



C.D.A.A. Newsletter

No. 124 - JUNE 2013

COVER STORY

**FRENCH SPELEO
CAVE DIVING**

PLUS

OLWOLGIN CAVE REVISITED

EARLS CAVE

MEXICO, VEINS OF THE EARTH

IAN LEWIS' KARST GEOLOGY

CAVE DIVERS ASSOCIATION OF AUSTRALIA

(Incorporated in South Australia)

Print Post No. PP 381691/00020

SENTINEL



Introducing the new G260

The new G260 is a balanced adjustable second stage featuring metal components for excellent cold water resistance. Its high performance makes it the ideal choice for all demanding divers and it will be the natural choice for G250 fans. The new left-right hose attachment option makes it perfectly suited for tech diving configurations.



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Cover:

Peter Buzzacott
exiting the
first sump in
Cergols Cave,
south France.

Photo by:
Nicklas Myrin

CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

P.O. BOX 544, Mt Gambier, SA 5291

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 Policy# 5Y-CAS-08-041140
Insurer: Liberty International Underwriters ABN: 61 086 083 605
Level 27, 1 Macquarie Place, Sydney NSW 2000
Name Insured: Cave Divers Association of Australia
Public Liability \$10,000,000 any one claim. Expiry: 30 September 2013.

'The Basic Rules of Cave Diving'

Through the study of past cave diving related accidents, researchers have found there are a number of common causes for these accidents. By becoming familiar with these causes, divers can learn to avoid similar accidents.

From the research, five main contributing factors have been found in over 90% of cave diving related fatalities.

These causes have led to the five basic rules:

- **Be Correctly Trained.**

In the vast majority of fatalities world wide, the divers involved had no formal cavern/sinkhole (Deep Cavern) training. Of those who did have training, most were diving outside the recognised limits of that training. Many open water Instructors have died in caves.

- **Run a Continuous Guideline to the Open Water (Surface).**

In a large number of overhead fatalities, victims failed to run a continuous guideline from the open water. When silting took place or they became disorientated, exit was then not possible with gas remaining.

- **Always keep a Minimum of 2/3rds of the Starting Gas Supply for Exit when Entering an Overhead Environment.**

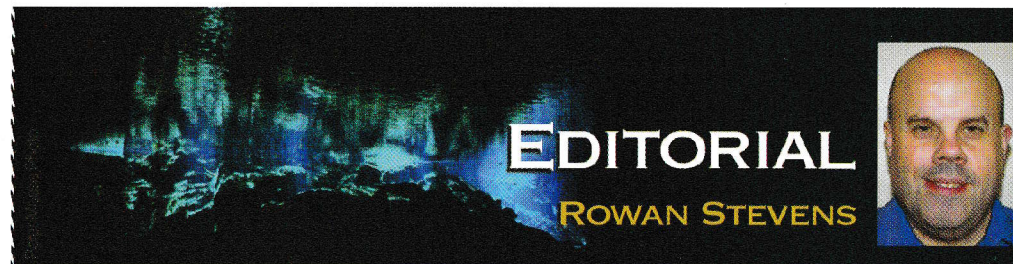
The rule is seen as the minimum in overhead environments and may not offer enough gas if trouble is encountered at the maximum penetration.

- **Always use a Minimum of 3 Light Sources.**

In cave diving this would be a primary and a minimum of two backups, all with the ability of lasting the duration of the dive.

- **Don't Dive Below 40m on Compressed Air.**

The CDAA's maximum depth limit is 40m. Of the trained, well equipped cave divers who have died, almost all were diving beyond 40m on air.



Dear Members,

Winter is well and truly upon us with colder nights and shorter days. That makes it all the more attractive for diving as being in the water is actually warmer than out of the water. To continue your freshwater diving adventures renew your membership today at www.cavedivers.com.au. See page 9 for further information. If you are unable to login to the web site contact records@cavedivers.com.au for a password reset.

This year the 2013 Annual General Meeting will be held in Mt. Gambier on Saturday November 9, 2013 to coincide with 40th anniversary celebrations. On page 8 is the official AGM notice including a call for Director Nominations, Member Motions and Amendments to the Constitution. On page 18 there is a summary of the planned 40th anniversary celebrations and calls for assistance. Make yourself known to Helen and Richard as your support will create a more memorable occasion.

In this issue, Peter Buzzacott delights us with French Speleo Cave Diving while Paul Hosie shares his explorations in Part 1 of Olwolgin Cave on the Roe Plains, WA which is now open to CDAA Advanced Cave divers to experience. See website for further details on Olwolgin site access.

Also, Michael Mallis shares his diving experiences in Earl's Cave, which incidentally was used as a dumping ground for farm animals caught in a bushfire in the area in the 1980s. There are also articles on Mexico from Jane Cowan and on Raising the Water in Piccaninnie Ponds and Picks Swamp from Ian Lewis.

Until our next special 40th anniversary edition of Guidelines, happy and safe diving.

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

Articles for Guidelines Sept. 2013 - Deadline is Aug. 15th.

- **Send articles by email to guidelines@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.

Pine Tank Lodge

Just 5 minutes drive from the best Cave & Advanced Cave dive sites.

Lodge Features:

- Accommodates 14 divers in 7 rooms; three double bedrooms and four rooms each with two single beds.
- Two separate socialising areas
- Endless hot rainwater showers in two separate bathrooms.
- Airfills, Nitrox, Trimix, high pressure O₂
- Undercover gear drying
- Barbeque facilities

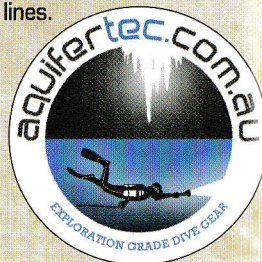
Courses:

- Deep Cavern to Cave
- Approved TDI Facility offering full range of TDI Technical Courses, Nitrox, Trimix, Deco Procedures and Extended Range.
- CCR Training KISS
- Sidemount



AquiferTec Australasia

- Specialist importers of Technical Cave Diving Gear.
- Bonex Long range Scooters 11-22km
- Shearwater Predator Computers.
- Contour compact video cameras and housings.
- Best prices in Australasia for the range of SANTI drysuits, undergarments and after-dive wear.
- **Sole Australasian importer for SITEC boosters.**
- **Best prices for Light Monkey HID and LED lights.**
- Armadillo Side Mount systems.
- O₂ sensors: Maxtec and Teledyne, Dive Soft trimix analysers and Oxycheq.
- 300mtr high pressure fill lines.
- Fill whips, digital gauges.
- Remote fill manifolds.
- FLEX Side Mount CCR.
- Spools & Reels.
- Narked@90.



Pine Tank Dive Lodge AquiferTec Australasia

Lake Edward Road
Glencoe, South Australia

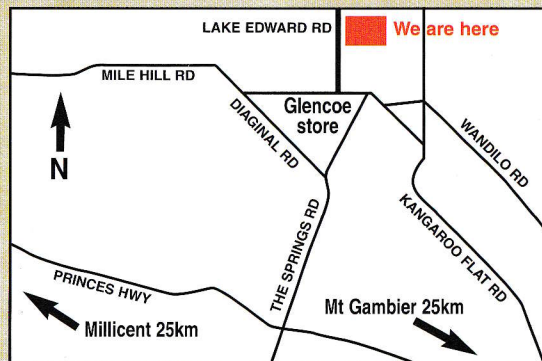
Phone: 08 8739 4020

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NATIONAL COMMITTEE UPDATE

JUNE 2013

While things have appeared to be quiet over the last quarter, it's actually been a very busy time for many of our volunteers and Committee members.

On the diving front, I mentioned in my email posting to you that we were waiting on the new indemnity agreement for the Roe Plains and Weebubbie caves. This has now been received and with it, we can finally provide ready access to the Roe Plains caves. By the time you receive this issue of Guidelines, we will have a new online booking process for you to access these caves.

Members are reminded that booking into sites is not optional or something to be taken lightly. Our ability to gain and maintain access is built on trust. Members are reminded to be vigilant with regards ensuring they are financial when attempting to book dives. If you are not able to book on, then it is likely your membership has lapsed, in which case the system will not allow you to book a site until this is reconciled. Non-Financial members who knowingly turn up to dive put our access to sites at risk, in addition those members who turn a blind eye to same issue are just as much a part of the problem and will be dealt with accordingly. Regrettably, in the past quarter we have given a long term suspension to one member for not following the published site access protocol.

Over the past quarter, two things have taken a lot of our time. Firstly was the 2013-15 business plan and secondly a significant update of the Regulations. Both will be published shortly and can be downloaded from the web site.

The Business Plan sets out the direction and the goals of the Association over the next three years and provides the framework and rationale for our budgeting process. It has been formulated based on your feedback from the state meetings and online survey.

The CDAA Regulations have been developed over a number of years, and by a number of separate individuals. Our Regulations are spread over the member regulations, access protocols, policies and instructor teaching standards. It is often very confusing to figure out precisely what is allowed and what is not. It is often difficult to tell what is a rule or what is guidance.

An interim set of Regulations have been developed. In these Regulations we have brought together like themes as we did for the Constitution. In doing this, inconsistencies became more obvious and this has enabled changes to be made. Once the review of content of the Regulations is complete, the Constitution subcommittee will review the document for wording, consistency and alignment with the Constitution.

During the process so far, of most significance in bringing like themes together is that we set many rules in place instead of setting principles and letting our instructors teach people the right way. For example, to share air, we regulated a 7ft hose. The issue is really that you must be able to share your air with another diver – a long hose is one technique and 7ft is a length that suits most people. Instead of blindly looking at the regulation and saying that if we wear a 7ft long hose we are safe, we need to focus more on the risk itself.

It is our intention to run some national workshops to look at the risks in diving and to determine how regulations, on-going education and training can be best used to lower these risks. Our expectation is that we will see our training uplifted and will see more structure around our on-going education (e.g. workshops, articles in Guidelines, videos showing techniques, etc.).

There has also been a significant ramp up in preparations for the 40th anniversary celebrations, scheduled for November 2013 in Mt. Gambier. This issue of Guidelines contains an overview of the celebrations. More information will be posted to the web site on a regular basis here:

<http://www.cavedivers.com.au/agm2013>

As always – may your drysuit remain wet on the outside.

The National Committee



John Vanderleest,
National Director



Helen Higgins,
Business Director



Linda Claridge,
Standards Director



Grant Pearce,
Site Director



Rowan Stevens,
Publications and
Records Director

NOTICE OF 2013 ANNUAL GENERAL MEETING, ELECTION OF NATIONAL COMMITTEE MEMBERS AND VOTING FOR MEMBER MOTIONS AND CONSTITUTIONAL AMENDMENTS

This notice is issued pursuant to Clause 12 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 November 9, 2013** at the **Main Corner Dress Circle, 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, Publications & Records Director and Site Director

*Member motions

*Amendments to the Constitution

The Returning Officer must receive nominations for the National Committee positions no later than the close of business **Friday August 16, 2013**.

Mail to: Returning Officer, CDAA - PO Box 9286, Mt. Gambier West, SA 5291

The Business Director must receive member motions and proposals for amendments to the Constitution no later than close of business **Friday August 16th, 2013**. Items received after this date will not be accepted nor will any extensions to this date be granted.

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

Members intending to nominate for a National Committee position must be eligible 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 National Committee members are contained in the Constitution of the Association. Nominations must be in writing and be signed by the nominee, the proposer and the seconder all of whom must be eligible members of the Association.

The polling date close for the election (if required) is **Monday November 4th, 2013**.

The election of National Committee members and voting on amendments to the Constitution will be conducted entirely by postal ballot. If you wish to vote you must be an eligible member of the Association and you must only use the ballot papers to be provided in the next issue of Guidelines (#125), on the Association website cavedivers.com.au or by special mail out.

The ballot papers must reach the Returning Officer (Darren Walters #3555) no later than close of business, **Monday November 4th, 2013**.

Detailed voting information will be provided with the ballot papers.

Questions may be directed to the Returning Officer at returningofficer@cavedivers.com.au

Helen Higgins, Business Director - business@cavedivers.com.au



CDAA ANNUAL MEMBERSHIP EXPIRY IS 30 JUNE 2013

It is your Association and it survives not only on the hard work of its volunteers and representatives, but also on the income derived from membership fees. Renew your membership now for 2014 and beyond. You can pay up to 10 years in advance to lock in against future fee increases.

To renew:

1. Login to the web site: www.cavedivers.com.au
2. Select 'Renew My Membership' from My Membership menu.
3. Ensure your contact details and email address are correct. Update your photo (if required).
4. Payment via PayPal or Direct Deposit.

Did you know?

- Non-Financial/Past Members can now login to the web site to renew.
- After you login to the web site your membership type and membership expiry (if applicable) is shown at the top of each web page.
- You can only see the dive booking schedule and make dive bookings up to your membership expiry date.

For any issues or assistance with membership renewals contact:
records@cavedivers.com.au

FRENCH SPELEO CAVE DIVING

Story
Peter Buzzacott
Photos
Niklas Myrin



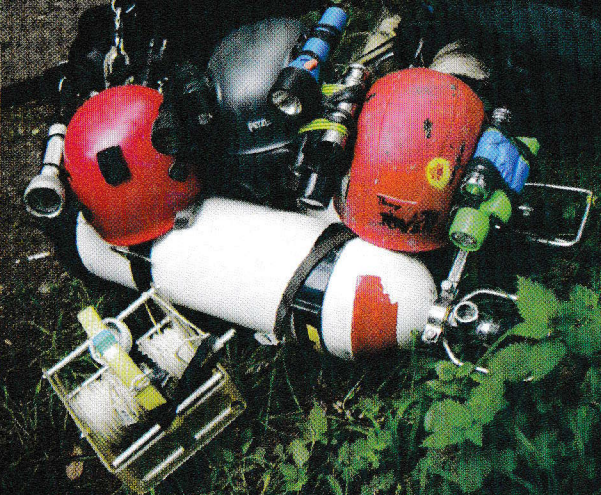
Cave diving in France is divided philosophically; there is a sport diving association and a speleo association, the *Fédération française de speleology (FFS)*. Soon after moving to France I joined both. Access to the more popular diving caves is unrestricted. Anyone can simply park on the side of the road and dive kilometres of cave. Access to sumps requiring vertical or Sherpa support, however, are a team effort and this is where your local speleo club comes in handy. Each club is free to recognise when a member scuba dives and to use those skills. Generally, it is up to the member to accurately describe his ability and not to overstate it. Speleo cave divers are encouraged to seek out peer opinion and not to bite off more than they can chew. For many, but not all, the best way to get a firm handle on solo sump exploration is to take the *FFS plongée souterraine* formation, that is, the French underground diver course.

Thierry Praud, (pronounced "Teary"), the FFS representative in my region, invited me to join a course in south France being run by Nelly Boucher, the area rep for Normandy. Both, I discovered later, have a solid reputation in French cave diving circles. Thierry also rather honestly advised *"you do not need this training, you can dive anywhere you want already, but you will learn the French way"*. I signed-up.

The sun was low in the west when I arrived at our stone farmhouse. The men shook hands, the women kissed both cheeks, we were shown our rooms and at

8pm course orientation started. At 9:30pm we started cooking dinner and broke out the wine. The French are highly social, especially when it comes to food and drink. Every meal is an opportunity not to be wasted. The FFS cave diver course, last revised in 2005, is designed from the outset to produce autonomous (solo) sump explorers, feeling their way around in zero visibility. There is no gradual progression from well lit, spacious caverns, through ever smaller caves and decreasing conditions. The progression here begins with learning to solo cave dive, followed by diving caves to gain experience, taking additional training (e.g. trimix, rebreather, etc) and supporting other explorers. When you are ready then you go it alone. This philosophical approach manifests itself at every step of the way. For example, there is a 1:1 instructor:student ratio and at the very start we were told *"you are alone, the instructor is behind you watching what you do but you are autonomous"*.

Course theory is similar to that covered in CDA courses, starting with cave diving history and the evolution of training based on accident analysis. This is followed by cave diving equipment, gas management, line work and the cave environment. Landowner relations were not covered in detail, presumably because either there is no landowner or else your club will arrange it. While the content may be similar the fine detail differs somewhat. To start, FFS divers work on fifths. They started decades ago with halves-plus-20 but too many died, so they moved to thirds. Still there were accidents so they



Far left: Peter Buzzacott in the small pool at the end of the first sump in Cregols Cave, South France.

Left: valve protection is standard

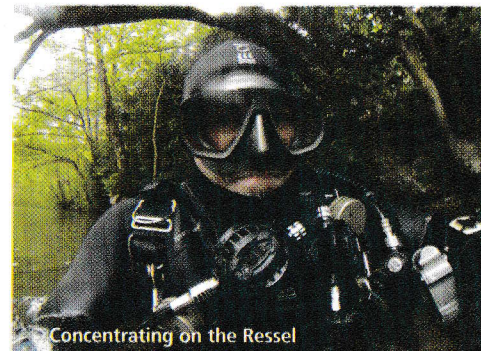
Above: lights are placed on the helmets for hands-free use
Below: 200m reels

changed to fifths. I considered this carefully and crunched a few numbers. Example 1; two divers with independents turn on thirds and one suddenly loses a bottle. In theory, two divers now have what they need to escape with an extra 50% in reserve. Example 2; two manifolded divers turn on thirds and one knocks his isolator/burst-disk and loses the lot. In theory, these two divers now have only exactly what they need to escape with no extra in reserve. Example 3; a solo diver with twin independents dives to thirds, turns and loses a bottle. Now one diver has exactly what he needs to escape, with no reserve, which appears half the risk of example 2 but still sub-optimal. Example 4; a solo diver turns on fifths and loses a bottle. Now he has exactly twice what he needs to escape. The theory is that this allows adequate reserves for stress and sorting out the issue. It sounded a bit conservative to me so I calculated the practi-

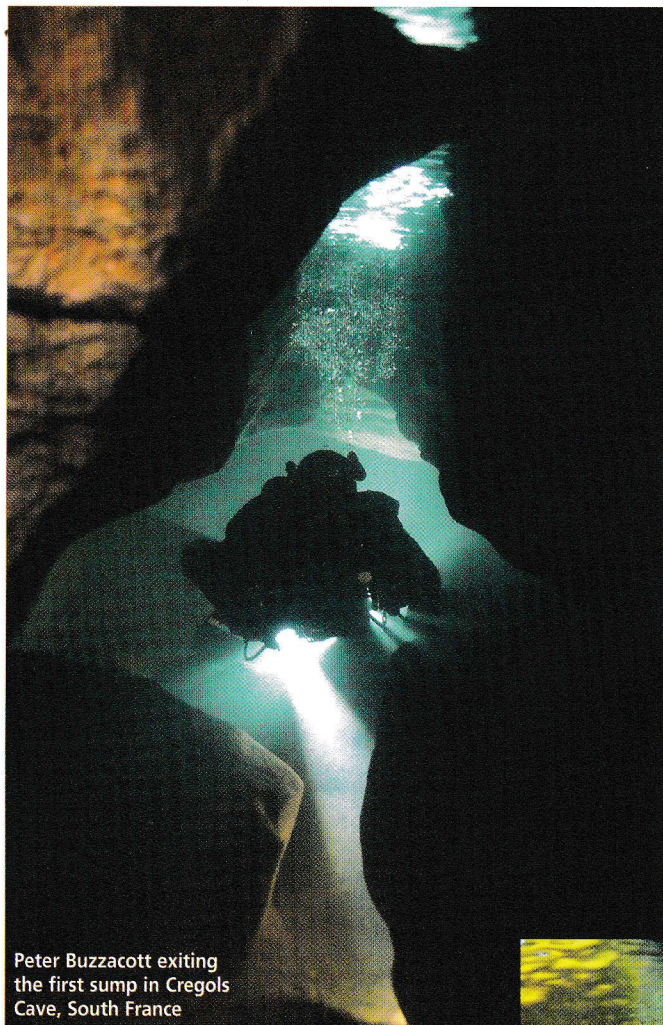
calities. 200 bar is not an unusual fill pressure here or in the US so, for simplicity, I started with that. In Australia we would take 20 off to make it simple, divide 180 by 3, giving 60 bar of useable gas, so we would turn on 140 bar. Here we would divide 200 by five, giving 40 bar, so we would turn on 160 bar. With the difference so small, I decided fifths sounded like a good idea for solo diving upstream.

In the equipment department there are a few differences too, as you would expect. *"Simple is best"* Thierry, our instructor would say. His weight belt (shown) is an example. Secateurs are preferred over knives, of course manifolds are impractical for speleo, wetsuits better than drysuits, no arrows or cookies, no long hose, a double bungie around your neck and colour-coded regs to match your valves, (for quick shut-downs). SPGs are tied together so with one hand both pressures are read. These are also colour coded. Lights are worn on the helmet because, afterall, there is not going to be anyone to signal when you are alone.

Time for the first dive. There were four of us students; Stefan, Stefanie, Juan and I. The others had never dived in a cave before and today would be their first go at it. The instructors explained that there would be no tests in the cave. They would check our comfort outside; buoyancy, mask clearing, reg clearing, and then if we were happy we could go in to see if we liked it. We geared-up beside the Ressel, one of the most famous cave dives in the world and still actively being pushed. Teams of German DIR types filed past, ▶



Concentrating on the Ressel



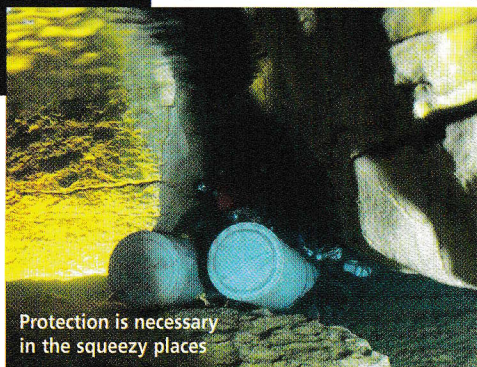
Peter Buzzacott exiting the first sump in Cregols Cave, South France

two long-body scooters and six tanks per diver. A couple of Dutch TDI cave divers wearing independents came over to say "hello", a few French divers from the sport diving association greeted Nelly warmly. We geared up quietly – I was very pleased we had come to this cave.

One-by-one we descended through the murky, green river, in visibility no more than half-a-meter, our fingers forming an "O" around the gold-line tied to an overhanging branch. At 3m the water cleared, the cave appeared below us, we demonstrated comfort and in we went. Wow, the Ressel; fantastic! It is impressive from the start and gets better with distance penetration. Visibility was excellent and the cave spacious but I was training for zero-vis so, while

rebreather divers scootered passed us, I kept my fingers around the line. With just one small back-up light on I could see only a short distance around me. A restriction appeared, about the size of a small windscreen, but the cave was large around it. Instead of travelling over the fallen slab and following the main passage the line travels under it, forcing trainee divers to pass-through one-by-one. We reached a point of interest and Thierry made sure I was noting what lay before us, then he signalled the turn and we exited. Our first dive was to more than a few multiples of the 40m limit for CDAA Deep Cavern divers. I had resolved to embrace this course regardless of previous training and experience but on this dive at least, I missed my canister light.

Back at the farm we 'inflated' the bottles, hung up our gear to dry and moved inside for the de-brief. Then it was time for another feast, (and that is no exaggeration), followed by a second, informal debrief around the dining table. At about midnight the first day wrapped up. In my room I turned off the light before climbing into my new French army sleeping bag.



Protection is necessary in the squeeze places

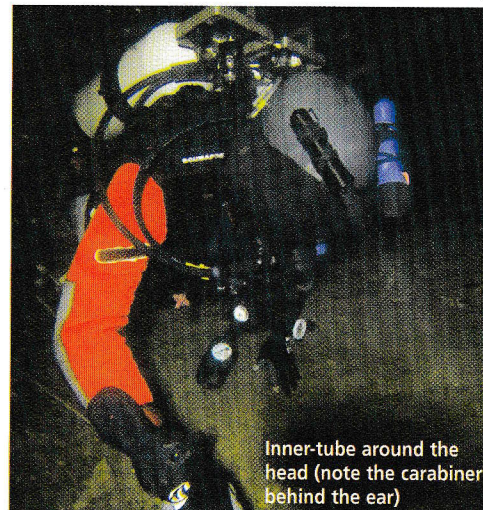
I looked at the window and there, on the opposite side of the valley, a series of magnificent stone buildings were softly lit, like a fairy tale castle.

Day two began with bowls of hot black coffee then soon we were handling reels and learning line theory. ▶



200m is standard and no emergency reel is carried. In general, if you only have one reel then you should stop lining virgin passage after 150m, cut the line and keep 50m for emergencies. "Dorf" style tape markers are placed every 10m on the line and these are cut acutely on the exit side for no vis work. The line is secured to rocks with rubber slings cut from inner tubes. You see this everywhere in French caves; rubber slings around projections holding the line in place and tense. When T-ing into an existing line simply tie a non-slip knot with a long tail, and then tie the tail on the exit side. A secondary, non-slip knot is then tied to a rock not far from the T.

Soon we packed up the gear into two vehicles because parking over this holiday weekend was congested. There were fifteen vehicles at the Ressel today, mostly vans, but already people were packing to leave. Soon we were setting up near the river. Divers entered or exited while we geared up and then it was our go. Some way into the cave I tied into the gold-line and wondered if anyone knew my knotted tail pointed towards the exit. All around us divers sported arrows and cookies. I wondered if someone might suddenly appear behind me low on gas, having



Inner-tube around the head (note the carabiner behind the ear)

Peter Buzzacott exiting the Source de Landenouse, South France

followed my T from the main line. But, that's not our concern for two reasons; first, it is the French way and if you are going to dive in a French cave then really you should know the French system and, secondly, this won't be an issue when I'm sump diving because I'll be the only diver in the team.

It was taking an age to secure the slings to the line and then they kept slipping off the rocks. I managed nine, probably four of which stayed in place. Exiting the cave was a nightmare. It took three times as long to undo the rubber as it did to fix it. Eventually I gave up, ripped the rubber slings off the rocks and just reeled them in, finally even cutting the knotted line instead of undoing the non-slip knots. That is, apparently, the French way, (although clearly I hadn't done very well at it). We returned to base, inflated bottles, sorted gear, then prepared dinner, finally we staggered off to bed at 12:30am.

Dawn was another joy; mist in the valley below, bird-song and the promise of a new cave in the morning air. Our first lesson was on gas management. Standard stuff you would think, adapted for fifths, but not so. For example, yesterday one of the bottles had not been filled so the diver had arrived with 180 bar in one bottle and 155 in the other. My "fifths" solution, when asked, was to add those together,



Top to Bottom: Our classroom

Obviously, weightbelts do not need to be released quickly in speleo diving

Peter and FFS Instructor Nelly

The forlorn remains of the tributes to the recent death in the Ressel

making 335. Divide that by five gives 67bar, times that by two (two fifths per bottle) gives 134 bar. That would be my turn pressure in each bottle. I would use (180-134) 46 out of the first bottle and (155-134) 21 bar out of the second, making 67 bar total out of 335, which is one fifth. Simple, I thought, just turn on 134. No no, that's too complex, better to divide the smallest by five, so $155/5 = \text{about } 30 \text{ bar}$, then just use 30 bar out of each bottle. Of course, this does also mean you have different turn pressures for each SPG.

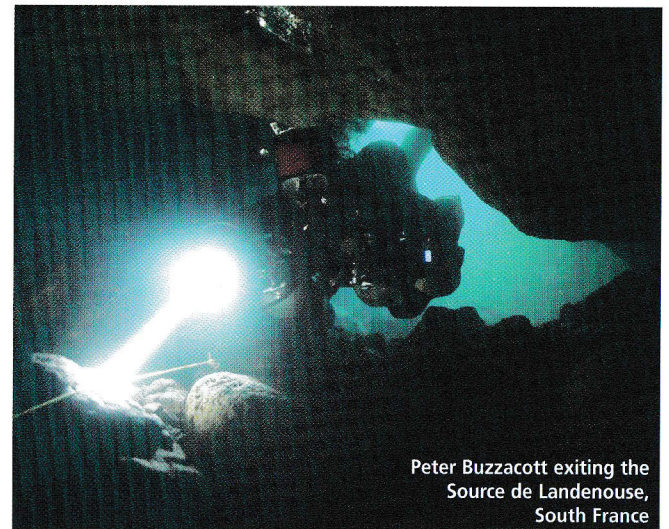
After lunch we set off for "Trou Madame", meaning "old wife". This resurgence cave usually involves a short trek upstream, then a 50m crawl to reach the flooded passage, but recent flooding meant the water was higher than normal and we could float the 50m. This was our third and last dive of the course, a "validation dive" where we should consider ourselves autonomous and turn on fifths or sooner after referencing the cave and line on the way in. Then a black-out would be fitted and we'd feel our way out. Thierry said I could go first today and if I turned early and had enough gas remaining at the end then I could dive again when Juan dived. We dived and I liked this cave even more than the Ressel. The rock is totally black, then it is pale, then there is clay, and sand banks, around every corner it is different. At 150m I was 15 bar down and signalled the turn. Thierry appeared surprised but I showed him my gas and he nodded. Then he pulled out a section of truck-tyre inner-tube and wrapped my head in it, securing it firmly with a carabiner, just to be sure. Exiting was non-eventful.

My second dive was even more fun and I was surprised that Juan reached 190m before turning. Afterwards we all congratulated ourselves while packing up the cars and I asked Stefanie how far she'd reached before turning. "Oh, about 270m" she said while Nelly nodded confirmation. That's right, on the French cave diver course you can make a 270m total black-out exit on your third ever cave dive. I really did question at this point if we don't nanny Australian cave divers just a little.

That night, after stowing the gear we had another delicious meal and then formal debriefs, which finished around 1:30am. The next day we packed up and left at midday, the course was over and I had completed it. But, did I pass? Well... No. None of us did. The course is not pass/fail, each of us was advised in the debrief what we should consider our personal limitations, and where we might feel autonomous. It is up to us then to listen to this advice or ignore it. In my case, I was asked what I thought of my own abilities and I answered that I felt happy diving autonomous in most conditions including vertical access, no vis, trimix, etc,

but that I'll need practise laying rubber. They both nodded, turned the page, read their own assessment and, I was pleased to learn, this was precisely their opinion too.

So, in conclusion it was a pleasure taking this course and, in my view, money well spent. In fact, it cost only 300 euros and that included food, wine, accommodation, gas and daily transport to the caves. Plus, after I received my certificate I was advised the FFS will refund a good chunk for anyone who completes the course because they financially support exploration and autonomous "plongeurs" are expected to map new cave. Even right at the end I was surprised by the philosophical differences between France and Australia. Then we stood in the warm sun and Nelly asked where I would go next and I said back to Trou Madame for a longer dive. "How far?" she asked. "I don't know, maybe 600m or so, just have a look around." I replied. Nelly smiled and I waited for the customary warning "ooohh, be care-



Peter Buzzacott exiting the Source de Landenouse, South France

ful" but instead she beamed, obviously pleased that already I was planning a solo dive and simply said "well, you saw 200m yesterday." So I arrived on site and set-up my gear quietly. One other diver was packing up and confirmed he'd just dived alone to around a kilometre. We swapped

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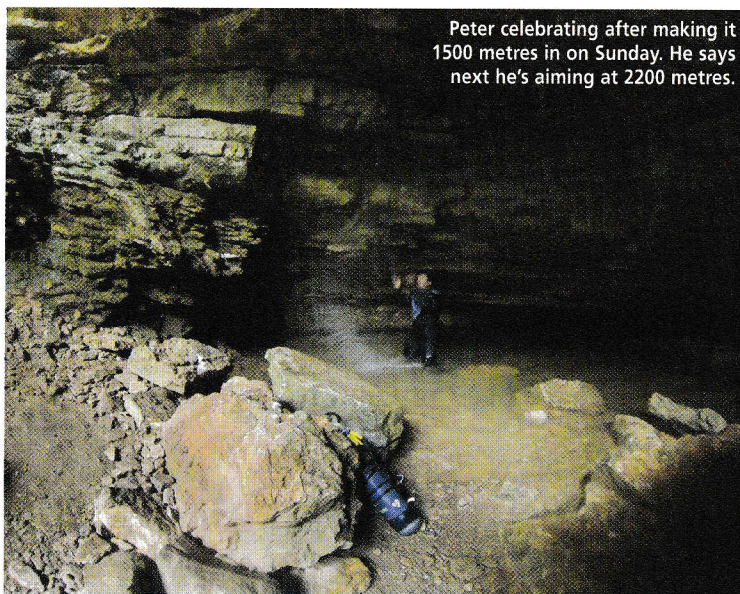
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John, Sharon and Erica.

details and agreed to dive at the same site one weekend. Then he left and I was totally alone. I carried my kit to the cave mouth, got dressed and slipped in. From 50-100m I re-checked regs, lights, inflation, computers, gas and compass, then hit my cruising speed of 20m/min and ticked over some metres. 500, 700, 900, I was kinda hoping I'd reach the 100m long gallery at 1000m in but I was approaching fifths by now and reached a large, shaft dropping to 14m. I descended for a sticky, clocked 940m, switched



Peter celebrating after making it 1500 metres in on Sunday. He says next he's aiming at 2200 metres.

on my GoPro and headed back out, pausing to video an air-bell on the way, dive time 100 mins. The next day I bought another two 11.4 litre aluminium stages and will return this coming weekend, aiming for

1500m. When I posted this on Facebook Thierry replied "great to see you making the most of your week off". Yup, the mind-set here suits me, for sure.

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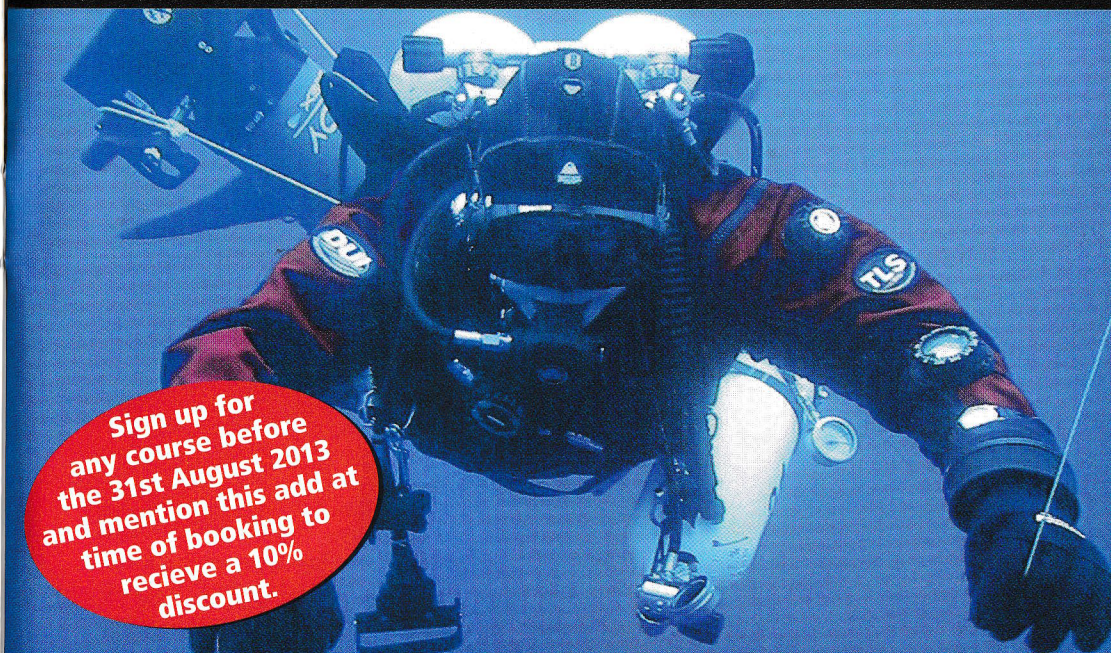
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CDAA 40th Anniversary Celebrations

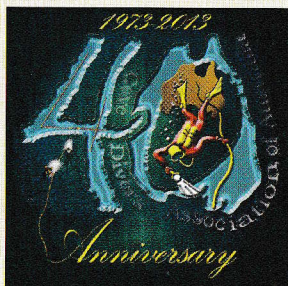
As many members may be aware, 2013 is the 40th Anniversary of the founding of the Cave Divers Association of Australia. During this time the CDAA has established a reputation as the premier Cave Diving Organisation in Australia and has been instrumental in not only maintaining access to historically dived sites in Mt Gambier but also in opening up cave diving access around the country.

The CDAA has during this time developed from a small group of similar interested divers into a globally respected Training and Member Organisation whose divers now access caves around the world.

As such the following 12 months will celebrate both the history of the CDAA and the success of members here & overseas with events planned for Interstate Capitals and a special 40th / AGM in Mt Gambier.

The National Committee have therefore asked that the Organising Committee consider a range of activities that will offer maximum benefit and involvement for members attending the AGM and those unable to be there on the weekend.

- **The main CDAA 40th/AGM Conference** is scheduled for the weekend of the 9th/10th of November, with days either side for in water activities & special functions. Members are invited to start planning to attend this event as we hope to have as many past & present members as possible. The normal weekend's activities will be enhanced with a special focus not only on the past but also the future of cave diving, and especially the growing use of Rebreathers. The events will include equipment exhibits, try dives, workshops and a range of presentations. Two International speakers have already been confirmed & details will be available in next Guidelines and on the CDAA Web Site.
- **A CDAA Cave Diving Photography Competition** will be run in the lead up to the 40th/AGM Weekend. Categories will be separated to allow all members to enter and prizes awarded to both Amateur & Professional Photographers. Details will be placed on the CDAA Members Forum and Web site shortly.
- The Highlight of the 40th/AGM will be the **CDAA 40th Anniversary Dinner** with special guests, inaugural CDAA Awards and prizes. Held on the Saturday evening this will be a night not to miss!
- **State Events** are been planned with your State Representatives leading up to and including the AGM, designed to bring your Association to you! These are being scheduled along the following lines:
 - Lead up events to include Interstate Members & Directors with workshops and discussion sessions.
 - Our 40th/AGM International Guests to present separate subjects on State visits, suitable for members attending both events and ensuring that those unable to get to Mt Gambier for the anniversary \ will still get the benefit of the speakers.
- **Commemorative Activities** will include the formation of the Association, the past 40 years of the CDAA and the members involved.



Members interested in being involved in both local and the 40th/AGM Celebrations are asked to contact your State Rep's.

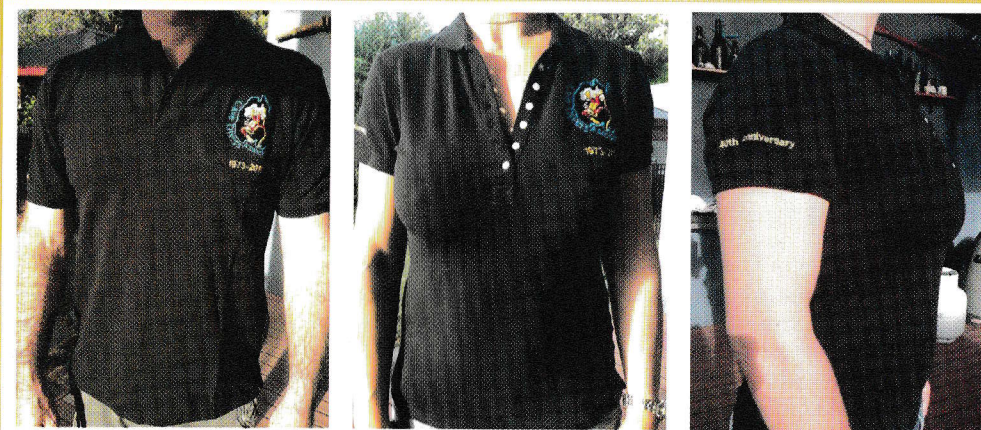
Any members wanting to offer prizes for any activity are invited to contact Helen Higgins on 0411-720-440 or business@cavedivers.com.au

Tickets to the Dinner will go on sale with next issue of Guidelines.

Any questions regarding the 40th / AGM or members wanting to offer assistance are asked to contact Richard Taylor (#2292) on 0417-426-371 or taylor.richardb@gmail.com

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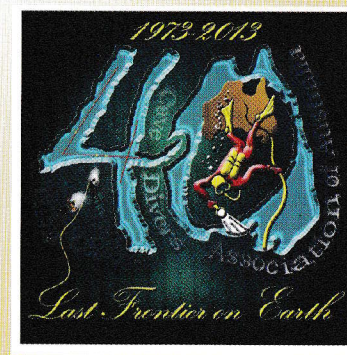
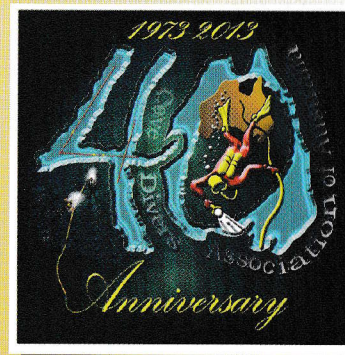


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Roe Plains, WA

OLWOLGIN CAVE - REVISITED (Part 1)

by Paul Hosie, Cave Exploration Group Western Australia (CEGWA)

On 6th October 2011, a remarkable thing happened when the author decided to revisit a muddy pool of water he had last looked at almost ten years before. The pool was in the entrance chamber of Olwolgjin Cave where 2,700m of cave diving passages had been explored and mapped since it was first dived in 2002 by the author and Andy Nelson (CEGWA). Whilst all the diving and exploration was being done from the 'main' (North East) pool, the 'other' (South West) pool had been ignored.

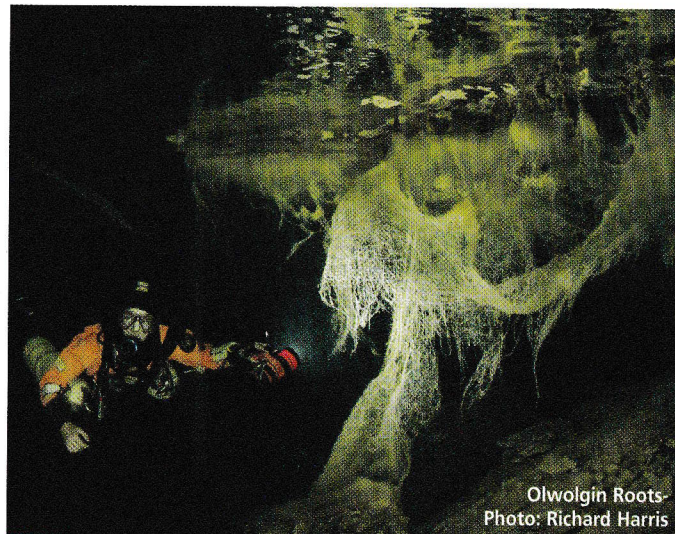
At the bottom of the 'other' pool, an awkward restriction was negotiated which lead to a further 80m of silty and reasonably small cave diving passage. Later that same afternoon, with full 7litre cylinders and reels of knotted guideline, the author and his primary dive buddy Alan Polini (CEGWA) extended the new line straight into large phreatic conduit for several hundred metres with no end in sight. Turning on their thirds, they left an exploration reel tied off to the top of a large rock in the middle of a big tunnel. Whilst surveying back out of the cave, several substantial side passages to the South were noted. There was disbelief around the campfire that night as Alan and Paul excitedly relayed their discoveries to the rest of the group. Sweet dreams indeed that night, and many more since!

Exploration in Earnest

This discovery was made at the end of a Roe Plains sightseeing trip with Brian Kakuk (Bahamas),

Ken Smith, Richard 'Harry' Harris and Grant Pearce (all CEGSA). As Alan and the author had to drive back to Perth the following day, they prepared for one more dive in the new cave but only after Brian and Ken dived next to extend the line and more importantly, retrieve Ken's reel that was still in the cave! The next morning, Brian and Ken explored several hundred metres of the main conduit (A Tunnel) and when they turned around on their thirds, Ken reported "I was so overwhelmed by what we had just done that I was shaking with excitement, so much so that I couldn't hold my pencil steady enough to write down the survey data, so Brian had to do it for me!".

As soon as Brian and Ken were clear of the water and it was clear that extending the main conduit would require stage bottles, Alan and Paul headed in, laying over 400m of line in side passages they had noted



Olwolgjin Roots
Photo: Richard Harris

STOP!!

Please swim
directly above
Guideline for
next 50m, or...

your exhaled bubbles WILL obliterate
the hanging roots of Olwolgjin Cave.

This is a Conservation Initiative brought to you by:
Australian Speleological Federation - Cave Diving Group
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Thank You.

for recognising
the fragility of
this cave.

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that were to become the C and D Tunnels. A gas failure (free flowing 2nd stage) experienced by Paul at the furthest penetration of the C Tunnel (p600m) during this dive meant that no survey data was collected. While Alan and Paul drove back to Perth, Harry & Grant extended the main tunnel using stage bottles to a penetration of over 800m with the passage continuing, though it had reduced down to a much smaller, side-mount only sized tunnel.

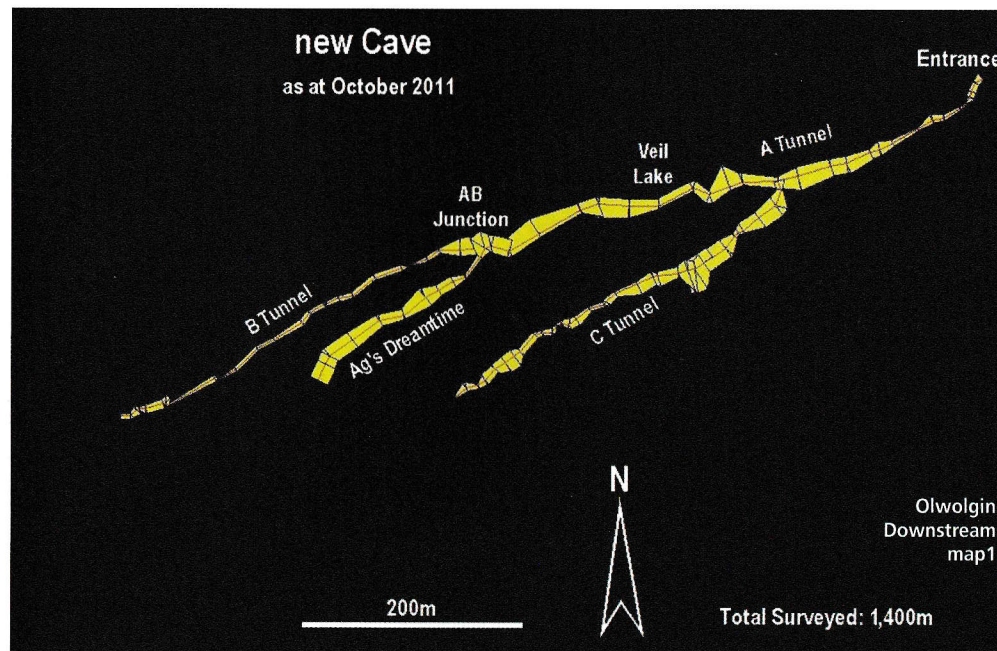
Ag's Dreamtime

Before the rest of the group headed for home, Brian

Kakuk was to make a sensational discovery whilst checking side tunnels at a penetration distance of 400m-500m. After pushing through a small, non-obvious side tunnel for 20m or so, the passage opened into a tunnel of generous proportions: 10-20m wide and 3-5m high. This stunning cave diving passage continued for almost 200m before Brian had to turn on his thirds where he tied off on a rock in the middle of a large, continuing passage. On Brian's suggestion and with approval of her family, the passage was named after Australian cave diver Agnes Milowka who had tragically died in a cave diving accident earlier

that year. Brian had this to say shortly after his discovery: "I was hoping to maybe name that big passage . . . "Ag's Dreamtime Tunnel" or something along those lines. . . . I was thinking about Ag while I was swimming down that borehole, wishing she was showing it to me."

And so it was, that during three days of diving in early October 2011, over 1,400m of diving passages were explored and surveyed following the initial discovery. There were three main leads, each continuing in parallel passages to the south west with penetrations of



600m (A), 800m (B) and 550m (C). It was realised from the start that this was potentially a very large and complex cave system and the author therefore established strict requirements for surveying and station numbering by the exploration teams (which is why he is referred to by some as 'Sergeant Major Survey'!). Following the initial exploration hiatus, the passages were labelled according to their potential for continuation.

CEGWA Crew Raid

It took little encouragement for a return trip ('The Raid') to be organised by a small crew of keen CEGWA cavers and cave divers for a four day long weekend in late October 2011. Kim Halliday and Craig Challen paired up as a dive team with Alan and Paul possibly over-enthusiastic with their rebreathers and scooters ready to explore caverns measureless to man! The four divers were brilliantly supported by Christie Allen, Mark Brown and Jeff Gibson – these guys looked after everything around the camp and cave so that the divers could just focus on the cave diving. Given the zero visibility and awkwardness of the first 30m of diving through the entrance restrictions, a thick rope (donated by Craig) was fixed in place by tent pegs and weights which improved the situation massively.

The next piece of infrastructure to be put in place was a staging area which was brilliantly set up by Alan 80m into the cave. The staging area consists of a rope fixed horizontally to the side wall with several hanging lines, each having several D-rings on it to clip off scooters, stage bottles, rebreathers etc. Owing to a few equipment problems and the fact that Ag's Dreamtime Tunnel shut down a further 70m beyond Brian Kakuk's tie off, only 600m of passage was explored and surveyed on this Raid trip, but there were still a couple of leads at the end and many side passages marked to explore. On the last dive of this trip, a significant discovery was made at the end of the B Tunnel by Alan & Paul – The Sanctum, an 80 metre long, 20m wide, 2m high room/passage which had further leads to explore but was now over 900m from the entrance and only accessible with sidemounts. The next visit was during Easter 2012 which involved Alan Polini, Grant Pearce, Chris Edwards, Ken Smith, Liz Rogers and the author. A significant event occurred early during the course of our diving whereby something shifted in the entrance restriction whilst four of the divers were in the cave. Owing to the zero visibility conditions we couldn't be 100% sure what had happened but we believe the Letterbox rock (a big chunk of several hundred kilos) had shifted into a

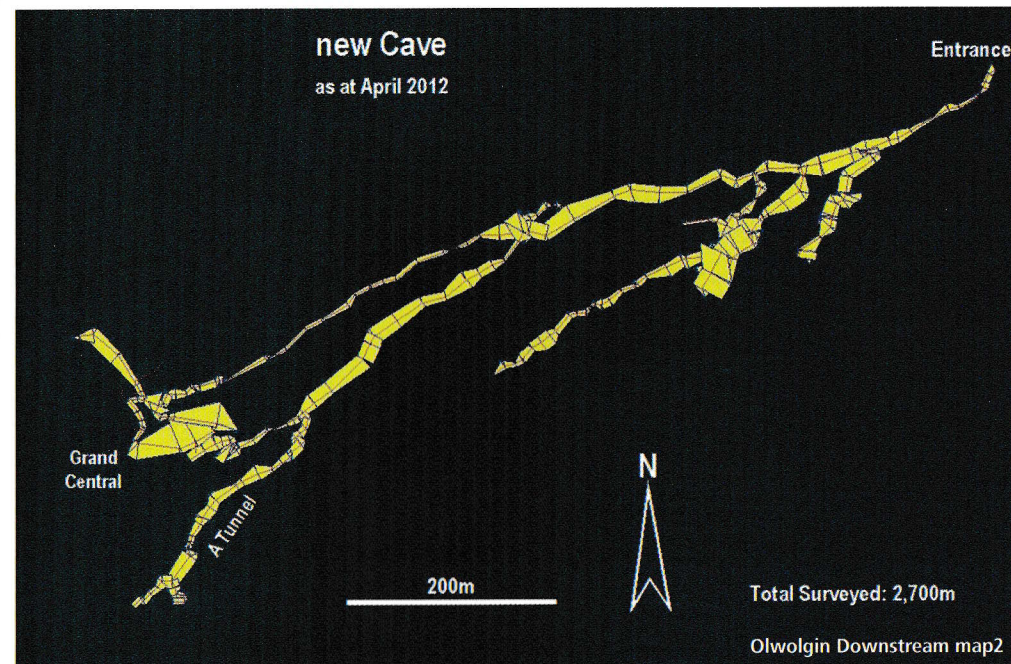


'Rootite' Photo by Liz Rogers

new position. This shook us up a bit and stopped us diving for a few days until we were confident that the situation was stable and it was safe again to enter. We added only 700m to the survey on this trip, bringing the total Downstream passage length to 2,700m. The most significant discovery was made by Grant & Chris when they extended the B Tunnel line to the South West from The Sanctum and entered an enormous room which proved to be 130m long, 30m wide, 3m high and has a completely flat roof at -4m. Subsequent visits have shown that this remarkable room can be accessed from five different passages around its perimeter and hence the name – Grand Central.

Cave Diving Conservation

The author has written several articles and given presentations to the Australian caving and cave diving communities regarding the uniquely fragile features found within the Roe Plains caves. The basis of this claim is that the most fragile features are organically based, rather than mineral or crystalline as found in



other cave systems. Whereas in dry caves it is the speleothems that warrant the greatest conservation and protection efforts, in these underwater caves, it is bacterial colonies, threadlike tree roots and tree tap roots that predominate. These features are very spectacular, with some of the tree roots hanging in drapes up to 5 metres long. They are also incredibly fragile and susceptible to being destroyed by divers' exhaust air bubbles, fin kicks or body movement. It is fortunate that the exploration of Olowolgin Downstream has been done following ten years of exploring and

mapping of the Roe Plains caves – Olowolgin Upstream and Burnabbie Caves. This experience has enabled the exploration team to identify the fragile features and place the guideline so that divers (including themselves) avoid damaging them. This strategy is supported by floating reflectors and signs that identify the feature and ask the divers to swim directly above the guideline for a short distance around it. And so it is that underwater track marking has been implemented with the hope of conserving these unique and spectacular features for future generations to enjoy. ■

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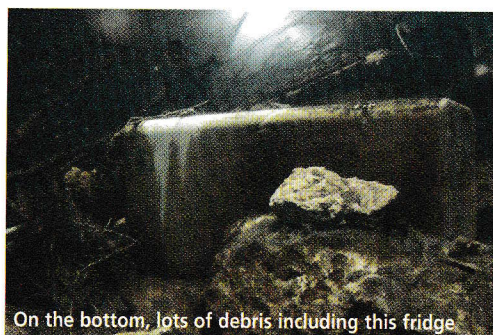
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DIVING EARL'S CAVE

Story and Photos by Michael Mallis (CDAA 4553)

"But, is it a cave?" I'm asked by a curious fellow cave diver eager to learn about a cave he's never heard of, that he might chance diving with me, *"Well no, but it's still interesting just the same"* I reply. *"Then why is it called a cave?"* was the expected question in reply. *"I don't know, perhaps that's what was thought a long time ago."* was all that I could say. I'm referring to Earl's cave, technically not a cave but a small sinkhole with a surface lake area of about 80 square metres with a maximum depth of 14m that undercuts the lake edge in most directions but notably to the north and east. The information sign states that it's big enough to encompass a house at its base.

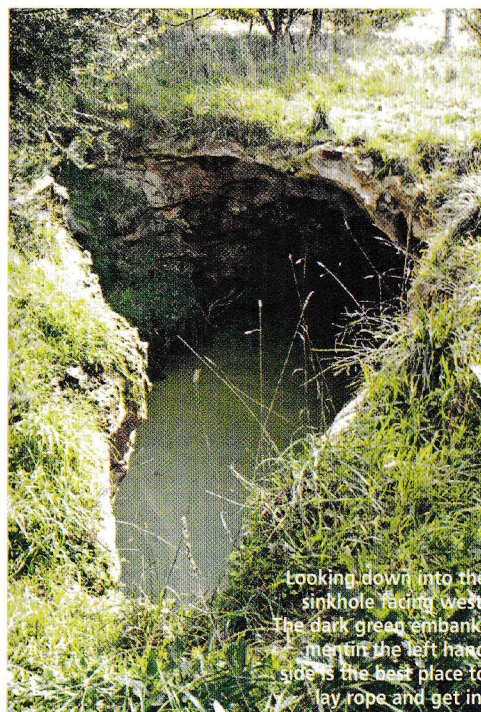
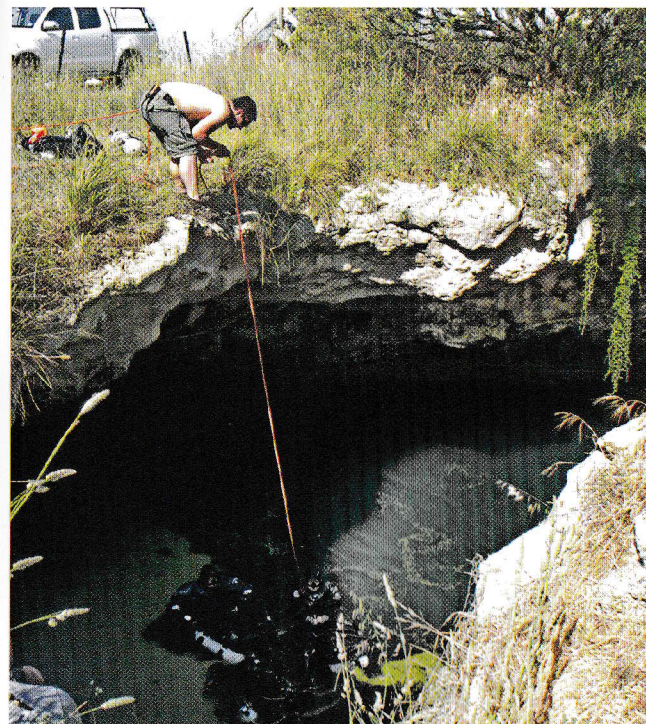


On the bottom, lots of debris including this fridge

Earl's cave is also referred to as Earls cave but I'll stick to Earl's unless I am corrected. My first sighting of Earl's cave was during my Deep cavern course some three years earlier when I saw the sign on the way to Piccaninnie Ponds and along the back roads of Allendale. I must admit that my first impression was one of horror; it did not help that I imagined what all sorts of nasty rubbish, animal carcasses, filth, oil, general pollutants and general muck filled a hole in the ground that was once used as a rubbish tip by the locals. Actually, it must still be used as a tip of sorts as there is evidence of more recent rubbish as well. It

didn't help that the whole surface was covered in a green duckweed mat. Tossing in a stick to break up the duckweed revealed ominous ink blank water that quickly filled-in. The water looked black, forbidding and uninviting. The germ of an idea to dive Earl's cave formed soon after once I started doing some research about this very little dived site. The fact that it's hardly ever dived or talked about was enough to inspire me to dive it one day just because I could. It's not a site that requires special permission to dive and is readily accessible to even non-CDAA divers. Maybe that's why it isn't generally dived much for the fact it's the dark sheep of the Mt Gambier diving fraternity that no one likes talking about as if it's an embarrassment or beneath cavers to take the plunge.

Over the years, I kept going back wondering what the best way down to the water would be and what sort of equipment would be required. Local hearsay literally advised me to be fearful of the water as there are rotting kangaroo/sheep carcasses making the bottom soft and spongy with rotting flesh; not a nice thought and one that could easily put anyone off from diving this site. Add to that the knowledge that for years the locals were known to use it as a personal rubbish tip for who knows what. At any rate I committed to the idea and contacted Tim Muscat, the CDAA Victorian



Looking down into the sinkhole facing west. The dark green embankment on the left hand side is the best place to lay rope and get in.

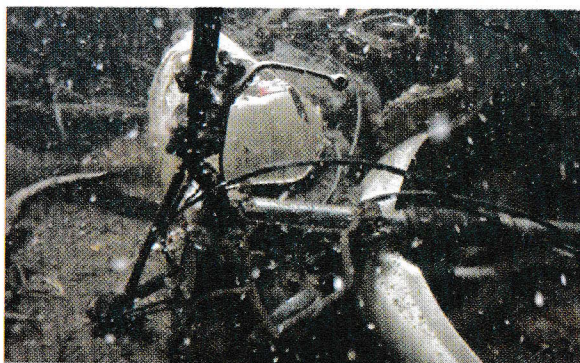
representative who I knew had ladders and roping equipment. I ran the idea past him and was quite eager to help. Of course, Tim was very eager to come along for the dive as were my other dive buddies, Paul, Brett and Hyeonji; in all, there were seven of us who dived.

After arriving one fine afternoon and after earlier diving Kilsby's a nice shallow dive was what the doctor ordered. Tim and I did a site inspection of how best to attach and secure the steel ladder down to the water's edge, run a belay line and how best to lower gear down into the water. With efficiency expected of seasoned CDAA divers, everyone lent a hand in securing and running lines and hauling gear. The plan was to get a team of three divers into the water first then the remaining four afterwards. Manifold twins were lowered into the water from a convenient overhang on the north side of the wall. The steel ladder was conveniently secured to a thick

fence post, as was the belay line. This was laid down the only sloping access point to the water and extended about a metre into the water. In turn, everyone easily managed the descent down the ladder and geared up whilst floating. Whilst on the surface it was impossible not to be totally covered in duckweed whilst gearing up.

I was part of the latter dive group but the reports back from the first group were that the water was remarkably clear, as the top of the rubble pile at about eight metres was visible from the surface. This pile was composed of mostly rubbish with a layer of sediment and the occasional branch protruding from the sediment. The rubbish consisted of the usual stuff associated with Mt Gambier sinkholes and was made up of barbed wire, glass and plastic bottles, a tennis racket, steel drums, sticks, street signs, plastic crates, a motorbike and even a Volkswagen car. If you've dived the southern Sisters Lake you'll know what I mean except it was nowhere near as murky. I was particularly struck by the number of boots and glass bottles and even old toys that were seen and yes, there are the skeletal remains of a sheep but thankfully, it had long decayed. I was particularly relieved that the water clarity was remarkable good. Compared to Sisters or Little Blue Lake it was excellent. As to the

water quality, who knows and I probably don't want to know but at least I couldn't see or smell anything untoward. When it came to my turn, I buddied up with Hyeonji who took the dive in her stride and who by the time this article is published would have become a CDAA Deep Cavern diver herself in no small part due to having experienced a new type of diving that whetted her appetite to further her diving ambitions. She had previously visited Mt Gambier but only dived Ewen's Ponds and possibly looked on enviously at others doing the more adventurous dives. This brief article was written to remind the CDAA membership that there are other little explored or forgotten dive sites that on first impression seem not worth the effort but for me it was worth it for my curiosity got the better of me. There is a short video of the dive, which casts a better light on or experiences and can be seen at <http://vimeo.com/60144799>.



Some of the other stuff you'll find on the bottom including a bicycle and tennis racquet.



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MEXICO - THE VEINS OF THE EARTH

By Jane Cowan, ABC - Foreign Correspondent - 12 March 2013

Imagine a mighty, pristine river system. Then put a lid on it and imagine it underground, coursing through yawning, cathedral-sized limestone caverns, pressing gently past prehistoric bones and sustaining an abundance of unique wildlife as it pushes inexorably to the sea and a vital role flushing mangroves and succouring reefs. Seems like a great foundation for one of the world's fastest growing tourist projects right? Wrong, say environmentalists who fear the tearaway development atop the magnificent Yucatan Aquifer in south-east Mexico will spell its demise.

Cancun is America's Bali. On a drop-dead stretch of Mexico's Caribbean coast, what was just a simple fishing town as late as the 1970s has grown to become one of the world's largest holiday spots that now draws visitors - way beyond the US - all the way from Europe. It's an all-inclusive, all-you-can-eat, all-you-can-do, package-holiday wonderland featuring gargantuan resorts and golf courses as far as the eye can see.

It's loud and brash and party-central.

But under all those stomping feet is the spectacular silence and epic grandeur of the pristine Yucatan Aquifer, described by some as the world's largest underground river.

"I can tell you the very first dive of my life was in one of these places and in 45 minutes it completely changed my life." LUIS LEAL, cave diver

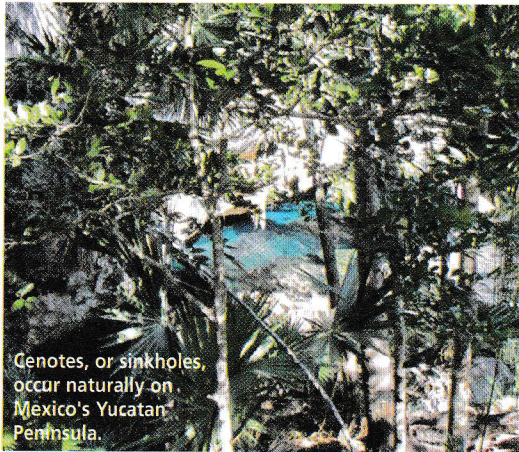
The aquifer is a vital resource for thirsty Mexico. It also nourishes vast tracts of rainforest, is home to unique flora and fauna and serves an integral role in the function of other ecosystems. Intriguingly, the aquifer also holds a treasure trove of prehistoric skeletons, and bones from the time the Mayan people held sway in this strikingly beautiful part of the world.

Environmentalists are deeply concerned about the future of the aquifer, as resort development continues unabated above. Limestone quarries gouge the filtering bedrock to provide cement for construction while sewerage and run-off threatens to leach into and taint the crystal clear waters.

"This area is so rich in biodiversity that it has become - literally - the beachhead for the fight on sustainability. If this area goes, if the biodiversity is defeated here then the planet is defeated." MICHAEL HALLE, ecotourism manager.

On her debut assignment for Foreign Correspondent, reporter Jane Cowan plunges into the seemingly bottomless canyons of the aquifer to learn its secrets and to assess arguments about the scale of the threats to its sanctity, and the economic necessities of the tourism push in Cancun and beyond.

"Maybe in the short term they are gonna make big money but in the medium and long term they are going to pollute this, they are going to pollute this, they are going to destroy this and we are not going to have anything unique anymore. It's going to be lost". LUIS LEAL, cave diver.



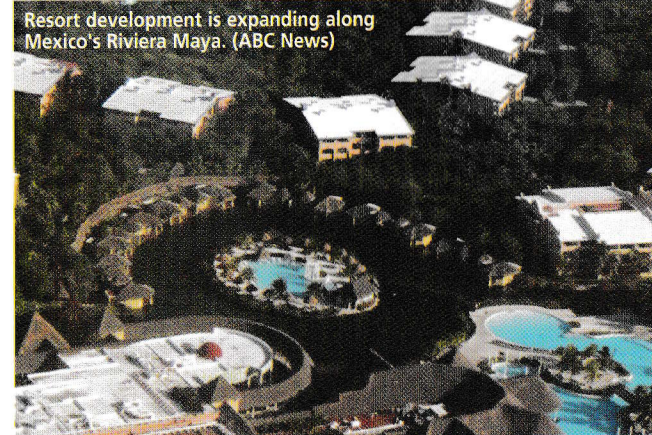
Cenotes, or sinkholes, occur naturally on Mexico's Yucatan Peninsula.

I've been called an immersive reporter and this was the ultimate. I spent three days learning about regulators and neutral buoyancy, poring over charts and calculating residual nitrogen. In the water I learned to manoeuvre my body by inflating and deflating my own lungs, and how to make an emergency ascent without exploding my chest. I discovered that my contact lenses didn't actually fall out if I lost my mask and opened my eyes underwater. By the time the rest of the crew arrived I had my open-water scuba licence and I was in raptures. But diving in a cenote was something else again.

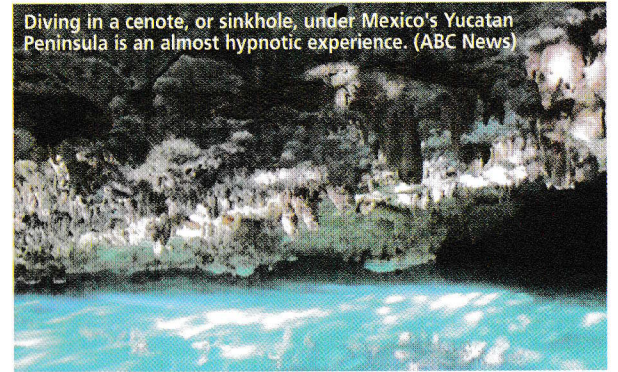
The word comes from the ancient Mayan expression for "well" and refers to the deep pits or sinkholes that occur naturally on Mexico's Yucatan Peninsula, resulting from the collapse of limestone bedrock exposing groundwater below. Diving in one is an almost hypnotic experience. The water is crystal clear. Light streams in from above, shimmering on the limestone rocks. Safe to say I can't remember the last time I saw anything so beautiful.

For the Maya, cenotes were sources of fresh water but also had a spiritual significance, representing an entrance to the underworld, a place for sacrificial offerings - humans - to appease the gods. There's a site, I'm told, where you can see hundreds of Mayan skulls preserved in the watery depths of one cenote. As a novice I could only go as far as the caverns, where there was always a quick way to surface. But the Yucatan is a mecca for cave divers. Carrying multiple tanks and lights they disappear for hours inside the network of tunnels. My dive instructor, guide and general guardian angel in the Yucatan, Luis Leal,

Resort development is expanding along Mexico's Riviera Maya. (ABC News)



Diving in a cenote, or sinkhole, under Mexico's Yucatan Peninsula is an almost hypnotic experience. (ABC News)



plunges into the caves every day, exploring what he calls the "the veins of the planet".

There was a serious purpose to all our diving. Rampant development is putting huge pressure on the fragile Yucatan ecosystem, particularly on its largely hidden assets - the cenotes and underground rivers which most visitors never see. Millions of Americans and Europeans fly into Cancun every year to lie in the sun and party. Enormous "all inclusions" - resorts where meals and drinks are rolled into the deal - dominate the 20-kilometre long Zona Hotelera. One night there and you feel like you're on the Las Vegas strip, rather than in Mexico.

In the seventies when Cancun was a fishing village and the first hotels were being built, there weren't many rules and regulations. So they ripped up the coastal mangroves and used fairly primitive means to dispose of dirty water and sewage. Greed conquered science and you can guess the rest. Now Cancun is saturated: an independent report a few years back warned any more development threatened to cause the collapse of water and electricity supplies. The next

city south, Playa del Carmen, is booming. The march by developers down the golden sands of the Riviera Maya coast seems relentless.

Diving in the cenotes, I glimpsed a Mexico a world away from drug wars and mass killings, a place of stunning natural beauty. I'd like to think that preserving rather developing would be the ruling dictum but frankly, if you want to appreciate the Yucatan in all its glory - don't wait too long.

Jane Cowan, ABC, Can Cun, Mexico

Source: <http://www.abc.net.au/foreign/content/2013/s3710545.htm>



Karst Geology

By Ian Lewis #258

Raising the Water in Piccaninnie Ponds and Picks Swamp

In the previous issue of Guidelines the announcement of the listing of Piccaninnie Ponds as an International RAMSAR Wetland Site and plans to extend the coastal wetlands there were published from a series of local newspaper reports. These events have been part of a three-stage process along this coastline undertaken over most of the last decade and are now coming to fruition. After research, freshwater Ecologists found that the wetlands around Piccaninnie Ponds were much more extensive in the early days of European settlement and contained a continuous body of water in a channel which ran for several kilometres from west to east behind sand dunes at the coastline. It drained in to the western side of the Glenelg River estuary in Victoria, just south of Nelson. Major Mitchell's party would have seen this in 1836!

The creek outlet not far west of the place where the Piccaninnie Ponds track reaches the beach is not natural – it was cut to drain the swampland for agriculture and has been flowing for at least 60-80 years. I remember as a kid walking along the beach to that creek cutting where there was an old timber hut of a couple of rooms built out of driftwood by an old hermit who lived there next to the sand dunes. I saw him a few times on the beach and around the swamplands. He apparently came in to the Nelson store once every 3 months for some basic supplies, walking along the beach past those freshwater beach springs. Decades later all I could find were the few scattered timber remains on the sandhill and now-days I guess they are completely grown over.

Using early land surveys, the Ecologists visualized a plan for

13th June 07 9.35am



28th June 07 2.40pm



17th July 07 11.52am



Filling Picks Swamp - shows some of the transformation process of the water flow "into Picks, from Pics!". Photos are credited to Steve Clarke and many thanks to him and to DEWNR for allowing their use.

Picks Swamp is in the photos which were taken from the same spot on the seaward side looking northwards inland. The water came from our "Pics" to the east (from the right-hand side) when the water was finally impounded again instead of all running out to sea. The three photos were taken over a 4-week period during Stage 2 and show how quickly a large area of coastal peaty farmland re-flooded with only a rise of approx. 50 cms of water, and how much water was available from the Piccaninnie Ponds outflows to fill it!

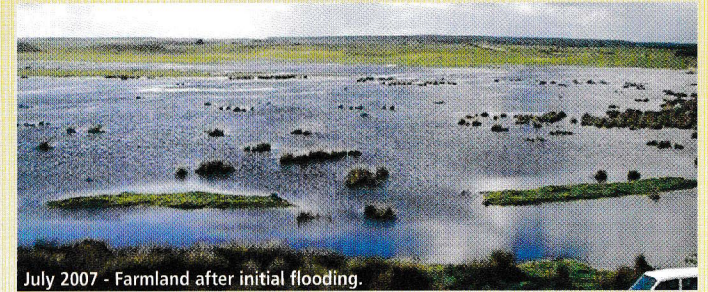
restoring the wetlands which had been drained, changed, grazed, got weeds and coastal wattle infestations etc over that time. **Stage 1** acquired the low-lying farmland to the west which adjoined the Piccaninnie Ponds Conservation Park. This was once owned by the Pick family, so became known as Picks Swamp. The name is not and never was an abbreviation of "Piccaninnie" (or "Pics" as we divers refer to the dive site). **Stage 2** constructed fish channels, assessed the predicted effects of raising the water level in both areas of land and then released water across Picks farmland, returning it to a Swamp. **Stage 3** has recently raised the road level to the coast over culverts and allowed release of the increased water levels into the east of the wetlands towards the Victorian border. It is hoped to eventually reconnect the outflow system to the Glenelg River estuary.

Already freshwater fish species Galaxia have been returning to the newly-flooded wetlands to the east where they haven't been seen for almost a century as they breed in the sea and live inland so were not able to get back in for so many years, blocked off by the road! The creek outlet to the sea has not been permanently closed but its flow is now significantly reduced by managing it and a fish race allows the Galaxia to re-enter the wetlands from the sea each year.

Cave divers have the brilliant opportunity to explore under the surface within the rock itself and swimming in the middle of actual aquifers (eg the Gambier Limestone aquifers, or the Eucla Basin aquifers on the Nullarbor). In the Piccaninnie Wetlands complex, we divers can see the effects of water movement and rise-and-fall over past Ice Ages and climatic conditions as we see all the sculpted ledges while diving through the Chasm or throughout the Cathedral. Hydrologists, Geologists and Ecologists would just about give a right arm to see what we see! At Pics, the Ecologists focus on the top 1-2 metres of water and the dramatic effects it has on swamplands and biology when the levels change only mildly (eg 10-30cms).



June 2012 - Native aquatic vegetation revived from the peat and growing everywhere!



July 2007 - Farmland after initial flooding.

Cave Divers see the full effect of the water and the processes it forms beneath. The combination of underwater knowledge and observations with the surface zone fluctuations gives us the true picture – that all components are intricately related and part of a big story through the seasons and over many millennia.

Photos, measurements, observations and sampling by cave divers makes an important contribution to wetlands science in such places as the coastal karst zones of the Mount Gambier area. Cave Divers' reports helped bring about laws in the 1970's to stop all dumping of rubbish in the region's sinkholes. The term "Karst Rising Springs" has now become part of standard Ecology work and studies in this region as the significance of karst has become widely known. Many hours of CDAA diving and recording underwater karst has helped bring this about. The CDAA has now appointed me as Science Officer to help coordinate such information so as a professional organization we can make formal submissions to various current and future projects across karst lands where our particular skills and knowledge have a unique perspective that no other have – karst waters from underneath.

A recent press release is published here from the SA Department of Environment, Water and Natural Resources (DEWNR) updating people on the developments to Stage 3. I work as a Geologist and as a Hydrogeologist in this Department so it is a privilege and a great opportunity to be able to discuss the extent and excellent outcomes of this project with the scientists and their teams who have achieved it. In

particular, Ecologists Mark Bachmann (who now runs an Eco-consultancy business) and Steve Clarke drove the project over the years and are delighted to see such good results for their teams' efforts. And projects like these are not free! The SA Government has funded most of the surveys, acquisitions and engineering works and a major contribution was made by the Australian Federal Government through their Biodiversity Fund, without which none of this would have been possible beyond designing a concept.

New wetlands for Piccaninnie Ponds

Recent on-ground works at Piccaninnie Ponds Conservation Park by Natural Resources South East have enhanced the recently RAMSAR listed site. The works have created another 25 ha of swamp wetlands and has enabled water to flow from the main ponds into the eastern side of the conservation park for the first time in approximately 70 years.

Natural Resources South East Regional Manager Tim Collins said the recent works are part of an ongoing restoration project that began in 2005 when the then Department of Environment and Heritage (DEH) began restoring the wetland which had been drained and grazed during European settlement resulting in severe degradation.

"The restoration of the Piccaninnie Ponds wetland complex is a high profile project that has received a large amount of interest from Regional, State and also National media. Each year 20,000 people visit the site and restoring the Piccaninnie Ponds Conservation Park will continue to provide many opportunities for positive exposure" he said.

The restoration project has been designed and carried out by local companies with further work yet to be completed including a new divers shelters and other infrastructure. Mr Collins acknowledged the local community for their input - in particular Ian Mitchener for his support of DEVNR design works and Project Officer Steve Clarke.

Natural Resources South East Wetland Conservation Ecologist Steve Clarke said approximately 175ha of wetland will be improved as a result of the project and will greatly enhance the area for native flora and fauna, especially birds and fish. The increase of surface water in the eastern wetland will also assist in the control of Coastal Wattle and Bulrush that have encroached substantially into what were previous areas of water prior to drainage.

The wetlands at this site provide habitat for 65 significant species including the critically endangered Orange-bellied Parrot and the Glenelg Spiny Cray. They also provide habitat for 24 migratory bird species. In fact the Dwarf Galaxia, a fish that is listed at State and National level has been seen in large numbers in the newly flooded area, which is very encouraging" he said.

Mr. Clarke said the improvements at Piccaninnie Ponds are proof that wetland restoration is indeed possible and that it is something the whole region can be proud of.

Pete Whiting
Communications and media officer
South Australian Department of Environment,
Water and Natural Resources
Email peter.whiting@sa.gov.au Phone (08) 87351212

HELP! Photographs of "The Pines" – Request to all CDAA photographers

Helo All -
Forestry SA are providing a series of Interpretive Sign panels for Pines Cave and I am currently trying to source photos for them. I would like to ask if any CDAA members would be interested to provide any recent pictures of divers inside the Pines. I have some older photos from Peter Horne in the survey days but am appealing to all you cave diving photographers for recent ones which will enhance the signs. So far I have been provide with the following images -

- A diver descends from the entrance into the main chamber (photo credit – Neil Vincent, 2004)
- The beginning of the Advanced Cave area in Pines Cave. Only Advanced Cave-rated divers are authorised to pass this point. (Photo credit – Neville Skinner, 2004)
- Diver swimming through "Back Passage" (Photo N. Skinner)
- The "Dark Room" (Photo credit – Petra & David Funda 2003)
- A survey tag at the end of "Bunyips Tunnel", around 40m in depth (Photo credit – Petra and David Funda, 2003)

- "Surprise Tunnel" at 33m deep at the beginning of "The Chimney" (Photo credit – Petra & David Funda, 2003)
- Stromatolites (not found in The Pines but will be on all Forestry SA diving site signs as a feature)

If any of you could provide photos of or similar to those listed above it would be greatly appreciated. However, please feel free to forward any other photos you believe would be of interest. I have a draft text for the signs and I would like these photos to be in "callouts" that indicate their location in the cave so could members please provide a location e.g. "Bunyips Tunnel" with each photo?

Please send photos in a compressed format only and I will chase up a full size version when required.

Thank you in advance for your assistance.

Regards, Toby Read, RANGER
MOUNT GAMBIER FORESTRYSA
Email: Read.Toby@forestrysa.com.au
Web Address : <http://www.forestrysa.com.au>



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Cavern Cavern Cave

VICTORIA Continued



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WESTERN AUSTRALIA



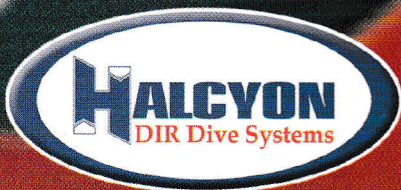
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CDAА SITE ACCESS - www.cavedivers.com.au

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
MT. GAMBIER - SA			
EWENS Ponds	Nil	DEWNR - P.O. Box 1046 Mt Gambier 5290 (08) 8735 1177	Groups of 6 or more, phone/mail to Dept. for Environment, Water & Natural Resources (DEWNR) Smaller groups, no need. Fax: (08) 8735 1135 General Diving: Divers to contact DEWNR and notify of date and site to be dived. Please make requests by phone or fax only. 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 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. Permit holders by phone or fax. Be aware of delicate vegetation. \$26/dive or annual Permit \$60. NOTE: Members can login to www.cavedivers.com.au and download pre-populated indemnity forms and these must be submitted to DEWNR at least 2 weeks prior to the intended dive date. NOTE: Divers should renew their Piccaninnie Ponds indemnities at least 2 weeks prior to their intended dive date.
Gouldens	CN	DEWNR	
2 Sisters Fossil	CN	DEWNR	
Piccaninnie Ponds	S	DEWNR	
Horse & Cart	CN	Peter Cunningham	By phone or mail, 1 week prior. PO Box 2168, Mt Gambier 5290. Ph: (08) 8738 4003.
Toa Tree	CN	Peter Cunningham	By phone or mail, 1 week prior. PO Box 2168, Mt Gambier 5290. Ph: (08) 8738 4003.
Little Blue	C	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. If no one is home - no dive!
One Tree	S	Mr. Peter Norman	Visit the house before diving. If no one is home - no dive!
Dave's Cave	C	Forestry South Australia	Maximum 3 divers all weekends between May & November inclusive (check and update on CDAА website).
Hells Hole	C	Fax: (08) 8724 2870	At least 4 divers in group - 1 with previous site experience.
Pines	C/P	Phone: (08) 8724 2876	Unrestricted days or numbers - Cave rated divers must not enter Penetration sections (stop signs)
Mud Hole	C	or book on-line via the	Unrestricted days or numbers.
Nettle Bed	P	CDAА website	Open every weekend. Maximum of 4 divers per weekend undertaking 1 dive only (check an update on CDAА site).
Stinging Nettle Cave	P	to arrange permit.	Open every w/end max 3 divers per day undertaking 1 dive per day (check updates on CDAА website).
Iddebiddy	P	email: conservationandrecreation@forestrysa.com.au	Open every Saturday max 4 divers, 1 dive only (check an update on CDAА 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 G.			
<ul style="list-style-type: none"> No diving on Total Fire Ban Days. Permit also required to run compressors during fire danger season. Keys for Hells Hole, Nettle Bed, Iddebiddy and Stinging Nettle Cave can be obtained from Lady Nelson Visitor Ctr on presentation of Forestry SA permits. 			
Kilsby's	S	Landowner leased to CDAА	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. No diving on Total Fire Ban Days.
Shaft	S/C	Generally open one weekend a month. Trevor Ashby	For access dates go to the CDAА 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 CDAА 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	C	Mt Gambier Council	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
- West	P	Lessee Ph: 08 8723 5552 Contact: Brenton & Kemele	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.
Three Sisters	P	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	P	CDAА	Access Manager: David Fielder. Email: tankcave@cavedivers.com.au
Baker's Cave	C	Janet & Bruce Saffin	Access Manager: Matthew Skinner. Email: bakers@cavedivers.com.au Climbing equipment required. One member must have previous dive experience at site.
NULLARBOR - WA			
Cocklebidy	C/P	DEC	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	DEC	Phone: (08) 9083 2100 Fax: (08) 9071 3657.
Tommy Grahams	C	DEC	
Olwolglin Cave	P	DPI	The Department of Regional Development and Lands, Perth, South East Region.
Weebubbie	S/C	DPI	PO Box 1143, West Perth 6872. Contact Shannon Alford, E: Shannon.alford@rdl.wa.gov.au Phone: (08) 6552 4661 Fax: (08) 6552 4415
WELLINGTON CAVES - NSW			
Limekiln (McKavity) cave	P/C	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. Affected by high CO ₂ levels during Summer/Autumn. Access is co-ordinated with the Wellington Caves management by Greg Ryan - Email: gjryan@gmail.com. Phone (02) 9743 4157. Unrestricted access currently exists - Please refer to website.
Water (Anticline) cave	C	Wellington Caves	
Rum Jungle Lake	S	Coomalie Community Govt Council	
Burrinjuck Dam	S/C/P	NSW Parks & Wildlife	Please refer to website. There are no specific access arrangements.

you're only as good as the gear on your back!



Dealer Enquiries Welcome

Email: Sales@Halcyon-Australia.com.au

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