



C.D.A.A. Newsletter

No. 88 - JUNE 2004

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EDITOR'S CORNER

Hi and welcome to a bumper Winter edition of Guidelines, 40 pages including 8 in colour! We have many sponsors helping to cover the cost of our fine magazine. Big welcome to our new advertisers DiveTek, Green Force, Diving Headquarters and Halcyon and thanks to the continuing support of DiveRite, International Motel, Avalon Motel, Bellum Hotel, Southern Diving centre, Northern Diver, Aspiring Products and Scubapro. Please mention you are a CDAA member when enquiring about these products and services either directly or from your local dive shop, many offer discounts and would like to know you noticed their ad! Also have a look at our products section, please buy some 30th anniversary t-shirts, contact the hard working Heike for these! Issue 88 has a huge variety of articles covering history; CDAA-style from Stan Bugg, ancient from John Vanderleest with what looks like "Boofhead the Bush kangaroo", equipment; battery talk from Daniel after great discussion on the email list (see not all bad!), dive techniques; "guy"-style from Steve, English mine-style from Gerry Chia and Martin Farr, and of course the mighty Czecs with yet more discoveries, this time in Nettle Cave (hopefully soon to be opened by Forestry). Thanks to all contributors.

Congrats to Danny Lyall for getting the front cover, the competition was hot this time.

Finally get those membership renewals in early to Belinda and think about joining up for a few years, for less hassle. Please remember we are all volunteers and try our best to get you sorted so you can enjoy our great sport.

Happy reading!

Terri Allen, Publications and Records Director, pubdir@cavedivers.com.au

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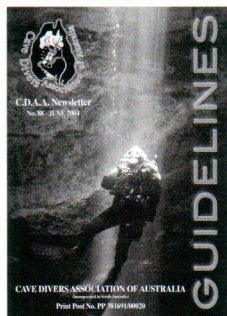
~ Articles for Guidelines ~

Members wishing to submit articles for inclusion in Guidelines can do so in the following manner:

- Send articles & photos via post, or preferably by email to:
Terri Allen, PO Box 7592, Melbourne 8004.
- Email to pubdir@cavedivers.com.au **and** seapics@alphalink.com.au
- Text files should be saved as Word files and pictures as separate jpeg files.
If mailing please send pics and text on CD.
- Pictures saved from digital camera or scanned from photos must be at least 200 ppi at 15cm wide or equivalent, and saved as Greyscale as JPEG's.

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Ararat, Victoria

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David Bryant

CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

P.O. BOX 4336, LANGWARRIN VIC. 3910

GUIDELINES is a newsletter of the Cave Divers Association of Australia. All articles for the following issue are to be sent to the Editor, David Bryant, PO Box 2198 Rosebud Vic. 3939. All articles and submissions shall automatically constitute an expressed warranty by the contributor that the material is original. We assume no responsibility for unsolicited material. Articles and information may be reproduced without prior permission provided reprints are accredited to the authors and GUIDELINES. Private advertising for caving and diving equipment may be advertised free at the discretion of the Editor. Opinions expressed in GUIDELINES are those of the individual authors and are not necessarily those of the C.D.A.A.

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A New Underwater Section of Nettle Cave (5L186) Discovered and Explored in Mt Gambier.

By Petra Fundova & David P. Funda, Prague, Czech Republic.

During 2003 we have been diving almost every possible weekend in Mount Gambier, exploring most of the popular caves and sinkholes as well as some of the caves described in Peter Horne's Lower South East Cave Reference Book. The feature listed as 5L186, Nettle Cave (or Stinging-Nettle Cave,) has long been on our list because of Peter's reference to his brief scuba-dive there in July 1985. Earlier this year we heard about it again from cave diver Gary Barclay, who mentioned to us something like: "You should have a look in that small doline across the road from Pines (5L61) - it is small, shallow and silty, so you guys would love it!" Soon after this, we met up with another cave diver, Andrew Higgins, who mentioned that he had dived Nettle Cave a couple of years earlier (August 2001). Andrew also mentioned having gone through a silty restriction at -8 metres, discovering a new, small tunnel leading to

about 17m depth there. This definitely whetted our appetite and moved Nettle Cave straight to the top of our list, because Peter's book also stated that "...the 2m high cave quickly bottomed-out at a depth of 8 metres where a very silty restriction was encountered....". Peter's map also showed a narrow continuation with a question mark indicating possible extensions, so when we heard about Andrew's discovery beyond that 8-metre restriction we thought, "if it can go from -8 to -17m, it may as well go from -17 to who knows!..". So on Saturday, 30th August 2003, we were on the spot ready for our first muddy adventure in Nettle Cave.

During the previous couple of months we had regularly been diving in the Mount using only 10-litre side-mounted scuba cylinders, so no major modifications to our low-profile gear were necessary. The doline lies

...continued page 8.

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Entrance to the Nettle Cave, view from the Crescent Lake, 30.8.2003, 1st dive.

beside the track which runs from Pines to the main road near Tank Cave, and the outer edge of the entry to the entry lake is about 19 metres from the road. After a 3m descent on a muddy slope we got to see the entry lake, but we were surprised to find that it was much larger than we expected from the map. Instead of a small rocky pool, there was a quite large undercut lake chamber. This might be due to the significant lowering of the regional water table that is being mentioned around the district. A brief look with a mask only, careful entry, and the dive was on!

The cave looked very much as on the map and everything was covered with thick brown silt. We got to the beginning of the 'Back Section' and started to look for the tunnel Andrew had mentioned to us. It was easy to find, so, down the hatch! The tunnel opened a little bit at 10-12m depth, forming a small room where two divers could exchange positions, then it continued down at a steep angle of 50° - 60° as a very narrow restriction between two walls, bending a little bit to the left, right, and left again. The dark silt was after us so Petra had to dive through it head first and not to waste any time on descent. Turning around was rather squeezey and after a few moments we found ourselves with 10cm visibility on our way back. We then did a short side-trip to the Back Section and we hit the water surface knowing we were approaching the entrance only by the depth shown on our computers.

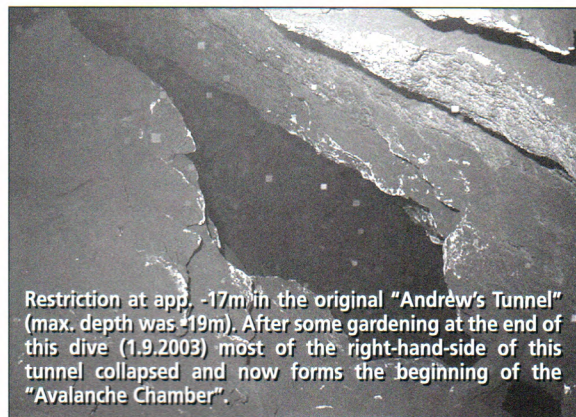
"Wow! It is a little bit like Mud Hole (5L97) !?" "Yeah, but unlike Mud Hole, this one is definitely silty, don't you think ??" "Well, like Mud Hole from -17 to -22 m! It's 19m deep but that's it." Of course we liked it and spent a couple of minutes on the surface of the lake sharing our first impressions and also checking both ends of the lake (muddy crawling). Luckily, it is all pure mud with no broken glass.

Because the water gets muddy quickly after entry, only the first diver gets to see something below 8-10m, so we dived it again on Monday, September 1, to -19m. On the way back from 'Andrew's Tunnel' we found a small window at about -12m, just big enough to put one's head

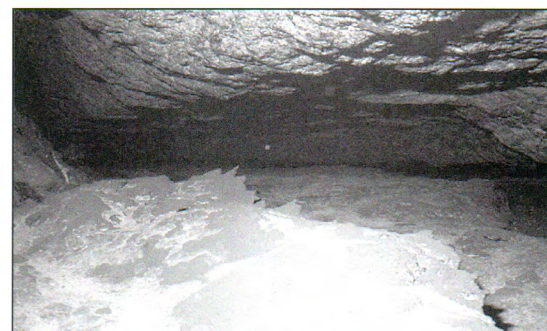
or camera in. Clear, blue water and a tunnel/fissure between two vertical walls of the entry chamber led down and seemed like getting bigger. We had realised we were not finished with this hole yet ... "What shall we do??" "was coming through my head as the silt was closing in around the tempting window. "It is small, just too small. Even for Petra in a wetsuit. Even for Petra in a wetsuit and no scuba tank..!" "Vis was gone but since nothing was laying on the 1m boulder which formed the bottom of the window, I tried to do a little bit of gardening and pushed the boulder in. It fell in easily, but now there was really nothing to see there. We left the scene with hope to break in next time.

We were back on the third weekend in September and dived the cave several times. On the first dive, on Friday September 19, Petra led the dive - we went through the restriction at 8m and hoped to get to a possibly enlarged window at 12m. But as we approached, we realised that everything had changed; we could not recognise the place! It was not just the one boulder I had pushed in, it had to have caused a small avalanche! The tunnel (or rather its east wall) was almost gone and now there was a large fissure with clear, inviting, blue water leading to the right in a SE direction ... it was just getting bigger and bigger. We are at -25 m and it still goes!

Our air consumption surely went up - Petra waved with her torch back to me, "Look at this!? Would you believe it!?" was all I could read from the look on her face! There were several openings between the two walls of the collapsed chamber to follow, and there was much more room at -25 m. The "Avalanche chamber" was also going in a horizontal direction. Without much hesitation we both followed the largest lead down to 30m. The outer wall of the chamber forms large steps about every 5m or so, and there are a few boulders trapped between the two walls forming picturesque blue windows leading down. Everything was covered with untouched, thick silt, but there was plenty of room to move around this virgin cave without damaging anything.



Restriction at app. -17m in the original "Andrew's Tunnel" (max. depth was -19m). After some gardening at the end of this dive (1.9.2003) most of the right-hand-side of this tunnel collapsed and now forms the beginning of the "Avalanche Chamber".



Newly opened "Avalanche Chamber" at -34m, view into the low flattener at the bottom of the cave, NW direction, 19.9.2003.

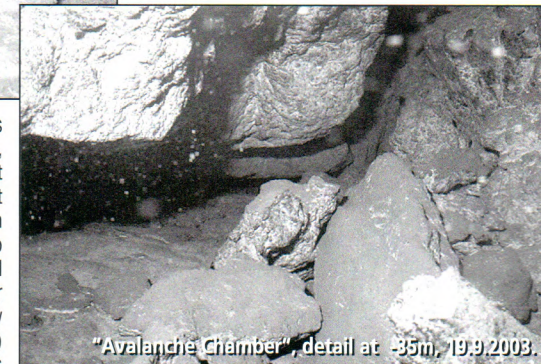
We went down yet another step, which reminded us a little bit of the restriction in Three Sisters (5L13), and were at the bottom at around -35m. The last flattener at this depth is about 10-15m long and it continues as a narrow fissure just 20-30cm high through which we could see yet another small step down - was this the beginning of a horizontal draining system? ... does it go to the Pines or Nettle-Bed Cave (5L290)? We had made a few loops in tunnels leading in the SE direction (150°) around the bottom but had to watch our air supplies a little bit; who would ever expect to run into deco time in the Nettle Cave?! Beautiful!

Our subsequent dives saw us concentrating on exploring all of the easy areas of the cave. We especially checked out the horizontal extensions heading to the SE (i.e. towards Pines), but we found no easy passage or conduit system there. The newly discovered "Avalanche Chamber" opens at app. -12m, but the first passage-step in the SE direction (just underneath the Back Section) can be entered from about -9 to -10m depth, immediately after negotiating the initial restriction at -8m (easy to be overlooked on the way in). From the water surface to the (present!) max. depth at -35m we used about 55m of line. There is a huge boulder trapped in between the two walls, reaching a maximum depth of around -25m and forming a natural crossing for diving either the smaller NE or larger SE extensions.

At the NW extension, longest penetration was possible at about 30m depth with bottom at about -33m. The two steeply descending walls get very close to each other there, and no easy extension seems likely. A quite different situation is at the opposite SE horizontal extension where a much wider gap between the two walls is choked by large boulders. The two walls of the collapsed chamber copy the profile-direction of the surface doline and extend in a SE (150°) direction towards Pines at several steps, the longest horizontal extension being probably at the -17 to -12m step. Altogether, the horizontal span of the collapsed "Avalanche Chamber" is about 50m, but at different

depth levels. The character of the limestone is very much like in Pines' main chamber (light color, hard limestone), very different from probably the much younger Nettle-Bed Cave (5L290) which has a much more sharply-defined outline and angular corners.

With a little bit of gardening at the bottom of the main chamber there is a good chance to break through yet another step downwards, maybe into the (presumed) original horizontal draining system. Another less likely possibility also exists along the SE edge of the chamber, but gardening among the huge boulders here seems a little bit



"Avalanche Chamber", detail at -35m, 19.9.2003.

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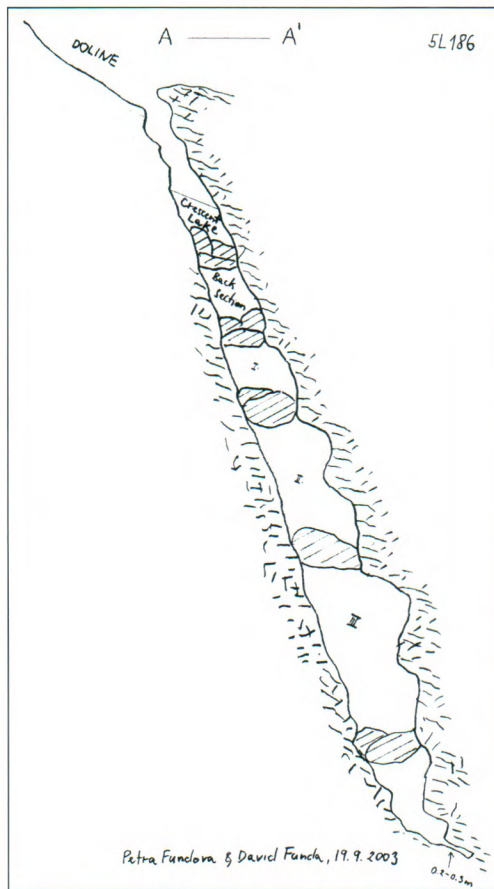
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We believe that this site would be of considerable interest to cave divers, especially those who do not mind diving (and avoid silting) in Mud Hole, Nettle-Bed and the Three Sisters. Side-mounting is not essential, but equipment configuration should probably be tested individually on the spot.

We hope that this report will serve both as a useful record of the events surrounding our discoveries and as a guide to the cave divers who will follow these early steps. Have fun diving there in the future!

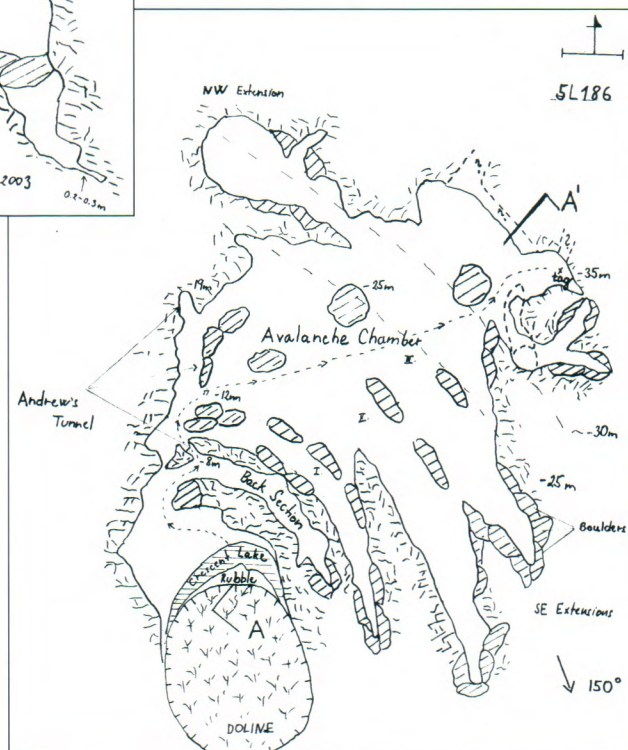
David Funda and Petra Fundova (CEGSA, CDAA)
E: pdfunda@hotmail.com or pdfunda@seznam.cz

P.S. Although the caves in Mt. Gambier area are by far the most frequently dived in Australia, do not let a false assumption, that everything has been fully explored there, mislead you! We know from our own experience that there are other features "out there" just waiting to be explored - but that's going to require another article(s).

We would like to take this opportunity to thank Peter Horne for a great deal of support and encouragement for our exploration diving and mapping around Mt. Gambier, also for his help with this article; Phil Argy - "Blue Lake Diving" - for his continuous support without which this discovery would not have been possible; and Linda Claridge for introducing us to cave diving.

scary, considering how readily our earlier efforts had quickly resulted in the "opening" of this cave!

More detailed exploration and mapping of the cave is still awaited, because cave diving politics intervened as people started to become aware of the fact that 'something' had been found at Nettle Cave, and divers were being seen there. As a result, Primary Industries (Forestry) recently made the decision to prohibit any further diving in Nettle Cave until a proper access policy could be sorted out. Nevertheless, we were happy that we had seen enough to realise that this is a significant discovery: while Nettle Cave is not as large as Pines, it is as deep as the impressive Dark Room in Pines and the distance to the deepest point at -35m is only little bit shorter than the length of the Back Passages to the Dark Room.



CAVE DIVERS ASSOCIATION OF AUSTRALIA

NOTICE OF 2004 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 will be held on Saturday October 9, 2004 at The Bellum Hotel Dining Room, Mt Schank, SA.

The Annual General Meeting will commence at 11am and will conclude no later than 1pm.

This notice also serves to call for:

- * Nominations for Business Director and Standards Director.
- * Member motions
- * Amendments to the Constitution

The Returning Officer must receive nominations for the Directorate positions no later than the close of business August 24, 2004.

Mail to: Returning Officer, PO Box 7592, ST KILDA RD VIC 8004

The Business Director must receive member motions and proposals for amendments to the Constitution no later than close of business August 24, 2004. Items received after this date will not be accepted nor will any extensions to this date be granted.

Mail to: Business Director - PO BOX 7592, ST KILDA RD VIC 8004

Members intending to nominate for an Office Bearer position must be eligible members of the Association as defined in the Constitution. Nominations should be accompanied by a précis not exceeding one hundred 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 members of the Association. The polling date close for the election (if required) is Wednesday October 6.

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 use the ballot papers to be provided in the next issue of Guidelines (#89) or by special mail out.

The ballot papers must reach the Returning Officer (Geoff Chambers #3484) no later than close of business, Wed October 6, 2004. Detailed voting information will be provided with the ballot papers. Questions may be directed to the Returning Officer, PO Box 7592, ST KILDA ROAD VIC 8004.

Re-thinking Thirds

By Steve Trewavas

The rule of thirds, the recognised cave diving gas consumption rule, solid, safe and consistent, right? During this short article I hope to challenge your beliefs and encourage each of you to think further about the subject.

Many of us have come to the realisation that in a lot of situations thirds is simply not enough and more conservative back gas planning is prudent. This becomes even more crucial during stage diving and here in this article I specifically want to address and pass on an alternative method of stage tank diving.

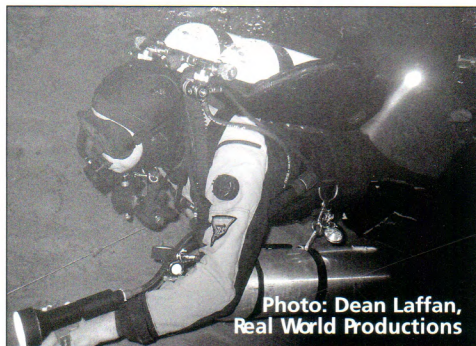
The accepted method of stage diving has been to breathe the bottle down to 1/3rd drop the bottle and revert to using your twins. Turn when you reach a 1/3rd of your back gas pressure and exit the cave, collecting your stages as you leave.

Thirds is the absolute minimum gas rule allowable for cave diving. If a diver and his buddy get in trouble at maximum penetration this method theoretically should get them out. In reality it would be a very close event. Factors such as increased stress promoting greater gas consumption, time used to fix the problem and the slower swim time utilised whilst gas sharing, will affect the outcome. A trained diver exiting a cave system, without lights, is approximately 4 times slower than when unburdened by failures. An untrained diver is approximately eight times slower, a sobering thought!

Firstly let us define a stage tank, which I see commonly confused with a decompression tank. A stage tank is utilised as gas to penetrate into a system, included in your back gas calculations, if you like. Decompression tanks on the other hand generally containing nitrox or oxygen and are used primarily to accelerate decompression times.

Half Plus 15 Bar

This is the new method presently becoming popular in the United States and promoted by GUE/WKPP divers throughout the world. In short it is a method that uses 1/3rd of your total gas supply after



breathing your stage tank to 1/2 plus 15 bar. The extra 15 bar is included as a means of not draining the tank fully and allowing an extra margin for gas switching. Additionally at considerable depths you may find the last 15 bar in a tank can not be breathed due to the complexities of Boyles Law.

This is basically a clever method of redistributing your gas by considering your gas as a total figure rather than as individual tanks. At all times prior to turning the dive you should have two thirds of your gas supply in your back tanks, untouched and available.

The simplest example of this method is to imagine you are conducting a dive utilising cylinders all of the same size and fill pressure. Twin manifolded 11 litre (80cft) cylinders on your back and an 11 litre (80cft) stage tank all filled to 210 bar.

1. Calculate 1/3rd of your 11 litre (80cft) stage tank gas; 210 bar divided by 3 = 70 bar, Which is; 70 bar in, 70 bar out, 70 bar in reserve, 70 bar X 11 Litres = 770 Litres.

The reserve gas of your stage tank is always retained in your twins.

2. Calculate equivalent pressure in your twins of this RESERVE of the stage tank.

Twin 11 Litre cylinders (80cft) are calculated as 22's (This is the volume per bar of the twin 11's aka 11 x 2 = 22), 770 litres divided by 22 litres = 35 bar.

3. Reduce usable pressure in your twin cylinders by the 35 bar which is NOT USABLE since it is the

Twins: 210 bar - 35 bar = 175 bar,
You now have 175 bar USABLE to calculate thirds in your twins, 175 bar, for simplicity rounds down to; 165 bar divided by 3 = 55 bar,
Which is: 55 bar in, 55 bar out, 55 bar reserve.
You have 55 bar to penetrate from your twins.

4. Calculate your twin tank turn pressure using the original starting pressure of 210 bar;
210 bar - 55 bar = 155 bar turn pressure in the twins
When pressure reaches 155 bar in his/her back gas the diver must turn and exit the cave.

Breakdown: 55 bar in, 55 bar out, 55 bar in Reserve, 35 bar reserve (stage), Total = 200 bar, (unaccounted for 10 bar is from the rounding to calculate 1/3rds).

Gas Management Summary:

Stage cylinder drop at 1/2 plus 15 bar;
210 divided by 2 = 105 bar,
105 bar + 15 bar = 120 bar - drop.

Twin cylinders;
210 bar - 55 bar = 155 bar turn.

This method has a number of positives, primarily it keeps a greater amount of usable gas in your back tanks, becoming ultimately more conservative. When utilising the Half Plus 15 Bar method during an emergency, as the stage tanks are drained, you would simply discard them. This has the benefit of not adding to your gear configuration and creating extra drag and clutter for a diver who is at risk of being overwhelmed with an increasing number of compounding problems. In any out of gas situation it is essential to exit as expediently and safely as possible and to further this, the more streamlined a diver the better.

In the traditionally accepted 1/3rds method a diver could not discard a tank which contained any gas, so would be obliged to drag them all with him. Due to the extra weight, complication and complexity of swimming with a number of stage tanks the divers' retreat would undoubtedly be slower, necessitating usage of even more precious gas.

With the above in mind consider the traditional scenario:

For whatever reason one diver has a total gas failure at maximum penetration. He signals his buddy who donates his long hose and the divers turn for the entrance. As the divers exit the cave

they come across the first of their usable stage tanks. By now one diver is totally out of air and the other is now basically in the same predicament. They have both used the two remaining thirds to reach their stage tank. Both divers being totally out of back gas, collect their stages and commence breathing them..

As they swim up to collect their second stage bottle they have drained the stage they are breathing until one last third remains. The divers dare not discard the tank as that last third may become critical. Each diver adds his second stage tank to his gear configuration and continues swimming clumsily along with two stages rattling around beside them, slowing them even further in their distressed state.

Alternatively utilising the 1/2 plus 15 method:

How would you feel about your buddy having additional gas in his twins at your gas failure point due to the fact that at your furthest penetration you both had a greater turn pressure in your twins anyway? You swim back sharing air to the first of your two stage tanks. Your back gas is not threatening to run out on the out of gas diver at any moment. You are in much better shape gas wise, as you arrive at your first stage tank. Here you each collect your respective stages and commence breathing them back to where you placed your second stage tanks. As you arrive at your first cylinder drop you have 15 bar of gas left in the first stage tank. It is practically empty, so you discard it leaving it in the cave, collect the remaining stage and swim carrying one bottle as efficiently as you can for the entrance.

I have also found this method far more practical during expedition diving where less tanks and gas mixing is required. At the end of a dive you don't have a third of your gas remaining in a number of stage tanks. Theoretically you should only have 15 bar, practically an empty tank, which you simply drain and remix.

I hope some of you will consider this method as a clever and safe alternative to the more traditional stage diving protocol. Lastly the usual word of warning. Before adopting this method and setting off for the end of some line, please take the time to fully understand what I have briefly explained above and if unsure, please just ask.

References:

"Beyond the Daylight Zone" GUE cave manual.
Tyler Moon - www.tylermoon.com

Battery Talk

by Daniel Habib

All of us either know or dive with 'tech-o' divers; you now, the nerdy types that like to revel in equipment specifications, D-ring sizes and the like, and generally enjoy spending their Saturday nights contemplating the braiding pattern of their preferred guideline... well that's most of us! And the good news is we can add battery chemistry to our long list of things to 'nerd' over.

No matter what level of 'cave diving' you're at, you will undoubtedly have had to set yourself up with a lighting system which houses batteries that you may not think too much about until it comes time to replace them perhaps. So for those who are less familiar with their battery's characteristics and the options available to them, here's a simple run down that I hope brings you up to speed.

Nickel Metal Who?! Chemistry?

Regardless of the type of underwater lighting system,

there are typically 3 types of battery chemistries that you will likely encounter; Lead Acid Gel (Pb Acid), Nickel Cadmium (Ni-Cd), and Nickel Metal Hydride (Ni-MH). There are other possibilities including Lithium Ion (Li-Ion) cells, however, these are currently cost prohibitive for most of us and hence not yet mainstream for this application.

Lead Acid Gel

Commonly referred to as 'Gel Cells', these are typically a single package containing semi-solid acid, hence the term gel. Whilst they are available in a range of voltages, the dive torch typically comprises one 12V cell, or two 6V cells connected in series to make a 12V supply. Gel cells are relatively heavier than other cells available which I personally consider a disadvantage, though this feature suits those who like a torch that doubles as a weight belt, and these are the cheapest battery option available.

When in use, these cells discharge relatively linearly, hence you may notice your light dimming gradually as this occurs. Unfortunately, they don't like being completely discharged as this can cause the battery irreversible damage so turn those lights out before they start fading too much if you use this battery type.

Ni-Cad

These cells are the garden variety rechargeable battery that most are familiar with, and are available in the standard packaged sizes (AA, A, C, D etc) as well as many others when ordered with solder



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continued page 16



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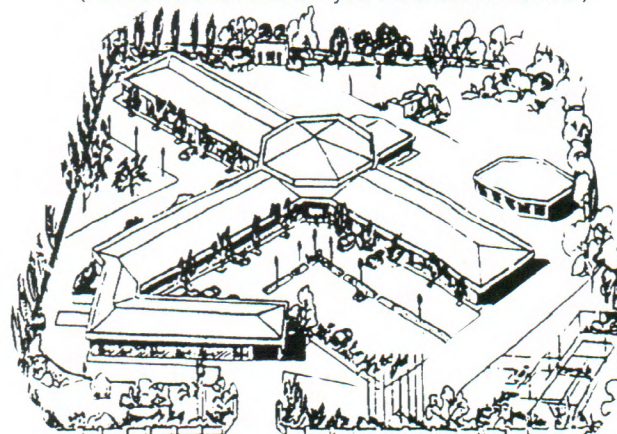


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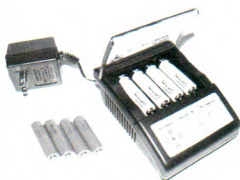
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tags. Typically, rechargeable battery packs (Ni-Cad or Ni-MH) used in diving torches compose a group of 1.5V cells soldered into the appropriate arrangement to deliver 12V, and are shrink wrapped into a package with just two wires coming out of the top. Without reading the serial number on the individual cells, it's almost impossible for us to distinguish between Ni-Cad and Ni-MH packs as they look the same, however a battery supplier can often tell you this info in a glance.

Ni-Cads deliver a consistent voltage throughout the discharge cycle until almost flat, where they tend to lose voltage rapidly. In some ways this is good, as you get maximum out of your cells, however, when they get flat the lights go out real quick, so some select gel cells which to avoid this. The most likely reason you will avoid using Ni-Cads is due to their inherent memory effect, also known as voltage depression; this



occurs when the cells are not completely discharged before recharging, so they are said to remember the shortened cycle thus reducing capacity. While this was a problem in years gone by, today's Ni-Cads are less susceptible and if effected, can be easily repaired by several deep discharge/recharge cycles. Deep discharges can be a little inconvenient if a charge is needed between every dive, however these cells are relatively cheap offering the possibility of a second pack. An advantage of Ni-Cads over NiMH is their life expectancy – they can survive up to 3000 cycles of use, compared with about 500. Additionally, they hold their charge more effectively when stored for long periods, whereas Ni-MH discharge at a greater rate. For these reasons and the relatively low cost, Ni-Cads remain my preferred option, though I'm sure many will disagree!

Ni-MH

Once too expensive, Ni-MH cells are now almost mainstream in top end lighting systems, with gel cells often offered as a cheaper alternative. They are packaged in the same way as Ni-Cads, however they

exhibit little effects of voltage depression and therefore may be 'topped up' between dives. In saying this, it is advisable that these cells complete a deep discharge/recharge cycle from time to time. Like Ni-Cads, Ni-MH cells maintain consistent voltage throughout the discharge cycle and can last around 30-40% longer than Ni-Cads. So why don't we all use these? They are typically around twice the price of Ni-Cads, and as mentioned, last only about 500 cycles, which is still a long time in anyone's book.

Charging

All cells must be charged with a charger designed for the specific battery type, or the cells will be damaged beyond repair, melt or even catch fire. Some chargers are suitable for both Ni-cad and Ni-MH but be sure of what you're using. Needless to say, never use a charger that does not specify its purpose, as it is a one way street if you're wrong!

Battery Talk

Apart from chemistry, batteries can be described by two defining characteristics; voltage [Volts] and capacity [Amp Hours (Ah)]. Voltage describes the potential difference of the battery, while the Ah rating refers to a cell's ability to deliver its rated current for 1 hour. There are numerous factors that influence a cell's discharge rate, however a simple rule of thumb is as follows:

Burn time [hrs] = battery Ah rating [Ah] / current [A]

Though not an entirely accurate formula (as you will find out when you calculate your own battery's burn time), we now have some understanding of what Ah ratings are and how they relate to burn time. In short, the greater the Ah rating, the greater the burn time. But...be careful when using Ah ratings to compare different battery chemistries, or even just equivalent cells from different manufacturers, as bigger isn't always better. To obtain a better understanding of how a battery will perform before you purchase it, always ask to see a 'discharge chart' for the cells of interest.

There are various charts available displaying differing information as required; below is just one example showing the discharge times for all the cells offered by a random manufacturer. We can see that if we had a torch that draws around 3 Amps and we required a 1 hour burn time, we need, in theory, to select a battery that falls within the dotted circle I have added. In practice, we would get something with a slightly greater capacity to allow for battery degradation with time. Other practical issues limit our selection, with the main one being the size and shape of the battery canister. Lastly, I hope I have shed some light on a few basic issues for those that are unfamiliar. It is important to note that no battery is the 'best' available, each having its own short comings.

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NATIONAL DIRECTORS REPORT

"Guidelines" has always been the best form of communication with our members, Landowners and advertisers. It hasn't always been the best read and as far as paying for itself, it's been a millstone around our neck. Much discussion has gone on about changing its format or scrapping it completely, I was determined to get "Guidelines" self supporting and I'm glad to say it's happened. Finally we seem to have cracked the right formula, we have a good looking magazine, it's full of interesting news and we have enough advertisers so that we break close to even. I bring this to your attention because as an Association we can be proud of our magazine. Compare "Guidelines" with similar productions overseas and locally and you will see that we more than outshine them. Terri Allen (Records & Publications) has been able to chase up those elusive advertisers and articles and therefore produce with David Byant of Seapics something we can all be proud of. Remember if you don't support our advertisers (tell them you're a member!) they will withdraw their support, so have a think before you stay somewhere or purchase something and try and do your best for the CDAA.

I recently appeared on the George Negus show on the ABC discussing Cave Diving and this can be viewed on our web site. After being approached to provide film and a speaker I left a message with one of our well known members, but was rejected on the grounds that there was "...some sort of catch or what did I want in exchange!" Giving up on that ego trip I approached some notables in NSW who I knew could provide film footage and would be good speakers, but commitments elsewhere wiped two off the slate and the third Ron Allum (I mention his name because he paid his fees so that he could gain access) somehow fell through the deal. Finally I decided to do the interview myself and Chris Edwards kindly provided the background footage. I hope you think it was worth the effort, see our web site for a read.

This issue of Guidelines calls for nominations for the position of Standards Director and Business Director. Having written about the responsibility these positions hold before I hope we get nominations from people willing to take on a task that requires input practically everyday. I will be sorry to see Richard Price retire as Business Director because he and Tammy (Treasurer) have worked so well together getting our books straight and out on time. Some members will

remember the "Good old days" when things didn't balance or books weren't available at the AGM. The writing was on the wall back then that the CDAA was going broke and I'm sure astute previous Directors can remember how "close to the wind" we ran. Richards's clear thinking has helped me through many situations and his advice has been always given freely. Our balance sheet is without doubt the best it's been in the last 30 years and without Richards investments and shrewd management it would have been harder to achieve. Perhaps the good thing will be that Richard will start diving in caves again as he won't feel that he's drowning in CDAA politics. Max has been working on our Power Point presentations and some changes in course formats. For those members who have been trained by Max you know what a nice bloke he is and if he was your examiner in a Penetration course, don't feel bad if you didn't make it the first time, because Max would always have your well being in mind. Many new Instructors have been appointed since Max came into office and we are still receiving applications, we will see a number of new names appearing soon on our list.

Email has been a blessing and a curse, it takes time by eating away the hours, answering enquiries from all walks of life about everything to do with cave diving, but becomes a real trial when we get so many queries and people expect an instant answer. Often questions are forwarded to the Director or office bearer concerned and if they not available we start getting "please explains" which take up more time. Please have some understanding for these volunteers; they have a life outside the CDAA.

Membership numbers are returning to what we had years ago which is good news for our balance sheet but means that sites start getting crowded. We have so many members wanting to become Penetration level that an extra course has been organised by Max and Barrie. Terri will be doing a presentation at the AGM giving the full breakdown of members and levels. Rob Brennan has advised that two "new" sites (Nettle and Dave's Secret Cave) are going to be announced soon, giving access requirements etc. We are always after "new" sites so if you know of any that we can use, please contact Rob as this is his department. Tank Cave has again been heavily dived over the year and although I haven't seen the figures yet I expect that it

...continued page 22

MEMBERSHIP RENEWAL INSTRUCTIONS

- 1) Please print and fill out the **Membership Application Form**
- 2) **Enclose a stamped self-addressed envelope**
- 3) **Include 2 photographs** of passport quality and please write your name on the back of each photo or email a good quality jpeg to **records@cavedivers.com.au**
- 4) Enclose your cheque for \$70 per year PAID (including backfees - \$45/year to a max of 5 years) You can also pay by credit card or by electronic transfer.
- 5) If you wish to have non-active membership, PAY \$35/year. You can keep your membership going, receive copies of Guidelines, but cannot dive with such a membership.
- 6) **After August 31st any unpaid renewals will incur a \$45 late fee.**
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will be very close to self funding through members fees. It was put to the Directors that Tank Cave should support itself and not be a drag on the Association and this we have achieved. The entrance road has recently been upgraded again and a new side fence installed. Building changes were to be started but this appears to have been delayed. As a Tank Cave diver I would like to see the long promised new map appear, but I understand the difficulties associated with this. John Winkler and his team are doing a wonderful job mapping this site and if divers would stop finding new areas and new tunnels life would be a lot easier, but wouldn't it be boring! The new signs at Pines have been installed so please heed their warnings. Have you used the CDAA tables yet? These can be found at most of the popular sites and more will be installed if we can get people to volunteer for the job.

Insurance is an ongoing worry and although the Association has never had a claim against it that I am aware of, it's not getting any cheaper. Planning trips to the Nullarbor, or anywhere around renewal time is asking for trouble. Renewal takes time and needs to be sought from the few companies who are willing to provide cover in the first place. Our Broker is working to get cover in place in time but there are no guarantees.

MEMBERSHIP RENEWALS ARE DUE NOW!...

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"High Standards"

Hi All...

Hasn't it been an interesting time? But perhaps many have not been reading the general email that has been floating around. Tsk ! Tsk ! It is a shame that these things happen. I try to step out side of the circle or square that so many of us get trapped in attempting to do this job as a volunteer, I am not into laying blame because I believe in the fable "He who excuses himself, accuses himself." and out of every disagreement we all grow and learn and move on to the benefit of the CDAA. This is where I would like to move on to relevant issues. We have many things in the wind, a coming election for Directors again. Two positions available mine (Standards Director) and Richard Price's (Business Director). Good luck to the all candidates for the position. I will be standing again as we have many things completed but waiting in the back ground for approval. What has currently been achieved? We again have completed a Penetration program at Easter I would like to thank Barrie Heard and all Instructors who put in a 14 hr / 16 hr day to make this happen. To the applicants well done to the eight who passed. To the four who did not remember that it is a learning program. Good luck next time ! The next major Penetration Program will be in October over two weekends 16th, 17th and 22nd 23rd. I will be there for the last weekend. Good luck to you all. There have been some major changes at Pines. We now have Definite Cave and Penetration areas. These are indicated with signs. Please do not compromise the CDAA or Forestry and please keep this Cave open. Whilst it is not a regulation it is morally wrong I believe for Penetration divers to leave guide lines bridging Cave and Penetration Zones. It compromises other divers who are Cave rated.

On a very positive note we have another Instructor who has made application to become a CDAA Instructor.

Thanks for the return information in regards to twin tanks. Due to research and discussion from Instructors I have made an informed decision based on fact. I believe that at entry level Cavern / Sinkhole courses will stay with single tanks. There will be a need to change the practical level of diver training to allow this to happen. Currently there are some Instructors checking this program. The course changes are again some thing I believe we must get right the first time. I will not rush any course changes through for the sake of completion.

My comment to finish. This is the Standards Corner for you. To tell you of the changes or the things that is being reviewed in CDAA Standards.. I hope you have always felt that this is what we achieve here.

Thanks for listening

Regards, Max B Marriott, CDAA Standards Director

CDAA's Formative Years

By Stan Bugg.

When I began visiting Mt Gambier in 1971, two divers had already drowned, and Kilsby's was closed as a consequence. But I was typical of most divers who travelled from Melbourne and Adelaide; I was essentially an ocean diver with little real appreciation of the hazards of the cave environment. I used a single low pressure cylinder with no HP gauge, no occy or BCD, and definitely no reel.

A few true cave divers told us that our methods were foolhardy, but as is so typical of the young we were unkillable. No doubt those who became statistics felt the same way. In a series of sickening events eight divers drowned in eighteen months between 1972 and 1973.

Press reaction was hysterical, citing "killer caves." Fortunately the South Australian government did not respond to the call to ban all cave diving, but they did put the diving fraternity on notice.....get organised or we will do it for you!

The CDAA was born amid this controversy, and a newly elected committee tried to figure out what to do next. To their enduring credit, they pretty much got it right.

They categorised the known sites according to difficulty. (Categories 1,2 and 3 at the time.) They then formulated a set of skills for testing of prospective category three divers. They then made a decision that had a lingering effect on their credibility. No-one was to be exempted from testing no matter how prominent their status in the diving community. This decision produced a LOT of bitching from those who expected a free ride, but it gave the CDAA real credibility in desperate times. Thirty years on, the current skills required for cave level are pretty much what had to be done to pass the original cat.3, the highest CDAA level in 1974. There was no equivalent to current penetration rating, as West, Iddlebidy and Tank cave had not yet been found.

Potential candidates were required to sit a theory paper, and it is time to admit to my own small contribution to the new system. Bob Cumberland and I were working in a Melbourne dive shop one Saturday when CDAA committee member Russell Trayner dropped in to see us. He was quite

sheepish, and obviously wanted to ask us something. Social niceties taken care of, he finally asked Bob and I if we were going to sit the CDAA cat 3 theory, scheduled for two weeks away. Bob and I shrugged, and said why not? Russell was pleased at this, but still edgy. Finally he asked, "Could you write us an exam paper?"

That's right folks. You heard it here first. I sat my own exam paper! (Did quite well too!) About 30 people attended the exam, held at the YCMA building near what is now Southbank.

Prac tests were arranged. (There was no thought of any training. Hundreds of divers were straining at the leash to be tested so they could get back to killing themselves)

The first prac weekend was held October 1974, with testing at Ewen Ponds (!) and Allendale(!!) Phil Prust and Dave Warnes were the main testers. I attended the second prac weekend in May 1975. David McIvor, Bob Cumberland, David Perry, Graeme Bradshaw and I went over early to practise. We had no idea what to expect so we did blackout buddy breathing in Cathedral, followed lines with no mask at 35m, and anything else we could think of.

A meeting at Allendale hall informed about 30 divers what was to be done: A vertical buoyancy test to be done without fins, orally inflating BCD. Reel out, two tie-offs, lose mask, buddy breathe while reeling home. Follow a fixed line while blacked out.

All of this seems logical with the benefit of hindsight, but fiery debate followed, arguing the validity of each test, and especially the requirement to actually have an octopus reg, which was not common in 1975. The committee stood firm, and we were to assemble at Pics next morning.

The Pics carpark was already full when we arrived. The first two exercises were to be done in the first pond, with the fixed line test being in the lower tunnel between the chasm and the cathedral.

There was already quite a crowd geared up so Bob and I expected to go later, but we were asked to go first so we could assist with the testing!

Phil Prust saw our buoyancy exercise, then we moved to Dave Warnes for the buddy breathing.

After completion, Bob and I were given control of the fixed line blackout test. My dive log says I was in the water for four hours.

I would be lying if I said things ran smoothly, but the hiccups were no fault of the organisers or testers. The problem was that they were dealing with some very powerful egos from the diving world, many of whom were quite grumpy at the idea of having to actually perform any skills. In their own minds they were already good enough, and expected to be signed off on the spot, sometimes with little real cave diving experience other than an occasional dive in Pics. Also bubbling just below the surface were various types of rivalries.....interstate rivalry, not to mention inter club/ inter dive store tensions. You know the sort of thing...." The reason he passed is that he is a mate of....." or "I only failed because I work for....." Etc. etc.

The organisers handled all of this s#*t very well, and bent over backwards to accommodate candidates by allocating them a tester they trusted. But this was never going to be enough for ONE very prominent diver of the time. After having BLOWN the buddy breathing test totally, he ranted around the carpark declaring that, a) It was a

stupid test anyway! And b) They were all out to get him! And c) It was all political! The committee calmed him down and offered him another attempt at the test. After a lot of histrionics he accepted, and guess what? He blew it again! (Seems he had a long standing problem with the fundamental skill of swimming without a mask!) He stormed off and was not seen again.

So from this humble start the CDAA has developed into an organisation whose safety record is the envy of the world. This is largely due to their firm stance on standards in these vital formative times, when to give in to the pressure from the majority who claimed that the standards were impossible high, would have led to a watering down of standards at best, and further accidents at worst. Since its formation, no CDAA member has died while following the rules and limits of the association. This speaks volumes for the vision of those who set the standards in the '70's, and must continue to be a powerful argument against any attempt to reduce the requirements to gain CDAA certification.

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Tea Tree	CN	PO Box 2168, Mt Gambier 5290	
Little Blue	S	District Council of Grant	Little Blue - permission not required - must carry card.
Allendale	C	District Council of Grant	Obtain key from Lady Nelson Tourist Information Centre.
Gouldens	CN	DEAH	General Diving: Divers to contact DEAH and notify of date and site to be dived. Please make requests by phone or fax only. (Email no longer accepted)
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 Ph: (08) 8735 1177	financial CDAA membership card. The diver must have signed an indemnity with DEAH before access is permitted. Training: The Instructor is to notify DEAH of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
Ela Elap	S	Mr. Peter Norman	Visit the house before diving.
One Tree	S	Private Bag 67, Mt Gambier 5290	If no one home - no dive!
Piccaninnie Ponds	S	DEAH P.O. Box 1046, Mt Gambier 5290	Permit holders by phone or fax. Be aware of delicate vegetation. Ph: (08) 8735 1177. Fax: (08) 8735 1135 NOTE: Indemnity form to be completed with membership renewal.

Hells Hole	S	Hells Hole - Minimum of 4 divers to be on site at all times..
Pines	P/C	Pines - Unrestricted numbers / days
Mud Hole	C	Mud Hole - Unrestricted numbers / days
Nettle Bed	P	Nettle Bed - Open every weekend. Maximum of 4 divers, 1 dive per day.
Iddlebiddy	P	Iddlebiddy - Open every Saturday. Maximum of 4 divers, 1 dive per day.

Owner: Forestry SA PO Box 162 Mount Gambier SA, 5290 Ph (08) 8724 2876. Fax 8724 2885 Email: forestrysa@saugov.sa.gov.au Contact:

ForestrySA by email, fax or phone to arrange permit. Collect permits from Carter Holt Harvey Mill Gatehouse, Jubilee Hwy Mt Gambier.

IMPORTANT:

- No diving on Total Fire Ban Days. ForestrySA may apply Forest Work Bans if forest fire danger is expected to reach extreme. Such bans exclude the public from entering the forest. If in doubt, check with Forestry Ranger or Forestry Office, although signs are generally erected at diving sites to indicate such bans.
- Permit also required to run compressors during fire danger season.
- Keys for Hells Hole, Nettle Bed & Iddlebiddy can be obtained from Lady Nelson Visitor Centre.

Kilsby's	S	Landowner leased to S.A. Police	Restricted access conditions apply - refer to the CDAA Website. Twin tanks, maximum of 40 metres depth. Write to: Gerret Springer, 30 Lorikeet Street, Mt Gambier SA 5290. Email: rolukage@ozemail.com.au, 4 to 6 weeks prior to wanting to dive. Please enclose stamped self-addressed envelope (Do not contact landowner) or book via web page. Access date now the first weekend of every month. No animals permitted. No mid-week diving.
		No Visitors	

CDAA SITE ACCESS

SITE	LEVEL	OWNER	ACCESS DETAILS
MOUNT GAMBIER - SOUTH AUSTRALIA (continued)			
Shaft	S	Generally open one weekend a month L. Claridge P.O. Box 15 Koroit VIC. 3282 Ph: (03) 5565 8793 A.H. Mob: 0408 052 070	For access dates contact Linda Claridge. Also, see Special Access Bulletin in Guidelines issue 69. Nitrox as a diving mix is not allowed in the shaft. Deco mixes ATTACHED to a shot line are permissible. Divers applying to dive in the Shaft must have documented experience of a least 5 twin-tank dives. Divers must provide their own harness and tank tapes. Email: garinda@tpgi.com.au
Hann's cave	P	P & A Lasslett	Groups of four divers only apply in writing to Site Director. Limited groups will be allowed access over the summer months. The site is very delicate and therefore only limited access is available. Divers applying will be notified as to further access details. Please include a stamped self addressed envelope.
Engelbrechts		Mt Gambier	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
- East	C	Council	advising which groups they are diving with. NOTE: Special conditions apply during March and April... See notice this issue. Please book public holiday dives with lessee.
- West	P	Lessee Ph: (08) 8723 2299	
Three Sisters	P	Millicent Council	Contact Records Officer. Access available for experienced Penetration divers only. Low profile or side mounted independent air systems required. Access agreement must be signed prior to diving. Please allow 4 weeks for indemnities to be processed.
McKay's Shaft	S		Contact South East representative Phil Argy at Mt. Gambier access and indemnities.
Tank Cave	P	Mr. DYCKER	Access Manager: Noel Dillon Email: noel.dillon@macquarie.com
Baker's Cave	C		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		Apply in writing for permission to dive at least 4 weeks in advance of trip to:
Murra El Elevyn	P/C		District Manager, C.A.L.M., PO Box 234, Esperance, W.A. 6450.
Tommy Grahams	C		Phone: (08) 9071 3733 Fax: (08) 9071 3657
Weebubbie	S/C		Apply to the Department of Land Information (DLI), now comes under the control of the Department for Planning and Infrastructure. Same location but new contact details Phone (08) 9347 5047 Fax (08) 9347 5004 Email: janice.leeman@dpi.wa.gov.au

N.S.W. - WELLINGTON CAVES

Limekiln (McCarthy)	P/C	Both Penetration and Cave Level are being accepted for this cave depending on it's water level at the time. The cave has a restriction at the entrance which is underwater making it a Penetration Dive. During drought, the water level drops to form a small lake below the restriction allowing experienced Cave Divers access to this delicate cave.
Water (Anticline)	C	Affected by high CO ₂ levels during Summer/Autumn.
Access is co-ordinated with the Wellington Caves management by Greg Ryan - greg@cs.usyd.edu.au. Phone (02)97434157		
Rum Jungle Lake	S	Unrestricted access currently exists - Please refer advice in Guidelines No. 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.

UP COMING COURSES

Cavern / Sinkhole Courses

July 19-Aug 1, in Melbourne and Mt Gambier, Twin tanks and second reg supplied.
Contact Jane Bowman 03 9579 2600

October 4th-17 2004, in Melbourne and Mt Gambier, contact Jane Bowman - 03 9579 2600

July 24-Aug 1, in Melbourne and Mt Gambier, Contact Stan Bugg or Paul Leslie 03 9879 2868

Two Courses: June 14-20 in Melbourne and Mt. Gambier, contact Rubens Monaco 03 5984 3770

October 7-24, in Perth, Contact Gary Bush, 0402 339 652

Cave Courses

Biannual (April & October) in WA, contact Gary Bush - gary.bush@bigpond.com

Two Courses - June 14-20 2004, August 23-29 2004, in Melbourne and Mt Gambier,
contact Warrick McDonald info@abocan.com.au or 0408 374 112

ADVERTISING RATES

FOR SPACE - APPLY TO TERRI ALLEN, PUBLICATIONS DIRECTOR...

Mobile: 0419 176 633 Email: pubdir@cavedivers.com.au

Size	Type	1 issue	Yearly*
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Inside front page	Full colour	\$450	\$1350
Inside back page	Full colour	\$400	\$1200
Full page	Black+white	\$200	\$600
Half page	Black+white	\$125	\$375
Quarter page	Black+white	\$100	\$300

*Book up for 1 year's advertising and get 1 issue free. You also receive free full colour advertising on our web page: www.cavedivers.com.au

SITE DIRECTOR'S REPORT

Hi guys...

These last few months have been some what busier then normal, with all the discussions and follow up that has been sent out on the net and such.

I have to thank all the volunteers that helped on the working bee - it was great to see so many people there to help, and some unable to attend supplying the liquid refreshments for the tired. 4 equipment tables were installed over both days, (Pines, Nettle-Mud Hole, Little Blue and Kilsby's). Hopefully more of these gearing up tables will be installed once permission is granted.

Last month a dive was conducted in Pines to set out where the cave changes from Cave to Penetration. 2 signs are now in place in the cave that informs divers where the cave changes levels. The map produced by Jurgen has been altered with colour coding so there is no mistaking where you can and cannot go. The max depth in the cave for a Cave rated diver is now 24 metres. The map on the web site has been changed so you can view it. The Forestry SA Rangers along with others will be checking gauges etc at the site so BE WARNED. Negotiations are currently under way with Forestry SA for access to Nettle cave and Dave's secret cave. We hope that they will be on stream very soon.

I have received mail from Kevin Mott (DWLBC) who is the Water Resources Officer who advised that the stepping stones in Fossils had been moved. These stones are there for a reason,

and, shock horror they are not there for us. Water levels have been recorded at the site for quite a considerable time and these are used for this purpose, so please leave these where you found them.

A small step has been placed in Kilsby's to temporarily help solve some of the problems with the ramp. Hopefully this will be fixed soon. After diving some sites last month I was concerned to find that access protocols were again being ignored and, after fronting the divers in question, their reply was "Well I know that's how it is done, but we asked the landowner if it's ok." Please remember that the conditions we use to access these sites are to keep the landowner happy. If you are not permitted to bring cars on the property then that's it. Don't even ask. It places the landowner in the position of having to say yes to something he shouldn't even be asked thus straining the relationship when the next group of divers say "Well you let the last lot do it." Just remember that their farms are their livelihood and the less the interference the better. Excellent work by the boys in Tank cave in removing the skull of the *Simosthenurus occidentalis* (see separate article) and hope to see it on display somewhere in the mount soon. The new parts of the "S" section are great to traverse and the goat track has certainly shortened the swim time to the Ballroom. For those who dive tank cave just think of the circuit dive that this has opened up.

INSTRUCTOR MATERIAL ORDERS:

Procedure for ordering student packs:

1. Check you are insured & financial.
2. Send order & cheque or by phone/credit card.
3. Allow 14 days from when the order is received - so allow plenty of time.
4. Student kits cannot be returned.
5. Instructors must be active.
6. Please do not pass my number on to dive shops - you should deal with them not me.

CONTACT:

HEIKE APPS - INSTRUCTOR MATERIALS OFFICER, PH: 02 6291 0566

PO Box 292, Calwell ACT 2905

Email: heike.apps@ga.gov.au

CDAA INSTRUCTORS

NAME A.C.T.	CONTACT No.s	STATE	Cavern	Sinkhole	Cave	Email
APPS, HEIKE	BH 02 6249 9170 AH 02 6291 0566	ACT	Yes	Yes	Yes	heike.apps@ga.gov.au
N.S.W..						
GRILLS, PETER	Home 02 4950 6262 Mobile 0419 820 920	NSW.	Yes	Yes	Yes	peter_grills@hotmail.com
ROBERTSON, ANDREW (currently inactive)	Home 02 9548 5987 Work 02 8868 8025 Mobile 0417 664 255	NSW.	Yes	Yes	No	buggs@tig.com.au
WALTERS, DESMOND	BH 02 6041 1405 AH 02 6025 3506	NSW.	Yes	Yes	Yes	descend@albury.net.au
SOUTH AUSTRALIA						
FEATONBY, TIM	Mob: 0402 129 253	S.A.	Yes	Yes	No	tim.featonby@defence.gov.au
MARRIOTT, MAX	AH 08 84473360 Mobile 0428 897 897	S.A.	Yes	Yes	Yes	dive69@chariot.com.au
YARRA, GEORGE	BH 08 8447 5771 Mobile: 0418 847 889	S.A.	Yes	Yes	No	gumbyg@adam.com.au
WEST AUSTRALIA						
BUSH, GARY	BH 08 9281 9460 AH 08 9367 4701	W.A.	Yes	Yes	Yes	gary.bush@bigpond.com
NTH. TERRITORY						
ELLIOTT, CLAIRE	BH 08 8981 3049 Mobile 0417 808 647	N.T.	Yes	Yes	No	claire@divedarwin.com
WEISSE, RICK	BH 08 8981 3049 Mobile 0411 470033	N.T.	Yes	Yes	No	rick@divedarwin.com
VICTORIA						
AXTON, PAUL	BH 9782 1671 Mobile 0419 346 442	VIC.	Yes	Yes	Yes	lozhard@bigpond.com
BARCLAY, GARY	AH 03 5565 8793 Mobile 0407 052 074	VIC.	Yes	Yes	Yes	garinda@tpgi.com.au
BOWMAN, JANE	BH 03 9579 2600 Mobile 0407 566 455	VIC.	Yes	Yes	No	info@aboccean.com.au

CDAA INSTRUCTORS

NAME	CONTACT No.s	STATE	Cavern	Sinkhole	Cave	Email
VICTORIA cont.						
BUGG, STAN	AH 03 9379 8791	VIC.	Yes	Yes	Yes	sbugg@micronica.com.au
CLARIDGE, LINDA	Mobile 0408 052 070 AH 03 5565 8793	VIC.	Yes	Yes	Yes	garinda@tpgi.com.au
CORNELL, BRIAN	Home 03 5985 2514	VIC.	Yes	Yes	Yes	cornell@alphalink.com.au
DALLA-ZUANNA, JOHN	Home 03 9434 1216 Work 03 9480 1316 Mobile 0407 887 060	VIC.	Yes	Yes	Yes	jdz@smart.net.au
EDWARDS, CHRIS	0417 116 372	VIC.	Yes	Yes	No	cedwards@teksupport.net.au
HEARD, BARRIE	AH (03) 5627 6474 Mobile 0419 401 276	VIC.	Yes	Yes	Yes	iantd@dcsi.net.au
MCDONALD, WARRICK	Work 03 9579 2600 Mobile 0408 374 112	VIC.	Yes	Yes	Yes	info@aboccean.com.au
MONACO, RUBENS	BH 03 5984 3770 Mobile: 0407-863-498	VIC.	Yes	Yes	No	info@divemelbourne.com.au
VANDERLEEST, JOHN	Home 03 9575 3636	VIC.	Yes	Yes	Yes	vanderleestj@ozemail.com.au
WEALTHY, BOB	Mobile 0417 524 005 Home 03 5985 8338	VIC.	Yes	Yes	Yes	wealthy@pac.com.au

RE: SHAFT - DID YOU KNOW...

Some divers are fronting up to dive this site without a harness, carabineer or even a sling. Whilst prior arrangements with the guide may allow for this to occur, please be aware that you may be charged for the hire of those items.

The guides will happily supply the A-Frame, ropes and pulleys but it is highly recommended that you own your own personal climbing equipment.

SHAFT DATES, 2004

The upcoming dates are...

July 03/04 • July 31/Aug 1 • Sept. 4/5

*For information on any Shaft or course dates contact
Linda Claridge on 03 5565 8793 or email garinda@tpgi.com.au*

By John Vanderleest

Special thanks for assistance needs to go to: John Winkler, John Dalla-Zuanna, John Vanderleest (the Three Johns), Gavin Prideaux, Noel Dillon, Mark Pain, Greg Ward, Rob Smith, Rob Wallace, Rob Brennan and just out number the Johns, the land owner Rob Dycer for realising the value of the specimen and ensuring it is not lost from neither the local community or the scientific world.

• • 6th August for September 2004 • 20th Nov. for Summer 2004/05 •

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TANK CAVE

~ DATES FOR 2004 ~

	DATE
1	June 26/27
2	July 10/11
3	July 17/18
4	August 28/29
5	September 11/12
6	October 2/3/4

	DATE
7	Oct. 7/8/9/10 (pref given to non Vic/S.A. Divers)
8	Oct. 30/31 - Mapping W'end
9	November 13/14
10	December 11/12

Tank Cave Annual Renewal...

For all returning Tank Cave divers the annual renewal application and \$100 fee is due on August 1st. The application form can be downloaded from the CDAA website at www.cavedivers.com.au. The annual fee has not increased, nor has the additional bookings fee of \$40 and divers are still entitled to two pre-paid bookings for this fee. However please note that due to high demand all divers need to plan ahead and book early for Tank Cave dives. All bookings shall be confirmed by Noel Dillon, preferably via email. However no divers bookings shall be confirmed without a buddy or buddy grouping. If a diver cancels their booking then the dive buddies booking will also automatically be cancelled. Therefore the Tank Cave booking page should be checked prior to departure for Mount Gambier to reconfirm your booking.

INTRO CAVE COURSE

• Martyn Farr Style •

By Gerald Chia

I recently had the privilege of being an observer of a TDI Introductory Cave Diver course being conducted by veteran cave diving instructor/author Martyn Farr. Martyn holds his courses from his home in Llangattock, a small village in a most beautiful part of South Wales, UK.

Martyn's courses are limited to 2-3 students, and the 'Intro Cave' is held over 2 days.

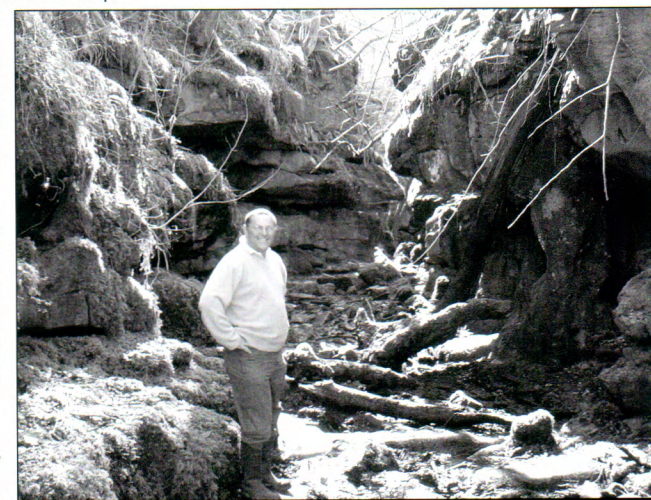
On Day 1 students are explained the various types of caves, cave conservation, and the upgraded procedures and equipment configurations which Martyn has adapted the from the TDI course to suit the British cold water, low viz, difficult access cave environment. Martyn explains to his students that the requirements of the US Florida Intro Cave scenario are inadequate for the UK. For example the TDI course at this level only requires single tank configuration, but Martyn spends considerable time setting his students up to dive side mounted twin cylinder configuration. Pre requisite for this course is Cavern or demonstrated equivalent.

A distinct difference between US / Australian conditions is that the cold water conditions require thick gloves, which then require use of 5-6mm nylon line as opposed to our usual 1.5mm line. A typical reel which they use is usually 400mm diameter which may hold 80m of line. They are more akin to something a Telstra linesman would use rather than our typical cave reel. Discussion also includes the different types of reels, and lines. A constant, re-current theme is global awareness, because Martyn is highly aware that people travel long distances these days and they must be able to adapt to "local" conditions, protocol, etc.

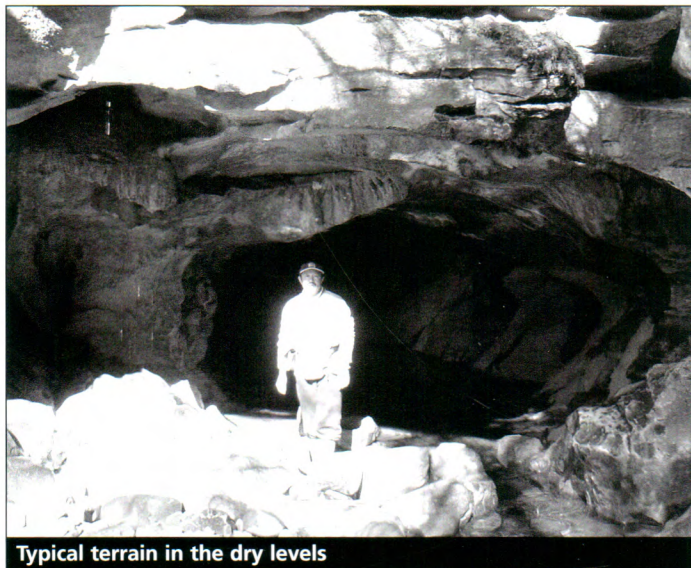
Martyn discusses and demonstrates line laying and lost line procedures, diving procedures with regard to being within arm's reach of the line,

anti silting techniques, types and location of line cutters, and low profile gear streamlining. Martyn also makes extensive use of "snoopy loops". These are thin strips of inner tube in various diameters, which have many uses, of which the most important being to secure belays for the guideline, and students are encouraged to equip themselves with a generous number of snoopy loops which are secured by 2 snoopy loops on the upper thigh. Martyn must dread the day when tubeless tyres are the only option, and tubes are no longer available. Equipment application and configuration for regulators and harness for side mounts, setting up of helmet and lights are an important part of the first day's activity, after which Martyn and students relocate to a pool to test and familiarise with the configuration, and various other techniques. Later on, they retire to a local pub to recap the day's events, complete the major part of "theory" and brief for day 2.

Second day sees Martyn and his students venturing to a local, long-abandoned silica mine which has extensive submerged sections. The 600m steep climb



Many cave entrances are actually in creek beds. Very dangerous after rain. Cavers / divers must check rainfall / weather forecasts.



Typical terrain in the dry levels

to the mine lugging gear is a challenge in itself, quite different to the drive up to the steps at the water's edge in Florida and some sites in Mt Gambier such as Pines. The mine is a labyrinth and intro cave students venture only in the second level horizontal passage over 2 dives, firstly following Martyn's line, and later on laying line themselves. Students are also required to apply other aspects discussed and practiced, on day 1, such as lost line recovery and good buoyancy and anti silting.

Day 2 concludes in Martyn's lounge room over a cuppa, where discussion and review takes place. Feedback on performance is a two way thing and analysis is sought. A take home exam is the conclusion, after which the majority of students will qualify as Intro Cave Divers.

The 2 days are very intensive for both teacher and students. Perhaps the biggest difference between what Martyn teaches and CDAA training is the heavy emphasis on self sufficiency. In CDAA there is considerable time spent on air sharing, but in Martyn's curriculum this is not a major consideration due to the twin independent cylinders and strict rule of thirds PLUS, and Martyn's emphasis on cold water and low viz conditions. Air-sharing is possible (Martyn demonstrates this with his long hose configuration) but it should be noted that this subject is addressed at both Cavern and again at Full Cave.

Throughout the course Martyn stresses to his students about

Global Awareness and the different conditions, demands, hazards, and conservation of the overhead and cave environments, and the need to keep an open mind and to incorporate new ideas and techniques which may be appropriate to the specific cave or environment. He also reminds his students that this is a recreational activity, and so they should also ensure that they have fun in their diving and on the course, and above all else keep safety as their priority.

(ED): The photos on the facing page are also from the course and illustrate the magnificence of cave diving and the cave structures Martin's students are so fortunate to experience.

While you're waiting for you next Issue of Guidelines, keep up to date with all the latest on the CDAA website...

www.cavedivers.com.au

- Course Dates • Photo Gallery
- Access Protocols • Classifieds -FREE to members
- On-line Dive Bookings • Latest News

**IF YOU WANT TO KEEP UP WITH THE LATEST NEWS,
REGISTER YOUR EMAIL ADDRESS
ON-LINE! DON'T FORGET THE WEB PAGE...**

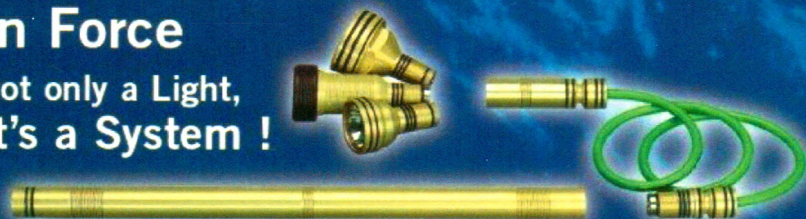


Diving in the silica mine. Photo by Martyn Farr



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*Infrared Device offer ends April 30th 2004.



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Email: dcb@divesydney.com.au

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10 Belgrave St, MANLY, NSW 2095
Ph: 02 9977 4355
Email: dcm@divesydney.com.au

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279 Maroondah Highway, RINGWOOD, VIC 3134
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Email: info@diverinstructionservices.com.au

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Email: halcyon@divesydney.com.au