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#### CAVE DIVERS ASSOCIATION OF AUSTRALIA

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Cover: Norway Caves

Image by: Sami Paakkarinen

#### CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

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GUIDELINES is a newsletter of the Cave Divers Association of Australia. All articles for the following issue are to be sent to the Publications Director, Email: publications@cavedivers.com.au

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#### **CDAA INSURANCE**

Policy Type: Combined Liability Insurance Insurer: Liberty International Underwriters ABN: 61 086 083 605 Level 27, 1 Macquarie Place, Sydney NSW 2000 Name Insured: Cave Divers Association of Australia Public Liability \$10,000,000 any one claim. Expiry: 30 September 2014.

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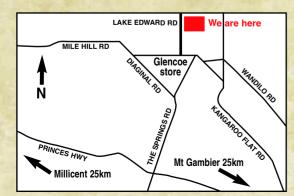
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Web: aquifertec.com.au



Welcome to the September 2014 issue of Guidelines.

The Members' Symposium and AGM 2014 is fast approaching and will be held on 18th October 2014 at the Main Corner, 1 Bay Road. Mount Gambier. This year we have an exciting line-up of speakers – see inside this issue for symposium agenda and speaker bio's.

#### In this issue ....

Enclosed are two inserts – the **2014 BALLOT PAPER** and the **2014 AGM MEMBER NOMINATIONS AND MOTIONS**. Nominations have now closed for Director position's and we are happy to report that Peter Horak #4614 and Linda Claridge #2214 have both stood unopposed. Therefore, Peter will take over as the new Business Director when Helen Higgins retires at the AGM and Linda Claridge retains her role as Standards Director for another term.

However, your vote is still required for two items. Firstly, the resignation of Grant Pearce from the position of Site Director has two candidates competing for the position – good luck to John Dalla-Zuanna #236 and Tim Muscat #4557. Secondly, it has been proposed that each member on the 1973 CDAA National Committee is inducted into the Hall of Fame.

Remember not to waste your vote – follow the postal vote instructions specified on the ballot paper.

#### Also in this issue ...

An important update from the National Committee on new Regulations and Training Standards. There are also articles from J.P. Bresser on the Croatian Cave Project (June 2014), and from Peter Buzzacott who has been diving in Norway. There are also reviews of new dive gear – Hollis 500SE, Scubapro Evertec Drysuit and the Halycon EOS Mini.

Lastly, keep abreast of latest news and developments ensure that you are ready to receive email alerts when CDAA Official Notices are published: <a href="http://www.cavedivers.com.au/notices">http://www.cavedivers.com.au/notices</a>. One recent announcement concerns the introduction of electronic permits for diving Forestry SA Sites – go online for more details as well as other news.

See you at the AGM in October. Safe and Happy Diving.

> Rowan Stevens #3177 | Publications and Records Director M: 0417 550 509 | E: publications@cavedivers.com.au

#### **IMPORTANT!**

#### **AGM 2014 INFORMATION**

This year's AGM 2014 information will be posted to the website (www.cavedivers.com.au) no later than Thursday 18th September.

To access, login using your CDAA number and password and select (from the left hand menu) "Members Document Library". When the page is displayed, select AGM 2014 from the drop down-list. The minutes from last year's AGM, the agenda for this year's AGM and the Directors' annual reports will all be found here. Once the financial statements for the year 2013-2014 are finalised, they will also be posted here.

The Symposium program can be found in this edition of Guidelines and on the CDAA website. Please register your attendance for the Symposium on the forums to assist with catering. To book and pay for the 'CDAA Annual Dinner', visit the online store before Monday 13th October 2014.

Regards, Helen Higgins **Business Director** 

> See pages 10 to 17 for the Symposium Agenda and list of Guest Speakers.

#### Articles for Guidelines Dec 2014 - Deadline is Nov. 20th

- · Send articles by email to quidelines@cavedivers.com.au
- Text files should be saved as Word files or Simple Text
- Pictures saved from digital cameras or scanned from photos must be at least 200-300 dpi at 15cm wide, RGB files, and saved as Maximum Quality JPEG's.

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with the SMS100. A product that has been copied, modified and a benchmark for technical sidemount for years. Even more popular has been the lightweight SMS50 line. These two have taken sidemount mainstream and the building blocks the new SMS75 harness.

While it will cater more to hardcore cave divers, SMS75 was created to handle all environments. Proper trim is key and the wing is designed to promote horizontal diving with increased lift towards the hips where it's needed most, and without modification. The SMS75 will also support rear mounted tanks and reversible inflator positions.

- » Trapezoid shape to promote horizontal trim
- » Adjustable and removable wing bungee
- » Designed for cave diving
- » Cam slots for single tank and grommets at 11" for banded doubles
- » Reversible Inflator & Dump assembly

- » Rigging kit included: Tank bungees, SS Cam bands, SS Bolt snaps & nylon line
- » Includes sternum strap & crotch strap
- » Inner located elbow to avoid overhead interference





It's hard to believe that it's been 9 months since our 40th Anniversary and we are heading into Spring again. It feels like it was only a few weeks ago.

While it has been cold, it has also been a good time for our CDAA volunteers to sit in front of the heater and help out with some of our administration functions

In case you missed it, Grant Pearce, our Site Director resigned his position due to a change in his work commitments and John Dalla-Zuanna stepped up to the plate in an acting capacity while we call for nominations and vote for the new Site Director.

Also joining the management team more recently was Andrew Rands as our new Risk Officer, and Robert Main as our NSW Representative.

The biggest focus of the National Committee over this past guarter has been the completion of our new Regulations and Training Standards. The number of hours, emails, iterations, phone calls, reflective moments, researching, questions, challenges and cross checks has been amazing. You would think that we could simply sit in a room and review and write the new documents over an afternoon, but nothing could be further from the truth.

As with our Constitution, our Regulations and Training Standards define who we are as an organisation. These documents can make or break access negotiations, influence the premiums we pay for our insurance and make a difference to what grants we do or don't get. And that is before we take into account the numerous suggestions from our members on what they want in and want out of the documents.

The work on the Regulations and Training Standards in now largely behind us and you will soon see the end result. If we have it right, which we hope we do, the documents will stand the test of time and not need anything more than fine tweaking over the coming years.

While the Regulations and Training Standards are important to us as an organisation, what is exciting as divers is the potential for two new dive sites. I hope that between the time of writing this report and the publishing of Guidelines, we will be able to tell you where these sites are located and how you will be able to gain access.

More exiting news is this year's international guest speaker. Thorsten (Toddy) Walde from Sardinia has agreed to spend nearly two months in Australia, visiting and speaking in several different States. Please make sure you lock into your diary the date and location for your State event (see contents of this issue of Guidelines for more information).

On the training front, we are now removing the need for two instructors at the Advanced Cave training level. This will make it easier and cheaper to run courses, meaning that we will see more training options for members. This change also brings us more in line with the rest of the world where this level of training is normally done by sinale instructors.

This financial year will also see us make our final payment for Tank Cave. The big guestion now faced by the National Committee is how do we maximise the benefit of this investment for all members to enjoy.

Once again, thanks to all members who volunteer their time to help with managing the Association, members that take the time to provide feedback and thoughts for improvement and members that simply let us know that they appreciate what is being done.

May your drysuit remain wet on the outside.

John Vanderleest On Behalf of the National Committee



John Vanderleest. National Director



Iohn Dalla-Zuanna, Site Director



Helen Higgins, **Business Director** 



Rowan Stevens. Publications and ecords Director



Linda Claridge, Standards Director

http://www.cavedivers.com.au/notices

The Official Notices section of the website has now been upgraded to automatically send an e-mail notification to you when a notice is published.

If you are not receiving emails then check your Spam Folder and make sure that the domain @cavedivers.com.au is not listed as spam.

You can edit your preferences at any time here: http://www.cavedivers.com.au/edit-member-details

Since the last edition of Guidelines the following official notices have been published:

- Letter from National Director
- Digital Permits for ForestrySA Sites
- Forum Accounts and Passwords
- Fee Increase for Pics Permits
- Web Site Rehosted
- Appointment of Acting Site Director

Thank you, Rowan Stevens. Publications & Records Director

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#### CAVE DIVERS ASSOCIATION OF AUSTRALIA

INCORPORATED IN SOUTH AUSTRALIA

#### AGM and Symposium 2014

This year the members' symposium will have a number of exciting local speakers presenting on their exploration, mapping, research and training as well as our keynote speaker Thorsten (Toddy) Walde from Sardinia.

The symposium will be held on the 18th October in conjunction with this year's Annual General Meeting (AGM).

The venue, the Main Corner, is conveniently located in the centre of town at 1 Bay Road, Mount Gambier.

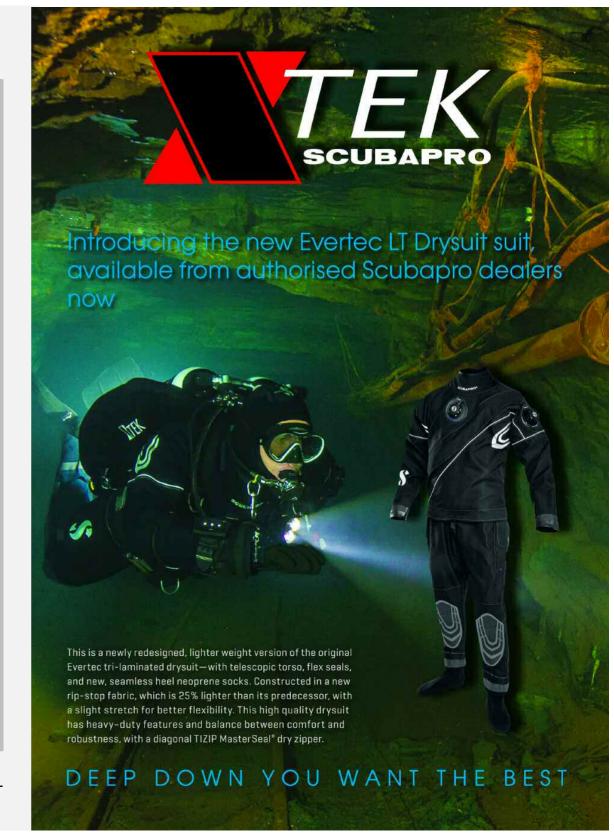
The Symposium will be held in the Dress Circle commencing at 9:15am.

The AGM will follow at 6:00pm and dinner will be served in City Hall at 7:30pm.

We hope that you can join us for an exciting event.







#### ~ AGENDA ~

#### **Saturday 18th October**

Time	Agenda item
9:15 - 9:30am	Member Registration and check in
9:30 - 9:45am	Welcome from the National Committee
9:45 - 10:30am	Using the SF2 Sidemount Rebreather for Exploration – Thorsten 'Toddy' Wälde  What makes the SF2 Sidemount eCCR so special? Why do we dive on this machine when there are many other good rebreather systems on the market? The flexibility and simplicity of this unit makes it perfect for exploration. The SF2 can be used in very remote areas like jungle regions where you can walk with the unit for several kilometres. It is ideal for post-siphon diving where you need to divide the weight and use the CCR in smaller areas where 'normal' backmount CCR's would not fit. In this presentation I will share my own experience of using this system in several cave projects. Exploration requires very specific configurations, often differing from regular cave diving set-up. The specially designed backplate and mounts allow for a fully modular set-up which makes carrying easy. Small modifications turn the Sidemount CCR into a reliable back-up system for long and deep cave diving. The further exploration of existing cave systems will require further development of equipment and diving technique. I believe the future lies in sidemount CCR's and during my presentation; I will take you on a journey into this world.
10.30 - 11.15am	A Tale of Two Sumps – Janine McKinnon  1. Sump II, JF-4 Kazad-Dum, Junee-Florentine Karst, Tasmania.  2. IB-232 D'Entrecasteaux River Third Sink, (into IB-14 Exit Cave), Ida Bay Karst, Tasmania.  Kazad-Dum Cave terminates in a sump at -267 m. Only two attempts have previously been made to push this sump. The results were inconclusive. Now the question is answered. What does it take to get diving gear to this remote location? What was found?  The D'Entrecasteaux River sinks and resurges twice before its third sink into Marble Hill. It then reappears in D'Entrecasteaux Passage inside Exit Cave. The sump had never been dived. There is 250m direct line between the sump and the reappearance. Was this to be a straightforward exploration?  There may also be some pretty pictures of Tasmanian caves.
11:15 -11:45am	Morning Tea
11:45 - 12:30pm	From Cave Diving to Sump Diving In Photos – Liz Rogers Like many CDAA members, Liz Rogers began her cave training in Gouldens before progressing to clear water in Mt Gambier caves big and small. Her cave photography then expanded to the clear water and tunnels of the Nullarbor. Over the last 18 months however, her focus has moved to the small and silty world of sumps - caving, diving, photography and exploration. This talk will cover some thoughts on a personal journey from cave diving to sump diving as a way to expand the horizons of our diving. The minimalist approach to gear required for a successful sump mission gives some insight into both how similar and how different the two sides of our sport are. The same change of mentality is required for great photos of water that's only briefly clear and to capture the spaces between the west stuff. The

for great photos of water that's only briefly clear, and to capture the spaces between the wet stuff. The differences in mentality, equipment, preparation and camera technique are illustrated by photos from

Jenolan, Elk River, Camooweal and Junee expeditions.

#### **Saturday 18th October** - continued

ing up with cave exploration.

Time	Agenda item
12:30 - 1:30pm	Cave Diving & TV Channels - how the game has changed – Ian Lewis Publicity about Cave Diving is entering a Golden Age. Using hi-tech equipment and very advanced skills, cave divers are going into places undreamt of only 20 years ago. Easier and cheaper travel to exotic locations, the use of Go-Pro cameras, good graphics and underwater voice recording is bringing cave diving into lounge rooms, pubs, You Tube and big screens everywhere around the world. TV Channels are now interested in the topic for far more than the bad old days of 'Death Wish Cave Divers' and our sport is seen as a highly-skilled and disciplined activity – brave, exploratory, environmental and scientific, rather than sheer adrenalin high-risk taking like Base Jumping.  Dealing with TV Channels when talking about and filming cave diving is a new approach compared to the avoidance we needed to practice in the earlier years. Ian will talk about several recent TV reports of different aspects of cave diving and the way that TV crews and reporters approach the topic and interact with us. It is certain that TV coverage will steadily increase, and we can encourage it and use these opportunities to further reinforce the value and importance of our sport for the next 40 years!
1:30-2:15pm	Lunch
2:15-3:00pm	Jenolan Caves – Michael Collins  Jenolan Caves are Australia's largest show cave system. They are the first caves in the world to have elected lights, just to mention one of the many interesting facts many people don't know about them. Michael will be giving a history of Jenolan Caves, both dry caving and talking about the first dive in 1952.  There will be Cave Maps, Photos and Information on what to expect if you would like to dive at Jenolan.
3:00 - 3:45	To be advised – Tim Featonby See website for full details.
3:45-4:15pm	Afternoon Tea
4:15-5:00pm	The SF2 eCCR Sidemount Rebreather - How it works - Thorsten 'Toddy' Wälde  The SF2 Rebreather is becoming more and more popular in the diving community. It has been tested by experienced divers in various environments, which are often very harsh and demanding. Toddy has already accumulated hundreds of hours on this sidemount unit and will share his knowledge, discussing some ke topics such as construction of the unit; it's strengths and weaknesses; how to set it up; differences betwee the Backmount & Sidemount units; and why the particular trim position and the balanced rigging are so important. There is more and more interest in using CCR's as a sidemount system and the SF2 offers great

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#### ~ AGENDA ~

#### Saturday 18th October - continued

Time	Agenda item	
5:00-5:45pm	Geology of Jenolan Caves – Mike Collins & Ted Mathews The geology of Jenolan Caves is unlike any other cave system in the world, or is it? Michael and Ted will show maps and photos of Jenolan which will reveal its secrets of cave formation over millions of years. This new way of looking at caves may even help cave divers understand how to read a cave and discover new passageways in both underwater caves and dry caves.	
5:45-6:00pm	Break	
6:00-7:00pm	AGM - Dress Circle Director Reports, Election Results and Motions brought before the AGM.	
7:30-11:00pm	CDAA Dinner- City Hall Bookings essential - see separate booking information.	

#### **Sunday 19th October**

A number of workshops are planned. Members are invited to attend one workshop in the morning running from approximately 9:00am-12noon.

All bookings should be directed to business@cavedivers.com.au

Imme	Agenda item
Morning	Workshop – Thorsten 'Toddy' Wälde
	Toddy will talk about the basic Sidemount Rebreather functions and setup as well a quick history of the
	development of this unit.
	Theory (30-45min)
	1- Learning about the SF2 Sidemount Rebreather and design
	2- Pre-dive assembly & diagnostic
	3- Rebreather support systems and gear requirements like the specific sidemount rig
	4- Overview of Exploration techniques and procedures

Morning	Photography Workshop – Liz Rogers
	Not getting everything you expected out of your new (or new to cave diving) underwater camera rig?
	Or looking to take the next step with your shots? Bring along your camera equipment and dive buddy model
	for a hands-on cave photography workshop with a focus on lighting. Liz Rogers will cover off camera strobes,
	modelling techniques and lighting control in a practical dry session to help you get the images you're looking

for on your next cave dive. Numbers will be limited to ensure good interaction, so get in early!

easy skills like DSV out/in, Bail-out Scenario etc.

Diving (about 10-15min). One dive to try out the unit and its particular trim characteristic, as well some very

Morning	SRT Workshop – Gary Barclay
	A practical workshop with an emphasis on understanding SRT gear and how to use it safely. Learn what
	every cave diver should have in his/her dive kit and what it is used for Practise knot tying using a variety of

#### **Sunday 19th October - continued**

Time	Agenda item
Morning	<b>SRT Workshop – Gary Barclay</b> , <i>continued</i> recognised knots and discover the differences between static and dynamic rope, between ascenders and descenders, figure eight knots and figure eight hardware, between wire ladders and whale tails. The workshop will focus on the needs of those attending.
Morning	Mapping Workshop – John Dalla-Zuanna  A view and hands on experience of, ● the art of underwater surveying and ● putting the data into a map. This workshop will overview the techniques of collecting data during a cave or sinkhole dive. You will use compass, tape, knotted line, slates and other tools to gather measurements and images to then take to your desktop. Here we will arrange the data using available software programs into maps and overlay onto Google Earth. For this workshop, you will need to bring some hardware, if possible a compass, slates & pencil, a reel with knotted guideline (every 3 or 5 metres), and a laptop. You may wish to share some equipment and laptop with your buddy, but the desktop work should be experienced individually for maximum effect.  Please register your interest to assist in preparing materials.
All Day  Continues on Monday, til 2pm	SROP Workshop – Richard Harris - (continues on Monday)  The Sump Rescue and Recovery Orientation Program (SROP) is a must do course for any cave divers who would like to learn more about the basics of responding to an emergency that arises when caving and diving. Run by the CDAA's SAR Officer Richard Harris, the course is now in its third year and is being constantly refined to offer an insight into the 'first response" following the loss or death of a team member during a cave dive; whether on a weekend in Mt Gambier, or on an expedition in the world's remotest locations. Considered a minimum introduction to the skills and knowledge of who to call and what to do in the first vital hours of a serious incident in cave diving, the SROP should be mandatory for all advanced cave divers especially those who run trips with less experienced cavers. Joined by other experienced CDAA educators, Richard delivers a dynamic and hands on introduction to this difficult topic.  Course duration 1 1/2 days, cost \$50.00. Contact sar@cavedivers.com.au. Bookings essential.

Monday 20th October - SROP Workshop with Richard Harris (cont'd) - Finishes 2.00pm.

#### State visits by International Guest, Toddy Walde. - Oct./Nov.2014

Sun. 12th October - Perth • Tues. 14th October - Adelaide Fri. 7th Nov. - Melbourne • Sat. 15th Nov. - Sydney • Sat. 22 Nov. - Brisbane

The Cave Systems of Sardinia (Italy) - A magnificent adventure - Thorsten 'Toddy' Wälde
Sardinia boasts over 4000 registered cave systems, long kilometres of spectacular cave passages, deep shafts to descend and multiple siphons
to dive. This island is a true treasure for all kinds of caving. There are several karst areas on the island but the biggest and most interesting
karst region is the Supramonte located in the Central-Eastern part of the island. This karst region covers a surface of more than 210 square
kms. Part of it - the Golfo di Orosei is a spectacular coast of high carbonate cliffs cut by some major streams, forming canyons ending in the
Tyrrhenian Sea. This surface drainage network is most probably a relict of the ancient hydrography related to weather periods. It continues also
on the ocean shelf for several kilometres up to a depth of at least -120 metres corresponding to the maximum lowstand of the Mediterranean
Sea during the Last Glacial Maximum, around 21,000 years ago. This presentation will look at some major underwater cave systems and
some post-siphon systems which are the most spectacular ones in the area. How are we diving these caves? How complex are they?

Overlapping of dry caving with cave diving and other related topics.

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#### ~ 2014 GUEST SPEAKER BIO'S ~

#### Thorsten 'Toddy' Wälde

Thorsten 'Toddy' Wälde is from Germany and started diving when he was 18 years old. Since then he has been addicted to water; opening a dive centre in 1993 and sharing his passion with many open water divers over the years. In 1995 he opened a second dive centre, managing to become one of the biggest dive centres in Germany for many years. During his years as Manager, Instructor and Guide, his activities brought him to all kinds of exotic places in the world such as the Red Sea, the Caribbean, the Pacific, the Maldives, the Mediterranean and the Atlantic. By the early 90's he had fallen in love with technical diving and he started to dive deeper and longer. His fascination for cave diving however began guite early when he was 10 years old and saw Jochen Hasenmayer entering a cave close to the town where he lived. When he started his dive centres, his fascination of diving into the underground became a passion and so he began to focus on cave diving.



In the late 90's he became an NACD Cave diver in Mexico and since that time fell so deeply in love with cave diving that he decided to sell all his shops and move to Mexico to live and teach cave diving for a number of years. He became an NACD Cave Instructor and he was involved in several cave exploration projects in Mexico, such as the deep sinkhole caves in Merida and was involved in many jungle expeditions around the Tulum area. He has been involved in several TV filming projects as safety diver and exploration diver. He has also authored several articles in diving magazines.

After a couple of years of intensive cave training and diving he decided to move back to Europe and find a place where he could teach and explore caves. In 2004 he moved from Mexico to Sardinia where he found the perfect spot for his new technical diving centre living his dream teaching cave & technical divers almost all year around. He has explored many cave systems in the 'Golfo di Orosei' an area well known in Europe for it's potential in cave diving, post-siphon diving and dry caves (more than 3000 registered caves and numbers are growing). He works with many speleo groups and when there is any siphon to dive in dry caves in remote areas, he gets the call. He has dived with Rick Stanton in various cave systems and has explored deep caves such as 'Utopia', one of the longest and deepest caves in Italy as well as many other projects. His diving centre is famous for cave training from cavern to CCR full cave classes, with Toddy holding Instructor Trainer ratings for Full Cave Instructor, as well as an NACD Sidemount, DPV, Stage and Survey Instructor. His big passion is rebreathers and in particular sidemount rebreathers which can be used in remote areas such as the exploration of the jungle regions of Mexico where he has discovered deep sinkholes; and particular post-siphon dives like 'Bel Torrente' in Sardinia where he stays for several days in the cave and has explored more than 5km penetration so far.

Besides cave diving, his other passions include speleo, canyoning, trekking and canoeing. For this reason he also has his own 'Outdoor Company' organising many tours in Sardinia.

Toddy is looking forward to coming to Australia and sharing his experience and knowledge about the cave systems in Sardinia with others.

#### **Ianine McKinnon**

Janine did her Open Water certificate in 1976.

She joined CDAA and cave dived in Mt Gambier and NSW, in the days of single backmounts and no gauges. After moving to Tasmania in 1981, she dived the Junee Resurgence, but drifted away from cave diving to ocean diving. She continued her caving, however, and regularly tackles Tasmania's vertical caves. In 2009, a chance decision led her back to cave diving, retraining, and trips to Nullarbor, Florida and Yucatan. She has abandoned her single tank and owns gauges. She has taken advantage of her caving friends to have excessive amounts of gear carried to dive sites in Tasmania. Her most recent projects were the relining of JF-8 Junee Cave and (solo) JF-390 Lawrence Rivulet Rising.



#### **Michael Collins**

Michael Collins CDAA#4516 has been a tourist cave guide of 8 years at Jenolan Caves and lives there full time with his family. Michael has worked in the dive industry for 10 years and is the founder of the trimixdivers.com website. Michael began diving in 1987 and by 1998 was trimix wreck diving off Sydney and has been cave diving since 2000. He is a member of WASEG and SUSS ASF caving clubs; member of ASF-Cave Diving Group; and member NSW VRA Cave Rescue. He has cave dived at Jenolan Caves, Buchan Caves, Nullarbor, Mt Gambier, Wellington NSW, Burringjuck Dam and NZ Pearse Resurgence. Michael



#### has taken a keen interest in how caves are formed at Jenolan Caves as well as many other places alongside Ted Matthews who is also a cave guide

#### **Ted Matthews**

Ted Matthews aged 71 has been a Cave Guide at Jenolan for 30 years part time and full time for the last 10 years. He is a member of SUSS caving club and is a retired school teacher. Ted studied at Sydney University and has a Science degree. He has spent the last 15 years studying Jenolan Caves and how they have formed.



#### ~ 2014 GUEST SPEAKER BIO'S ~

#### **Ian Lewis**

lan Lewis has been caving and diving since his early teens. Being born in the Mount Gambier region he enjoyed exploring many of the local caves in his youth, and he joined the Cave Exploration Group of South Australia (CEGSA) in the early 1970s. He took up cave diving in 1971 after a trip to the Nullarbor Caves at a time when nothing was known of them and he initiated the first diving explorations there. He served as an advisor on the South Australian Government Advisory Committee established in 1973 when the whole sport was under review following a string of cave diving deaths which resulted in the creation of the CDAA and attended the Association's first meetings in Mount Gambier. Ian has acted in many Committee roles including National and Standards Director as well as being a longstanding Examiner, and he has travelled widely to explore caves around Australia and in Florida and England. Ian has also authored many popular books and articles over the decades including Australia's first cave diving manual. "Cave Diving In Australia", with then-President Peter Stace (ed 1982), within which the first maps of Mount Gambier's categorized sinkholes were also published. Ian has represented Australia at the International Speleological Conference, has a degree in Geomorphology specialising in limestone hydrology and these days works as a Scientific Assessment Officer for SA's Department for Water. He continues to enjoy sharing his experiences and knowledge with others.

#### **Gary Barclay**

Gary Barclay has been cave diving and accessing caves in all many areas of the world for over 25 years. He has conducted many trips and taken many CDAA programs to the Nullarbor and his trips are renowned for safety and comprehensive support. He can frequently be found guiding at the Shaft and has hosted many clean ups at Hells Hole and managed the safe entry and exit of divers to these sites.



#### Iohn Dalla-Zuanna

An active cave diver since 1973, John has been able to follow his passion in many caves throughout the world. As a member on numerous cave diving explorations, including two National Geographic expeditions, John has lent his experience & resources in providing specialised equipment & dive support to his fellow Wetmules and friends. A Hall of Fame inductee and a 40-year member of the CDAA, John served as the CDAA Mapping Officer and on various other management committees. John is still an active diving Instructor, and recently rewarded by Latrobe University, Victoria - "Outstanding Services Award to



Scuba Diving". He is also involved in the current development of all the CDAA cavediving rebreather training programs. It is in the field of cave mapping. that John has a major interest and has previously displayed unique survey & 3D mapping techniques used in the many expeditions to date.

#### **Richard Harris (Harry)**

Richard Harris (Harry) is an Adelaide based medical practitioner who brings a wealth of experience in expedition diving, wilderness and diving medicine, advanced first aid and delivering medical care in austere environments. His work and training with the South Australian aeromedical retrieval service also gives him unique insights into the emergency services and disaster planning in Australia. His work with the South Australian Water Operations Unit has helped generate a new era of cooperation between volunteer cavers and the police in dealing with cave rescue and recovery in this state.



#### **Liz Rogers**

Liz Rogers is a cave diving photographer who has spent a lot of dive time playing with off camera lighting and very clear water in Mt Gambier's caves and sinkholes before branching out. From early dives in Mt Gambier her photographic portfolio has expanded to encompass the massive Nullarbor caves and the haloclines of the Roe Plains, volanic vents, underwater stalactites and grotty little sumps across the country. With an interest in capturing expedition and exploration photography, Liz has taken the camera cave diving in Camooweal, Jenolan, Wellington, Tasmania and eastern Victoria.



Exploration is rarely easy and on expeditions Liz has become experienced at nursing fragile and awkward loads down big pitches and through small crawls to reach the water. The recent addition of a rEvo to the toy cupboard has both increased the dive task loading and opened up whole new photographic possibilities. Capturing the moment means keeping up with cave divers hell bent on exploration in search of images that convey what it felt like to be there. Liz has had photos and articles published in Sport Diver, DAN's Alert Diver, National Geographic, the Weekend Australian and other major newspapers and dive publications in Australia and internationally. She blogs weekly about underwater photography, cave diving and exploration on her website. http://lizrogersphotography.com

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**Destination: CROATIA** 

#### Croatian Cave Project, June 2014

**Pictures & Story by JP Bresser** 

In the south of Croatia, close to the Bosnian border is a very desolate region. Steep mountains form a natural border between Bosnia and Croatia and remnants and reminders of the war can be found everywhere. The area is wild, with bears and wolves roaming the mountains (a rare site for much of Europe) and the few people that live here are careful in their contact and seem wary of foreigners. The mountain ridge functions as a huge water reservoir for the Karst area, and springs are found everywhere, shaping the lush and green landscape.

It's extremely hard to get permissions to dive the springs since they function as a source of fresh water for a large part of the country, but after many years of negotiation and goodwill building we received special permits to dive and explore the springs.

Since it's impossible to dive the caves in winter due to the high flow of water, we decided to visit in June with a team of Halcyon divers and began surveying and sketching the first part of a system called Vukovica Vrelo. The water is extremely clear and around 8-9 degrees celcius throughout the year.

The entrance lies at a depth of 33 meters and is only accessible through a narrow restriction. Even this late in the year we encountered significant flow, forcing us



to use pull and glide techniques to enter. Once inside the cave, it opens up to cathedral proportions and slopes up to an area we call 'the Castle" at a depth of around 10 meters. Spectacular!

Our focus however, was on the relationship between the restriction and the road above. The local government was worried about the chance of the restriction collapsing due to heavy traffic of quarry trucks, and thus cutting off the source of fresh water. Our task was to assess the risk

During our 5 day projects, multiple teams were in the water daily working on survey, and documenting the cave. We used the Halcvon EOS mini lights with the 5.2ah extended range battery giving us close to 6 hours of burn time. The EOS mini is extremely comfortable and easy to handle, specifically in this cold water utilising gloves. The long burn times made it a very useful tool on remote locations like these where charging batteries can be a problem.

See over the page for another stunning underwater image by JP Bresser.



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#### **NEW GEAR**

### The **Hollis 500SE**, Turning Tech Diving on its Side.

The new Hollis 500SE (Side Exhaust) regulator has recently been released in Australia, and finally there is a side exhaust regulator designed with Tech Diver's requirements in mind. Following the phenomenal success of the Oceanic Omega 2 – the world's best selling reg ever, the Hollis 500SE sets the standard for reliability and light weight, without sacrificing performance in any way. So, what are the advantages of a Side Exhaust Reg?

The unique profile of the 500SE second stage directs the diver's exhaust bubbles back and away from your face, maintaining a clearer field of vision when diving. The ultra sleek, light weight second stage also significantly reduces any possibility of jaw fatigue found on heavier, more conventional second stages. Combine this with the orthodontic mouthpiece, and the 500SE is practically weightless in your mouth.

The biggest advantage, in my opinion, also provides a fantastic extra safety feature on the 500SE. Being a side exhaust second stage, there is no right or left, no right way up or upside down. To the end user, this equates to

a far safer dive if you ever have a gas emergency and have to share air or deploy an alternate second stage. In a gas emergency situation, divers are generally a little stressed, and the ability to deploy a working second stage to a buddy who may have been without gas for some time, without worrying if the reg is the right way up, and if it might flood the diver's mask if donated upside down, is piece of mind for all divers. Many conventional second stages also don't work too well upside down, and can be either extremely difficult to breathe, or deliver a rather wet breath to an already stressed diver.

The 500SE, on the other hand, offers the diver the safety



of no matter how the second stage is deployed, it's always the right way up, always ready to work perfectly, time and time again. Combine this with no left or right hose requirement, and divers can choose to route hoses from either the left or right, for the best possible streamlining and ease of use.

For twin tank users, there is also the advantage of having all hoses from your right cylinder on your right side, and all hoses from your left cylinder on your left side. On a deep trimix dive, or again in a possible stressful situation, this is a cognitive second nature thing – left equals left, right equals right.

The 500SE second stage utilises a servo-controlled valve to provide precision airflow and unparalleled performance for both air and trimix divers in a side exhaust configuration. To achieve this, Hollis have perfected the original "lever-servo valve" they designed 35 years ago. The 500SE's pneumatically balanced servo valve is actually a two-stage valve. Just a small sip through the mouthpiece opens the servo mechanism or control valve lever. Air flow from the servo valve creates a vacuum which immediately opens the main valve diaphragm, allowing air to flow through the regulator to the mouthpiece. Instead of one small port to provide air flow from the first stage, the 500SE features porting around the entire main

All extra brass has been removed, resulting in an extremely light first stage that still performs under even the most adverse conditions. The first stage is an environmentally sealed, balanced diaphragm type, which is also over balanced, meaning regardless of depth or tank pressure, the second stage gets all the gas it needs to feed to the diver. Hose routing from the first stage is also a breeze for single tank, twins and even sidemount. No matter what your configuration, the HP and LP ports are aligned to route your hoses the best way possible.

#### Diver's Field Test

In the field, the 500SE performs flawlessly. Quiet, extremely easy to breathe, and incredibly light in your mouth. I tried the reg on singles, twins and a sidemount rig, and it worked a treat in all configurations. No matter what position in the water I put myself, performance was always great.

If you would like to get a hold of what I feel is a great piece of dive gear for all types of diving, from rec to tech, have a close look at the Hollis 500SE. I'm sure you will be impressed.

By Tony Davis.



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# The New **Evertec Drysuit** from Scubapro

After the success in the last two years with their new range of drysuits, Scubapro have announced the release of the Scubapro Evertec which compliments the new Technical Range of Scubapro wings, regulators and cylinders. The Evertec is made from a tough trilaminate material which is flexible and quick drying. The suit comes with reliable Si-Tech valves that have been adopted by Scubapro in their most recent ranges of suits. The neoprene socks allow the use of rock boots, wetsuit boots or for warmer waters, the use of the socks alone.

This is a newly redesigned, lighter weight version of the original evertec tri-laminated drysuit—with telescopic torso, flex seals, and new, seamless heel neoprene socks. Constructed in a newrip-stop fabric, which is 25% lighter than its predecessor, with a slight stretch for better flexibility. this high quality drysuit has heavy—duty features and balance between comfort and robustness, with a diagonal tiziP masterSeal® dry zipper.

#### **FEATURES**

- Constructed of heavy-duty trilaminate with reinforced fabric in all the high-contact areas.
- A telescoping torso with elastic crotch strap enhance overall fit and range of motion.
- Warm neck collar keeps heat in and protects the latex neck seal.
- Two large dual-compartment cargo pockets are equipped with D-rings, high-security overflaps and Velcro closures.
- Suit includes suspenders, an anatomically shaped hood with extended neck and a patch kit.





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**Destination: NORWAY** 

# Endless light and eternal darkness: Cave diving in the Arctic Circle

by Peter Buzzacott

Long have I wanted to dive the Plura system north of Mo I Rana, an industrial town in mid-Norway known as the 'Gateway to the Arctic Circle'. Then, while I was testing experimental dive equipment in Croatia last year I met a decompression scientist from Trondheim. "You should come visit my lab" he said, and so exactly one year later there we were, planning medical experiments in his Norwegian hyperbaric laboratory.

During the week I booked return flights from Trondheim and on Friday we wrapped up our meetings, agreed respective tasks for further collaboration and then I boarded the Dash 8-100, a twin-engined commuter perfectly suited to short-runway take-off and landing. None of us had seat numbers so I took a window and watched the lone ground-crew guy unplug an extension cord running from the terminal to the front of the plane. He gave a thumbs up and the props started turning. The engines really roared during take-off, the whole plane vibrated and shook itself down the runway and then we were up and airborne. Norway is a really beautiful country with vast forests. rolling hills and burgundy houses with white window frames. Even in summer snow was common across the many bare-rock summits below us. Rivers and lakes shone as blue as the sky.

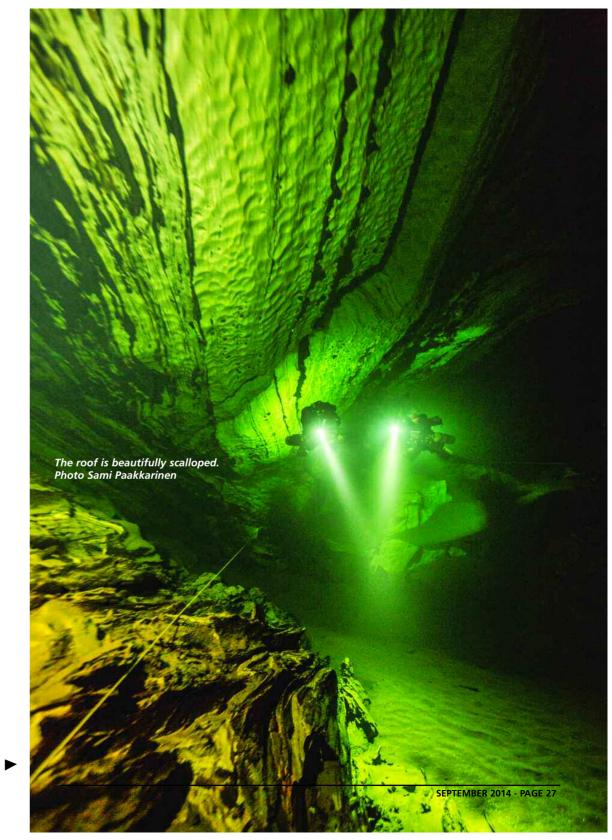
We landed beautifully, the Captain spun the plane 90°

and parked it neatly in front of the Mo I Rana airport, basically a single building opposite the town's motor-racing circuit. Soon my newest buddy Tom arrived to collect me. I would be staying at his place for the weekend. Norway in general is quite expensive but this is especially the case in remoter towns, so I was grateful to have Tom's guest room. In fact, I was welcomed by his family also and even given the keys for a night while they attended a wedding! Time and again I am astonished at the camaraderie we share in cave diving. It reminds me of the army, like a brotherhood. It's amazing.

First we visited the local club-house where we met Raymond, my buddy for tomorrow, and we collected some tanks and gas. Raymond leant me a backplate and wing, Tom gave me a spare long-hose, pretty soon I was configured to their satisfaction so Tom and I set off. We drove out of town for half-an-hour, called in

to see the farmer and his wife who own the property the cave is located on, then we drove on and parked by a picnic table in a copse of low trees covered in new light-green foliage. We carried our manifolded twin-18's down to the water and assembled the rigs there. We had small bottles of argon for suit inflation, plus a spare stage of nitrox and some oxygen for safety, which we dropped near the entrance.







Both of us had a few gear issues to start with, which were soon resolved but I decided to leave the GoPro outside the cave today while adapting to the unfamiliar. Then my helmet was hitting the manifold so I left that behind too; just small issues but they delayed us leaving the shore.

The water was 4°C. I'd had a leaking suit in Italy three weeks before but had bought some goop from the local technical dive centre which had sorted out my leaking cuffs nicely. Still I had pin-prick holes all over my back and, really, it's time for a new suit. Today though I was in three layers of undergarment with drygloves and a Fourth Element 7mm hood so I was ready for action no matter what the temperature. Apparently it had been almost zero here two weeks previously so I was glad it had warmed-up some.

This cave is spectacular – the scalloping all around is just marvellous. Tom was hoping we could reach an air chamber at about 350m in so he was swimming steadily while I was looking around like a kid in a candy store. The passage was huge, I couldn't

Raymond and Tom, making me welcome

even make out the walls. There were dark bands through some huge cream-coloured boulders, and rust-like excreta growing out of the bands. At 30m depth I was starting to feel short of breath so I slowed down. Vis was only a few metres and I wasn't really happy swimming blindly while wearing a manifold, something

I've grown out of since selling mine a few years ago. I was getting cold too, and my lips were stinging like they were on fire. At the 200m mark I signalled the turn and led out slowly, taking in the view.

We exited at 40 mins, made a few mins of deco and surfaced at 45 mins, shivering by now and with

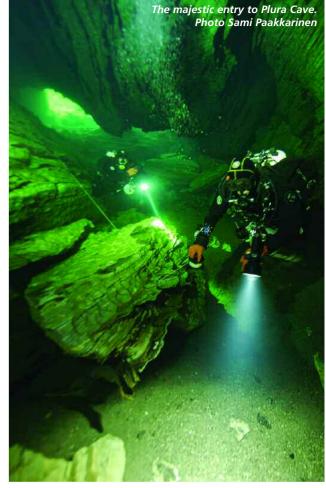


cramps hitting behind my quads while both my feet and hands were burning from the cold. Gee-whiz I was glad I hadn't pushed-on to the air chamber. The air is breathable in there but the guys don't always surface, sometimes they sit at 1m or so and then return. I am sure I would have been in some considerable discomfort if I'd pushed-on in this dive.

Plura hit the cave-diving world's headlines in January this year when two Finnish divers perished in there attempting an incredible traverse through 130m depth over many hours. I'd crossed paths with Jari, one of the deceased, and his buddies a couple of times in south France last year and can say these guys were super-keen cave divers. It is such a tragedy when we lose the shining lights of our sport. In many ways we endure this in the same way elite mountaineers do. We're aware of the risks but still we are drawn to these beautiful, inhospitable places we love so much. An international team were assembled including Rick

Stanton and Mark Dogherty but the restrictions and capricious environment forced the Norwegian authorities to abandon the recovery effort in late February. Then, in March, the surviving members of the Finnish team returned and completed what stands now as the most remarkable recovery so far in cave diving, (given that David Shaw succeeded but did not survive the ordeal). I won't re-hash the epic here, a simple Google search for Plura will lead interested readers to the full story. By June the cave had only recently re-opened and we were among the first to return to it. R.I.P. Jari.

I didn't sleep that night, because... there was no night. The sun went low, teasingly almost setting, but then it came back up. I checked the clock every hour through the night. 2am. 3am, 4am, was it time to get up yet? In the morning Tom and his family laid on a full Norwegian breakfast for me. There was sliced moose sausage, reindeer, fresh vegetables and cheeses, juice, tea and coffee, a full table. Norwegians are very proud of their healthy lifestyles, long life-expectancy and socialist society in which taxes are high, university education is free and the poorest are well looked after. Like my friends in Michigan, everyone I met seemed to have a cabin in the moun-





tains; hunting is very popular, and when the sun comes out Norwegians lay around soaking it up like pale lizards. I really like Norway.

Raymond joined us at the cave and today we geared up at the picnic table. My back was feeling those twin steel 18's after yesterday, plus I still had the argon bottle. At 46 years old, I was glad I'd already carried my stage down to the water. In the water however, it breathed like an old dog and when I adjusted the cracking pressure it free-flowed so I said to the guys "look, I don't care how far in we go, let's just have a swim around and take some

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photos". I had my GoPro in one hand and a borrowed video light in the other so I really wanted a simple dive anyway. Being the great hosts they were, both said "fine" and off we went, Raymond leading and me in the middle

By 20 mins I was once again icy-cold so I gave the turn signal. On the way out I paused for photos, few of which worked out, this cave is just so massive and dark. I made seven mins of deco and surfaced, very happy to have dived here at last. Afterwards Raymond left for work and Tom drove me further up-valley, where snowmelt streams disappear into rock and reappear in caves upstream from Plura. This is the focus of current exploration, to extend the known system upstream. It is tough, tough cave diving. Even today, at the height of summer, there was snow on the ground in thick patches here and there, (and this cave is dived all year round!)



The next day I waited at the airport while local revheads drifted around the racetrack out front. My twin-propped bird landed like Orville in the Rescuers, I climbed aboard and mentally said farewell to Mo I Rana. At latitude 66°N this is the highest I've dived so far, even well north of Scapa Flow, and it would not have been possible without the generous support of my Norwegian pals Tom and Raymond. Hopefully, one day I can repay the favour and take my new friends out to the Nullarbor, which could not possibly be more different than cave diving in the tree-covered snowy mountains of far northern Europe.

**Postscript:** Sincere thanks to Sami Paakkarinen for his photographs of Plura cave.





### The New Halcyon **EOS Mini**

The Halcyon EOS<sup>™</sup> Mini represents a new generation of lighting, blending the performance and convenience of Halcyon Exploration lighting with the size and portability of recreational, hand-held lights. Recreational and technical divers alike will be impressed by the intense output of this convenient, easily adjustable light with hands-free operation.

The EOS<sup>™</sup> Mini provides an amazing amount of light in a small, stylish package It boasts 2.5 hours of full-power run time and 6 hours on low power.



#### Features:

- Nearly indestructible LED module in Delrin® housing with small form factor.
- Amazing intensity is 30% brighter than conventional EOS primary
- Easily stored in a pocket or on a Halcyon harness
- Ideal for travel due to light weight and long burn time.
- Innovative handle provides excellent portability with hands-free operation.
- Adjustable design can rapidly be customized to fit left or right hand, with or without gloves.
- Foldable handle protects LED and lens while in transport.
- May be fitted with an optional, fixed Goodman handle.
- Rear attachment point accommodates nearly any bolt snap or wrist lanyard.
- Removable, compact 2.6 amp-hour, sealed Li-ion rechargeable battery pack

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NAME		Deep Cavern	Cave	Adv. Cave	NAME		Deep Cavern	Cave	Adv. Cave
A.C.T.					VICTORI	A Continued			
Mob:	Heike (CDAA 2776) 0407 230 108 osclan@tpg.com.au	Yes	Yes	Yes		CLARIDGE, Linda (CDAA 2214) Mob: 0408 052 070 E: garinda@tpgi.com.au	Yes	Yes	Yes
<b>NEW SOUTH</b>	WALES					DALLA-ZUANNA, John (CDAA 2	36)		
Worrd	ONBY, Tim (CDAA 3327) owing Heights, NSW 0402 129 253	Yes	Yes			Mob: 0407 877 060 E: jdz@paintandcustom.com.au	Yes	Yes	Yes
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Mob:	MAN, Jane (CDAA 1880) 0407 566 455	Yes	Yes	Yes		Mob: 0413 429 533 E: info@idcscuba.com.au	Yes	Yes	
E. Jan	elbowman@hotmail.com				WESTER	N AUSTRALIA			
Mob:	MBERS, Geoffrey (CDAA 34 0438 059 886 offie1@gmail.com	184) Yes				PAYNTER, Geoff (CDAA 3784) Mob: 0407 445 112 E: gpaynter60@bigpond.com	Yes	Yes	

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#### CDAA 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 AC = ADVANCED CAVE

SITE MT. GAMBIER - SA	LEVEL	OWNER	ACCESS DETAILS
Ewens Ponds	Nil	DEWNR - P.O. Box 1046 Mt Gambier 5290	Groups of 6 or more, phone/mail to Dept. for Environment, Water & Natural Resources (DEWNR). Smaller groups, no need. (08) 8735 1177 Fax: (08) 8735 1135
Gouldens	CN	DEWNR	<b>General Diving:</b> Divers to contact DEWNR and notify of date and site to be dived. Please make requests by phone or fax only.
2 Sisters	CN	DEWNR	Divers must have the correct CDAA diving endorsement for the site and carry current financial CDAA membership card.
Fossil	С		The diver must have signed an indemnity with DEWNR before access is permitted and original copy must be received by DEWNR prior to diving.  Training: The Instructor is to notify DEWNR of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
Piccaninnie Ponds	S	DEWNR	Permit holders by phone or fax. Be aware of delicate vegetation. NOTE: Members can login to www.cavedivers.com.au and download pre-populated indemnity forms.  NOTE: Divers should renew their Piccaninnie Ponds indemnities at least 2 weeks prior to the intended dive date.
Horse & Cart Tea Tree	CN CN	Dale & Heather Perkins Dale & Heather Perkins	At least 1 week prior by email: dhperkins@bigpond.com or phone (08) 8738 4083.
Little Blue Allendale	S C	District Council of Grant District Council of Grant	Permission not required - must carry card. Obtain key from Lady Nelson Tourist Information Centre.
Ela Elap	S	Dean & Carol Edwards	Key available from Simon Livingstone at the Bellum Hotel.
One Tree	S	Mr. Peter Norman	Visit the house before diving. If no one is home - no dive!
Dave's Cave	С	Forestry Sth. Australia Phone: (08) 8724 2876	Maximum 3 divers all weekends between May & November inclusive (check and update on CDAA website).
Hells Hole	S	Fax: (08) 8724 2870 or book on-line via	At least 4 divers in group - 1 with previous site experience.
Pines	C/AC	the CDAA website to arrange permit.	Unrestricted days or numbers - Cave rated divers must not enter Penetration sections (stop signs)
Mud Hole	C	email:	Unrestricted days or numbers.
Nettle Bed	AC	conservationandrecreation @forestrysa.com.au	Open every weekend. Maximum of 4 divers per weekend undertaking 1 dive only (check an update on CDAA site).
Stinging Nettle Cave	AC	Forestry Sth. Australia	Open every w'end max 3 divers per day undertaking 1 dive per day (check updates on CDAA website).
Iddlebiddy	AC	Forestry Sth. Australia	Open every Saturday max 4 divers, 1 dive only (check an update on CDAA website)
			IMPORTANT: Divers must advise Forestry SA of their online booking. Collect permits from the Forestry Office, RHS of driveway to Carter Holt, Jubilee Hwy, Mt Gambier.
			No diving on Total Fire Ban Days. Permit also required to runcompressors during fire danger season. Keys for Hells Hole, Nettle Bed, Iddlebiddy and Stinging Nettle Cave can be obtained from Lady Nelson Visitor Ctr on presentation of Forestry SA permits.
Kilsby's	S	Landowner leased to CDAA	Refer to CDAA 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 diving on Total No animals, visitors or mid-week diving allowed. Fire Ban Days.

#### CDAA 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 AC = ADVANCED CAVE

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SITE	LEVEL	OWNER	ACCESS DETAILS	
MT. GAMBIER - SA	(continued)			
Shaft	S/C	Generally open one weekend a month. Trevor Ashby	For access dates go to the CDAA web page. Nitrox as a diving mix is not allowed in the Shaft unless a trimix endorsement is held but deco mixes attached to the shot line are permissible. Refer to Shaft access bulletin within CDAA Regulations. Divers applying to dive in the Shaft for the first time must document dive experience with twin tanks.  Download form off website.	
Engelbrechts - East - West	C AC	Mt Gambier Council Lessee: Ph: 08 8723 5552 Owner: John & Sue Douglas	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 contaminance. Diving hours are now restricted to 8am to 8pm CST.	
Three Sisters	AC	Millicent Council	Download Indemnity from Web Page. Access available for experienced Penetration divers only. Access agreement must be signed prior to diving. Allow 4 wks for indemnity process.	
Tank Cave	AC	CDAA	Access Manager: David Fielder. Email: tankcave@cavedivers.com.au	
Baker's Cave	С	Janet & Bruce Saffin	Access Manager: Matthew Skinner. Email: bakerscave@cavedivers.com.au Climbing equipment required. One member must have previous dive experience at site.	
NULLARBOR - WA	4			
Cocklebiddy	C/AC	DEC	Apply in writing for permission to dive at least 4 weeks in	
Murra El Elevyn	C/AC	DEC	advance of trip to: District Manager, Department of Environment and Conservation (DEC)., PO Box 234, Esperance, W.A. 6450.	
Tommy Grahams	C	DEC	Phone: (08) 9083 2100 Fax: (08) 9071 3657.	
Burnabee	AC	Department of Lands, WA	Apply in writing or email for permission to dive at least four weeks in advance of trip.	
Olwolgin Cave	AC	Department of Lands, WA	Miss Shannon Alford, Email: Shannon.alford@lands.wa.gov.au	
Weebubbie	S/C	Department of Lands, WA	Phone: (08) 6552 4661 Fax: (08) 6552 4417 P.O. Box 1143, West Perth WA 6872. A site indemnity form must be filled out for each visit to the site. Diving permission acknowledged by official letter from Land Owner.	
WELLINGTON CAVES	S - NSW			
Limekiln (McKavity) cav	re C/AC	Wellington Caves	Both Penetration and Cave Level are being accepted for this cave depending on its water level at the time. The cave has a restriction at the entrance which is underwater making it a Penetration Dive. During drought, the water level drops to form a small lake below the restriction allowing experienced Cave Divers access to this delicate cave.	
Water (Anticline) cave	С	Wellington Caves	Affected by high CO <sub>2</sub> levels during Summer/Autumn. Access is co-ordinated with the Wellington Caves management by Greg Ryan - Email: gjryan@gmail.com. Phone (02) 9743 4157.	
Rum Jungle Lake	S	Coomalie Community Govt Council	Unrestricted access currently exists – Please refer to website.	
Burrinjuck Dam	S/C/AC	NSW Parks & Wildlife	Please refer to website. There are no specific access arrangements.	

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