



C.D.A.A. Newsletter
No. 79 - MARCH 2002

CAVE DIVERS ASSOCIATION OF AUSTRALIA
(Incorporated in South Australia)

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South Australian Cave Divers Association

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Editors Note...

Hello to all CDAA members... This is my first letter as Editor/Designer of Guidelines. I began my diving career back in '88, taught by one of your own, Chris Edwards. 13 years later, still an open water diver I am a keen underwater photographer and often write about my travels and experiences. Having only dived Ewens Ponds I truly envy all of you who have the privilege and skill to discover some of the best cave diving the world has to offer.

Many of you, I'm sure, like to write some extravagant dive logs and the Guidelines newsletter is always looking for these types of articles. This is simply a request to submit your material for publication. What are you waiting for, put pen to paper and submit. We welcome any submission and thank you for your support. Also, any budding photographers out there with an underwater shot or even something like this issues cover are always welcome to submit.

The December 2001 issue was my first as editor/designer and the colour presentation was a new look for Guidelines. The quality will continue and I welcome any comments or suggestions you have to offer for ideas for the newsletter. Feel free to email me at seapics@alphalink.com.au. Thanks always, Dave Bryant.

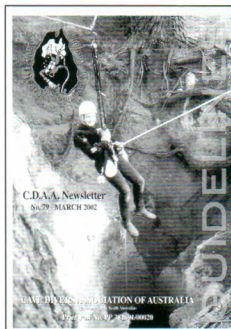
ARTICLES FOR GUIDELINES...

Members wishing to submit articles for inclusion in guidelines can do so in the following manner:

- Send articles & photos via post to:
The Editor, David Bryant,
P.O. Box 2198, Rosebud, VIC. 3939.
- Email to seapics@alphalink.com.au
- Any files for inclusion should be saved as MS WORD text files or Quark if using a Mac. If mailing please save pics and text to CD, not floppy disc and include a hard copy, thank you. Colour photos can be supplied for scanning.
- Pictures saved from digital camera or scanned from photos must be at least 200 ppi at 15cm wide or equivalent, and saved as Greyscale as JPEG's.
Photos can be sent to the editor for scanning and will be returned asap.

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Chris Ross entering
McKays Shaft,
South Australia.

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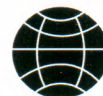
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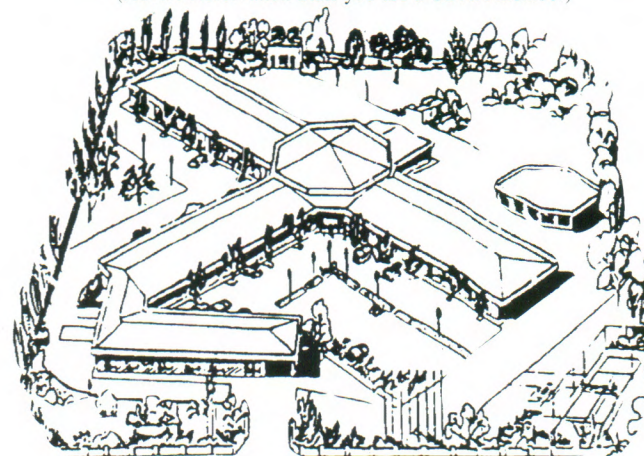


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Pick-02

DiveTek also supplies replacement Oxygen Sensors for most Analysers

Equipment Update by Chris Edwards

H.I.D. LIGHTS

Last issue we looked at Oxygen analysers. Elsewhere in this issue is an update on that subject from an Australian manufacturer. This article however will look at HID's

So what's all the fuss about -

High Intensity Discharge Lamps are not a new concept. Even their use underwater has been going on for some time. The Film and TV world has been using lamps such as HMI's (albeit powered from the surface or a submersible, such as in the film Titanic) for many years. What is relatively new is the speed with which these lights are gaining acceptance in the world of Diving. And not just Technical Diving. When I first started to gather material for this article I was surprised at the number of companies throughout the world manufacturing HID's. The lights listed here therefore are a small cross section of those available.

HID stands for High Intensity Discharge. Most HID arc lamps are defined by the gasses they contain such as Mercury or Sodium vapour lamps which are common in many streetlights. Or Xenon, often used for projector lamps in movie theatres.

HID's work by creating a small ball of burning plasma inside a fused quartz container. The colour of the light that this gives off is dependant upon the gas or gasses being burnt. HMI's approximate as closely as possible, daylight or a colour temperature of around 5,600 degrees Kelvin. The lamps have four basic components. A battery source, a ballast, an igniter and the lamp itself. The battery source can be almost anything you like as long as it is in the range of 9-15v. Therefore retrofitting an HID head to your existing battery pack is like-

ly to be an option. The ballast's prime role is to limit the current flow through the lamp - without it the lamp would eventually burn up and probably explode. The igniter is there to do just that, ignite the arc. In conjunction with the ballast it provides the start up voltage required to fire the arc (somewhere in the vicinity of 6,000 volts). Once fired the lamp uses very little battery power.

At present the most commonly used diving lamp is incandescent which works by passing a current through a filament. The filament is housed in either a vacuum or another gas such as Halogen. The resultant light is normally in the vicinity of 2,800 to 3,200 degrees Kelvin. However most of the energy produced by such a system is



given off in heat and as such they are highly inefficient. By comparison to an HID they are also a "wider" light source. The point source of the HID makes for more efficient optics and therefore a greater effective light output. Sartek describe their lights as having four to six times the light output of the equivalent wattage halogen and therefore a 10watt HID equates to 50 watt halogen. Underwater Kinetics only rate theirs at half of that (according to Rodales).



theirs at around 30 watts and Germanys Multitec state that their 10w equals a 65w Halogen! Incidentally although Multitec are manufactured in Germany they do have an agency in Adelaide, Australia. Dive Rite are looked after in this country by Tony Davis.

Whatever the truth of the light outputs mentioned above, the burn times are reflected accordingly. Sartek conservatively suggest that their 12V/7Ah battery will effectively power a 50w incandescent lamp for 1 hour or their 10watt HID for an impressive 6 hours. Pretty handy for long duration dives in places like Mexico, Australia's Nullarbor sites and Mt Gambiers "Tank Cave". Ballistic quote that their 7.6Ah pack will power their 10w head for 8 hours. Alpha state that their existing 2000 battery pack (nominally 4Ah) will run the 10w lamp for 3hours. The OMS web site quotes 6.5 hours based on an 8Ah pack. Interestingly OMS spend some space promoting their batteries and chargers as being better than their competitors. No other site I found took this approach.

So what are the pros and cons. –

Taking the drawbacks first – cost would be the first thing – particularly in Australia. The aussie peso only gets half a dollar US, a bees dick more of the EURO and just over a third of an English pound. Whilst most of the parts can be made locally, the lamps are imported. The Dive Rite 18w is around AUS\$450.00 - \$500.00 mark! Ballistic quote a replacement 10w at \$264.00 and Alpha, around \$300.(NOTE – this is just for a replacement bulb, not the whole system!) So if you own one be careful with it!

Drawback two. When the voltage drops too low, the lamp goes out. No warning, just out. The first time it happened to me I was a tiny bit anxious. No, not because it went dark, but because the torch was on loan and I thought I may have broken it! Three, there is a finite warm up time.

Underwater Kinetics appears to be about 30 secs while Sartek rate theirs at 10secs to 90% for the 10watt unit. This I guess would be most relevant to Photographers and Videographers who only want the lamp on during shooting. Or wreck divers who only



want the lamp on during the penetration phase. Four, once fired up the lights should be left on for four to five minutes before turning off (in order to reach normal operating temperature). Once turned off it should be left for at least one minute before restarting. So if you accidentally knock the on/off switch during a dive...

So what about the pros. Burn time and light output alone for mine outweigh any cons I have found with HID's. You can also expect a longer service life – somewhere around 1000 ignitions, which is around 3 to 5 times the life of a Halogen bulb. A daylight colour temperature, reduced size of battery canister, weight and size reduction all add to their attractiveness.

Some other considerations –

Fragility – depends on your viewpoint. One of the trickiest bit in the manufacturing process is the "metal to glass" seal around the electrodes. Depending on the lamp the pressure inside an HID at normal operating temperature can be anywhere from 20 to 100 atmospheres. Obviously smaller units equate to lower pressures. This suggests to me that turning one on, out of the water and then submersing it, would create a temperature differential that would not be very helpful to lamp life. Conversely unlike an incandescent lamp they are less susceptible to failure from vibration and knocks.

The second tricky bit in the manufacturing process, which adds significantly to the cost, is that quartz requires VERY specialised techniques to shape and the lamps are made by hand. Quartz is still as hard as rock at the melting point of iron, which is over 1500 degrees C!

Construction materials –

The Dive Rite website states that they make all their light heads from aluminium on recommendation from the lamp manufacturer who specify that it is necessary so that the head can act as a heat sink. Alpha in Melbourne also make their heads this way. Extreme Exposure (EE) make their heads from Delrin which is a trademarked acetal plastic with good thermal and milling properties. Geelong based Ballistic, manufacture theirs from stainless steel and anodised aluminium. Sartek, Nite Rider and Underwater



Kinetics also appear to be a plastic – I cannot testify as to what. England's Denney and the USA's OMS again use aluminium. Sartek's website describes a test where they left the lamp on out of the water for 9 hours without damage. Ballistic recommend a maximum out of water burn time of 20 minutes. So it would appear that use out of water is OK, however I would be wary of running them too long in say an air chamber and then immersing them back into cold water.

Battery packs –

like all torches there are a variety of options in both construction materials, types of batteries and connectivity. Alpha will either retro fit to your existing lead acid pack or sell you a new one. Almost all the manufacturers are heading toward NiMH as the choice of power supplies. According to Nite Rider they deliver a third longer burn time, weighs 30% less and has a shorter recharge time. They are however more expensive, particularly for the chargers. Ballistic offer either hard wiring or a wet mate connection to the battery pack. Likewise EE and Sartek. Wet mates offer the versatility of being able to change light heads or battery packs whilst underwater. This may be attractive to Videographers or those requiring redundancy. Even those considering diving in icy conditions and wanting to use electric heated undergarments!

Light focusing –

Otherwise known as beam width, varies from lamp to lamp and manufacturer to manufacturer as well. As far as I can see Dive Rite, Sartek and EE all offer the choice of either fixed or variable with all their heads. Ballistics 10watt heads are fixed narrow beams but offer variable focus with the higher watt versions. They also offer a choice when ordering of either 6,13,20 or 38 degrees. Alpha offer either 6 or 13 degrees. Ultimately this is a user choice issue, with photographers more likely to opt for wider/ more even spread and sump divers a tight beam likely to provide better penetration in dirtier water.



Cost –

Lets face it, nothing is particularly cheap in this sport. Remember the first dive computer you bought? What about the laptop you justified buying "for work", on which you now run your dive software. What about your regulator/s? At present the units are quite expensive mostly due to high manufacturing costs and as I mentioned earlier, the value of the Australian dollar, although a glance at some of the US chat sites reveals that they still consider them expensive in their own country. However like dive computers greater use and acceptance will cause them to become more affordable. The automobile industry is already changing over to HID's for headlights. Mass acceptance in this area can only lead to economies of scale which will bring lamp prices down. But, back to figures. Advertised price on the American EE's 10watt unit with the 4AH battery pack works out at \$A1155. Denney (UK), for their equivalent unit \$A1208 and Ballistic (Australia) \$A950 (lead acid) &\$1192 (NiMH). Alpha offer two options – an upgrade on the 2000 pack for \$950 and for a complete unit \$1450. (Prices based on exchange rate at time of printing).

Use and Lamp selection –

10w or 18w appear to be the major sellers. Sartek also offer a 50watt unit and Denney



Diving a 100watt (imagine that in Blacks!) EE and Sartek's 10w and 18w heads both come on a Goodman handle. Multitec's 10w and Dive Rite's 18watt heads also come that way. Denney do not have handles on any of their HID's while Nite Rider have their own exclusive mounting system. Ballistic do not have a mount with their

heads but do provide tank mounting brackets if this is your choice. As for Alpha they will provide you whatever mount you require. An advantage of the 10w unit is certainly the small size made possible by incorporating the ballast into the battery pack rather than the torch head. The on/off switch mechanism most commonly

used is a toggle on the battery pack however Alpha are in the process of changing to a magnetic switch. OMS use a twist of the light head, similar to current Alpha lights. Warranties vary from manufacturer to manufacturer, from 1 year to lifetime on manufactured parts and to an extent vary in duration depending on the part described. The globes themselves have no warranty.

One warning –

Metal Halide lamps all emit Ultraviolet, visible and infrared light. Possible skin or eye irritation can result from exposures exceeding 15 minutes according to Welch-Allyn, one of the manufacturers. Whilst this ought not to be a concern during the sort of use divers make of such lamps, particularly as water is a natural UV filter, it is worth considering that presumably one should not look at the lamp to check that it is on, rather point it at something instead.

In summary, should you own one? Yes! Last May I was out on the Nullarbor with some divers using Dive Rite HID's and more than once didn't even need to turn my lights on at all. Consideration needs to be given to this when planning dives as light

signals from conventional torches are very hard to see in the area illuminated by several HID's! Both Ballistic and Alpha were recently kind enough to loan this author one of their lights whilst in Mt Gambier. I dived with them in Gouldens, Pines, One Tree, Little Blue, Nettlebed and Sisters South. (Yes, I was running a course, hence the choice of sites) Sisters is notoriously dirty and penetration of that water was excellent. At the bottom of One Tree I could see almost the full width of the Sinkhole.



Sartek

Not bad for a 10watt unit!

So which one should you own? That is a much harder question. I guess at the end of the day once you have decided wattage, you need to consider whether you want to support local manufacturers who offer back-up close to home. Or whether the backup offered by stores and outlets selling overseas manufacturers is sufficient for your needs.



MultiTec 10w

There is most certainly more manufacturers around than I have mentioned above and undoubtedly more information that I could have collated. I hope however that it has provided some insight into the subject. All the mentioned manufacturers have websites if you require further data.

INDEMNITY REMINDER...

A reminder to all members that your indemnities for the sites controlled by the Department for Environment and Heritage expire with your CDAA certification. In other words you must renew that indemnity as often as you do your membership if you wish to dive Pics, Gouldens, Sisters, Fossil or Ewens.

On that subject don't forget that Kilsbys indemnities need to be renewed every FIVE (5) years. If it's been a while then download a new one from the web site and forward it to Gerret Springer whose details appear on the access page.

Australian Made Oxygen Analysers - Just For The Diver.

Daryl Waters - DiveTek

It was with great interest that I thumbed through the last edition of Guidelines. I myself, an old cave diver from way back enjoyed Guidelines new format. The reason that I actually had the copy in my hands is that I was looking to advertise my new Australian made product.

The interest lay in the fact that I was reading an article that outlined the use and availability of oxygen analysers. The main thing that caught my eye was the fact that all of the analysers were from overseas! DiveTek, based in Brisbane, has changed that situation.

There are, as the article points out, many different configurations and manifestations of oxygen analysers on the market today, nearly all of them are medical based models with leads, external sensors and hefty price tags and then there is the replacement price of the actual fuel cells that run the units. Some of these sensors can cost up to \$300.00 AUD.

DiveTek have introduced a range of Australian made DIVING SPECIFIC oxygen analysers.



The OzAnalyser Two

With quick-change battery capsules integrated into the front fascia of each unit, there are no worries with battery change or removal for storage. The flow is constant and set - no problems with fluctuating flow interfering with gas readings. The Dual analyser (the OzAnalyser Two) has two independent oxygen analysers in one case. This unit uses two entirely separate units to display an impartial gas reading for comparison between each analyser. The only common point is the QD input of the sample gas. It then branches off to two separate sensors that, in turn, send signals to independent amplifier boards. These amplifier boards align the signal output to that of the display reading on the digital display.

The amplifying of the signal makes for a more accurate reading of your breathing gas.

One of the main advantages of the DiveTek OzAnalysers is the signal amplification circuit board. To increase accuracy and to scale the sen-

OzAnalyser One and OzAnalyser Two

Housed in a waterproof Pelican(tm) Case these analysers bring to Australia a new concept in mixed gas analysing. The OzAnalyser use a unique 'incorporated sampling system'. Basically, this means that the gas is connected directly to the unit itself via the QD or LP inflator hose of your regulators and all flow and analysing operations are taken care of within the confines of the case. This eradicates the time consuming task of setting up flow meters, external sensors, pressure reduction devices and messy tubes and wires.

The OzAnalyser One

If you choose to add the constant flow option by purchasing the 'OzAdaptor' you can use the unit as a direct sampling unit by connecting the DIN adaptor directly to the cylinder.

sor output to that of the digital display the output of the sensor is electronically amplified. This increases accuracy substantially which makes your diving safer.

Both units are calibrated at DiveTek with 100%O₂ and 100% N₂ thus ensuring the best possible accuracy by testing through a complete range from zero to 100% O₂.

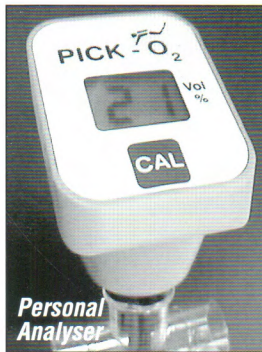
The Personal Analyser

DiveTek also carry a full range of the great new personal oxygen analyser, The Pick-O2.

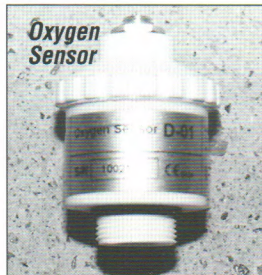
Pick-O2 is an inexpensive, disposable and light-weight oxygen measuring instrument. It is housed in a compact and rugged housing. Pick-O2 is equipped with an electrochemical sensor and a microcontroller for the fast measurement of oxygen concentrations from 0-99% Vol. oxygen.

This analyser is a great unit to quickly check mixes in an instant.

Based on the sensor's diffusion principle, it can either work passive or active in a gas stream. Therefore it is perfect for checking oxygen concentrations. Pick-O2 operates continuously and maintenance free. It shows the measured oxygen concentration on its 2-digit display. Pick-O2 can be calibrated at ambient air by just



Personal Analyser



Oxygen Sensor

pushing the "CAL" button until CA appears on the display.

The life time of PICK-O2 is at least 2 years, with no replacement of the battery required. When Pick-O2 has reached the end of service life it shows no more reading on its display.

DiveTek can supply Oxygen Sensors as well.

Once there was only a handful of suppliers from whom divers could get replacement sensors, and they were overseas. DiveTek can supply sensors for most analysers and also most rebreathers as well.

As technical diving grows in popularity, DiveTek recognises that this new and exciting sport will need good quality product and also replacement parts for that product. DiveTek carry a full range of sensors that will fit most technical diving equipment.

So, since the last edition of Guidelines, CDAA members can recognise a new player in the Oxygen Analyser market in Australia.

See the advertisement in this edition of Guidelines and also visit DiveTek's website to see the full range and also more information on DiveTek's product.

www.divetekoz.com or email: divetek@divetekoz.com Safe Diving, Daryl Waters

In Remembrance of the World's Greatest Loved Freediver...

The world mourns a true pioneer of freediving, JACQUES MAYOL, who died 22 December 2001 by his own hand. He could hold his breath for five minutes when at rest, or four minutes during his remarkable depth record dives, and was immortalised in a Hollywood film The Big Blue. He set a world record in 1983, when 56 years of age, by diving to 105.76 metres on a single breath. Mayol was passionate about the sea, and was dubbed 'the dolphin man' by the press. He was a successful writer, lecturer and documentary maker. After achieving so much, he hung himself on the Italian island of Elba. He was 74 years of age.

GENERAL NOTICE: 1080, BULLOCKS & BLACKS CLOSED INDEFINITELY

Negotiations with the new owners of Barnoolut Station have resulted in access being denied. The

Directorate has been negotiating since the property was sold to Mr Alan Scott, of Scotts Transport. Mr Scott has advised that the property runs cattle and sheep and he does not want them disturbed, therefore the CDAA has no choice but to remove the sites (Blacks, 1080 and Bullocks) from our listing. It is a sad state of affairs when access is closed by a Landowner. The effect this will have on tourism to the area, already at a decline, can not be imagined. CDAA divers have been diving these sites before the Associations formation and after so many years it's a sad inditement of human nature when the will of one is forced upon so many.

When negotiations could not be arranged over the Warbla site the CDAA also removed it's listing.

This resulted in many divers entering this site without permission and has probably allowed untrained or inexperienced divers to risk their lives in this cave. The CDAA can only take action against a member, when unlawful entry takes place, when they (CDAA) have an access agreement with the properties owners. As the CDAA no longer has an agreement we will, like we have with other sites not listed, pass no comment or take action against members reported to be diving these sites. Time may see a change of heart on behalf of the Landowners but until then we will be expressing our concern with the Landowners Committee, the new State Government and the local newspapers. Warrick McDonald, CDAA National Director

GUIDELINES DEADLINES

If you would like to contribute to Guidelines in 2002, you should note the following deadlines for submission of materials:

Deadline	for publication
20th May	June 2002
20th August	September 2002
20th November	December 2002

From Jurgen Gehrer...

TANK CAVE...

~ THE DEVIANT DIVERS WAY ~

What Gary my trusted buddy and I did this weekend was too great not to share it with you. Gary and I planed to dive 900 meters in to tank cave, along G tunnel.

We decided to carry twin back mounts and 2 stage tanks each. The weather was a warm, 34 degrees! Not the most comfortable in a wetsuit. Yes wetsuit!!!!

Anyway the first dive was to drop a stage tank (NITROX 42) 300 meters from the entrance at a spot marked H2 on the Tank cave map.

The stage tank clipped to our bodies with karabiners and bungee cords, we carried it to H2, breathing only of our back mounted 75's. Leaving us a full tank for the long dive the next day. Having done that Gary and I dived a couple of passages we hadn't been in yet. On this dive I saw my first living thing, apart from divers in tank cave, a small cave crustacean called a syncarid.

A syncarid is a small blind relative of the shrimp, crab and lobster, unchanged for 240 million years. Its adaptation to subterranean life includes the loss of sight in favour of highly developed chemical and tactile senses. The little critter has a built in orientation device called a statocyst.

Apparently it has an egg shaped organ in a cavity near the base of its antennae that contains two balls. (I knew I was a syncarid!) These are attached to the side of the antennae by a cord.

Depending on its orientation in the cave, gravity causes the balls to fall to the left, right, top or bottom of the cavity, indicating its position to the animal.

Syncarid's represent one of a group of animals that no longer exist in surface waters. I watched it until it disappeared amongst the rocks.

Our second dive for the day was a tunnel off S6 (another point in Tank cave). This passage deserves its own write up. Lets just say it is cool. Sunday was the day for our planed 900meter penetration down G tunnel to and past G3.

We got dressed clipped all the peripherals to our bodies and another set of everything, just in case something goes wrong.

Gary and I climbed in to the water at the

entrance puddle. (Anyone who has seen it knows it's not much bigger then a puddle). There we clipped our stage tank (air) to our right side and off we went. The passage from the entrance heads down on a steep decline to 7 meters. In spots tight, but clean and smooth rocks made it an easy task.

A short swim and we ducked under a low section towards a big tunnel (A2). Gary and I used the shortcut at A3 to bypass a 4meter ascent at A4 (90 meter room) The shortcut is a beautiful little tunnel, very low but interesting.

At the end of it we attached a snap and gap to B1 and on we went. The swim from here was easy. Huge passages, clear water, big junks of rock lay on the floor. These pieces dislodged at one point from the ceiling and hit the floor. Some are the size of a small house.

Now swimming over rather then under them, makes you wonder when the next piece might drop?? At A8 we passed an air surface that was formed by divers expelled air.

Heading towards A10 we saw the light beams of other divers coming towards us. It was Stan, Dave and Brian with his HID torch.

We turned left, away from A line, down a steep slope towards B14. I installed a jump reel and connected it with H1. Only a view meters on, we arrived at our pre-staged tanks.

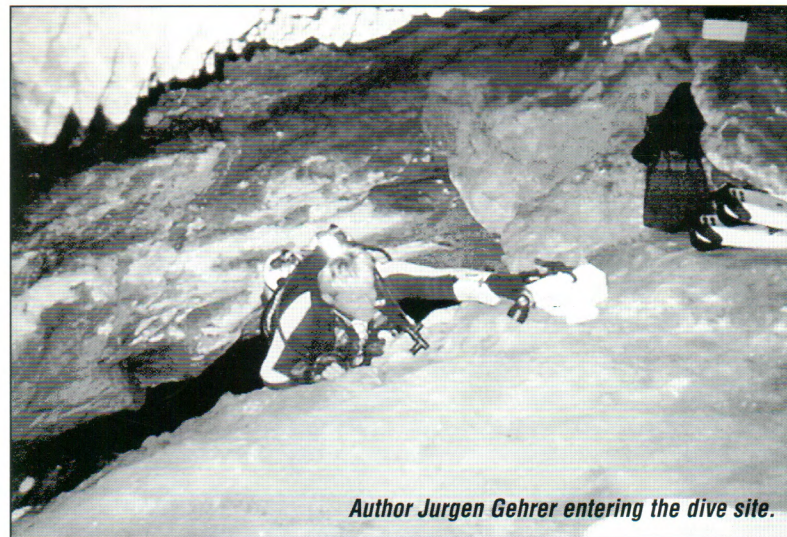
We dropped the partially used tanks (170bar) clipped them to the guideline, picked up the full ones (NITROX 42) and off we went towards H3. At H3 we turned left.

A hole connecting H passage with E (the window) is about 50 cm high quite wide but silty.

We passed it without a hitch and went down an excellent looking passage. Limestone flakes litter the floor. It is pretty.

Not a very high or wide tunnel, cream coloured and as mentioned before, Limestone flakes everywhere. It is totally unique!

This tunnel appeared to end at a rock pile. But looking closer I saw that there is a tiny spot where we could get through. It seemed too small for 2 tanks but nearly impossible with 3. I angled my body every which way but I seemed



Author Jurgen Gehrer entering the dive site.

not to fit. Another go and it worked.

I squeezed and wiggled my way up and through the restriction. Now we where "in" the rock pile! The rock pile is best described like this. Imagine a dome filled with a pyramid of rocks and boulders. The only way to pass this pile of rocks is, to follow its ring around the bottom.

Squeezing your way over, under and around those rocks, in spaces left when the collapse happened. You wiggle your way to the opposite side of the room, where the passage keeps going. Looking back I saw Gary pass through the restriction with just as much effort! Six meters further there was yet another. This one was easier to pass.

Once through, we floated down towards E4 where we arrived at the entrance to the Easter extension. Its passage leading off into the prohibited distance. This area does not get dived, as it is to be left in its natural state, unspoiled by man / woman.

The rock pile is a 100 to 150 meter dive until passed. Studying it, one observes that some of the smallest rocks hold up some of the largest. Once through, you seem to contemplate the fact, that if any of those rocks shift, G1 will become a tomb.

Just past G1 the passage deepened. From here on the minimum depth was 17 meters. I reached my thirds of my stage tank and switched to my back mounts. We planned to carry it with us for the next 260 meters and drop it at G4.

The passage towards G4 is a long, wide, but

eventless one. Different in looks to what we've seen till now. The limestone is dark in colour, with silt on the floor and broken bits of roof lying everywhere.

With only one tunnel splitting off in a half loop, this swim is boring. About 760 meters in to the cave or 220 meters past G1 the floor raises on a slight incline.

The spooky thing

is that the ceiling does not do the same, thus, 780 meters into the cave one is wedged between the ceiling and the floor.

With the stage tank on us, we had to push it to the side to make ourself lower in profile. This went on for about 20 meters, after which we arrived at G4.

G4 is best described as a small room with a silty floor. The wall in front of us is a huge rock which followed with the eye, shows a small and tight passage going up.

To the right is another passage. Our passage! Its floor silty, strewn with small rocks and the walls and ceiling jagged. With visibility this passage was no problem. Without, it was going to be unpleasant.

Deciding not to bother dropping the stage tank at this point, we kept going. A couple of times we got stuck, had to back up, moved to the left and off we went again. Once through we arrived at the ballroom. It was quite a sight!

After such a long time in confinement, the ballroom is almost too much space to handle. This room is the size of a small hall. Big pieces (boulder size) of rocks litter the floor. It has a dark grey look to it. There is lots of silt but being so far below you, not worth mentioning.

A huge passage straight ahead, a big rock pile and a low passage leading over it, to our left.

The thought that water had to dissolve all this rock to create this room let alone Tank cave, is mesmerising.

Here we placed a peg to mark the exit route, as

there are several lines going off in all directions. The passage we followed led us to a beautiful looking tunnel leading south-east. It became smaller, mid grey in colour, with a fine, grey silty bottom.

That far into the cave, emphasis was given to anti-silting techniques. A little marker arrow showed 880 meters. Our goal was 900 so we pushed on. At this time, we were 58 minutes under ground and under water, at a depth of 17 meters (near the ceiling).

The computer on my wrist was starting to clock up decompression time. By the end of the dive we had to stop in 3 meters for 17 minutes.

Having done part of the dive on NITROX 42, the time was reduced. We followed the passage until it rose along another rock pile. A tag showing 900 meters was the end point of our dive.

A tunnel goes off to the left and the one we were on kept going as well. We decided to dive our plan!! Gary and I enjoyed the isolation for a few minutes, then headed home.

Being aware of how few people have ever been here, we took great care not to leave any marks anywhere. Back at our squeeze just before G4, Gary headed through.

Without the luxury of sight the passing of such a restrictions was exiting. The visibility was literally 5 - 10 cm. I gave Gary some time to clear the passage, after which I followed.

The thing with restrictions in zero visibility is, that the protrusions from the walls and ceiling become hands of doom. These seem hell - bent on keeping you in this pristine yet hostile environment.

But having done such restrictions a few times by now, it was a battle we were always going to win. At G4, visibility still non-existent, I headed left along the fixed line. Suddenly the water was as clear as air.

There I saw Gary waiting for me. We were again squashed between the floor and ceiling, but with endless visibility it was nothing to worry about. I gave Gary a double squeeze on his ankle, meaning I am OK and lets go.

At H2 we picked up our other stage tank and made our way to a spot about 5 meters from the exit. Here we stayed in 3.4 meters of water, until the computer cleared our deco time then added another 10 minutes for safety.

Total dive time was 144 minutes or 2 hours and 24 minutes, spent in this beautiful cave. In a wetsuit!!!! For all you dry suit pussies. We arrived at the surface puddle totally stoked and

exhilarated.

What a rush, what a dive, oh what a feeling
Jurgen Gehrler CDAA2933

Ps. Thank you Glen for being the guide, the hub, the fearless leader, the big toe, Jenny's husband!! Carlo for his company & sending me the gas blending software, Stan and Brian for finding my jump reel Dave for the go to the toilet, walk over the fence thingimajigg, Sabine for making us work on her torch & bringing that feminine touch (suck, suck) and last but not least Gary for being my buddy & making me dive the plan.

Dive time: 144 minutes (2.24 hrs)

Deco stop: 17 minutes

Safety stop: 10 minutes

Total distance travelled: 1800meters

Tanks:

2 x 2 back mounted 75's steel (air)

2 x 1 side mounted 88's aluminium's (NITROX 42)

2 x 1 side mounted 88's (air)

1 deco tank (NITROX 46) staged at -5 meters

2100 litres of NITROX 42 approx. per diver

3460 litres of air approx. per diver

5560 litres total of open circuit gas per diver.

View Tank cave map on: www.cavedivers.com.au

WANTED



ARTICLES FOR GUIDELINES

IF SIGHTED PLEASE SEND IMMEDIATELY, TOGETHER WITH ANY PICTURES TO:

**The Editor, David Bryant
P.O. Box 2198, Rosebud VIC 3939.**

REWARD

An even better Guidelines for everyone.

THAILAND CAVE DIVING PROJECT

by Chris Ross

Dry cavers have known for several decades that Thailand is rich in limestone. With the formation of the Thailand Cave Diving Project (TCDP), the underwater systems are now being explored.

The TCDP is directed by Matthew London, an American who has been living in Thailand for over ten years. He operates a dive shop in Patong Beach, Phuket (Scuba World) offering instruction from Open Water - NAUI through to Cave and Tech - NACD, NSS-CDS.

Several small systems have been located, but diving is focused at a site known as 1175 at Sa Keo, a deep system in Southern Thailand. The system is in Krabi Province, some three hours drive from the dive shop. There are two springs, both of which feed short surface runs and then disappear into two separate syphons. The two spring tunnels meet at a depth of 80M and from there a single tunnel continues down to over 110M. The traverse from one spring basin to the other is the deepest in the Southern Hemisphere. The syphon side has been explored to a depth of 70M.

The site is of particular interest as it contains speleothems in very deep water, up to 85M. In conjunction with the University of Bangkok, the TCDP are gathering information about past weather patterns and water levels. Analysis of samples taken from the site indicate that the system was dry between 10 and 15 million years ago.

While exploration has focused mainly on Southern Thailand in the past, some extended expeditions up North have been conducted. Much of this is well off the beaten track. The only resource available to the Group are 'incomplete' geological surveys from the Thai government. The local Thais are very helpful and accommodat-

ing, and local knowledge is heavily relied on when exploring.

Steve Trewavas and I spent 3 weeks in Thailand with the TCDP, assisting with exploration and diving in site 1175. We were able to get out of the 'tourist' areas and into rural Thailand. The landscape of Southern Thailand is simply amazing - "Cockpit Karst", characterised by sheer-sided mountains jutting out of generally flat plains, all covered in lush green jungle.

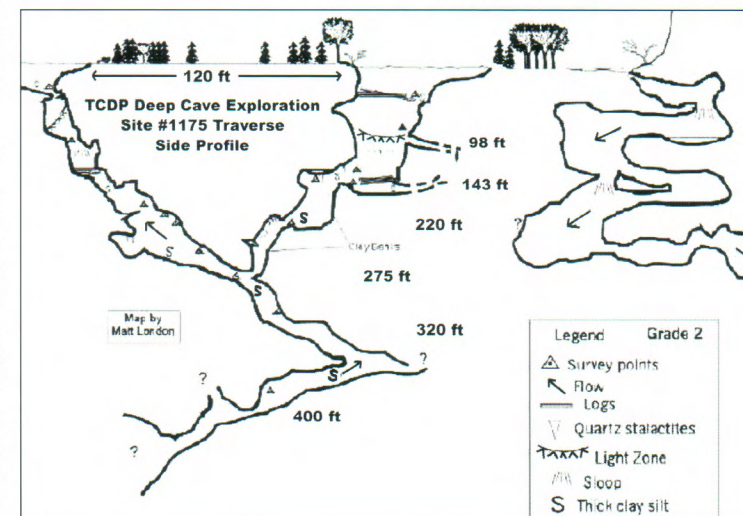
Our diving centred on site 1175. After a number of dives in each spring, we completed the traverse. Decompression gases used were EAN50 and 100% oxygen and bottom gas was Trimix 15/45. Deco bottles were dropped in both springs, and each diver breathed a stage bottle of Trimix before touching his backgas. While visibility was not stunning (5 - 6 M) there was a fixed line all the way, and the warm water made decompression a breeze!

Ceek out the TCDP website at:
www.dir-asia.com

Facts and Figures:

Best Conditions for Cave Diving - May to July
Water Temp. - 28 deg.

Visibility - 2 to 20 metres



NATIONAL DIRECTORS REPORT 1st Quarter 2002

Since my last report I have been involved in helping finalise the Australian/New Zealand Standard for Occupational Diving Operations Part 3: Recreational diving and Snorkelling at a workplace. This Standard could directly influence members, because when we enter a private property eg. a farm, we have entered a workplace. This would also apply to Government land as well. Without a Standard or a Code of Practice to go by and because we are using our Standards and Regulations plus a few Bulletins we need to be very careful that we act within our Duty of Care. I believe that once the Standard is completed we should adapt it for our special use. The Standard covers SCUBA, Snorkelling, Nitrox, Trimix and Rebreathers, if we modify it where necessary to make it "cave" friendly it will stand up in court should it ever become necessary. For those of you that have dealings with the DLI or Worksafe you already know about Duty of Care and the consequences, should you not meet the requirements. It's a different world now, than it was nearly 30 years ago when the CDAA was first established and we must change with the times. I recently had to advise some members that they could not use Mt Gambier sites, with which we have access agreements, to run a Trimix course. It guiles me that we can't do what we want, but we must be cautious when acting on behalf of the CDAA.

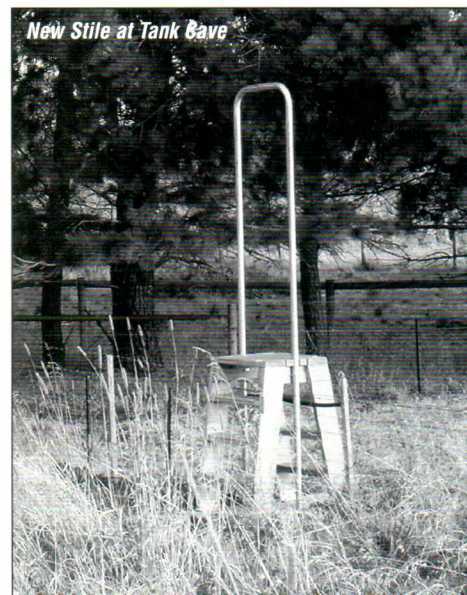
Discussion is still going on with Mr Alan Scott over access to Barnoolut so don't think that it's been forgotten. We want an outcome that enables open access for our members, seven days a week (remember when you could dive anytime?) and our

own entrance and roadway. We may not end up with what we want but believe me, we are trying for you.

Work was also finalised with Forests SA on our new agreement, this has taken me over 6 months to reach a workable result and I believe that we now have an agreement that will see us into the future without the restrictions on mixed gas or rebreathers etc. Martyn Farr, with some other British divers will be visiting our caves in March and will be diving Wellington and Mt Gambier. Lamar Hires along with a couple of buddies from the USA will be diving the Nullabour in April as well. Under our Associate Member rules we are receiving many applications for access to sites and as yet we have not had to refuse anyone who has followed our application procedures and met the qualification standards.

Dave Warnes (member #1) has constructed a stile for us at Tank Cave (see photo) and it's a beauty, this will save the fence being broken as divers take comfort trips into the forest across the road. When Dave builds something it's there to stay, I used it myself and it's a stile to be proud of. Dave has done a lot of work for the CDAA over the years and when called upon recently by the CDAA to help again he jumped into it. Dave wants me to thank Phil Argy and his son for helping install the stile and for allowing him to stay during the week at no-charge while he got the stile concreted into place. Blink Bonney Lodge is the only air/nitrox fill station in Mt Gambier and all of us should return the help Phil has given us over the years by frequenting his establishment.

The Tank Cave mapping crew are at it



again and are getting closer to completing the map. So much work has gone into this project it amazes me that we still have so many keen "mappers".

The AGM will be held at OZ Tek in Sydney this year. We will be sending out information on the web site and via Guidelines. Since the Constitution changes in 1997 we have experienced a decline in attendance at the AGM. I believe that this has come about because members feel that they can't voice their concerns and be heard, as the Constitution removed their power to do so at an AGM. Therefore because only a few members (plus Directors and office bearers) attend, we feel that Oz Tek, which previously has seen members attend from all over Australia, will expose us to more people and it will allow our New South Wales members to be represented. At the last Oz Tek we sold more CDAA product than for the previous 12 months as well.

Site improvements are ongoing as I have mentioned in previous reports; you will see the photos of some of these in this issue. The Tank stands have now been approved,

money allocated and the sites for positioning decided, therefore work will be starting on these shortly.

Finally, I would like to announce our 30th Year anniversary function next year. We are planning to hold a special celebration with guest speakers, a dinner, swap meet and second hand goods sale, equipment displays and other activities. Melbourne has been chosen because of it's more central location and larger member and population draw as it will be open to the public as well. In conjunction with the AGM this should be the largest CDAA function ever held.

I hope you enjoy our new Guidelines format and I wish you the best in your personal and cave diving endeavours.

Regards,

Warrick McDonald.

NEXT PENETRATION COURSE EASTER 2002



**AND HAVE AS MUCH FUN
AS THESE GUYS DID!!!**

Limited places available! Avoid disappointment by booking EARLY. Remember only two Penetration courses are scheduled each year, so don't miss your opportunity to receive world class instruction.

**For more information contact Paul Axton
Standards Director on
03 9782 1671 or 0419 346442
or E-mail records@teksupport.net.au**

IMPORTANT NOTICE PLEASE READ

This a reminder to all members that correct access procedure must be followed at all times if we are to ensure access privileges continue.

In particular members are reminded that ALL divers must sign in at Lady Nelson prior to diving Englebrechts and that non-members and members who are not appropriately certified MUST NOT enter the site. This means that you cannot invite your non-diving friend or partner to enter the cave while you dive! Likewise please remember that you are not permitted to pass on the key to other divers but must sign it back in on completion of your dive.

The Directorate will be conducting spot checks of sites such as Englebrechts in the future and any member found to have breached access protocol will be suspended from that site immediately.

NOTICE FOR INSTRUCTORS

Procedure for ordering student packs:

1. Check you are insured & financial.
2. Send order & cheque or by phone/credit card.
3. Allow 14 days from when the order is received - so allow plenty of time.
4. Student kits cannot be returned.
5. Instructors must be active.
6. Please do not pass my number on to dive shops - you should deal with them not me.

• INSTRUCTOR RENEWALS •

Several instructors have not yet renewed their CDAA ratings. Instructors must lodge their current insurance details and renewal fee or packages will not be issued and certifications rejected.

**INSTRUCTOR RENEWALS ARE DUE AGAIN 31st DECEMBER 2001.
AVOID DELAYS IN PROCESSING YOUR REQUESTS FOR MATERIALS
BY SENDING YOUR RENEWAL ASAP. PLEASE REMEMBER IT'S A
BUSY TIME OF THE YEAR FOR EVERYONE.**

Instructor Renewals
PO Box 8283, CARRUM DOWNS, VIC. 3201

Deb Williams
Instructor Materials Officer

NEW VISITOR FACILITIES AT HELLS HOLE

Hells Hole (L40) is one of the largest sinkholes in the South East of SA, situated in the Caroline Forest approximately 20km from Mount Gambier. Just how to make this place safer was always put in "the too hard basket" until NPWS SA constructed a viewing platform at nearby Caroline (Pond Flat) Sinkhole. From that project it could be seen that the concept might also be appropriate at Hells Hole.

Consulting Engineer Bruce Jordan was invited to inspect the Hells Hole site and was subsequently engaged to oversee the project. It was soon realised that due to the undercut nature of the cliff face, this structure would need to be much sturdier than the one at Pond Flat, particularly if cave divers were to abseil from it, as Hells Hole is a Sinkhole rated site. Assistance was also provided by Peter Grills (CDAA 1780)

by taking ForestrySA Senior Ranger, Trevor Wynnai to see the gantry structure at Blacks as an example of what could be incorporated into the Hells Hole structure to assist diver access. Keppel Prince Engineering Pty Ltd was then engaged to manufacture and install the platform, a 12 metre long fully galvanised steel structure. This platform should be an immense help to divers who wish to access this site, with anchor points incorporated for divers to connect onto. Vehicular access has also been provided and the gate key can be collected from the Lady Nelson Visitor Centre by producing your diving permit. Permits may be obtained by contacting ForestrySA at forestrysa@saugov.sa.gov.au. Tourists can also enjoy a safe unimpeded view of Hells Hole with a good rubbled car park complete with interpretive signage.



Hells Hole viewing platform



Sign Bay at car park

FOR SALE

PEE VALVES – \$65.00

JUMP REELS – \$65.00

Please call (03) 5565 8793 or

Email: garinda@tpgi.com.au

FOR SALE

Nite Rider dual head video light system. Used only occasionally as a new HID system replaced it.

New value over \$2000.00, quick sale \$400.00

Call Warrick McDonald on 0408 374 112.

DUI Tech Diver crushed neoprene dry suit in perfect condition, kevlar kneepads, thigh pockets, dual zip, hood, pee valve, rock boots, small size, stylishly black for stealth work. New over \$5000.00 sell for \$2000.00.

Call Warrick McDonald on 0408 374 112.

The following was posted on the website recently. It is reprinted here for those members without internet/email access.

Report on Hungarian Cave Dive Incident!

Rescue action in the cave Rakoczi barlang Esztramos hills, Aggtelek National Park North East of Hungary, 10 km from Slovak border. 233 people were involved in this rescue action.

What happened?

A not very well experienced Hungarian cave diver Zsolt Szilagyi dived in the cave Rakoczi Saturday 26. 1. 2002 at 17.30 and did not return back from the sump. There was a vertical rope 5 mm in diameter hanging from the roof above the sump down to the bottom at minus 20 m. It was spanned by the help of a piece of lead generally used in diving which was simply fitted on the bottom with a knot.

Divers fit their own life line to this main one at -12 meters and enter a hole called "gate" leading to the underwater part of the cave called devil's beergarden. Coming back in completely muddy water, Zsolt, as the last one was coiling his life line, but he did not realize that he was pulling it some meters through the gate. As he reached the main rope, he detached his own one but the main one immediately disappeared in the muddy water as it was pulled down by the lead weight. The diver lost the orientation in the completely muddy water and did not find the way back.

After about two hours of searching, his companions were sure he is dead and started to alarm rescue divers and cave rescue to organize an action to find and transport the body out off the cave (as it is done usually).

As they were calm for few seconds they heard somebody shouting. Zsolt found a small air bubble about 1 x 2 meters, high 2 meters which was connected to the main chamber with a crack about 1 cm and with good luck it was possible to manage a voice communication with him.

Now a big rescue action started. A lot of divers tried to find the way to Zsolt's place. But with-

out success. The underwater cave is extremely complicated and the max. distance to see was 10 cm. During the whole action 143 dives were made and 283 sunks in the Underground lake.

I was present from Sunday 27. 1. 2002, a.m. 05.30, till the end of the action and tried to help. 24 hours later, when divers did not succeed I tried to organize to dig an artificial tunnel to the victim, but I had problems to get permission from the rescue leader. 48 hours later, on 28/1/2002 at 18.00 I got permission and started with Slovak cavers to make a tunnel of triangle shape (base 60 cm, high 100 cm) by the help of pyropatrons. Our cavers were working continuously without any break. Finally the leading diver Laci Czako found the place where Zsolt was sitting at Tuesday 29. 1. 2002 at 11.45 after 66 hours, but he was not able to dive through the sump. He was found in the last minute.

Divers supplied him with warm drinks and later with food. They constructed for him a place to lie down a while in a comfortable way. A diver doctor was taking care of Zsolt.

My group, later increased by best Czech rescuers, was working in three shifts, and finally Thursday 31. 1. 2002 at 15.35 we entered the small room where Zsolt survived 118 hours. Within 70 hours we made a tunnel (60 x 100 cm) 10.9 meter long in a very hard semimetamorphed trias limestone.

The successful rescue was followed by all kind of media in all East European countries, and is still extremely popular in Hungary. 7. 3. 2002 we and all the people who took part in the rescue action (about 160) met for a banquet in Hotel Avar in Spa Matrafured. This big reception will be paid by one Hungarian multimillionaire.

Gustav Stibranyi.

HELLS HOLE

January 28, 2002, the first two divers to use the newly erected gantry at Hells Hole prepared to do their dive, assisted by Gary Barclay, Linda Claridge and Andrew Young. The divers, Andrew Fleming and Craig Stobbs, both CDAA members from the A.C.T. were spending a very hectic 2 weeks diving in many of the Sinkhole sites around the SE area.

The well planned trip gave them an opportunity to dive in The Shaft and Kilsbys, and to finally get into Hells Hole, a site that they had visited before, but this time had come prepared to dive.

With the newly erected gantry already in place the divers could safely set up both their climbing and diving equipment with far less risk of danger than previously, when this would have had to be done on the sloping lip of the sinkhole.

The original plan was for just the two divers to get themselves into and out of the sinkhole. This was not always recommended, but with previous climbing and SRT experience it could be achieved, but the chance meeting with Gary, Linda and Andy meant they could concentrate on the dive and be assisted in and out of the water. Whilst the gantry certainly made everything so much easier and safer, one small problem was discovered – 2 x 15metre ladders will no longer reach into the water. The gantry sits above the lip of the sinkhole, approximately another 2 metres so go prepared for a longer ladder climb than previously thought. By adding Gary's spare ladder to Craig and Andrew's, the problem was soon rectified.



Craig Stobbs abseiling in

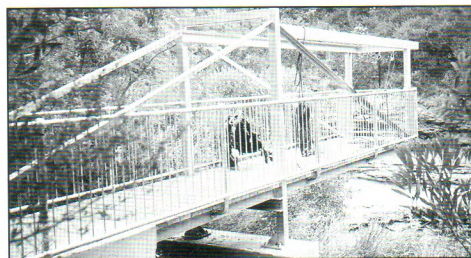
Throughout the setting-up period a group of sightseers expressed interest in viewing how we used the gantry, as the guys in the group happened to have worked on the construction of the structure. These people also ably assisted in the lowering of the equipment for the divers but strangely enough didn't hang around to help in the removal of aforesaid items. Funny about that!

Whilst the erection process was happening Forestry SA had had to leave the site unlocked and everyone was amazed at how much rubbish was dumped into the site in just 3 weeks. In the near future another clean up will be arranged to help make the site a little cleaner. Craig and Andrew made a small contribution to clean up by collecting a small wheelie bin and an orange gas bottle and sending them back up for removal.



Andrew Fleming and Craig Stobbs elated after their dive.

These two divers were unanimous upon their return to the surface that despite having their doubts about how good this dive was going to be it turned out to be THE BEST sinkhole they had ever done, including the Shaft and Kilsbys. "Bloody Awesome", and "Unbelievable", were words that were bandied around. "We'll be back here again". And they were – one week later Craig and Andrew returned to the site, set up the equipment and got themselves in and out of the site one more time. Good effort guys!... Linda Claridge.

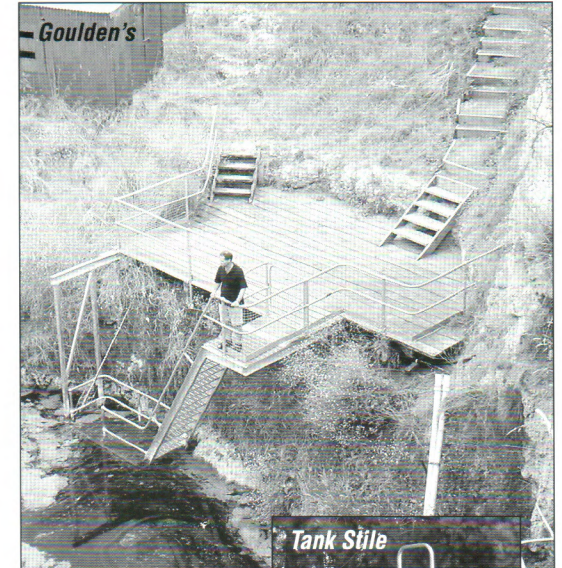


LATEST SITE IMPROVEMENTS...

The following spread of photos represent some of the improvements that have been going on in the Mount in the last year or so. Thanks to all the members and organisations who assisted.



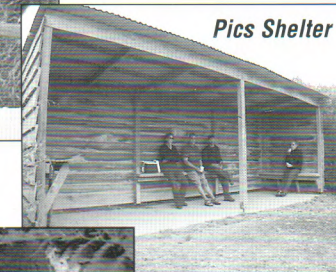
Englebrechts West - new limestone steps



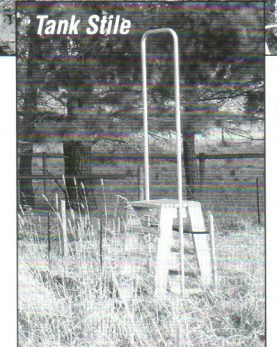
Goulden's



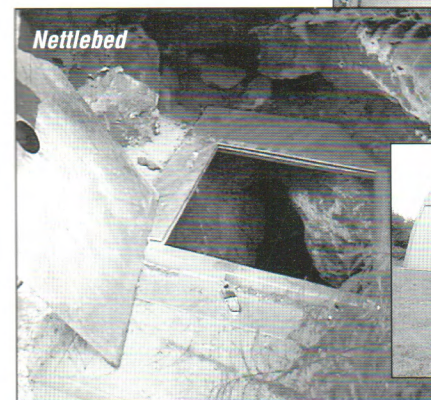
Goulden's Steps



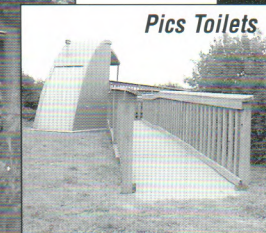
Pics Shelter



Tank Stile



Nettlebed



Pics Toilets



Englebrechts East - new limestone steps

CDAA SITE ACCESS

Remember: Access is a privilege, not a right. Please be considerate of landowners wishes.

CN = CAVERN S = SINKHOLE C = CAVE P = PENETRATION

SITE	LEVEL	OWNER	ACCESS DETAILS
MOUNT GAMBIER - SOUTH AUSTRALIA			
Ewens Ponds	Nil	DEAH P.O. Box 1046 Mt Gambier 5290 (08) 8735 1111	Groups of 6 or more, phone/mail to Dept. of Environment & Natural Resources (DENR). Smaller groups, no need. Indemnity form to be completed.
Horse & Cart	CN	Peter Cunningham	By phone or mail, 1 week prior. Ph: (08) 8738 4003.
Tea Tree	CN	PO Box 2168, Mt Gambier 5290	
Little Blue	S	Port MacDonnell	Little Blue - permission not required - must carry card.
Allendale	C	Port MacDonnell	Obtain key from Mt. Gambier Tourist Information Centre.
Gouldens	CN	DEAH	General Diving: Divers to contact DEAH and notify of date and site to be dived.
2 Sisters	CN	P.O. Box 1046	Divers must have the correct CDAA diving endorsement for the site and carry current financial CDAA membership card. The diver must have signed an indemnity with DENR before access is permitted.
Fossil	C	Mt Gambier 5290 Ph: (08) 8735 1177	Training: The Instructor is to notify DEAH of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
Ela Elap (Curr. Closed)	S	Mr. Peter Norman	By phone or drop in before diving.
One Tree	S	Private Bag 67, Mt Gambier 5290	Ph: (08) 8738 5287
Swim Through	C	Valerie Earl PO Allendale 5291	Currently CLOSED pending new access arrangements.
Piccaninnie Ponds	S	DEAH P.O. Box 1046, Mt Gambier 5290	Permit holders by phone. Be aware of delicate vegetation. Indemnity form to be completed. Ph: (08) 8735 1177 Faxed copies of cards no longer accepted when booking.
Hells Hole	S	ForestrySA	Contact ForestrySA by mail, phone, fax or email to arrange permit. Collect permit from Regional Office or Carter-Holt Harvey Mill gatehouse, Jubilee Hwy., Mount Gambier.
Pines	P/C	PO Box 162	No diving on total fire ban days. Hells Hole key from Lady Nelson.
Mud Hole	C	Mt Gambier 5290 Ph: (08) 8724 2876 8.00am - 4.30pm weekdays Fax: (03) 8724 2885	Forest Work Bans may be applied by ForestrySA if forest fire danger is expected to reach extreme. Such bans also exclude the public from entering the forest. If in doubt, please check with Trevor Wynniat, although signs are generally erected at diving sites on such days to indicate such bans. Permits required for compressors during fire danger season.
Email: forestrysa@saugov.sa.gov.au			
Kilsby's	S	Landowner leased to S.A. Police	Restricted access conditions apply - refer Guidelines Issue 54. Twin tanks, maximum of 40 metres depth. Write to: Gerret Springer, 30 Lorikeet Street, Mt Gambier SA 5290. Email: rolukage@ozemail.com.au, 4 to 6 weeks prior to wanting to dive. Please enclose stamped self-addressed envelope (Do not contact landowner). Access date now the first weekend of every month. No animals permitted. No mid-week diving.
Shaft	S	Generally open one weekend a month L. Claridge P.O. Box 290 North Adelaide 5006 Ph: (03) 5565 8793 A.H.	For access dates contact Linda Claridge. Also, see Special Access Bulletin in Guidelines issue 69. Nitrox as a diving mix is not allowed in the shaft. Deco mixes ATTACHED to a shot line are permissible. Divers applying to dive in the Shaft must have documented experience of a least 5 twin-tank dives. Sept 8/9, Oct 7, Nov 10/11, Dec 1/2. Email: garinda@tpgi.com.au
Ten Eighty	S	Mr. Colin Traeger	Sundays only Mail Booking Form to Colin Traeger 2-6 weeks prior, stating names/qual.
Bullock Hole	S	PO BOX 1046	of all divers, and time slot. Please include stamped self addressed envelope.
Black Hole	S	Mt Gambier 5290 (08) 8726 6215	Closed October to November for shearing.

CDAA SITE ACCESS

SITE	LEVEL	OWNER	ACCESS DETAILS
MOUNT GAMBIER - SOUTH AUSTRALIA (continued)			
Max's Hole	C		Currently pending access arrangements with new owner.
Hann's cave	P	P & A Lasslett	Groups of four divers only apply in writing to Site Director. Limited groups will be allowed access over the summer months. The site is very delicate and therefore only limited access is available. Divers applying will be notified as to further access details. Please include a stamped self addressed envelope.
Engelbrechts - East	C	Mt Gambier Council	Obtain key from Mt Gambier Tourist Information Centre. Access agreement must be signed prior to diving. 2 divers must sign out keys, all divers must sign in advising which groups they are diving with. NOTE: Special conditions apply during March and April... See notice this issue. Please book public holiday dives with lessee.
- West	P	Lessee Ph: (08) 8723 2299	
Three Sisters	P	Millicent Council	Contact Records Officer. Access available for experienced Penetration divers only. Low profile or side mounted independent air systems required. Access agreement must be signed prior to diving. Please allow 4 weeks for indemnities to be processed.
Iddlebidy (5L250)	P	ForestrySA PO Box 162	5L250 open every Saturday. 5L290 open every weekend. Max. 4 divers per dive per day, 1 dive per day for each site. Only Penetration divers.
Nettle-Bed (5L290)	P	Mt Gambier 5290	Bookings from Forestry Office - key from Lady Nelson. Contact ForestrySA by mail, email or fax to arrange permit. Collect permit from Regional Office or Carter-Holt Harvey Mill gatehouse, Jubilee Hwy., Mt. Gambier. No diving on total fire ban days. Forest Work Bans may be applied by ForestrySA if forest fire danger is expected to reach extreme. Such bans also exclude the public from entering the forest. If in doubt, please check with Forestry Ranger Trevor Wynniat or Forestry Office, although signs are generally erected at diving sites on such days to indicate such bans. Permits required for compressors during fire danger season. Email: forestry.recreation@saugov.sa.gov.au
McKay's Shaft	S		Contact South East representative Phil Argy at Mt. Gambier access and indemnities.
Tank Cave	P	Mr. DYCKER	Access Manager: John Vanderleest Email: John.Vanderleest@admiral.com.au
Baker's Cave	C		Please write to the Site Access Director to dive in Baker's Cave. Include stamped self-addressed envelope. Climbing equipment required.
NULLARBOR - WESTERN AUSTRALIA			
Cocklebidy	C		Apply in writing for permission to dive at least 4 weeks in advance of trip to: District Manager, C.A.L.M., PO Box 234, Esperance, W.A. 6450.
Murra El Elevyn	P/C		Phone: (08) 9071 3733 Fax: (08) 9071 3657
Tommy Grahams	C		
Weebubbie	S/C		Apply to Gerry Falleiro, A/Assistant Project Officer, South East Region Land Administration Services Branch Phone (08) 9273 7215 Fax (08) 9273 7414 Email: gerry_falleiro@dola.wa.gov.au PO Box 2222 Midland WA 6936
N.S.W. - WELLINGTON CAVES			
Limekiln (McCavity)	P/C		Both Penetration and Cave Level are being accepted for this cave depending on it's water level at the time. The cave has a restriction at the entrance which is underwater making it a Penetration Dive. During drought, the water level drops to form a small lake below the restriction allowing experienced Cave Divers access to this delicate cave.
Water (Anticline)	C		Affected by high CO ₂ levels during Summer/Autumn. Access arrangements are co-ordinated with an already commissioned research group. Contact Greg Ryan (02) 9743 4157 h, greg@cs.usyd.edu.au
Rum Jungle Lake	S		Unrestricted access currently exists - Please refer advice in Guidelines No. 68 or check CDAA website.
Burrinjuck	S/C/P		This is a tri rated site. Please see details in issue No. 73. There are no specific access arrangements.

ACTIVE CDAA INSTRUCTORS

Any Instructor wishing material contact - (03) 9562 9264 (Fax) or email: debwilliams@bigpond.com

STANDARDS DIRECTOR:
Paul Axton
Telephone: 0419 346 442
(email) records@teksupport.net.au

INSTRUCTOR	CN	S	C	STATE	PHONE
NSW & ACT					
Nick Jones	•	•		ACT	0408 423 017 m
Peter Grills	•	•	•	NSW	(02) 4950 6262 (8am - 12 midday)
Andrew Robertson	•	•		NSW	(02) 9548 5987 h 0417 664 255 m
Des Walters	•	•	•	NSW	(02) 6041 1405 h (02) 6025 3506 w
Heike Apps	•	•	•	ACT	(02) 6291 0566 h
SOUTH AUSTRALIA					
Greg Bulling	•	•	•	SA	0409 095 927 m (08) 8265 4978 h
Glen Harrison	•	•	•	SA	0427 608 609 m
Max Marriot	•	•	•	SA	(08) 8447 3360 h
Richard Megaw	•	•	•	SA	(08) 8344 1733 h
WESTERN AUSTRALIA					
Gary Bush	•	•	•	WA	0402 339 652 m (08) 9367 4701 h
VICTORIA					
Paul Axton	•	•	•	VIC	0419 346 442 m (03) 9782 1671 h
Gary Barclay	•	•	•	VIC	(03) 5565 8793 h
Jane Bowman	•	•		VIC	(03) 9579 2600 w
Stan Bugg	•	•	•	VIC	(03) 9379 8791 h
Linda Claridge	•	•	•	VIC	(03) 5565 8793 h
Brian Cornell	•	•	•	VIC	(059) 85 2514 h
John Dalla - Zuanna	•	•	•	VIC	0407 887 060 m (03) 9484 1216
Chris Edwards	•	•		VIC	0417 116 372 m
Barrie Heard	•	•	•	VIC	(03) 5627 6474 h 0419 401 276 m
Warrick McDonald	•	•	•	VIC	(03) 9579 2600 w
Bob Wealthy	•	•	•	VIC	(03) 5985 8338 h

UP COMING COURSES

CAVERN/SINKHOLE AND CAVE COURSES, PERTH, W.A.

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Phone 0402 339 652 or email gary.bush@bigpond.com

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MARCH 11-24 • MAY 13 - 26 • JULY 15 - 28 • SEPT. 9 - 22

Contact Jane Bowman 03 9579 2600

CAVE COURSE, MOUNT GAMBIER.

MARCH 18 - 24 • MAY 13 - 26 • JULY 15 - 28 • SEPT. 16 - 22

Contact Warrick McDonald 03 9579 2600, 0408 374 112

or email abocean@dingley.net

Florida Cave Diving – October 7th – 20th 2002

Join us on this Cave diving package. Fly to Los Angeles and on to Jacksonville via a hub. 14 nights, usually 20 dives. We have done this trip for the last two years and have it all worked out. We stay in Lake City and use an RV to travel around. Fantastic dives such as the Ginnie Springs system, Little River, Peacock, Manatee and Cow.

Approx. \$4,000.00 per diver. For more information call Warrick McDonald or Jane Bowman 03 95792600 or email abocean@dingley.net

OZTEK3 Exhibition & Conference Update

The OZTeK Organisers have announced that additional speakers have been confirmed and dates set for the OZTeK3 Conference & Exhibition in Sydney later this year.

International Speakers already confirmed are Cave Explorer and CIS Lunar Rebreather Developer Bill Stone, famous for his Caving and Cave Diving explorations of the Wakulla system in Florida. Accompanying him will be his partner Barbara am Ende, Cave Explorer and Team Member of the National Geographic featured Huautla Expedition in Mexico. Gary Gentile will rejoin OZTeK following his success at OZTeK2000 in Melbourne and will discuss diving the Great Lakes Wrecks in Canada & the USA as well as explorations of the German U-Boat Fleet off the US East Coast. Look for a plug for a planned OZTeK Trip to the US to dive these wrecks in 2003/4!! Stephanie Schwabe will recount diving the Blue Holes of the Bahamas with Rob Palmer and others and will also discuss Risk Acceptance her experiences dealing with the loss of partners who explore at the edge. She will also be part of a new Women in Diving segment. Our very own Dr Simon Mitchell will once again entertain and educate us on Decompression matters and this year OZTeK will cover Underwater Imaging with Michael Aw discussing the growth of digital underwater photography.

To open the OZTeK3 Conference the organisers are very pleased to announce that Drew Richardson of PADI Worldwide and an major developer of PADI's DSAT Tec Program will give the Key Note Speech. "We regard the Opening Address as setting the tone for the show" said Richard Taylor, OZTeK Convenor. "With PADI's entry into the Technical Diving Market the whole sport has taken a significant shift and the future of Technical Diving will be affected in many ways. I am very happy to have had the support of Terry Cummins and PADI Asia/Pacific in arranging for Drew to open the Conference.

As a representative of the largest diver training agency in the world we will get an insight into what direction Technical Diving will take. Ten years ago if you had mentioned PADI teaching Nitrox, Rebreathers and Decompression Diving you would have been laughed at. The Future of Technical Diving will depend very much on the direction the major training agencies take and I

am sure we shall see some exciting developments ahead."

Additionally OZTeK will be holding an Underwater Photography Competition in conjunction with Scuba Diver Australasia. Categories of Best Wreck, Cave, Rebreather, Digital and Open/Enhanced will allow underwater photographers the opportunity to enter in areas usually overlooked in the main stream photographic competitions. Great prizes will be on offer and details on entry rules and prizes can be found at www.diveoz.com.au/oztek.

OZTeK3 will be held on the weekend 14-15 September 2002 at the Australian Technology Park in Sydney. A major exhibition is planned to attract divers from all over Australia and the Conference will focus on "Challenging our Limits". Core elements from past OZTeKs such as Cave and Wreck Diving, Rebreathers and Physiology will be discussed, but look for new sessions focusing on emerging technology and alternative Extreme Areas within diving. Part of the Conference will look at "Women in Diving" and especially the impact they are having in exploration.

Immediately following OZTeK all interested people are welcome to join in the first OZTeK Dive Trip, to dive the SS President Coolidge and Caves in Santo, Vanuatu. Leaving Sydney on Monday 16 September immediately after the OZTeK Exhibition & Conference, this trip will be led by OZTeK Convenor Richard Taylor and accompanied by Gary Gentile. Nitrox, Rebreathers and Trimix will be available and for divers wishing to extend their range, TDI programs in Wreck Penetration, Extended Range and Trimix will also be available. Additionally Gary Gentile will also be running an underwater wreck photography workshop.

All interested parties are asked to contact the OZTeK Convenor Richard Taylor at oztek@diveoz.com.au. More details will be released in the coming months with additional speakers, themes and sponsors to be announced shortly. This will be THE SHOW for 2002 and divers from all over Australia, New Zealand and the Asia/Pacific Region are encouraged to attend. Keep an eye out for more details SOON! Details will be posted on the OZTeK Official Web Site at www.diveoz.com.au.

TANK CAVE

~ DATES FOR 2002 ~

	DATE	SPECIAL WEEKEND
1	March 29 to April 1	Easter
2	April 13 and 14	
3	April 20 to 25	ANZAC period
4	May 4 and 5	
5	May 18, 19, 20	Adelaide Cup weekend
6	June 2 and 3	
7	June 8, 9, 10	Queens Birthday weekend
8	June 22 and 23	
9	July 6 and 7	
16	July 20 and 21	
10	Aug. 3, 4, 5	NSW Bank Holiday
**	Aug. 17 and 18	Mapping Weekend
11	Aug. 30 - Sept. 1	
12	Sept. 14 and 15	
13	Sept. 28 and 29	
14	Oct. 5, 6, 7	SA Labour Day
15	Oct. 20 and 21	
16	Nov. 2 to 5	Melbourne Cup weekend
17	Nov. 16 and 17	
18	Dec. 1 and 2	
19	Dec. 15 and 16	
20	Dec. 21 to 24	Christmas

OZTek announces Underwater Photography Competition...

It is worth noting that concurrent with OzTek is an underwater photography competition, being run in association with Australasian Scuba Diver magazine. There is even a rebreather Photo category. Check to OzTek website for more details. www.diveoz.com.au

INDUSTRY NEWS

Goodbye Tricia and Thanks!

I wish to advise all members that Tricia McQuade finished up at Lady Nelson on Friday 8th March 2002, which, according to her co-workers, was a very sad day (for them). Tricia was always an enormous help to all the members who have signed keys out over the years, even including those who on rare occasions turned up with invalid or no cards! On behalf of the membership I wish her the best for her future endeavours. We too will miss her.

IMPORTANT NOTICE TO ALL DIVERS PLANNING TO DIVE ENGLEBRECHTS EAST OR WEST DURING MARCH & APRIL

It is planned to close the cave to divers from the 18th of March 2002 through to 26th of March 2002 and then restrict access to the west only from 26th March through to the 2nd of April.

East and West Closed 18/03/2002 to divers
West Open to divers 26/03/2002. to divers
East open to Divers 02/04/2002 to divers

This is request from Lifeline, the body who run the cave tours. They are likely to have large numbers of visitors during that time and wish to maximise the number of tourist that they can guide through the Cave and also want to ensure clear water in the East throughout this time.

DUI and DIVE RITE Specialists are coming to Australia...

Coming soon to Australia, Mr Dive Rite - Lamar Hires, Mr DUI - Dick Long and from the other side of the Atlantic - Martyn Farr. Those of you who own DUI suits will already be aware of Dicks visit, assuming you registered for the owners group. Dick will be running sessions in various parts of the country. I believe Lamar will be giving talks during April in Sydney, Melbourne and Adelaide and Martyn, I think, is just here to Dive!

CDAА PRODUCTS ORDER FORM

Please make payable to:
CDAА, P.O. BOX 290
NORTH ADELAIDE, SA 5006

	QTY / COL/SIZE	ITEM	UNIT PRICE	TOTAL
BOOKS		Cave Diving Communications. A manual from NSS - CDS dealing exclusively with all underwater communications used in cave diving. Including touch, torch and line signals, and use of line arrows and jump reels. A must for all cave divers bookshelves.	\$17.50	
		Cave Diving - A Blueprint for Survival. A book by the world-renowned cave diver, the late <i>Sheck Exley</i> , this is a case study of a number of accidents that have occurred in the USA and how to avoid them.	\$15.00	
		Basic Underwater Cave Surveying. The standard publication for anyone remotely interested in research and survey techniques used in water filled caves.	\$30.00	
		CDAА Occasional Paper No. 2, From National Conference 1981. Includes topics such as Fossil Cave, Belay Techniques and Cocklebidy 1979.	\$2.00	
		DAN Emergency Handbook, Revised 1995 edition by Lippmann and Bugg. Printed on waterproof paper this essential first aid manual should be part of every cave divers' kit.	\$17.00	
		NSS Cave Diving Manual. The standard reference manual in cave diving covering just about every conceivable topic. New Edition.	\$55.00	
		The Darkness Beckons. By <i>Martyn Farr</i> . The history and development of cave diving.	\$75.00	
		An Introduction to Technical Diving. By <i>Rob Palmer</i> .	\$45.00	
		Deep Into Blue Holes. By <i>Rob Palmer</i> . This is the project manual written about his trips to the Bahamas, diving some of the most advanced and spectacular caves in the world.	\$55.00	
		NSS Cavern Divers' Manual. The standard reference manual in cavern diving covering almost every conceivable topic. Also most principles behind safe sinkhole and cave diving.	\$30.00	
		Caverns Measureless to Man. <i>Sheck Exley</i> .	\$46.00	
		Cave Practice & Equipment. Edited by David Judson British Cave Research Association. Updated 295 Page book fully illustrated with over 200 line drawings & 33 pages of dramatic photographs. Full chapter on cave diving by <i>Martyn Farr</i> .	\$40.00	
		New Edition of Peter Horne's Lower South East Cave Reference. An illustrated catalogue of the Lower South East Region of South Australia.	\$130.00	
		Australian Caving Diving - A Contrast. By <i>Tony Carlisle</i> . Four short documentary type videos on Warbla Cave, Three Sisters Cave, The Road to Toad Hall and Tank Cave. Reviewed in Guidelines 54.	\$25.00	
		Australia "Nullarbor Dreaming". A world record exploration into a desert cave. During November 1988, a team of Australian cave divers set out on an amazing adventure to explore the mysterious subterranean waters of the Pannikin Plains cave. This epic underwater exploration nearly ended in tragedy when a freak cyclone storm hit the area and the cave collapsed trapping the expedition below. The program is a graphic account of the expedition and their escape from the cave. Executive Producer - <i>Andrew Wight</i> .	\$29.95	
VIDEOS		Florida "Window to a Hidden World". The ultimate cave diving adventure. <i>Andrew and Liz</i> with fellow cave diver-explorer <i>Wes Skiles</i> , take us on a journey to discover the beauty and danger of the Florida aquifer. Beneath the surface of Florida lies one of the planet's largest freshwater reserves. The intricate system of water filled caves is now under increasing environmental threat from the population above. Producers: <i>Andrew & Liz Wight</i> .	\$29.95	
		Mexico "Water of the Gods". An exploration of ancient <i>Maya</i> ruins and underwater caves. Under the dense jungle of Mexico's Yucatan Peninsula lies a vast freshwater source relied upon by the ancient <i>Mayas</i> - a mysterious and complex people who built and occupied complex limestone cities in this region for over two thousand years. The <i>Wights</i> explore their hidden caves, uncovering their beauty and mystery, and providing a link to the past. Producers: <i>Andrew & Liz Wight</i> . Director: <i>Liz Wight</i> .	\$29.95	
		Cuba "Beneath the Surface". The underworld of <i>Cuba</i> . This documentary explores the role water has played throughout time in the history of <i>Cuba</i> . It reveals some of the many beautiful aspects of this magical Caribbean island, explores the bizarre subterranean caverns and provides unexpected contrasts with <i>Cuba's</i> turbulent history. This is an expose of a <i>Cuba</i> we believe we know. Producers: <i>Andrew & Liz Wight</i> . Director: <i>Liz Wight</i> .	\$29.95	
		Anniversary Edition T-Shirts. Colour: White, Blue. Sizes: Medium only.	\$5.00	
CLOTHING		Anniversary Edition Windcheaters. Colours: Blue, Black. Sizes: Small or Medium only.	\$5.00	
		Anniversary Edition Polo Shirts. Colours: White, Blue, Black. Sizes: Small or Medium only.	\$5.00	
		Polar Fleece Jumpers. Original Logo. Colours: Navy or Grey.	\$69.95	
		Polar Fleece Vests. Original Logo. Colours: Navy or Grey.	\$49.95	
MISC.		Beanies. Navy only.	\$17.95	
		Caps. Black only.	\$19.95	
		CDAА Key Rings. Blue with gold motif. CDAА P.O. Box on back.	\$5.00	
		CDAА Stickers. Yellow. (Include stamped, self-addressed envelope for delivery.)	\$1.00	
		Tank Cave Poster. Full Colour 14 1/2" x 25" poster of Tank Cave by <i>Peter Rogers</i> . Price includes p&h.	\$8.00	
		CDAА 25th Year Anniversary Stickers. Special deal - 3 for \$5	\$5.00	

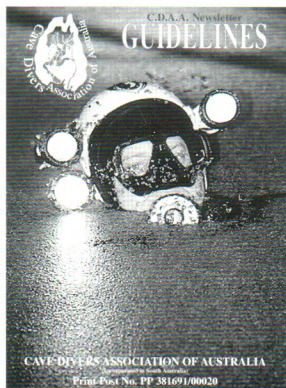
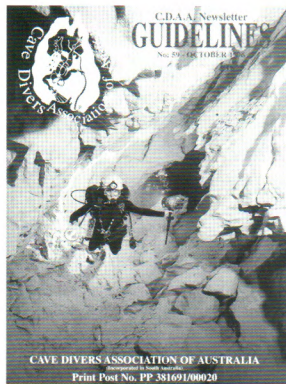
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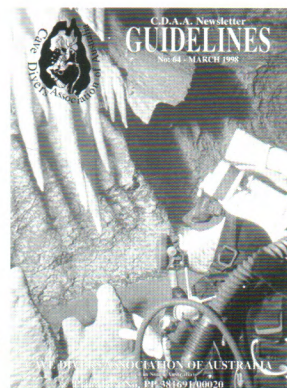
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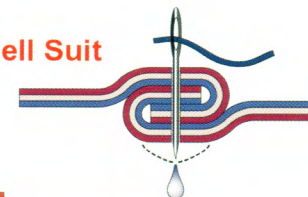
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