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C.D.A.A. Newsletter  
No. 113 - SEPTEMBER 2010



**CAVE DIVERS ASSOCIATION OF AUSTRALIA**

(Incorporated in South Australia)

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SENDING





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### Cover:

**Dave Warnes**  
CDAA No.1  
in Tank Cave  
on his  
75th Birthday

Photographed by:  
Gary Barclay

## CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

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

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## CAVE DIVERS ASSOCIATION OF AUSTRALIA

### Editorial

It is election time again and the ballot paper is included with this edition.

Do take the time to vote. We have the Business Director and Standards Directors positions up for re-election. Warrick McDonald has a life membership nomination.

Vote however you like, but vote – then you have had your say.

The AGM is getting closer and we have another exciting Symposium planned again with Simon Mitchell being added to the speakers list. There will also now be two workshops prior to the Symposium start, one with Christophe running a line marking session and the other by our own Ian D Lewis discussing Karst Geology and where that next secret room may be found. Check the agenda out in this edition.

If you've been thinking of doing a trip out to the Nullarbor, you need to read Ben Armistead's article in this edition. The lads faced every obstacle known to man almost, and still managed to get a few dives in. If you think this is the typical Nullarbor story, you are in for a big surprise as were these boys.

Stu McGregor's three part article on the exploration of stunning blue holes concludes in this edition and Ian D Lewis will write a follow up for the Christmas edition – explaining some of the Geology of blue holes. There is an opportunity for CDAA divers to get involved in Stu's ongoing research and he will advise more on this in the future.

It is great to see a new advertiser with AB Ocean Divers, promoting their Santi Drysuits and undergarments. I personally own Santi BZ200 and BZ400 custom made undergarments and these are the most solidly constructed and warm undergarments that I have ever owned by a long shot.

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Dive Safe, Jason Caldwell  
Records and Publications Director

Email: [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au)



### 'Dave's 2 Bar'

Well, what a winter we're having... colder temperatures than the last few winters but from what I can tell the water in Port Phillip Bay seems to be no cooler than previous years. Even though you're a cave diver, originally you began in salt water and each time I'm at Portsea I always run into a cave diver or two who are out diving the Canberra or one of the deeper drop offs. The closest I've come to cave diving was at Crystal River in Florida in 2004 (and Ewens Ponds). The thought of cave diving always excites me however. This just means you're all going to have to write more articles so I can read about these amazing cave diving adventures around the globe... keep them coming, thanks, Dave Bryant.

PS, see pg40, 2 images I took whilst in Florida in 2004.



## AGM SPECIAL EVENT

# CDAA Members Symposium

**The Barn Conference Centre**

**Morning workshop 10:30 – 11:30am – Two Choices**

**OPTION 1:**

Cave Navigation Practical Workshop with Christophe Le Maillot. BYO reel, jump spool and line markers for a practical dry land session.

**OPTION 2:**

Karst Geology with Ian Lewis  
Ian will teach you how to look at caves from a Geological point of view, this makes finding that next secret tunnel considerably simpler.

### Symposium Agenda:

**1200-12:15pm – Welcome and introductions**

**12:15 to 1pm – Forrest Wilson and friends**

Forrest will speak for 30 minutes on his many adventures and then there will be 15 minutes of question and answer time

**1 - 1:45 pm – Christophe Le Maillot:**

European cave diving

**Afternoon tea provided**

**2:15 – 3pm – John Garvin:**

RB cave diving in the Turks and Cacos Islands/ Sanctum

**3 - 3:45pm – Simon Mitchell:**

Cutting edge research technology using CO2 sensors in rebreathers and medical conditions relating to CO2 in diving

**4 - 5pm – Christophe Le Maillot:**

Cave diving exploration in the Mexican Sian Kaan Biosphere

**RSVP: [vicrep@cavedivers.com.au](mailto:vicrep@cavedivers.com.au)**

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## End of year 2009-2010

I am pleased to announce that the CDAA is running along quite smoothly from a business perspective. There are a number of items we are addressing, some of which I have mentioned below under their respective areas. We have managed to address insurance issues to ensure coverage for dry-caving, rope access and non-diving members. This is all at no extra cost. We are addressing the constitutional issues which will allow these to take place. Members can expect to see changes in all these areas within the next 12 months.

It was with great sadness this year saw the passing of Max Marriott, a former director and long time CDAA instructor. His funeral was attended by many CDAA members and notably a number of past and present office bearers. We expect to announce a cave diving award bearing his name in the near future. A draft kindly prepared by Adrian Richards is on the website for comment.

This year saw the first caving fatality in Australia in many years. On Saturday 13 March 2010 Dr Robert McAlister, CDAA #883, failed to surface from a dive in Kilsbys Sinkhole. The SA police are preparing an inquest brief for the state coroner. I do not expect any official findings to be released for at least 12 months. Our thoughts are with Rob's family and friends and also his dive buddy.

We have seen a more active state scene with numerous gatherings being organised. I am keen to see this area grow and a more social aspect develop. Several directors have travelled interstate and met with members in an effort to seek feedback from a wider pool of members.

We have made a conscious effort to promote the CDAA this term. A monthly column containing CDAA articles is being placed in DiveLog Australia and copies of Guidelines are being distributed more widely at dive stores. If you have a local dive store which is interested in the CDAA please contact me and we can organise for a copy of our magazine or even presentations at their venue. We are again supporting Oztec in 2011 which is the region's premier technical dive show.

## Business

Helen Higgins commenced a number of sub committees run by various Directors. Each subcommittee has reported its findings to the National Committee. We are currently working on the constitution with the aid of the recommendations made by that committee. We hope to endorse rational and valid changes for the membership to vote on. A separate mail out will be used at the completion of the process.

Helen Higgins resigned as Business Director and Andrew Cronan was appointed as her replacement by the Directorate early in 2010. Andrew's considerable business experience has been a huge asset to the CDAA and I feel very confident in our financial decisions with him advising us. We are moving towards becoming a far more financially accountable association - something both Andrew and I wish to ensure remains in the future.

## Publications and Records

Jason Caldwell has arguably had the busiest portfolio over the last financial year and definitely the most stressful. Our thanks to Tony Richardson for 10 years of service creating, managing and maintaining the Association's website. Damien Gerogiou has completely revamped the site and has been working almost continuously on upgrading our databases enabling faster and more efficient handling of information on the new site. We are privileged to have him showcasing our site.

Guidelines has moved forward in leaps and bounds under Jason. We know have a more colourful and informative magazine obtained with considerable cost savings.

## Site

Biggest news on the site director's portfolio is the proposed purchase of Tank Cave. We have had issues with the subdivision as it is non-complying with the state's current legislation. In short the surrounding land has already been subdivided and any further subdivision can only be greater than 40 hectares. Our little proposed development is about 5. Special permission is being sought from the council and this has been opposed by the state transport department. Decision to be expected shortly.

## Standards

Course material development has been high on our priority this year. More work is still required. The new Advanced Cave program has been released and Jane is working on the Cave Program at present.

There have been a number of investigations this year into various members and alleged breaches. Most of these issues could be averted if the person considers the interests of the Association over their personal gain. The investigations process is under review as part of the constitutional review and we hope to propose a more workable and equitable system in the near future.

The establishment of a training committee has greatly assisted in relation to materials and standards interpretation. I appreciate the work of members of this committee.

## Election

*Its election time again and the position of Business and Standards are up for renewal. I would encourage members to consider carefully and vote to have their say.*

Sincerely, Steve Trewavas

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001	David Warnes	Life Member
002	Phillip Prust	Life Member
186	Peter Stace	Life Member
258	Ian Lewis	Life Member
708	Chris Brown	Life Member
719	Peter Horne	Life Member
1188	Lance Mitchell	Life Member
1268	Max Marriott	Hall of Fame

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# Australian Blue Holes Exploration 2009

## PART 3 - ... Centenary Cay & The Wonky Hole

Story by Stu McGregor, pictures from video.



**Friday 7am;** Centenary Cay is known as safe anchorage and we need a place to stay overnight. It is also picked because there is a vague possibility in the satellite image of something else there? very dubious....

The dory is dropped in and the first need is to collect GPS points to calibrate an image. (In red)

And surprisingly there is a hole at "A", meagre, yes a mere 11m deep but a hole never the less in the hardline.

Agnes decides to have a peak-a-boo dive in our dubious location. A couple of team members give her a hand and take a dory.

Meanwhile with the image calibrated, the mother-ship via compass changes does a sonar run over what looks like "Dubious large Holes", B in the satellite image.

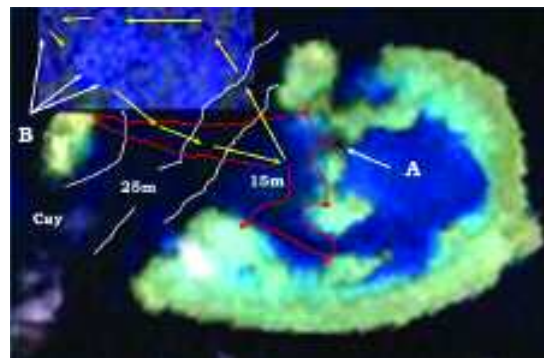
While the error factor is pretty large, the holes are larger. The search turns up nothing of value other than minor depressions. We return pick up Agnes; "A" is just a hole, not even a cave related and hardly worth a mention.

**9am;** We depart.

**12pm;** We arrive in the middle of nowhere, no reef for kilometres and best describe as "the back paddock". There is no protection from the swell or current and we are here to dive Scotties' fishing hole, a Wonky hole to some. The usual risk, current, is ever present. The wind has dropped to 15 to 20 knots, and the swell is not much more than a metre. A fairly sure thing is it has never been dived when the seabed is at 60 metres and that's the top of the hole.

The marks are well known to Scott and it is too deep for boat to anchor, so with a series of passes a pinky and shot line are dropped in the hole. Kevin and I get in a dory and while the divers get ready we start GPS and sonar scans of the hole.

It was the usual call for volunteers and dubious dive plan with the stern deck always a wash with dive gear. The booster pump is in full swing filling



mixed tanks in a hive of activity.

As Norval does a pass, two at a time the divers do the leap of faith.

Those left on the surface have a nagging feeling of concern and hope that the dive is straight forward and uneventful. It doesn't quite work out that way; the first a diver marker pops up 250 metres off the pinky and we in the dory go to investigate.

We dropped a shot line and pinky in to better mark the diver as he does his long deco in a current drift and merely a minute after that a second



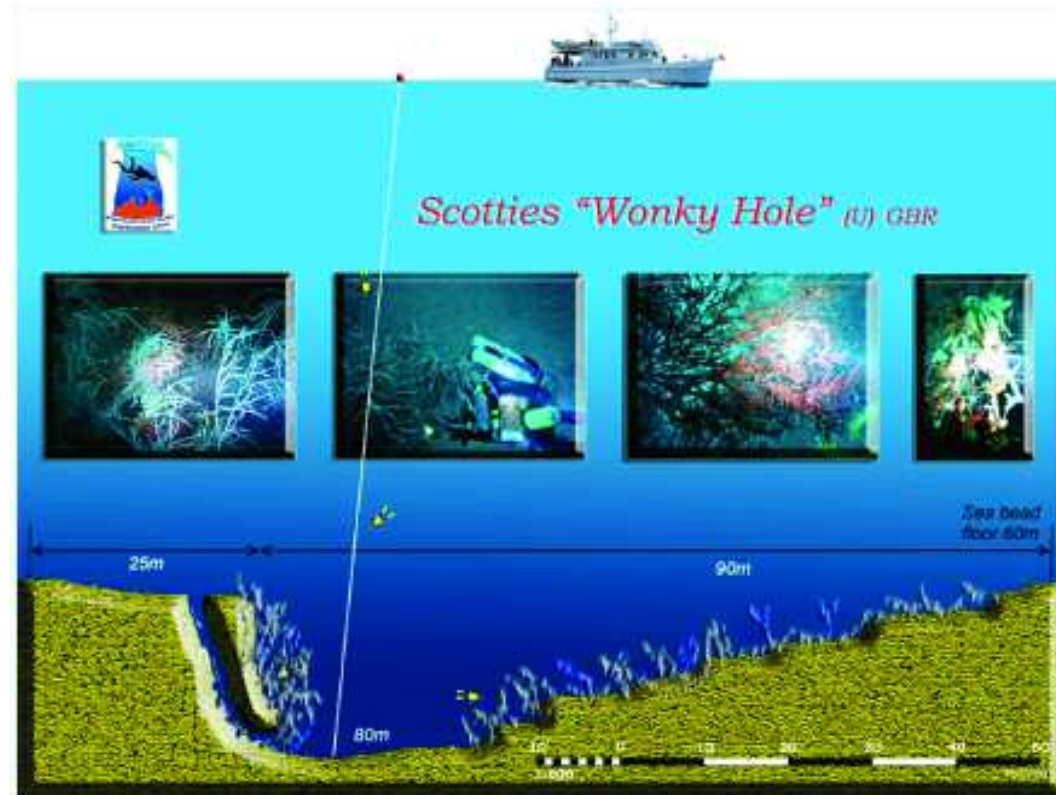
diver marker pops up 300 metres off the original site. Well, that bug-gers it. We decide to put another diver in to investigate who is where and that all is cool.

Dave went for a swim in standard scuba. The water temperature is a lush 26 degrees, a big change for Dave who is more at home in icy cave water of 8 degrees.

All divers were located and fine, two on the drift as our mother-ship shadows and eventually picks them up 3km off site, while the two who were still on the site were picked up in the dory.

The survival packs never came into play on the trip and that's the idea. The current on the dive, with hindsight, was around a knot but we couldn't have known that at the time, call it luck.

It takes a weird group to dive a hole





on a “what if”, which is mostly speculation and imagination This is pure exploration, and we have no idea what is down there. As it turned out the divers encountered the most life they have seen on the reef a forest of tree-size soft and hard corals. Tim had the smallest of cameras on the dive. We'll need more luck to get any photos.

Officially, it was a health population of Antipatharia (Black corals).

The divers found a small fracture cave up to the seabed floor, mostly terraced coral blocks collapsing inwards. On the surface I noticed on two occasions a white and black banded sea snake surfacing next to the buoy for air. I was very impressed he was doing 80m dives every hour or so.

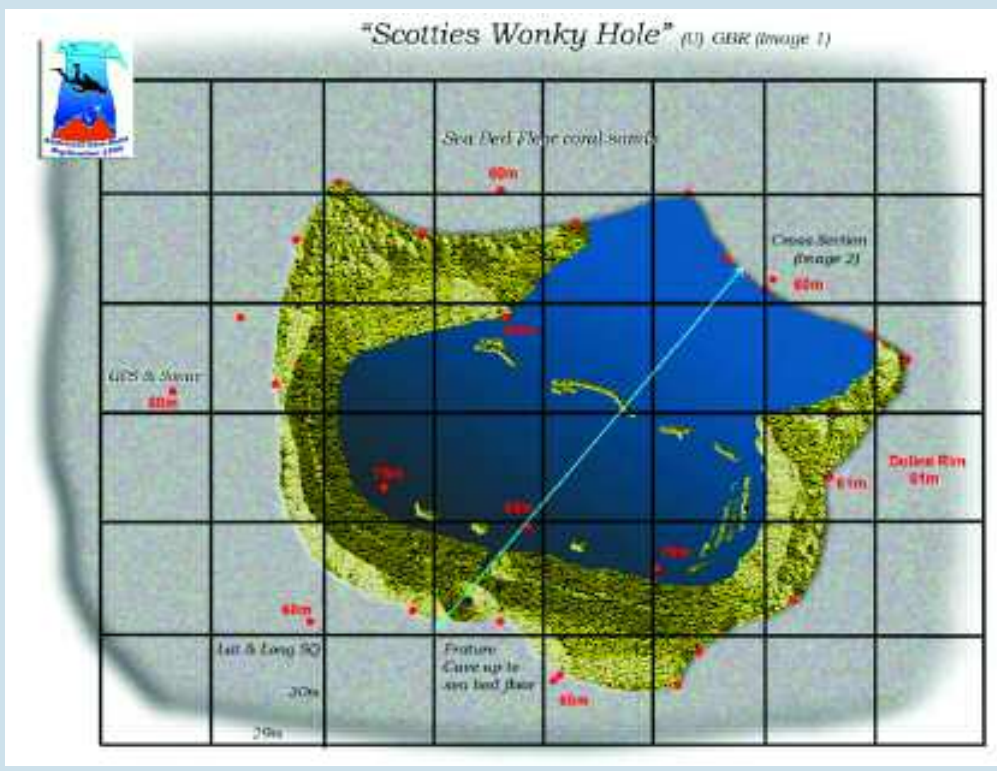
### Human Habitation in the Reef:

Other than on coastal islands, plants, animals and people actual living on the outer Great Barrier Reef during low sea levels has never been proven. It most likely never will. In short, the GBR as a living structure in its growing and dying phases wipes out any proof. Additionally, you can be hard pressed to come up with an environment plan plausible for human occupation, let alone a reef location given coral sand's porous nature (it

won't hold freshwater). On a more personal issue, I have no idea how they would have walked on coral without thongs. Scottie's wonky hole in a mirror image on land would have been an oasis in the reef for a time.

Going back in time, Image 1 plan (North is up) is consistent with freshwater runoff flowing northeast to southwest over a porous shallow coral valley behind the higher main reef outcrops. Hence to form a cave cavity, then collapse from the hole is fairly straight forward.

With the above, freshwater would now pool or act as a “spring” in the hole. Australian Aboriginals, who have been specialists forever in surviving arid landscapes, know these holes as a “donga. To us they are a shallow sinkhole or cenot’e. To them they are a source of freshwater. Even in a salty environment, freshwater pools in a donga. Importantly, the hole would have been very visible in the valley, ramped easy access with a large body of freshwater maintainable. Aboriginals lived in small family groups; they were hunter gathers and nomadic. The donga was most likely known to them as a “meeting place” and would have provided the same key elements



for plant and animals.

The key factor is freshwater stability. Being 100km within the edge of the outer reef would have a more stable freshwater table between the stop over sea levels of -90 metres and -120 metres. Certainly between -65 metres and -80 metres the donga held freshwater for a thousand years. It's tricky to say, given today's sea level inundation, what coral sand build up has occurred. Even so, it is a moot point if the donga was 5 to 20 metres deeper.

While 250km out from the current coastline is a long way to walk for a drink with no thongs, between 10,000 and 40,000 years ago it was plausible. The Donga may have been a Garden of Eden supporting life, however with rising sea levels later surrounding them, the GBR became smaller islands and everything in time was wiped off the face of the earth, just a hole left that you can only speculate on.

**4.30pm:** We depart the science project.

**6pm:** Arrive at a little reef for the night.

**Saturday 7am:** Depart for an even smaller reef, arrive 8am; 21-487 (right)


Keyhole (U) is a name I have given to describe a feature in the reef hardline, basically a hole and channel combined in the reef. 21-487 has two of the smaller just right (yellow arrow)

Plan A: There was concern the weather face would be too rough so the plan was from near "A" as well dive there, we would launch dive sorties over the hardline via the dubious low patch to the Keyhole, a distance of around 2km.

The reef is 5km long x 1.5km at the widest point, however our reoccurring problem is that you can't see diddly-squat of the



underwater reef until the sun is high. 10am to 3pm is fine, but before or after sucks. Enter "Plan B" - we motor round and find the hole, drop a dory in and GPS and sonar survey, after which is "Plan C". We took the mother-ship straight in and anchored in the hole, which led to "Plan D" - we would not dive the hole, but the channel and deep fractures noticed on the outside. Plans changing just par for the course.

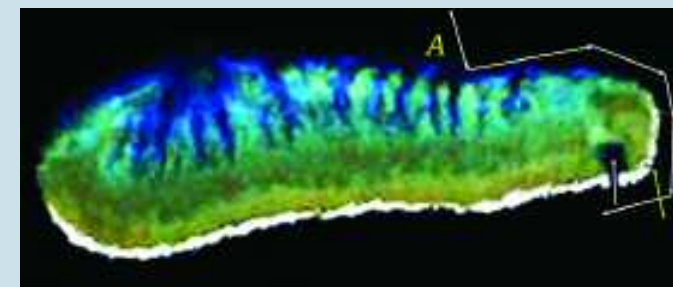


By this stage and considering it was our last dive, everyone was pretty comfortable with swell and current, just water off a duck's back. We ventured long distances to explore the area.

Dave and I stumbled on each other in "C" (above) which was a stunning fun scooter ride as we twist and turn at 90m deep along a slow rising slot/keyhole passage. When rounding the corners, all the fractures, holes and channels looked promising for caves, yet nothing.

After about 100 metres our passage ends with a 10 metre vertical connection back up to the hard-line. Dave with his side-mount re-breather is in a happy place.

Meanwhile back in the keyhole, Agnes had her mind set on lunch. I was being all girly and not fond of the spiky bits and trying to talk him into the idea when Agnes rocked up and just leapt on him.





Not much to the keyhole. It is surrounded by a reef wall 3m high, terraced down with sections of wall between 10 and 15 metres high to a coral sand floor. It is very "reefy", filled with soft and hard corals with a blue carpet of staghorn.

Only after the trip and some pondering, this keyhole in the reef is most likely a collapsed sea cave developed from lower standing sea levels. 21-487 is slightly different to other reefs. It is surround by deep water steeply dropping off to 70 metres, hence even the channel cuts on the back face and goes deep quickly. Wave action in any coastal area exploits a fracture with wear and tear to form blow holes, caves etc. A common feature is the narrow channel into a domed room, hence on the right reef we were just looking in the wrong place for caves, but that's life...

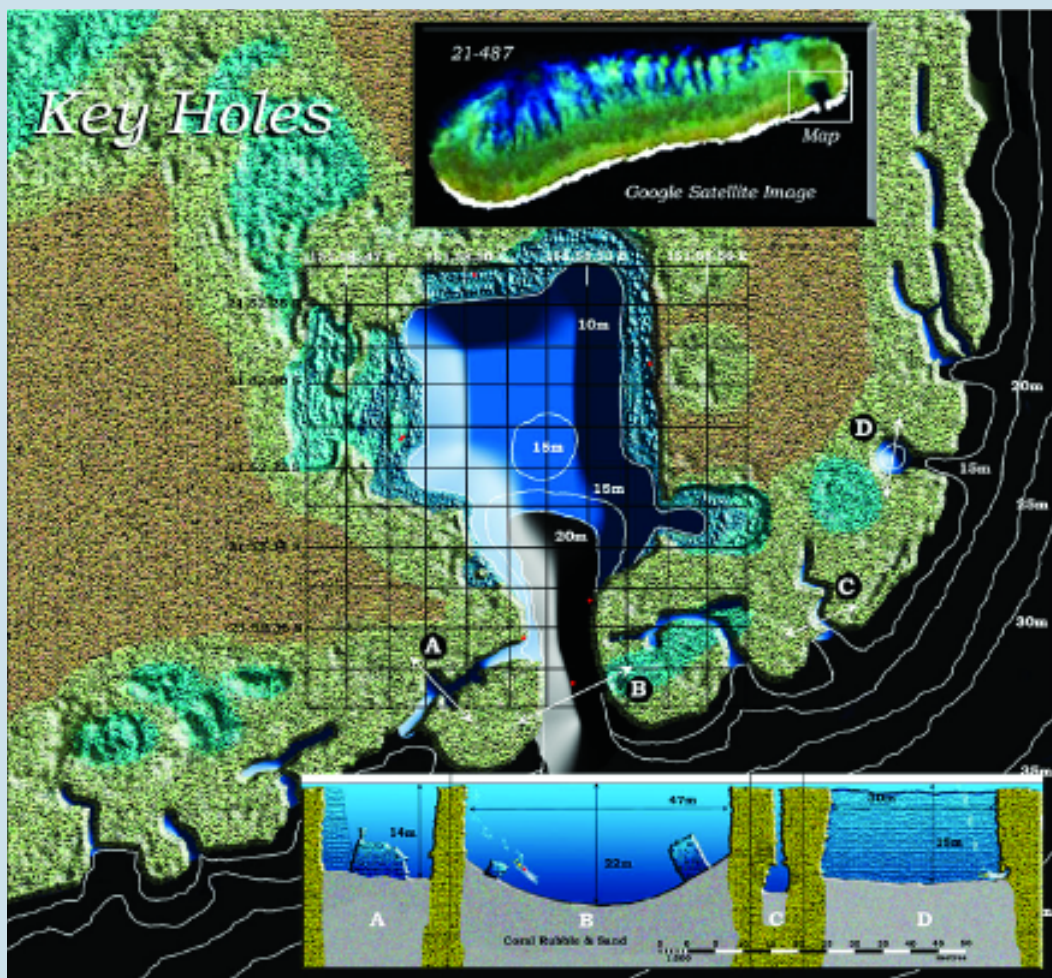
We left around 1pm, and were back in Gladstone around 5am Sunday with a stack of gear to sort out.

**Summing up**, it was a team effort. Someone was dive bitch to drive the dories, pull divers in, load gear, play dive marshal and fetch the beers, however we didn't have to cook or clean the dishes. Thanks to Scott and Suzi who run a great operation with MV Norval Charters, and Morgan their crewman.

Our objective was to have fun and explore new things, take each day as it comes and we achieved this. Currently Barrier Star Blue Hole is the deepest of its kind in the Great Barrier Reef and around Australia, well at least until the next trip.

Cheers

Stuart McGregor.



Looking back over the year, after I was appointed, there have been many highlights and a few lowlights.

Being nominated and then accepted into the Women Divers Hall of Fame would have to be a highlight, but the investigations against members would have to rank as the worst part of the job. Suspensions or punishments are a fact of life it seems that Directors have to make decisions about. The new investigation system put forward by the Constitution Committee may solve some of the problems with interpretation of the Constitution and Regulations but it still will come down to someone's decision. I was part of two major investigations at the start of my term, which had not been finalised by the time I came into office. It was a nasty initiation into the workings of the CDAA. Currently we have another case under investigation and the time this takes is extraordinary.

The Training Committee has been working through the courses, cleaning up areas that could be confusing and finalising the Advanced Cave Program. The new Cave Course has been completed apart from some final editing and then manuals, quizzes etc to match will be made available. Warrick McDonald has completed the Power Point Presentation and will be presenting this to the Committee at the next meeting. Regrettably Andrew Higgins resigned from the committee after a couple of meetings, due to personal issues, but we hope to see him back again in the near future.

The Standards Directors position covers a number of areas and in this first year in office I have tried to learn as much as possible about the different areas. Day to day running of the CDAA takes up a surprising amount of time as Directors confer to get a consensus for any action they take.

The **Instructor Body** has seen a sorting out of its members. The numbers we had years ago have decreased, so there will be a concentrated effort to bring more Instructors under the CDAA banner. **Instructor Records** have been the responsibility of Paul Leslie and a review of qualifications and currency constantly takes place. **Quality Assurance** under Stan Bugg has resulted in mainly complimentary posts to Instructors although we

still get a little negative feedback from time to time.

**Teaching Materials** have undergone a number of changes thanks to Scott Edwards who retired recently to join the Police force. I will be seeking someone else to take on this position. As stated previously, the **Training Committee** with Warrick McDonald, Paul Leslie, Steve Trewavas, Terri Allen, Mike Reed and myself have changes in the pipeline. I continue to do the job as **Advanced Cave Co-ordinator** Unlike in the past where we have had a number of Examiners working on the one program I have tried to keep a consistency of Examiners. It's been found from feedback that it is less confusing for candidates, as they are subjected to fewer opinions during the testing period. The Examiners have been joined recently by Paul Leslie and Ian Taylor; both have already worked on one program. Thanks are due to the Examiners who assisted me on programs and made time for the members, Andrew, Warrick, Paul and Ian. The **Course and Diving Standards** area has also undergone changes. With the Training Committee we are looking at raising the number of dives and skills, the new Advanced Cave Program has areas in it that may have already been covered in the Deep Cavern Course and once the new Cave course is introduced a number of areas have been moved from the Advanced Cave Program back to the new Cave Course. These changes will see the standard of our Cave divers lifted to match or better other training agency standards - an area I have felt we have fallen behind in.

With your support I hope to be elected to carry on and finish the projects I have started and start fresh ones in the new term.

**Jane Bowman**

CDAA Standards Director

CDAA Advanced Cave Co-ordinator

CDAA Advanced Cave Examiner 1880



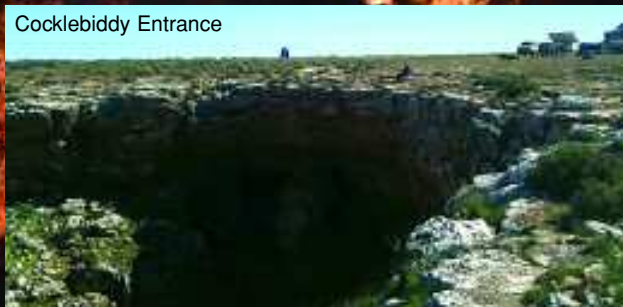


# Nullarbor

Ben Armistead:



Cocklebidy Entrance



## Driving to the Nullarbor

It's Thursday night, the cars are packed and trailers are hitched. An hour out of Brisbane and my Hilux clutch starts slipping. Left the trailer with the other car and guys and went to Johns, unpacked the Hilux into his land cruiser and left the Hilux there. Off we go. It's now midnight.

We get between Moree and Narrabri and Tim's trailer has a breakdown. The u-bolt holding the leaf suspension has shattered and the trailer's resting on the axle. One of the cars goes to the closest town, Moree and luckily finds a RACQ or someone who has the u-bolt we needed. (On Easter Saturday mind you). So we fix the trailer and were off again.



We drive nonstop to Broken Hill which we hit around 2am to find there are no 24 hour servos. With both cars low on fuel we have to stay until morning when the servos open, so we pull up in a

shopping centre car park to get some zzz's, when we are woken up to a security guard telling us to move on as we are not allowed to park in the car park after hours. So across the road we go to park in the street.

It's 6am, the cars are full of gas and were off again. We drive straight through to Eucla WA (right on the WA/SA border) and pass through some beautiful countryside and watch magnificent electrical storms at night on the horizon.

We meet up with Neville and Scott at Port Augusta and keep going. We stop to have dinner at Ceduna at the pub overlooking the bay. Seems like a nice spot and I hear the seafood is great in this area. We continue on after dinner and drive through to Eucla (500kms). John and I stop along the way to check out the coastline and refuel (luckily we had taken some jerry cans.)

We finally make it to Eucla in the middle of the night where we spend a few hours trying to find the cave / campsite about 20kms north of Eucla in the desert scrub. Luckily we ran into some locals who gave us some directions (I'm still wondering what the locals were doing driving through the scrub here at 2am). We find the cave and set up camp (or somewhere to sleep for the night at least).

## Weebubbie Cave

It's good to see this huge hole in the ground during daylight. And we're all excited despite the lack of sleep we've all had. We set up a tripod (crane) to lower the gear down to the entrance of the cave and start unrolling and setting up the 300m of compressor hose (so we can fill the tanks at the water's edge which is around 100m below ground and 200m walk in) and electrical cable so the generator can run the light we have inside the cave.

We get to the water's edge and the cavern is huge and the water spectacular, so clear you could mistake it for not even being there. 5m deep looks like 1m. It's gut-busting work getting our gear down to the water's edge, carrying tanks and gear bags over 200m of continuous rock pile, but worth every drop of sweat.

It's a beautiful cave with huge caverns as big as industrial sheds.. Visibility so great our high powered torches can't punch that far. 18C water, I did all my dives in a 3mm wetsuit with hood and was fine. Two days later we're packed up and move on.

We tried setting up a flying fox to retrieve the gear from the water's edge. Then the tripod/crane could lift it up with the help of the car lowering it or raising it.

## Murra El Elevyn Cave

Murra is 5 km west of Cocklebidy roadhouse and it's a much smaller cave with a very steep entrance.



Weebubbie Entrance





We arrive, setup and start taking our gear down to the water's edge. I'm close to the bottom of the incline when someone accidentally drops a tank 50m up. The tank comes bouncing down the rocks, misses one person and is coming in what looks like a straight line for me. So I throw myself around the corner of the bottom of the cave where it turns off and sprain my shoulder in the process. A minor injury, luckily no one was seriously hurt, but the tank's valve is broken. Divers = 0 Nullarbor = 1 (Nullarbor's the boss!)

I do a dive that afternoon, another beautiful cave dive. A lot smaller though with passages leading off everywhere.

The next day my shoulder is hurting considerably, so I decide to sling it and take the day off so it can heal. One of the guys hadn't planned on doing the whole trip with us and had booked himself on the Ghan (east-west train service) which runs through an old ghost town (Rawlinna) about 150 kms north of Cocklebiddy in the middle of the desert. John is taking Scott to the train and I figure I'll go and keep John company on the way back. Its only 150kms but it's a horrible road so it takes four hours one way.

We decide to take a few drinks and some food for the trip (12 cans of rum, 5 muesli bars and 5 litres of water)

Three hours into it John gets tired and lets Scott drive. Ten minutes later Scotty is driving a bit too fast and hits a big sharp rock. Bang, two flat tyres on one side and only one spare. We have two punctured tyres and a damaged wheel.



We put the spare on the front and the damaged rim/flat tyre on the back and decide to try and limp to Rawlinna. It's only

20kms away. We have no idea what's there but it's a lot closer than Cocklebiddy (130kms). We limp 10km down the road and come to a 3-way fork, unsure of which way to go.

Luckily a caravan of 4WDs comes out of the horizon. It turns out the 4WDs are out testing the 4WDs and trailers that they make in some of Australia's worst conditions. They had some spares but nothing would fit right, so John went with back with them to Cocklebiddy to try and get some help and tyres, whilst Scott and I waited with the car.

## Finding a Spare Tyre

Cocklebiddy has nothing and suggests driving 500k west to Norseman. John goes back to camp and tells everyone what's going on and Tim and he drive to Norseman who also has nothing and suggests trying Kalgoorlie (another 200kms). Kalgoorlie has the tyres but no rims. The rims have to be sent from the east coast. So they arrange for the rim to be sent to Kalgoorlie, have a tyre fitted and then the complete unit sent out to Cocklebiddy.

2 nights later we wake up in the morning and flatten the battery in the land cruiser we have been stuck in for 2 days listening to music. We hear what sounds like a quad bike



Murra Entrance

and see some dust on the horizon, which turns out to be Tim's van now with blown exhaust manifold & missing exhaust rocker.

Once the shock of seeing Tim's car was gone, we replace the rear tyre

on the cruiser (which now has everything but a spare tyre). John takes Scott to Rawlinna and drops him off to wait for the train. Tim and I wait for John at the spot they found us and upon John's return we head for Cocklebiddy.

With gates every 10km or so there was a lot of stopping and starting and eventually Tim's car stalls and won't start. So we start towing him in the cruiser and after several attempts Tim finally manages to clutch start the vehicle. With the fear of the van stalling again Tim takes off ahead of us in the cruiser and a few more gates later the van's stopped on the inside of a fence with a flat tyre. We did have a spare, so we put it on and take off again.

Finally we arrive back at Cocklebiddy roadhouse. We decide to take the van to Norseman to have it looked at and repaired. We refuel the van (while it's still running), go back to camp and Tim & Tony take off to



Norseman in the machine gun sounding, carbon monoxide poisoning, 80kmh maximum speed without stalling, van along Australia's longest straight road (146km).

After I return from 2 nights in the desert I enjoy a hot meal and a shower at the roadhouse. The next morning I have one final dive in Murra before hauling all the gear out of the cave (now minus 3 men, which made a huge difference) and pack up camp which took us two days.

## Two Nights in the Desert

Scott and I stay with the car while John goes to try and get a tyre. The other cars give us some water and off they go. We are left with twelve cans of rum and five muesli bars and 20 litres water. John leaves at around 5:30pm on day 1. We figure he'll be back in around eight hours or so, as it took 3 hours to get out here.

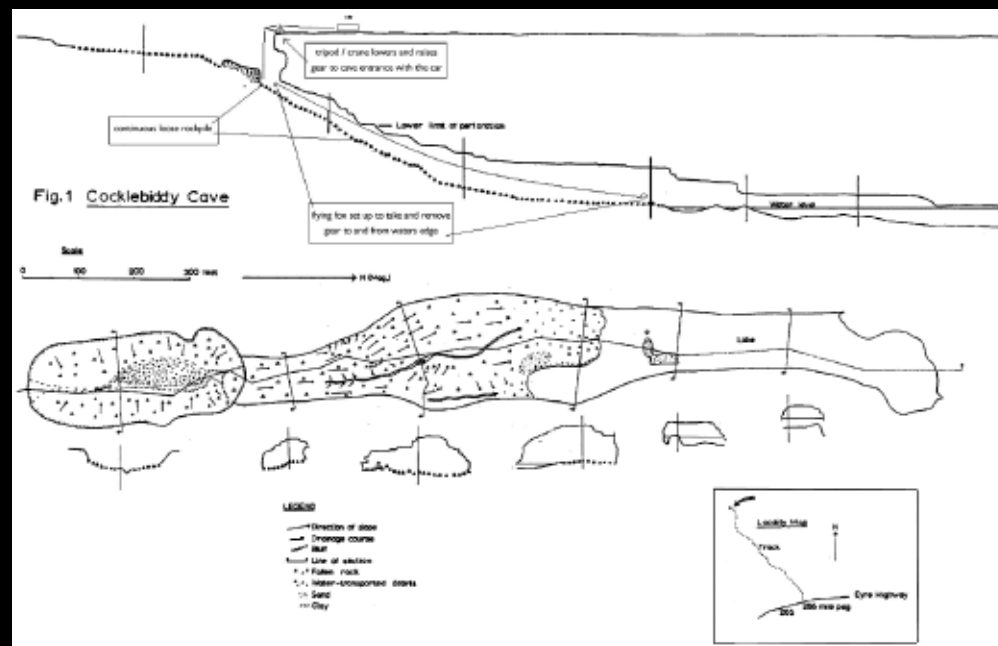
On night one around midnight we see some headlights on the horizon. Hurrah! More people. Turns out to be a roo shooter who lives out at Rawlinna and has a dozen roos hanging around his land cruiser ute. One still has the joey in the pouch. A head pops up from the back and we meet his thirteen year old daughter who is in her sleeping bag in the back of the ute with her pet puppy.

The next day we see 2 emus walking by 150m away from us and that's it. The guys testing the 4WD gear had told us there was Telstra reception at Rawlinna so Scott decides to go for a walk (2km) towards Rawlinna and see if he can get



reception and re-book his train ticket. Scott makes it back to the car and tells me he was successful, so we decide to go back to where he had reception and ring the Cocklebiddy roadhouse to see if they know what's going on. They tell us they've seen the guys and they're pretty sure they had the tyre with them. We leave it at that and wait for their return.

I figure while I have reception I may as well check out what's happening in the digital world and look up Facebook on my iPhone. That's right, stuck in the desert 130kms middle of nowhere, We've left the car and walked a few km's north and I'm checking facebook. By this time the sun is starting to set and we see a set of headlights in the distance again, followed by a gun shot. I express my concern to Scotty to avoid acting or looking like a kangaroo.





## Cocklebidy Cave

John and I take the first trailer load of stuff over to unload. All we know about the turn-off is it's 10km west up the road behind a truck rest area. We find the rest area and the signs pointing the way to Cocklebidy. It turns out to be several roads separating and joining each few kms or so. We see a few shingle back lizards on the way and stop to take a closer look. They have one or two ticks on them so we figure we'll remove the ticks since we've picked them up and bothered them, it's the least we can do.

We let some air pressure out of the tyres of the cruiser, disconnect the trailer and drive the cruiser out slowly to dry, hard ground. Then we have to pull the trailer around forty-five degrees so we can connect it back to the cruiser on a different angle and we pull it out as well. All this happens about 500m away from the next cave/campsite.

**Tim, Tony & Neville arrive at camp that evening,**

I spend the day inside the cave unloading gear at the waters edge, and don't exit until night fall. The guys decide to stop for lunch, but i figure by the time I get up there it will be time to come back down again. So I ask them to send me down something upon there return. They come back and send down a tin of hot and spicy spam... shudder!.. it was awful, but i was hungry and i dont know if it was the spam or my guano (bat poo) covered hands but I paid for it that night with a spout of food poisoning.

## Dive 1 in Cocklebidy

The first 200 to 300 meters of the dive is zero to five metre visibility from the muddy rainwater recently washed in. It does clear up after that. There's footprints on the cave floor and what looks like marks of objects being dragged along the floor. There's a line running from the waters edge to the rockpile and along it are distance markers.

the 1k marker and I'm still in water. I remember seeing an air chamber not far back and wonder if I should have surfaced there. I came across another air chamber and decide to surface. The chamber curves around a corner so we swim around and there it is.



The others arrive with all the gear and we help carry seven tanks for thier big push dive tomorrow on to Toad Hall. Tim volunteers himself to carry over two 60kg scooters without much arguement from anyone else. I remember letting him pass at one stage with a scooter strapped to his back almost as big as him and sweat just pouring from him. Good effort mate! With all the gear over, we head back over to the other side have a quick bite to eat and drink before we make the long swim back to the entrance.

The plan, at 11:30 am Tim & Heike enter the water and five hours after the rest of the divers swim out to the first rock pile to meet them on their return and help carry the gear back over the rock pile, then swim the return leg home with all the gear.

During the removal of the gear from the cave. We use a bag with rocks in it to get the flying fox back down to the water so we can load onto it, otherwise there's not enough gravity to pull the weight of 200 metres of rope down. During this process some rope gets pulled up and under

We pack up the camp and head back to Cocklebidddy roadhouse. The spare tyre for the Landcruiser still hasn't shown up and after touching base with the courier company we find out its been sent from Perth to Kalgoorlie, had the tyre fitted and then sent back to Perth. So we travel to Norseman in the hope of gaining a day and intercepting the tyre.

We drive to Norseman and stay the night and find out the next day there has been a truck rollover on the highway between Perth & Kalgoorlie, and 160 trucks are held up. Eight hours late, the tyre finally turns up. We put it in the car and start the long trek home, picking up the trailer we left at Cocklebiddy. We made it back to Brisbane in around forty hours. 3,600kms later.

## Lessons Learnt

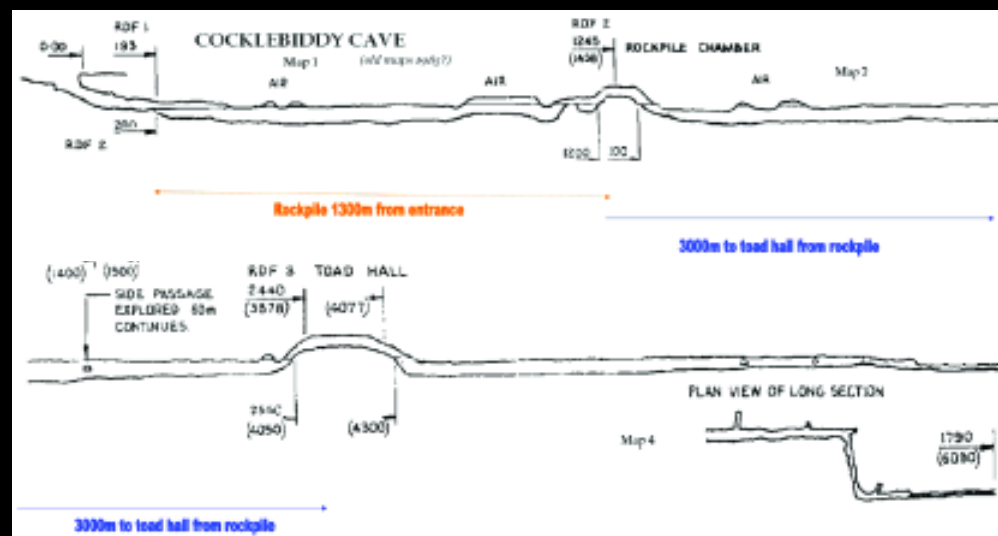
**Take a UHF radio, plenty of water and tell people where you are going. Carry two spare tyres if you're considering travelling off road.**

I couldn't imagine doing this trip without the 300m of electrical cable for lighting and 300m whip for refills at waters edge, like pioneers did before us.

## Take a solid Tent.

**Weather is very random and it can be very windy.**

**Cave helmets recommended in & out of the water.**





## Nomination for Business Director - Andrew Cronan #4289

Proposed by Steve Trewavas. CDAA #3095      Seconded by Jason Caldwell. CDAA #4041

Since being asked to take on the role of Business Director by the National Committee in February after the resignation of Helen, I have focused on the Association's financial management and continued the work begun by the finance committee last year. I developed the Association's first budget and have introduced a six monthly review and plan to reduce this to a quarterly review if elected. I have worked with the other Directors and we have achieved close to a 10% reduction in operating costs and will continue to reduce costs and pass those improvements on to members through additional services or reduced fees. We will, for the first time, review the budget and actuals at the AGM as well as a forecast and plan for the next 12 months. Historically the Association has reported rather than planned and making this change is a significant cultural and operational change that we are half way through. I will continue this change to ensure a rigorous planning, reporting and accountability framework exists for the Association.

The development of the financial model for the potential purchase of Tank Cave demonstrates the detail and openness that I have brought to the association.

Finally I have no commercial interests in the dive industry and as such am independent and like you simply want to enjoy our great sport.

## Nomination for Standards Director - Jane Bowman #1880

Proposed by Warrick McDonald. CDAA #1882      Seconded by Sara Ibison (Arundale). CDAA #3909

As most would know, I was appointed Standards Director after the last election in 2009. The position became vacant when Steve Trewavas was elected National Director. I have been 'learning the ropes' in the caretaker role and feel after bringing myself up to date on the political and standards side, that I now have a clear understanding of the job.

As the current Advanced Cave Program Co-ordinator, I have been working to bring the Advanced Cave Program up to current comparable world standards. As an Advanced Cave Examiner, Cave and Deep Cavern Instructor for many years, plus serving on the Standards Committee, I have worked on many programs and believe I understand the teaching side of the CDAA well, along with the changes that are needed.

My aim is to present new course outlines at all levels, which are currently in motion and have been tried by different instructors, and honed after each trial. The new Cave course is at the final stages and its introduction will meet the same or higher standards other agencies are offering. The Standards and Procedures section of the instructor manual has gone through many changes, and I will form a group to examine it further and in greater detail, and change sections so they align with each other. Instructors will be bought up to date and given tools they require to produce the highest level of candidate.

Finally I will be actively seeking new instructors to fit the vacant positions after member retirements.

## Nomination for Standards Director - Linda Claridge #2214

Proposed by Michelle Boyle. CDAA #4273      Seconded by Gary Barclay. CDAA #1735

A member of the CDAA since 1990 and a CDAA Instructor since 1995, I still love teaching and cave diving at all levels. I have previously held the position of Records Officer (1994-2000) and Shaft access co-ordinator (1997-2009).

I have visited cave dive diving regions around the world and have dived and undertaken Cave training in Florida, Vanuatu, England and Wales, thus allowing me to see how agencies and instructors teach and adopt methods that are sometimes specific to the locations and conditions that surround them.

Mapping and research is a valuable and important part of understanding and exploring our environment and can offer unique opportunities to learn more about the caves. I have been involved in and learnt from many mapping/research projects such as Vanuatu, Black Hole (1994), Pines, Bullock Hole, Little Blue, Kilsby's (2007), Blue Lake (2008), Piccaninnie Ponds (2009). I hope to assist and encourage more of this.

There has been much work conducted in the area of Standards over the past few years and there still remains much to be done. We still have conflicting documents between teaching and diving standards that require some work and current course materials need constant reviewing to stay in line with current cave diving techniques. If elected I do plan on 'reinventing the wheel' but wish to work with current directors, liaise with instructors and assist and encourage the continuation of current and future projects.

## CAVE DIVERS ASSOCIATION OF AUSTRALIA

# Ballot Paper.

This is your ballot paper for the  
2010 CDAA Elections.

There are a couple of things you  
need to know...

**1. Before voting, please read pages 22 and 28  
for the 250 word precis for each candidate,  
plus Nominations for Life Membership on page 27.**

**2. Instructions for voting and mailing your ballot  
are listed on Page 4 of this four page pull-out.**

**3. Your vote is important, please take the time  
to fill in your ballot paper correctly and return  
it to the appropriate address. Thank you,  
Geoff Chambers, Returning Officer, CDAA.**



CAVE DIVERS ASSOCIATION OF AUSTRALIA  
DIRECTORATE ELECTIONS SEPTEMBER 2010

# BALLOT PAPER

## BUSINESS DIRECTOR:

The following member has been nominated for the position of Business Director:  
A statement from the candidate appears in this issue of Guidelines:  
Please place a cross in the box below.

Andrew Cronan - CDAA #4289

*Proposer: Steve Trewavas CDAA #3095    Seconded: Jason Caldwell CDAA #4041*

VOTE      YES ☐      NO ☐

## BUSINESS DIRECTOR:

The following member has been nominated for the position of Business Director:  
A statement from the candidate appears in this issue of Guidelines:  
Please place a cross in the box below.

Richard Taylor - CDAA #2291

*Proposer: Kelvyn Ball CDAA #3276    Seconded: Tony Davis CDAA #1187*

VOTE      YES ☐      NO ☐

CAVE DIVERS ASSOCIATION OF AUSTRALIA  
DIRECTORATE ELECTIONS SEPTEMBER 2010

# BALLOT PAPER

## STANDARDS DIRECTOR:

The following member has been nominated for the position of Standards Director:  
A statement from the candidate appears in this issue of Guidelines:  
Please place a cross in the box below.

Jane Bowman - CDAA #1880

*Proposer: Warrick McDonald. CDAA #1882    Seconded: Sara Ibison (Arundale). CDAA #3909*

VOTE      YES ☐      NO ☐

## STANDARDS DIRECTOR:

The following member has been nominated for the position of Standards Director:  
A statement from the candidate appears in this issue of Guidelines:  
Please place a cross in the box below.

Linda Claridge - CDAA #2214

*Proposer: Michelle Boyle. CDAA #4273    Seconded: Gary Barclay. CDAA #1735*

VOTE      YES ☐      NO ☐

## LIFE MEMBERSHIP:

The following member has been nominated for Life Membership:  
Please place a cross in the box below.

Warrick McDonald - CDAA #1882

*Proposer: Ellen Robinson CDAA #4208    Seconded: Heather Pardoe CDAA #4505*

VOTE      YES ☐      NO ☐



### POSTAL VOTING INSTRUCTIONS - SEPTEMBER 2010

Please follow these instructions carefully to register your votes in the 2010 Ballot

#### **Step1** COMPLETE THE BALLOT PAPERS

Clearly indicate your preference on all ballot papers following the instructions for each question. Fold your ballot papers and place them in a small envelope and write on the front of that envelope:

##### **BALLOT PAPER ENVELOPE**

*By placing your ballot papers in a separate envelope, your vote remains anonymous.*

#### **Step2** PLACE THE BALLOT PAPER ENVELOPE IN ANOTHER ENVELOPE ADDRESSED TO THE RETURNING OFFICER.

The address for the Returning Officer is:

**The Returning Officer  
PO Box 286  
Fairfield VIC 3078**

#### **Step3** SIGN THE BACK OF THE ENVELOPE ADDRESSED TO THE RETURNING OFFICER

On the back of this envelope you must write your name, CDAA number and signature. This serves to declare that you are the person whose name appears on the back of the envelope, and that this is your only vote in the 2010 ballot.

#### **Step4** SEND YOUR ENVELOPE TO THE RETURNING OFFICER STRAIGHT AWAY

**Your votes must reach the Returning Officer by the close of business Monday, 27th September, 2010.**

Any questions may be directed to Andrew Cronan - [business@cavedivers.com.au](mailto:business@cavedivers.com.au).

# Nomination for Life Membership

I wish to nominate Warrick McDonald CDAA #1882 for life membership of the CDAA.

Warrick has been involved in the Association for many years and has contributed greatly to it. As the National Director for ten (10) years (the longest anyone has ever served) it kept him busy and he donated substantial amounts of time to ensure that his responsibilities were performed to the highest level. I understand that he was previously the Business Director for two (2) years and served in the three (3) person committee at the time where he was Treasurer and Business Director. At the time he inherited the CDAA accounts it was discovered that the Association was \$20,000.00 in the "red". By using his own cheque book and covering CDAA debts he turned around the finances of the CDAA. When through a change back to the five (5) person Directorate his job became redundant, he left the Association with about \$35,000 in the "black". He continued producing Guidelines as a ghost editor plus served as the Victorian CDAA representative and the Instructor Materials Officer. In 1999 he was asked again to accept the position of National Director as there were no nominations, he then took a healthy bank balance and with the help of the Directors who worked with him and grew \$50,000 into \$360,000. During his period as National Director he saw to it that Nitrox was accepted and wrote the Policy for it. Warrick also introduced acceptance of other training agency certifications and wrote that policy. Then he tackled Tri mix and rebreathers allowing them to be used in caves and wrote the policies. New courses such as the Deep Cavern Course were introduced and written by him as well. Obviously none of this could have been achieved without the involvement of others and he always gives those who worked with him credit. During his time we saw Guidelines modernised and go partly colour. We saw the internet introduced with our own web site and therefore all the benefits of booking, maps and products. AGM became something to attend again as he changed the old format into a presentation of information in his latter years as National Director. Oz Tek in Sydney and Melbourne were next on the agenda and a stand was procured, this was a first for the CDAA and has been continued at every show. Tank Cave which was closed again when he first took office was re-opened because of his personal relationship with the Tank Cave owner. The lease of Tank Cave and Kilsbys for the CDAA was achieved by Warrick. His passion for cave diving is evident

in regards to his ongoing guiding at Tank Cave, his involvement in projects such as the Kilsbys Research, Piccaninnie Ponds Project and the Blue Lake project enabled these efforts to go ahead. As an Advanced Cave Examiner he has trained many divers at Deep Cavern, Cave and Advanced Cave level. The latest Advanced Cave Course was written by Warrick with help from his team. Recently he has written the new Cave Course and serves still on the Training Committee. If this was not enough his input into Guidelines with articles over the years has put him in the top level of contributors. The re-establishment of the Mapping and Research branch enabled great maps to be produced and Tank Cave amongst others to be examined. Water testing projects and others here and overseas went ahead under his CDAA leadership. The Shaft allowed Tri Mix diving for the first time for the CDAA. As the head of the committee that worked on the recent new Constitution he dedicated more than two years to the project. At the same time Warrick had input into three other committees that had been set up to move the Association forward.

A love of everything that is wet limestone stands out as he and his partner Jane Bowman travel the world seeking new adventures in caves. Having dived in caves in around Australia such as Tasmania, the Nullarbor, Western Australia, NSW and South Australia plus overseas destinations including Florida, China, Philippines, Guam, Solomons, New Guinea, Palau and Mexico, to name but a few.

Warrick's passion for the CDAA may have upset some people at times who had their own agendas but his dedication and work ethic is second to none.

His nomination is seconded by Heather Pardoe, member number 4505.

Thank you in anticipation of your consideration of this suggestion for life membership.

Yours truly, Ellen Robinson CDAA # 4208



**NOMINATION FOR BUSINESS DIRECTOR:**

**RICHARD TAYLOR #2291**

**PROPOSED BY KELVYN BALL #3276**

**SECONDED BY TONY DAVIS #1187**

I bring membership & business management experience and 19 years as a CDAA diver to strive for an Association accountable to its membership, Nationally active, involved in the local community and compliant with good business procedures.

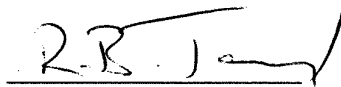
**Goals:**

1. Reinstate the Finance Subcommittee, publish recommendations, State Meeting discussions, vote by the 2011 AGM. Include Fiscal Governance:
  - a. annual Operational and Capital Expenditure budgets approved at AGMs with member controls for additional expenditure.
  - b. mandatory budget surpluses.
  - c. fees & agreements direct with the Association and not individuals.
2. Reinstate the Constitution Subcommittee, publish recommendations, State Meetings discussions, vote at the 2011 AGM. Include:
  - a. terms for non-voted directors to the next AGM, then till the next normal election cycle.
  - b. a Complaints Resolution Process with independent investigation and appeals incorporating long term members.
  - c. elected State Representatives who, with the Directors, form a Policy Group to propose goals consistent with the Association's Aims.
3. Review web and on-line services, membership & order processing and materials production & updating and establish performance requirements.
4. Review the Tank Cave proposal and all correspondence, publish details and a member vote taken on whether to proceed or not.

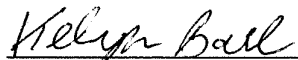
**Other:**

5. Directors attending State Meetings.
6. A Training Advisory Panel.
7. Reinstating past Instructors.
8. Publishing of Committee Meeting minutes.
9. Publishing Office Bearer correspondence.
10. Reviewing Land Owners Liaisons.
11. Member Awards.
12. Annual grant for a Mt Gambier high school study project.
13. Arrangements with the ASF and other Cave Diving Groups around Australia.

250 words



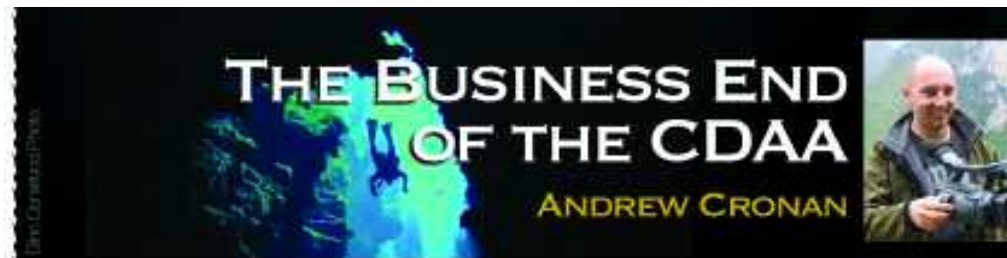
**RICHARD TAYLOR #2291**



**KELVYN BALL #3276**



**TONY DAVIS #1187**



The audited accounts for 2010 will be posted on the website before the AGM along with the agenda and minutes from 2009.

This year has seen revenue hold up well in a difficult economic time for many businesses and associations, a reflection on the passion that people feel for their sport and an indication of the value members see in the Association. We have made good progress in expense reduction, an annual reduction in expenses of Guidelines and the website should save the Association close to \$8,000 per year, a great improvement facilitated by Jason.

At the AGM we will present next year's budget as well as the latest model for the purchase of Tank Cave. Any member who has been involved in a development application would be familiar with the process and timeframes involved and Tank is no exception. There are a number of parties and agencies that need approvals or participation from, so it will be another 3 months before we have a final picture of the outcome.

It is a month until the AGM and I would encourage everyone who can to join us. The dry business side is tempered by some great presenters, workshops, food and the occasional refreshing beverage. It is an opportunity to meet other members and is great fun. Details on how to book are available on the website and in this issue of Guidelines.

The AGM also presents our opportunity to vote for elections and motions, it is the member's Association and this is the primary tool for giving guidance to the Association.

The better the turn out for voting, the stronger the Association will be.

Safe Diving, Andrew Cronan, Business Director.  
Email: [business@cavedivers.com.au](mailto:business@cavedivers.com.au)

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## Publications and Records Directors Annual Report - September 2010

### Memberships

There has been growth in membership numbers with 820 members as of June 30 2010.

- 2009 = 785 • 2008 = 799 • 2007 = 804
- 2006 = 751 • 2005 = 754

There were 70 new divers who did Deep Cavern Courses in this last financial year and some of these members have taken active roles within the Association.

52 members progressed from Deep Cavern to Cave rating and we had 13 new Advanced Cave rated members.

This has been the toughest year for the Records Officer with all the changes to the website and systems. Rob Lee has done a remarkable job and adapted to the new systems well. A software issue with the card printer caused some delays in August but Rob has managed to catch up quickly. Well done Rob.

Nicole Johnstone will be taking over the role of records very soon so, I would like to welcome her to the role and sincerely thank Rob Lee for the time he has given to the Association and the members.

Members will notice the new photo on the membership card. Anna Munter is the diver and the site is Englebrechts Cave. Thanks to Dean Chamberlain for taking this superb photo.

### Products

Sales are slightly down in comparison to last year. This was to be expected however, as our 2009 attendance at Oztek boosted sales to record figures. Tara Parkinson has done an outstanding job once again in the Products area and has adapted to the new online store system quickly and effortlessly. Each edition of Guidelines has a featured product of the month and the new website showcases these better than ever. There have been a number of new items introduced and these are constantly being updated by Tara. Thanks needs to go out to Stu MacGregor for his fantastic artwork, enabling the production of new colourful maps for Tank and The Shaft. The strongest selling products for the year have been Hoodies, Black Polo Shirts, WKPP and Mount Gambier DVD's and the new Tank Cave map. The Sheck Exley & the Martyn Farr books have also been consistently strong sellers year after year.

### Guidelines

We have been able to increase the page amount to 48 pages full colour every edition and save more than 30% on the printing costs of Guidelines since the introduction of the new printer. The paper we are using is slightly thinner but has little bearing on the price. This change was done to allow the Publication to be easier to handle and after getting accustomed to it myself, I believe we have achieved this. This thinner paper has reduced the overall weight of the publication, which has saved us further monies in postage. Dave Bryant has excelled this year in creativity and is wowing our members with his use of colour and new graphics/headings. Dave also handles all of the advertising revenue for Guidelines and this helps to offset a little of the cost to members.

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Seanna Cronin joined the team as Copy Editor to help reduce the errors and she does an amazing job, quick, sharp and very easy to deal with. Ian Lewis has provided some of his expertise in the new Karst Geology section and this has proven to be one of the most read sections with very positive feedback from members. Deadlines are often tight and the team have done an exceptional job over the last twelve months.

We have had some great stories this year, Stu's Blue Holes has been like the Lord of the Rings trilogy, with me now finally being able to put all the three parts together. We have had some new discoveries and then reflected back to old discoveries. The course reports, the trips and adventures right through to the international visitors who have contributed to our experiences and our humble little magazine – a big thank you to you all.

I would lastly like to thank the supporters of the CDAA Guidelines magazine. We have regular advertisers like Diverite, Oceanic, Halcyon, DKG Drysuits, Just a Bed Lodge, Pine Tank Dive Lodge, Blue Lake Diving, Allendale East General Store, Clean Air Servicing and John Vanderleest.

We have published a number of stories in Dive Log commencing at the start of the year, subject to space availabilities and hope to continue with this more in future editions.

### Website

The website has undergone a complete revamp and this includes a new webmaster Damian Georgiou. Damian has built the new website from scratch. This undertaking has been months and months of work and late nights for Damian and I. We are continually evaluating all areas of the website for how it can be optimised. The server has presented a number of challenges to us over the last few months and we are having it completely rebuilt, so it performs how it should. Feedback from members has been extremely positive which makes it all worthwhile.

We are saving further member funds, with no longer having to pay a webmaster to maintain the site, thanks to the generous offer by Damian to do it at no charge.

The forums are gaining in popularity and are allowing a voice for members who have not previously appeared online. We have three moderators: Adam Hair, Matthew Skinner and Lachlan Ellis. These guys are there to ensure that some level of decorum stays within the forum.

The Forestry booking procedure has changed in the last couple of months and members who make an online booking will need to contact Forestry to advise them of any bookings made. Please check the Forestry site booking page to confirm the procedure.

### Directorate Business

This is my first year in office now and it has been an extremely busy and tough year with a lot of my personal time allocated to CDAA business – and I thought Records consumed a lot of my time - nothing like this! These are tough roles and anyone who wishes to get involved needs to realise that these roles can be all consuming if you want to do the best you can and make a difference.

As Directors, sometimes we have to make decisions that will make us unpopular with certain members and this is all part of the role. Nothing is done without consulting other Directors and a collective decision is arrived at. These decisions cross back and forth from Director to Director till a suitable resolution is achieved. This process takes a considerable amount of time and we don't always agree on everything, as you would expect.

Investigations are one of the worst parts of the role and also take up huge amounts of time. There is no pleasure in having to suspend a member for any reason and these types of decisions weigh heavily on the Directors long after the decision is made.

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*John, Sharon and Erica.*



# Out of Gas DPV Procedures

by David Rhea

*The only real option is for two divers to get into a customary gas sharing position. The donor places the receiver in the front of him insuring close contact and easy hose management. The donor will place his DPV in the standard rear tow position and the receiver will tow the two of them out as is SOP. The exception to this would be if the receiver was overly shaken and the donor felt it best that he control the exiting navigation. In this case he could tow the receiver, clipping the receiver's DPV in the tow position behind the receiver.*

Naturally they would never abandon a working scooter. Likewise, they would never tow a dead scooter out under these circumstances. While scootering we are exposed to several real threats that make it truly dangerous to operate two DPV'S simultaneously while sharing gas.

- The pace would be extremely difficult to coordinate.
- If for any reason the reg was ripped from the receiver's mouth it would be almost impossible to retrieve it and return it to them in a reasonable time frame.
- If the long hose were accidentally pulled from the receiver's mouth it is highly likely that the reg would be sucked into the prop of one of the machines. This of course could be very catastrophic, as then additional gas would be lost from the only remaining resource.
- Navigating restrictive passages would be virtually impossible.
- Simultaneously trying to control buoyancy while traveling at high speed in a high outflow cave in tandem is not realistic.

All of these reasons make sharing gas with both divers scootering unsafe. When compounded with the significant distance and/or depths we are exposed to in the WKPP, the scenario becomes not only unsafe but unrealistic.

As always, proper judgment, practiced skills, and a calm demeanor are all paramount to the success of every emergency resolution. These, like all skills, must be practiced if they are truly to be a viable option in reality.

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Hi All

Since the last AGM, many things have happened. One of the more important would be the re-establishment of the Land Owner Liaison Committee. This will hopefully see some improvements to access and some sites as we are meeting annually. We are also in communication with each other during the year if the need arises. One of the outcomes of the re-established Land Owner Liaison Committee is to organise some work to be done at some sites. One of the long time issues will hopefully be sorted out with the car park at Hell's Hole moving, which should reduce access to those who wish to dump rubbish in the site. This will allow us to perform a hopefully more effective clean up day at Hells Hole. We are aiming for this day to be finalised before the end of February 2011, and as usual I will be calling for volunteers. Also, the day to day running of sites, and the negotiating and re-negotiating of leases have been keeping us very busy, and with the added task of possible purchase of a site has made my spare time this year very scarce. In fact, I have made more non-diving trips to the Mount over the past year than I have in a very long time.

There has been some important work done on the little fish in the caves on the Nullarbor Plains by Peter Buzzacott and his crew. Peter is currently travelling the globe with some of the info that has been collected.

Recently there has been some work done on the other side of the road from Tank cave. Ground penetrating radar has been used in an attempt to show more of what's happening underground there. While it's in its early stages and data is yet to be released there has been some good information about the site already.

The state reps have been going great-guns with some organising talks and entertaining workshops that have been very well attended by divers in general not just cave divers. The appointments of John Dalla-Zuanna as Mapping Co-ordinator and Trent Lee as Science Officer are long overdue. Both of these guys

are available should you wish to contact them, please send through an email to me and I will forward it to them. There have been a couple new appointments of guides for both Tank Cave and The Shaft.

One of the low points of the year would have to be the passing of Max Marriott after a long illness. He will be sadly missed by all. Attending his funeral was a difficult task but looking at all the divers (the who's who of cave diving) who attended then made off for a drink afterwards. He would have been pleased at thought that he had managed to get them all together. Tragically, not long after Max's passing, we also lost one of our own while diving in Kilsby's. This should serve as a reminder to all of you to keep on top of your gear and training because it can become unstuck so quickly.

Some marvellous work has been done by the members in securing the continued access to Ewen's Ponds for all divers. Government departments were looking at closing this site or at least introducing some very strict access controls on the site but thru their work we still can dive this site.

I would like to thank Bruce Bulled for his work in the running of The Shaft and wish Terri Allen, his replacement as access coordinator for the Shaft, all the best. Craig Larkin and Noel Dillon also need to be commended on the incredible amount of work that they put in as access coordinators. While on that note all of the volunteers from the State reps to those who run sites and book in divers to time slots deserve a huge pat on the back for their work and time they put in so we can dive. Many receive abusive calls late in the week as why people's names are not on the list to dive. They always seem to be able to work it out.

As always remember,  
Diving is a privilege not a right.  
Regards Rob Brennan.

# KARST GEOLOGY

WITH IAN D. LEWIS



## What caused the Giant Sinkholes?

***I've been concentrating on the Mt Gambier region in this current series of articles but for those of you who are interested in other karst/cave diving areas, I will cover them in due course, so you are by no means forgotten!***

### The early ideas

In my last two articles I've been talking about some of the smaller, shallower Mt Gambier cave diving systems which are generally further inland from the coast. However these types of caves were discovered later by settlers and explored later by cavers and cave divers because early attention in the region was grabbed by the giant sinkholes. All the first settlers could do was swim in them and drop in plumb lines, so they had no idea what the pattern of the large chambers under them would look like.

I referred previously to the Henty brothers from Portland in Western Victoria who were the first Europeans to reach Mt Schank and Mt Gambier in 1836. Because both mountains were prominent, the Hentys headed straight for them first and found rich volcanic soil around them — great for settling, running stock and crops. Water was in the Mt Gambier lakes where they set up stockyards, but Mt Schank crater was dry at the time, as far as we can tell. So at Mt Schank, they and other stockmen wandered around the area until they found Little Blue, One Tree and Ela Sinkholes with excellent water supplies. There is an old watercolor painting of Little Blue painted about 1845 showing a bark hut and a windlass there.

I mention this bit of history because the first settlers then concluded that these three sinkholes and ones found later on Barnoolut had actually been volcanic steam vents. Remember, in the mid-1800's, the science of Geology itself was only just being discovered across Europe and North America, so no-one had any better explanations. Interestingly, even when I was a kid growing up in Mt Gambier in the early 1960s, the common explanation for the sinkholes was still that they were volcanic vents, 100 years after the ideas of the first settlers. The word "karst" was hardly known in the 1960s either! Note also that I have used the term "sink-hole", not "Cenote" in this article, as the debate about this geological name is still not over and is another interesting Guidelines article.

### The huge Sinkhole rooms

In the 1960s, initial cave diver exploration of the sinkholes began and we started to get a vague idea of their huge size and shape. When Peter Stace and I wrote the book "Cave Diving in Australia" in 1980, that was the first time any maps of the Sinkholes had even been drawn, let alone published. So

at last we could have a think about these amazing geological features. From that time on, a number of us began wondering about the huge size of these sinkhole rooms.

The sinkhole rockpile collapses are gigantic, as you've all seen. In my last two articles I've talked about rockpiles in smaller caves and finding our way through, over or (better still) around them to explore continuing passages. Take Pines or Allendale for example. If you could pick up all the loose rocks and fit them back together each in place in the roof, the remaining space below would be wide-flattish chambers at about 20-30 meters depth (or about 10m depth in Englebrechts). These are typical of "base level" tunnels which formed and developed at the caves' beginning and have collapsed in places along their lengths later.

But if you could pick up the humungous big boulder piles in the sinkholes and re-pack them in the roof, the amount of space still left beneath would be colossal. How could so much space be below there and not be packed with rubble? Broken rubble only packs a space about 50-75% effectively, so where are all the previous huge limestone blocks that should also be filling the sinkhole rooms?

### The role of the Groundwater

The first obvious answer is groundwater dissolving the limestone away over a long time. But if that were the case, you would expect much bigger chambers in Pines, Allendale and Englebrechts after water had dissolved all their rockpiles too. But it hasn't dissolved their rockpiles much at all which is why we have to work our way through and around them. So groundwater is not active enough chemically to dissolve the huge rooms or giant boulders of the sinkhole rockpiles.

Another possibility is flowing groundwater or underground streams. Flowing water in conjunction with air has formed most of the world's cave systems by eroding and dissolving limestone. So could it have caused the original large deep caves to form at Mt Gambier which later collapsed to form sinkholes? Over the last few decades I have spent a lot of time on sinkhole dives closely examining the walls and rock collapses for hydrogeological evidence of flowing streams at depth and never found any. (I'm limited to 40m on air). Yes, in some spots there is evidence of rocks and small parts of sinkhole walls at depth being slightly rounded (ie no longer jagged) from solution by water, but they do not indicate stream flow. In some places at depths around 30-40m (eg One Tree) the silt shows tiny flow paths, but these are formed very locally by trickles, not streams or rivers, during a low water dry period in the ancient past and are only up to metre or two in area or length.

[One of the areas of a cave where there is a good evidence of slow water movement is the eastern chamber of Englebrechts where you stand on the platform and can see the walls showing "scallop" or "scoop" marks which were eroded/dissolved (in combination) by groundwater in different levels and different stages over thousands of years.]

### Creating giant deep rooms

So what could remove such a huge volume of deep cave limestone underneath the sinkhole plain from the Barnoolut area and Kilsby's Hole to Little Blue, One Tree, Ela Elap and The Shaft? The only thing that could have happened is massive dissolving of the limestone in enormous chunks.

Limestone reacts to acid very readily. If you put a few drops of even a weak acid on it, it fizzes and then dissolves away. Even though rainfall through the atmosphere picks up CO<sub>2</sub> and forms an extremely weak acid, limestone reacts with this to dissolve steadily over time. But you'd need huge quantities of strong acid getting into the limestone to generate the vast deep chambers in the sinkhole zone. How could that happen? What would pour it in?

The answer is that it didn't pour in from the top - it came up from deep below! This was due to two major geological factors close by. The first is the Mt Schank volcano itself just east of the sinkhole area which blew up through the limestone plain (fig 1). [It's really worth the walk up to the rim because you can see the whole sinkhole area from the top in a specky view.] The second major geological feature is the Nelson Fault. 50 years ago, old geology maps showed it as a short faultline near Nelson on the Victorian border but recent research from geological stratigraphic boreholes show that the Nelson Fault runs from the Glenelg River near Nelson under the Mt Schank area and under the Barnoolut Sinkhole zone

(see fig 1). Such big faultlines cause many of the large elongate fractures and multiple cracks throughout the limestone where most of the sinkholes are.

Why are a volcano and a faultline relevant to the size of deep sinkhole chambers? Because one of the main gases produced by deep magma prior to and during eruptions is CO<sub>2</sub>. We know this occurs here because there is a commercial CO<sub>2</sub> well at Caroline between Nelson and Mt Schank not far from the Nelson Fault. This CO<sub>2</sub> is in a reservoir 2600 metres down, is tapped at the surface as a gas and liquefied on-site. Before, during and after eruptions this deep CO<sub>2</sub> (way below the bottom of the limestone) can seep and bubble up the deep faultline weaknesses until it comes to the limestone near the top which is full or half-full of groundwater. As soon as the CO<sub>2</sub> and the water meet, the groundwater becomes strongly acidified — at a far higher rate than rainfall-generated carbonic acid. Additional sulphur gases may have boosted this acidification.

### Volcanogenesis — the Sinkhole maker!

This highly aggressive acid water chemistry, possibly even slightly warmed (which would also speed things up), reacted enormously upon the big limestone fractures and dissolved it away in bulk, possibly quite quickly (in geological terms) over a couple of decades or a century or so, which is FAST. Frankly, it would have ripped the limestone away. This process is called "Volcanogenesis" and has been identified in several other limestone areas of the world which have volcanoes or deep gas reservoirs associated with them. For example, the Cretaceous meteor/comet impact in the Gulf of Mexico which wiped out the dinosaurs produced huge deep concentric fractures in the earth's crust which can be traced in the lines of sinkholes (cenotes) across the northern Yucatan Peninsula jungles. The sheer impact would have activated magma and deep CO<sub>2</sub> which certainly had the

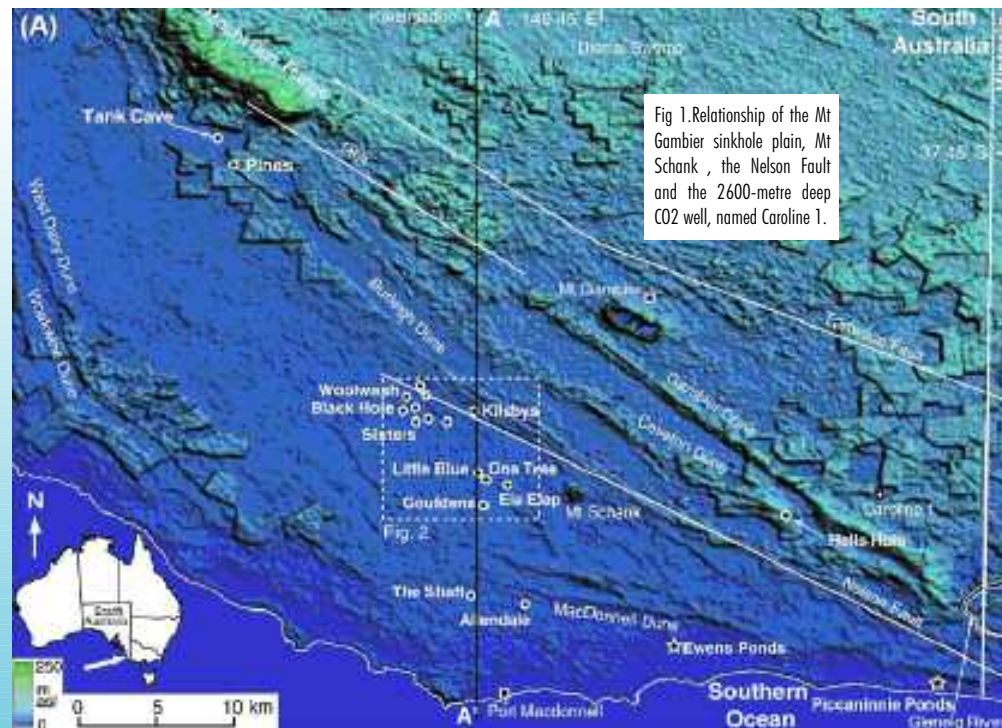


Fig 1. Relationship of the Mt Gambier sinkhole plain, Mt Schank, the Nelson Fault and the 2600-metre deep CO<sub>2</sub> well, named Caroline 1.



effect of dissolving deep chambers in the Yucatan limestones after they were formed above later on.

If you look closely at fig 1, the line of the three sinkholes - Ela—>One Tree Little Blue heads directly towards Blacks Hole, which itself has a large deep tunnel running back in their direction on the same line. This alignment is one of the major linear fractures in the limestone produced by the Nelson Fault. Kilsby's Hole lines up in the same way with Rubbish Hole just north of Woolwash Sinkhole. (Allendale and The Shaft also line up the same, but their geology is a different story—that's another article.) Kilsby's Hole is not round, but rectangular and has a cross-fault running along one wall at about 20m depth which I spotted some years ago. Kilsby's Hole is really a single giant rectangular slab between right-angled local faults/fractures which has dropped down 30-40 metres after the deep chamber dissolved below by volcanogenesis. Our whole diving space at Kilsby's is actually just a gigantic "drop block"—see fig 2.

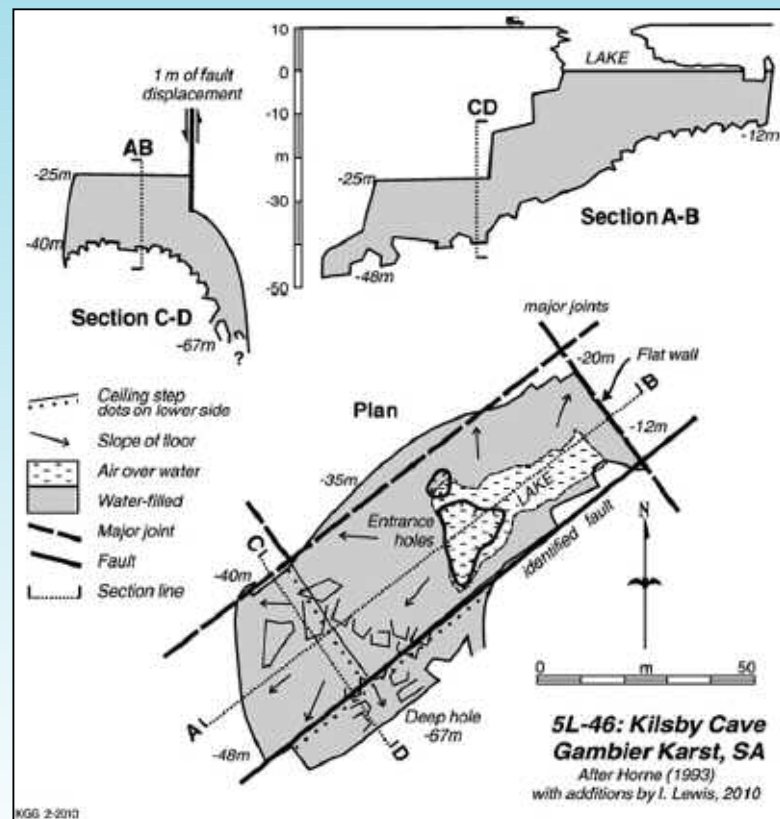
So the CO2 intersecting the groundwater along the Nelson Fault zone acidified the groundwater so much that it opened up a large series of huge deep chambers which did not have rockfalls at the time but dissolved away fast. The rockfalls causing the sinkhole entrances were small by comparison (although they are BIG on a human scale) and came much later. Without the deep CO2 reservoirs from volcanic magma bleeding up the Nelson Fault we would not have any large sinkholes at all, only small caves like Allendale.

So in a roundabout way, the early settlers were sort of right... the sinkholes are not volcanic steam vents but they are a direct result of volcanic effects upon

the limestone. I had suggested this CO2 acidification idea about 25 years ago in my Honors thesis on MG caves and sinkholes, but had never heard of the term "Volcanogenesis" then. Some years ago, stromatolite sampling by Professor John Webb in several Sinkholes discovered a past period when the groundwater was increased in acidity, which he explained in his beautiful talk at last year's AGM Conference. Subsequently, John, Ken Grimes (another Karst geologist who runs Regolith Mapping consultancy) and myself pooled our ideas and under John's leadership this year published a full scientific paper on this volcanogenesis to explain the sinkholes' presence and size. It's great to see such impressive features produce new scientific insights, all of which are built on cave divers' exploration, mapping and observations. All of us are so privileged—we are the only people who can see these colossal processes by diving through them.

And a prediction... there are other such large chambers along these alignments which have not broken through to the surface yet because our Mt Gambier limestone plain is very stable and they don't fall in regularly like they do in Florida and central America. Gravimeters will be able to detect them as we've used these successfully on the Nullarbor to find giant underground rooms. But in the meantime, search every nook and cranny of these giant rockpiles to get down the sides of them as the deeper original chambers will certainly be there!

Ian D Lewis CDAA # 258



Figures 1A and 2 are from our paper, it's reference is: Webb JA, Grimes KG and Lewis ID; Volcanogenic origin of cenotes near Mt Gambier, southeastern Australia; "Geomorphology" Issue 119 (2010) pp23-35. It's a solid read but there's lots in it!

Fig 2. Kilsby's Hole map with some geological/structural interpretation. The two short north-west running major joints are actually part of the main Nelson Fault fracture system while the two longer south-west ones are actually only secondary crossfaults. Altogether, they make Kilsby's Hole one big rectangular block drop.

# CAVE DIVING

by Ken Smith



Forrest looking for the blue hole outflow.

**"They are the most beautiful caves in the world", Agnes Milowka had told me after her 2009 trip to the island of Abaco in the Bahamas.**

**"Sure" I thought "but she hasn't been to Mexico yet".**

**I couldn't imagine anything better than the Yucatan caves I saw in 2009. But I decided to have a look anyway and arranged a trip for May 2010.**

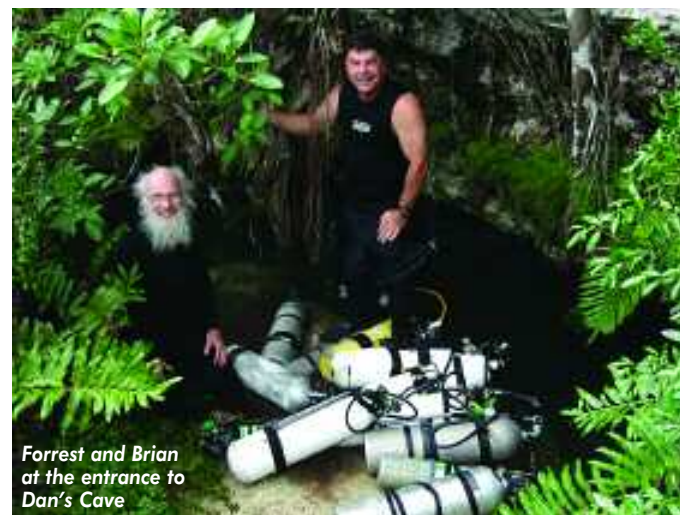
I had been to the Bahamas once before, to the island of Andros in 1998 (see Guidelines 68, March 1999). There are a number of Inland cave dive on Andros, including Stargate Blue Hole and many ocean blue holes. At Small Hope Bay Lodge on Andros I looked at maps of several of these caves and saw a lot of surveyed passage at over 300 feet deep. This is when I first saw Brian Kakuk's name, as most of this deep mapping was done by him. Brian is still in the Bahamas and he has spent more

than 20 years in the exploration and study of the Bahamian underwater caves. He now lives on Abaco and runs "Bahamas Underground", taking tourists like me to look at the caves.

When Forrest Wilson and I flew into Marsh Harbour on Abaco, Brian was there to meet us in his van. It was only a short drive to Brian's house and dive shop, which shares a compound with the Bahamas Cave Research Foundation office. The "Friends of the Environment Cottage" is there too and this provided us with very convenient accom-

modation for the week. It was only a short walk to Brian's van and dive shop. Brian guides a maximum of two cave divers. He regards any more than two divers as too risky for the fragile caves. Side mounted cylinders, whilst not mandatory, are a very good idea, since most of the beautiful areas are not accessible to back mounting divers.

Most of our diving was done in Dan's Cave which is still growing as Brian continues to find new passages. It contains all types of cave, from huge Nullarbor style passage, to tight and delicate areas. No two dives were the same and all were wonderful. The water is fresh above about 10 metres and then you enter the salt water. There



Forrest and Brian at the entrance to Dan's Cave

are many intensely decorated chambers at depths up to 20 m, but some sections of passage were 45 metres deep. We dived with nitrox, and decompressed on oxygen after every dive. Between dives we sat in the woods near the cave entrance, ate our lunch, and swatted the large "Doctor" flies which came to feed on our blood. Brian has made friends with the local Bahamian curly tailed lizards. They emerge from the bushes to eat freshly swatted doctor fly from his fingers. These lizards look like a creation of Micheal Leunig and provided good entertainment. The weather was warm and humid so after lunch it was a pleasure to slip back into the 25C water.

We dived one ocean blue hole and it was interesting to swim along a winding cave passage as the marine environment slowly changed to the more familiar cave environment. This cave is tidal and Brian had timed our dive so that we swam in against the current, but had the pleasure and safety of the current helping us out. At one point we found a hole in the floor which was gushing cool clear cave water, contrasting with the warmer sea water.

Ralph's Cave has an area called the "Glass Factory" and a feature of this area is a dense collection of soda straws called the "Frozen Rain". Brian describes entering this area as "swimming through a chandelier". That was exactly how I felt as I crept along the floor of the cave trying to avoid the mass of delicate speleothems just above my head. Brian watched us very carefully through the delicate areas and was ready to grab a fin or push us down if we got too close. A feature of these caves is the purity and transparent nature of the calcite formation. We could see right through many of the shawls, and large stalagmites would light up if we placed a primary light on one side. In the glass factory the stalactites and straws had reached an ancient water surface at one point in their growth. Huge single crystals of calcite began to grow underwater, producing rose like formations and soda straws with large single crystals attached to the end. Most of these crystals look like perfect drawings from a crystallography text book. The frozen rain is probably the second most beautiful thing I have ever seen. No human artist could produce a sculpture of such complexity. It

was created at least 10,000 years ago but it is so sparkling clean it could have been formed yesterday. This demonstrates the absolute purity of the ground water in the area.

In Lost Reel Cave Brian showed us a complete skeleton of a crocodile. It was in perfect condition and curled up as if it were sleeping. Then, like a magician, Brian would feel carefully in the silt and produce large sections of tortoise shell. Crocodiles and tortoises are both extinct in the Bahamas. However remains of both have been found in many of the caves. One tortoise shell shows crocodile bite marks, which indicates that they once cohabited on Abaco.

The final dive of our trip was a double stage dive to Fangorn Forest in Dan's Cave. Fangorn Forest is about 20m deep but we had to pass through a tunnel at 45m to get there. One of our two stages had a richer nitrox mix and we dropped this before we passed the deep section. All our remaining cylinders were all breathable at 45m. Fangorn Forest is the most beautiful place I have seen. The density, complexity and colour of the formation is amazing. It's big area too. I was able to look in all directions and the formation went as far as I could see. It was truly breathtaking! This can be a problem underwater, I kept checking my gauges to see how much gas I had left.

I didn't take my camera underwater on any of these dives. I wanted to experience the cave in real time without the hassle of taking pictures. However, other people have taken some excellent photos. Photos by Wes Skiles can be seen in the August 2010 issue of National Geographic. The web sites listed below also have some excellent shots. There is also a request for letters of support for cave conservation to be sent to the Bahamian Prime Minister. Brian is hopeful that the area of the caves will be made a national park to protect the caves and the pristine ground water which preserves them. Please consider adding your voice in support of this.

Agnes was right. They are the most beautiful underwater caves in the world!

**The Bahamian curly tailed lizard.**



**The crocodile skull.**



## New - Embroidered Hoodie with Front Zipper \$70.00



**Available on the online store!**

CDAA Logo on the front & Cave Divers Association on the back. Sizes M, L, XL & XXL



## PRODUCTS STAND at the AGM

I will have a full range of Books, DVD's & Clothing available to purchase all day during this year's AGM.

If there's something in particular you would like to purchase and wish to save on postage, give me a call or send me an email and I can bring the item for you.

## SOMETHING FOR THE GIRLS Just in time for summer!

**New Ladies Stretch V-Neck Tee Shirt in sizes 8, 10, 12 & 14. White with the CDAA logo on the front**

See you at the AGM.

**Happy Diving, Tara Parkinson  
CDAA Products Officer.**



# CDAA INSTRUCTORS

NAME	Deep Cavern	Cave	Adv Cave	NAME	Deep Cavern	Cave	Adv Cave
<b>A.C.T.</b>				<b>VICTORIA. cont.</b>			
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
<b>SOUTH AUSTRALIA</b>				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
<b>VICTORIA</b>				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		<b>QUEENSLAND</b>			
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	<b>WESTERN AUSTRALIA</b>			
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.**



**Dave Bryant's close encounter with Manatees at Crystal River, Florida. October 2004.**



self portrait

# UPCOMING COURSES

## DEEP CAVERN Courses

October Sat 9th - Sun 17th in Melbourne and Mt Gambier  
First weekend theory and pool session. Second weekend 3 days in Mount Gambier. All specialized gear supplied  
Instructor: Terri Allen (3483) - 0419 176 633

Saturday October 30th - Tuesday November 2nd inclusive  
Full time course in Mount Gambier SA. All dives- 4 training, 3 site dives, wire ladder climbing and rope handling workshop included. All specialised equipment supplied. For more info please contact...  
Instructor: Linda Claridge 0408 052 070

November Mon 1st - Sun 14th in East Bentleigh, Melb./Mt Gambier  
Twin tanks, harness, wing and regulators supplied at no charge if required. All theory and pool work completed  
Instructor: Warrick McDonald (1882) - 0408 374 112

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

## CAVE Courses

October Sun 3rd - Tue 5th in Mount Gambier SA  
Full time Cave course. All theory, training and site dives conducted in the Mount Gambier SA area. 3 training dives in Gouldens and 3 site dives in Cave sites. Twin cylinders can be supplied for candidates flying in to Mount Gambier. For more information or to schedule your own dates please contact ...  
Instructor: Linda Claridge (2214) - 0408 052 070

October Mon 11th - Sun 17th in Melbourne and Mt Gambier  
Theory 2 nights in Melbourne. 3 day weekend at Mt Gambier 6 dives  
Instructor: Terri Allen (3483) - 0419 176 633 -

November Mon 8th - Sun 14th in East Bentleigh, Melb./Mt Gambier  
3 nights in shop and then 3 days Mt Gambier, S.A. Twin tank setup can be provided at no charge if required.  
Course taught by CDAA Advanced Cave Examiners.  
Instructor: Warrick McDonald (1882) - 0408 374 112

November Mon 22nd - Mon 29th 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 59

Please download the latest application form from the website.  
[www.cavedivers.com.au](http://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
<b>MOUNT GAMBIER - SOUTH AUSTRALIA</b>			
<b>DEH SITES</b>			
Ewens Ponds	Nil	DEH P.O. Box 1046 Mt Gambier 5290 (08) 8735 1177	Groups of 6 or more, phone/mail to Dept. for Environment & Heritage (DEH) Smaller groups, no need.  Fax: (08) 8735 1135
Gouldens	CN	DEH	<b>General Diving:</b> Divers to contact DEH and notify of date and site to be dived. Please make requests by phone or fax only.
2 Sisters	CN	P.O. Box 1046	Divers must have the correct CDAA diving endorsement for the site and carry current
Fossil	C	Mt Gambier 5290 Ph: (08) 8735 1177 Fax: (08) 8735 1135	financial CDAA membership card. The diver must have signed an indemnity with DEH before access is permitted and original copy must be received by DEH prior to diving. <b>Training:</b> The Instructor is to notify DEH of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
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!
<b>FORESTRY SA SITES</b>			
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.			
<b>IMPORTANT:</b>			
<ul style="list-style-type: none"><li>No diving on Total Fire Ban Days.</li><li>Permit also required to run compressors during fire danger season.</li><li>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.</li></ul>			
Kilsby's	S	Landowner leased to CDAA	<b>Access - Open Weekly.</b> 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 <a href="http://www.cavedivers.com">www.cavedivers.com</a> or contact Craig at <a href="mailto:kilsby@cavedivers.com.au">kilsby@cavedivers.com.au</a> No animals, visitors or mid-week diving allowed.

## CDAA SITE ACCESS

SITE	LEVEL	OWNER	ACCESS DETAILS
<b>MOUNT GAMBIER - SOUTH AUSTRALIA (continued)</b>			
<b>BARNOOLUT SITES</b>			
Ten Eighty	S/C	Scotts Agencies P/L	Access:  <b>ALL BARNOOLUT SITES ARE TEMPORARILY CLOSED.</b>
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 - East - West	C P	Mt Gambier Council Lessee Ph: 0418 133 407	
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.
<b>NULLARBOR - WESTERN AUSTRALIA</b>			
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
<b>N.S.W. - WELLINGTON CAVES</b>			
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 <sub>2</sub> levels during Summer/Autumn. Access is co-ordinated with the Wellington Caves management by Greg Ryan - gregr@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](http://www.cavedivers.com.au)

	QTY / COL/SIZE	ITEM	UNIT PRICE	TOTAL
DVD'S	NEW!	<b>A Cave Diver's Story</b> - 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	
		<b>Australian Cave Diving - A Contrast.</b> By Tony Carlisle. Four short documentary-type videos on Warbla Cave, Three Sisters Cave, The Road to Toad Hall and Tank Cave.	\$25.00	
		<b>Axsis Mundi.</b> 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	
		<b>Cave Diving Beneath the Ozark Mountains – DVD</b> - 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		<b>Cave Diving Mount Gambier – DVD</b> - 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	
		<b>China - Beneath the Wall – DVD</b> - 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	
		<b>Down Deep Down Under.</b> 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	
		<b>Facing Darkness.</b> 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		<b>Wokey Exposed.</b> 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	
		<b>WKPP Push for the Connection – DVD</b> - 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! <b>NEW POSTERS</b>  <b>THE SHAFT &amp; TOMMY GRAHAM'S MAPS</b> 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

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Postcode: \_\_\_\_\_
TOTAL \$ \_\_\_\_\_

[illegible]

Expiry Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Ph: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

# BOOKS, BOOKS, BOOKS

	QTY / COL/SIZE	ITEM	UNIT PRICE	TOTAL
BOOKS		<b>Abseiling Handbook.</b> 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	
		<b>Basic Underwater Cave Surveying.</b> The standard publication for anyone remotely interested in research and survey techniques used in water filled caves.	\$30.00	
		<b>Cave Diving Communications.</b> 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	
		<b>Cave Diving - A Blueprint for Survival.</b> 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	
		<b>Cave Diving - Articles &amp; Opinions</b> 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	
BOOKS		<b>Cavern/Cave Diver Workbook.</b> 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	
		<b>Caverns Measureless to Man.</b> 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	
		<b>CDAA Occasional Paper No. 2.</b> From National Conference 1981. Includes topics such as Fossil Cave, Belay Techniques and Cocklebidy 1979.	\$2.00	
	NEW!	<b>Divers of the Dark - Exploring Budapest's Underground Caves</b> 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	
		<b>Diving in Darkness</b> 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	
BOOKS		<b>Hidden Splendours of the Yucatan.</b> Hidden Splendors 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	
		<b>NSS Cave Diving Manual.</b> The standard reference manual in cave diving covering just about every conceivable topic. New Edition.	\$55.00	
		<b>NSS Cavern Divers' Manual.</b> The standard reference manual in cavern diving covering almost every conceivable topic. Also most principles behind safe sinkhole and cave diving.	\$30.00	
		<b>The Darkness Beckons.</b> By Martyn Farr. The history and development of cave diving.	\$75.00	
		<b>The Taming of The Slough.</b> 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	
		<b>Vertical.</b> - 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	

