



C.D.A.A. Newsletter

No. 132 - JUNE 2015

SENZIG

CAVE DIVERS ASSOCIATION OF AUSTRALIA

(Incorporated in South Australia)

Print Post No. PP 381691/00020



# Tec Training

## In Mt Gambier

TDI Advanced Nitrox  
 TDI Decompression Procedures  
 TDI Extended Range & Trimix  
 TDI Sidemount & Cave Sidemount  
 TDI CCR Cave – All three levels  
 TDI CCR Courses – Various Units  
 TDI CCR Helirox & 60m Mixed Gas  
 TDI Cavern, Intro to Cave & Full Cave  
 TDI Tech Instructor Programs

If you hold a current CDAA Deep Cavern Certification and are looking to complete one of the above courses, you can now do these courses in Mt Gambier.

### Benefits Include:

- No boat dives
- No Swell or Current
- No bad weather to stop completion of courses
- Most courses can be completed over a long weekend
- Theory and confined water sessions can all be done in the Mount
- Minimum of two students to run courses
- Flexible dates to suit you and your buddy or group
- Discount for groups of 4

For more information please contact Rubens Monaco on  
**0413-429-533 or 03 5984-1799**  
 Email: [info@idcscuba.com.au](mailto:info@idcscuba.com.au) Course Information: [www.idcscuba.com.au](http://www.idcscuba.com.au)

# TECDIVEGEAR

Australia's most competitive technical diving equipment online shop

**[www.tecdivegear.com.au](http://www.tecdivegear.com.au)**



## CONTENTS

Editorial - Rowan Stevens	5
National Committee Update	6-7
Instructor List	45
Site Access	46-47

### Articles...

Cave Dwelling Creatures Compensate	10
A Unique World - Dene Buckley and Pippa Waterworth	12-15
New Scubapro Gear	18-19
Member Profile - Peter 'Puddles' Horne	20-26
Natural treasure shared with world	27
Freshwater Caves in the Ottawa River Peter Buzzacott	28-33
XDEEP Streach - John Vanderleest	34-37
Our Hidden Heritage - Peter Horne	38-40
Ancient Neanderthal DNA From Cave Skeleton	41
Tourism expansion for Kilsby's - Leon Raydemer	42-44



### Cover:

Michelle Doolan  
 in F tunnel  
 in Tank Cave.

Image by:  
 Liz Rogers

## CAVE DIVERS ASSOCIATION OF AUSTRALIA

ABN 65 062 259 956

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

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

All articles and submissions shall automatically constitute an expressed warranty by the contributor that the material is original. We assume no responsibility for unsolicited material. Articles may be reprinted in part or in full in other magazines as determined by the CDAA and authors provide full permission. Private advertising for caving and diving equipment may be advertised free at the discretion of the Editor. Opinions expressed in GUIDELINES are those of the individual authors and are not necessarily those of the C.D.A.A.

## CONTACT LIST

Please contact the most relevant person or, if unsure write to:  
 C.D.A.A. P.O. Box 544 Mt Gambier SA 5291 [www.cavedivers.com.au](http://www.cavedivers.com.au)

**NATIONAL DIRECTOR** - John Vanderleest  
 Email: [national@cavedivers.com.au](mailto:national@cavedivers.com.au) Mobile: 0419 775 771

**STANDARDS DIRECTOR** - Linda Claridge Mobile: 0408 052 070  
 Email: [standards@cavedivers.com.au](mailto:standards@cavedivers.com.au)

**Quality Control Officer** - Linda Claridge Mobile: 0408 052 070  
 Email: [quality@cavedivers.com.au](mailto:quality@cavedivers.com.au)

**Risk Officer** - Andy Rands Mobile: 0403 825 590  
 Email: [risk@cavedivers.com.au](mailto:risk@cavedivers.com.au)

**Search & Rescue Officer** - Richard Harris  
 Email: [sar@cavedivers.com.au](mailto:sar@cavedivers.com.au) Mobile: 0417 177 830

**Instructor Materials** - Deb Williams  
 Ph: 0419 882 800 Fax: 03 5986 3179 Email: [materials@cavedivers.com.au](mailto:materials@cavedivers.com.au)

**BUSINESS DIRECTOR** - Peter Horak  
 Email: [business@cavedivers.com.au](mailto:business@cavedivers.com.au) Mobile: 0403 349 122

**Treasurer** - Tammy Beattie Email: [treasurer@cavedivers.com.au](mailto:treasurer@cavedivers.com.au)

**CDAA Products** - Hui King Ho  
 Email: [products@cavedivers.com.au](mailto:products@cavedivers.com.au) Mobile: 0407 987 003

**SITE DIRECTOR** - John Dalla-Zuanna Mobile: 0407 877 060  
 Email: [site@cavedivers.com.au](mailto:site@cavedivers.com.au)

**Kilsby's Booking Officer** - Craig Larkin  
 Email: [kilsby@cavedivers.com.au](mailto:kilsby@cavedivers.com.au) Mobile: 0418 821 191

**Tank Cave Booking Officer** - Noel Dillon  
 Email: [tankcave@cavedivers.com.au](mailto:tankcave@cavedivers.com.au) Mobile: 0407 530 103

**Shaft Booking Officer** - Peter Horak  
 Email: [shaft@cavedivers.com.au](mailto:shaft@cavedivers.com.au) Mobile: 0403 349 122

**PUBLICATIONS & RECORDS DIRECTOR** - Rowan Stevens  
 Email: [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au) - Mobile: 0417 550 509

**Records Officer (Members & Instructors)** - Rowan Stevens  
 Email: [records@cavedivers.com.au](mailto:records@cavedivers.com.au) - Mobile: 0417 550 509

**Guidelines - Graphics & Advertising** - David Bryant  
 Email: [guidelines@cavedivers.com.au](mailto:guidelines@cavedivers.com.au) - Mobile: 0417 125 710

**Webmaster** - Simon Roberts Email: [web@cavedivers.com.au](mailto:web@cavedivers.com.au) Mobile: 0433 069 751

### AREA REPRESENTATIVES

**ACT:** Heike Apps Email: [actrep@cavedivers.com.au](mailto:actrep@cavedivers.com.au) Ph: 0407 230 108

**NSW:** Robert Main Mobile: 0411 519 825 Email: [nswrep@cavedivers.com.au](mailto:nswrep@cavedivers.com.au)

**N.T.:** Jeff Swann Email: [ntrep@cavedivers.com.au](mailto:ntrep@cavedivers.com.au) Mobile: 0408 819 782

**QLD:** Position Vacant Email: [qldrep@cavedivers.com.au](mailto:qldrep@cavedivers.com.au)

**SA:** Ken Smith Email: [sarep@cavedivers.com.au](mailto:sarep@cavedivers.com.au) Mobile: 0407 603 118

**South-East SA** - Grant Pearce Ph: 0438 833 103. Email: [sesarep@cavedivers.com.au](mailto:sesarep@cavedivers.com.au)

**WA:** Pippa Waterworth Email: [warep@cavedivers.com.au](mailto:warep@cavedivers.com.au) Mobile: 0410 304 894

**VIC:** Tim Muscat Email: [vicrep@cavedivers.com.au](mailto:vicrep@cavedivers.com.au) Mobile: 0422 127 802

**Public Officer** - Andrew Seifried Email: [publicofficer@cavedivers.com.au](mailto:publicofficer@cavedivers.com.au)  
 Mobile: 0404 275 637

### CDAA INSURANCE

Policy Type: Combined Liability Insurance Policy# BN-EAL-14-441680L.  
 Insurer: Liberty International Underwriters ABN: 61 086 083 605  
 Level 27, 1 Macquarie Place, Sydney NSW 2000  
 Name Insured: Cave Divers Association of Australia  
 Public Liability \$20,000,000 any one claim. Expiry: 30 September 2015.



# Pine Tank Lodge

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

## Lodge Features:

- Accommodates 14 divers in 7 rooms; three double bedrooms and four rooms each with two single beds.
- Two separate socialising areas
- Endless hot rainwater showers in two separate bathrooms.
- Airfills, Nitrox, Trimix, high pressure O<sub>2</sub>
- Undercover gear drying
- Barbeque facilities

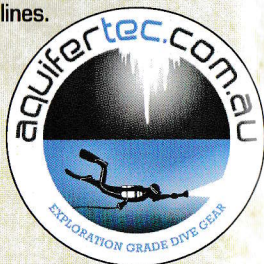
## Courses:

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



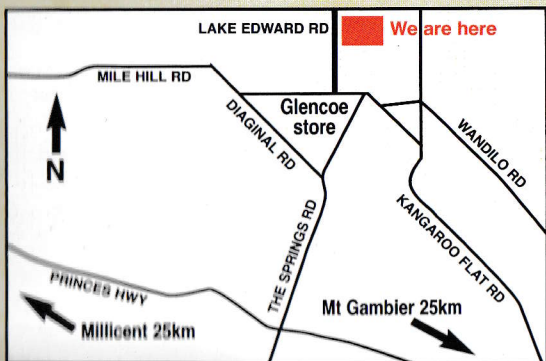
## AquiferTec Australasia

- Specialist importers of Technical Cave Diving Gear.
- Bonex Long range Scooters 11-22km
- Shearwater Predator Computers.
- Contour compact video cameras and housings.
- Best prices in Australasia for the range of SANTI drysuits, undergarments and after-dive wear.
- Sole Australasian importer for SITEC boosters.
- Best prices for Light Monkey HID and LED lights.
- Armadillo Side Mount systems.
- O<sub>2</sub> sensors: Maxtec and Teledyne, Dive Soft trimix analysers and Oxycheq.
- 300mtr high pressure fill lines.
- Fill whips, digital gauges.
- Remote fill manifolds.
- FLEX Side Mount CCR.
- Spools & Reels.
- Narked@90.



## Pine Tank Dive Lodge AquiferTec Australasia

Lake Edward Road  
Glencoe, South Australia  
Phone: 08 8739 4020  
Mobile: 0438 833 103  
Email: [stay@ptdive lodge.on.net](mailto:stay@ptdive lodge.on.net)  
Email: [admin@aquifertec.com.au](mailto:admin@aquifertec.com.au)  
Web: [aquifertec.com.au](http://aquifertec.com.au)



## EDITORIAL

ROWAN STEVENS



Hi,

I'm going to start with some amazing news – which I would not have believed myself until I saw it. David Warnes (#1) has turned 80 years old and to celebrate he spent the weekend diving tank cave (see photo). Congratulations David and a big happy birthday from the CDAA. What an amazing milestone, keep up the good work.

Welcome to the special July edition of Guidelines, which is being published later due to the deadline for nominations for National Committee positions. Now that nominations have closed, only the current incumbents nominated and subsequently have been re elected into their current positions. There is, however, a vote required for member motions, so please read the motions and voting instructions and make your vote count.

In this issue we announce details of the keynote guest speaker at the Members Symposium – Andrew Pitkin, USA. Don't forget the Symposium and AGM 2015 is on Saturday 26th September 2015. Also in this issue are articles about cave eco systems both locally and abroad. There is a gear review in the Mantis Dive Watch, Air 2 - 5th generation and XDEEP Stealth Side Mount harness. We interview and profile Peter Horne. There is also an article on the Westmeath freshwater caves in Ottawa, Canada.

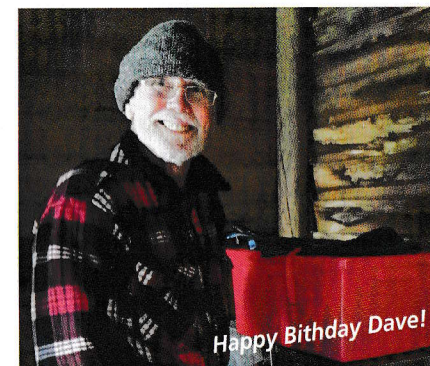
Enjoy!

Happy and safe diving.

Rowan Stevens #3177 | Publications and Records Director  
M: 0417 550 509 | E: [publications@cavedivers.com.au](mailto:publications@cavedivers.com.au)

## XDEEP STEALTH TRIAL PROMOTION

The Australian distributor, Deep Dive Gear, have donated one XDEEP Stealth Side Mount Harness to the CDAA for members to trial. Contact them to find out where you can try it out! Phone: 02 6257 1527



## Articles for Guidelines Sept. 2015 - Deadline is Sept. 4th

- Send articles and jpeg images by email to [guidelines@cavedivers.com.au](mailto:guidelines@cavedivers.com.au)



# NATIONAL COMMITTEE UPDATE

JUNE 2015

Recently, the National Committee asked itself one simple question: "If I could get access to the dive sites outside of the CDAA, would I become or remain a member?"

This simple question helped us crystalise our thinking regarding our future.

Although we have a 5 year business plan, our success points so far have been largely administrative in nature. It is now time to get back to our core - cave diving and cave diving related activities.

Member activities will be key for us going forward and if we are going to be serious about it, they must not be ad-hoc. To achieve this we will still need local volunteers, but the national preparation and coordination will need to be more professional. Ideas include more social events with more speakers, new equipment trials, skills updates, CDAA facilitated dive trips, loan equipment, inviting prospective members to events, getting event sponsorship, etc.

Aside from member activities, we also want to spend time developing a place we can call home. A home is not about lecture facilities, but a place members can bring their families, sit around a fire while they relax and talk. A place to bunk out or camp for the night. A place where members who have travelled from interstate get to hang out with other cave divers. A place where new members can be mentored by those more experienced. A place where you will enjoy being even if you don't dive for the weekend.

And finally, we want to modularise our training to include core and optional modules. This will allow people to personalise their training and make them more relevant to the region. Some of the ideas put forward include basic cliff management, SRT, sump diving, mine diving, dry caving, surveying, dry caving techniques and scooters.

For these things to happen we are asking for your endorsement. Please refer to the voting papers.

My your drysuit remain wet on the outside.

John Vanderleest  
National Director



John Vanderleest,  
National Director



Peter Horak,  
Business Director



Linda Claridge,  
Standards Director



John Dalla-Zuanna,  
Site Director



Rowan Stevens,  
Publications and  
Records Director

## Guest Speaker Announced for 2015 CDAA Symposium ~ Andrew Pitkin, USA.

Andrew Pitkin learned to dive in 1992 in the cold murky waters of the United Kingdom and started cave and technical diving in 1994. His first exposure to exploration was in 1995 when he was one of a team of divers who were the first to reach the bottom of the Great Blue Hole of Belize at 408 fsw (123 msw). Subsequently he has been involved in numerous cave exploration projects in Belize, Mexico and Florida. From 1996-2000 he was employed at the Royal Navy's Institute of Naval Medicine, running a hyperbaric facility, treating decompression illness, participating in research into outcome after decompression illness, submarine escape and testing of new military under-

water breathing systems. He is one of a handful of civilians to be trained by the Royal Navy as a diving medical officer. In 2007 he moved to Florida and is currently on the faculty of the University of Florida College of Medicine in the Department of Anesthesiology. His professional interests include pediatric cardiac anesthesia and medical education. He has been diving a Prism CCR since 2004 and has yet to find a unit that can outperform it for long-range and deep cave diving. For specific applications he has experience in side-mount, no-mount and even back-mount configurations, both open- and closed-circuit.



## We Specialise in Dry Suit Repairs

We are the authorised repairer for most drysuits on the market

And we supply and repair for commercial divers, fisheries and government organisations!



*'Damn Good  
Drysuit Repairs'*



## DKG DRYSUITS



### Supplier of these Quality Products:

- RB consumables & Repairs • She-P distributor
- Shearwater Products • DiveX distributor
- Sorb (intersorb and sofnoime)
- Narked at 90 Distributor
- Kubi Dry glove system
- Otter Drysuits MTM

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

Contact: Damo 0466 912 190

[damien@drysuit.com.au](mailto:damien@drysuit.com.au)





CAVE DIVERS ASSOCIATION OF AUSTRALIA  
INCORPORATED IN SOUTH AUSTRALIA

## AGM and Symposium 2015

This year the members' symposium will have a number of exciting local speakers presenting on their exploration, mapping, research and training as well as our keynote speaker Andrew Pitkin from the United Kingdom.

The symposium will be held on the **26th September** in conjunction with this year's Annual General Meeting (AGM).

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

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

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

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



# Blue Lake Diving & Just a Bed Lodge

- Air Fills • Nitrox Fills • Minor Repairs
- Overnight Scuba Cylinder Testing\*

(\*Prior arrangement required)

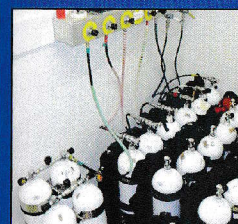
## Trimix and High Pressure O2 available

Guaranteed o'night Air / Nitrox fills...  
drop off before 8pm, filled by 7am next morning!

**All enquiries:**

**Darren Walters - 0408 845 511**

Email: [darren@justabedlodge.com.au](mailto:darren@justabedlodge.com.au)



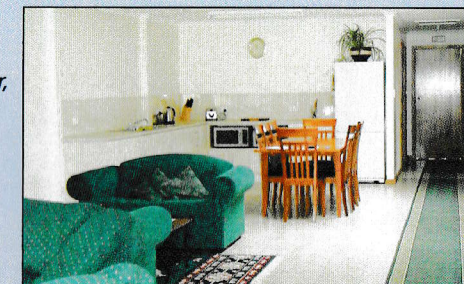
## ACCOMMODATION \$32pp per night Linen Included!

- Linen consists of fitted bottom sheet, top sheet, doona, pillow & pillow case, quilt and a towel..
- Each bedroom is individually lockable allowing for a secure area for personal effects.
- Spacious room with kitchenette (sink, refrigerator, two microwaves, crockery & cutlery, toaster and kettle), kitchen table, lounge area, TV & DVD/video.
- 2 individual toilets and a spacious bathroom with instant hot water shower & vanity.
- Barbeque, seating area and provisions for drying of diving equipment if required.

Contact Suzanne on 0427 884 729 or Email: [suzanne@justabedlodge.com.au](mailto:suzanne@justabedlodge.com.au)



**6 individual bedrooms,  
All with two single beds & linen.**



## [www.justabedlodge.com.au](http://www.justabedlodge.com.au)

280 Cafirco Rd, Mt. Gambier 5290  
PO Box 9286, Mount Gambier West, S.A. 5291



# Cave Dwelling Creatures Compensate For Loss of Eyesight

Tom Illiffe, Texas A&M University Professor of marine biology

*Scientists studying cave-dwelling crustaceans have determined that, as they evolved without eyes, their other senses improved to compensate for the lack of sight. In work, published in the current issue of BMC Neuroscience, researchers in the US and Germany examined the brains of three cave-dwelling crustaceans; Mictocarididae from Bermuda, Spelaeogriphacea from South Africa and Thermosbaenacea from Italy.*

What all three species have in common is that they are blind, and have only small stalks where their eyes used to be present.

These animals first colonized caves at a time when the continents were still connected to each other and most of the world was one big land mass. This was at least 180 million years ago, a time when dinosaurs dominated the Earth. Since then, these small crustaceans have lived underground in total darkness all this time, so there was no need for vision or even eyes. Thus, they were forced to live without sight, and they are still living like that today. It's what is known as 'regressive evolution' – when evolutionary processes go in reverse and body features are lost due to non-use.

Without light, the creatures were forced to adjust, losing not only their eyes, but having major changes to their brain and nervous system also occurring.

Their olfactory lobes which control the sense of smell and taste were enhanced and became better developed as they lost their vision. As their optic nerves were disappearing, their other senses were taking over. In other

words, the changes in their environment changed these crustaceans themselves.

Enhanced adaptations such as longer antennae and an improved nervous system helped these creatures to obtain food or find mates as they swam or crawled through the caves.

Even with no light in the caves, evolution continued to proceed as it always does – these creatures were able to adapt and survive in this totally dark environment, while life on the surface of the Earth changed radically. Our findings suggest that these creatures, as they spent longer and longer time in complete darkness, changed independently during this evolutionary process, and they gradually reduced brain functions that were no longer needed.

The project was funded by the German Science Foundation and assisted by the Bermuda Biodiversity Project.

**Website ref:** [cavingnews.com/20150515-cave-dwelling-creatures-compensate-for-loss-of-eyesight](http://cavingnews.com/20150515-cave-dwelling-creatures-compensate-for-loss-of-eyesight)



Tom Illiffe diving in a Bermuda cave where he found blind crustaceans. Photo by Jill Heinerth

SCUBAPRO



UNLIMITED FREEDOM

X-TEK SIDEMOUNT SYSTEM

Maximum maneuverability under water, a better streamlined shape, less back strain, easier entry into the water, and increased under water safety. The X-TEK sidemount system by SCUBAPRO delivers the ultimate diving experience.

SCUBAPRO.COM



X-TEK SIDEMOUNT SYSTEM



# We Visit a Unique World

by Dene Buckley and Pippa Waterworth

*The Nullarbor Plain is located in the South-West of Australia and includes land within South Australia and Western Australia, totalling 197,200 km<sup>2</sup>. Seventy percent of the Nullarbor Plain is located within Western Australia, and the majority of it, is flat and treeless. The Nullarbor Plain forms the onshore part of the Eucla Basin, and is the world's largest karst region. It contains widely scattered collapse dolines and a few hundred caves, some of which are large and extensive, and several have submerged diveable sections. The karst landforms are characterised by solution sculpturing, underground drainage systems and caverns.*

It is widely recognised that Nullarbor caves are extremely important ecosystems because they are home to evolutionarily significant species of troglodites<sup>1</sup>, troglodiles<sup>2</sup> and stygobites<sup>3</sup> (Morton, Short, & Barker, 1995). Documenting the cave environment, including collecting biological specimens, commenced in the late 19th century. Over the years ongoing research has contributed to a better understanding of this unique and biologically diverse environment. Table 1 shows the biological significance ranking of the diveable caves, to which the Cave Divers Association of Australia (CDAA) has access. The ranking was extracted from a more exhaustive table found in a report on the biodiversity of the Nullarbor region (Eberhard & Moulds, 2007).

The Biological Significance rank takes into account overall species richness, as well as the number of trogloditic and stygobitic species, but doesn't take into account endemism especially of obligate<sup>4</sup> fauna. A more accurate picture of ecological significance can be established by taking into account the number of endemic species (a species prevalent in or limited to a particular locality or region) that are cave dwelling - trogloditic or stygobitic. Cave dwelling terrestrial and aquatic species have been recorded as endemic to 64 caves in the Nullarbor region. The number of species that are obliged (obligate) to dwell in a cave to survive ranges from 1 to 10, depending on the cave. The caves in the region mainly contain fewer than 3 obligate species, and often only having 1 species present.

*nyctophilus geoffroyi*



**Table 1: Biological Significance Ranking**

Cave Name	Total Length (m)	Species Richness	RANK (out of 150)
Cocklebidy	6550	49	3
Weebubbie	950	32	8
Burnabbie	1000*	7	9
Olwolgen	920*	5	11
Murra-El-Elevyn	1140	23	12
Tommy Grahams	560	7	39

\* Both caves have been extended since this data was compiled.

**Table 2: Richest Caves**

Cave Name	Number of Obligate Subterranean Fauna Taxa
Olwolgen	5
Burnabbie	5

There are two obvious exceptions to this (Table 2), and those caves are found on the Roe Plain; both of which are diveable caves. Olwolgen and Burnabbie caves have extraordinarily high numbers of endemic species compared to the other caves in the Nullarbor region, which

makes them significance reservoirs of unique biota.

The Nullarbor caves are also ecologically important to vertebrates, and are critical habitats for some species of birds and bats, which roost and breed within them (Eberhard & Moulds, 2007). Two species of bats that are often found are the chocolate wattled bat, *Chalinolobus morio* and the lesser long eared bat, *Nyctophilus geoffroyi* (Eberhard & Moulds, 2007). Both species are called micro bats, as they belong to the family Microchiroptera meaning 'little hand-wing'. They are also both insectivores, dining on insects that they find by echolocation. Although the *C. morio* is usually a

tree dwelling bat, it uses caves for shelter and breeding in the Nullarbor region (probably due to sparse foliage) and is, therefore, considered a cave-form of the species (Hamilton-Smith, 2003).

Bats have been recorded within a number of caves in the Nullarbor region, five of which are accessible to CDAA members (Murra El Elevyn, Cocklebidy, Tommy Graham's, Weebubbie and Olwolgen). Murra El Elevyn and Weebubbie, along with Warbla and maybe Thampanna caves have extra significance to bats in the region, because they are classified as maternity caves (Moulds, 2006; Richards, 1971). Disturbing the bats during the maternity season (November to January)



Roof Root Mat Burnabbie Cave





Moriocave2 Bat

can cause panic flight which may dislodge young from the ceiling or from their flying mothers (Hamilton-Smith, 2003). In most cases young that fall to the floor are not retrieved and subsequently die. Disturbances at this time may also cause pregnant females to abort their unborn pups (Murray & Kunz, 2005). Many species of bats are under serious pressure because of habitat loss and global warming and, therefore, these animals are a fragile part of our ecosystem. If they are severely or repeatedly disturbed they may abandon



Spider Egg Sack in Root Mats

their habitat or in some cases die.

This brief snapshot highlights the uniqueness of the Nullarbor caves CDAA members visit. Every visitation has a direct impact to a cave's environment and the communities it contains. Not keeping to tracks is a good example of the negative impact we can have. Not only does it disturb new areas and can lead to accelerated erosion but has the side effect of compacting soft floor sediment. According to Eberhard and Hamilton-Smith (1997) this compaction may render it less suitable as invertebrate habitat.

There are a number of conservation measures that CDAA members can adopt to help lessen the impacts



Cockroach Foraging in Root Mats

#### Surface Spider Using Cave for Shelter



of their visits to these fragile environs, both above and below ground. The following is a short (but by no means exhaustive) list:

- Cave slowly. You will cause less damage to the cave and yourself.
- Keep to tracks. Don't make short cuts or new tracks.
- Don't disturb biota and be careful not to trample fauna underfoot.
- Don't disturb or shine lights on roosting bats and keep noise to a minimum.
- Remove rubbish and body waste from caves.
- Respect the cave and the surrounding environment.
- Use good trim and buoyancy techniques to avoid damage to the cave.
- Use equipment configuration appropriate to the cave i.e. side-mount in Roe Plains caves.
- Previous damage is not an excuse to continue to cause damage.
- Use established campsites, don't make new ones.
- Don't burn rubbish, instead collect it and leave at the nearest roadhouse refuse site.

Recently the CDAA adopted the Australian Speleological Federation's Minimal Impact Caving Code to provide some guidance in cave conservation. For this to be of benefit, it is recommended all CDAA members make them self's conversant with its contents. It is only with understanding and self-policing that we will be able to conserve these fragile cave environments for the benefit and enjoyment of those who follow.

#### References:

Eberhard, S., & Moulds, T. (2007). Subterranean biodiversity of the Nullarbor Karst. Greenwood, W.A. : Subterranean Ecology Scientific Environmental Services.

Hamilton-Smith, E. (2003). Beneath the surface: A natural history of Australian caves. In B. Finlayson & E. Hamilton-Smith (Eds.). Sydney: UNSW Press.

Morton, S. R., Short, J., & Barker, R. D. (1995). Refugia for Biological Diversity in Arid And Semi Arid Australia: Biodiversity Unit, Department of the Environment, Sport and Territories.

Moulds, T. (2006). The seasonality, diversity and ecology of cavernicolous guano dependent arthropod ecosystems in southern Australia. University of Adelaide Adelaide.

Murray, S. W., & Kunz, T. H. (2005). Bats. In D. C. Culver & W. B. White (Eds.), Encyclopedia of caves. (pp. 39 - 45). San Diego, California: Elsevier.

Richards, A. M. (1971). An ecological study of the cavernicolous fauna of the Nullarbor Plain Southern Australia. Journal of the Zoological Society of London, 164(1 - 60),

## Engelbrecht Cave and Cafe

9.30-3.30 Thurs-Tues

Looking for a toasted sandwich and a cuppa or some hot soup and a scone in between dives, then call in to see our friendly staff.

Home baked cakes and treats always on the menu along with hot Mahalia coffee.





# 2015 AGM Voting, etc

Positions for **National Director, Publications and Records Director, and Site Director** are to be voted in 2015.

The Proposed Nominations for the position of National Director and Publications & Records Director appear below.

## Nomination for National Director – John Vanderleest #1965

*Proposed by Noel Dillon CDAA #2038 Seconded by Jurgen Gehrre CDAA #2933*

*Over my term as National Director our administrative processes have improved immensely, regulations that limit our diving choices have been removed, we have more dive sites, we have paid off all Tank Cave, our insurance costs have been halved and we are once again on solid financial ground. As a result we no longer see a lot of the disharmony we once had. My desire is now to focus on the CDAA of the future. Making the CDAA an organisation of choice not because of site access, but because it offers a place of belonging. An organisation for members and their families. An organisation that thinks National and International rather than just Mt Gambier. I envisage new things such as sump diving, dry caving techniques, equipment support for places like the Nullarbor, access agreements for mines and quarries, CDAA coordinated trips and having a place we call home. To be an organisation of choice we need to return to our roots where the focus is on diving and not the administration of diving. I believe we have a good team in the National Committee who are achieving results. If you are not satisfied with the progress we are making, I ask that you do not vote for me, but if you think we are advancing and like the direction, then I ask your permission for both myself and that of my committee member peers to continue.*

## Nomination for Publications and Records Director – Rowan Stevens #3177

*Proposed by Chris Edwards CDAA #2247 Seconded by Claire Cooper CDAA #3673*

*In 2011 I started a journey to help transform the CDAA into a relevant modern cave diving organisation. In 2013 I was re-elected to continue that journey and have since made the following contributions:*

- Led update and publication of New CDAA Regulations, Diving Training Standards and Student Training*
- Materials for Deep Cavern, Cave and Advanced Cave;*
- Migrated web site to more a more reliable and secure hosting provider;*
- Added web site functions for Instructor Renewals and Ordering Replacement for Lost/Stolen Cards;*
- Ensured only the highest quality cave diving content is published in guidelines;*
- Streamlined member communications through Official CDAA Notices and targeted emails.*

*Foundational work is complete. In support of the National Committee I am ready for the next phase of the journey that will focus on training and member diving choice. I seek your support for re-election as Publications and Records Director to continue the journey.*

# 2015 AGM Voting, etc

Positions for **National Director, Publications and Records Director, and Site Director** are to be voted in 2014.

The Proposed Nomination for the position of Site Director appears below.

## Nomination for Site Director – John Dalla-Zuanna #236

*Proposed by Philip Croker CDAA #3124 Seconded by Alexandra Watt CDAA #4887*

*I am seeking your vote of support to continue in the role of Site Director.*

*Over the past 12 months, I have vigorously pursued the agenda items around sensitivity to the relationships between landowners & the activities of the Association.*

*In this period, I have contacted all the known landowners and strengthened their involvement with the CDAA. At a number of sites, there have been changes in site managers and adjustments to protocols and procedures. I have negotiated these changes with a minimum of disruption to benefit both the landowners and members.*

*I have also created active links with key members in all States, who are now gathering access requirements for cave diving features of interest to the Association including known mines & quarries.*

*I continue to be informed and active on the key issues of increased access and environmental impact which are foremost considerations / parameters in making productive decisions. I will continue to liaise with the many members who provide feedback on such conditions. These include the Tank Cave Management Committee, Access & Booking Officers, the State Reps and you, the members who provide information, which I relay to the Directors.*

*I am enthusiastic working with the current team of Directors who are experienced and united. Discussions on the future challenges and directions for the CDAA have already begun, and will be the focus of my work ahead, ... as well as opening a few more sites.*

*Please support my nomination.*



# NEW GEAR

## MANTIS DIVE WATCH

*Wristwatch-style dive computers are all the rage these days because they're versatile as well as stylish. A dive watch/computer can be worn to the office during the week as a fashionable timepiece. When five o'clock rolls around it can be worn to the gym or lap pool as a workout watch, and when the weekend finally arrives and it's time to go diving, you've got yourself a full-featured deco computer.*

The new SCUBAPRO Mantis dive watch is an ideal example of this precise blend of form and function. Its casing is made from the highest marine grade 316L stainless steel with an attractive—and protective—two-toned brushed finish. The SCUBAPRO logo is displayed prominently on the front bezel ring along with the imprinted labels for the four magnetic control buttons. This not only looks good design-wise, it also makes it very easy to identify button functions for quick navigation through the intuitive menu system. Data is presented with easy-to-read alphanumeric characters and graphics on a clean, well-ordered LCD segment display mounted beneath mineral glass. The screen comes with an inverted backlight for use in low-light conditions.

For daily topside use the Mantis offers full timekeeping functions, including hour/minute, date and alarm. For after-work sports and exercise, the altimeter and thermometer let you track hiking excursions into the upper elevations. The chronograph with lap memory is great for running, as is the heart rate monitor display when using an optional Polar or Latitude HRM belt. Or, switch to Swim Mode and you can record your

swimming time (chronograph), number of swim strokes and swimming distance.

For diving, the Mantis is loaded with features. Its UWATEC ZHL-8 Predictive Multi-Gas algorithm can accommodate three gas mixes, from 21 percent nitrox to 100 percent O<sub>2</sub>, plus it offers a fixed PPO<sub>2</sub> CCR algorithm for closed circuit rebreather diving. With a maximum operating depth of 120m/394ft, the Mantis offers four underwater modes: Deco, Gauge, Apnea and CCR. It comes with an enhanced logbook for apnea divers and the ability to monitor your heart rate while at depth. Even better, when wearing the Latitude HRM belt, you can use the belt's temperature to estimate your own skin temperature, which can then be factored into your decompression algorithm. For post-dive data tracking the Mantis comes with LogTRAK software for both PC and Mac as well as an Android LogTRAK app.

### THE MANTIS AT-A-GLANCE

- Targeted to certified air (open water and above) and nitrox divers, in addition to closed circuit rebreather divers using a fixed PPO<sub>2</sub>.
- Casing is built from the highest marine grade 316L stainless steel with a two-toned brushed finish that both protects and looks great.
- Magnetic control buttons eliminate the need for holes, maintaining the casing's watertight integrity and maximizing mechanical reliability.
- Mineral glass protects the LCD segmented display that features an inverted backlight to enhance readability in low-light conditions.
- Features include full topside time-keeping functions plus a chronograph with lap memory for running.
- Four Dive Modes—Deco, Gauge, Apnea and CCR—plus a Swim Mode offer maximum time-keeping and data crunching versatility on land, on the surface and under water.
- Dive Modes function to a maximum operating depth of 120m/394ft.
- UWATEC ZHL-8 Predictive Multi-Gas algorithm allows divers to carry high oxygen concentration mixes (21-100%) in addition to their primary breathing gas.



- Fixed PPO<sub>2</sub> CCR algorithm is provided to accommodate closed circuit rebreather divers.
- Enhanced logbook allows apnea divers to store their repetitive apnea dives sequentially under same session.
- Heart rate monitor uses either a Polar or Latitude HRM belt. Using a Latitude belt enables divers to use belt temperature as an estimate of skin temperature, which can be factored into the decompression algorithm.
- CR2032 user replaceable battery is rated for two years or 300 dives. Note: battery compartment is not independent of the electronics.
- USB data interface (with dongle) is both PC and Mac compatible using LogTRAK software. An Android LogTRAK app is also available.

### INCLUDED WITH THE MANTIS

The new Mantis is delivered with a Meridian thermoplastic rubber wrist strap in packaging that's similar to the Chromis. Included in the box is a "Read First" manual identical to that of the Chromis (06.204.428). Also included is a LogTRAK CD (including a full user's manual in TBD languages), a Chromis-style strap extension for thick wetsuit or drysuit use, a 3M foil screen protector, a laminated Quick Guide card, and a Registration card (US and ROW).

Available accessories include a USB dongle for data downloading, a Polar or Latitude HRM belt, colored (blue, red, yellow, pink) wrist straps and extensions and a nylon strap and extension.

### THE MANTIS ADVANTAGE

When it comes to dive computers, a common complaint

among divers is, if it's too complicated or confusing to access a computer's cool features, then it really doesn't matter how many cool features a dive computer has.

That's the beauty of the Mantis dive watch. It foregoes the frills and focuses on the features and functions that are most important to the end-user, both topside and under water. Then, with an intuitive menu system accessed by clearly marked buttons, it makes it easy to access these functions, understand them, and use them.

Also, the Mantis is not a dive computer that's stowed in a bag or on a shelf when the diving is over. The Mantis owner is always wearing it, using it, scrolling through the logbook during a spare moment in a sales meeting, ever exploring and getting to know the system. And we all know that the more time we spend with any computer, the more we benefit from it.

Finally, the Mantis is built to last, with a quality full stainless steel body and magnetic buttons that maintain the unit's watertight integrity and reliability. Divers can be assured that the Mantis will be there for them for as long as they need it.

### SUMMARY

With its sleek design and compact size, the Mantis packs a lot of computing punch yet offers an attractive and easy-to-read display and an intuitive menu system. About as versatile as a dive computer can get, the Mantis provides an operating mode for virtually every type of in-water activity, including closed circuit rebreather diving. Offering just the right balance of topside features and underwater functions ensures that the Mantis will become an integral part of not just your diving life, but of your everyday life as well.

## AIR 2 5TH GEN

This fifth-generation octo/inflator is now easier to use than ever. As a backup regulator in high-stress situations, the AIR2 breathes like a dream, rivaling some second stage models. It is CE-certified for waters 10-degree Celsius or warmer. The large, flexible purge button provides quick clearing when it counts. Divers can also enjoy pinpoint buoyancy control with the AIR2. Its large inflate and deflate buttons are easy to distinguish, and the device fits comfortably in hand. For reliable performance without dangling hoses, the AIR2 is a standout.

- Radically improved Work of Breathing
- CE Certified Alternate Air Source
- Breathing performance remains consistent at air pressure
- New Dive/Pre-Dive switch allows diver to detune the unit when not in use to eliminate free flows.
- Flexible S560-style purge cover is easy to locate and depress for quick clearing.
- Power inflate and deflate buttons are positioned on top of the housing when the AIR2 is in the diver's mouth, making it



easier to control buoyancy.

- Power inflate button, which is the same as on the new BPI, features a lighter lever so less load is required to initiate inflation.
- Larger inflate and deflate button buttons can be differentiated by color and by touch due to their different shapes and sizes.
- Large bite tabs on mouthpiece guarantee a secure grip in high stress situations.

\*This editorial is supplied by Scubapro Australia





# CDA A MEMBER PROFILE



## Peter 'Puddles' Horne

*Peter 'Puddles' Horne has been a very familiar face over many decades in the CDA A. He is well known for sticking his head down every tube, slot, rabbit burrow and crack in the ground in the Mount Gambier region where water was to be found, or even if he thought he could sniff it! Of course, the nickname 'Puddles' was quickly earned due to this ferreting around in barely-accessible dive sites. I believe there is even a photo in existence somewhere of Pete actually lying in a large puddle in full cave diving gear desperately hoping there was a passage leading off it, even though it was only 10cms deep!*

*One result of this dedicated attention to detail was the discovery of the entrance passage to Tank Cave in the days when only single-tank explorers could fit into it. What an enormous contribution to the sport of Cave Diving in this country! Tank Cave became the primary driver in the CDA A setting up a fully-fledged Penetration Level of cave diving training.*

*Thank you from everyone for that tremendous discovery, Pete!*

*Pete has taken great trouble over many years to photograph and record cave entrances, cave features, underwater items of scientific interest and early movie footage of many different cave diving sites across the South East. Interestingly, there have been a good number of instances where these older photos now show us of changes in the surrounding landscapes, entrance modifications and changes in water level – not to mention a most significant improvement in dive gear from the Sharkskin wetsuits and Aquaflash torch days! Pete has applied his sense of humour to many diving situations and the puddle photo is one of them.*

*Have you noticed he is always grinning in his photos!? Even with a reg in his gob! However, he is renowned in the cave diving world for his Hollywood Epic "Life in Earth - David Battinburrow goes Cave Diving" which featured cave divers in all sorts of hilarious above-ground and underwater situations. There needs to be a DVD of this film!*

*And Pete has made a great contributions to the cave diving Environment - his detailed documenting of so many scientific reports on sinkholes, groundwater, stromatolites, discovery of syncarids, and fossil recoveries. He has made all these reports available to everyone on his website as he believes everyone should benefit from the knowledge.*

*That is characteristic of his great generosity of spirit.*

*Lastly, he developed heartwarming and caring friendships with so many landowners and their families because of his friendly and communicative nature.*

*All of the above is why he is a CDA A Life member and one of my best mates!*

*Introduction by Ian Lewis Interview by Dave Bryant*

*Welcome to a brand new section for Guidelines where we interview past and present CDA A members who have made an impact within the Association. Sit back and enjoy old photos, historical facts and some great stories.*

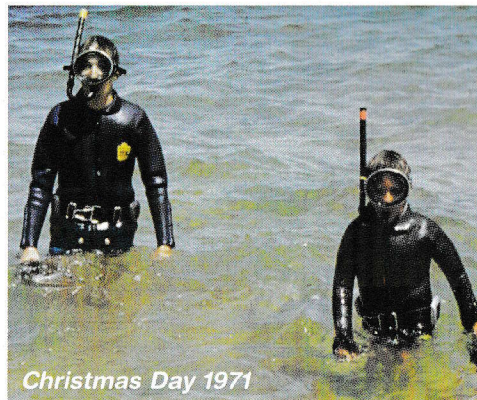


*Peter Horne Spearfishing,  
Jan. 1977 with Mike Kupets*

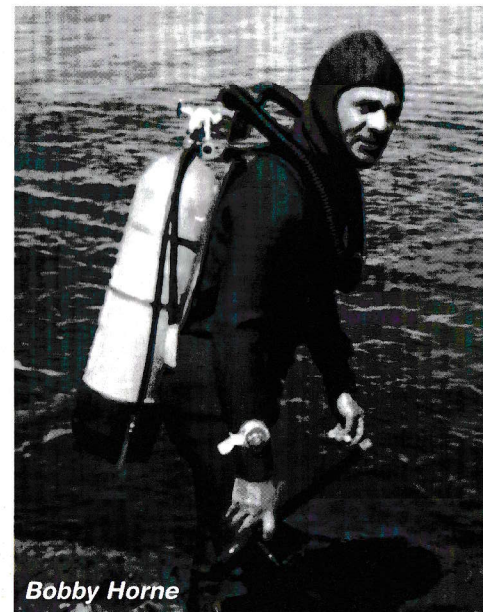
*I developed a strong interest in natural history at a very early age and was always eager to see what new strange creature was going to appear at the end of a fishing line. It was while I was fishing at Marino Rocks one day that I saw a Jumping Blenny hopping about in a small tidal pool, and I got really fired up about catching small sea critters to study in a large saltwater aquarium I kept at home. I began snorkelling at Brighton Beach (SA) in around 1966, quickly learnt the dangers of using a twin-tube "ping pong ball" snorkel, full-face mask in*

*Peter, tell me a bit about your youth, where were you born, what started your interest in diving?*

*I was very fortunate to grow up (with a fisherman father) near the coast, at a time and place that afforded me numerous opportunities to explore beautiful beaches and then-mysterious rivers and*



*Christmas Day 1971*



*Bobby Horne*

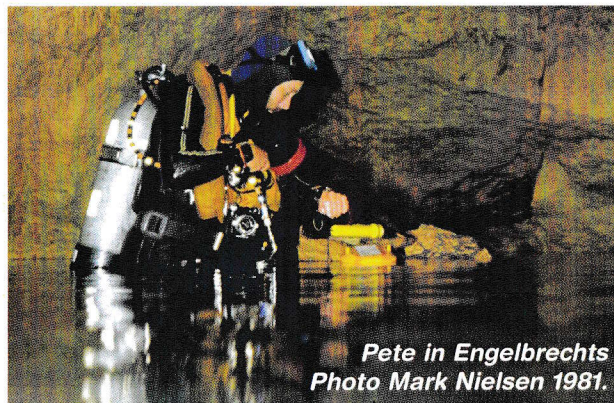




**Kambrook Reel**

choppy seas, as well as discovering the thrill of catching blue crabs in the shallows, and as I gained more confidence I was often doing solo snorkel dives hundreds of metres offshore for hours at a time. I was really chuffed when I bought a Turnbull "Rocket Gun", but in 1971 a very scary encounter with a hungry 3m Bronze Whaler put me off spearfishing when it grabbed a buoy and viciously towed my dive buddy underwater for many metres; he was only saved from drowning when the cord to his weightbelt snapped.

My father and I approached the one-legged owner of Adelaide Skin Diving Centre (ASDC), Dave Burchell, to get properly trained in around 1966, but I was disappointed when Dave explained that I had to be at least 12 years of age to learn scuba



**Pete in Engelbrechts**  
**Photo Mark Nielsen 1981.**

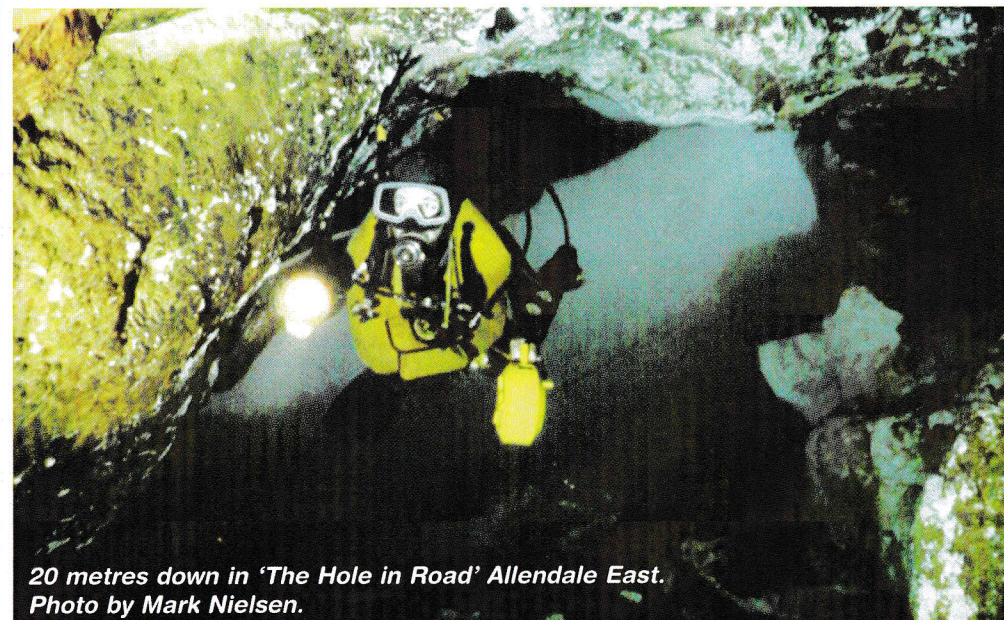


**Bang stick, Feb. 1979**

and to come back later! So we bought Bill Barada's "Let's Go Diving", and I'm sure that Dad, my younger brother Tom and I only survived because of how religiously we studied this to teach ourselves how to dive, using a 72 cubic foot steel scuba cylinder with a twin-hose Nemrod Snark III regulator and a needle contents gauge. I obtained my basic open-water "C-card" from Divers Service in Welland in 1976 (cost \$14!!) and joined the SCUBA Divers Club before developing an interest in helping academics and students from such places as the University of Adelaide, SA Museum, Marine Aquarium Research Institute of Australia (MARIA) and the Society for Underwater Historical Research (SUHR) with various projects.

**When did you start cave diving? Was it something you were introduced to or did you stumble upon it in a magazine?**

Actually it was neither of these; my cave diving interests basically involved bumping into the right people at the right time in the late 1970s. The four key people were fellow sport parachutist Bob Cunningham (a pioneering Mount Gambier sinkhole diver with many great stories to tell), Telecom Australia colleague Rupert Faderl (who introduced me to Ewens Ponds while we were waiting for a total solar eclipse), and Ian Lewis and Peter Stace (who were writing their groundbreaking book "Cave Diving In Australia" at that time, when I met with them to discuss



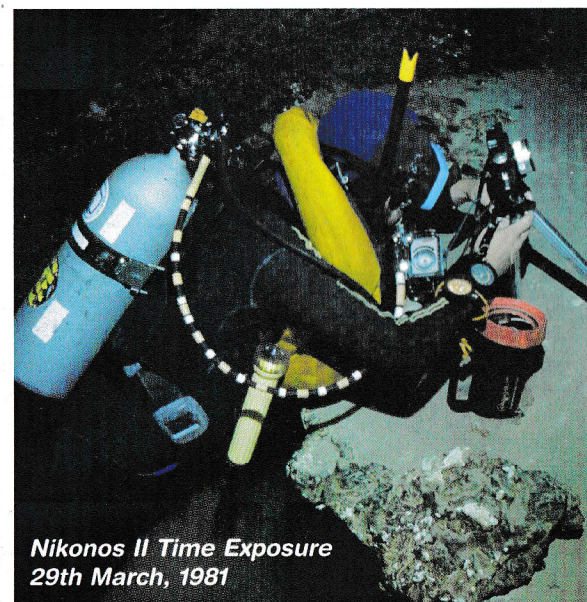
**20 metres down in 'The Hole in Road' Allendale East.**  
**Photo by Mark Nielsen.**

diving accidents and was enthralled by their stories, especially the incredible sled-pushing Nullarbor expeditions which were being undertaken in Cocklebiddy Cave). I became a CDAA member in October that year, and soon became intrigued by the caves and sinkholes of the region and set out to explore, study and map as many as possible.

**You were a photographer, but did that involve taking pictures only when you started diving or were you a photographer earlier on?**

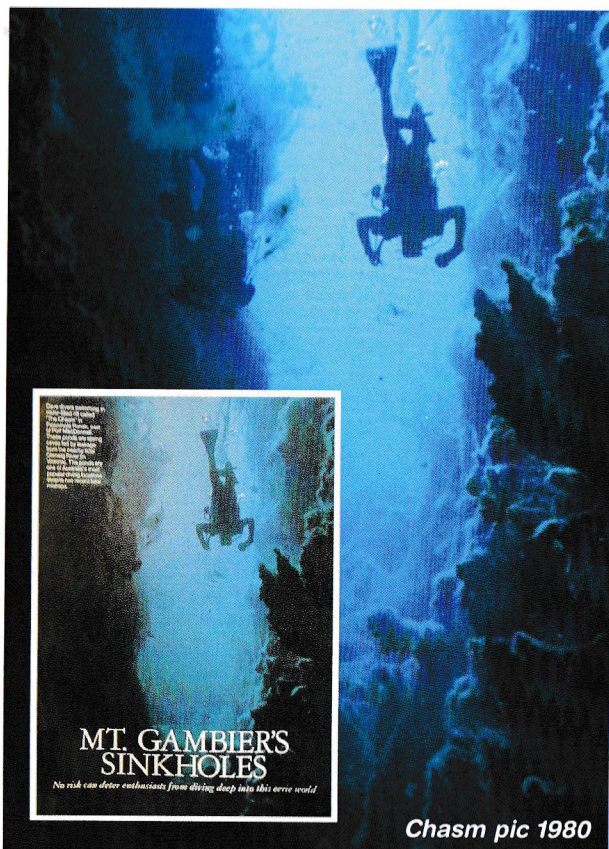
My photography interests started in the early 1970s, long after I began diving and commencing with black and white shots before progressing to

colour slide photos of natural scenery and more esoteric subjects like lightning, the moon and landscapes. I also became interested in aerial photography through my involvement with the local skydiving scene, and after seeing Bob Cunningham's great underwater Nikonos photos from some dives we shared at Port Noarlunga and Aldinga, I bought a 35mm Praktica camera and underwater housing and later a number of Super-8mm movie cameras. In 1977 Peter Christopher (then President of SUHR) very kindly lent me an underwater housing which perfectly fitted my little Hanimex movie camera, and I used this for many years before it ended up on a skydiving friend's helmet; it was also used to make a small movie called "Calm Waters", which won first prize in the Scuba Divers Association of South Australia's movie competition in 1978.



**Nikonos II Time Exposure**  
**29th March, 1981**

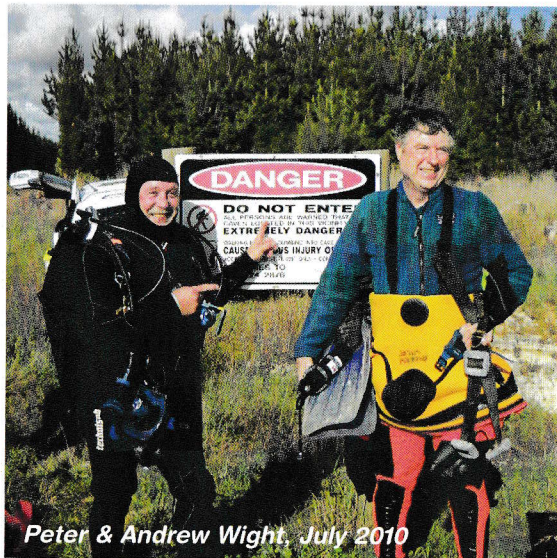




Chasm pic 1980

What is your earliest memory of the most memorable cave or cavern dive, and why?

I personally found every single cave to be a unique place to explore. Some of my most enjoyable Mount Gambier dives of course would be our early explorations and surveying dives in places such as Kilsbys Hole, The Shaft and Engelbrechts Cave, and especially the night that Mark Nielsen and I first broke through and explored to the 90 Metre Room in Tank Cave. If I had known what an amazing place Tank would turn out to be, I wouldn't have handed the exploration over to others (I was busy with a lot of projects and CDAA Committee work during that period) and I certainly wouldn't have named it boring old "Tank Cave", that's for sure!!! I also really loved a number of great Floridian caves such as Hole In The Wall, Devil's Eye/Ear and Diepolders sinkholes.



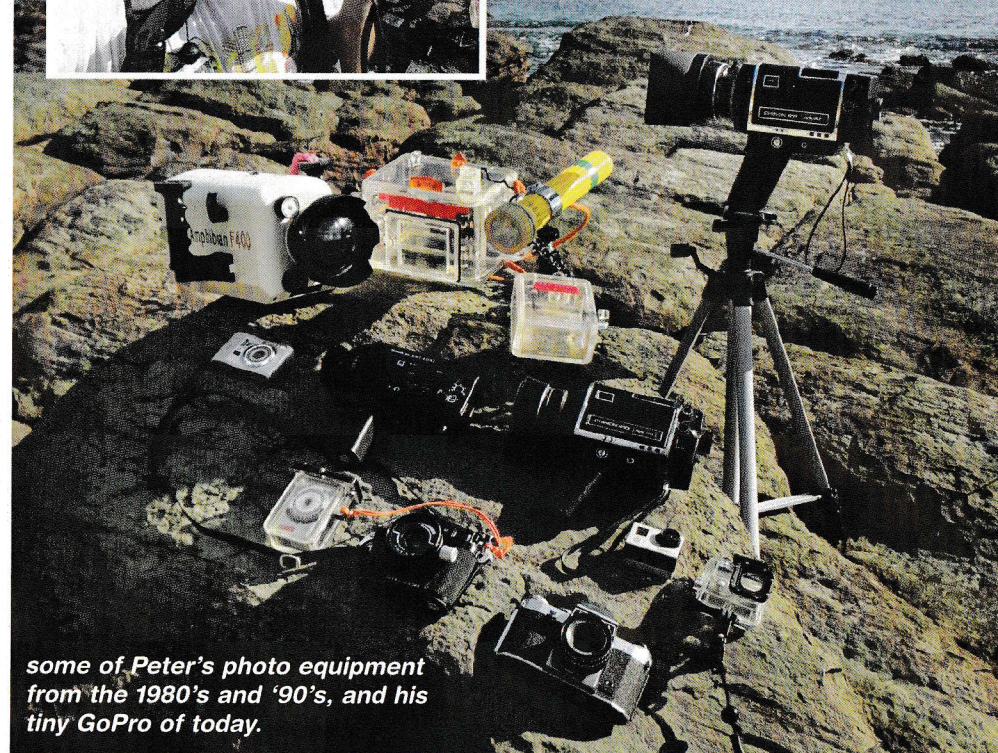
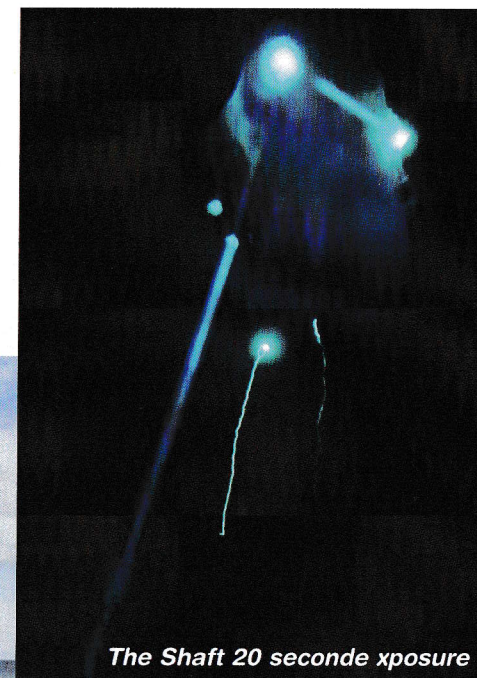
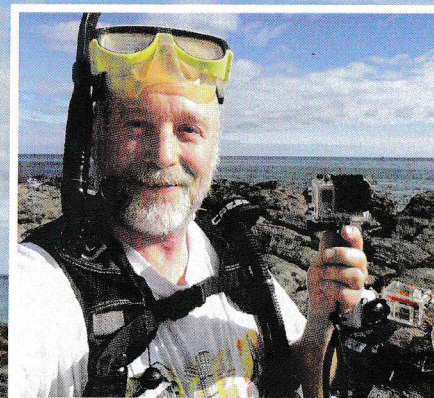
Peter & Andrew Wight, July 2010

What sort of camera gear did you use underwater, and over the years have you kept up with technology. Do you still have your old camera gear in a dark closet somewhere?

I took my first underwater photos in early 1976 using Bob Cunningham's Nikonos before I bought my Praktica Nova 1, and I used the latter throughout the late 1970s/early 1980s before buying a Nikonos II (without flash; big mistake!). My Super-8mm movie cameras included a Sankyo EM-40XL, a hand-sized Chinon Pocket-8, two heavy Chinon 410 Macros and a Hanimex Super-8mm (the latter two were also used to shoot a little cave diving comedy, "Life In Earth" starring "David Batinburrow", in 1979/81). I turned to Video-8 in around 1989 after working with brilliant cave diving videographer Tony Carlisle, and owned two Sony 340E cameras which fitted a very solid \$3,000 Amphibico housing. These days I am content with playing with my little "GoPro Hero" video camera to assist research dives I'm currently doing with Ian Lewis and to share images with my non-diving "Facebook" friends.

Describe briefly your life as a cave diver, where you ended up diving, were there any mishaps and what were the highlights of your time in the sport.

I've loved the Mount Gambier region with its awesome volcanos, caves and coastline for as long as I can remember, and as a cave diver I really wanted to do more for both the local community and academia in general than just have fun. I enjoyed discovering and exploring caves with my friends (especially Mark Nielsen and Andrew Cox), and while I



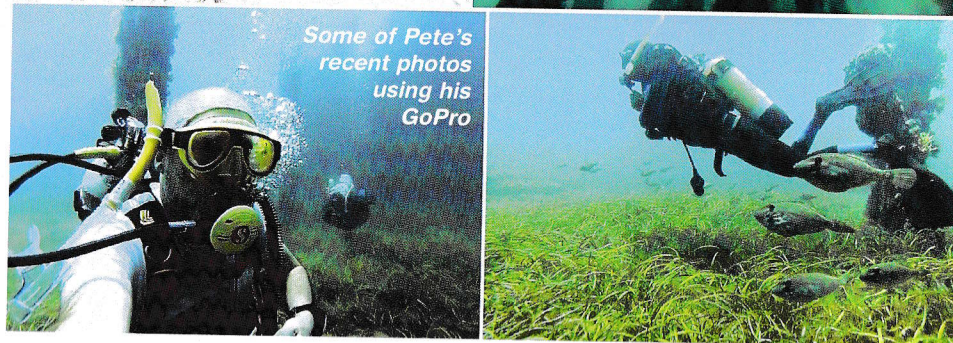
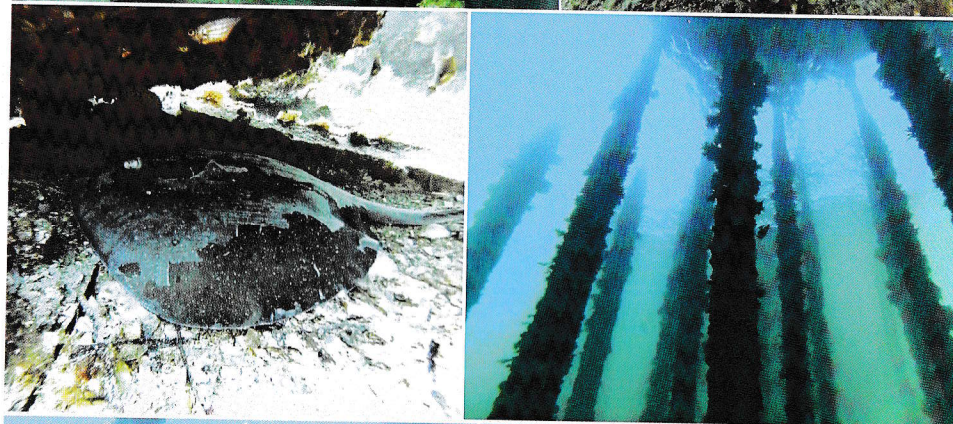


did have a few scares, those experiences were all valuable lessons; it really was only because of the CDAA's excellent training with reels and lines that I was able to work through and survive several very hazardous experiences. I also gained a lot of satisfaction from serving in most Committee positions and on various sub-committees over a number of years, and I especially value the many wonderful long-term friendships that I built up with landowners, researchers and other cave divers and film crews etc. And I really enjoyed coordinating and/or taking part in most of the Mount Gambier region's

pioneering cave explorations, surveys and research projects, as well as helping to support the local community in various ways such as giving talks, assisting with tourist information and organising a "live video dives" weekend in Allendale in 1994.

**If you had your time all over again, would you do anything differently?**

With the benefit of hindsight I would deal with the less pleasant aspects of CDAA politics in a completely different way, but as far as the actual cave diving goes, I wouldn't want to change a thing!



Some of Pete's recent photos using his GoPro

from The Border Watch, Mt. Gambier - April 1st, 2015

# Natural treasure shared with world

**Renowned freshwater photographer focuses on Piccaninnie Ponds**

*SOME of the region's most popular and unique wetlands have attracted international attention, with a renowned freshwater photographer from Switzerland making a splash in the area.*

Natural Resources South East staff welcomed freshwater photographer Michel Roggo to the region to explore Piccaninnie and Ewens ponds, as well as other popular sites. Mr Roggo is part of the International League of Conservation Photographers, with his Freshwater Project dedicated to documenting freshwater environments with a particular focus on underwater photography. The project promotes conservation of freshwater systems and helps educate people about their importance through photography.

"Often the focus is on the ocean, but freshwater is also a place for amazing ecosystems and humans are connected to freshwater since we need it to survive," Mr Roggo said. "The freshwater areas of the South East have such a high interaction with the landscape." The project will allow him to visit 30 unique freshwater places around the world over four years.

So far he has visited places in Siberia, Slovakia, Brazil, Greenland, China and even in the deserts of Oman. Natural Resources South East wetland conservation ecologist Steve Clarke said it was exciting to have water bodies in the South East recognised as part of the group. "Michel's work features in high-profile publications such as National Geographic, so it is great international exposure," Mr Clarke said.

"Piccaninnie and Ewens ponds are extremely unique, not only in their beauty, but in their ecological systems, biodiversity and interaction with the groundwater and our coast," Mr Clarke said. The wetland ecologist said many people who lived in the region were unaware of the wetland and Karst rising spring sys-

tems and their international importance.

"We hope Michel will return to the region in the future to hold an exhibition of his photographs taken during his time here," Mr Clarke said. "It will be great for the community to come, see and learn." Mr Roggo said he had enjoyed his time in the South East and thought the freshwater systems were magnificent and full of diversity. "I first heard about Piccaninnie Ponds about 10 years ago," the professional photographer said. "It was great to finally experience it, though for me, I really enjoyed Ewens Ponds. "It is wonderful and I even spent some time in a small plane taking photos of the wetlands, which really shows their importance. "I am pleased to include this region in my project and finally place a site pin in Australia."

**Visit: [www.roggo.ch/thefreshwaterproject](http://www.roggo.ch/thefreshwaterproject) to view the project results.**



Switzerland freshwater photographer Michel Roggo visited and explored the unique beauty inside Ewens and Piccaninnie ponds as part of his research into global freshwater environments.

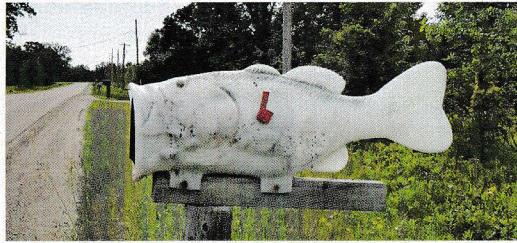


# The Westmeath Freshwater Caves in the Ottawa River

Story & Pictures by Peter Buzzacott

*I landed in Montreal for the Undersea Hyperbaric Medicine Society (UHMS) annual scientific meeting but that could wait till after the weekend. A rental Toyota was ready for me at the airport and two hours later I was collecting four dive tanks from a dive centre in Ottawa. Another couple of hours further west I checked into my budget hotel, microwaved dinner and started banding up the rental tanks for sidemounting. Tomorrow, I was planning to dive.*

When I'd booked to attend the UHMS conference I put a post on cavediver.net and soon identified where the best cave diving is to be found in Canada. Next I contacted Canadian cave diver Dr David Sawatzky whom I knew had mapped these caves last century before moving to Nova Scotia. David sent me his

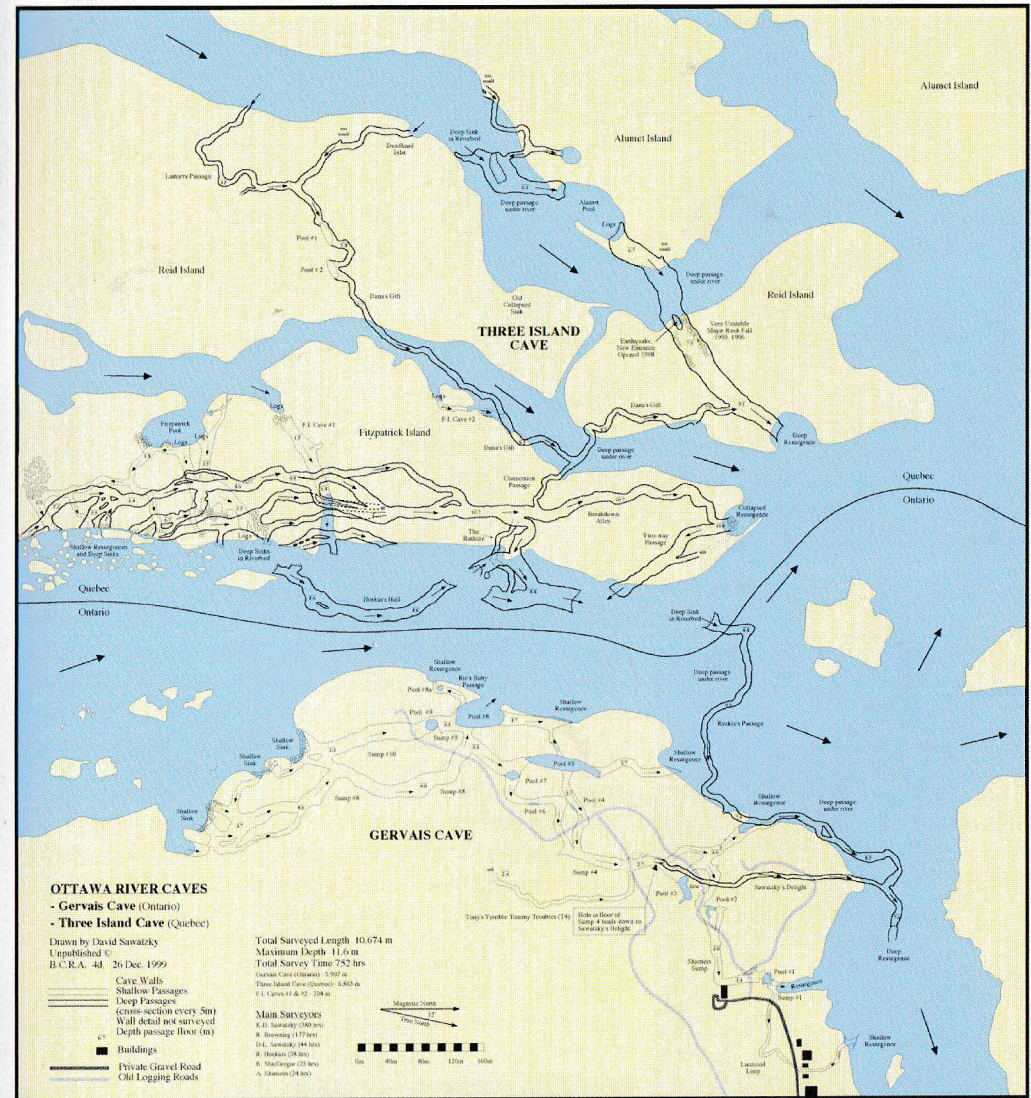


detailed map and some advice, including that the area in which the caves are located was recently purchased by the Nature Conservancy of Canada (NCC), a group dedicated to preserving masses of

Canadian wilderness with rich biodiversity. An exchange of e-mails followed during which I reas-



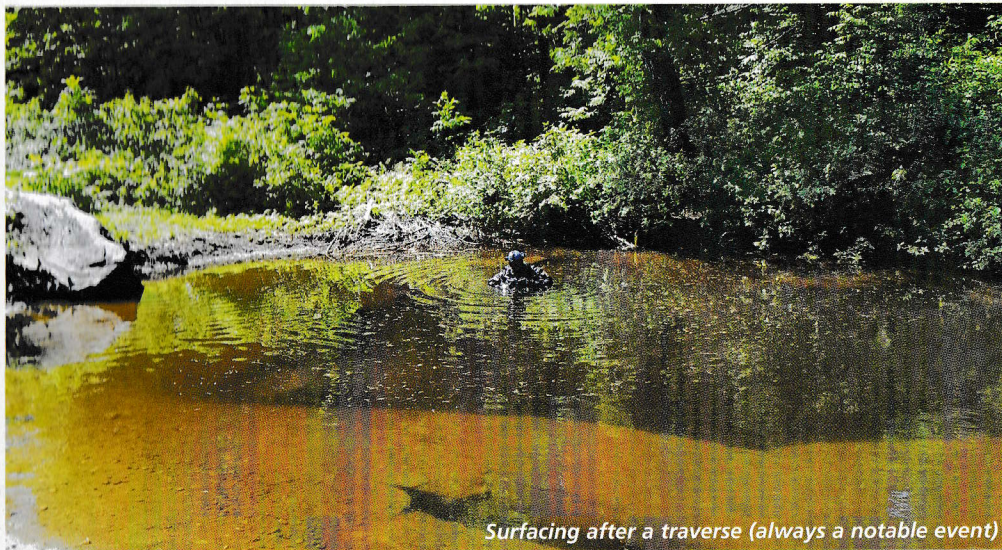
Bonnechere Cave entry from the river



sured the NCC that cave divers are actually risk averse, that I wouldn't need a local recreational diver to buddy with me to be safe, and I offered to write a report detailing my observations, water temperature data and recommendations for future cave diver access requirements. I suspect some background enquiries were made both about me and about cave divers in general before, success, two weeks before the conference I received word that the NCC had approved my application for a Research Permit to dive the caves. The area the caves are located in predominantly rests upon granite but large pockets of Ordovician lime-

stone karst exist and in these pockets we find Canada's most extensive cave systems. The Westmeath Freshwater Caves have been carved out by the rush of river water shortcutting through fractures rather than flowing around bends in the river. Accordingly, the walls are carved with parallel ridges and patches of scalloping that is steeper on the lee side of the flow. Depths are shallow, usually 3-10m, and the passages cut through islands, traverse multiple entry ponds and many even end in mid-river resurgences. Stained by tannin in the river water, the walls are dark and goethite is frequent.





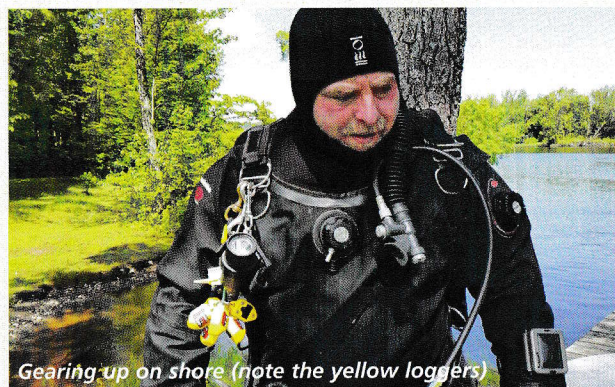
Surfacing after a traverse (always a notable event)



Rescued Mud Puppy  
(below and above)

This weekend was a 'Biodiversity Blitz' which started with a welcome brief and introductions. I was the diving guy, there was an ant guy looking for ants, a moth guy, a spider/beetle guy, three 'herbies' (looking for herbs), a few with an affinity to snakes and turtles and a couple of twitchers (spotting birds). With so many scientists on the ground, conservation conversation was animated. I geared up in a shallow bay near a convenient dock, then entered the cave and used a 12mm rope through the cave to assist my

progress, leaving a water temperature logger near the entry. The area has had substantial rain in recent weeks and the river was a metre higher than normal so the flow through the cave was really pumping. The water was the colour of tea and visibility no more than one metre. None of my GoPro photos worked out inside the cave, despite using a video light and a primary canister light. Soon I surfaced in a nearby pool – I had completed a traverse and surfaced to look around. During the ascent I spotted a home-



Gearing up on shore (note the yellow loggers)

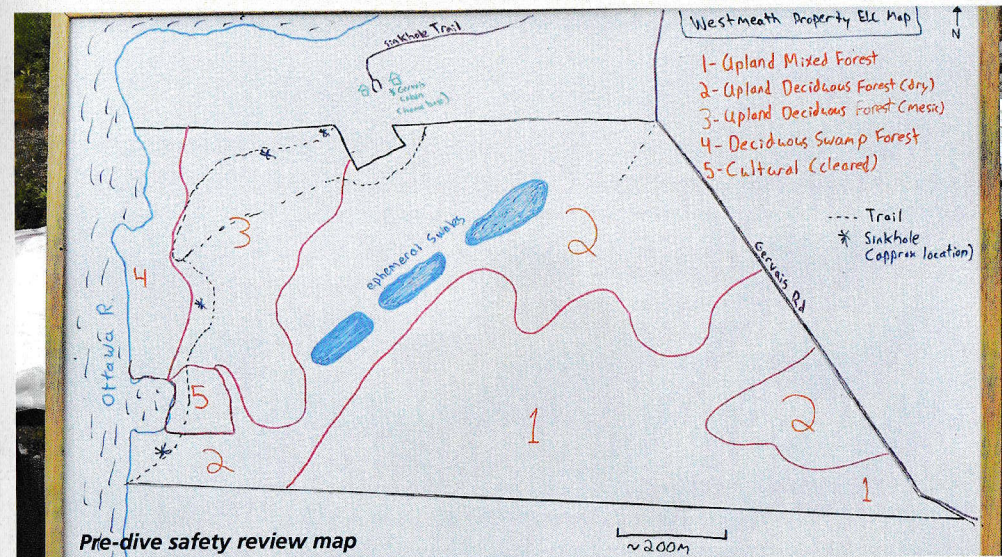


Checking the map

made fish trap, probably left in place by some holidaying children, so I recovered that to prevent unnecessary loss of aquatic life. When I lifted it out of the water I realized there was a 25cm-long salamander in there. In Slovenia these are cave adapted with white skin and no eyes but here 'my' salamander, known locally as a 'mud-puppy', was a lovely grey and looking up at me. I handed him over to Ben, an NCC summer technician who set the poor thing free after I'd re-entered the

cave, heading further upstream passed organic forms growing on sticks and rocks. Picking up a small rock I found a white crustacean about 3mm long with long antennae. He didn't react to my light but these caves are so long and yet rich in nutrient throughput that it is entirely likely cave adapted species may well live in here, awaiting discovery.

We'd been asked to collect a few shells for a mussel expert at the Canadian Museum of Nature to identify resident molluscs and inside the cave I found large concentrations of big mussels, many open and feeding. I collected a few empty shells and also a gastropod, a cephalopod and a brachiopod. These appeared, to me, original and not fossilized. In nearby Bonnechere Cave the managers pump the caves dry each summer and similar-looking fossils can be clearly seen in the walls, which look identical to the walls I was looking at in Westmeath (whenever I got close enough to a wall to see it). Maybe these ancient shells were cut free from the limestone, I don't know and look forward to finding out from the NCC. I picked up a tabulate coral, blackened on one side (so recently released from the limestone I'm guessing). I reached fifths and turned my dive, swam out passed a Walleye fish, then at the

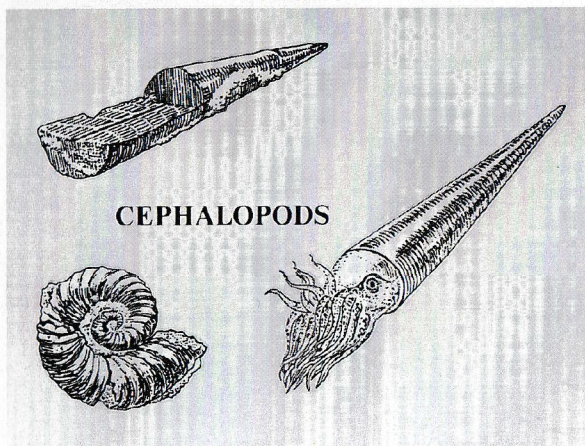


Pre-dive safety review map





Back from the second dive, marvelling at the view



CEPHALOPODS



Shells collected in Westmeath Cave

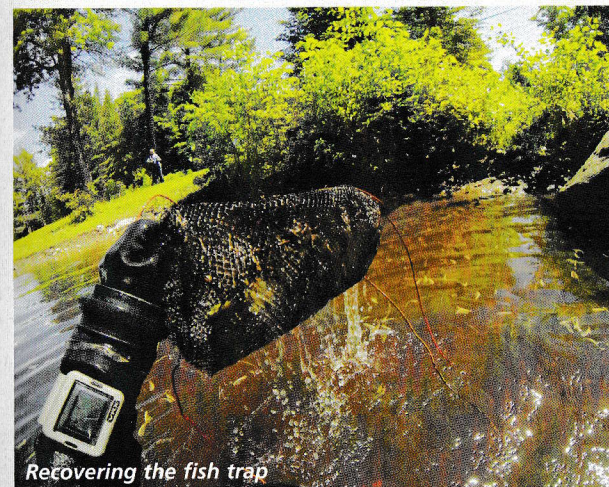
exit I collected my temperature logger and came across a snapping turtle. My first day had been a great success.

The next day a super guy called Jim collected me at the dock and took me around to the west side of the peninsula, where a couple of passages on the map intrigued me. Entry to the small bay was made easier due to the higher water but numerous boils on the surface suggested a raging flow. I geared up at the shore while Jim left to collect the NCC team. Alone, just me and the sound of gurgling water, a lone heron watching from an overhanging branch, I felt totally at peace. Silently I donned my tanks, checked my regs, gauges, lights, turned on my GoPro and slipped below the surface. Within a metre it was black so I tied off a jump reel and searched about for the main line in this first cave. Soon I found it, tied in and headed on, my hands outstretched due to the poor vis. Below me I found big river mussels and above the cave entrance I'd spotted piles of mussel shells on the river bank, so otters must live here, eating mussels that are fed by the nutrient flow concentrated by the cave.

I 'suspected' which passage I was in after



Water boiling out of cave



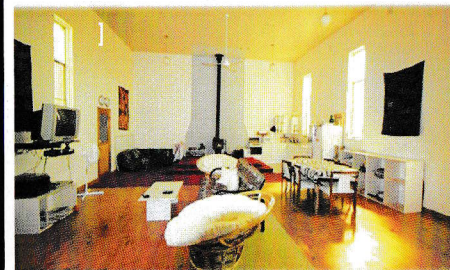
Recovering the fish trap

bringing along a laminated map, celotaped around the edge for extra waterproofing, but after 15 minutes or so the direction of the current changed gradually. Initially I'd been heading into a strong current but by now I was angled about 45 degrees to the rope, then as I progressed I ended-up at 90-degrees, progressing sideways hand-over-hand, perpendicular to the rope. Given the strength of the flow I decided to avoid the siphon ahead and turned the dive, passing a big catfish on the way out. Back at the surface I finned over to the massive boil further around the bay but once there I felt the strength of it and opted to skip this passage. The cave's not going anywhere. Apparently the best time of year here for diving is in autumn, when the flow is way down and the visibility optimal. Jim came back in his boat and picked me up, then invited me back in autumn. I can't promise it'll be this year Jim, but when I can then I will, aye.

**Acknowledgements:** My sincere thanks to the Nature Conservancy of Canada for permission to visit these dynamic and precious ecosystems, thanks to Dr David Sawatsky and Paul Heinerth for their assistance in making this happen, and a special mention to Jim who could not have done more to make a cave diver welcome.

## Come stay at the Divers Church, Kongorong

The Huge open plan living room and kitchen is warmed by a wood burning stove with all the cooking appliances you could ever need.



- Several sofas, LCD television, DVD, Stereo
- Bunks for 10, 1 double upstairs
- Doonas and pillows supplied
- Drying areas - indoor and out
- Plenty of parking
- Trestle tables for teaching/gear setup
- Large outdoor table and bench seats
- Private double downstairs
- 2 spacious bathrooms
- Compressors welcomed
- Gas BBQ
- Whiteboard

Bring 6 friends and stay for free!

E: [deb@bbkk.com.au](mailto:deb@bbkk.com.au) Ph: 0419 882 800  
[www.debwilliams.com.au](http://www.debwilliams.com.au) \$30 pp per night.



# XDEEP Stealth

## A New Side Mount Harness

Story & Pictures by John Vanderleest

*My recent trip to Bahamas prompted me to consider a new side mount harness to replace my aging Armadillo. In doing so, I had to consider how my side mount diving skills, the areas I was using side mount rigs, and how the new equipment options and their design has evolved over the last 10 years.*

*The weight restrictions when flying played heavily on my decision and I made it my primary consideration in selecting a new rig. This consideration was not also restricted to my harness, but to most parts of my gear. My fins, dry suit, thermals and lights. In fact, the only gear I haven't touched of late are my regulators.*

My second consideration in selecting a new rig was my profile in the water – namely my profile in restrictions. While all side mount rigs are low profile, I was looking for something with less than the Armadillo, which was a tall ask.

Like many of us, I trolled the internet to find options and prices. I read what others wrote and compared their style of diving to that of my own. After many hours of research, I finally settled on the XDeep Stealth.

I had assumed that I could purchase the unit in the USA on the way through to the Bahamas, saving myself considerable amounts in both the purchase

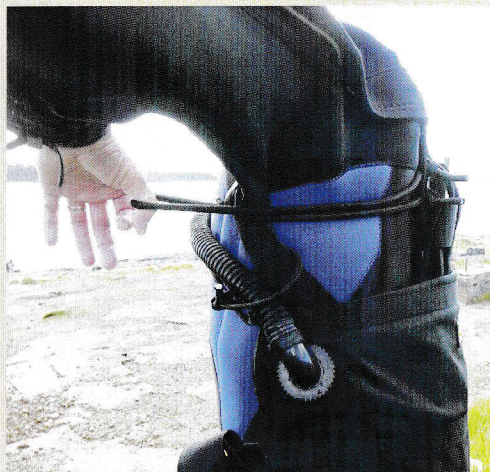
price and GST. But I was wrong. What I found was that I could purchase it cheaper from the Australian importers Deep Dive Gear than I could in the USA. Not only do I now get local support, the tax man got his money and the profits went to an Australian business, leaving me with a clear conscience on several fronts.

My new side mount rig arrived the day before my departure. Because it was compact and light, I had a quick look and then simply threw it into my carry on-bag. There was no way I could do that with my Armadillo.

At first, my thoughts on the new rig was quite reserved. It simply did not seem right. The side D-rings were what looked like very thick rubber bands and the bladder was not sewn or bolted to the harness. The bladder was simply held onto your body with bungy cord, meaning the harness and bladder could be used independent of each other. Oh well, I thought, I will keep an open mind and see how it goes in the water.

### **Here is what I found.**

The first thing I noticed was the reduction in drag while swimming. Now you would not think that a harness and bladder could make a lot of difference, but it's extremely noticeable. The XDeep uses minimum webbing for the harness and the bladder sits in the small of your back and around the kidneys. This means the almost no drag. I did not think that my

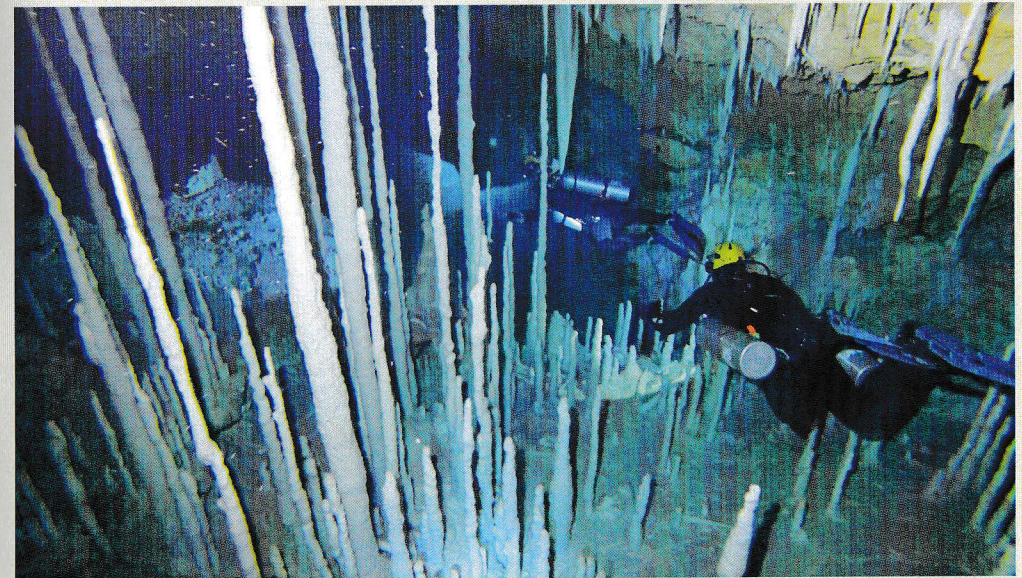


Armadillo had a lot of drag, but that was compared to my older Dive Rite setup. Which of course was significantly less than my back mount setup. The lack of drag of the XDeep was extremely noticeable and a real pleasure to use.

The second thing that surprised me was the rubber D-rings. You could be easily slide them up and down on your waist band, allowing you to adjust the location of your side mounted cylinders during the dive, as is the need when you are wearing allies. It also makes it

easier if you change from wetsuits to dry suits, change cylinder sizes or change the thickness of your thermals. The only drawback of these rubber D rings was that the dog clips on my cylinder bands only just fit the rubber, so it took a little practice to be able to quickly clip on and off. In warm water, this was OK. But in cold water, when the feeling in the my hands is not as good, I might need a larger dog clip on my cylinders.

The third thing I liked about the rig was the optional







weight pockets that run down your spine. Having weights on your spine is definitely a lot better than a weight belt around your waist, something that many twin tank back mounted divers have known for a long time. But unlike with back mounted cylinders, here you can twist your torso in any direction without the gear limiting your movement. The other thing I liked about the spine mounted weights is that I use a Scurion caving light when I travel and the battery pack is about the same size as a 4lb lead weight. I simply put the battery pack in a spine pocket and used it as a trim weight. Perfect.

So with the harness set up to match my body size, the right weights and trim, 4 full allys, video camera, diving and video lights, I was off.

Diving with me were two others, also using side mount harnesses, but of different brands. We were all keen to check each other out and see the pros and cons of each of our rigs.

The main thing I noted was the volume of the BCDs and where the air was placed. One of the units was filled to near capacity at the start of the dive. Given we were using allys, this unit would not lend itself to steel cylinder so would not suit me back here in Australia. The second thing I noted was that the location of the air sat in the other rigs which was not always ideal. Because my bladder was secured with bungees, I could move it slightly up and down my torso to also get that perfect trim.

Of course, now I hear you ask "why you would want

to move the bladder? Why not get it right at the start and leave it there?" The answer is simple – and that is because the gear we were using was not static, neither was our trim. For a start, the video equipment was negative in the water. This effectively meant while carrying the gear during the swim you could easily maintain your trim, but when you stopped and held the camera out in front while filming, you became top heavy and lost your trim. Of course, we could have worked on making the camera and video packs neutral in the water, but life is not always that simple when travelling. While the others could not hold a stationary position while filming, I could simply slide up my bladder up an inch or so on my torso to compensate for the shift in weight and once again, hold perfect trim. This technique also work when I staged cylinders or went from negative full allys to positive empty allys. What I thought was a poor design of the XDeep Stealth, proved itself to be one of its greatest advantage. It is something no other side mount system can do, something that when you are in the Crystal Caves of Abaco, is a real bonus.

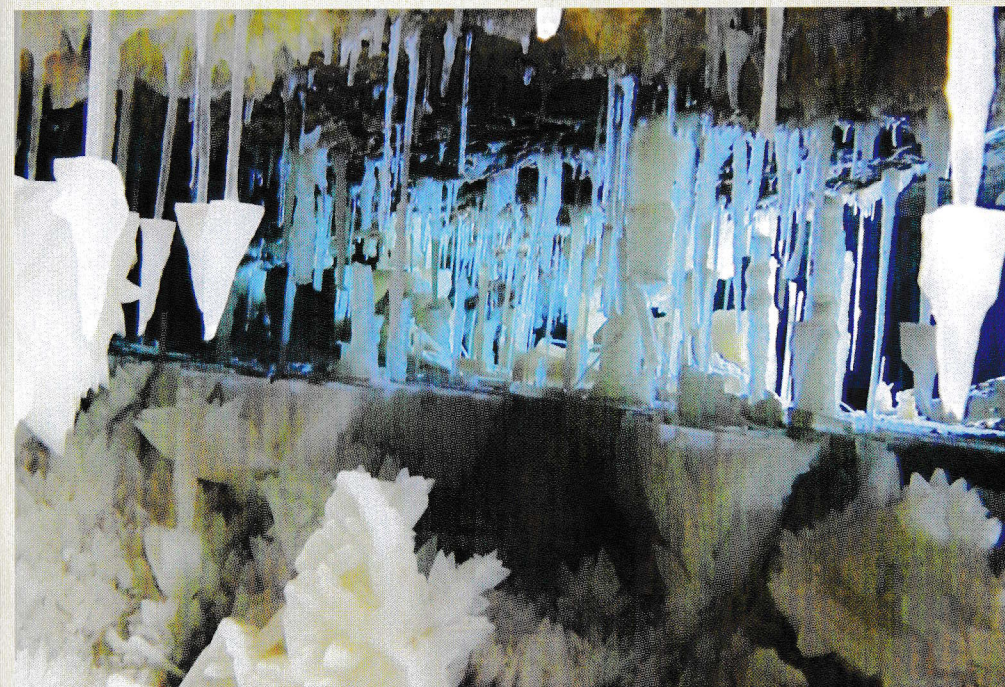
So what else did I like about the unit. I liked the metal plates that can be used clipping on reels and butt mounted light canisters. These were well thought out and a breeze to use. I liked the bladder dump valve that sat in the centre and small of your back. It was easy to reach by either hand and you only needed to lift your backside to make it the high point for dumping gas. And I liked the optional side mount



butt plate you can buy if you want to have the more traditional door handle mount for steel cylinders.

About the only thing I not like and did modify on the rig was the long oral inflator hose. I prefer them short, but that is personal preference and not a real criticism.

***The Australian distributor, Deep Dive Gear, have donated one to the CDAA for members to trial. Please see the notice on Page 5 in this issue of Guidelines to see how you can trial this kit.***



While I have not yet tried this myself, I believe it would also be a good unit for sump diving. You can keep the harness on your body between sumps and because the bladder is independent, it can be taken off and protect inside a gear bag while you move between the sumps.

So would I recommend it? In a word – Yes. And if you would like to try a unit out for yourself, you can.



# Our Hidden Heritage

Story & Pictures by Peter Horne - originally published in Environment South Australia ~ 1998.

*THEY ARE SECRET WORLDS WITHIN A WORLD – vast networks of dark passages and chambers lying beneath our feet, where the warm, life-giving rays of the sun never shine. Hidden, in some cases, even inaccessible... but they are there, often awesome, beautiful. Many are unique and of great importance to our State's natural heritage.*

Although explorations of our caves commenced almost as soon as the land was settled by Europeans, the 'wet' sections of these often spectacular natural features, i.e. the regions beneath the water surface, were only visited by lamp-wielding 'speleonauts' after personal underwater breathing equipment first became available to civilians in the late 1950s. Clad from head to toe in bulky black wetsuits or drysuits, and wearing one or several heavy metal compressed-air cylinders on their backs, the first cave divers tentatively swam down silt-covered corridors and into uncharted depths to discover a whole new world – a special realm that needs all the help it can get from conservationists.

Since the mid-1970s, the work of a small group of dedicated cave divers and supportive scientists has resulted in a number of important discoveries in our State's waterfilled caves and 'sinkholes' (cenotes), particularly those found within a 15 kilometre radius of Mount Gambier. The importance of several well-known underwater gardens such as Ewens and Piccaninnie Ponds has long been known thanks to the efforts of people like Reg Lipson and Dr Neil Hallam, and the declaration of these places as protected reserves gives them, at least, a fighting chance of survival. But very few of the other 400-odd known karst features in the area are similarly protected – in fact, many are under great threat, often being used as convenient rubbish dumps.

Waterfilled caves are important for a number of reasons. Like 'dry' caves, waterfilled features tend to be excellent natural 'time capsules', trapping and often preserving all manner of animals (including humans) which have had the misfortune to stumble into them. The calcium-saturated waters and anoxic sediment in many water-filled caves also tend to protect and preserve faunal remains extremely well in comparison with dry caves – for example the well-pre-

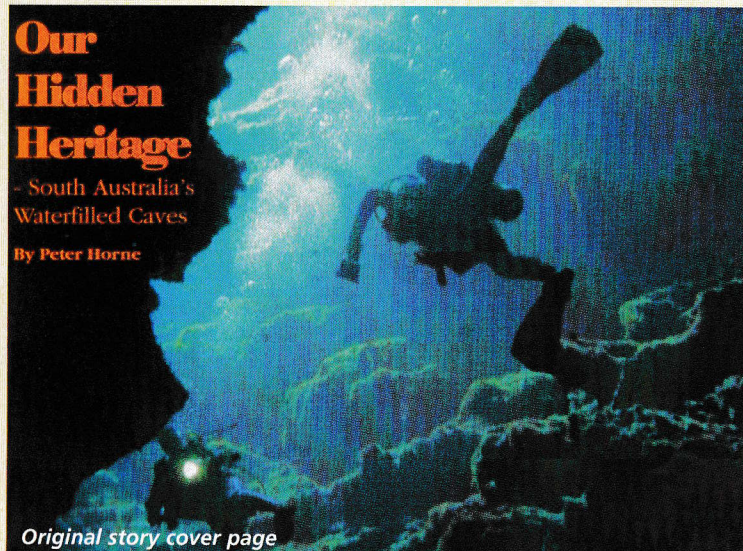


served skull of an extinct species of kangaroo (*Sthenurus* sp.), retrieved by the author and colleagues undertaking a project for the Flinders University during 1986/87, was found to contain what appeared to be remnant brain tissue even though the skeleton was believed to be at least 18,000 years old. The site of this discovery, a natural graveyard called Fossil Cave (The Green Waterhole, 5L81) in which many thousands of bones from a vast range of extinct megafauna were recovered, is also the 'type locality' of a very special type of syncarid, *Koonunga crenarum*, which the

author discovered in 1981 and which was only previously known in the form of 200 million-year-old fossils. Just as surprising during the late 1980s was our discovery of several major bones piles at a depth of around 50 metres in a little-known chamber of one of the larger very popular sinkholes; what appeared to be a row of silt-covered pebbles on a large boulder turned out to be an intact *Sthenurine* kangaroo backbone, and one particularly huge bone,

later identified by Neville Pledge at the SA Museum as being the tibia of an extinct *Diprotodon*, was also pulled from the bone mound. Many other underwater sites have similar mounds of potential significance to palaeontology.

Apart from their importance to fossil experts, water-filled caves also frequently contain archaeological remnants. Skeletal human remains, rudimentary stone implements, marine tucker-shells and ancient wall markings called petroglyphs have all been found in a number of waterfilled caves by observant cave divers.



Original story cover page



Site used for fill



Perhaps it is only a matter of time before, as has been the case overseas, human DNA will also be found in ancient, well-preserved remains taken from the depths of our local caves. From a purely human perspective, such places warrant as much protection as possible. Biologically too, many waterfilled caves and sinkholes contain significant if relatively small and often inconspicuous forms of life which have not been recorded elsewhere. In the Mount Gambier region, tiny bivalved and single shell molluscs and crustaceans such as copepods and ostracods can be found near many cave entrances, and even at great depth, in areas of total darkness where one would normally not expect to find any large living creature, it is possible to stumble upon delicate freshwater sponges in several major sinkholes. A number of sites are also unique mini-ecosystems, comprising an intricate and very delicate interrelationship between floral and faunal association such as

algae and the like, and in many sinkholes large 'spires' and mats of stromatolitic material can be found near the present-day water table. The importance to society (via such fields as pharmacology and genetics) of unidentified bacterial colonies which have been found in several undisturbed sites has not yet even begun to be assessed.

Many such places are being protected to various degrees only by cave divers and landowners via a policy of non-publicity, but inevitable changes in property ownership over time and differing management ideas mean that such places will always be highly vulnerable; the author knows personally of at least three instances where new landowners/managers have totally destroyed unique sites using mining or filling techniques for purely short-term financial gain or out of concern about possible litigation in the event of an accident occurring in a feature or on an adjacent property. In view of the fact that many of the few known waterfilled caves are under increasing threat, it is essential that efforts be made to protect both the cave features and their respective landowners as much as possible. The heritage aspects of underwater caves vary, but the specialised and low-key nature of cave diving activities has unfortunately meant that any calls for funding have faded into the wilderness, with South Australian Government representatives claiming that it would be 'too expensive to purchase holes on farmers' properties'. It is my hope that this article will serve to highlight the importance of this issue – that our underwater caves and their contents will no longer be left out in the cold when it comes to conservation issues and associated funding.

*In 1998 it was written.....*

*Peter Horne has co-ordinated or participated in almost every major underwater cave research project in the State over the past 20 years and he has undertaken more than 1000 cave dives both in Australia and overseas during that time. He is currently an administrative volunteer for CCSA.*



**Collection of bones found in caves**

April 28h, Italy, Europe

## Scientists Extract Ancient Neanderthal DNA From Cave Skeleton

***More than twenty years after the discovery Altamura Man, new research has managed to extract the oldest samples of Neanderthal DNA.***

***Found by cavers exploring Italy's Lamalunga cave in 1993, Altamura Man is believed to have fallen into a natural well and died of starvation.***

***Over the following centuries, the remains were cemented in place and preserved by calcite***

In the study, published in the Journal of Human Evolution, researchers from the University of Rome and University of Florence used new techniques to extract a small fragment of shoulder blade from the fossil skeleton of Altamura Man which remains trapped in the cave.

The team was then able to extract DNA from the bone, which confirmed the man of Altamura was definitely a Neanderthal, the species lived throughout Europe between 200,000 and about 40,000 years ago.

Using uranium-thorium dating, they were also able to determine the age of the skeleton to be 150,000 years old, making the highly fragmented DNA, the oldest sample of Neanderthal genetic material ever extracted.

A number of stalactites from the cave were also dated which show they started forming before 189,000 years ago, while the calcite formations entrapping the skeleton began between 172 and 130 thousand years ago, at the height of the next to the last glaciation.



*The skull of Altamura Man, surrounded by calcite deposits. Photo via Italian Ministry of Cultural Heritage and Activities*



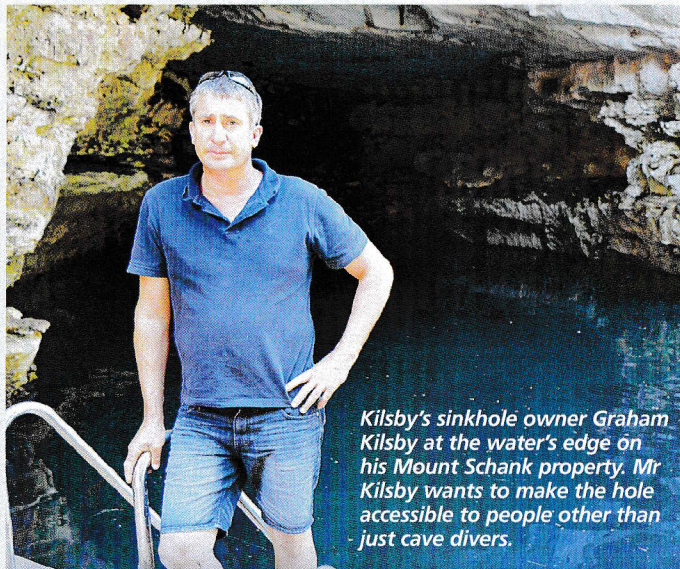
# Property owner seeks to expand tourism beyond cave divers

*DESCRIBED by cave divers as one of the most spectacular sinkholes in Australia, Kilsby's Hole on the out-skirts of Mount Gambier remains an unseen wonder for all except a hand-ful of highly trained and experienced divers.*

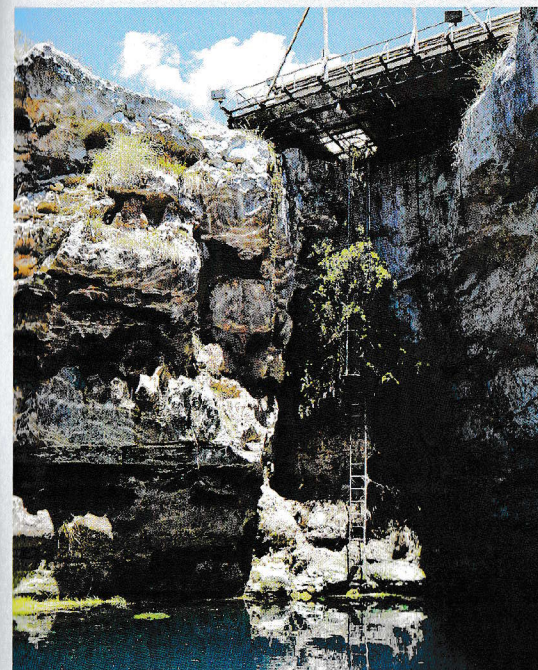
Famous for its crystal clear waters and static diving conditions, the hole offers spectacular views from above and beneath the water's surface. Limestone cliffs rise to 20 metres from the water's surface, encircling the tranquil pool which reaches a maximum depth of 62 metres.

It is for these reasons that land-owner and prime lamb producer Graham Kilsby believes his sink-hole should be developed to become an attraction to people other than cave divers.

"This place is a unique Mount Gambier drawcard in need of some development to make it more of a destination than just a stopover," Mr Kilsby said.



*Kilsby's sinkhole owner Graham Kilsby at the water's edge on his Mount Schank property. Mr Kilsby wants to make the hole accessible to people other than just cave divers.*



*Kilsby's sinkhole in Mount Schank is surrounded by limestone cliffs rising 20 metres above the water's surface, encircling a tranquil pool which reaches a maximum depth of 62 metres.*

The sinkhole is situated on a 1200 acre property at Mount Schank where Mr Kilsby manages his first cross Merino and Border Leicester flock of 2500 ewes.

"As a first step, I would like to develop bathroom facilities and a kitchen and barbecue area where divers would be able to kit-up and have meals sheltered from the wind and rain, especially during Mount Gambier's long winter months," he said. "The second phase would be the construction of dormitory-style accommodation and a couple of cabins for tourists, visiting school groups or even businesses seeking a team-building facility."

The first phase will cost \$70,000 to complete, but such a financial outlay, coupled with the cost of public liability insurance, will not be viable for Mr Kilsby since it far outweighs his lease income

from the Cave Divers Association of Australia (CDA). The CDA has leased the sinkhole directly from Mr Kilsby since 2007 with around 400 divers visiting the site last year under the CDA's auspices.

"It is situated midway between Melbourne and Adelaide and there is no reason why this sinkhole shouldn't be enjoyed just like any other tourist destination along the way."



*Ian Lewis and Peter "Puddles" Horne from the Cave Divers Association of Australia before exploring the underwater wonders of Kilsby's Hole on the outskirts of Mount Gambier. The hole is renowned for its crystal-clear water and static diving conditions.*





*Ian Lewis, Australia's only cave-diving geologist, ready to explore Kilsby's Hole near Mt Gambier once again. Mr Lewis is completing a PhD at La Trobe University on the formation of large caves in the South East.*

"Ideally what is needed is a State Government grant to open the place to a wider audience, to share the beauty not only of the sinkhole, but of the lower South East as a whole," Mr Kilsby said. "I've had a film crew here shooting for the Australian Coast television series as well as school children snorkelling and have also been approached by free divers to use the site.

"We have something special here, a natural feature which I would like to share with like-minded people." The hole was one of the first sinkholes to be explored by divers in Mount Gambier in the late 1950s and has claimed the lives of three divers - a tragic double drowning in 1969 and a Melbourne man who died while diving with a partner in 2010.

The South Australia Weapons Research Establishment leased the hole in the early 1970s for secret tests of the Barra Sonobuoy, a device designed for detecting submarines, and it has been leased by the South Australia Police Underwater Recovery Unit for diver training since the 1980s.

Police have constructed a pontoon on the water's surface to provide easier access and erected a large platform on ground level from where equipment can be lowered into the water.

Mr Kilsby said aside from steps cut into the limestone by his father to enable safe passage to the water, along with the police team's modifications, the sinkhole remained as it was thousands of years ago.

## HEY YOU!

*...been cave diving locally or overseas?*

**done a cave course?**

*had a new cave diving experience?*

**bought some new gear that you absolutely love?**

**We Want Your latest Experience in Writing...  
So come on, write us Your story for Guidelines!**

**Email to: [guidelines@cavedivers.com.au](mailto:guidelines@cavedivers.com.au)**

## CDAA INSTRUCTORS

### NAME

Deep  
Cavern

Cave

Adv.  
Cave

### NEW SOUTH WALES



BOULTON, Alex (CDAA 4125) Yes  
E: [kartzone@gmail.com](mailto:kartzone@gmail.com)  
Mob: 0404 878 720



FEATONBY, Tim (CDAA 3327) Yes Yes Yes  
Mob: 0402 129 253  
E: [tim.featonby@hotmail.com](mailto:tim.featonby@hotmail.com)

### SOUTH AUSTRALIA



PAYNE, Timothy (CDAA 2640) Yes Yes  
Mob: 0448 147 927  
E: [Tim@diveessentials.com](mailto:Tim@diveessentials.com)

### VICTORIA



ALLEN, Terri (CDAA 3483)  
Mob: 0419 176 633 Yes Yes  
E: [terri.allen@bakeridi.edu.au](mailto:terri.allen@bakeridi.edu.au)



BARCLAY, Gary (CDAA 1735)  
Mob: 0407 527 921 Yes Yes Yes  
E: [garinda@bigpond.com](mailto:garinda@bigpond.com)



BOWMAN, Jane (CDAA 1880)  
Mob: 0407 566 455 Yes Yes Yes  
E: [janelbowman@hotmail.com](mailto:janelbowman@hotmail.com)



CHAMBERS, Geoffrey (CDAA 3484)  
Mob: 0438 059 886 Yes  
E: [geoffie1@gmail.com](mailto:geoffie1@gmail.com)



CLARIDGE, Linda (CDAA 2214)  
Mob: 0408 052 070 Yes Yes Yes  
E: [garinda@tpgi.com.au](mailto:garinda@tpgi.com.au)

### NAME

Deep  
Cavern

Cave

Adv.  
Cave

### VICTORIA Continued



DALLA-ZUANNA, John (CDAA 236)  
Mob: 0407 887 060 Yes Yes Yes  
E: [jdz@paintandcustom.com.au](mailto:jdz@paintandcustom.com.au)



EDWARDS, Chris (CDAA 2247) Yes  
Mob: 0417 116 372  
Email: [cedwards@aanet.com.au](mailto:cedwards@aanet.com.au)



MCDONALD, Warrick (CDAA 1882)  
Mob: 0408 374 112 Yes Yes Yes  
E: [info@oceanivers.com.au](mailto:info@oceanivers.com.au)



MONACO, Rubens (CDAA 1731)  
Mob: 0413 429 533 Yes Yes  
E: [info@idcscuba.com.au](mailto:info@idcscuba.com.au)



MUSCAT, Tim (CDAA 4557)  
Mob: 0422 127 802 Yes  
E: [tim\\_muscat@bigpond.com](mailto:tim_muscat@bigpond.com)

### WESTERN AUSTRALIA



PAYNTER, Geoff (CDAA 3784)  
Mob: 0407 445 112 Yes Yes  
E: [gpaynter60@bigpond.com](mailto:gpaynter60@bigpond.com)



# CDAA SITE ACCESS - www.cavedivers.com.au

Remember: Access is a privilege, not a right. Please be considerate of landowners wishes.  
CN = CAVERN S = SINKHOLE C = CAVE AC = ADVANCED CAVE

SITE	LEVEL	OWNER	ACCESS DETAILS
<b>MT. GAMBIER - SA</b>			
Ewens Ponds	Nil	DEWNR - P.O. Box 1046 Mt Gambier 5290	Groups of 6 or more, phone/mail to Dept. for Environment, Water & Natural Resources (DEWNR). Smaller groups, no need. (08) 8735 1177 Fax: (08) 8735 1135
Gouldens	CN	DEWNR	<b>General Diving:</b> Divers to contact DEWNR and notify of date and site to be dived. Please make requests by phone or fax only.
2 Sisters	CN	DEWNR	Divers must have the correct CDAA diving endorsement for the site and carry current financial CDAA membership card.
Fossil	C		The diver must have signed an indemnity with DEWNR before access is permitted and original copy must be received by DEWNR prior to diving. <b>Training:</b> The Instructor is to notify DEWNR of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
Piccaninnie Ponds	S	DEWNR	Bookings can be made online via the CDAA web site.
Horse & Cart	CN	Dale & Heather Perkins	At least 1 week prior by email: dhperkins@bigpond.com or phone (08) 8738 4083.
Tea Tree	CN	Dale & Heather Perkins	
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	Dean & Carol Edwards	Key available from Simon Livingstone at the Bellum Hotel.
One Tree	S	Mr. Peter Norman	Visit the house before diving. If no one is home - no dive!
Dave's Cave	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/AC	Forestry Sth. Australia Phone: (08) 8724 2876 Fax: (08) 8724 2870	Unrestricted days or numbers - Cave rated divers must not enter Penetration sections (stop signs)
Mud Hole	C	or book on-line via the CDAA website to arrange permit.	Unrestricted days or numbers.
Nettle Bed	AC		Open every weekend. Maximum of 4 divers per weekend undertaking 1 dive only (check an update on CDAA site).
Stinging Nettle Cave	AC	email: conservationandrecreation@forestrysa.com.au	Open every w'end max 3 divers per day undertaking 1 dive per day (check updates on CDAA website).
Iddlebidy	AC	Forestry Sth. Australia	Open every Saturday max 4 divers, 1 dive only (check an update on CDAA website)
		Forestry Sth. Australia	<b>IMPORTANT:</b> Divers must advise Forestry SA of their online booking. Collect permits from the Forestry Office, RHS of driveway to Carter Holt, Jubilee Hwy, Mt Gambier.
			<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 Ctr on presentation of Forestry SA permits.</li> </ul>
Kilsby's	S	Landowner leased to CDAA	Refer to CDAA website. Twin Tanks - Maximum depth of 40 metres on Air. Meet at gate of property at 8.55am or 12.55pm. Book on-line at www.cavedivers.com or contact Craig at kilsby@cavedivers.com.au <b>No diving on Total Fire Ban Days.</b>

# CDAA SITE ACCESS - www.cavedivers.com.au

Remember: Access is a privilege, not a right. Please be considerate of landowners wishes.  
CN = CAVERN S = SINKHOLE C = CAVE AC = ADVANCED CAVE

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





*Left to right, Ken Murray, Tim Muscat at the back and Michelle Doolan on the right.  
Shot in F tunnel in Tank Cave. Photographed by Liz Rogers*