](http://www.cavedivers.com.au)

*Thank You, Tara Toone*

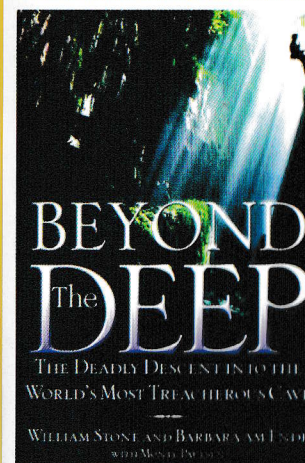


| ITEM  | PRICE   |
|---|---------|
| <b>Abseiling Handbook.</b> For those involved in basic recreational abseil instruction, this book details safe abseil practises for beginners. Contents include, risk management, equipment, anchor systems, abseil site set-up and instruction and emergency procedures.   | \$20.00 |
| <b>Basic Underwater Cave Surveying.</b> The standard publication for anyone remotely interested in research and survey techniques used in water filled caves.   | \$30.00 |
| <b>Beyond The Deep.</b> By Bill Stone & Barb am Ende with Monte Paulson.<br>An exciting true life expedition to the Huautla Cave System in the mountainous region of south eastern Mexico. In 1994 an elite team of international explorers with the combined skills of mountaineering, caving, and diving set out to go farther into the earth than anyone had before. | \$35.00 |
| <b>Cave Diving Communications.</b> A manual from NSS - CDS dealing exclusively with all underwater communications used in cave diving. Including touch, torch and line signals, and use of line arrows and jump reels.  | \$25.00 |
| <b>Cave Diving - A Blueprint for Survival.</b> A book by the world-renowned cave diver, the late Sheck Exley, this is a case study of a number of accidents that have occurred in the USA and how to avoid them.  | \$20.00 |
| <b>Cave Diving - Articles &amp; Opinions</b><br>A comprehensive Guide to Cave Diving & Exploration. Edited by Jill Heinerth & Bill Oigarden. Written and edited by some of the top cave divers in the world, this book covers everything from basic equipment to advance cave exploration.  | \$70.00 |
| <b>Caverns Measureless to Man.</b> The story of the passion for cave diving of the late Sheck Exley who spent his life exploring underwater caves. Publications Directors pick. <i>Amazing book, a must read!</i>   | \$50.00 |
| <b>Divers of the Dark - Exploring Budapest's Underground Caves</b><br>A unique journey into an underground world that only a handful of people have visited. One of the most well-known springs is Malom Lake. It is a doorway to the cave system called Molnár János. Nobody knows how far or how deep below the city the tunnels reach. Magnificent photos!           | \$75.00 |
| <b>Diving in Darkness</b> By Martyn Farr. Personally signed by the author. Provides a clear, concise and modern overview of the essential equipment, skills and techniques required to dive in caves, mines, wrecks and beneath ice. Published in softback Diving in Darkness is packed with 170 photographs and diagrams throughout its 128 pages.                     | \$65.00 |
| <b>Hidden Splendours of the Yucatan.</b><br>Hidden Splendors of the Yucatan is photographer/author Lalo Fiorelli's story of exploration, teaching, and photography in the caves of Mexico's Yucatan Peninsula. His stunning photography is complemented by the lively, down to earth writing style that brings the experience of exploration.                           | \$49.00 |
| <b>My Father, The Captain</b> Is a unique, and unforgettable biography by Jean-Michel Cousteau on the career and life of Jacques Cousteau, the frontiers he opened and the legend he created.   | \$39.00 |
| <b>NSS Cave Diving Manual.</b><br>The standard reference manual in cave diving covering just about every conceivable topic. New Edition.  | \$55.00 |
| <b>NSS Cavern Divers' Manual.</b> The standard reference manual in cavern diving covering almost every conceivable topic. Also most principles behind safe sinkhole and cave diving.  | \$30.00 |
| <b>Side Mount Profiles.</b> The ultimate sidemount diving book by Brian Kakuk & Jill Heinerth<br>Featuring: Wes Skiles, Lamar Hires, Jakub Rahacek, and Steve Bogaerts.   | \$49.00 |
| <b>The Essentials of Cave Diving</b> by Jill Heinerth. Woman Divers Hall of Fame member Jill Heinerth, has created this full color contemporary guidebook. Generously illustrated, containing practical 21st century underwater knowledge, including sidemount techniques and the latest rebreather technology.   | \$49.00 |
| <b>The Taming of The Slough.</b> This is Sheck Exley's exciting story of the discovery and mapping of the Peacock Springs Cave System - at the time the world's longest underwater cave.  | \$45.00 |
| <b>Vertical. - A Technical Manual for Cavers</b> by Alan Warild<br>Vertical is a definitive guide to vertical cave exploration techniques. It describes deep cave exploration methods: emphasising the importance of safety, conservation and documentation. The fifth edition of Vertical is illustrated with photographs from expeditions on five continents.         | \$45.00 |

# CDAA PRODUCTS NEWS

*New books now available!*

**NOW AVAILABLE ON THE ON-LINE STORE!**



## Beyond the Deep - \$35.00

Bill Stone & Barb am Ende with Monte Paulson

Beyond the Deep is the new book on the exciting true life expedition to the Huautla Cave System in 1994. The book is a page-turning thriller that covers the tremendous human drama of going where no one has gone before. Hidden in a remote, mountainous region of south eastern Mexico is Huautla-possibly the deepest cave complex in the world, an uncharted, never fully explored world of sky-scraper-sized chasms, underground rivers, and treacherous rock slides. In 1994, an elite team of international explorers with the combined skills of mountaineering, caving, and diving set out to go farther into the earth than anyone had before. Led by a larger-than-life, driven caving pioneer, the expedition faced some of the most severe - and most deadly-conditions ever encountered...

To view or order any of these  
New CDAA Products, please visit the Online Store.  
Happy Diving, Tara Toone, CDAA Products Officer.



Aggie Malkowska in Pines. Photo: Luke Baade



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...you're only  
as good

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on your back!



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[www.halcyondive.com.au](http://www.halcyondive.com.au)