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C.D.A.A. Newsletter
No. 114 - DECEMBER 2010



CAVE DIVERS ASSOCIATION OF AUSTRALIA
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Cover:

Christmas Is.
Sea Caves

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Seanna Cronin

**CAVE DIVERS ASSOCIATION
OF AUSTRALIA**

ABN 65 062 259 956

P.O. BOX 290, NORTH ADELAIDE 5006

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

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CONTACT LIST

Please contact the most relevant person or, if unsure write to:
C.D.A.A. P.O. Box 290 North Adelaide 5006 www.cavedivers.com.au

NATIONAL DIRECTOR - Steve Trewavas
Email: national@cavedivers.com.au Mobile: 0423 021 488

STANDARDS DIRECTOR - Jane Bowman
Email: standards@cavedivers.com.au Ph: 9579 2600

Quality Control Officer - Stan Bugg
Email: quality@cavedivers.com.au AH: 03 9379 8791

Safety Officer - Richard Harris Email: safety@cavedivers.com.au

Instructor Records - Paul Leslie Mobile: 0407 785 591
Email: instrecords@cavedivers.com.au

Instructor Materials - Paul Leslie Mobile: 0407 785 591
Email: materials@cavedivers.com.au

Instructor Advocate - Paul Leslie Mobile: 0407 785 591
Email: advocate@cavedivers.com.au

BUSINESS DIRECTOR - Andrew Cronan Phone: 0408 119 896
Email: business@cavedivers.com.au

Treasurer - Tammy Beattie Email: treasurer@cavedivers.com.au

SITE DIRECTOR - Rob Brennan
Email: site@cavedivers.com.au Mobile: 0414 821 322

Kilsby's Access - Craig Larkin
Email: kilsby@cavedivers.com.au Mobile: 0418 821 191

Tank Cave Access - Noel Dillon
Email: tankcave@cavedivers.com.au - Mobile: 0407 530 103

Shaft Access - Terri Allen
Email: shaft@cavedivers.com.au Mobile: 0419 176 633

PUBLICATIONS & RECORDS DIRECTOR - Jason Caldwell
Email: publications@cavedivers.com.au Mobile: 0404 070 029.

Records Officer (Membership matters) - Jason Caldwell.
Email: records@cavedivers.com.au P.O. Box 841 Beaconsfield VIC 3807

Copy Editor - Seanna Cronin Email: seanna.cronin@gmail.com

Guidelines - Graphics & Advertising - Dave Bryant: 0417 125 710
P.O. Box 2198 Rosebud VIC 3939. Email: seapicsdavebryant@gmail.com

CDAA Products - Tara Parkinson - Mobile: 0400 688 548.
Email: products@cavedivers.com.au

Webmaster: Damian Georgiou Email: web@cavedivers.com.au

AREA REPRESENTATIVES

ACT: Heike Apps Ph: 02 6291 0566 Email: actrep@cavedivers.com.au

NSW: Mark Jobbins Ph: 0411 191 590 Email: nswrep@cavedivers.com.au

N.T.: Jeff Swann Email: ntrep@cavedivers.com.au

QLD: Tim Featonby Ph: 0402 129 253 Email: qldrep@cavedivers.com.au

SA: Ken Smith Email: sarep@cavedivers.com.au

South-East SA - Grant Pearce Ph: 043 8833103. Email: sesarep@cavedivers.com.au

WA: Peter Buzzacott Email: warep@cavedivers.com.au

VIC: Mischa Temple Email: vicrep@cavedivers.com.au

Public Officer - Kevin Burrowes Ph: 08 8351 0272 Email: kburrowes@esc.net.au

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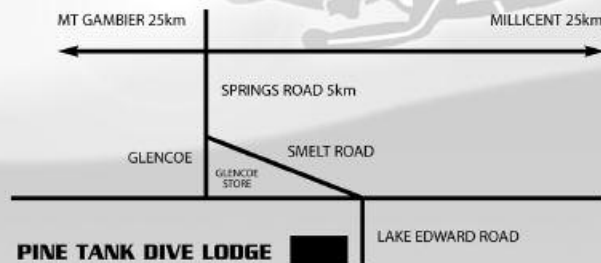
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CAVE DIVERS ASSOCIATION OF AUSTRALIA

Editorial

Well another year nearly at an end and what a busy one it has been with Guidelines. We will always print a full 48 pages now in full colour, so get your contributions in.

This edition we have a beautifully written story from Adam Hooper and Garth Haselden on their trip to the Playa Del Carmen region in Mexico. Seeing those images and reading the article just makes me want to book a trip there immediately.

Ian Lewis covers the Allendale Hall's 100 year centenary celebrations and the part it played in the forming of the CDAA.

Mick Betts shares the story on his trip from Perth with mate Colin Murray, looking at the logistical challenges of planning travel to Mount Gambier. Reading this makes us appreciate the helpful members of the CDAA – hats off to you all.

Dave Bryant covers the AGM Symposium and a non-cave diver's view of the CDAA annual event. Dave Scarlett, again provides some exceptionally well composed and exposed images.

International member Pierre Constant shares his adventures and exploration into Tewi Cave PNG. It is amazing the advancement in cave diving techniques, even in the last ten years.

Ian Lewis' Karst Geology section features a look at the Qld Blue Holes from a geological perspective. He wets our appetite at the end with possibility of similar holes in the South Australian coastline. Seanna Cronin made a recent trip to Christmas Island and our cover shot shows the amazing visibility that can be seen in sea caves.

I'd like to wish all of our members a happy and safe Christmas and New Years.

Dive Safe, Jason Caldwell
Records and Publications Director

Email: publications@cavedivers.com.au



'Dave's 2 Bar'

Guidelines is looking better and better all the time... and yes, I'm a little biased about that because I get to design it every issue. For the first time since taking on Guidelines in 2001, I was able to attend the AGM and Symposium. Not being a financial member of the Association I did not actually attend the AGM but I did manage to meet and hear from the guest speakers, and what an experience it was. Meeting explorers, creators, leaders in their field.. it was a great experience and one I'll never forget. And, I managed to drag my wife Miranda along for the weekend and she too found it really interesting. While in the Mount we also managed to snorkel Ewens and Piccs, and I created a video of our weekend... it's on YouTube - take a look - <http://www.youtube.com/user/seapicsdavebryant>

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As we move to the busy Summer season of diving where, no doubt, many divers will frequent our amazing Australian cave sites, it may be a timely reminder to be cautious and disciplined when cave diving. Many of our sites require notification or bookings to a department or CDAA booking officer, and you cannot take the attitude that you can just 'turn up' with the hope that another diver has cancelled their place. Don't forget that some sites have depth limits in accordance to your certification, and if you are using a Rebreather or diving on Trimix or Nitrox, you need to have your CDAA card endorsed accordingly. It is a very simple process and does not cost anything! Steve recently posted a reminder to the Forum about RB divers carrying bailout on all dives, a requirement that is written into our Regulations. If anyone witnesses a violation of Standards, it is your duty as a member to report the details in writing to the Standards Director. We cannot (potentially) risk the loss of dive sites due to members doing the wrong thing. The new Cave Course is now complete and will be sent to all Instructors for discussion prior to release. We hope to implement the changes as of January

1st, 2011. The main changes include skills such as a lost line search, an improved line entanglement and line cutting exercise, the introduction of jumps using spools or safety reels and additional site dives.

If the changes are accepted, the Advanced Cave program will follow soon after. The reasons for changes to AC include that a number of the skills that were assessed at that level have been moved to Cave level.

I have had a number of requests over the last couple of months from cave divers wishing to cross over into the CDAA. If you know of someone who has obtained a certification overseas, they may be unaware that this is a possibility, and I can be contacted in regards to any queries.

Here's hoping that everyone has a wonderful holiday season — Merry Christmas and a very happy 2011 to you all.

Safe cave diving, **Jane Bowman**

CDAA Standards Director

CDAA Advanced Cave Co-ordinator

CDAA Advanced Cave Examiner 1880

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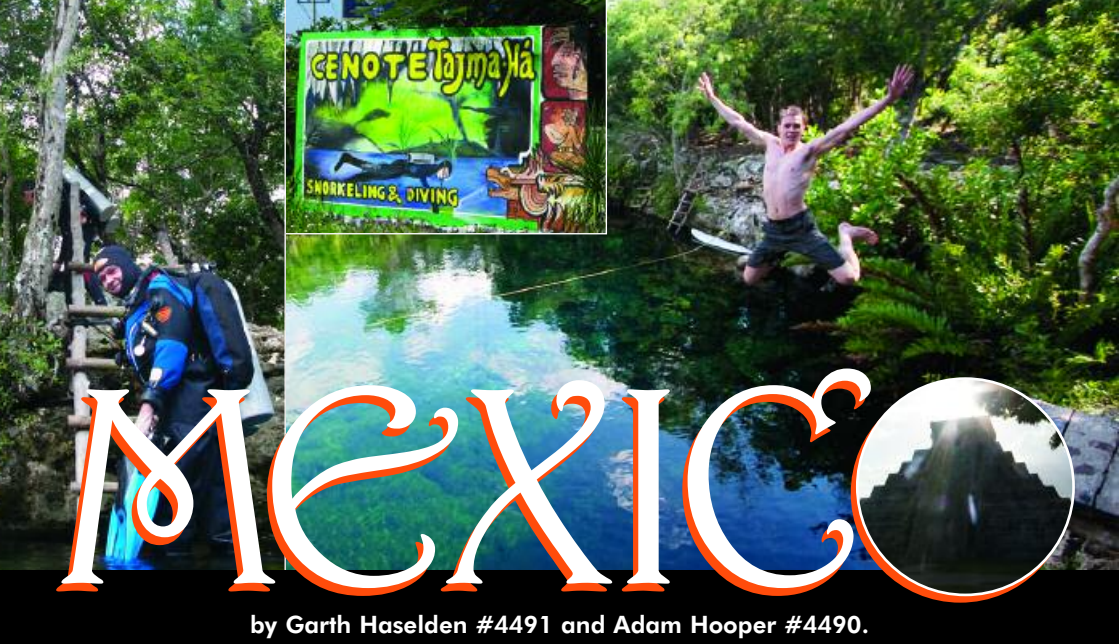
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by Garth Haselden #4491 and Adam Hooper #4490.

My arrival in Cancun marks the end of four months in Quebec exploring the rivers of the province, mostly in the north and the east. I leave with memories of warm summer days, endless rapids, calm mountain lakes inhabited by lone loons and seemingly endless portages to experience the inaccessible. Crisp rivers with Atlantic salmon travelling in the opposite direction to ourselves. Autumn comes all too quickly, colours change, the air tastes and smells different and with eager anticipation I rise each day with the enthusiasm to see the new colours evolve. The change of season also acts as a stimulus to keep moving, summer has come to an end and the next part of year is about to commence. I'm sad to leave Quebec, and already look forward to returning. At Cancun Airport I have a grossly overloaded trolley and after escaping the Montreal autumn my jumper suddenly seems extremely excessive. The contrast of vivid reds and oranges and the gradual insulation process of layering has been turned upside down and I'm struggling to remove as much clothing as possible and find a place to stuff it amongst the overloaded trolley. The jungle greens and turquoise water is as much of a contrast to autumnal Quebec as the somewhat socialist, liberated and anglophone resistant Quebec is to the sugar coat-



ed sweetness of the Caribbean coast of Mexico which is catering for the multitude of US tourists. The other travelers appear in pursuit of sun, alcohol and good times. I'm once again thrown back amongst over straightened hair, Havianas, tattoos that scream 'it was a good idea at the time' and figure hugging clothing that provides that wonderful "muffin" appearance to the over indulgent. I am happy to have a sense of not quite belonging and the thought of maples, birch and pines tug at me to return. A customs officer is seated beside a large button above which are two lights, red and green. I glance again at the trolley and cross my fingers. When I press the button it lands on green. My customs fate has been decided; I escape the search and saunter past the benches of holiday possessions strewn across the bench with the officers inquisitively looking at the "essential" items that endlessly appear from the latest arrivals. A bus service runs from Cancun Airport, the main hub for the region to Playa Del Carmen. In less an hour and \$30 later you're in a Gold Coast-like wonderland of characters and reminders of the target attendees. There are Starbucks, sports bars, fast food chains and cigar shops on every block. Despite my malaise at the package holiday scene, and the lack of authenticity of the surrounds, I find myself thankful that the demands for

this over populated piece of Caribbean coast allows super cheap and regular flights from the USA. Prior to arriving my impression of Mexican diving consisted of isolated cenotes, a non-descript track to their entrance, unknown to anyone but the local divers, perhaps on private land or guarded in some-way, where access for a few Aussie gringos would be difficult. Not to mention the risk of being held up at gun point for my new regs that I nurtured all the way down in my carry on, tucked gently into a soft cradle of clothes. The Yucatan is a vast area, so while this sort of adventure is no doubt possible the reality was that the diving is extremely accessible and secure. A hire car was no problem to drive amongst courteous drivers and on well constructed roads. All of the cenotes we dived were also accessed for swimming either by locals or the occasional guided group from a hotel. They were all signposted on the highway. Perhaps knowing roughly how many kilometres they are outside of the town would be useful but it certainly was nothing reminiscent of trying to find Mudhole or Iddlebidy near Mt Gambier by navigating the maze of forestry roads. I was more concerned of bandits last time I parked my car at Piccaninnie Ponds than at any of the sites we dived in Mexico. I also had the sense that not speaking Spanish would make it difficult to negotiate with the local guardian at the site. In all instances we arrived, announced "hola,



buenos dias bueco" (hi, good day, diving) and a few smiles.. and they would announce the price for entry, between 40 and 150 pesos (\$4-\$15). Occasionally we were asked to show dive certification cards. All sites had kit-up tables at waist height, parking within 100m of the entry point and generally a pontoon or similar platform somewhat like Little Blue with adequate steps for access. It couldn't be easier. Our trip started with three days guided diving through the guys at Protec. This was great to orientate ourselves and gain familiarity with 2 dive sites. We would revisit these sites several times. The days being guided allowed some insight into the local diving. Nando appeared in eternal pursuit of sidemount rigging perfection while Mauro was passionate about the exploration that he was involved with. Our second day was to a lesser dived cenotes that Mauro was in the progress of mapping new sections of, it was great to pepper our humble dives with the sense of real exploration; even if we never saw the end of the mainline and the sections being pushed. A turtle is taking a few causal breaths at the surface and a couple





of Latin mermaids snorkel in their bikinis. Cool water trickles down my back and around my neck, it slowly creeps up the ankle cuffs of my wetsuit with welcome, but refreshing relief from the heat that was generated while kitting up and performing the twin tank waddle approaching the cenotes. It also reminds me to stop be distracted by the singing immediately before the dive my imagination is hearing. I check the long hose is free, bubble check with Garth and exhale. A combination of relief from the clutter of surface life in Playa and the peace that floating in water always provides is accompanied with a gentle descent. I take a short half breath and I am once again thinking ah at last, I'm back underwater. The bubbles from the next exhalation tickle past my ears and the sound soothes, my heart beat slows. The first breath always tastes so damn good, it arrests my decent and with a few kicks I'm near the entrance and make a primary tie-off. I've levelled off at 5 metres. We will reach a max depth of 7-12 metres during the rest of the dive trip. Shortly after entering the cave we pass the grim reaper sign, in most caves this acts as a good land mark for

discovering the gold line just beyond. The gold line starts on the edge of the halocline. A boundary layer of salt and fresh water is marked by an appearance of the fresh water sitting like air on top of the salt water. A diver in the salt water below appears a blur as if looking down off the side of a boat. His fin kicks stirs the boundary layer, plumes of salt water mix to create a swirl of haze like dust behind a car travelling down a dirt road. The halocline also is characterised by a temperature change, the fresh water at 24C and the salt water below at 26C. On our return trip I swim up through the halocline and find myself observing the ripples and small waves at the boundary of salt water, for a moment I think I have swum up into the air. Like a busking mime artist I feel around the space with open palms only to realise I'm still wet. It may partly be blamed on the unbelievably clear water, relatively heavy silt that clears quickly and the sense of comfort with being underwater that comes with longer dives in warm water. We continue deeper into the system, today's dive will be around 2 hours. We only explore less than 1% of what is a



system of more than 170 km. In just this small section we will travel through chambers large enough for a train, be greeted by low flatteners and then shortly afterwards find ourselves weaving delicately through decorations. I wonder if our bubbles are the first air to touch these features in thousands of years. There is a sacred sense to what we see. I'm up front today and as I round the corner I groan through my regulator. I never talk underwater but now I'm mumbling through my restricted palate, hampered by the regulator. Moments later I hear Garth's similar reactions. There is a moment of understanding with the Mayan worship for their God Chaac, ruler of the underworld. Buoyancy control is paramount as we are completely surrounded by hundreds of delicate stalactites on the ceiling and the myriad of differently shaped stalagmites making up the floor. A labyrinth of beauty. My torch paints the room and I feel guilty that these feeble photons pollute the silence and expose a world forever hidden in complete darkness. Our dive today passes the warm glow of other cenotes, the line arrows reflect this and provide warning that we are approaching a moment where the world outside will feel a little closer, we move into the shadows and avoid it. We approach the end of the dive and collect the primary line. After 2 hours my computer is still blank in the "bottom time remaining" window suggesting an almost infinite time still available at our current depth. A glow of an ethereal blue is now in front. It provides a sense of warmth and of life.



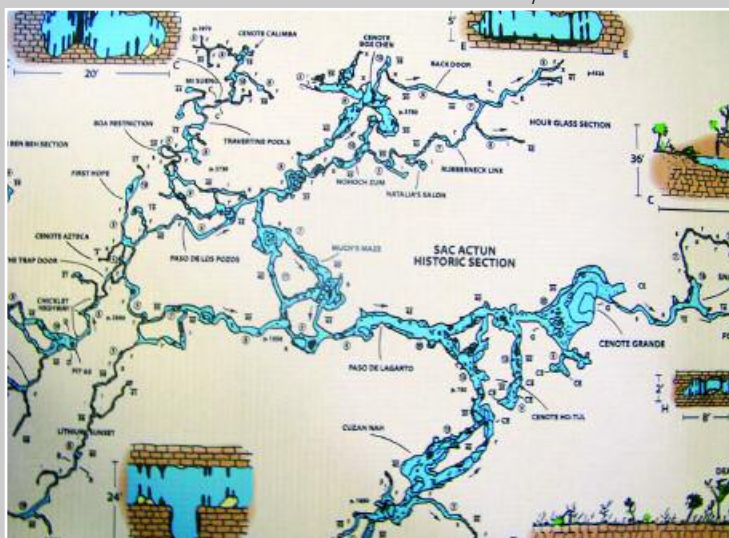
After extended run times we find it a humbling feeling. I untie the primary tie off, and have a moment where I already long to be back underground. To explore just a little bit further than the last dive, I think about the options for the next dive, which jump to take next, what lies beyond, just a little further. With ample air remaining and still warm we spend some time enjoying the curtain of light that dances in the cenotes and the vivid greens of aquatic life. It is with reluctance we emerge from the dive. I float at the surface in a prone position, a few kicks to the steps and take one last breath through my regulator before stepping up out of the water. A short surface interval, enough for a tank change, \$1.50 sandwich, some hydration and we enter the water for the second dive. Back at the shop we try to describe the Australian diving but find ourselves lost for adequate descriptions. The obvious things gain mention. Deeper, colder, lack of formations in comparison to what we have seen here. A forced smile tugs at the corner of Patrick's mouth. His thoughts are clearly battling with his instinctive reactions. Polietly he says 'It's a long way from here and despite diving +300 days/year, in 3 years I haven't seen 10% of what exists underground here'. With that pleasant post dive sense of lethargy we wander up Playa's 5th Avenue, distant and removed in our minds from the commercialism. I wish I could have expressed how Mt Gambier holds a charm that I look forward to. The sense of adventure laying our own line, the



Just the facts: Equipment: We used twin ally 80s for all our diving (the depth of the sites means that +2 hour run times are achievable without a stage). All equipment is available for hire at reasonable rates if you need anything. Most of the well known dive brands are available for purchase, but be prepared to pay a premium for it.

Other activities:

Factor in some time to visit the Mayan ruins of Chichen Itza,



silt and the cold biting at my cheeks all contribute to a great sense of discovery. I enjoy the thought of a beer and chicken snitzel at the Bellum and the familiar local faces, a few stories shared at refill stations, the myth, the magic and endless debate that characterises the CDAA. We are lucky to have an association that draws us all together in Australia. The energetic debate provides a great platform for discussion and development of the standards within cave diving. I pause for a moment and realise that as I stepped off the curb I exhaled as if expecting to descend the 20 cm we just glided over. I long to be under water again. 'What's the plan for tomorrow Garth'

one of the 7 man-made wonders of the world. It's a whole day to get there and back from Playa and if you stay overnight you can hit the site as it opens in the morning, before the day tours arrive. There are other ruins at Tulum and Coba if you're looking for something a little closer.

Example of Costs:

Food:

It's easy to eat for \$20 a day if eating the local fair (which is sensational): tacos, matelas, burritos etc. Expect Australian/US prices if you're inclined more towards Starbucks, fast-food chains, Argentinian steaks houses.

Diving Guides: US\$180 per person per day

Tank Rental: US\$20 for a set of doubles per day

Tank Fills:

US\$12 for a set of doubles (more for nitrox)

Primary Light Rental: US\$10 per day

Entrance Fees:

US\$5-\$15 per diver (paid in local currency)

Rental Cars: There are a huge number of rental car companies, most based in Cancun. If you prefer to rent through one of the larger chains (Avis/Budget/Hertz etc) then expect to pay a premium. We rented through Zipp rental who met us at the airport and allowed an extension with no great hassle. We rented a small 4 door VW car for US\$35/day including all insurances and unlimited kms. You cannot avoid paying insurance but it is worth having as the road between Cancun and Tulum is an accident hotspot. We initially rented a GPS at \$10 a day but this proved unnecessary. Be methodical when you fill out the vehicle condition report at the start of the rental and check for things like floor mats and cigarette lighters as these are things you could be stung for later.

We managed to fit 4 sets of doubles in the boot and dive gear in the back seat of our 'compact' and bought a couple of \$2 plastic painting drop sheets from Walmart to keep the car as dry as possible. We also paid \$5 to have the car cleaned inside and out at the end of the rental to remove any trace of the off-road adventures we had.

Most of the dive guides get around in dual cab, two-wheel drive utes (with 4WD clearance) but provided it doesn't rain too much, normal cars are fine.

Accommodation: Playa del Carmen is certainly a place to PARRTTY, night time doesn't kick off until 11.30pm and will be pumping till day break. Some divers stay in Tulum about an hour down the road and many of the major sites are located on the highway in between these two towns. Accommodation is available in the form of all inclusive resorts, hostels, hotels, condos.

Mom's Hotel is situated right above the Protec shop and

looks clean and friendly. We stayed in Hostel Playa. Prices are seasonal so jump online and check it out before you arrive. If diving with a group a condo might be a good option.

Dive shops/contacts: We met quite a few of the staff from the three major operators in Mexico: Aztec Diving, Zero Gravity and Protec. All were very professional and display the same standards we are familiar with in Australia. Contact them about your needs to help you choose. It appeared as though they all have different areas of speciality (rebreathers, sidemount, GUE).



Allendale Hall, the Sinkholes and the Cave Divers

Ian D Lewis

On Saturday December 4th, the Allendale Hall celebrated its centenary. People from all over the local community and further afield came for a day of fun, food, festivities and speeches. A 60-page book on the history of the hall was launched. This book was written by local writer Robert Thompson, who has also written extensively about the history of nearby Port MacDonnell. The Allendale Hall was the birthplace of the CDAA when divers gathered to form an organisation to train divers safely and protect the caves and sinkholes from possible closure.

This was not only the beginning of the CDAA's history but was also a highly important event for the Allendale and Mt Gambier district communities who were still reeling from a series of five tragic incidents in five years resulting in 11 lives lost. This had shattered the rural calm of a beautiful region. The formation of the CDAA had a calming effect but it wasn't easy for many years while the scars started to heal. That meeting in the Allendale Hall began nearly 40 years of successful interaction between cave divers and the community that welcomes them. I represented the CDAA at the commemoration ceremony and said a few words. The following article is a contribution I wrote on behalf of the CDAA for the new centenary book.

The Sinkholes and Caves

Close by to the Allendale Hall is the famous "Hole in the Road". Allendale Sinkhole is a cave filled with the beautiful clear water for which the South East is famous and runs northwest from its entrance to within 150 metres of the hall. A smallish entrance passage leads divers to a depth of 20 metres or so opening out into Allendale's "Underwater Hall"! This is a white limestone room about the same size as the main Allendale Hall room itself. If further tunnels are ever found running off the Underwater Hall, they will run directly underneath the one on the surface!

There are many stories and legends about the cave. Here's a short summary. Some time in the late 1800's on a dark and stormy night when it was raining heavily, a cave entrance opened up under the weight of a horse and cart being driven along the track to Port Macdonnell. The local legend is that the man managed to climb out, the horse drowned in the sinkhole and the cart was washed up 20 miles away in Piccanninnie Ponds! Once I gave a talk at a major diving conference in New Zealand and told this story — several members of the audience said they had heard about this event but that the cart had washed up in New Zealand! (At the time there were a lot more of them than me, so I decided to agree with them.) Divers have never found horse bones or cart wreckage. This may be due to the thousands of tonnes of rubble (including the old high stone wall once surrounding it) thrown into the entrance around 50 years ago

when the Council and Highways decided to fill it in as it kept collapsing under the main road and reopening every decade or so. In the end, as we all know, Highways gave up and put the road around it, making it one of Allendale's major tourist attractions, particularly for cave divers.

The Cave Divers

By the mid-1960's, SCUBA was beginning to become a popular new sport around the world and a few brave locals began exploring the underwater sinkholes and caves of the district. Allendale Sinkhole is one of the smaller, shallower ones but has very clear water all year round. Divers discovered the Underwater Hall but no tunnels lead off it anywhere at all. There are the remains of an old wheelbarrow about halfway down in a side space.

Divers quickly became attracted to the larger deeper sinkholes of the district as well, including Little Blue Lake and others on various farms in the Mt Schank—Allendale area where the limestone gets deeper. Then as more divers became curious about this clearwater diving, more came from everywhere to see for themselves. Some of us who pioneered the early serious explorations were very cautious and planned our visits and expeditions but many who visited were only trained to dive in the sea where you can just head for the surface if there is a problem.

The result was a series of deaths of untrained or poorly-prepared divers in a series of five incidents from 1969–1974, in which 11 divers lost their lives in several sinkholes and caves. Allendale Cave was not one of them and has a perfect safety record. Its shallowness and single hall-sized room make it a pretty safe dive, in fact. However, only a few kilometres to the west of Allendale is a world-renowned very deep sinkhole called The Shaft. It is named because the small round entrance allows a beam of sunlight to shine down 60 metres (200 feet) into a gigantic underwater room filled with clear blue water. The effect for divers is like swimming down a beam of light in an enormous space and is amazing! Viv and Jean Ashby were delightful, warm and generous owners of The Shaft, allowing a great many of us over those years to dive in their spectacular sink-

hole and becoming good friends with a number of us. However, on one terrible day in 1974, four divers out of a group of 8 died at depth in The Shaft. All were moderately or well-experienced sea divers from Sydney but had no organised plan nor cave diving skills. After this tragedy, The Shaft remained closed for 10 years and all of us who had become good friends with Viv and Jean were devastated for them. It reopened later and son Trevor now allows diving groups only led by specialised cave diving guides. These series of tragedies got to the SA Parliament in Adelaide. Various ideas were put forward, including dynamiting all caves and sinkholes, filling them up with anything to plug them and banning diving altogether. A small group of us from Mt Gambier, Adelaide and Melbourne who had been diving carefully in the sinkholes for about 10 years said that they are too beautiful, rare and fascinating to be destroyed or banned. I was on the government committee set up in 1974 to review the deaths and this committee said there would be no cave diving unless divers organised proper training and qualifications. So there was a real urgency and a focus to set up the sport, prepare training standards and protect the caves and sinkholes from forced closure or damage.

Allendale Hall - Birthplace of an International Sport

In 1975, the Allendale Hall was chosen as the venue for our first public meeting for all concerned divers because it was right in the middle of Australia's spectacular sinkhole region. I still remember that meeting and where I sat in the hall. More than 100 people turned up. A number of us spoke up about our experience diving in

these sinkholes and the types of safety procedures we had developed. For many divers this was news - they didn't realise that special techniques were needed. Many thought that because the water was clear going in that it would be safe and easy to come back out. A review of the five diving death tragedies had revealed some vital training and preparation needs which divers had to learn.

So in Allendale Hall on that day in 1975 we all decided to form the Cave Divers Association of Australia (CDAA). We didn't even dream that the CDAA would grow from less than 100 members that day to training and qualifying 5000 cave divers to the present day, 35 years later! The training is built around four levels of cave complexity — Little Blue Lake is a level two sinkhole (fairly simple), and Allendale Sinkhole is at level three (moderate).

In 1980, Peter Stace and I completed a full review of all the Coroners' reports and a mapping programme of all the popular sinkholes and caves, published in the well-known book called "Cave Diving in Australia". The first shop which ever sold them to the public was the Allendale Tea Rooms run by Maurie Wallace! 5000 copies of that book have sold around the world, teaching divers how to plan and equip themselves safely for SE sinkhole and cave diving.

The Allendale Hall was the birthplace of the CDAA and is a special place for local people and all cave divers.

Ian D Lewis Life Member,
Cave Divers Association of Australia



Allendale Hall (red and white roof on the intersection) and the Cave in the middle of the road, 1981 (photo: Ian Lewis)

All the Way from Perth

by Mick Betts #4544 & Colin Murray #3241. Photos by Colin Murray

Although WA may be blessed with the Nullarbor, the Perth area hardly has the reputation as one of the world's top cave diving spots. But this wasn't going to stop one pair of WA divers.

I had been diving about 12 years and had clocked up around 500 dives before the opportunity presented itself in early 2010 to do the Cavern/Sinkhole course in WA.

My mate Colin has a similar story though he did his course a couple of years previously, also in WA. With scant few local opportunities to use this training we set about planning a trip to Mt Gambier for a week of diving.

The pages of this glorious publication are frequently graced with wonderful tales of "we dived here and there and saw this and that" and for me, to drone on about how wonderful Mt Gambier diving is, would be truly preaching to the converted. So maybe there is merit in a different spin on our story... after getting our qualifications we both wanted to get caving but the logistics of organising a trip over East frequently fell into the 'too hard' basket - until one day we both committed to pull our collective fingers out of our (own) bottoms and get a trip sorted.

Getting leave from work was the first thing to organise so we quickly nailed down the dates for October 2010 and knuckled down to the seemingly massive task of sorting out the rest of the trip. After a brainstorm at the pub we came up with a list of activities with names against each and then set out on our

respective tasks. We doubt those that follow us will find similar hassles so hopefully the following points will be of help to others when planning a similar trip.

• *Flights:* Easy one - find a mate who has too many airmiles so he can use them to pay for 2 trips to Adelaide.

• *Flights again:* Discover that we have to be married to each other to both use the same airmiles. He's a good mate, but not that good, so the first damage to the credit card was done. Not all that bad, around \$500 each return.

• *Accommodation:* Everyone raves about Just A Bed Lodge - we visited there and it certainly is a good spot, but we preferred to be more central so we booked a caravan each in the centre of Mount Gambier. Splashing out a bit I guess, but it was good to have the space.

• *Transport:* We picked up a rental car from Adelaide airport and drove to the Mount. We ended up with a Subaru Forrester which turned out to be an excellent choice. Anything smaller would have been a real struggle with two full sets of gear.

• *Speaking of which - dive gear:* We each had a big plastic box plus a twin set, totaling 120kg. I didn't relish the thought of excess baggage on that so a few phone calls turned up a local trucking company with a run to Adelaide twice a week. The only trouble was that we arrived on a Saturday when the trucking company would be closed so we would have to wait until the Monday to collect it - bummer. A few more calls to complete strangers in the CDAA gave a solution; the gear would be delivered to a dive shop, tanks filled and then get taken to someone's house for us to collect. Although a perfect solution, I harboured a few initial concerns about entrusting a few grand's worth of gear to a bloke with the nickname 'eBay' but fears were unfounded and we collected the gear exactly as planned. Damn fine chaps that CDAA bunch!

• *Having never been to Adelaide* or MG and being the resident expert at getting lost, an iPhone with Google Maps was worth its weight in gold for finding our way around.

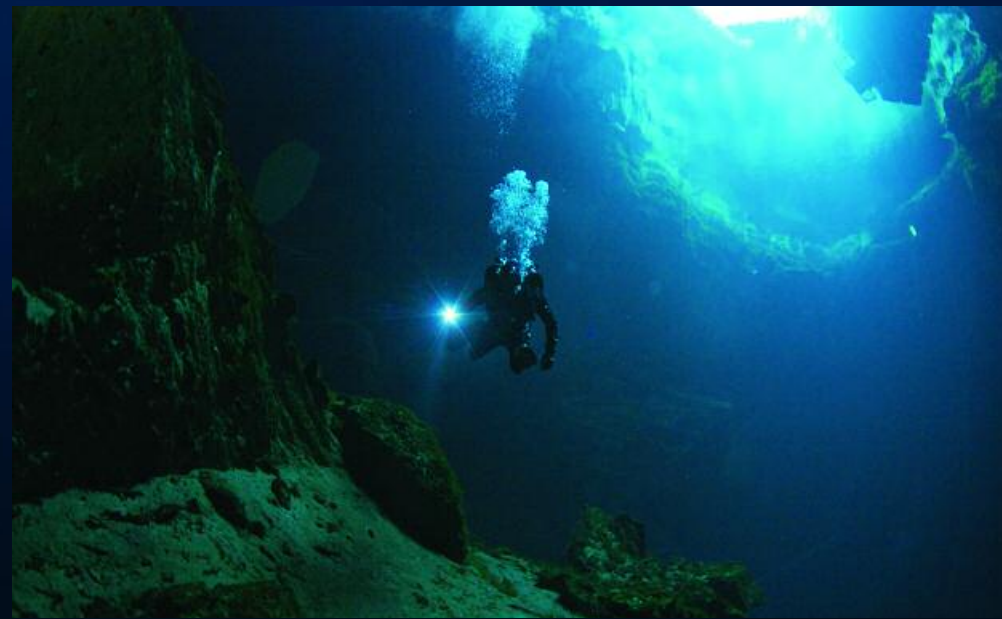
• *Rumour has it* that rental cars are indestructible, but when the deposit is on my credit card I'm not convinced. A week's worth of chucking wet dive gear in the back will take its toll on any car so we came up with a simple solution, for which Lowest Prices really were Just the Beginning.

On the outskirts of Mt Gambier many people will know of a little corner store, identical in appearance to many corner stores all over the country. \$15 was money well spent on a 4ft x 3ft sheet of plywood to lay in the back of the car - sliding the twin sets in and out on that was a breeze, and I didn't get any surprise bills from Mr Europcar.

• *Air fills:* Only two places that I'm aware of near to the Cavern/Sinkhole sites around Mt Gambier: Just a Bed and Allendale General Store. Both are equally good, though because of the locations and the order of our plan we got most of our fills from Allendale. Top marks to John there for great service! (why can't Telstra find decent guys like him?). We made ourselves a dive plan for the week with important ones like Gouldens, Pics & Kilsby's locked in. Other flexible sites such as One Tree, Little Blue, Sisters, even Ewens Ponds (hardly cavesque, but definitely worth a dive). We pencilled in to have some flexibility but generally stuck to that plan. I found that until you actually visit these places the names mean very little, but there is some good info on the CDAA site so arm yourself with that and a map of the area and you soon get the hang of what's where.

• *Take a beanie hat* - an essential piece of kit as soon as you are out of the water, especially at the cooler times of the year. Something else I also learned on this trip was that when going on any dive trip, take a 2nd hood. Its horrible to pull on a wet hood, so have a second and rotate them, allowing each to dry. When I say 'rotate', that doesn't mean put it on backwards.

At the end of our trip we flew back to Perth at lunchtime on a Monday. This worked out well as we could get a dive in on Sunday morning then drive to Adelaide in the afternoon. Overnight in the city, Monday morning drop the gear back at the truck yard and off to the airport with a good 24hrs no-fly time. That last dive on the Sunday had very long 5m & 3m stops after a full week of diving.



I think that's about all on the logistical tips, but I have to say a big thank you to the following people who helped us along the way:

- Geoff Paynter, my Cavern/Sinkhole instructor in WA, he got me into all this
- Linda Claridge, several phone calls to show us the ropes and generally guide us around.
- Steve Saville and Steve Coulter, priceless help in getting our gear picked up and ready for us. An even bigger thanks that nothing ended up on eBay.
- John in Allendale store, great to chat with and top notch air fills
- "The Girls" at DEH for helping us change plans at short notice and get more dives in Pics.
- Mother Nature for carving out some of the best dive sites I've been in.



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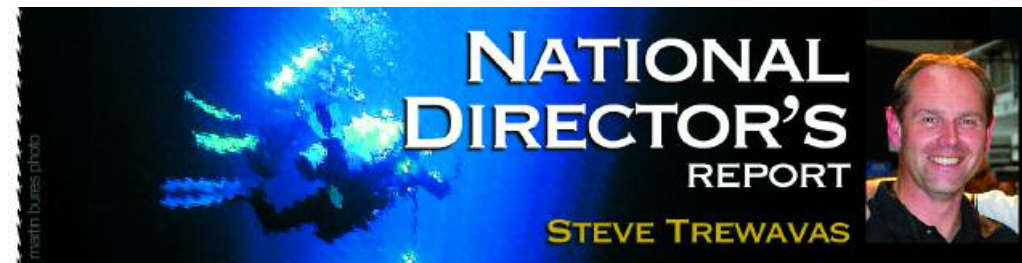
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Another year comes to an end.

The Tank Cave purchase process is continuing with its site subdivision and sale being approved by the Millicent Council last month. Approval has now also been granted by the South Australian Government. Please read the site director's report for further details.

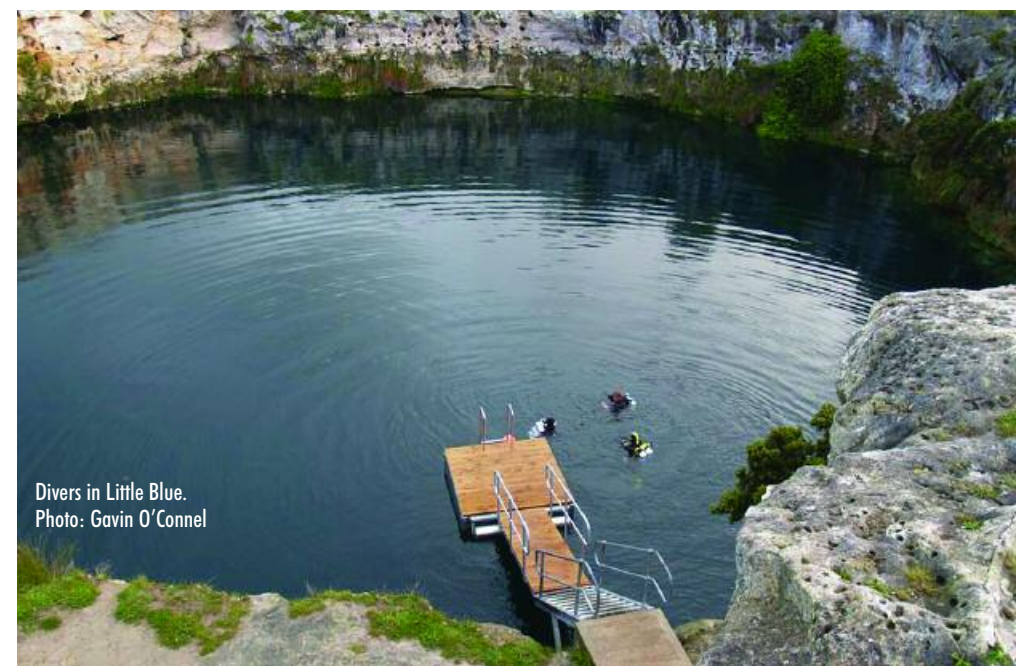
Earlier this year I wrote to the owners of Barnoolut Station seeking a meeting to renegotiate access to the sinkholes on that site. I have recently received a letter in reply stating that the property would not be opened to cave diving and a request that I pass the final determination on to all CDA members. I was also asked to convey the fact that any unauthorised access to the site would be dealt with as a trespass and legal action would be considered. It is a great shame that such pristine and marvellous sites are no longer ours to enjoy. With this in mind I would like to remind members that our sport is reliant on the good will and understanding of land

owners who really get nothing from us other than stress and the accompanying headaches. Please bare this in mind the next time you interact with them and try and pass on our appreciation for their acceptance of our sport.

We are currently trying to track down photographs for the website which depict divers of note diving in Australia. If anyone has any photographs of overseas visitors or notable Australians could they kindly forward scanned images to the webmaster. The idea is to have a photo section under the History area to retain and record these events.

Shortly proposed Constitution changes will be posted on the website. Please make yourself familiar with the proposal. We hope for some constructive debate before a final endorsed document is sent to the membership for a vote.

Steve Trewavas



Divers in Little Blue.
Photo: Gavin O'Connel

CDAA AGM and Symposium 2010

What I learned about Cave Diving!

by Dave Bryant
Photos by Dave Scarlett

OK, let's get one thing straight, Cave Diving is a serious sport and a business for many... I still get asked when am I going to do my cavern/sinkhole course and I have to be honest, I probably never will. Having said that I can't think of a more time consuming, spine tingling and down right scary past time you lot call cave diving. The recent Symposium at The Barn in Mount Gambier showed my wife and I just how far many divers are prepared to go for a buzz, for adventure, for exploration and I guess, for the love of it!



Possibly the only cave diving I might ever do... the sea caves at Wilson's Prom



Guest Speakers: Simon Mitchell, John Garvin, Christophe Le Maillot and Forrest Wilson.

Most non-divers think I'm mad, donning scuba gear and setting off to photograph a school of fish or a shark, and often I'd have to agree with them but I love my sport and have made it a part-time business too. I wouldn't give it up if you paid me.

When we heard from the guest speakers at the Symposium, what they had achieved with their cave diving, I have to ask, are they just as mad as I am?

We hear about accidents and all strive for better practices. Deep caves with no light or air pockets above is, well, downright unsafe, but cave divers would have to be the safest divers in the world.

Our guest speakers this year displayed a vast amount of character and life experience, which told us, the audience, they had also cut a few corners in their time and lived to tell the tale.

John Garvin is one such diver who even though his experience told him he could dive almost anywhere, he too dived a site where it tested his nerve and anatomy and luckily he lived to tell a story.

John ran a dive shop in Turks and Caicos and some years ago had been told of a deep hole filled with clear water... what better place to have a dive. He and a mate did in fact dive the site. He used a reel, tied off to a tree branch and descended into what eventually was sheer blackness, where only torch

light gave any bearing. He spoke about descending in to a layer of algae which burnt his skin, or at least felt like it, but he and his mate proceeded deeper. To cut a long story short, they reached a wall, got a bit disoriented, then upon heading back to the surface, it all went a bit wrong. He and his buddy couldn't see any light towards what they thought was the surface, in fact John used the words 'Black Black'... when you see contrast between black and black black. By this stage I would be a nervous wreck but John held himself together, followed the line and eventually saw a glimpse of contrast in the blackness, and so, they lived to tell the tale. John has since written a screenplay for the soon to be released film 'Sanctum' based on his scary experience along with another story about Andrew Wight's entrapment in Pannikin Plain back in 1988. James Cameron has funded the pro-



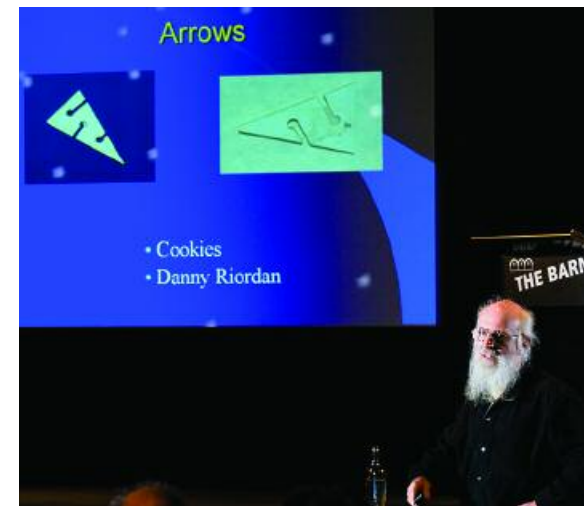
John Garvin

duction of the film and it tells the tale of cave divers who get caught in a cave system and have to use their wits and experience to stay alive and survive. John wrote the Sanctum screenplay and is starring in the film. Andrew is a Producer of the film, along with James Cameron and Ben Browning.

John has been a long-time Cave diver and he considers himself lucky to have survived a precarious dive which could have been fatal. He has instead been fortunate to use his experience to provide better training to the divers who come to dive with him in the Turks and Caicos, and he now has a new friend and movie producer with whom we are sure he has created a unique film which passes on the fascination, fear and safety of cave diving.

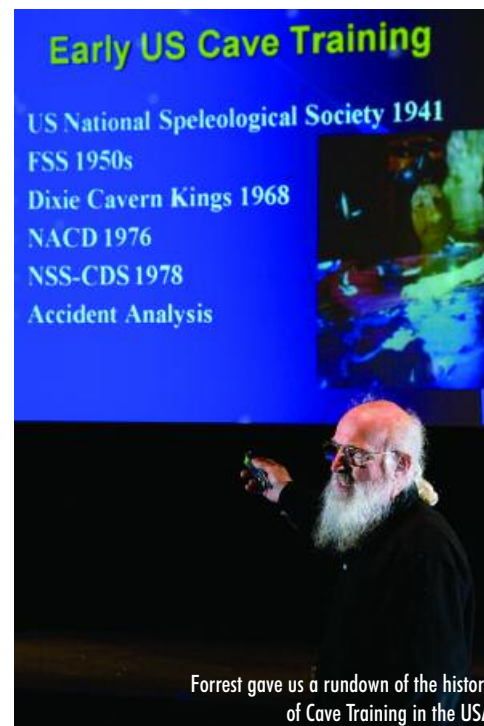
John was a wonderful guest speaker. He kept us captivated the entire time. We were also privy to see a snippet of the new movie 'Sanctum' which is due for release in February 2011.

Forrest Wilson is a jovial gentleman who inspires people to keep doing what they love well into their retirement. Once again I met a diver who loves it so much they'll travel the world, meet great people and keep diving. I was fortunate to first meet Forrest at the time I also first met Ken Smith, at the Allendale East General Store. I had my back to Forrest and felt like a right drip! He was very chatty, though I believe he had been diving with Dave that day and he was ready for an afternoon



siesta!

Listening to Forrest the following day talking about Cave Diving also brought to our attention the many people who cut a few corners, no one in particular, just people who didn't go about their adventures the right way. Forrest is of course famous for inventing the Forrest Arrow - which I'm sure many of you have and use when you go cave diving. Something so simple has become a tool of necessity when it comes to cave diving.



Forrest gave us a rundown of the history of Cave Training in the USA

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What I indeed learnt from Forrest is that cave diving has been around long before I was born in 1968 and he'll be doing it for a long time to come.

Christophe Le Maillot is an explorer of distinction - here's a guy who goes that extra step to becoming unique in a sense where his dedication to the sport, his meticulous organisation and mapping makes him a unique explorer and a very interesting man.

Christophe has been exploring cave systems in Bosnia and Mexico. Bosnia is the last place I would have thought underwater caves existed. In fact, these caves are so deep and long, his dive logs show they are truly unique and have never before been seen by divers.

Christophe has had cave diving experience in France, Bosnia & Herzegovina, China, Australia and Florida. His involvement with the community, diving organisations and destinations has allowed his sport to become a career, an adventurer and a specialist guest presenter. He has been diving for 16 years, has 6000+ dives and 4,500 of those were in caves. His longest penetration is 19,000 feet. He is co-owner of Zero Gravity/DIR-Mexico.

To be honest, Christophe's talk at the Symposium was so captivating it's difficult to recollect all of it. My advice is to set sail on the internet, first start at the web link mentioned below and do a general search on him. He obviously has his fingers in a few pies and is involved in many businesses and on-going explorations, and he's even on Facebook, so look him up and discover a unique cave diver whose desire is to live a life of travel, exploration and education.

To find out more about Christophe, his team and his explorations go to: www.gue.com/?q=en/node/209&id=304

Dr Simon Mitchell offered the CDAA members an interesting topic this year - cutting edge research using CO2 sensors in rebreathers and

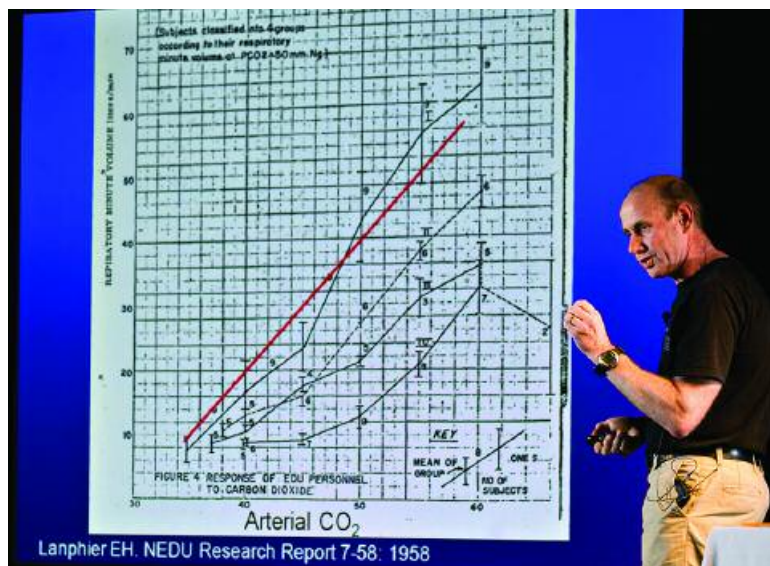


Christophe Le Maillot

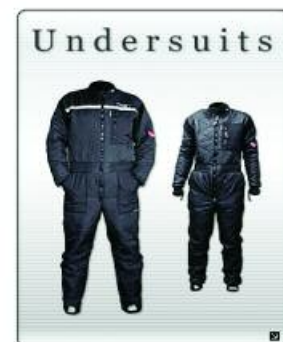
medical conditions relating to CO2 in diving. I have heard Simon talk once before and his knowledge is outstanding, not only from a specialist doctor's perspective but also as a diver who uses his experience to evaluate the effects on the human body. Unfortunately my wife and I were not present to hear all of Simon's presentation and to be honest, not being a cave

diver, it's a bit beyond my knowledge. What I must admit though is as we diversify ourselves with our sport, using newer devices, gas mixes, perfecting the art of diving, without people such as Simon Mitchell we'd be at a loss to determine the outcomes of errors of judgement and the way we practice the sport.

To sum up this year's Symposium, from a non-cave diver's perspective it taught me how critical 'safety and planning' is to any diving we conduct and what adventures we can all look forward to in the future.



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"After World War II,
the Australian Navy used to come here for a picnic,
have a swim in the pool and enjoy the cool shade of the cliff.
We call this place 'Wash Wash Meri'..."

TEWI CAVE

Manus, Admiralty Islands / Papua New Guinea

by Pierre Constant

the thrill of discovery

"Wash wash meri" pool, entrance of Tewi cave, at the base of the cliff.

2 degrees south of the equator, the Admiralty Islands of Papua New Guinea, are a forgotten eden far away from civilization. During the Pacific war, Americans had bloody fighting with the Japanese who had occupied Manus for a couple of years, before they were dislodged in 1944.

I am standing at the base of a 40 metre high limestone wall in the jungle, which runs from north east to south west along the Tewi lagoon, on the north coast of Los Negros Island. The latter is connected to Seeadler Harbour and the Pacific ocean. The name of the island is a legacy of the Spanish navigators of the 16th century. Thick mangroves fringe the waterfront. Nearby is a bamboo grove where, according to the locals, a big female crocodile dwells.



Tewi lagoon and the limestone cliff

I had visited 'wash wash meri' once in July 1999. Attracted to the turquoise blue color of the crystal clear water, I went for a swim and did some snorkeling. I dove down on one breath to about 10 metres, but could not see the end of it. A slope of sediments was gliding down under the base of the cliff. Under the surface, some fish were wriggling shyly: the Orbicular Cardinalfish, Mangrove Snapper; "Lutjanus argenti-maculatus" and some black and white banded Archer Fish with a yellow tail.

One morning in December, I made up my mind. Time to find out with a tank dive, whether the pool was leading anywhere deep down. I drove my minibus to the village nearby. Paul, the old man was sitting under his house, peacefully smoking his pipe in a wretched antique looking armchair. With due respect to authority, I assumed he was a "bigman", introducing myself, I asked for the permission to dive into the pool. Paul was curious and open minded. Caressing his white beard and adjusting his spectacles, he stared at me for a while. "Nobody has ever scuba dived Wash Wash Meri. You are the first white man, with such a funny idea", he smiled. "By the way, we have a legend about this place..."

This is the story of Inimei and Inipoon. A long time ago, two sisters—in fact mermaids, half human, half fish—lived in the lagoon. One day, they were caught by fishermen. One was killed for food, while the other, Inipoon, escaped after marrying the leader of the men. She got pregnant with child and returned to the lagoon, where it is believed they both originated. Eventually, Inipoon, the youngest of the two sisters, landed and walked across to the pool where she hid. This is where she disappeared forever.

With the blessing of Paul, the bigman, I am off to the waterhole with a joyful party of local boys. Not too sure what to expect down there, I told my wife to stay behind, until I found out a bit more. I had a small

Scubapro torch, but did not have a reel. Once underwater, I followed the left side of the wall. At the base of the slope, I reached the bottom at a depth of 17 metres. Any contact of my fins with the silt would automatically translate into a dark cloud of dust, that would obstruct visibility behind me conspicuously. I went as far as I could before losing visual contact with the surface light. Then, there was a bend to the left. Another drop brought the depth of the tunnel to 21 metres and I returned to the safety of the exit after 33 minutes. I discovered a pile of oyster shells and other shell debris of marine bivalves on a side slope plunging down to 25m. Did prehistoric man live here?, it really looked like it... Some translucent fresh water shrimps were hopping around on the sediment. Well, I knew for sure that this was not going to be my last dive in "Tewi cave". Something was still hidden in the darkness.



Vivien descends into the hole, experiencing a silt out

March 2000: After a two months leave, I resume my exploration. This time, I bring a reel from South Australia (a 110m one) and feel more confident about venturing into the unknown. A big rusty pirate Chinese looking junk had anchored in front of Lorengau (capital of Manus), with a cosmopolitan crew of young men and women, going around the globe for some coral reef research. I convinced a nice guy named Michel -also French- to join me for this second dive. I bring the reel along, but keep fighting with it for most of the dive. That additional stress pumped up quite a bit of air!... Eventually, we got to the end of what I call the first chamber. A small twin headed stalagmite is rising from the bottom, after the bend. On the right hand



Vivien inspects a stalagmite of the tunnel, at 82m

side, Michel finds a crack, just wide enough for a man to sneak through. It leads deeper to another chamber, at least 10 metres down below, which would be at a depth of 30m. Getting serious now. Beyond the small stalagmite a crest is culminating at 19 metres and the reel is now fully extended. The tunnel continues beyond. Back home, I measure the reel line, it is only 90 metres!...

One week later, I go for a third attempt and say to myself: forget about the reel, too much trouble. Any respectable member of the CDAA would naturally throw me the stone for my foolhardiness. PNG claims to be the land of the unexpected and I had to adapt myself to the situation." The first condition of diving is to be relaxed", me thinks.

None of the local boys came along, nor assisted me with carrying equipments. I climb over the ridge in the jungle, scuba tank on my back, dive mesh bag in one hand and camera in the other. Sweating like a pig allright, and downhill towards Tewi lagoon, over sharp dolomite limestone. 15 minutes later, I rejoice at the thought of a bath in cool water.



Vivien and the second team of porters

Without hesitation, I find my way straight to the end of the first chamber, then uphill past the small stalagmite. This time it is all new in the great dark beyond. My torch beam shines on the left, where I am amazed by the discovery of two stalagmites. One is simply 3 metres high and pointed towards

the ceiling like a missile. On the right side is another stalagmite about 1m50 in height. Now in total darkness, the bend to the left has given way to a curve on the right, into another chamber which looks quite large. In the middle of it, a small rise is crested with 3 stalagmites. My light cannot meet the sides of the chamber any longer. I feel like playing against the odds. My

eyes do not want to leave the reference of the wall on my right hand side. If the system suddenly branches into different chambers, I can easily be trapped. A big eyed shrimp is staring at me on the bottom. I turn around, with a 100 bars left on my pressure gauge.

On subsequent dives, I reach a total dive time of 57 minutes, discover a peculiar marine life at the cave entrance: a cowrie shell plowing through the sediment, white bryozoans, sponges, translucent ascidians. In the depth of the cave, small red banded cave shrimps "Rhynchocinetes hiatti", are skimming the bottom, hopping around in circles if the torch beam was on them. I try to enter the third chamber, through the side crack at the end of the first chamber, but each time I silt in and am afraid to venture any further down. "Very wise indeed...", confessed Tony, an Australian cave diver, whom I spoke to on the phone on night.

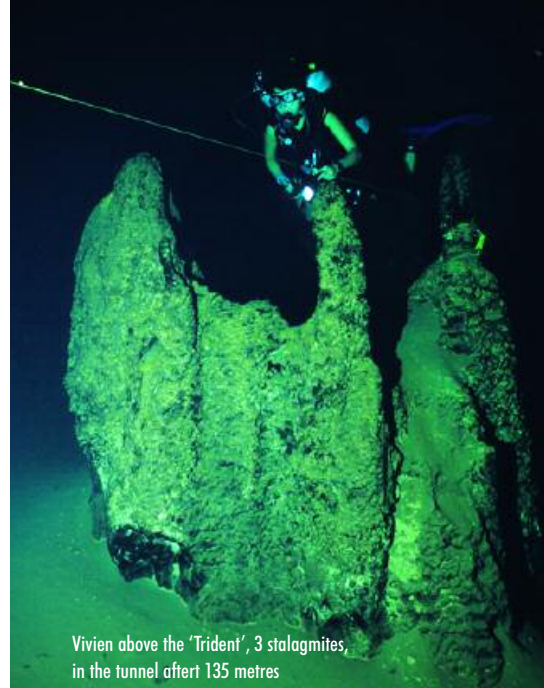
Definitely not trained as a cave diver, I have to accept my limitations, my technical lack of knowledge and poor equipment. One evening I decided to call the Australian cave divers, I had met the year before in South Australia.

The morning after I had sent my emails, one cave diver answered in a hurry. My story got him seriously interested

At the end of March, Chris, -a Frenchman who is going to spend some time in Manus- joins me. He brings along one powerful underwater light, that gives a new perspective of the cave. I take him as far as I have gone. This time we discover the skeleton of an

ancient snake, laying on the sediment. The exploration is getting exciting and the main tunnel continues further.

Early April, Gary and Tony from the CDAA- arrive from Melbourne, loaded with a 100kg of luggage each. I take them right away to the lagoon. Sweating like a pig, Gary wonders: "Do you expect us to do this everyday,



Vivien above the 'Trident', 3 stalagmites, in the tunnel after 135 metres

with twin tanks and all the gear? we'd better need some porters...". Don't worry, I'll figure that out", I say, reassuring.

Under the supervision of Simon -my trust man-, the expedition moves on the next morning, like a 19th century exploration party in New Guinea's jungle. The single line of 10 men, crawls up in silence through the lush vegetation. A slow caterpillar creeping over jagged limestone. Some carry yellow tanks, others dive bags with lamps and heavy batteries, others cameras and bush knives. The day before, I had mentioned to Simon that it was no easy feat to climb over these two big dead logs, laying across the trail. "Just put a few wooden steps in front, that will do", I advised. Now I am surprised for good. He had chopped a large passage through the two logs, with a simple axe. "Oh! It took me only 2 and a half hours work...", he said modestly.

Tony and Gary are rightly impressed by the waterhole, at the base of the limestone cliff. Tony choses to be the reel man and draws the line to where I had ventured with a single tank, Gary takes some pictures. On the following day, they are both on twin tanks and we go further in a long straight tunnel, to an area crested with stalagmites. I name it: 'The Chandelier'. On the right side of it, a big depression is going into the deep. The tunnel continues up into another chamber, much narrower, where freshwater and saltwater mix. The visibility changes drastically, and it turns rapidly blur. At this stage, Tony catches my attention frantically -his lamp drawing round cir-

cles- and signals me to return. The message is clear. I have gone too far on a single tank. Fair enough. I make my retreat along the guideline. Back through the long corridor, I find Chris inspecting an old rusty 20 gallons Japanese drum, laying on its side. Nearby is a pile of debris and small rocks, with a few bones and the skull of a mammal, maybe a cuscus. These must have fallen from a hole in the roof. The pincers of a large coconut crab join the collection, and are also part of the bounty. Above my head, the ceiling is very high. At a depth of only 8 metres, it is still going further up in a mix of fresh and murky water.

In the next few days, numbered arrows are fixed onto the guideline, showing distance to the exit. Little yellow markers - Sixteen in total- are placed wherever the line is change direction. "Fishers" or cracks in the wall, are noticed by Gary, as well as solution tubes, but no branching tunnels leading elsewhere. After four days, Tony and Gary come to the conclusion that their exploration is over. At the end, they notice a small chamber with a single stalagmite, 1m50 high and straw like stalactites hanging from the wall. "A very nice room indeed", says Gary. "Only 8 metres deep, very silty, almost zero visibility". The end of the line is tied up at an estimated distance of 300m. "It could even be 350m, if we made a mistake...", he reckons.

The sketch of the extended guideline realized afterwards, shows the design of a fishing hook. "Tewi Cave" is heading south west, then south, at last turning east and ending due north. "There must be other caves in the area", remarked Tony. For sure there are. A few dry ones served as refuge for both locals and Japanese soldiers during WWII. There is even an underground river flowing in the mountains of central Manus, with human skulls and bones from the cannibal times...". Spooky?

The island of Los Negros has typical karstic features, like Swiss cheese. An old fringing reef was tectonically uplifted, then submitted to erosion for a few million years, before being partly submerged again. Considering the size of a 3 metres stalagmite, Tewi cave could be at least a few hundred thousand years old.

June 2006: Six years have gone since I was last in Manus. The emotion of Tewi Cave's discovery, the thrill of exploration, are still fresh in my memory. My only concern is that I have not reached the end myself, due to the lack of proper equipment and necessary training.

The cathedral entrance of Tewi Cave



While in South Australia during spring 2003, I take the 'Cavern/Sinkhole' course of the Cave Diver Association of Australia and I become certified. Now able to use twin tanks and to lay a line, I train myself in the sinkholes of Mt Gambier for a couple of years and my girlfriend Vivien also gets her training in 2005.

Back to Manus, the locals have not forgotten 'Kisokau', my local name in Titan. I am welcomed like a hero! I stop by the village of Lolak to greet Paul, the 'bigman', president of the island of Los Negros. "You've been gone for a long time!..." he says. I inform him of my intentions regarding further exploration of Tewi Cave. Paul will do what's necessary to make the trail user friendly again...

The following night, Vivien has a strange dream. "At our first dive in the cave, we meet a salt water crocodile hidden in the darkness... disturbed, he heads towards the exit and we give him way, our backs against the wall. Considering the risk involved, we decide to turn around, but the croc is waiting for us and attacks...". My assistant is rather suspicious when we embark all our equipments in the 4x4 of the Harbourside Hotel.

At Lolak, Paul -sitting on top of his furniture- assigns us Thomas and Amos as porters. Joe comes along as a scout. Amos is deaf and mute, slightly Mongolian, but for sure solid enough to carry Vivien's tank and BCD. "Huh! Huh!", he growls, eyeing us as a mad man. We cross over the limestone ridge in the jungle and reach the edge of the waterhole 20 minutes later. The water of the cave is dark and dirty green. Nothing inspiring indeed, despite the rays of the sun that filter through the forest's canopy. The support team is speechless as we glide into troubled waters. The visibility is not flash. After 70 metres, my companion shows signs of distress. With a swaying motion of the torch, I shine on the algae covered line, which was laid 6 years earlier. Comforted, she accepts to move on. Sentinel of darkness, the giant 3 metres tall stalagmite appears in the light beam, then the 'Trident'. The skeleton of the fossil snake still lays in the sediment, where I first found it. Vivien takes it easy, now that she hasn't met the crocodile...

At the second immersion, we push until the 'Chandelier', a rise made of various smaller stalagmites. The distance is now 210 metres from the entrance. The main tunnel seems to split in two. On the right, a depression leads to



Paul, the "bigman", president of the local government, at home, with Amos, Los Negros Is.



Bullets, a memory of war gone by.



A pile of bones from a mammal.

a dead end which drops to 24 metres and goes around the Chandelier. On the left, the passage narrows, then climbs up into a corridor that I now call 'The Hook', in reference to a very sharp curve towards the left. Twin tanks diving is compulsory from then on. Since poor visibility does not agree with photography, I postpone our third dive to another day, allowing Tewi Cave to regain its visibility. Joe, Amos and Thomas will take advantage of the extra time to cut down a few trees of the clearing, to facilitate the penetration of light into the cave.

Saturday, June 3rd. The transport of the 4 tanks and the equipments is not an easy matter. 4 porters are needed. Two of them disappear as soon as we reach the cave. "Gone wild pig hunting", reckons Joe with a movement of the shoulders. In the water, the visibility has improved. We aim straight at the 'Chandelier' with twin tanks, then enter the 'Hook'. The water becomes blurry due to the halocline and the passage narrows. Two small stalagmites rise on the right. The corridor veers to the left in a sharp 90° angle. We finally come to a last chamber with a truncated stalagmite and shawls on the wall. Some broken stalagmites lean at an oblique angle. This is clear evidence of past earthquakes, no doubt. Finally, the dead end faces due north. The space is short to turn around. Vivien points her luminous halo in my direction, wrapped like a ghost in the turbidity that surrounds us. This looks like a science fiction movie! With a motion of my finger, I signal the turning point. We have come to the end of the 'Hook' at 300 metres from the cave entrance.

On the way back, we explore the sides of the tunnel. A new snake skeleton lays next to a pile of debris. The unfortunate reptile has coiled up in its last convulsions, after falling from a crack of the roof. Near the giant stalagmite, a forest crab is flipped upside down. One more exploration remains: the lateral hole at the end of the first tunnel, into the deep chamber... A tricky passage, where the volatile silt awaits to follow you down into the dungeon...

During the night, Vivien has a morbid dream. "We laid the line and had gone down into the hole one after the other..., when suddenly a rock fall occurred! A cloud of silt fell on top of us inside the chamber and we could not see a thing. The exit doomed, we were trapped like rats, it was horrible. The air pressure was getting lower on our gauges... when the end was near, you held me very tight in your arms".



Vivien hovers above the snake skeleton.

A bad omen, for sure. Nevertheless, I decide not to be influenced by it. Our first tie-off is made on the side of the tunnel above the hole. I go in first. As expected, a small cloud of dust follows. Down below, my torch shines on a round chamber 10 metres wide. On the right, two thick stalactites bulge from the wall like mushrooms. The bottom is at 30.5 metres. Reel in hand, Vivien comes down surrounded by a gaze of brown silt and does another tie off on the ceiling. I gesture her to join me quickly as the dust invades the chamber, like a sly trap. As we retreat, I grope towards the exit, hitting my head against the ceiling. Vivien reels in behind me, humming like a bird in spring time. This is the right mental attitude, because the experience of a silt out is not really fun. The brown fog dissipates as I emerge in the gin clear visibility of the tunnel.

Our fears behind us, we have pierced the mystery of Tewi Cave. Since then nature has claimed her right again. Other caves and underground rivers await to be discovered in Los Negros, and in the mountainous interior of Manus. The adventure lives on beyond the next ridge...



Pierre Constant was a resident of PNG 1999-2000, running a dive centre in Manus, after 5 years exploration of the archipelago.

He obtained his "Cave Diver" rating at Mt Gambier, in March 2007, with Linda Claridge.

His numerous experiences are related in the coffee table book: "Manus - Admiralty Islands, lost world of the Titans", land + underwater photographs, with a text of his adventures in Papua New Guinea. 160 pages, 204 photos.

Cost: Aus \$60 + postage.

To order: Pierre Constant: email:calaolife@yahoo.com

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KARST GEOLOGY

WITH IAN D. LEWIS



The Queensland Blue Holes and what they inspire...

Stu McGregor's recent series of articles on the Blue Hole discoveries along the Great Barrier Reef in Queensland have revealed some very interesting geological discoveries and have led me to a topic which I have been contemplating for a number of years. I'll come to that a bit further into this Karst geology article.

The mystery of Blue Holes

Blue Holes around the world have a real sense of mystery and attraction. Anyone who has been to the Bahamas knows of their curiosity and spectacular secrets, together with those wild tidal whirlpools and inrush/outrush of sea currents making dive planning into Blue Hole cave systems very disciplined. They are full of surprises. I remember Peter Stace telling me of one dive in a Bahamas Blue Hole as they exited in fairly crappy viz and had to deco at the entrance where the outflowing tide was trying to push them to the surface. Pete suddenly saw in the gloom the head of a bloody huge shark next to him. Of course they all crapped themselves but it just cruised past them effortlessly and Pete swore it took over a minute for its whole length to slide past him, it was that huge! That was not in the Cavern-Sinkhole Dive planning theory!

Blue Holes have also naturally caused all sorts of theories as to why and how they formed, out there in the sea. Apart from mariners' tales of Devil's Holes, voodoo and folklore, early naturalists began to assume they were throats of volcanoes. This is interesting because that is also what the early settlers around Mount Gambier thought the local sinkholes like Little Blue, Black Hole and Umpherston's Sinkhole were. In my last article I explained that although they weren't right, there is a strong link between volcanoes and large sinkholes in the Mt Gambier area. So if Bahamas' Blue Holes were thought to be volcanic in origin, could the Queensland ones also have been? Queensland has several chains of volcanoes all the way up the Dividing Range and Lake Eacham is a freshwater dive in a broad volcanic crater. Could the Blue Holes have been a chain of sub-sea vents now dormant or extinct and colonised by fast-growing coral forests?

The Bahamas' Blue Holes are limestone sinkholes occurring in the same limestone as the mainland sheets across Florida and the Yucatan Peninsula. What was once a more or less continuous thick sheet has been cut by fault lines and separated by deep ocean channels and currents. Their Blue Holes are formed by normal dry land karst processes when the sea was lower and cave and sinkhole complexes developed over many thousands of years during Ice Age periods when sea levels remained low, and may have been flooded a number of times by the sea in between various ice ages. When ancient sea level

changes were happening over there, the same was happening around the Australian continent. So, depending what the zone in Queensland between the modern coastline and the Pompey Reef Hardline outer limit consisted of, there may have been limestone there too, deep enough for Sinkholes to develop and later become drowned Blue Holes.

A famous Australian Karst Scientist

The divers investigated three Blue Holes along the Pompey Reef "Hardline" — the oceanward edge of the Pompey reef complex approximately 250kms offshore, north of Gladstone and east of Mackay. That's a long way out. There have been a number of visits to several different Pompey Reef Blue Holes out here over the years, including Andrew Wight on the Quest, which Stu mentioned, and a scientific expedition to two other Blue Holes further to the north back in 1979.

This expedition was significant for many reasons, but one of the most important was the inclusion of a researcher named Professor Joe Jennings. This very popular scientist was a limestone specialist from England who came out to Australia in the 1950's bringing with him all that knowledge and discovering an entire continent where almost no limestone karst research had yet been done. Joe died 20 years ago but he still influences every karst geologist in the country even nowadays, as we build most of our work on his insights and new theories and discoveries about karst in Australia. We all still miss him.

In 1972 I led the first Nullarbor cave diving expedition (Ron Doughton wrote about it and featured some beautiful photos in a recent Guidelines issue in 2009). After we made those huge underwater discoveries in Weebubbie and Cocklebidy, with the diving being led by Phil Prust and Dave Warnes, I was asked to go to Sydney and give a presentation on our findings to the Australian Speleological Conference. I took slides and maps and gave a beautiful talk which everyone was naturally extremely interested in as they all wanted to know what we had discovered. At the end of the talk, this old guy got up and stood in front of me and started talking to the audience. I didn't know what was going on and was about to say hey, wait your turn, mate when I realised what he was saying. It was Joe Jennings, the karst guru of all gurus, saying that our discoveries on the Nullarbor and our maps and diagrams had completely re-shaped their sci-

entific thinking of how Nullarbor caves formed and he was giving us all high praise for our efforts and our recording. So began a long friendship with Joe and it was he who impressed upon me that divers interested in geology were the underwater eyes for all geologists such as himself. I've never forgotten that and it's why I have measured, mapped and recorded so much stuff over 40 years since.

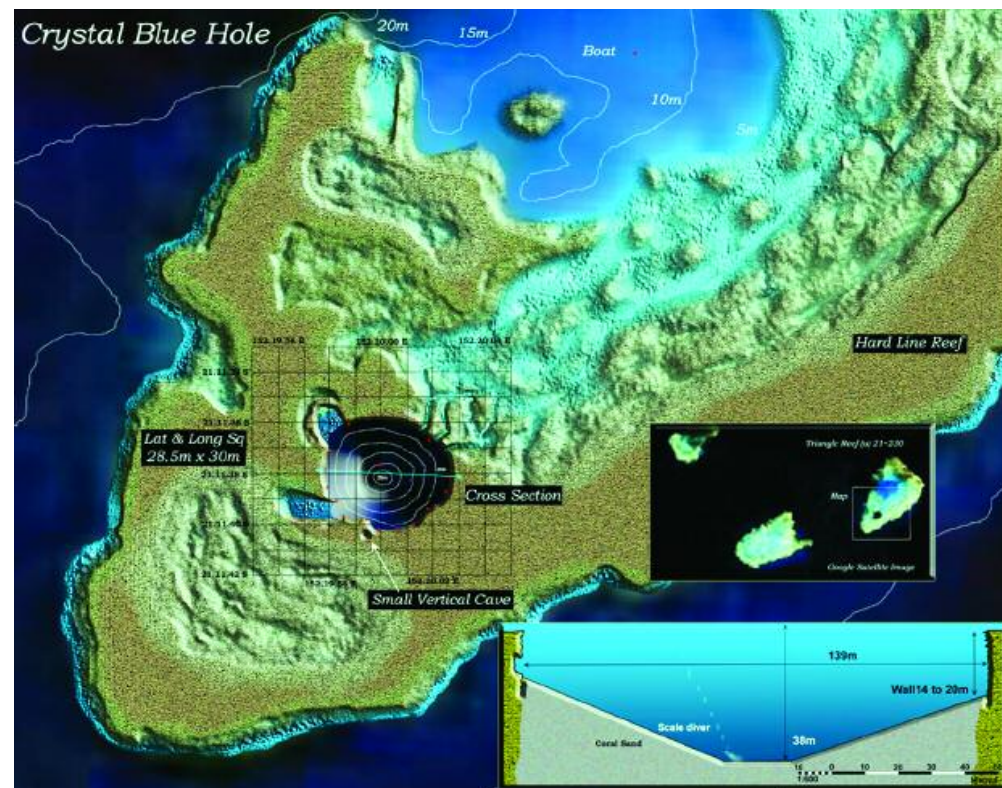
Why Queensland's Blue Holes are there?

In a similar way, the Blue Hole maps and diagrams from Queensland of Stu McGregor and the others are the start of revealing another potentially large maritime limestone region. The 1979 scientific expedition went to two Blue Holes in the Northern Pompey Reefs which they named Cockatoo Blue Hole and Molar Blue Hole. These holes are another group again from the ones Stu has just written about. This means there are at least 5 major Blue Holes stretched out over a 150-kilometre stretch of outer hardline reef off central Queensland. Joe Jennings and the others actually did some seismic work out on these two holes as well as soundings and taking drill cores. They found that the coral tops around the Blue Holes had colonised real limestone underneath. These limestones are up to 10,000 years old, which makes them much younger than the Bahamas, Mount Gambier and Nullarbor limestones but the actual caves and sinkholes themselves in many cases are very young. So their conclusion was that a large expanse of the land between the modern Queensland coast and Pompey Reef Hardline was a limestone plain. These young limestones were formed from the erosion of much older limestones when the whole area was dry at times of ice ages. Caves and large sinkholes formed in them much the same as they have in the

Mount Gambier and Bahamas regions. This gives us an idea of what is out there, still to be found. For example, I'd be itching to look at the walls of all those deep channels that Scotty's boat had to navigate through when Stu and all the others had to get out to the ocean side of the reef. Hey — I know we are talking really serious and dangerous currents, but the geology tells me that's one of the places to look. Perhaps there are some better-protected backreef walls inside to tackle first. Any cracks and fractures in the outside hardline at the surface (such as the four Keyholes which Stu's group investigated near Scotties Wonky Hole) would be prime places to follow down the face to depths of 30-60m to see if they produce tunnel leads. There's a shallow flat limestone sea cave system under Cape Spencer on South Australia's Yorke Peninsula that has developed exactly like this. Like the Mount Gambier area, the vertical zone to search would be from about 20m to 120m depth — the depth range of cave-dissolving groundwater across Australia's coastal limestones through the last Ice Age.

Australian limestones offshore

This leads to my other topic which I referred to above. The Blue Holes, Cenotes and cave systems of the Florida-Mexico-Bahamas region all formed in large offshore limestone sheets laid down as the sea floor of ancient warm shallow seas. These beds eventually hardened under their own weight and cemented into huge continental shelf platforms of limestone. Where else in the world has this occurred? All you have to do is look for regions along current continental coastlines where there are large stretches of limestone running into the sea. When you look at Australia in that way, a number of large areas come to mind — the coastline off Mount Gambier, the Nullarbor, the Port Campbell—12 Apostles Coast, the



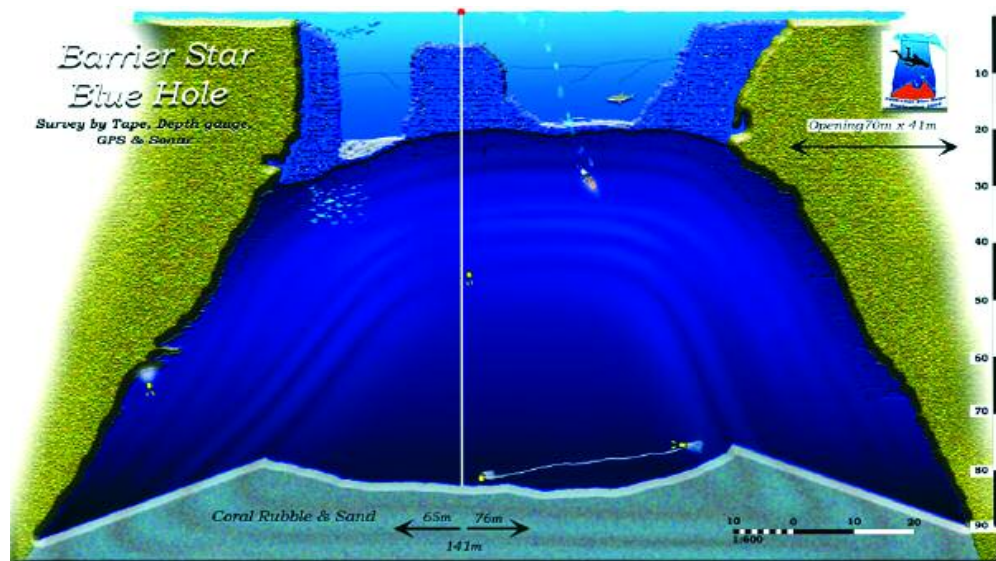
drowned limestones off Torquay and in The Rip in central Victoria and the area between the Queensland coast and the Pompey Reef Hardline.

Divers have found offshore lines of bommies in the Rip and Port Phillip Bay, offshore past Torquay, off the Great Ocean Road, all along the Mount Gambier coastline, off Yorke Peninsula and in areas of south west Western Australia. All of these are limestone. They are very similar to the ridges and gullies of the Pompey Reef which form the wild-running tidal channels that Stu and the others had to navigate to get to the Blue Holes. What I am saying is that offshore limestones exist in heaps of places around Australia in tropical and colder ocean conditions.

So the Queensland Blue Holes were sinkholes developed in normal limestones and were later drowned by rising seas between ice ages. The same process has happened off these southern Australian coastlines except there were no coral reefs to grow on top of them as the southern ocean has always been too cold. The Queensland Blue Holes are an indicator of other offshore cave and sinkhole systems along our southern coastlines. All these (and the Florida-Bahama-Mexican caves) have formed in what karst geologists call "carbonate platforms" – vast limestone plains offshore leading out to the continental shelves. The Blue Hole expeditions in Queensland are only just beginning, and the examples of smaller

caves and splits in the outer reef edge show that not only large Blue Holes will be found but other cave systems also.

And it is high time we turned our attention to the continuation of the Mount Gambier limestone sheet heading southwards out to sea. We all know that there are freshwater springs reported offshore from Piccaninnie Ponds and Ewens, and that to the west along that cliffy coastline, cray fishermen have favourite secret 'deep cray-holes' where the crayfishing is extra good – descriptions of some of these from the sounders and local knowledge are descriptions of sinkholes!! Victorian divers have always been told that Portsea Hole is a long drowned meander bend of the Yarra River... but have another look next time you're down there; it has the structure of a limestone sinkhole half buried in the sand. And we know from all the Nullarbor diving discoveries that just like Mount Gambier, the limestone tunnels get larger and deeper as you head towards the coast. Karst geologists know that this keeps going offshore across the continental shelves. If divers can use satellite technology and sophisticated boating, detecting and diving equipment off the Pompey Reefs, let's start thinking about along the southern Australian coastline too. They are there to be found.



These three Queensland Blue Holes (pgs 31 and 32) are far wider than most Mt Gambier sinkholes but two of them have received massive amounts of sand and coral infill. Barrier Star Blue Hole is the real indicator of cave development as water dissolving it when it was on dry land would have flowed through at a deeper level, undermining the huge volume, just like The Shaft at Mount Gambier. There may be extensive tunnel systems at 100-120m which will be serious diving. However, The Keyholes at Scotty's Wonky Hole indicate that there will be shallower tunnel systems higher up in the walls of various Blue Holes and channel walls all throughout the 150 km Pompey Reef complex.



Hi All

Exciting news to hand – we have finally been given the permission and go ahead by the Government departments and Councils to purchase Tank Cave. There have been many "I"s to dot and "T"s to cross, along with the many hoops to jump through and red tape to get through – but in the long run I believe that it has all been worth it. Now the real hard work begins. From here (once the rest of the purchase is complete) we need to fence, gate and organise vehicular access to the site. There is a committee that has been working silently behind the scenes to work out the day-to-day running of our new site. These guys will let us know when these working bees will be. When Tank Cave became available to purchase, the landowner requested that we either put in an offer of purchase or the lease would have substantially increased or not renewed at all. We believe that a vote would not have been a true cross section of the membership as it is extremely difficult to get people to vote. In fact history tells us that the average number of votes that we have returned to us (either by electronic or snail mail) is somewhere in the vicinity of 150 votes. This does not represent a true cross section as the current number of members is approx 750. Even if 150 members all vote "yes" to a purchase is that a mandate for the directors? Arguably, No. It is not even 25% of the membership. With this in mind the poll which was run online with a precursor indication that if you do not want to purchase the site vote now as we will take it as a n indicator that you approve - was our way of gauging the thoughts of the membership. This process polled a total of 24 people against the purchase. The online banter also indicated a very positive response from the vocal membership

Special mention to Rob Winkler for his mapping work in locating the cave tunnels that cross the highway to enable the Dept for Transport, Energy & Infrastructure to build new overtaking lanes on both sides of Tank Cave. His work has enabled them to structurally

increase the strength of the road areas above our tunnels.

We would like to thank all those involved in this purchase for the many long hours, meetings, phone calls etc, etc.

Pines has a new set of steel steps installed on site by Forestry SA. These steps lead directly to the water and have now made it much safer to access this cave in all weather. A huge thank you to Forestry SA for this site improvement.

I would like to thank all booking officers for their tireless work though the very trying period of the website change. I would also like to thank the State Reps for their work in organising events.

Remember access is a privilege, not a right.

Safe Diving

Regards Rob Brennan.

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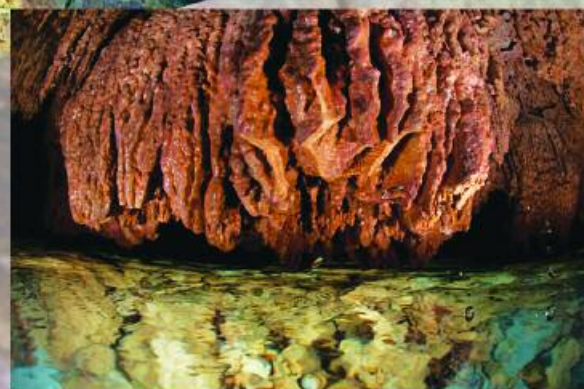
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John, Sharon and Erica.

THE GROTTO CHRISTMAS ISLAND



Seanna Cronin is a Queensland based photographer and journalist who specialises in diving related media and imagery.
Check out: www.seannacronin.com



Lucky for us (the CDAA) Seanna volunteers her time every issue of Guidelines to proof check the text which allows us to produce a more accurate publication, thanks Seanna!

RECORDS AND PUBLICATIONS

JASON CALDWELL



Again, it has been a busy quarter with constant upgrades to the new CDAA website. The website itself has had issues with the server that it has been sitting on and I thank the members for their patience while these are sorted out. Damian Georgiou, our web-master has his finger on the pulse and is continually looking at ways of providing the most ideal system and service to the membership. We are currently looking at another content management system to allow better integration of iPhones and the like. Over the coming time, you will see another new look to the website and forum as these changes take place. These are all being developed on a much faster server that Damian has been optimising for some time now. Damian has written a new booking system module to allow site access officers to be able to manage bookings both quicker and easier. To enable him to find out the best way of achieving this and see directly what was needed, he graciously took over the Tank Cave bookings for the last couple of months and gave Noel Dillon a well earned break. The system is now finished and Tank Cave bookings have been handed back to Noel again. Reports back from the site access officers and Forestry SA are all positive for the new system and notes can now be added to the bookings page advising members of any special situations at any dive site.

The forum is continuing to increase in popularity and while it may not get to every single member, the Directors now have the ability to send a group email to the entire membership for matters that are really important. Our aim is to use this facility sparingly and anyone not wishing to receive these notifications should contact me to be removed from the email list.

Records has seen a change in officers three times this year with Rob Lee starting off the year, Nicole Johnstone taking it over for a couple of months and me now handling it again until I hand it over to Rick Nash towards the end of the year. Records is a tough and challenging job and each time we have a change of Records Officer, it disrupts the processing of memberships in a timely manner until the new person learns the ropes. Thank you to the membership again for being patient during these times. Welcome to the role Rick, let's hope that you can stay in place for a couple of years at least.

I am thrilled with how Shepparton Printing Service are printing Guidelines, this now being the fourth edition to be printed by them. One of their staff, who is himself a scuba diver, has been so amazed with the stories that he has been reading in our little publication, that he has now completed and passed his Deep Cavern Course – well done Dale and welcome to the CDAA.

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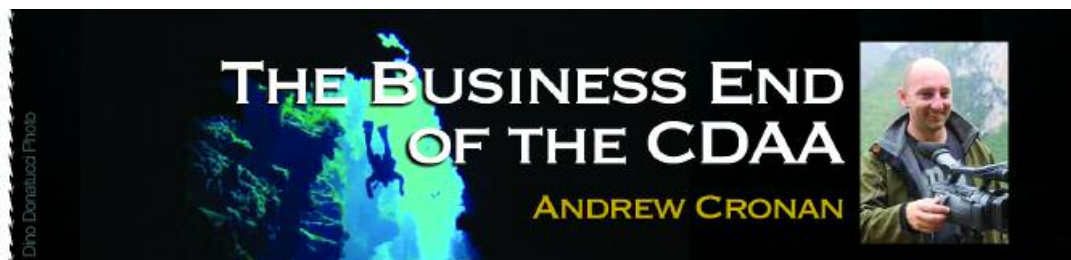
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I'd like to take this opportunity to thank all those who helped make the AGM and the symposium a great success, we are a volunteer organisation and a number of people donated their time, expertise and personal expense in making this year another success for the association. On behalf of the association and the directors I think we owe a big thank you to Jane Bowman who coordinated the event, Mischa Temple for the audio/visual, Tara Parkinson for products and Geoff Chambers for acting as the returning officer and Warrick McDonald for chairing the AGM.

Our speakers were fascinating and engaging and gave an insight into the really exciting things people are doing globally with our sport. Thanks as well to the members who participated, volunteered and attended the symposium and the AGM.

I was returned as Business Director as was Jane Bowman for the Standards Director role. This election identified a number of procedural

pieces of the regulations and constitution that need to be simplified and better documented, thanks to our Public Officer Kevin Burrowes. The National Committee has reviewed and is implementing Kevin's recommendations to limit any issues in future elections. The counts, Kevin's recommendations and the minutes are all available on the website.

I am exploring options for the next couple of years for the best location and agenda to suit the majority of members and how to use the symposium to generate visibility of the association. We will have a discussion document out in the next couple of months.

The Tank Cave purchase proposal is winding its way through the governmental approval processes and I hope to have an update in the next month.

Safe Diving,
Andrew Cronan
Business Director



IF YOU HAVEN'T LOOKED AT THE NEW CDAA WEBSITE, GET ON NOW, THERE'S SO MUCH NEW STUFF TO CHECK OUT!

Cave Divers Association of Australia
Incorporated in South Australia

HOME CDAA PASSWORD

Monday, November 26, 2010

The CDAA - Linking Landowners to End-Users

Abstract The Cave Diver's Association of Australia (CDAA) formed in 1973 in response to a number of high-profile cave diving deaths and today has nearly 700 members and a safety record that is second to none. Land owners and managers entrust CDAA with ensuring the safety of divers through training, access conditions and equipment requirements. Often [...]

Sanctum Movie Trailer now online

The much anticipated James Cameron movie trailer Sanctum has now been released on the Apple trailers website. Sanctum Trailer Here is also a link to the main Sanctum website, where there is a synopsis and picture gallery Sanctum [...]

CDAA will be at Oztek 2011

The CDAA will be exhibiting again next year at Oztek over the weekend of 12th and 13th March 2011. Featuring a meaningful exhibition showcasing the very best that the world of diving has to offer, an [...]

September Guidelines now online

The September Guidelines is now available for members to view in electronic format. All members will be sent a paper version of this edition as it contains the ballot papers for this years election. Members [...]

Changes to Forestry Online Bookings

If members are booking Forestry sites on-line, they need to advise Forestry via email that they have made the booking, also, who they are diving with (CDAA Numbers), date of dives, certifications and sites they wish to [...]

CCR technology - Overview and Challenges

We live in a time of change. Our technological society, that has been making huge advances in the past hundred years, has allowed us to go to places where nobody has been before, to dramatically increase the [...]

CDAA Member Photos

CDAA Member Video

MY FAVOURITE DIVE SITE



Iddlebidy is my favourite site for many reasons, from the challenge of needing to abseil in and haul the gear in and out, to the untouched beauty that this cave holds at every turn. The site may require 3 hours of rope skills, but this work is made worth it by the more than 200m long tunnel with many clay blocks that this site is famous for to look at along the way. After an hour long dive you still have half your gas remaining for a dive in nearby Pines to wash all that dirt out of your regs and inflator hoses which is a pain but easily solved. A great site underwater and the abseiling and climbing aspects makes it feel like you are really going caving and not just jumping into a puddle of water on the side of the road.

Matthew Skinner

MY FAVOURITE DIVE SITE



Kilsby has always been a spectacular dive site. On our last dive trip in October 2010 shortly after the AGM the group had a bonus finding ducklings in the water. The cute guys seem quite adept at climbing on board Gawain Lynch after our dive in the afternoon wanting to get onto something dry. Watch out for ducks next time you're in Kilsby.

Joseph Tan



Send us your favourite shot and a brief quote about why it's your favorite dive site...

Contributors will receive an Oceanic Hollis Mask!

EMAIL YOUR PICS: seapicsdavebryant@gmail.com

• Articles for Guidelines •

- Send articles preferably by email to: publications@cavedivers.com.au
- Email to publications@cavedivers.com.au and seapicsdavebryant@gmail.com
- Text files should be saved as Word files or Simple Text and pictures as separate jpeg files. If mailing please send pics and text on CD. Send to PO Box 2198 Rosebud 3939 Victoria.
- Pictures saved from digital camera or scanned from photos must be at least 200-300 dpi at 15cm wide, RGB files, and saved as Maximum Quality JPEG's, or Tiffs if mailing.

CDAA INSTRUCTORS

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

INSTRUCTOR ADVOCATE: PAUL LESLIE.

UPCOMING COURSES

DEEP CAVERN Courses

January Tue 4th - Mon 17th in Melbourne & Mt Gambier
Theory, full gear critique and assistance with modification as well as a 4 hour pool session. all completed in Melb.
3 day weekend... complete 3 Cavern Dives and 3 Sinkholes in Mt Gambier. Twin Tanks required for all dives.
Instructor: Paul Leslie (3184) - 0407 785 591

January Sat 22nd - Tue 25th in Mount Gambier SA
Entirely in Mount Gambier SA. All theory, dives, dive permits, wireladder climbing and rope workshop included.
All specialised equipment supplied. Instructor: Linda Claridge (2214) - 0408 052 070

March Sat 5th - Tue 8th in Mount Gambier SA
Entirely in Mount Gambier SA. All theory, dives, dive permits, wireladder climbing and rope workshop included.
All specialised equipment supplied. Instructor: Linda Claridge (2214) - 0408 052 070

April Mon 4th - Mon 18th in Melbourne & Mt Gambier
Theory, full gear critique and assistance with modification as well as a 4 hour pool session. all completed in Melb.
3 day weekend... complete 3 Cavern Dives and 3 Sinkholes in Mt Gambier. Twin Tanks required for all dives.
Instructor: Paul Leslie (3184) - 0407 785 591

CAVE Courses

March Tue 15th - Mon 21st in Melbourne & Mt Gambier
June Mon 27th - Mon 4th in Melbourne & Mt Gambier
November Mon 14th - Mon 21st in Melbourne & Mt Gambier

Course includes theory, full gear critique and assistance with modifications including use of Finger Spools, Arrows and Cookies. This is all completed in Melbourne. Then a 3 day weekend away where you will complete 6 Dives including 3 Cave Sites in Mt Gambier. Twin Tanks required for all dives. If dates don't quite suit, arrange 2 to 4 of your dive buddies and I can run a course to suit you including midweek courses. Midweek courses will be run over 4 days in Mt Gambier. Instructor: Paul Leslie (3184) - 0407 785 591.

ADVANCED CAVE

April Thu 21st - Mon 25th in Mt Gambier
Program conducted entirely in Mt Gambier over 5 consecutive days.
Please pay careful attention to the equipment requirements.
An application form can be found in the Downloads section of the web site,
and submitted to the Advanced Cave Program Co-ordinator, Jane Bowman.

Instructor: Jane Bowman (1880) - 0407 566 455

Please download the latest application form from the website.

www.cavedivers.com.au

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 P = PENETRATION

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

FORESTRY SA SITES

Dave's Cave	C	Maximum 3 divers all weekends between May & November inclusive (check and update on CDAA website).
Hells Hole	S	At least 4 divers in group - 1 with previous site experience.
Pines	C/P	Unrestricted days or numbers - Cave rated divers must not enter Penetration sections (stop signs)
Mud Hole	C	Unrestricted days or numbers.
Nettle Bed	P	Open every weekend. Maximum of 4 divers per weekend undertaking 1 dive only (check an update on CDAA website)
Stinging Nettle Cave	P	Open every weekend max 3 divers per day undertaking 1 dive per day (check an update on CDAA website).
Iddlebidy	P	Open every Saturday max 4 divers, 1 dive only (check an update on CDAA website)
Owner: Contact Forestry SA by email: conservationandrecreation@forestrysa.com.au. Fax: (08) 8724 2870 or Phone: (08) 8724 2876 or book on-line via the CDAA website to arrange permit. Divers must advise FSA of their online booking. Collect permits from the Forestry Office, RHS of driveway to Carter Holt, Jubilee Hwy, Mt G.		

IMPORTANT:

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

Kilsby's	S	Landowner leased to CDAA	Access - Open Weekly.
			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 animals, visitors or mid-week diving allowed.

CDAA SITE ACCESS

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

NULLARBOR - WESTERN AUSTRALIA

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

N.S.W. - WELLINGTON CAVES

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

Tara Parkinson CDAA, 1 Kingston Street, Mount Waverley Vic. 3149,
or order On-Line at www.cavedivers.com.au

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

CLOTHING, POSTERS, STICKERS

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

Cardholders Name: _____ Order Date: _____ Sub Total \$ _____

Address: _____ Plus P&H \$12.00

Postcode: _____ TOTAL \$ _____

Card No.

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☐ Bankcard ☐ Mastercard ☐ Visa

Expiry Date: _____ Signature: _____ Ph: () _____ Fax: () _____

BOOKS, BOOKS, BOOKS

	QTY / COL/SIZE	ITEM	UNIT PRICE	TOTAL
BOOKS		Abseiling Handbook. For those involved in basic recreational abseil instruction, this book details safe abseil practises for beginners. Contents include, risk management, equipment, anchor systems, abseil site set-up and instruction and emergency procedures.	\$20.00	
		Basic Underwater Cave Surveying. The standard publication for anyone remotely interested in research and survey techniques used in water filled caves.	\$30.00	
		Cave Diving Communications. A manual from NSS - CDS dealing exclusively with all underwater communications used in cave diving. Including touch, torch and line signals, and use of line arrows and jump reels.	\$25.00	
		Cave Diving - A Blueprint for Survival. A book by the world-renowned cave diver, the late Sheck Exley, this is a case study of a number of accidents that have occurred in the USA and how to avoid them.	\$20.00	
BOOKS		Cave Diving - Articles & Opinions A comprehensive Guide to Cave Diving & Exploration. Edited by Jill Heinerth & Bill Oigarden. Written and edited by some of the top cave divers in the world, this book covers everything from basic equipment to advance cave exploration.	\$70.00	
		Cavern/Cave Diver Workbook. This workbook is the official training manual used by the NACD for the Cavern Diver and Cave Diver courses. It includes sections on accident analysis, cave types and their formation, equipment, communication and emergency procedures.	\$40.00	
		Caverns Measureless to Man. The story of the passion for cave diving of the late Sheck Exley who spent his life exploring underwater caves. Publications Directors pick. <i>Amazing book you can't put down once you start, a must read!</i>	\$50.00	
		CDA Occasional Paper No. 2. From National Conference 1981. Includes topics such as Fossil Cave, Belay Techniques and Cocklebidy 1979.	\$2.00	
BOOKS	NEW!	Divers of the Dark - Exploring Budapest's Underground Caves A unique journey into an underground world that only a handful of people have visited. One of the most well-known springs is Malom Lake. It is a doorway to the cave system called Molnár János. Nobody knows how far or how deep below the city the tunnels reach. Magnificent photos!	\$75.00	
		Diving in Darkness By Martyn Farr. Personally signed by the author. Provides a clear, concise and modern overview of the essential equipment, skills and techniques required to dive in caves, mines, wrecks and beneath ice. Published in softback Diving in Darkness is packed with 170 photographs and diagrams throughout its 128 pages.	\$65.00	
		Hidden Splendours of the Yucatan. Hidden Splendours of the Yucatan is photographer/author Lalo Fiorelli's story of exploration, teaching, and photography in the caves of Mexico's Yucatan Peninsula. His stunning photography is complemented by the lively, down to earth writing style that brings the experience of exploration.	\$49.00	
		NSS Cave Diving Manual. The standard reference manual in cave diving covering just about every conceivable topic. New Edition.	\$55.00	
BOOKS		NSS Cavern Divers' Manual. The standard reference manual in cavern diving covering almost every conceivable topic. Also most principles behind safe sinkhole and cave diving.	\$30.00	
		The Darkness Beckons. By Martyn Farr. The history and development of cave diving.	\$75.00	
		The Taming of The Slough. This is Sheck Exley's exciting story of the discovery and mapping of the Peacock Springs Cave System - at the time the world's longest underwater cave.	\$45.00	
		Vertical. - A Technical Manual for Cavers by Alan Warild Vertical is a definitive guide to vertical cave exploration techniques. It describes deep cave exploration methods: emphasising the importance of safety, conservation and documentation. The fifth edition of Vertical is illustrated with photographs from expeditions on five continents.	\$45.00	

