



C.D.A.A. Newsletter

No. 108 - JUNE 2009

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CAVE DIVERS ASSOCIATION OF AUSTRALIA

(Incorporated in South Australia)

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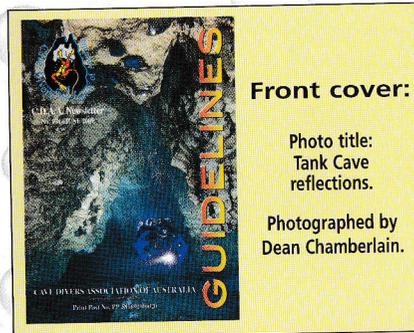
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Front cover:

Photo title:  
Tank Cave  
reflections.

Photographed by  
Dean Chamberlain.

## 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 Editor, David Bryant, PO Box 2198 Rosebud Vic. 3939.

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### CDA A INSURANCE

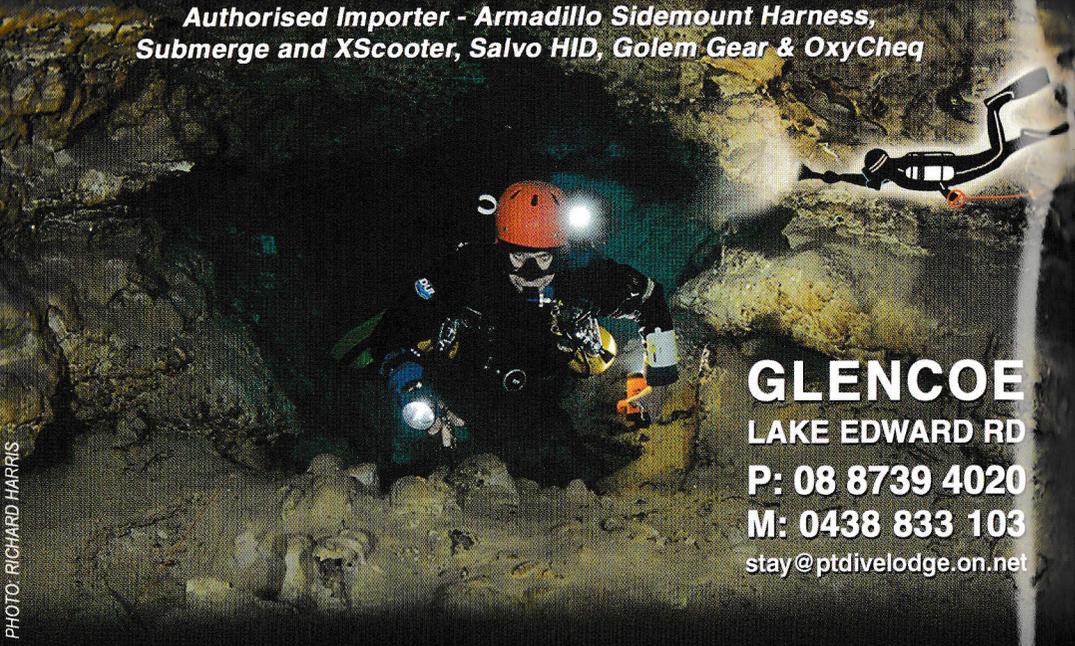
Public Liability policy limit A\$10,000,000.00 Policy# DMI/114781.  
Expiry: 17 July 2009 Insurer: Dive Master Insurance Consultants Ltd

# PINE TANK DIVE LODGE

## Divers Air, Nitrox & Trimix

Authorised Importer - Armadillo Sidemount Harness,  
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PHOTO: RICHARD HARRIS

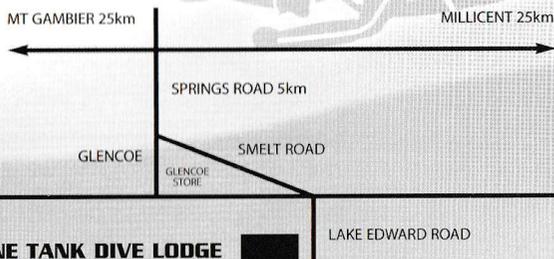


**GLENCOE**  
LAKE EDWARD RD  
P: 08 8739 4020  
M: 0438 833 103  
stay@ptdivelodge.on.net

Pine Tank Dive Lodge has been designed by cave divers to meet the needs of divers. With affordable accommodation and only 5 minutes driving time to the best cave diving sites in the South East of South Australia (Pines, Tank, Iddlebidy, Nettlebed, Fossil, Sisters, Mud Hole, Stinging Nettle Cave), divers can maximise their time in the water. Follow the blue signs.

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Pine Tank Dive Lodge is close to the Glencoe General Store for all your fuel, bottle shop, post office, EFTPOS and store item needs.



### Pine Tank Dive Lodge

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Glencoe, South Australia  
Phone 08 8739 4020  
Mobile 0438 833 103  
Email stay@ptdivelodge.on.net

## EDITOR'S CORNER

Hi All

Plenty of news in this issue with good reports, calls for the AGM, notice of the symposium. Hope you enjoy the reading in these cold Winter months. I read over my last editorial about the Vic bushfires and it seems surreal now watching Kinglake covered in a blanket of snow!

Oztek was another successful venture for us with good exposure as well as sales of our products including posters. Thanks to those photographers or contributed their work and a big thanks to Tara our products officer for bringing the products up and running the stand. It gave me a chance to go see a few more talks this time. I was impressed with the overseas speakers especially Jill H but I have to say the Aussie speakers especially our CDAA members such as Ag (scary stuff!), Steve and Craig did us proud. Congratulations on the awards and congrats to the photography winners such as Neil, Dean and Mick.

Thanks to the continuing support of our advertisers and welcome to a new advertiser who does dry-suit repairs, very handy for us cave divers.

Geoff and I just came back from a luxury Truk Lagoon trip led by Jane Bowman. Was fantastic diving and we were thoroughly spoiled. Will be hard heading back to the cold water of the caves. The AGM symposium looks better than ever if that is possible. Once again Steve has pulled out all stops to get us some varied and excellent speakers.

Membership renewals are now due if you are only paid up for the year. You can use the membership form in this issue or download off the web but even better is have a go at using our new ON LINE MEMBERSHIP RENEWAL at [www.cavedivers.com.au](http://www.cavedivers.com.au). Thanks to Jason and Tony for setting this up.

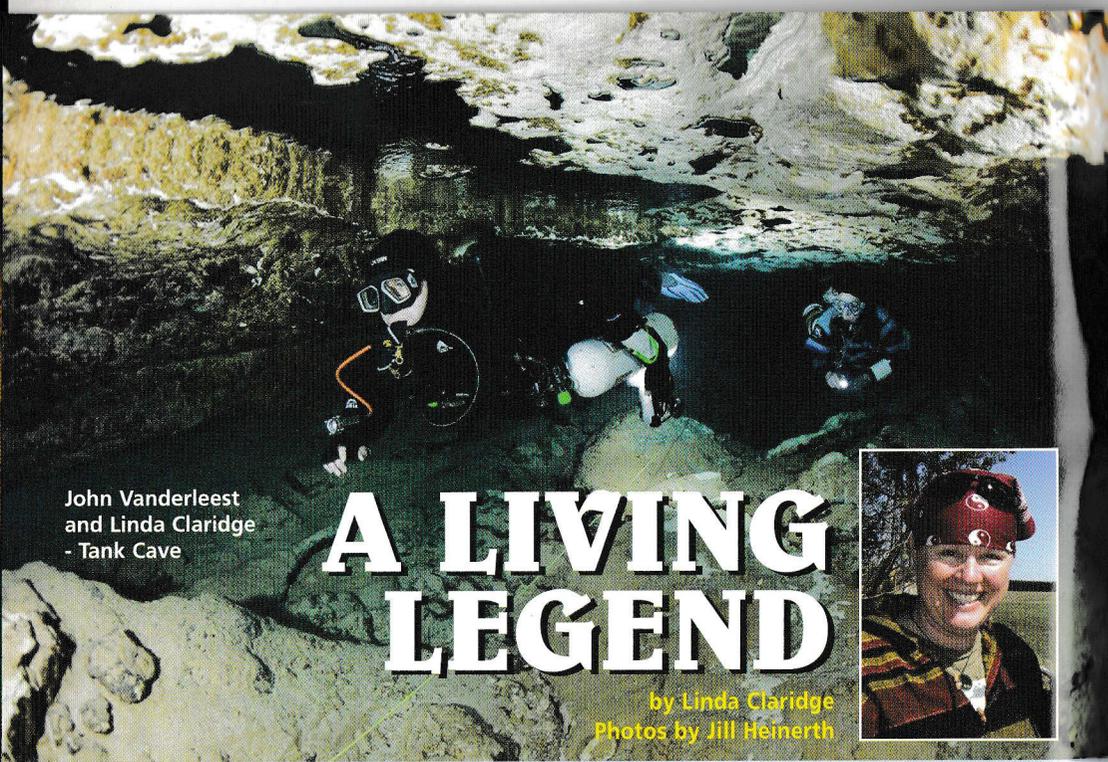
Next issue of Guidelines will be my last so I hope to go out with a bang and expect lots of good articles and photos. Thanks everyone.



Terri Allen, Publications and Records Director,  
Email: [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au)

## ~ ARTICLES FOR GUIDELINES ~

- Send articles & photos via post, or preferably by email to:  
Terri Allen, PO Box 6492, Melbourne 8008.
- Email to [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au) and [seapics@alphalink.com.au](mailto: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 200-300 ppi at 15cm wide, RGB files, and saved as Maximum Quality JPEG's, or Tiffs if mailing.



John Vanderleest and Linda Claridge - Tank Cave

# A LIVING LEGEND

by Linda Claridge  
Photos by Jill Heinerth



Jill Heinerth from North Florida USA, recently visited Mount Gambier after a very informative and interesting series of presentations at Oztek in Sydney.

Jill gave some great presentations on Diving the Iceberg Caves of the Antarctic, Making movies in caves and also conducted a workshop on Photography in Challenging environments.

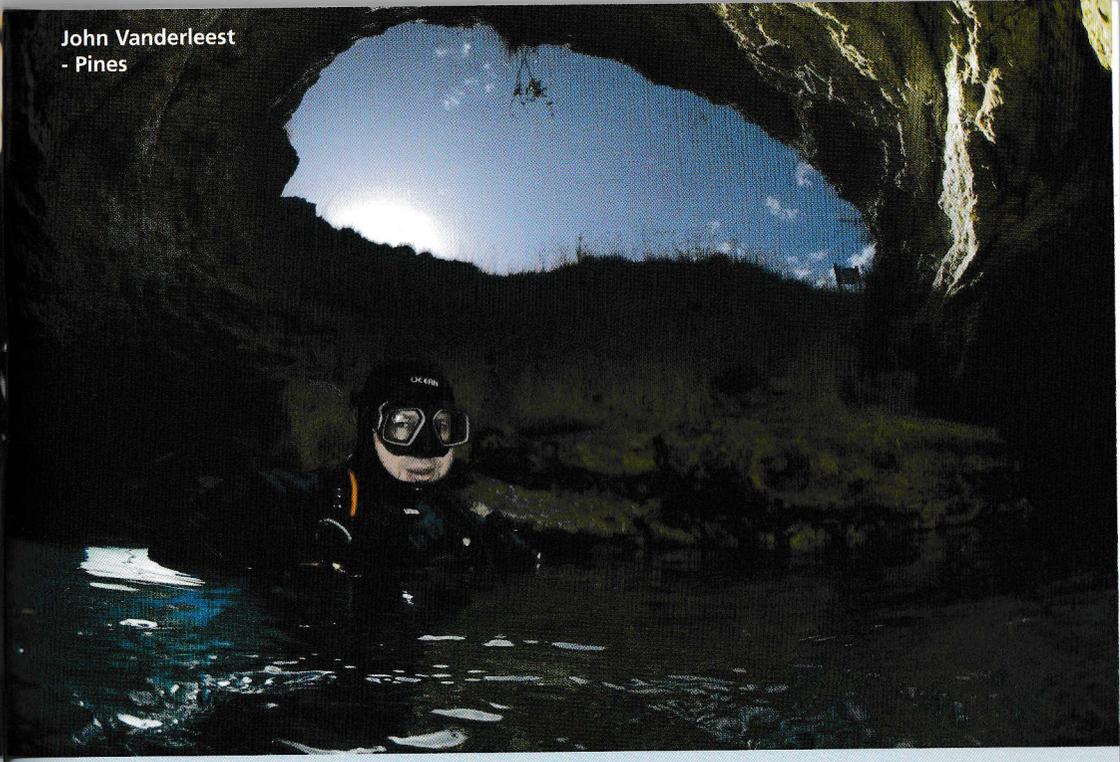
She has just released a new book written in conjunction with Bill Oigarden and reviewed recently in Guidelines – Cave Diving, Articles and Opinions, **A Comprehensive Guide To Cave Diving and Exploration.**

Jill's many accomplishments also include documentary writing, producing and filming, she has significantly contributed to the Wakulla 2 project using a Cis-Lunar rebreather and digital mapping technology. She also regularly contributes to many international magazines and websites. A renowned photographer (she is an Adobe Photoshop expert) and author as well as a leading Cave, Technical and Rebreather Instructor, she and her husband Robert Mc Clellan were hosted by John Vanderleest on a relaxing few days to SA.

Jill enjoyed a weekend of diving at Tank Cave, taking many photos of different areas of the cave. She enjoyed a dive in Pines and finished off the trip with a dip in The Shaft likening it to the Floridian dive site the Eagles Nest. Whilst Jill dived, Robert was shown the local area through to Portland by Noel Dillon.

*More of Jills amazing photos can be viewed at [www.IntoThePlanet.com](http://www.IntoThePlanet.com)*

John Vanderleest - Pines



## FOR SALE

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*John, Sharon and Erica.*

# A WEEKEND AT TOMMY GRAHAM'S

by Pippa Waterworth

*Driving back from doing our cave course in Mount Gambier we were already discussing a trip to the Nullabor. Certainly it has none of the luxuries of the Mount but it is only 13 hours drive and so can be done as a 'weekender'.*

Some months later, Dene and I were in Bunbury, picking up Pete, our dive buddy, ready for our second trip into the Nullabor. We drove through the night and arrived at Norseman, on the edge of the desert, around 10am. After still more driving we finally arrived at Cocklebidy at 4.30pm and made a recce in the cave to the water's edge.

The next day we were up early and had our gear loaded in by 11am; ready to start a day of cave diving.

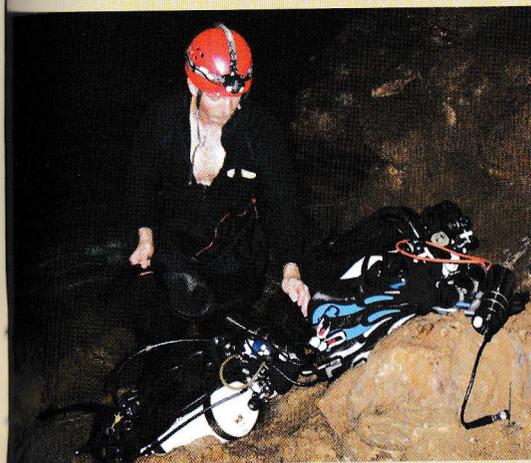
Tommy Graham's has an air chamber that separates the flooded section into halves. On the first day we went to the air chamber and that night discussed going over the rock pile and into the other part of the cave. The map showed the rock pile to be quite long, maybe 50m or so but we thought it didn't look that far. We could see a steep hill and assumed it went steeply down to the water in a similar



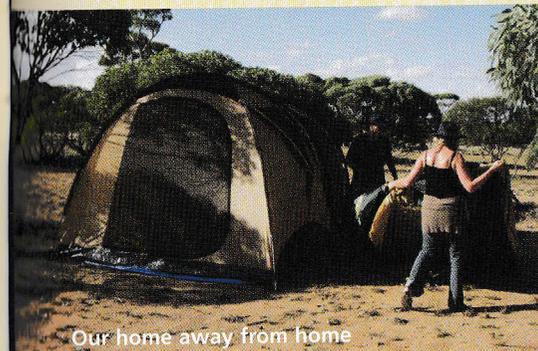
Moving the gear down to the water

fashion on the other side. We were aware that if we over breathed our regulators we couldn't sit down to catch our breath so we had to be pretty certain we could make it before attempting the trip. We decided to give it a go the next day. I was hoping to be able to make the crossing unassisted but thought through what might happen and tried to imagine myself dealing with the consequences of over exertion in that harsh environment.

The next day we swam back through the first sump, which is very pretty with interesting rock formations. Peter entered the air space first, as he would walk up the slope for a look. As we entered the little lake of the air chamber, we unclipped our stage cylinders to reduce our weight. Dene and I waited while Pete lifted himself out of the water, with his regulator in place, and headed up the very

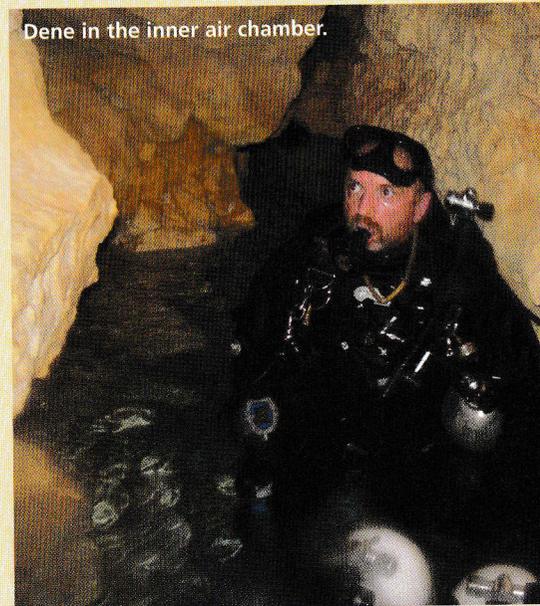


steep rock face. A few minutes later he was back, panting hard. It was obvious that the exertion and the effects of the carbon dioxide rich environment had made it a much harder task than we had imagined. Quickly we decided to leave the traverse to another trip. Pete lay in the water breathing off his regulator until his breathing and metabolism came under control. I was next in line and could see Peter was struggling. My mind flicked through the scenarios of what might happen next. It certainly brought home the reality of the ever present danger of being some distance from an easily breathable air source. We weren't carry oxygen, the conditions didn't warrant that sort of caution but this meant that if Pete couldn't get his CO2 levels under control there wasn't a great deal I could do to help. Afterwards, the event made me think about how I react under pressure and why we do things that can be life



Our home away from home

threatening. It wasn't a severe situation but it does make you think, and hope that the hours spent in the Swan River, practising drills and emergency procedures will be enough for that time when things go wrong.

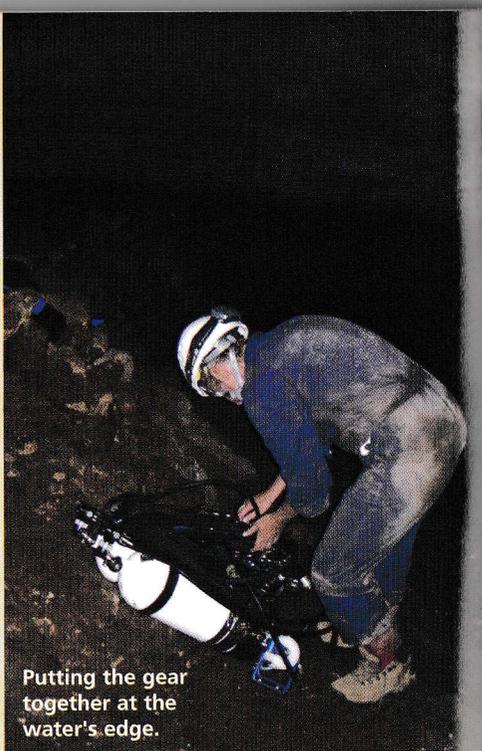


Dene in the inner air chamber.

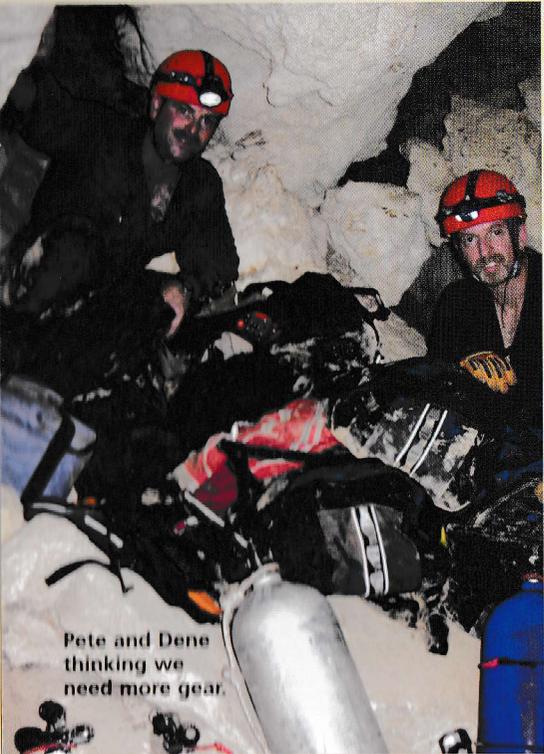
Once Pete was Ok, we swam back into the first chamber and explored things a bit more. I tied-off to the main line and we practised a jump to the Keyhole line. We went through the keyhole for a second time with me in the lead, as Pete reckoned the lead position was awesome. He was right; it was a buzz; swimming through the narrow opening that was only just wide enough for our twins and seeing it stretch out in front with no one to block the view (I am sure it won't seem as awesome when I have experienced more than three caves but for now it was great.) We returned to the main line but not before a quick look at the entrance to the deep room, and then it was back to the pool and the mouth of the dive. As we got out we talked about the next dive; it was decided that Dene and Pete would go into the deep room and I would sit on the water's edge and enjoy the surrounding.

"Once they surfaced, we packed up our gear and discussed the next trip, while making the gruelling trek back to the real world. We decided we should try side mounted 40ccft cylinders for the next attempt across the rock pile and that maybe it was time for a wet mate-able attachment for my heated vest. I feel the cold very badly and it is made worse by having a circulation disorder which means my hands and feet go numb. I wouldn't be cave diving if it wasn't for my husband finding the best heated vest on the market. Let me add that my second best piece of equipment is my dry gloves - Awesome. Sure, they make the line work harder but no more than being unable to feel your hands or distinguish the cord. I wouldn't be diving without the vest and the dry gloves.

Cave diving can be physically challenging; I try to combat this by a fitness regime of swimming, running and going to the gym, when possible. However, this never really makes up



Putting the gear together at the water's edge.



Pete and Dene thinking we need more gear.

for genetics, and I am forced to find other ways round the extreme physical strain that can be part of cave diving in the Nullarbor. The short length of our trips help, as it prevents the exhaustion created by many days of diving. I also only do 1 dive on the second day, so that I have the energy to pull my weight as we lug the gear to the surface. Even with this concession, by the time we are done I find I am exhausted beyond anything I usually feel.

I love a challenge, especially if it leaves me with aching muscles and dog tired. Good thing, because diving Tommy Graham's was exhausting. The sure thing is; we will be back but not until next year, as we have Murra and Weebubbie to visit next and Cocklebidy to return to before it is time for a second shot at the inner chamber of Tommy Graham's. We may not be breaking untrodden ground or even doing hard core dives but we are having heaps of fun and plan to do it as often as our life styles permit.

- CDAA AGM Members' Symposium -

# Exploration in Motion

Commencing 1pm on Saturday October 24th 2009

Followed by an annual dinner with a further presentation and film evening with Casey McKinlay.

by Steve Trewavas

We hope to see as many members as possible to attend this year's exciting CDAA conference. We are privileged to have secured the attendance of several extraordinary speakers;



## Casey McKinlay:

Casey McKinlay is a renowned aquatic explorer with more than 20 years of active research and discovery experience. Casey is currently responsible for directing operations for the Woodville Karst Plain Project (WKPP) which is the most active and successful cave diving exploratory project in the world with more than one hundred members. The WKPP recently received a Resolution from Florida Governor Crist and the Florida Cabinet recognizing the project's 20 year contribution towards underwater cave exploration and its work to protect Wakulla Springs. Casey and his diving partner Jarrod Jablonski hold several cave diving world records including the longest exploration dive into a flooded cave system at more than 5 miles requiring more than 28 hours underwater. Casey serves on the GUE Board of Directors, is a fellow of the Explorers Club and serves as an advisor to the Wakulla Springs Water Quality Working Group and Unit Management Planning Committee, promoting responsible use, study and protection relevant to water quality issues affecting Florida Springs. Casey along with Global Underwater Explorers recently completed 2 cave diving expeditions to mainland China at the invitation of the Chinese government and a third trip is currently planned for December, 2009.

Expertise: - Exploration, support, video, survey, decompression, rebreather and mixed gas logistics Extreme exposure exploration, planning and logistics 5-13 hours at 300ft/90m, 10-16 hours decompression, 15-30 hour run times. Casey's current position is Vice President and Chief Operating Officer for Halcyon Manufacturing. His duties include directing daily operations and strategic planning for domestic and worldwide product distribution.

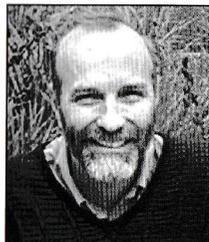


## Alan Warild:

Alan began caving at Wee Jasper in the NSW Southern Highlands in 1968, while he was still at school. He took to it right away. Alan had soon explored all the more challenging caves on the mainland and began exploring further afield, first to Tasmania with its deeper and more challenging caves, then on to New Zealand.

In 1976/7 Alan participated on his first trip to Mexico. Since then he has been exploring deep caves the world over and is Australia's most accomplished vertical caver. Alan has led Australian expeditions to Mexico from the mid-eighties to mid-nineties that culminated in passing the -1000 m deep 'landmark' depth for deep caves. In between these momentous expeditions, Alan spent summer caving seasons in Europe doing sporting descents - many of them solo including at the time, the World's deepest cave (Gouffre Jean-Bernard in France -1535 m). In 1998 Alan took part in the expedition that explored the first -1000 m deep cave in the Southern

Hemisphere, Muruk Cave in Papua New Guinea. In 2003 Alan assisted Russian cavers in exploring the latest World's deepest cave: Voronia Cave in Abkhazia. In 2004 in what Alan describes as a "lowest point" in his decorated career, he was one of the two people exploring at the bottom of the cave at over -1800 m. A year later Voronia passed -2000 m and of course Alan was back exploring that too. Recently Alan has returned to the Mexican caves discovering and exploring two new caves below -1000 m deep. He is still chasing the magically 2000m mark in Mexico and even though he has not yet got close, perhaps one day he will.



**John Webb:**

John is an Associate Professor at Latrobe University (Vic) where he is head of Environmental Geoscience.

He obtained his Honours (with a University Medal) and PhD degrees in earth sciences at Queensland University. John's interests are now centred on environmental geoscience, particularly aspects of groundwater contamination. John taught at Melbourne University Geology Department for 5 years before moving to La Trobe University in 1985. John has more than 100 publications to his name. He currently teaches the following units at Latrobe;

- Water geochemistry
- Land contamination
- Hydrogeology
- Hydrology
- Landscape and climate change
- Regolith
- Remote sensing
- Geographical Information Systems

John will talk on the geology and hydrology of Mount Gambier. An entertaining and topical talk not to be missed!

**So remember, Saturday October 24th 2009, commencing at 1pm.**

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PO Box 9286, Mount Gambler West, S.A. 5291



## CAVE DIVERS ASSOCIATION OF AUSTRALIA Inc.

### NOTICE OF 2009 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 Saturday October 24, 2009 at the Barn Palais Conference room, Mt Gambier, SA. 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, Site Director and Publications and Records 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 14, 2009.

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 Friday August 14, 2009. Items received after this date will not be accepted nor will any extensions to this date be granted.

Mail to: Business Director  
3 Harris Cres,  
Glen Waverley VIC 3150

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 October 19, 2009.

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 (#109) or by special mail out.

The ballot papers must reach the Returning Officer (Geoff Chambers #3484) no later than close of business, Monday October 19, 2009. Detailed voting information will be provided with the ballot papers. Questions may be directed to the Returning Officer c/o.

Helen Higgins, Business Director



# ONE FOR THE GIRLS!

by Tara Parkinson

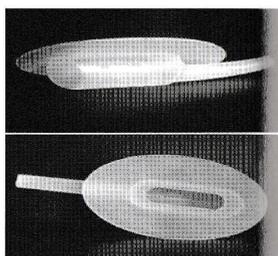
We have all heard the jokes and stories either over the dinner table or at a dive site. We have seen the pranks the guys play on each other with catheters and we have all heard the term "Plumb Up". Well as the old saying goes "If you can't beat them join them". No longer do we have to worry about dehydration or trying to find a private place to pee. Welcome to the age of the She-P!

Back in mid 2005 the inventors of the She-P, Heleen Graauw & Sander Jansson from the Netherlands, started their two year long process of developing the She-P. After much trial and error the She-P has evolved from the original latex design to the new "Blue" limited edition She-P now available.

The She-P has been described as looking a bit like a stingray and is made from soft silicone. Featuring a reservoir with output tube and fitted with a quick release con-

necter that connects to your standard pee valve hose. It has flexible wings that adhere to the skin with medical adhesive designed for prosthetic devices. After a few applications the She-P takes approximately 5 minutes to apply and is comfortable enough to wear all day. Once the She-P is fitted

correctly, climbing in and out of dive sites or travelling in your car will not dislodge the She-P. The quick release connector makes it very easy to get in and out of your dry suit in between dives, without removing your She-P. The She-P is easily removed by simply peel-



## SITE DIRECTOR'S REPORT

JUNE 2009.

It has been a very busy time during the last 3 months with Dr Harry and myself being appointed as our cave safety and rescue representatives to the ASF. Dr Harry will be attending a conference in New Zealand this August on our behalf.

I would like to thank Stuart Mc Gregor for his tireless work in the mapping and research role which he has just vacated. I would like to call for volunteers for this position so if you interested please contact me.

I would also like to set up the new position of Science officer to help us document the critters and formations found in our caves.

The Site Sub Committee has been very helpful in making suggestions towards our goals. We hope to be starting some projects and site upgrades shortly in line with these suggestions.

We are still getting too many people booking sites to dive and not turning up. With the sites that require advance bookings you must notify the access co-ordinators or persons so the site can be re booked again if possible. There has been some minor infractions regarding divers not sticking to the access agreements, turning up late on site, allowing unauthorised people onto sensitive sites. This jeopardises

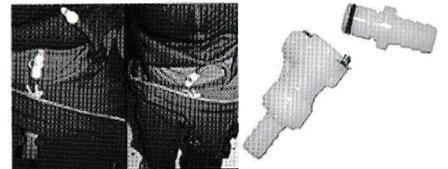
our access to sites and is not to be tolerated.

The long running Black Hole mapping project is back on the horizon with the initial weekend run a few weeks ago. Many thanks to those who have assisted so far and we hope to have a map available soon. More weekends will be needed to complete this project.

There have been a few changes to Sites since the last guidelines so here they are. With the lowering water table the water depth in Hann's Cave has dropped to below a meter so this site has been closed for diving as it is not possible to dive. Black Hole and 10 80 have now been dual rated. They now have a Cave and Sinkhole rating. We do have a need for some guides. If you're interested please contact me.

Dept for Environment and Heritage price increases are now occurring 1st April each year instead of 1 July. The new fees for Piccaninnie Ponds are \$26 for a single dive and \$60 for an Annual Permit. The Annual permit commences from the date the fee is paid and expires 30th June. Remember access is a privilege, not a right.

Safe Diving, Rob.



ing the She-P off at a 90 degree angle and combined with the citrus oil base wipes to remove any glue residue. The She-P is reusable for approximately 150 dives and compared to the mail catheter version works out cheaper per dive.

Maintenance of your She-P is very simple. After each dive clean your She-P with the Alkare wipes or an acetone base product to remove any residual glue. After cleaning your She-P disinfect both your She-P and pee valve and you are done.

The She-P web site has an excellent FAQ page with all the information required for application and where you can purchase your She-P here in Australia. There is also lots of photos and feedback from happy She-P divers.

I have had complete success with no leaks on any of my dives and wouldn't leave home without it. All I can say is every girl must have one!

Happy She-P diving. Tara.

## Bauer Junior Compressors

1 x Bauer Junior / 3.5 cfm,  
Built 2003 \$ 3,500.00

1 x Bauer Utilus / 3.5 cfm,  
\$4,000.00

1 x Bauer Capitano / 5 cfm  
Built 1983 \$4,500.00

*I have modified a number of Bauer Junior compressors, the Petrol motor and Electric motors can be changed over for home use in 2 minutes!*

- Clean Air Servicing
  - Scuba High Pressure Compressor Repairs & Maintenance
  - Bauer -Trained service Mechanic
- Certificate No. 121206/58  
Contact; **Peter Cronin** (Seaford, VIC)  
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0409 009 149 or 03 9776 9249

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  - Each bed is supplied with mattress cover sheet, pillow, doona & blanket. Please provide your own linen or linen is available for a small additional cost.
- Each bedroom is individually lockable allowing for a secure area for personal effects.
- Keys will access the front sliding door and your individual bedroom only.

*Rates from \$30 pp per night!*

- Spacious room with kitchenette (sink, refrigerator, two microwaves, crockery and cutlery, toaster & kettle), kitchen table, lounge area, TV & DVD/video.
- 2 individual toilets and a spacious bathroom with instant hot water shower & vanity.
- Barbeque, seating area and provisions for drying of diving equipment if required.

Clean air fills, Nitrox and Trimix is available from Blue Lake Diving nightly.

**Contact Suzanne anytime on 0427 884 729.**

# NATIONAL DIRECTORS REPORT

JUNE 2009

Trying to keep a low profile is not easy but that is what I have endeavoured to do over the past few months. I felt it was in the best interests of the Association, for me to take a back seat, so that other Directors could take the reins and therefore take responsibility.

Hopefully the members have been happy with the input from Steve Trewavas, Helen Higgins and Rob Brennan in their roles as Directors. Terri Allen the Publications and Records Director is stepping down this year after serving the Association in different capacities as Records Officer, Products Officer and as a Director for the last 8 years. The Association owes her a huge thank you for the work she has done. Terri will continue as a CDAA Instructor so I'm sure you will see her at different sites.

Two years ago at the CDAA AGM I was asked if a system or plan had been put in place to replace myself and other Directors, basically a mentoring program. This system was put in place and members with intentions were sought. At last years AGM I was asked the same question, which I confirmed and even asked who I had in mind, I could not answer that question at the time because I did not have the member's permission to divulge their intentions. As there is a call for nominations in this issue of Guidelines, it is time I let everyone know who I have been working with to fill the vacancies.

Steve Trewavas has done an outstanding job as the Standards Director. I know you will all agree. Steve has been working very closely with me and I recommend him for the position of National Director. Steve's dedication and loyalty to the Association is without question, his ideas a breath of fresh air and he has demonstrated political savvy when dealing with factions. The transition between Directorates will be smooth and easy because of our working relationship. Anyone who has been elected will tell you just how hard it is to inherit a role, without information passed on, as happens in some cases. For the position of Publications and Records I think Jason Caldwell is the best choice as he works closely with Terri the Director and it is almost a natural progression from Records Officer (which he now holds) to Director. This was how Terri came into her Directorate. Ian Taylor has expressed interest in becoming Standards Director should

Steve stand for National Director providing work commitments allow it. Rob Lee has also approached me about this position and feel that he could fill Steve's shoes if it was necessary.

In my position I am required to sit on many Committees formed by the Association and I have been keeping a close eye on the different ones that have been set up. Although my input may not be much, I have tried to pass on my knowledge regarding the history of the CDAA and political stances that have been made in the past in regards to the running of the Association and of course my opinions. Although a repeat of previous mistakes may not work out the same, it's best to be aware of the pitfalls. We currently have a lot of money in the bank, this should be invested wisely to maximise our return, thereby allowing the Association to keep fees down. The Finance Committee will present their ideas to the Directorate for approval, then there will be a vote by the Directors on the points raised as to whether they are accepted or not. Input from members would be welcomed, whether you are on the Committee or not. The Constitution Committee is meeting face to face shortly, to nut out a few ideas after their email correspondence was stopped. The Alignment Committee I know has hashed out some ideas and these are being worked on now. What we have seen is that a lot of each Committees work, clashes or overlaps other Committees work, so this will have to be sorted out.

The web site members list has witnessed some nasty posts so action has been taken against members, who have broken the standard, laid down by the Webmaster and Directors. It has brought about the establishment of another list that members can join and it only has notices to members that can't be replied to. So, if you want to keep up with what's happening, join this list now, no flaming, no silly comments, no time wasting in amongst the news.

Regards, Warrick McDonald,  
CDAA National Director



## CAVE DIVERS ASSOCIATION OF AUSTRALIA Inc. NOTICE OF SPECIAL RESOLUTION MEETING 2009

This notice is issued pursuant to Clause 3 (1) special resolution (b) of the Associations Incorporation Act 1985 SA and serves to advise members that a Special Resolution Meeting of the Cave Divers Association of Australia Inc. will be held on Saturday October 24, 2009 at the Barn Palais Conference room, Mt Gambier, SA. The Special Resolution Meeting will commence at 5:45pm and will conclude no later than 6:00pm.

This notice also serves to advise of the intention to propose the following resolution for voting from the floor, at that meeting. The resolution will be passed at the meeting by a majority of not less than three-quarters of such members of the Association as, being entitled to do so, vote in person at the meeting.

No other business can be transacted at this meeting.

### RESOLUTION

To replace Clause 36 (1) of the Constitution

36 (1) The Constitution of the Association can be amended by postal ballot with the results announced at the Annual General Meeting.

with

36 (1) The Constitution of the Association can be amended by postal ballot with the results announced at the Annual General Meeting. For an amendment to be passed, no less than 20% of eligible, paid up members of the Association must vote with no less than 51% of votes received in favour of the amendment.

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Contact: Damien Grigg ~ Ph: 03 9327 9322  
Mobile: 0432 277 917 ~ Email: Damien@drysuit.com.au

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



DIY supplies at reasonable costs  
(glues, seals, melco tape, ports)



Dependant on stock and suit

# 'Standards Direction'



I have a number of items to alert you to this issue of Guidelines. The CDAA Regulations have again been updated so please take the time to familiarize yourself with these. Amendments include a number of things which will impact upon your diving;

The Shaft Trimix regulations have been added to the Shaft access bulletin, which formalize what is required for Trimix diving at that site.

The Tank Cave schedule has been revised again and Rebreather access addressed. Please check your guide for the weekend is RB trained as this is a requirement prior to any RB diving at a guided site as per the Australian Standards. There has been recent debate about the use of Rebreather's in Tank as early as your first dive. I have amended the regulations to include the ability of a Rebreather diver to carry bailout from their first dive and so fix a slight loophole to permit this to occur.

After detailed debate on the email list I have formalized the need for Rebreather divers to undertake 15 hours minimum of non-overhead environment diving prior to taking a Rebreather inside a 'cave.' The prerequisite time can be accumulated in a sinkhole or cavern environment but is not restricted to freshwater or CDAA sites. Once completed, cave and penetration diving is then permitted. This policy runs a fine line between ignoring and over regulating Rebreather diving. I appreciate the input from numerous people during the setting of this policy and am open to further feedback on this issue.

We now have a Diver Propulsion Vehicle (DPV) policy as well. Concerns have been raised about the amount of damage these units are capable of inflicting on our cave environment and the dangers of inexperienced usage. Before entering an overhead environment a minimum of 10 hours on the unit is required. These dives can also be conducted in a sinkhole or cavern environment. Divers should be aware of and practiced at emergency procedures before entering a cave or penetration level overhead. Please refer to the policy for full details.

Another issue is our Stage tank marking. Please be

aware that we have a policy on this, which includes the prominent marking of a bottle with it's MOD. If this is not complied with, then technically there is a breach of CDAA standards and penalties may then be relevant. In short your stage and decompression bottles must be marked so that both you and a dive buddy can determine what mix is in your cylinder whilst conducting a dive. Dive Buddy's should be able to read a bottles MOD from 3 metres away. This is a safety issue and is considered best practice throughout the diving community.

Black Hole, Shaft and 1080 are now all dual rated as sinkhole and cave dives. Exact definitions and limits can now be found in the CDAA Regulations and this issue of Guidelines. This will enable divers to obtain more cave rated dives towards level progression within the CDAA. It also defines what were certainly dives in excess of the sinkhole definitions in the past.

I feel it is important to move the CDAA forward as a truly National Organisation and move out of our power base of Mt Gambier. To that end I am currently addressing Interstate sites. In Brisbane for example there are a number of deep quarry's which we aim to have accredited towards level progression. This will enable Queensland divers to count dives in these sites towards their cave course. By doing this in various regions I hope to encourage and expand our sport in Australia. If anyone has some local sites including dams, lakes or quarries that they think may give divers experience at dives equal to sinkhole diving please contact either myself or Rob Brennan (Site Director).

We are also looking at appointing a Science Officer. Please contact me for more details.

Lastly and unfortunately on a negative note, 2 members have been suspended for three months due to diving beyond their training limits in the Nullarbor caves. Please abide by your permits and stick to your training levels.

Kind regards, Steve Trewavas

# Down To BUSINESS

This quarter has been very busy again with lots of projects in the pipe works.

The five subcommittees were formed at the beginning of April and each has been diligently working towards preparing their respective reports. Extensions have been granted for the subcommittees with final reports due by the 3rd August with the exception of the Constitution subcommittee which has until later in the year. The final reports will form vital information which will be used to write the Business and Strategic Plan of the Association.

With the current state of the economy and through preliminary budgeting that the Finance Subcommittee have been working through, it has become apparent that the Association cannot continue to make the sort of profits that we have become used to seeing over the past few years. We are currently looking at what the ramifications are and what options we have in the financial management of the Association. A significant proportion of our profit has come from interest on our savings. With the large drop in interest rates we will see a significant drop in our profitability. Our funds have now been transferred into two new accounts in order to try and maximise our opportunities for interest.

In the last few months we have given members back a huge amount of money in the form of reduction of fees. Membership fees have been dropped by \$10. This will cost the Association approximately \$8000 per annum. Endorsement fees have been dropped. This will cost the Association \$500-\$1000 per annum. Also Tank Cave fees have been restructured with the dropping of the renewal fee. In the last 12 months numbers diving Tank Cave have decreased which has meant a significant shortfall in covering the lease fee. We hope the restructuring of the fees will encourage more bookings and we have started to see an increase. In order to cover the lease based on current fees we need all the slots filled which means 12 divers each fortnight. If we cannot achieve these numbers we will be forced to put the fees for Tank Cave up. So come on all you Penetration divers, do your bit to keep the fees down for all by booking out each weekend.

Over the last couple of months I have had meetings with staff from Lady Nelson, Englebrecht's Cave, the Bellum and Millicent Council. We would like to raise the profile of the CDAA in and around Mt Gambier

and to put something back into the communities which support our sport. In the future we will also look at areas outside of Mt Gambier such as the Nullarbor. What I have been speaking about is putting displays or updating existing displays at each of these venues. You will see a call for photos in this issue of Guidelines for us to use in these displays. Spend the next few months challenging yourselves for those extra special photos that could be selected for permanent display and send me your thumbnails to register your interest.

Finally, the AGM is fast approaching with only 4 months to go. This is a free event that is being run as a service to members. There will be workshops in the morning and Steve has lined up some excellent speakers for the afternoon. The keynote speaker is Casey McKinlay who is the project co-ordinator for WKPP. Also speaking will be Al Warild, author of Vertical and John Webb, Associate Professor of Environmental Geoscience at Latrobe University.

This year we will be at a new venue, the Barn Palais and for anyone that has ever had dinner at the Barn you know how exceptional the food and service is. We have negotiated a terrific 3 course meal for only \$40 per head. Our keynote speaker will also be presenting over dinner. The dinner will need to be pre-booked with me and payment deposited into the CDAA account. No bookings will be taken after the deadline. There will be more details in the next issue of Guidelines. Accommodation is available at the Barn and a discount will be offered to CDAA members. Please note that this is a long weekend, so book early to avoid disappointment.

Remember that along with the AGM announcement is also the call for nominations for three Director positions, National, Site & Publications and Records. Take time to carefully consider these roles and nominate for one of these if you think you have the skills, time and commitment to make a difference. The notice also serves to call for member motions and Amendments to the Constitution. Alternatively if you would like to raise any concerns for the Constitution Subcommittee to consider, please send these to me by the 31st July.

Regards, Helen Higgins.





# REBREATHER GAS MANAGEMENT VERSUS THE RULE OF THIRDS

by John Della Zuanna #236

The basic tenet for gas management in cave diving, is "The Rule of Thirds".

Of course this relies on careful pre-dive consideration of a number of factors which include:

- distance/depth/time of the dive
- the dive conditions, visibility, flow, restrictions
- diver & buddy breathing rates
- equipment and redundancy
- decompression obligations

Whilst the standard dive configuration assumes you dive with at least one buddy, a prudent diver would assume the worst case scenario of a buddy with a total gas failure with a need to share gas, or buddy separation and having to exit the cave from its furthest point, solo.

So, armed with all these factors, you apply The Rule of Thirds (or 4ths etc) and line up your cylinders...

## For the rebreather diver, all these factors still apply... but, "The Rule of Thirds"?

When two rebreather divers pair up, each diver should carry and/or stage their own gas and have enough to exit the cave from the furthest point without relying on any of the buddy's gas.

Generally, the rebreather dive time is based on the system's consumables. These are:

- the unit's scrubber time – usually 3-6 hrs. So, aim to surface with at least an hour of scrubber remaining.
- the unit's battery life – varies enormously between units, not withstanding that all units can operate in a "manual mode".
- the available oxygen – a diver's usage of oxygen is approx 1.25 to 2.0 lts/min regardless of depth thus easily calculated from the cylinder volume & pressure. With experience and using a 3lt onboard O2 cylinder, mine is approx 20 BAR/hour. Adding a factor to allow for an increase in O2 consumption at times of exertion or stress

during a dive, I multiply my O2 consumption by a factor of 1.5 and arrive at the 30 BAR/hour to use in my calculations.

When planning a runtime, I need to exit the dive with at least an hour of O2 still remaining, hence 30 BAR (or rounded up to say 50 BAR).

• the available diluent – diluent is only used in the descent phase of the dive to maintain loop volume. If the dive is shallow, little gas is used. On dives where depth keeps changing, more is used. At times, the diver may want to do a "diluent flush" or mask clear and these actions will also use diluent.

Diluent rules are harder to formulate because they vary with different dive profiles, but you should turn the dive at half + 30bar of your starting pressure.

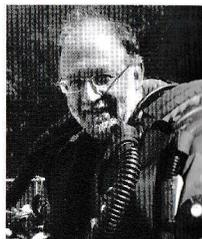
## So what happens when we lose the use of our rebreather?

The rebreather has a number of operational modes, so when there is a component failure there are options for the diver to go to before abandoning the unit. However, when the rebreather is no longer usable, the diver will need to use the alternate (bailout) gas supply.

The use of bailout cylinders is the most common form of backup gas used by the rebreather diver.

The amount and type of gas required will depend on the dive profile and decompression requirements and is calculated at 1.5 times the required gas for each gas leg. Interestingly, as the rebreather returns on a dive and approaches the entrance (exit?) of the cave, the bailout gas available increases dramatically! Furthermore, the buddy's (unused) bailout cylinders are also available and can be passed to each other, if required.

So, looking at two dive examples and run them with a rebreather and calculate the BAILOUT requirements.



## \*1. 65m dive in The Shaft for a Bottom Time of 25mins, Run Time 77mins

<b>Rebreather has:</b> Dil - Tx 18/30 Oxy – 2 lt/min	<b>Need:</b> Say 150 lts 77x2=154 lts	<b>Need:</b> Say 50 BAR Say 50 BAR	<b>Start with:</b> 3 lt Dil Cyl at 200 BAR 3 lt O2 Cyl at 200 BAR
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BAILOUT GAS IF REQ'D	MIN GAS REQ'D (lts)	+ ½ TO CREATE SAFETY	TOTAL GAS REQ'D (lts)	REQ'D CYLINDERS filled to 240 BAR
AIR	950 plus	500 for safety	Say 1500 lts	Single 7lt (1680 lts)
Nx 60	600 plus	300 for safety	Say 900 lts	Single 7lt
Pure O2	450 plus	250 for safety	Say 700 lts	Single 7lt

## \*2. 16m dive in Tank Cave to the end of G tunnel for a Total Run Time of 104mins.

<b>Rebreather:</b> Dil - Air Oxy – 2 lt/min	<b>Need:</b> Say 150 lts 104x2=208 lts	<b>Need:</b> Say 50 BAR Say 70 BAR	<b>Start with:</b> 3 lt Cyl at 200 BAR 3 lt Cyl at 200 BAR
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BAILOUT GAS IF REQ'D	MIN GAS REQ'D (lts)	+ ½ TO CREATE SAFETY	TOTAL GAS REQ'D (lts)	REQ'D CYLINDERS filled to 240 BAR
AIR 52x2.6x20	3000 plus	1500 for safety	Say 4500 lts	Two 10lts (4800 lts)

\* INDICATIVE PURPOSE ONLY. I have used Vplanner B/E with +3 conservatism with a RMV of 20.

I have also rounded up the gas requirements for ease of numbers.

PLEASE DO NOT USE THESE CALCULATIONS FOR YOUR DIVES but DO YOUR OWN!

A follow up article in next Guidelines will discuss diving with an OC Diver as well as the placement & usage of the bailout gas cylinders on a rebreather diver.

A more detailed article will also be available on the CDAA website.

## CALL FOR PHOTOS

The CDAA is currently looking at establishing permanent displays in and around Mt Gambier. These will include an update of the current photos in Lady Nelson, a photo display at Englebrecht's Cave and a photo display at the Bellum. For this purpose, I would like to call on members to submit to me photos taken in Mt Gambier that could be selected from and incorporated into these displays. The photos can include under water shots as well as around dive sites.

The Bellum display will include photos taken from sites in close proximity to the Bellum such as One Tree, Little Blue and Kilsby's. Acknowledgement of photos will be made.

Please send photos to me by the 31st August 2009.

Regards, Helen Higgins, Business Director.

## CDAA INSTRUCTORS

NAME	Deep Cavern	Cave	Penetr
<b>A.O.T.</b>			
APPS, Heike (CDAA 2776) BH 02 6249 9170 AH 02 6291 0566 E: heike.apps@ga.gov.au	Yes	Yes	Yes
<b>N.S.W.</b>			
GRILLS, Peter (CDAA 1780) AH 02 4955 4497 Mobile 0419 820 920 E: peter_grills@hotmail.com	Yes	Yes	Yes
<b>SOUTH AUSTRALIA</b>			
COSTELLO, Peter (CDAA 3378) Mob: 0417 494 771 soudiv@southernrdiving.com	Yes		
MARRIOTT, Max (CDAA 1268) Mob: 0428 897 897 E: dive69@internode.on.net	Yes	Yes	Yes
SELBACH, Steve (CDAA 3495) Phone: 0413 134 827 Email: steve.selbach@mac.com	Yes		
<b>VICTORIA</b>			
ALLEN, Terri (CDAA 3483) Mob: 0419 176 633 E: terri.allen@baker.edu.au	Yes	Yes	
BARCLAY, Gary (CDAA 1735) AH (03) 5565 8793 E: garinda@tpgi.com.au	Yes	Yes	Yes
BOWMAN, Jane (CDAA 1880) BH: (03) 9579 2600 E: info@abocean.com.au www.abocean.com.au	Yes	Yes	Yes
CLARIDGE, Linda (CDAA 2214) Mobile 0408 052 070 E: garinda@tpgi.com.au AH (03) 5565 8793	Yes	Yes	Yes

NAME	Deep Cavern	Cave	Penetr
<b>VICTORIA. cont.</b>			
DALLA-ZUANNA, John (CDAA 236) Penetration instructor Phone: 0407 887 060 Email: jdz@paintandcustom.com.au	Yes	Yes	Yes
HARDMAN, Lorraine (CDAA 2824) Mob: 0418 304 120 E: PALdiving@people.net.au	Yes		
HIGGINS, Andrew (CDAA 3329) Mobile: 0413 569164 E: ahiggins@optusnet.com.au	Yes	Yes	Yes
LESLIE, Paul (CDAA 3184) Phone: (03) 9879 2868 Email: info@melbournediving.com.au	Yes	Yes	
McDONALD, Warrick (CDAA 1882) BH: (03) 9579 2600 E: info@abocean.com.au Mobile 0408 374 112	Yes	Yes	Yes
MONACO, Rubens (CDAA 1731) BH 03 5984-1799 E: info@idcscuba.com.au Mobile: 0413-429-533	Yes	Yes	
TAYLOR, Ian (CDAA 3568) Phone: 0411 118 134 E: ian.taylor4@defence.gov.au	Yes	Yes	
<b>QUEENSLAND</b>			
FEATONBY, Tim (CDAA 3372) Mob: 0402 129 253 E: tim.featonby@defence.gov.au	Yes	Yes	
<b>WESTERN AUSTRALIA</b>			
PAYNTER, Geoff (CDAA 3784) Mob: 0407 445 112 E: gpaynter@geo.net.au	Yes		
<b>INSTRUCTOR ADVOCATE: ANDY HIGGINS.</b>			

## Constitution Subcommittee

The Constitution Subcommittee is currently working through the Constitution and addressing any inconsistencies, ambiguities or required changes. If you have any concerns or areas that you feel require addressing or any amendments that you would like the subcommittee to consider, could you please forward these to the Business Director, Helen Higgins by 31st July 2009.

## UP COMING COURSES

### DEEP CAVERN Courses

July 1 - 31, 2009 in Melbourne & Mt Gambier  
Midweek or weekend courses. Flexible schedule. 3 days in Mount Gambier.  
Instructor: Rubens MONACO 0413-429-533

July 11 - 14, 2009 in Mount Gambier SA  
4 Day full time course conducted entirely in Mount Gambier SA.  
Instructor: Linda CLARIDGE 03 - 5565 8793

July 20 - August 2, 2009 in Melbourne and Mt Gambier  
Includes 3 hour pool session, gear critique and theory in Melbourne and then 6 dives in Mount Gambier.  
Instructor: Terri ALLEN 0419 17 66 33. Email: info@oceandivers.com.au

Commencing 25th July 2009 running over two weekends with theory in the evenings.  
Geoff Paynter - Mob: 0407 445 112 Email: gpaynter@geo.net.au

August 1 - 30, 2009 in Melbourne & Mt Gambier  
Midweek or weekend courses. Flexible schedule. 3 days in Mount Gambier.  
Instructor: Rubens MONACO 0413-429-533

Commencing 15th August 2009 running over two weekends with theory in the evenings.  
Geoff Paynter - Mob: 0407 445 112 Email: gpaynter@geo.net.au

September 1 - 13, 2009 in Melbourne & Mt Gambier  
Theory and Pool in Melbourne. 6 Dives and climbing workshop conducted over 3 days in Mt Gambier.  
Instructor: Andrew HIGGINS 0413569164 Email: ahiggins@optusnet.com.au

### CAVE Courses

July 1 - 31, 2009 in Mt Gambier - Midweek or weekend courses. Flexible schedule. 3 days in Mt Gambier.  
Instructor: Rubens MONACO 0413-429-533

July 15 - 20, 2009 in Melbourne & Mt. Gambier - 3 day weekend, 6 Dives including 3 Cave Sites in Mt Gambier.  
Instructor: Paul Leslie (03) 9459 4111

July 25 - 27, 2009 in Mount Gambier SA. 3 day full time course conducted entirely in Mount Gambier  
Instructor: Linda Claridge 03 5565 8793

July 27 - August 3rd. Melbourne and Mt Gambier. Twins, Plates/Wings supplied.  
Instructor: Jane Bowman 03 9579 2600 or 0407 566 455. Email: info@oceandivers.com.au

August 1 - 30, 2009 in Mt Gambier - Midweek or weekend courses. Flexible schedule. 3 days in Mt Gambier.  
Instructor: Rubens MONACO 0413-429-533

### CDAA Penetration Courses

October 3 - 11, 2009 in Mt Gambier  
Run over October 3rd, 4th and 5th (public holiday in NSW, SA & ACT) and October 10th & 11th. Program run entirely at Mt Gambier. Please download the latest application form from the website and send to Jane Bowman, CDAA Penetration Program Co-Ordinator. Phone: 03 95792600

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

## TANK CAVE DATES... & A REMINDER...

A Tank Cave returning diver application form and the annual \$150 fee will be required before any bookings can be accepted.

July 11 - 12. Steve Trewavas	October 17 - 19 Ext Weekend. Richard Irdorfer	December 5 - 6. Gary Barclay
July 25 - 26. Linda Claridge	October 23 - 25. AGM Extended Weekend.	December 12 - 13. Chris Edwards
August 8 - 9. John Dalla-Zuanna	No Diving Saturday. Warrick McDonald	Jan. 1-3, 2010 New Years Day. Warrick McDonald
August 29 - 30. Chris Edwards	October 31 - Nov 3 Melbourne Cup Weekend.	January 23 - 24. Steve Trewavas
September 12 - 13. Andrew Higgins	Warrick McDonald	February 6 - 7. Linda Claridge
October 3 - 5 S.A. Labour Day. Grant Sommer	November 21 - 22. Rob Brennan	February 13 - 14. Rob Brennan

## CDAА SITE ACCESS - 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
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### MOUNT GAMBIER - SOUTH AUSTRALIA

#### DEH SITES

Ewens Ponds	Nil	DEH P.O. Box 1046 Mt Gambier 5290 (08) 8735 1177	Groups of 6 or more, phone/mail to Dept. for Environment & Heritage (DEH) Smaller groups, no need.  Fax: (08) 8735 1135
Gouldens	CN	DEH	<b>General Diving:</b> Divers to contact DEH and notify of date and site to be dived. Please make requests by phone or fax only.
2 Sisters	CN	P.O. Box 1046	Divers must have the correct CDAА diving endorsement for the site and carry current financial CDAА membership card. The diver must have signed an indemnity with DEH before access is permitted.
Fossil	C	Mt Gambier 5290 Ph: (08) 8735 1177 Fax: (08) 8735 1135	<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. Permit holders by phone or fax. Be aware of delicate vegetation. \$26/dive or annual Permit \$60. NOTE: Indemnity form to be completed with m'ship renewal & lasts same length as. M'ship.
Piccaninnie Ponds	S	as above	<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, 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 home - no dive!

#### FORESTRY SA SITES

Dave's Cave	C	Maximum 3 divers all weekends between May & November inclusive (check and update on CDAА 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 CDAА website)
Stinging Nettle Cave	P	Open every weekend max 3 divers per day undertaking 1 dive per day (check an update on CDAА website).
Iddlebiddy	P	Open every Saturday max 4 divers, 1 dive only (check an update on CDAА website)

Owner: Contact Forestry SA by email: forestrysa@forestry.sa.gov.au. Fax: (08) 8724 2885 or Phone: (08) 8724 2876 or book on-line via the CDAА website to arrange permit. Collect permits from the Forestry Office, RHS of driveway to Carter Holt, Jubilee Hwy, Mt Gambier.

#### IMPORTANT:

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

Kilsby's	S	Landowner leased to CDAА	<b>Access - Open Weekly.</b> Refer to CDAА website. Twin Tanks - Maximum depth of 40 metres on Air. Meet at gate of property at 8.55am or 12.55pm. Book on-line at www.cavedivers.com or contact Craig at kilsby@cavedivers.com.au No animals, visitors or mid-week diving allowed.
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## CDAА SITE ACCESS

SITE	LEVEL	OWNER	ACCESS DETAILS
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### MOUNT GAMBIER - SOUTH AUSTRALIA (continued)

#### BARNOOLUT SITES

Ten Eighty	S/C	Scotts Agencies P/L	Access: Grant Sommer ph. 0412 266 826. Mail - 147 Kenihans Road, Happy Valley, SA 5159 Download indemnity and book online at www.cavedivers.com.au. <b>DATES OPEN:</b>
Blacks Hole	S/C	Scotts Agencies P/L	
Shaft	S/C	Generally open one weekend a month. Trevor Ashby	For access dates refer to Guidelines or the CDAА webpage. 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 CDAА Regulations. Divers applying to dive in the Shaft for the first time must document dive experience with twin tanks Download form off website. Email: shaft@cavedivers.com.au (Linda Claridge, 0408 052 070)
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 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.
- East	C	Council	
- West	P	Lessee Ph: (08) 8723 2299	
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: site@cavedivers.com.au.
Tank Cave	P	Mr. DYCER	Access Manager: Noel Dillon. Email: noel.dillon@macquarie.com
Baker's Cave	C	Manager: Brad Dibble E: site@cavedivers.com.au	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

Cocklebiddy	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.
Murra El Elevyn	P/C		Phone: (08) 9083 2100 Fax: (08) 9071 3657.
Tommy Grahams	C		
Weebubbie	S/C	DPI	The Department for Planning and Infrastructure, Midland, State Land Services South East. PO Box 1575, Midland 6936. Contact Kim Allison, Email: kim.allison@dpi.wa.gov.au 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 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 <sub>2</sub> 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 Guidelines #68 or check CDAА website.
Burrinjuck	S/C/P		This is a tri rated site. Please see details in issue No. 73. There are no specific access arrangements.



# Easter Penetration program 2009

Rob Lee

**This program has been put off about three times for us, either Darren was busy or I was and we probably weren't ready anyway, but here we are and it has to happen.**

Arriving late on Tuesday night we hit the sack and got up early for practice Wednesday.

Peter Streit was there and we were told that Yochen wouldn't be joining us as the Coffs Harbor floods had made him fly home to repair the damage. We had a coffee and had a few laughs before heading to Pines where different theories, strategies and systems were argued (sorry discussed) before the dive but the only thing I got out of it was that my dry suit zip was stuffed and I was freezing!! A tube of aqua seal is your best friend at this stage even if it means not getting out of the suit until the replacement arrives... so my days of practice were filled with hauling tanks to the lake for those who had DRY suits. Oh well I should have it all in one stock by now anyway.

The course started with Peter Buzzacott, Peter Streit, Darren Crockett, Liam, Freddy, Eugene and myself with instructors Jane Bowman and Andy Higgins.

While I'd done hundreds of dives with Darren and a course with Peter S; Freddy and Eugene dived with each other there were a lot of questions to be answered about configurations and experiences etc within the group. The theory was as long as the dives? Man, these days are never going to end! By the second day we'd all blown it.

The course has changed as many of you may be aware and now you get a warm up stress test. Thank god for that.

Darren and I were teamed up for the test, and I went in so cocky I dropped the reg..... that's right I dropped the reg. Someone shoved a reg in Darren's mouth, he spat it out, they put it in again he spat it out. We then got dragged by the ears and spanked.

The fill room at just a bed lodge was the de-brief room. We re-named it the "slaughter house" as we looked for a plastic sheet and maybe some saw dust on the ground. Needless to say I was told that they were both very disappointed in me and I need to pull my finger out, which was deserved but demoralizing. Every one in the course got a kicking even those who made it out. One of the comments was "that was the poorest demonstration I've ever seen". But at least they got out un-like myself.

The next day was the last chance, Liam Allan and I teamed up, we swam out, jump here, turn there, you know the drill, at the end of the line the instructors hit us, this time we (in my opinion) were like a fine tuned machine, not a breath was missed as I held on to the Liam Allan express, then out of the blue I was told to hold on to the reg, what?? oh yeh

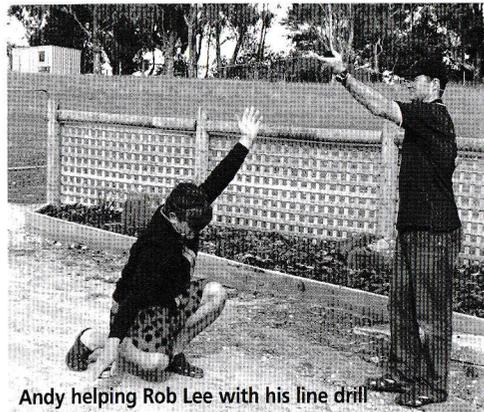
the restriction, shit that was quick! On the long hose, through the restriction, pick up a stage and then exit.

On surfacing congratulations was given to Liam and I was back in teaming up with Pete Buzzacott. I think they really wanted to test me! Pete's a good diver with a great attitude so I had no qualms diving with him, not sure how he felt about me after yesterday. As we ventured into the darkness we made it to the end of the line I looked left towards the instructor to ask "haven't you forgotten something?" when they got me, bugger I wasn't ready. I got to Pete and started our way out. At the restriction we got a little messy with light cables and long hose but sorted that out, picked up the stage and exited. While I new I'd got through I needed to hear it for myself, "are you happier with that result? You should be, congratulations your through." yahoo...

Darren got teamed up with a Eugene and proved that when he's in control it all goes to plan, showing that yesterday's mishap was no fault of his.

Peter Streit, for those who haven't had the pleasure, is a great bloke to have in the house for a week. His humor is drier than a hobbyhorses stool sample, and had us in laughter for hours. Pete teamed up with Freddy and the odd couple followed the dive plan and came out victorious.

We arrived at Pines on Sunday morning and the excitement was a buzz. You know, there is a whole sexier side to this place than we'd seen before, it's just



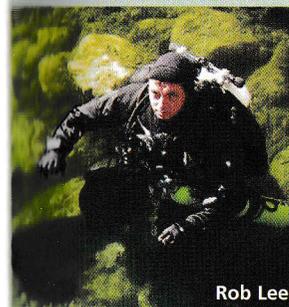
Andy helping Rob Lee with his line drill

a shame that we didn't get to see it. Blindfold exit was the plan for here, and I felt a bit awkward as I swam past the topsighn. I have no idea where we were when Darren's light signaled a failure. I turned with my primary reg deployed and got blacked out! Oh that's the problem. At this point Daren had no idea where I was, as he was also blacked out. I found the line and made my way back to him, the signal was clear "lets get out of here!" with the added task of a eighteen meter depth change we rattled our way from the un-familiar tunnel. As we came across our stage bottles we realized where we were. From there we were home and hosed, well so I thought, at a blacked out deco stop a simulated valve failure broke the silence. For a second I thought, "Who cares, I'm on my stage bottle and six meters from the lake." Then I remembered that at "all times you are being critiqued" so I completed another valve drill and fixed the issue.

### Idlebiddy cave, oh my god!

The access to this place is an epic adventure for us beginners but wow it's all worth it. The dive team comprised of Liam Allan, Darren Crockett and myself and it was "like a movie" the tunnel is huge and with three 18w HID's the colours are amazing. That dive was just awesome. I'm still at a loss for words.

The final days dive was Englebreets West. My team was Peter B and Eugene. On the way in, before the rock pile Peter had a simulated valve failure, we fixed that kept going. We hadn't made it to the



Rob Lee



Right: Instructors Andy Higgins and Jane Bowman.



# Deep holes in the ground that will blow your mind: Unravelling the mysteries of the Bahamas.

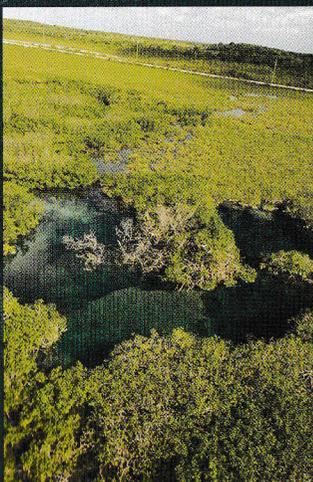
Agnes Milowka:

*As we flew over Abaco I asked the pilot 'So what does everyone think of when they think of the Bahamas?'... 'Sex on the beach' he said without any hesitation I can only assume he meant the cocktail.*

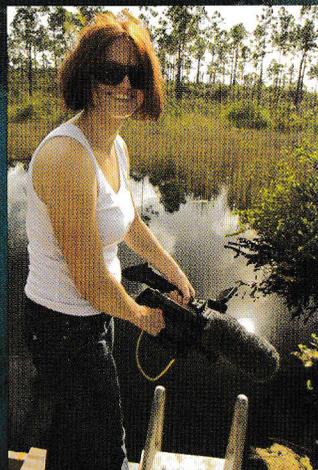
*Either way it all sounded rather promising!*

I've been getting spoiled rotten over the past year living and diving in Florida's cave country and one would think that I'd be rather hard to please after this experience. Yet the Bahamas did more than just please me; they titillated me, intrigued me and eventually left me breathless.

While everyone is always going on about the caves in Mexico, little did I know that not far off the Floridian coast, nothing short of a secret treasure exists... somehow the Bahamas had gone under my radar.



One of the many blue holes in the Bahamas.



Agnes Milowka camera in hand (photo: Wes Skiles)

But alas, we weren't heading to the Bahamas to drink pina colodas and swing around in a hammock, we were on an expedition led by PhD Kenny Broad, to unravel some of the mysteries that lay within the Blue Holes of Abaco. Joining the team were everyone from palaeontologists, biologist to microbiologist and climatologist. Jenn Macalady, PhD Tom Iliffe, PhD Richard Franz, PhD Gary Morgan and Tom Morris... the list of scientists reads rather like the who's who of the cave scientific research world. What's more Wes Skiles and the Karst Production crew were there to document the goings on of the trip and immortalize the work of the divers and the discoveries of the scientists with film and still photography. I was in Ag heaven as Wes kindly allowed me to play with the big boys toys. The Nikon D-700 was amazing and produced incredible images; it is fair to say that it kicks ass all over my little point-and-shoot and that I now desperately want one.

We didn't come to the Bahamas just for the sake of blowing bubbles, we came to dive for a purpose... and this experience more than anything before brought home the message that caves are more than just a playground for divers. All too often a cave is seen as nothing more than a hole in the ground that divers can penetrate and then sit around bragging to their mates about how far they got. Cave divers, generally speaking, float around enjoying themselves and have little appreciation for what they are looking at beyond the aesthetically pleasing beauty that surrounds them. Scientists, given the same opportunities as us to see what is down there, would have kittens of excitement.

Despite the caves being right there below our feet, we know so little about them. Our understanding of karst development, hydrology and cave biology is still in its infancy. To this day very few scientists are cave divers and as such a synergy between cave divers and scientists is essential. Thus we got the opportunity to get wet and check out the caves, and in between going 'ooohhh...

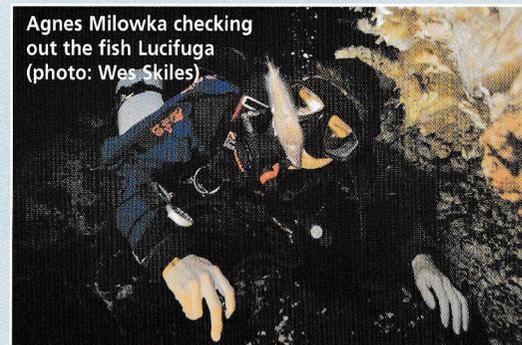
ahhh' we brought back valuable data that has huge potential for the work of the scientists. I found it incredibly rewarding to combine doing something I love with a firm scientific purpose.

One of the best dives of the project, and possibly one of the best dives I have ever done, was a recovery of the now extinct tortoise shell and crocodile skull. Both were a cool 3000 years old and were recovered in faultless condition - perfectly intact! This was possible because of the special environment within Sawmill Sink and the thick layer of sulphur that blankets the hole at about 9m.

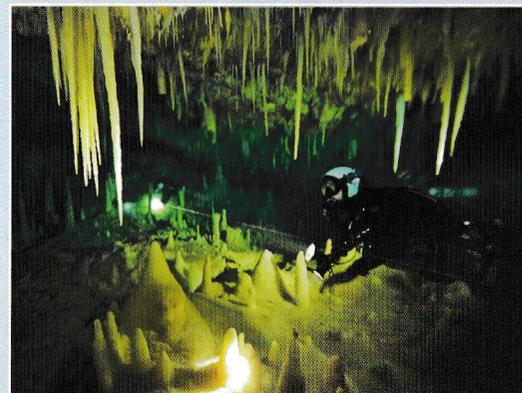
A number of things happen as you swim into it. First watching a diver go in is like watching a magic trick. The diver suddenly disappears and leaves in their wake swirls akin to fog. As you enter the layer yourself all vision comes to a screeching halt, a total wipe out in visibility. All perception of where you are disappears... a perfect confusion of the senses. Suddenly you smell it! Yep you actually smell it underwater and it is almost as unpleasant as taking a deep whiff of undergarments after a few days diving. What actually happens is that your body absorbs this stuff, it permeates through your skin... makes me feel kinda dirty just thinking about it. Even after you pop out into clear dark water beneath the sulphur layer the smell stays with you.

The visuals are spectacular, the experience is uncanny even if it does smell a little off, but what is really fascinating is the fact that this sulphur layer keeps the water below it in an anaerobic state. That means no oxygen is getting through that thick layer of sulphur and into the bowels of the cave. This got our microbiologist Jenn Macalady incredibly excited. The environment simulates that of the Earth's surface many millions of years ago, which means that bacteria that are long extinct elsewhere are thriving here in Sawmill Sink. By studying them we can begin to grasp what life on earth used to be like.

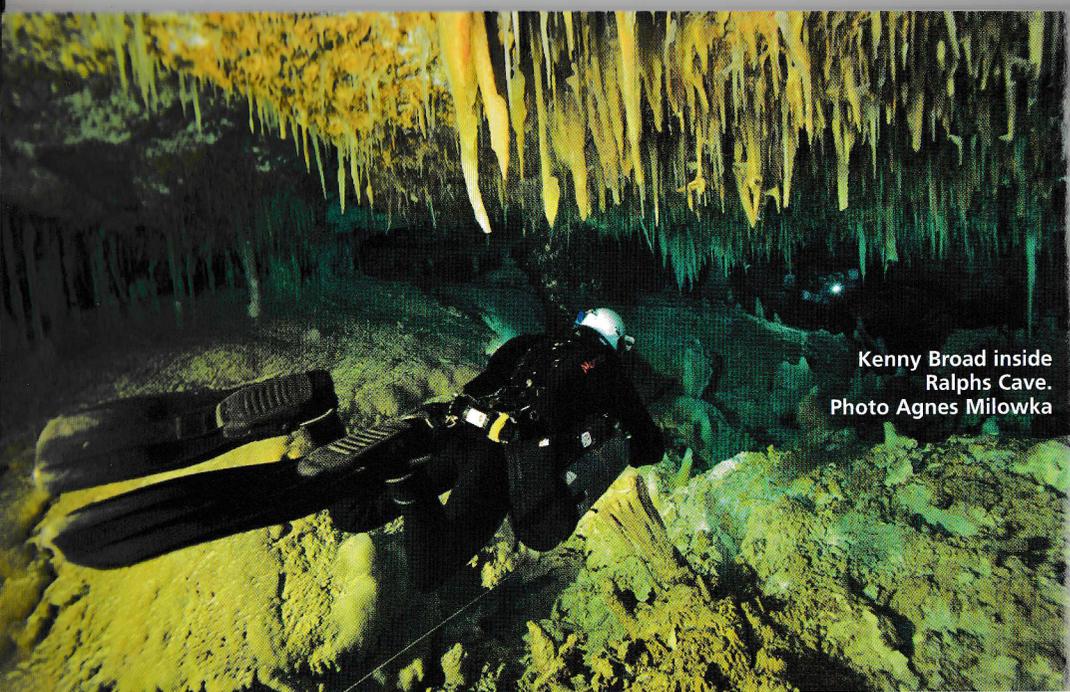
The sulphur layer and lack of oxygen have further con-



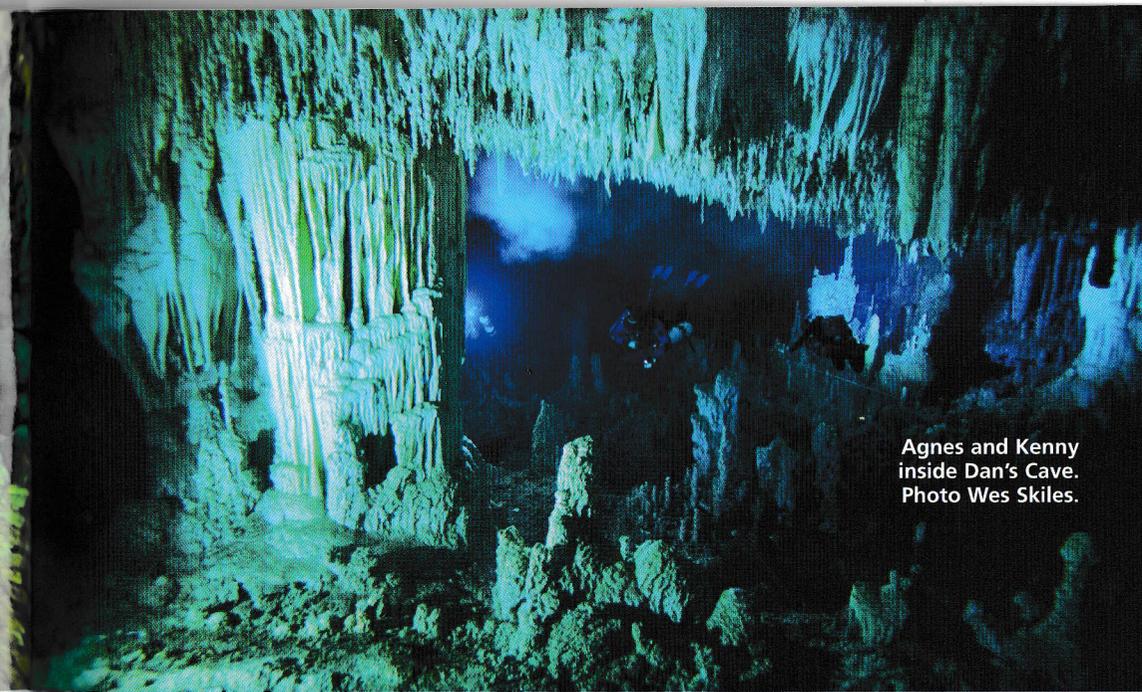
Agnes Milowka checking out the fish *Lucifuga* (photo: Wes Skiles)



Kenny Broad inside Ralphs cave (photo: Agnes Milowka)



Kenny Broad inside  
Ralphs Cave.  
Photo Agnes Milowka



Agnes and Kenny  
inside Dan's Cave.  
Photo Wes Skiles.

sequences. Anything that has fallen into the sink throughout its existence remains perfectly preserved, especially as it slowly gets buried in the muck, commonly referred to as peat. It was incredible to see a tortoise shell that could very well have fallen in only yesterday, were it not for the fact that they have been extinct on Abaco for hundreds of years. Each individual piece of the shell was in place and many of the extraneous bones were still there.

The dive itself was gnarly as hell, a whole team of divers trying to light up the recovery sequence. The silt was raining down on us from the slope, percolation was coming down on us from the ceiling, not to mention the mess that comes with excavation. The feeling of accomplishment when the remains made it safely into the container was great. Then there was the pure thrill when the boxes and the remains made it to the surface and into the arms of the eager and ever waiting scientists. Their eyes lit up the moment they saw the remains - they had seen nothing quite like this specimen. The excitement of Dick Franz and Gary Morgan was thrilling to watch as the possibilities for the knowledge gained from this recovery are infinite. Capturing this moment on camera meant that many others will be able to experience the joy they felt.

There is more inside caves than bones of long dead animals however. Working beside a cave animal lover like Tom Iliffe and watching the man do his thing has opened my eyes to new possibilities. Each of these caves is an intricate, unique and self contained eco system. I enjoy watching crawlies and catfish in the caves, but beyond the obvious are a whole bunch of much smaller

little dudes. The naked eye of your typical cave diver is not trained to spot these little guys, but Tom Iliffe has been doing this for over 30 years and in this time has found over 300 new species. Now I'm no scientist, but finding one new species is typically a lifetime achievement for a biologist. So the doctor has been most efficient and his track record is rather impressive. If nothing else this demonstrates rather neatly that the underground world really is the final frontier and we have much to learn and discover.

The animals that Tom Iliffe does find can be appreciated in the water column if you have a good set of eyes. As apparently I don't, I had to wait to see the intricate detail and beauty of the animals until they were in a vial and under the microscope. They were translucent, colourful, fragile and captivating in their moves and sheer beauty. Remipedes and worms... animals so wild looking and yet so cute I wanted to keep them as pets. The wildest human imagination could not conceive these creatures... they must have inspired so many science fiction writers. So keep your eyes open and peeled straight into the water column, you never know, that little white dot might be an incredible creature rather than just a speck of silt.

While I don't pretend to understand the nuances of the work the scientist were doing, I can certainly appreciate it. The data the team collected will help improve knowledge and understanding of caves in the Bahamas and around the world. More knowledge can only increase the importance these cave environments and eco systems have. Perhaps this can have a positive influ-

ence on how folks, cave divers and non-divers alike, perceive what is just below the surface of the earth.

Yet, at the end of the day I am a cave diver and as far as I'm concerned the pursuit of extraordinary beauty is a perfectly legitimate quest. The team, spearheaded by Brian Kakuk, headed to a couple of beautiful caves called Dan's and Ralph's to photograph and film them. Dan's was my first opportunity to see speleothems underwater, and oh boy, did I get spoiled.

I was blown away to put it mildly. The sheer amount of decoration was incredible; there was room after room of decorations. Yet each room was very different and had a wildly distinct feel. My favourite was called the Alleyway, where I got to swim through a passageway with tall stalactites and stalagmites on either side of me, it felt like I was swimming through a giant crystal forest. The whole scene was illuminated from all sides by the ever powerful Dive Rite 50W lights, meaning I could see everything - amazing!

Further Dan's, like all the caves, has a number of life forms. I do believe I might have clapped my hands in excitement when I saw my very first Lucifuga. It is a fish, with a face only a mother could love that screams Jurassic. It is the oldest and the only truly cave adapted fish in the world. This little creature is just wickedly cool.

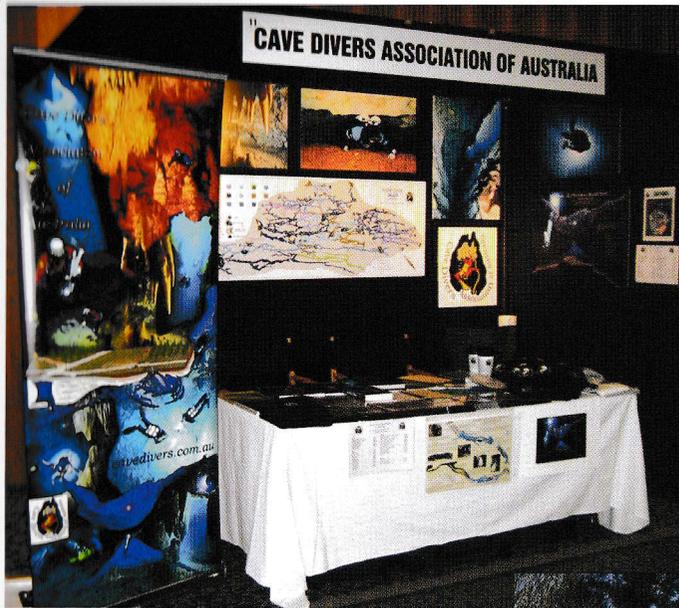
I thought Dan's was the best cave in the world until I dove Ralph's. This cave defies description, it is probably the prettiest and most special cave on the planet. I could happily dive this cave every day for the rest of my life and not get bored with it. After you dive it, you seriously consider never setting foot inside a cave again, or perhaps simply lying down to die, because nothing will ever beat

this experience. Every type of crystal decoration imaginable is present in this cave; intricate rose like formations, exquisite crystals, stalactites piled on so thick not even a flathead could swim through them without making contact. Then there were the soda straws with little diamond shaped crystals at the tips. They say diamonds are forever, well, this cave has captured my heart big time. I felt as fuzzy as the halocline that surrounded us as we explored and photographed the cave.

Brian Kakuk runs Bahamas Underground ([www.bahamasunderground.com](http://www.bahamasunderground.com)) and he was our illustrious guide throughout the trip. Not only is this man a genuine explorer with extensive knowledge of the local area, he is also a fabulous host and perhaps most importantly a top bloke. He deserves a medal for looking after our lot, taking us to orgasm-inducing caves... and for the late nights he stayed up filling all our tanks. A big thank you must also go to Nancy Albury and the Friends of the Environment; without their support, patience and hospitality we would have been completely lost.

So, when I think of the Bahamas, I think of the most incredible caves in the world; a place where each cave is different, unique and startling. I think of fascinating scientific work and of all the questions the scientists are attempting to solve. I think of fossils, bones and the oldest living fish in the world. I think of a beautiful rugged coastline. I think of sunsets and the sweet taste of a well deserved beer at the end of the day. But I do not think of sex on the beach. Somehow, to my great dismay, the Bahamas stereotype managed to elude me. Still, one can't have everything... and there is always next time.

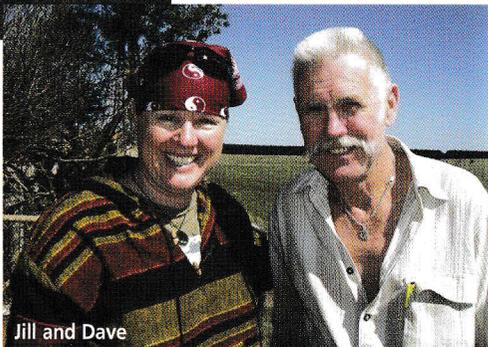
# ~ GUIDELINES GALLERY ~



Helen and Tara  
OzTek 2009, CDA Booth.

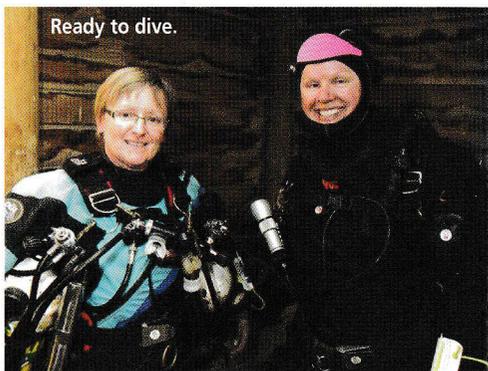


Florida, by Dean Chamberlain



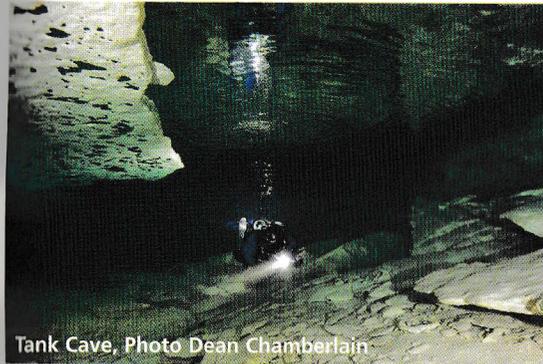
Jill and Dave

Shots of Jill Heinerth on her visit to Mt Gambier  
Photos by Gary Barclay

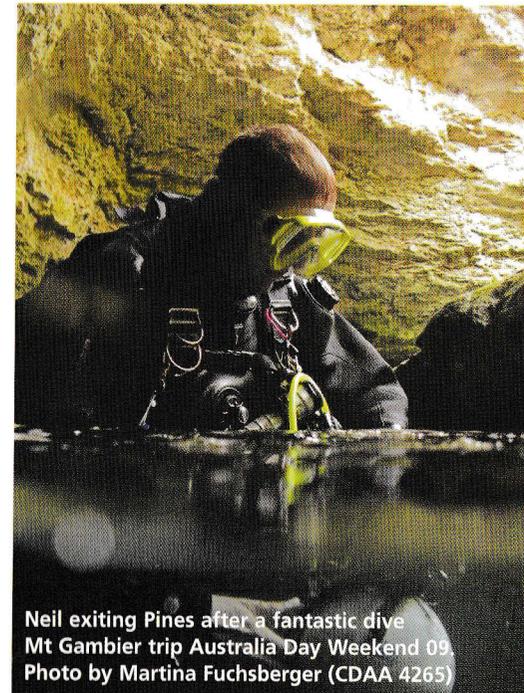


Ready to dive.

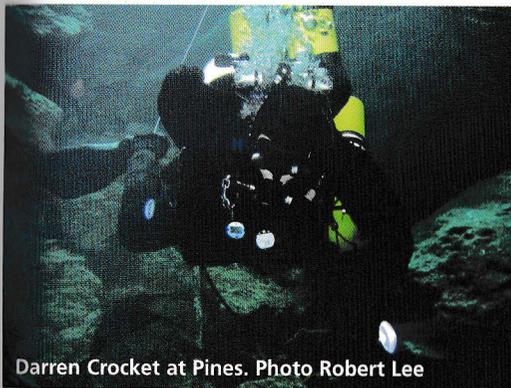
# ~ GUIDELINES GALLERY ~



Tank Cave, Photo Dean Chamberlain

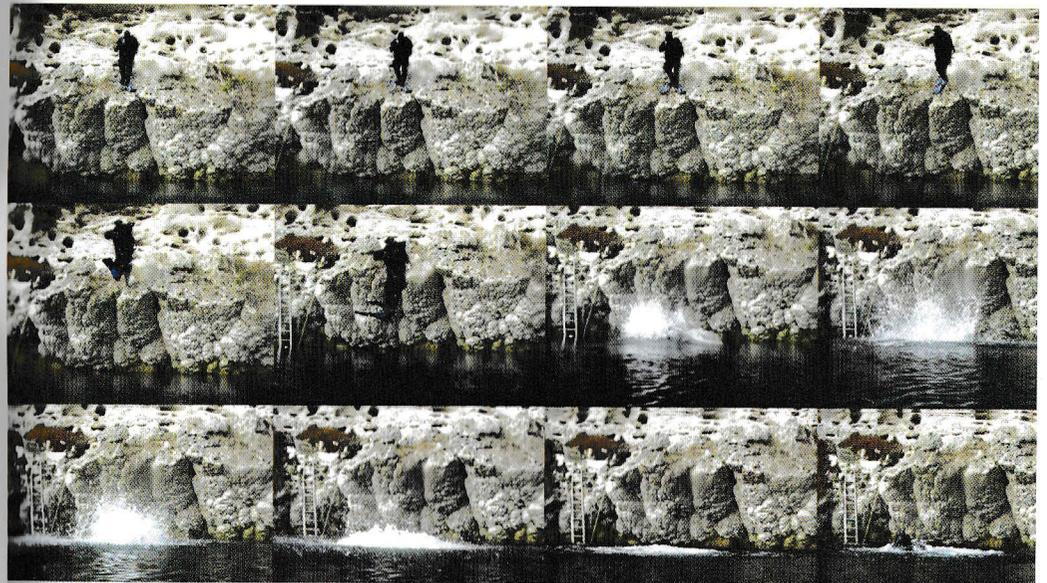


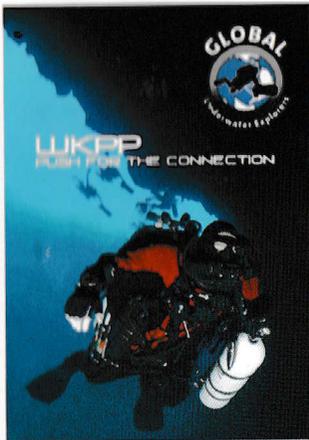
Neil exiting Pines after a fantastic dive  
Mt Gambier trip Australia Day Weekend 09  
Photo by Martina Fuchsberger (CDA 4265)



Darren Crocket at Pines. Photo Robert Lee

Below: Dene Buckley entering the water at Blacks.  
Photo Peter Buzzacott





## WKPP Push for the Connection \$35

A Global Underwater  
Explorers Production.

# Product of the Month

Two decades of ground breaking exploration and research within the mammoth cave systems of North Florida stall during one of the longest periods of dark water on record. However, during a period of clear water conditions, explorers from GUE's Woodville Karst Plain Project resolve to establish a physical 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 and Leon Sinks cave system. A range of nearly 30 hour immersions while exploring at 90m lead WKPP explorers to a series of breakthrough discoveries, resulting in one of the most celebrated connections in cave diving history. Starring Casey McKinlay, coming to Australia in October. Come and hear him speak at the AGM Symposium at Mt Gambier and purchase your signed copy.

## CDAA PRODUCTS

### NEW DVDs!

#### AXIS MUNDI \$35

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 and deeper into the inner jungles of the Yucatan in search of unexplored cenotes...the windows that reveal the ancient Maya. Axis Mundi follows the team as they journey relentlessly into the uncharted subterranean chambers... discovering giant underwater passages, ancient relics, and the skeletal remains of tragedy and human sacrifice.

#### WKPP - Push for the Connection \$35.

See review and the Product of the Month description ABOVE.

#### NEW TANK CAVE MAPS

New Laminated Tank Cave Maps are now available to order via the online store. \$118

#### POLAR FLEECE VESTS

Are you looking for something extra warm to wear under your dry suit now it's starting to get cold? The online store has plenty of Vests in both Blue & Black in all sizes. Price \$50

To view or order any of these CDAA products, please visit the online store or complete the mail order form in Guidelines. Happy Diving, Tara Parkinson, CDAA Products Officer.

NEWS

# HOLLIS® Winter Sale 20% OFF Selected Hollis Packages Only while stocks last!



Normal RRP \$1,472.80

## HTS / X-Series packages

#### Package Includes:

- HTS Harness
- 37 or 55 X-Series Wing
- Stabiliser Plates (Pair)
- Twin Band & Bolt Kit
- FREE Hollis Team T-Shirt

#### HTS

- Streamlined modular harness system with comfort back pad and lumbar support
- Comes standard w/ adjustable Velcro™ cummerbund (removable)
- Comes standard w/ crotch strap – 5.1cm webbing with scooter ring (removable)

#### X Series (Cave Cut)

- 1000 denier Cordura™ w/ PU lamination outer shell
- 15mm urethane internal bladder
- Centrally located elbow to avoid tank valve/regulator interference
- Available in either 37lb / 17kg or 55lb / 25kg lift bladder

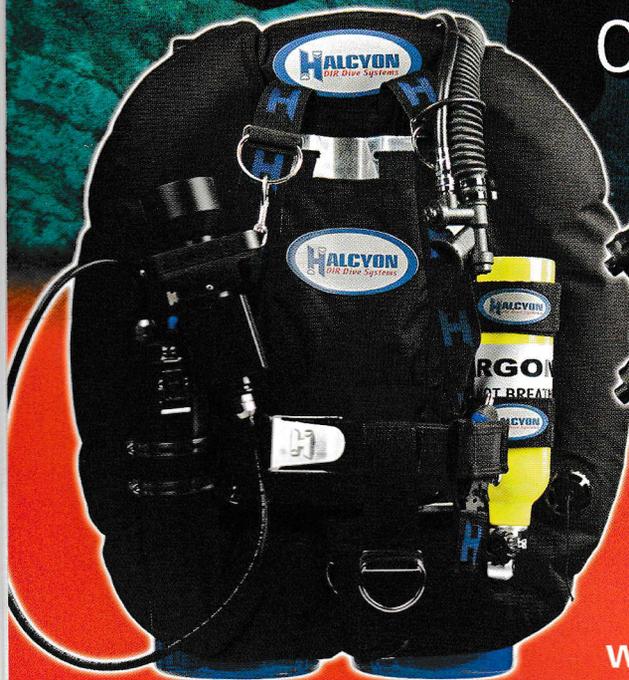
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