



C.D.A.A. Newsletter GUIDELINES

No: 76 - SEPTEMBER 2001

CAVE DIVERS ASSOCIATION OF AUSTRALIA

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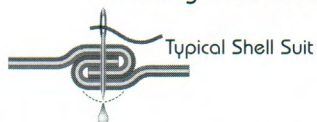
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P.O. Box 290, North Adelaide, S.A. 5006.
- Email to glenn@vds.net.au
- Any files for inclusion should be saved in "TEXT" or "ASCII" format. Hardcopy should also be provided wherever possible.

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Inside Front Page	Black & White	\$300.00
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Full Page	Black & White	\$250.00
Half Page	Black & White	\$150.00
Quarter Page	Black & White	\$100.00

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Front cover:

Photo credit:
John Seddon

Composite art design:
Gary Cobb, Cobb
Creative Advertising
and Design

Area:
Piccaninnie Ponds,
Mt Gambier,
South Australia

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GUIDELINES is a newsletter of the Cave Divers Association of Australia. All articles for the following issue are to be sent to the Editor, Glenn O'Connell, P.O. Box 290, North Adelaide, S.A. 5006. 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 and information may be reproduced without prior permission provided reprints are accredited to the authors and GUIDELINES. 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.

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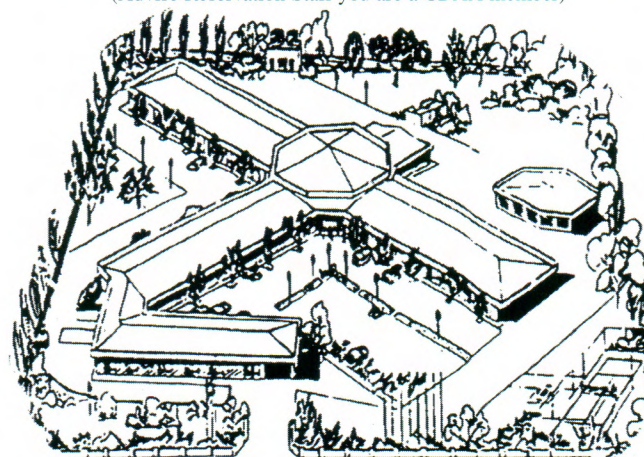


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MEXICO

The French Way

June is one of the quieter months down south so we, that's Jane Bowman, Richard Price, Les Rothbart, Robbie Stewart and myself headed for North America for the month. Florida was great and the crew that didn't have the latest Dive Rite HID's and wings, harness and reels were now equipped. Tony Davis, the Australian Dealer, took care of the accounts as well which enabled us to pay in Australian dollars back here. Very nice way to shop, thank you! With a whole load of deep penetrations under our belt we headed for Mexico.

Now Mexico in June has a few things about it that you should know. Firstly it's bloody hot, I mean damn hot! Secondly, mosquitoes are everywhere near the Cenotes, thirdly it's the cheapest way to go. The Villas Della De Rosa offers an off-season package that is quiet a saving.

Tony De Rosa picked us up at the airport and we drove the couple of hours to the Villas in Tulum. After a little trouble with rooms and a lack of communication between the De Rosas and ourselves, we settled in and worked out what we were going to do. First the guide, Christophe Le Maillot was French (a bad start?) although with six years experience in the area we thought he would probably do! Chris is the holder of two major records in Mexico, is a great bloke and has more dives under his belt in Mexico than most would get in a lifetime of cave diving.

Cenote after Cenote, each dive to a different place, some were wide open places others worm holes everything you can think of. If you wanted a long swim then this was the place, just follow the line, place a dozen or so gap reels in and away you go. The place is a hollow, tunnels everywhere and going in all directions. Skill was needed to plan, and mark your way, pegs were placed so many times that you quickly realised that this was very different to Florida and Australian diving. If you trust your guide you simply follow, gap after gap, jump after jump, circuit here, squeeze there. Nothing to worry about just follow the guide, right? Wrong, I can't think of a quicker way to get into trouble. Personally I don't trust anyone, if I can't find my own way out I'm not interested in going, therefore I peg, I remember and I plan. Mexico is different, they use one arrow to mark a jump, but not all the time, it could be a peg! Two arrows close together mean the shortest way out, but short is not relevant to distance or the exit here. A guide is essential if you want to see the place and find the better Cenotes. An interesting quirk is the way they hide the lines, one day, in the same site it will be "...off the Gold line to the right, high up!" Go back tomorrow and it's been moved. It seems that some guides think it is in the best interest of divers to move the lines around, shorten them or lengthen them, even change the type, thickness and colour at irregular intervals. This "safety?" procedure is

to stop Cavern Guides taking divers into the tunnels! Yes, a different system than ours.

Happy hour, the view of the Caribbean, warm clear sea water and crystal clear fresh water and sights to take your breath away. Go to Mexico but take your skills

with you. If you should want to know more ask one of our team.

By the way, check out the following website for more! www.dir-mexico.com

Warrick McDonald

BLUE CREEK RESURGENCE 2001

Crystal clear water, stark rock and undiscovered passageways make for great cave diving. Unfortunately, as in most endeavors there is usually a down side and in this case it was the water temperature, a cool 7 degrees Celsius.

Blue Creek Resurgence is located in the Nelson province at the top of the South Island of New Zealand. Here the karst formation is predominantly marble and limestone. The area is renowned for the Nettlebed (24 km in length) and Bulmer (53 km) dry cave systems, which travel deep underneath the surrounding mountains. Tourist and wild caves litter the area and are a Mecca to New Zealand dry cavers.

New Zealand cave divers Keith Dekkers and Keiren McKay had done several initial exploration dives in Blue Creek. Kieren reported the cave dropped to a gravel restriction at 32 metres and then opened into a river passage four metres wide, flowing both ways, explored to a depth of 45 metres.

Several months of planning, 20 kilos of excess baggage and one day of plane

travel saw Chris Ross and I land safely at Nelson airport. Waiting for us was an equipment supply kindly arranged by "Aquanaut New Zealand."

Access to the dive site is not easy. A casual twenty-minute walk up a hiking track soon becomes a wearisome hour carrying dive equipment. The surface lake is enclosed by a small cave, which is entered through a 2 metre drop from the dry riverbed. Keiren's orange line was clearly visible in the crystal clear water.

The aim of our first dive was to establish the extent of the restriction and ensure deeper exploration was safe. The entrance shaft resembles a smooth walled lava tube indicative of large water/ice flow from some time past. At a depth of 12 metres, small gravel pebbles covered the floor of the tube and appeared to fill the chamber pushing us ever higher toward the roof of the cave. We reached the tunnel restriction at a depth of 34 metres, 71 metres from the entrance. The "restriction," four metres wide and 80 centimeters high, was passed safely. Heading deeper, we swam across several large cross tunnels, which

TANK DIVE MAPPING ACTIVITIES

were heading upward toward the surface. Chris led down the third tunnel we crossed, the floor of which was scattered with smooth round riverbed rocks. Heading deeper we found the orange line tied off in a large room at 43 metres, 120 metres from the entrance.

We spent two weeks exploring Blue Creek and completed 9 dives in total. The cave was videoed to a depth of 65 metres.

Dives were conducted utilising stage bottles that were breathed down to a half plus 15 bar before turning, keeping our untouched backgas as bailout. The stages always contained the same mix as our backgas. This method is very conservative and enables a diver having a problem to discard the bottle, and resort to his basic backmount configuration. A diver becomes "cleaner" in the water, not having to manage an added bottle when exiting under stress. The technique also enabled us to maximise gas usage whilst minimising the number of gear haulage trips to and from the dive site. Our final dives were conducted using our backmounts only.

The dive is substantial and would be classified as a CDAA penetration site. It has multiple tunnels and several restrictions to negotiate. At a depth of 65 metres 180 metres from the surface the cave opens into two low arched room with a series of tunnels leading off tantalisingly deeper into the hillside. The largest room, which is found at a depth of 45 metres, rises at least 15 metres above the floor but was not explored above 40 metres due to other dive priorities. Several merging side tunnels also beg for further exploration above the 20 metre

point. These join to form one tunnel that rises shallower toward a second entrance in the flowing riverbed above.

All maps and underwater video tape obtained is currently being collated and will be forwarded to the New Zealand Speleological Society for assistance with future exploration. I also wish to thank the local Nelson dry cavers for their support and advice.

We would like to specifically thank Aquanaut New Zealand, Darren Lark of Aquanaut Australia, SportsWorld Motueka, Diver Instruction Service and Electronic Power Systems.

Barrie Heard of IANTD Australasia and Matt London of the Thailand Cave Diving Project provided valuable technical advice.

- *All shallow dives were conducted using Nitrox at a maximum partial pressure of 1.4.*
- *Trimix was used on all dives below 40 metres - an equivalent air depth of 30 metres was standard.*
- *Decompression mixes were staged within the cave and not taken deeper than a MOD of 1.6.*
- *Dives were limited to a maximum of one hour in the water due to the water temperature and the remoteness of the dive site.*
- *Dives were conducted using GUE's Decoplanner software.*

By Steve Trewavas

The Tank Cave mapping activities are gaining momentum and starting to produce a wealth of accurate data utilising some innovative technology and approaches.

Two Radio Direction Finding (RDF) systems have been developed and refined over the last few months and are now enabling rapid and accurate determination of the surface positions of the underwater cave points. The two systems follow quite separate approaches and both are proving very accurate and efficient.

The Ken Smith & Adrian Richards "Pinger" system is a collection of 3 very compact tubular transmitters that are easily carried by one diver. The transmitters are placed at prearranged points through the cave on a single dive. The surface positions are then identified with the RDF receiver and marked before the transmitters are repositioned and eventually retrieved by subsequent dive teams in a leap-frog process. The transmitters are buoyant and are weighted so that they float vertically against the tunnel roof. The transmitter positioning against the roof and the angular capability of the receiver facilitates not only precise positioning, but also allows distance and angle measurements to be taken for mathematical calculation of the rock thickness.

The John Dalla-Zuanna "Thumper" is a single circular shaped directional transmitter with a surface return signal capability. The transmitter is placed at the required cave point by the diver and activated. As soon as the surface team

locates the position and a marker is placed, a return signal is sent to the diver. The return signal sounds a buzzer on the unit to notify the diver to move to the next planned cave point and also turns the transmitter off. The break in transmission confirms to the surface team that the message has been received and they also move to the next planned position where the process is repeated. Once the teams are in position the acquisition times are rapid, currently around 1 minute. Depending on the dive distance and particular target points, up to 7 positions per dive are currently being acquired.

The accuracy of the surface position from both units is to within a few centimeters. A total of 18 positions were located on the mapping weekend of the 18/19 August, mostly across the S-section of the cave. This a very impressive throughput given the other activities that were also being conducted on the site over this time and the atrocious weather conditions that prevailed.

To assist with the planning process and as an operational tool for the weekend activities, a draft site map had been produced from survey data collected on previous visits. The surface data was acquired from physical measurements and the John Winkler backpack mounted differential GPS system with attached survey data logger to calculate the surface positions of the various features. Phil Prust provided an excellent draft of the latest Tank Cave plan and this was merged into the composite layered draft map with

specialized computer mapping software. The Map Grid of Australia layer was added providing a standardized grid reference resolution down to 10m. The result was a multi-layered map of the Tank Cave area showing the relationship of all major features above and below ground.

The required cave points were then identified and the coordinates Downloaded back into the GPS. The GPS and grid map enabled the surface RDF teams to pre-position close to each target location and this greatly assisted the efficiency of the process.

A local surveyor volunteered to assist with the fine detail mapping and was present on the weekend. The draft map was used to plan the work and a local Survey Grid has now been established to enable simple and accurate recording of future positions. A series of 24 permanent survey marks have been located across the site, all accurate to within +/- 2 cm of the Map Grid of Australia. The survey grid has been designed so that any future positions we wish to record will fall within 100m of at least two survey marks. Simple distance measurements to any two marks is now all that is required by the mapping co-ordinators for entry into the mapping software for automatic coordinate calculation and recording. So ground teams

will not require any sophisticated skills or equipment to produce efficient and accurate results.

The team participating on the 18/19 August were John Dalla-Zuanna, John Vanderleest, Ken Smith, Adrian Richards, Rob Wallace, John Winkler, Tim Foster, Harvey Grantham & Phil Prust.

Also a big thank you to the divers who assisted with the previous survey visits; Carlo Virgili, Glen Harrison, Andrew Seifried, Dave Warnes, Warrick McDonald, Jane Bowman, Gary Barclay, Jurgen Gehrer & Gary Bottomley. Apologies to anyone we may have inadvertently missed.

And a special thanks to surveyor Mark Oldfield who has given us the valuable base data to build our map of the future and Rob Dycer for allowing us to tramp all over his paddocks.

There are a number of other activities currently in the pipeline. Stay tuned for the next issue of guidelines for the latest developments and a comprehensive article on the project.

Dive safe.

John Winkler



BUSINESS DIRECTORS REPORT



OFFICE BEARERS

The last issue of Guidelines called for nominations for office bearers, member motions and amendments to the constitution. The Returning Officer has informed me that one nomination was received for each of the three office bearer vacancies and I have received no member motions or proposed amendments. Accordingly, there will be no ballot conducted.

Chris Edwards will remain as Publications and Records Director, Warrick McDonald will continue in his role as National Director and Rob Brennan is to take over from Steve Arnel at the AGM in October. On behalf of all the members I would like to thank Steve for all of his efforts over the last few years and to welcome Rob to the National Committee.

Richard Price

Business Director

THE EXPLORATION OF SISTEMA OX BEL HA

The Ox Bel Ha Cave System, Quintana Roo, encompasses 70,693 meters of surveyed and mapped underwater cave passage, with a maximum depth of 33 meters and an average depth of 15 meters. There are a total of forty-four cenotes connected to the system. The halocline is at a depth of about 9 meters where the aquifer empties into the Caribbean Sea and about 18 meters in the cave's inland reaches. Ox Bel Ha extends beneath a wide range of pristine terrains, from the ocean shoreline through mangroves, salt marsh, and saw

grass to the dense jungle that hosts a myriad of plant and animal forms. Remains of walls and pyramid mounds witness previous occupation by ancient Maya throughout the area.

The discovery and exploration of Ox Bel Ha has taken years and is still going on. It was in February 1996 that Orane Douxami, Travis Mack, Sam Meacham, and Bil Phillips embarked on a jungle adventure with two Mayan guides in search of new cenotes. In the preceding months, Juan

Toon and Juan Garcia had escorted us to several other cenotes in the dense Yucatan jungles south of Tulum. We were looking for an elusive Emerald Cenote much deeper in the jungle. After two hours of bushwhacking and marching along unmarked paths, we arrived at the largest collapse area we had ever seen, a 500-meter stretch of the most pristine jungle one could imagine. We all stood speechless, gazing into the crystal waters of Cenote Canales.

Canales was beautiful, but it was also the home of a thriving crocodile population. Two years would pass before we returned to it. This trip, having studied aerial photographs of the area, Sam and Bil trudged farther back into the jungle to another staggering discovery. The Emerald Cenote, Esmeralda, proved to be a large, open-water pool over 170 meters in length, sunken 12 meters below the surrounding jungle, and with two islands in the middle. This was too exciting to ignore, and the hike back to civilization passed quickly in non-stop discussion of what we had seen and its ramifications. Somehow even then it was clear that this would be the start of something big. The very next day, a reconnaissance dive confirmed our belief that this was going cave. It would take another eighteen months of meeting with the owner, Ejido Jose Maria Pino Suarez, planning, and hard work to establish just how big the cave actually is.

ESMERALDA, MAY-JUNE 1998. It was time for additional explorers to join the team. Fred Devos and Daniel Riordan joined Sam and Bil for a six-week expedition. Weeks of cutting 6 kilometers of horse trail were necessary before a day-camp for a generator and equipment store

could be established at Cenote Esmeralda and, later, moved to newly discovered Cenote Amber Sun. The hike in was now only an hour and a half, and the explorers continued to walk in and out daily along rough jungle tracks. The existence of the camp simplified logistics and reduced the loads that had to be carried in and out of the jungle, but the long hikes still increased the risks of dehydration and injury. Nevertheless, the first Esmeralda expedition was a great success. The four divers completed a total of twenty-nine dives, with bottom times often exceeding four hours, and explored and surveyed over 11 kilometers of cave passages connecting a total of eight entrance cenotes.

CHIKIN HA, JUNE 1998 TO MARCH 1999. While Bil, Sam, Fred, and Daniel were investigating the Esmeralda system, Bernd Birnbach and Christophe le Maillot were pursuing what at least at first appeared to be an unrelated effort starting from Cenote Del Mar. The French Cave Diving Federation had begun exploration from nearby Cenote Tarpon with some 300 meters of line, and subsequently Steve Gerrard, Tamara Kendle, Steve Keene, and Sue Sharples connected to this line from Cenote Del Mar. Continuing from a lead that Sharples had found, Ted Cole and Tamara Kendle had then added an additional 1400 meters, bringing the total to about 1800 meters.

Bernd and Christophe resurveyed all existing lines and made new discoveries. By the end of a six-month period, they had explored and documented an additional 18 kilometers of new cave and were starting to reach the limits of what could be accomplished in a single dive. This new cave system was Sistema Chikin Ha

(Western Water). Although access to the original entry point was relatively easy, impenetrable mangrove prevented land access to all cenotes inland from Del Mar. As penetration distances increased, scooters, multiple stage bottles, and then finally separate set-up dives were required. Having switched to a more flexible and self-reliant side-mount configuration, Bernd and Christophe, with help from Daniel Riordan, then pursued the downstream side of Chikin Ha, where an important discovery was made. Sistema Chikin Ha drained directly into the Caribbean Sea through a total of three vents.

The two groups of explorers, in Esmeralda and Chikin Ha, did not pursue their efforts in isolation. As the two cave systems unfolded, a connection between the systems became increasingly likely. When

computer-generated maps of both systems were overlaid on aerial photographs of the region, our hopes increased. Even allowing for errors in the surveys, the two cave systems were probably only 500 meters apart. Indeed, it became apparent that there might be another connection. Gary and Kay Walten had been exploring the neighbouring Sistema Ya'ax Chen (Blue-Green Well). By connecting a chain of cenotes, they had succeeded in exploring about 18 kilometers of new passage. Caves that had originally been separated by miles of jungle were now tantalizingly close, and the time had come to recognize this. In order to avoid the counter-productive competition that has plagued Mexican cave diving in the past, the three groups agreed that a new name would be in order should systems connect. The Mayan name Ox Bel Ha, Three Paths of Water, would



encompass all the exploration, while still recognizing the three teams' efforts.

On March 13, 1999, the connection between Chikin Ha and Esmeralda was achieved. It required a dive of more than 3600 meters by Bernd and Christophe, using triple scooters and six stage bottles each, in addition to their back-mounted doubles. They started from Cenote Del Mar, and their bottom time exceeded eight hours. This accomplishment made the combined size of the cave over 33 kilometers, and the name Ox Bel Ha became official. The exploration and survey of the 21 kilometers of cave in the Chikin Ha part of the system had taken a total of fifty-nine dives. Fifteen cenotes were connected, and the three connections to the ocean made. The farthest penetration was 4200 meters. The connection to Ya'ax Chen remains elusive to this day.

YA'AX KAI, MAY 1999. Once Esmeralda and Chikin Ha had been connected, further exploration became a formidable proposition. Daily excursions, now reaching another half kilometer beyond the Esmeralda camp, through difficult terrain, combined with very long dives, were out of the question. The time had come for a step up in the activity, a full-blown jungle base camp. The first base camp was established at Cenote Ya'ax Kai (Blue Fish), which had previously been discovered in the course of dives from Esmeralda. After many weeks of trail clearing, the comforts of home were left behind, as the first camp-based expedition, which lasted four weeks, commenced. Sabine Schnittger joined the Esmeralda and Chikin Ha team members in a joint effort to push the far upstream reaches from Cenote Ya'ax Kai. We also had full-time support: Beto Segunza, the

expedition horse Antar, and Don Celiano Herrera with his team of helpers, horses, and mules for transport of equipment and supplies. All members now dived with side-mount equipment configurations for increased self-sufficiency, and scooters and double stage bottles became standard issue, allowing for a working radius of over 2000 meters. Underwater times averaged four hours. Several double-scooter, triple-stage dives were also performed by buddy teams, in push dives in search of cenote entrances and future camp sites yet farther into the inland terrain.

Setting up a complete base camp over 6 kilometers back into the jungle presented serious physical and logistical challenges, but the trade-off came in the form of better surface support, more safety equipment, more manpower, better evacuation procedures and communications, and on-site map display and data storage. Although the workload of daily chores and equipment maintenance took on new dimensions, expedition-style efficiency prevailed, allowing for maximum performance and reduced physical stress. This paid off. In the four weeks, with more than thirty-nine dives, the team of seven surveyed and mapped an unparalleled 14 kilometers of new cave. At over 47 kilometers, Sistema Ox Bel Ha became the third longest known water-filled cave system in the world. Five new cenotes were connected. In addition, biologist Samantha Smith of the Centro Ecologico de Akumal conducted hydrological studies, analyzed salinity levels, and sampled the water quality. In this rapidly developing and environmentally threatened region of Mexico, Ox Bel Ha's water proved to be pristine.



CENOTE XUX, DECEMBER 1999. The exploration, documentation, and study of Ox Bel Ha now demanded a much greater level of commitment and planning. In the summer of 1999, the Grupo de Exploración Ox Bel Ha was formed. GEO's founding members Bernd Birnbach, Fred Devos, Christophe le Maillot, Sam Meacham, Bil Phillips, Daniel Riordan, and Sabine Schnittger established this non-profit organization. After studying aerial photographs and making many jungle hikes, GEO concluded that exploration should continue in the vicinity of the southwestern part of the system at two cenotes, Cenote Xux (Wasp) and Cenote Xix (Dust), whose existence had originally been established through aerial photos. They had not been connected to Ox Bel Ha, but they lay in an open section of land between the Esmeralda part of the system and Ya'ax Chen. Underwater investigation

of this area had initially proved frustrating. Mysterious water movement and confusing passageways suggested that a large breakdown area would prevent this section from ever being connected to Ox Bel Ha. But an initial reconnaissance dive performed by Fred found several passages that could potentially connect to Ox Bel Ha. The leads looked promising, and the decision was taken to risk a base camp at Xux in the hope of connecting it with Ox Bel Ha.

The camp established at Xux proved to be the foundation for GEO's most successful expedition to date. During the two-week project, team members dived in shifts and, with the help of field-blended nitrox, safely executed fifty-nine dives. On the fourth day of exploration, Bil Phillips made the connection to the Esmeralda section of Ox Bel Ha. The cave reached out in all directions, and exploration raised as many

questions as it answered. Passages heading from Xux toward Sistema Ya'ax Chen were blocked in a tannic-water breakdown area within an estimated few hundred feet of connecting. At the end of the project, a staggering 24,021 meters of passage had been explored and surveyed and sixteen new entrances discovered. The combined result of 70,650 meters made Sistema Ox Bel Ha the longest underwater cave in the world. With two large cave systems, Ya'ax Chen (18 kilometers) and Naranjal (20 kilometers) nearby and several prospects for new base camps, it looked like work in this colossal subterranean waterway had really just begun.

OTHER CAVE SYSTEMS, 2000/01. By the end of 1999, exploration of Ox Bel Ha had been an unqualified success. However, along with the vastly increased size of the system came correspondingly high logistics costs. In 2000 GEO turned its

efforts toward the surrounding and more accessible cave systems Ya'ax Chen and Naranjal. Several attempts to connect Ya'ax Chen to Ox Bel Ha from the Ya'ax Chen side were unsuccessful, in spite of its close proximity. Exploration dives were conducted in the downstream section of Sistema Naranjal. Christophe and Bil discovered a hidden restriction and added 760 meters of passage. It was a breakthrough that had eluded explorers for several years. Named Snakes Man's Escape, this side-mount passage winds its way southeast toward Ox Bel Ha through a multitude of restrictions with considerable water flow.

A cave called Ayim (Crocodile) is located approximately 2.5 kilometers inland from the farthest upstream reaches of the Ox Bel Ha system. This cenote covers an area of about 40 by 300 meters of marshy collapse containing a total of five open pools. Cave

explorers Gary and Kay Walten first discovered the system in 1997 and explored 1208 meters of passage on the upstream side. Since that time, GEO members Bernd Birnbach, Fred Devos, Sam Meacham, Bil Phillips, and Sabine Schnittger added an additional 1672 meters to both the upstream and downstream parts of the cave, establishing lines heading directly toward Ox Bel Ha's distant Jigsaw Reach.

The year 2000 culminated in a ten-day December expedition using only a day-camp to store tanks and equipment. From this location, Steve Bogaerts, Fred Devos, Christophe le Maillot, Bil Phillips, and Daniel Riordan conducted several dives into new passages. Christophe concentrated his efforts in the Naranjal siphon area and was successful in adding an additional 975 meters of passage. This route continues to wind its way downstream through seemingly endless side-mount restrictions and complex cave. Daniel worked the deeper, saltwater leads to investigate places believed to hold possible breakthroughs. Ultimately, this ended in disappointment. Sistema Naranjal now sits at 21,336 meters of explored cave, and a connection to Ox Bel Ha is even closer.

By the end of the expedition, Sistema Ayim had been surveyed to 8,166 meters. Yet a connection to Ox Bel Ha could not be found. As the lines were laid and the pattern of the new passages emerged, it became clear that the main trunk passage was veering off to the south, away from the destination we had anticipated, and heading toward an even more distant part of upstream Ox Bel Ha. Further

exploration will be required. Our efforts are not finished in this region.

As this is being written, GEO is pursuing exciting new leads. Just weeks before the Ayim project, Jim Coke and Sam Meacham located a cenote in a strategic position between Naranjal and Ox Bel Ha. Jim and Sam were able to verify both upstream and downstream leads from this Cenote Andreas. Another important discovery was made on New Years Eve. Two kilometers inland from the farthest reaches of Ox Bel Ha, Cenote Chuup Ich (Swollen Eye) had been found on an aerial photograph. Steve Bogaerts, Bil Phillips, and a transport crew hacked their way out to Chuup Ich with one set of side-mount gear to make a recon dive. The effort found 600 meters of new cave in both upstream and downstream passages. Chuup Ich is bracketed by Naranjal and Ayim.

It was decided to use closed-circuit rebreathers to see exactly what Chuup Ich has to offer. All our previous explorations utilized open-circuit scuba, and to our knowledge closed-circuit rebreather technology had not been used for shallow, long-distance exploration here in Mexico before. Steve and Bil conducted a mini-project from March 31 to April 3, 2001. Utilising Buddy Inspiration rebreathers, we learned a tremendous amount about the technology and were also successful in establishing the promise of the new cave system. Three dives resulted in 2400 meters of new cave. With the original 600 meters, Chuup Ich holds a total of over 3 kilometers of surveyed and mapped passages, along with two additional entrances.



Our fellow cave diver, friend, and first patron was Steven Douglas Corey. When our ability to continue our self-supported efforts was exhausted, Steve, believing in and sharing our vision, stepped in. Without his involvement, most of what we have accomplished would not have taken place. He will not be with us to take part in future projects. On November 9, 1999, he lost a two-year battle with cancer. On April 25, 2000, Steve found his final resting place in Sistema Ox Bel Ha when his ashes were set free in Cenote Esmeralda. The pursuit of our goals now has even greater meaning to us all. Thank you, Corey.

GEO would like to thank all its contributors for their support in our efforts here in Mexico's Riviera Maya: Standish Meacham, Don Keele and Joan Huton, Dave, Renate, and James Christy (Rendezvous Charters), Joe Anthony and Heidi Deja, Jane Morrison, Jana Smith, Gerry Hill, Diver Dave, and the Grand Pooh Bah. The following gave support and assistance: Jane Emerson (Corey Electrical Engineering), Paul Beale and Vickie McNair (Aquanauts Dive Center), Joe Borovic, Bart and June Bjorkman (Enviro Dive Services), Lewis Cadenas (Baure Compressors Miami), James Coke IV, Ross Cowell, Juan Chio, Bob Hemm (Explorers Club of New York), Ivan Hernandez and Daniel Corredor (Aguakan SA de CV), Lamar Hires (Dive Rite), Eric Huurre (Skywriter Productions), Greg and Sally Hrehovecsic, Andrew Pitkin (Hyperbaric Medicine), Buddy Quattlebaum (Hidden Worlds Dive Center), the directors of the Quintana Roo Speleological Survey, Gunnar and Lina Wagner (Aktun Dive Center), and Mike Way (Colorado Alliance for Environmental Education.)

And special thanks to the landowners, the Ejido Jose Maria Pino Suarez and Commisario Mariono Dzul and the Ejido Tulúm. And our crew Beto Seguenza, Don Miguel Chiu, Don Selliano Herrera, Santos Mejia, Sr., Santos Mejia, Jr., Don Melesion, William, Jose, and Cristino.

Grupo de Exploración Ox Bel Ha:

Bernd Birnbach, Germany

Steve Bogaerts, England

Fred Devos, Canada

Christophe le Maillot, France

Sam Meacham, U. S. A.

Bil Phillips, Canada

Daniel Riordan, Mexico

Sabine Schnittger, Germany

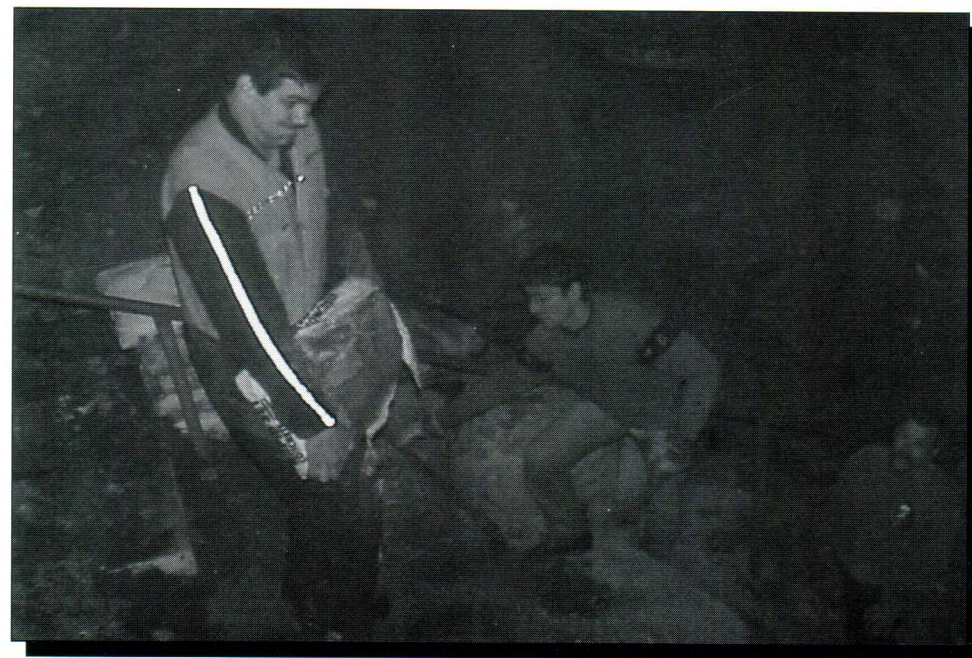
Bil A. Phillips



ENGLEBRECHTS WEST WORKING TEAM

At one of the Landowner meetings which are held in Mt Gambier every few months, Cliff Collier the manager of Lifeline, who looks after the Englebrechts Tourist Cave, Steve Arnel and myself discussed the improvements that had been done to the East side. It was suggested that we could do the same on the West side, installing stairs from the platform to the small cave at the bottom. Cliff said he would look for donations of money and materials. Cliff true to his word E-mailed me with his plan and after working through the logistics it was decided that as soon as the "season" was over we would close down Englebrechts and begin. The chance came

but then a wedding, the first ever held at the site got in the way. We had an envelope over the weekend of the 28th and 29th of July so Cliff Collier E-mailed me the date. As is always the case plenty of members want things to happen but when it comes time to do the work they are often busy. It sure didn't help when I could only give a couple of weeks notice. The E-mails went out requesting help and our mailing about Tank Cave, which went to every Penetration level diver, also contained the information. Anxiously I waited for the volunteers to contact me whilst attending a conference in the Hunter Valley, NSW. Realising that there wouldn't be many, the





Directors "volunteered" they would have to do the job. I flew in to Melbourne on the Friday night getting home at 2.30am, Jane had booked a flight to Mt Gambier for 6am so at least I wouldn't have to drive, although sleep was out of the question. Paul Axton picked me up at the Mt Gambier airport and reported that Phil Argy, Tim Foster, Andrew Young and Steve Arnel were waiting. Chris Edwards was working until late Saturday so he drove over to work on the Sunday. Gerret Springer had already let me know he was coming and his wife Katrin and two children met us as well. Cliff opened up the gates and away we went manhandling two pallets of limestone blocks down the stairs to the lower landing. We planned to stack the blocks at the base of the platform on the Saturday and Sunday and then finish the work on another weekend. But, as luck would have it, we busted our boilers, even though it was raining on those outside in

our human chain and had the blocks stacked by lunchtime. Kevin Mott arrived with the plans, (nothing like engineers to help) so we decided to try and finish the job. The combination of dirt, sweat and the weight of a few hundred limestone blocks plus concrete bags and a lack of sleep were starting to hit me, but by the look of our other workers I don't think I was the only one. Our workers came and went because of family commitments etc. but the job progressed until we hit a snag. The bags of pre-mix turned out to be cement and mortar. Golly gosh! The workers exclaimed, plus a few daggers were shot in Cliff's direction, "It's not my fault, they gave me the wrong stuff" he said. You would think that before we carried down 40kg bags we would check what was in them, but I'll just excuse us by saying we were tired! So now we needed sand and screenings plus they had to be carried in some form down the stairs and mixed

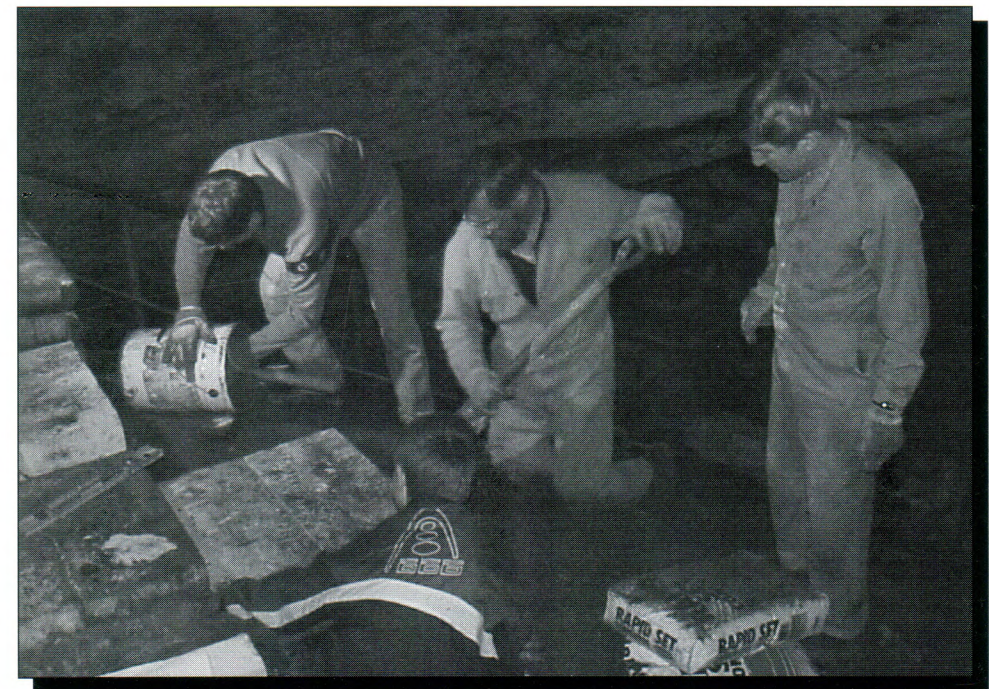
somehow. I realised something would have to be done to put down the rebellion, which could have resulted in new bones, buried in the mound. Cliff and I went to the only place open and then the haggling started. To cut a long story short we left with six bags of pre-mix "donated" to Lifeline and the CDAA, hence go and buy something from them and mention our name and the good deed they did! Meanwhile back at the site..... six bags were then carried down by Paul and Andrew with a little help from me. (I only weigh a bit more than a bag, wringing wet!) The job had now progressed to such an extent that we could actually see the end. Cliff organised a mercury vapour floodlight, from another "friend", and Kevin who obviously didn't sleep on the Saturday night supplied wooden templates. Dig, lift, pour, level, adjust and square off, over and over again. Finally it was over, the

job completed, the Engineers plan followed to the.....well close! Have a look at it next time you're there, if you're diving, see if it doesn't make it easier!

Thanks to Gerret Springer, Phil Argy, Tim Foster, Andrew Young, Paul Axton, Steve Arnel, Chris Edwards and Kevin Mott. Don't forget that this was made possible by Cliff Collier of Lifeline, "Stafford and Earl" who supplied the limestone blocks and "Gambier Earth Movers" who supplied the Quick-Set concrete.

Finally apart from the labour special thanks should go to Phil Argy who at the death knock gave us some limestone blocks to finish the job.

Warrick McDonald.



THE PUDDLE -

McCavity Cave

Waking up and dozing off, I was only remotely aware that half of me was restless, the other half just wanting to sleep.

In a few hours, the very early hours, I would soon stir and drag my body unwillingly from its resting place and push it into the shower. There thousands of water droplets would hopefully do their job by initiating the lights being turned on in my brain. For the moment however, I remained half asleep, preoccupied with an image of a small hole which was accompanied by the words _Wellington, Wellington, you should see the entrance, it's a ***!!**&&!

With the sun already having risen, the car with myself intact, moved fluently along the Newell Highway increasing its hold on the central N.S.W. countryside. At the next fuel stop, Jurgen and I would catch up with the other members of our party, Helen, Andrew and Mike.

Between the petrol pumps, the odd curious glance was cast upon our trailers of scuba tanks and gear. What must they be thinking I thought to myself, Dive country N.S.W.? Up since 4.00.A.M. this morning, the only wrecks around here could be seen climbing into their cars and heading north.

For sometime now we had practised any number of sidemount configurations off Parkdale beach. We had reconfigured gear, then reconfigured again. Being happy with the gear was having the ability to put our sidemounts on and take them off, attach and unattach lights whilst underwater, with no problems. The Australian Geographic article on McCavity cave had kept us sober, with the most sobering aspect being the entrance. Lets just say it's very small.

After branching off the Newell from Parkes, we finally reached our destination Wellington, where in the nicely shaded caravan park, we were only a few 100 meters from McCavity.

As Greg Ryan our guide from the Sydney University Speleologist Society, wasn't due till Saturday morning, we dawdled up to the nearby cave office to see what was in the wind. This turned out to be an unexpected boon. We obtained the keys for the nearby gate, drove our vehicles through and unloaded our gear into the entrance of Lime Kiln Cave, which would in turn lead us to McCavity.

With a cave ladder secured, we descended the five meters into the caves entrance. Daylight soon faded and was replaced by the small yellow tungsten beams of our cave

lamps. Scrambling down the honeycomb of the sometimes-precarious rock collapse, we soon bore the tribal markings of dirt dust and mud, daubed upon our arms legs and faces. With my helmet scraping from the constant massacre of bumps, I edged backwards on hands and knees through the final crawl way, to be then stooping in the small room known as the telephone Booth. And there it was, a seemingly innocent puddle, a very clear puddle, a bottomless puddle, one size 7 boot high, by my three size 7 boots wide. In all honesty it didn't look quite as small as I expected, but make no mistake it was small. They didn't call it The Birth Canal for nothing.

After the initial puddle viewing, I felt inclined to prod it one more time, but it lay there unrelenting. Finally, we began the task of loading all our gear into the cave. Having divided our group into two for the actual diving, we placed Helen, Andrew and Mike's gear into or nearest to the Telephone Booth, ready to go for the morning. The Booth was jammed with three people, let alone with dive gear. My own and Jurgen's gear was stored at Central Station ready for the second dive. After that task was finished, we made for the surface and fresh air to relax after the long day, with a few well-earned liquid refreshments.

Upon his arrival on Saturday, Greg's gear was soon placed into the cave ready to lead the first group into The Birth Canal. As Helen's head disappeared into the puddle and the last piece of gear was passed down through a series of prearranged signals, we watched the last evidence of diver activity also disappear with the fading glow of torchlight from the puddle. Jurgen and I were now left alone in solitude to ponder. When the torch's life force returned to activate the puddle's glow, I knew it would soon be our turn to enter its domain.

Entering The Birth Canal with dive gear on is out of the question. A large cylinder with a 10 metre long hose and reg was set up in the Phone Booth. And in order to pass gear in and out, a long piece of webbing was used. It was also useful for pulling oneself free of the puddle on exit. The Birth Canal was full to the brim with water, but in periods of dry weather, can be partially full or empty. At the empty level, Mc Cavity is rated as cave, due to its major restriction being out of water; otherwise it is rated as a penetration site. Back mounted twin 55's are the largest tanks that can be passed through The Canal. Anything bigger simply won't fit unless it is passed down singularly, which is why sidemounts are useful. When each diver enters The Birth Canal, only mask, fins weight belt, helmet and the long hosed reg are worn and nothing else, as nothing else fits. Once through, each diver's tank B.C.D.etc is lowered down, to allow gearing up to take place underwater. I had chosen to be slightly positive in buoyancy, mainly to prevent myself from sinking too much down the cave drop-off, to the bottom six metres below whilst putting my gear on.

With reg in mouth, I edged slowly backwards until water engulfed my legs. Sliding down to my head and elbows, I grabbed my camera and strobe, and then disappeared beneath the puddle's surface. After pushing myself downwards, I was surprised at the



difficulty of manoeuvring my Nikonos and strobe down the canal. Scraping in unison with my helmet, I hoped that the neoprene stubby holders were doing their job at protecting my lens and viewfinder. I soon took heart as the 1_ metre long constriction gave way to a large chamber. I tethered my camera and through a prearranged system of tugs, geared up alone. Although on a sharp incline, the ledge surrounding The Canal exit, allowed oneself to back up to it, for tank manoeuvring etc. I was feeling rather chuffed with myself, until I noticed my reg was skewiff and somehow threaded under my B.C.D. After the word idiot momentarily passed, I went about some corrective manipulation therapy along with the thought; slow and steady wins the race, well entrenched In my mind.

With the gradual appearance of his fins, came the slow realisation that I was to witness the birth of Jurgen. After the final cradling of his torch, his umbilical was soon cast aside and now breathing unassisted, we finned away into McCavity.

Drifting down the Long Tunnel, small calcite formations were only a hint of what was to come. Allowing my mind to wander the annals of this water-filled cavity, the sudden presence of several large suspended stalactites took me by surprise. In captivity, we hovered around them with my strobe illuminating them, like the fingers of a giant wreaking havoc with lightning bolts from the heavens above. Testimony perhaps to the accompanying torrential rain, a nearby flowstone lay motionless, its now gentle cascade frozen in time.

Further on Rapunzels Tresses towered above us. Its size alone was mesmerizing. So named for its gothic like headpiece, this daunting formation is known as a Pendant Flowstone. To float by this giant was a magnificent pleasure.

Approaching in silence, The Dragons Teeth lay resting on a ledge undisturbed for an eternity. Aptly named, each tooth and bone-looking stalactite and stalagmite, might have even thrown a passing palaeontologist into a momentary gasp; but as we glided over to this secluded edge, I just found myself gazing in awe. With each fang looking ready to puncture the head of another hapless victim, it didn't even feel strange that this delicate sculpture could evoke such thoughts in only 8 metres of water.

With the teeth way behind us, I watched ahead as Jurgen now rose towards the ice like surface of Bondi Beach. As his head broke through, I was greeted with a myriad of snow-like flakes raining down upon me. Heavily saturated with calcium carbonate the main constituent of limestone, the calcite surface could no longer hold together, and so let fly with a beautiful display akin to being trapped in a snow dome. At the surface, the surrounds were more ordinary, but at least the air was breathable. And although one can make it to Bondi from the surface via some very squeezezy dry passages, it is nevertheless too difficult to make it with dive gear.

Sinking downwards though the dispersed calcite we continued our exploration, and made our way towards the Northwest Passage. The ever so slight milkiness apparent at the outset of the dive was beginning to intensify. The calcite rafts as they are known, had definitely sunk, and no doubt contributed to this, together with our bubbles, passage through The Birth Canal and the others having been through before us.

The narrower Northwest Passage led us to Hanging Swamp. Here the roots of trees hung ominously around us. As we passed through, a hairy appendage grabbed on to Jurgen's tanks, which had me thinking, the bogeyman is alive and well. It was a quiet relaxing passage on our last reconnaissance, and with the turn around finally given; it was soon time to leave.

The following day Jurgen and I would be the last to dive. With visibility down to only a few metres, it was as if we were surrounded in a dense fog. Strange shapes were to loom towards us out of the mist and then reveal themselves at the last moment to be stalactites and the like. Although the visibility was low, this dive was to be equally as good as the first, simply because of its own special atmosphere, which it brought to the dive.

In the meantime we arrived back at The Canal and began unrigging in preparation for the surface. With that completed, the only task remaining was for me to make my way upwards back to mother earth.

Still immersed in thought, I finally emerged from the puddle. What a great dive it had been.

With only half my torso protruding from the puddle, I gathered my senses for a few moments, and then at last stepped out. It had been an exceptional dive.

Having a memorable dive such as ours requires good teamwork. It was essential. So I would like to thank Greg Ryan for volunteering his time and expertise in showing us McCavity; and also my fellow dive buddies, Jurgen Gehrer, Helen Genitsaris, Andrew Higgins and Mike Eccles for their good teamwork and companionship.

As a cave diver people often ask, what do you see down there? I couldn't just say giant fingers, a gothic head, some fangs and a snow dome could I?

POST SCRIPT

Rather than bring a compressor, we decided on taking two sets of twins or sidemounts. As mentioned previously, twin 55's will fit in The Birth Canal; anything larger has to be in sidemount form. Due to the shallow depth, we all agreed that the 55's were more than enough for air consumption. Underwater, gearing up took no longer than 8 minutes on the average for each diver. But this is a very rough guide. I certainly felt that I took longer than expected on the first dive. The important thing is to take your time and don't rush. Although our four metre cave ladder was adequate, an 8 metre one or longer would have been better for the entrance to Lime Kiln. Also a second ladder and I'm guessing here, about four metres long, could have been put to good use in bypassing a section of precarious rock collapse leading into Central Station. Extra rope for securing ladders and passing gear is essential.

Arriving up the day before and setting up our gear in the cave, saved a lot of time. We got two groups of four and one group of two into McCavity on the first day of diving. On the second day it was only Jurgen and I. It is essential that someone remain on standby at the surface. In this way two groups work well. I would think that no more than four in each group is more than enough, but it would be advisable to talk to Greg Ryan about this. Staying in a cabin at the caravan park in close proximity to the cave was also an advantage. With only Jurgen and I diving on the Sunday, our whole group managed to get away early at 1230P.M. for the 9 to 10 hour-long trip home to Melbourne.

CAVE AND DIVING EQUIPMENT

- We filled one van, one car and one trailer for one three-day trip
- Climbing tapes, (easy to attach to tanks).
- Karabiners for gear, ropes and ladders.
- Two cave ladders, 8 and 5 metres minimum length apiece.
- Enough ropes to secure all ladders.
- One hauling rope.
- Helmets, dry cave lamps and spare batteries.

Water bottles.

One large scuba tank and extremely long hose (7-10 metres in length, I recommend talking to Greg about this).

Leather gloves for each person.

Old clothes, or protective gear.

Protective bags with strong handles, for all dive gear and equipment

Dive gear, spares etc. First Aid Kit

Tanks and extra tanks (we didn't take a compressor)

The way to McCavity And Where To Stay

Caves Caravan Park, Ph. 02 68452970, Caves Road, look for the signs, six kilometres south of Wellington on The Mitchell Highway, adjacent to the caves and Mc Cavity. You can_t get much closer.

DIVING MCCAIVITY

You need to have a Cave or Penetration rating (depending on Mc Cavitys water level) with the Cave Divers Association Australia (C.D.A.A.). And you need to contact Greg Ryan of the Sydney University Speleological Society.

Amazing Caves

Those of you who have never been to see an IMAX film are without a doubt poorer for the experience. The most recent release, Journey Into Amazing Caves was shot in the Yucatan, Mexico. Many of the underwater sequences were filmed in Dos Ojos and the movie was directed by no less a legend than Wes Skiles.

Unfortunately this film may never be seen in Australia. According to a couple of our members (thanks to Ken Smith and Dean Laffan) the owners of the theatres were not sure of its viability.

Ken suggests that some encouragement could be useful. If you live in Adelaide the phone number is 82270075. In Melbourne the number is 96635454.

www.amazingcaves.com is a web site advertising the IMAX movie, so if you like what you see, try giving them a call.

I know that both Perth, Sydney and Townsville all have Imax Theatres as well so perhaps a concerted campaign could be useful. If members in all those states would care to email me (cedwards@teksupport.net.au) the postal addresses of those places I would be happy to send a letter to them all on behalf of your organisation, the CDAA.

There was also a great article in the Spring issue of Immersed Magazine. If you can't afford to buy it, try your local library.

Shaft Diving

The numbers of divers diving in the Shaft during the earlier months of this year were down compared to the same time last year. But now that the weather is closing in I see a renewed interest by the divers to once again dive in the Shaft. As everybody knows, in order to do a dive in the Shaft you must have a guide for the day whose responsibilities lie in gaining access to the property, ensuring indemnities and associated paperwork is completed and also the safe entry and exit to the dive site of the divers. That in itself requires a certain level of skill in the use of ropes and climbing equipment, and also requires the guide to hold and maintain his own extra equipment for this role. Approximately 20% of divers diving the Shaft do not own any specialised climbing equipment, hence extra harnesses, slings, and carabineers must also be supplied. As a result a small fee is applied to your days diving to help reimburse some of the guides expenses. Once a guide agrees to do a weekend I have never known them to cancel out on the divers. On the other hand.....there has been a increased amount of divers either failing to show up, cancelling on the day or simply choosing not to dive for a variety of reasons.

As a direct result of this there are a number of provisos now being put into place for the people booking into the site.

- Any cancellation made after 7PM Wednesday in the week leading up to your dive will be charged the dive fee unless the dives can be filled by other divers.
- Any cancellation on the day of the booked dive will be charged the dive fee.
- Any diver failing to show up for the booked dive will be charged the dive fee.
- Any failure to pay the dive fee will suspend the diver from future dives in the Shaft until the guide has been reimbursed.

Remember, the guide makes no profit from these dives. They are simply being reimbursed for fuel and time and money spent on the maintenance, upkeep and purchasing of the specialised equipment needed to get you in and out of the water.

Despite these little hassles access arrangements to the Shaft are not difficult. Contact Linda on 03-5565 8793 AH or e-mail garinda@tpgi.com.au to organise your dives. The Shaft is open one weekend per month.

Shaft Dates...

September 8/9th
October 7th
November 10/11th
December 1/2nd

Please note that proof of a minimum of 5 twin tank dives is required prior to being granted Shaft access.

WANTED



ARTICLES FOR GUIDELINES

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

**The Editor, Glenn O'Connell
P.O. Box 290, North Adelaide, S.A. 5006.**

REWARD

An even better Guidelines for everyone.

CDA 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	DENR P.O. Box 1046 Mt Gambier 5290 (08) 8735 1177	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 Tea Tree	CN CN	Peter Cunningham PO Box 2168, Mt Gambier 5290	By phone or mail, 1 week prior. Ph: (08) 8738 4003.
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	DENR	General Diving: Divers to contact DENR and notify of date and site to be dived. Divers must have the correct CDA diving endorsement for the site and carry current financial CDA membership card. The diver must have signed an indemnity with DENR before access is permitted. Training: The Instructor is to notify DENR of the date the sites are needed and to forward signed indemnities from each student and their temporary card number/ membership number.
2 Sisters	CN	P.O. Box 1046	
Fossil	C	Mt Gambier 5290 Ph: (08) 8735 1177	
Ela Elap One Tree	S S	Mr. Peter Norman Private Bag 67, Mt Gambier 5290	By phone or drop in before diving. Ph: (08) 8738 5287
Swim Through	C	Valerie Earl PO Allendale 5291	Currently CLOSED pending new access arrangements.
Piccaninnie Ponds	S	DENR 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 Pines	S P/C	ForestrySA PO Box 162	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. 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 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.
Mud Hole	C	Mt Gambier 5290 Ph: (08) 8724 2876 8.00am - 4.30pm weekdays Fax: (03) 8724 2885	
Email: forestry.recreationse@saugov.sa.gov.au			
Kilsby's	S	Landowner leased to S.A. Police No Visitors	Restricted access conditions apply - refer Guidelines Issue 54. Twin tanks, maximum of 40 metres depth. Write to: 40 School Road, St. Andrews 3761, Email: mpain@hipex.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 Bullock Hole Black Hole	S S S	Mr. Colin Traeger PO Box 12 Mt Gambier 5290 (08) 8726 6215	Sundays only Mail Booking Form to Colin Traeger 2-6 weeks prior, stating names/qual. of all divers, and time slot. Please include stamped self addressed envelope. Closed October to November for shearing.

CDA 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 - West	C P	Mt Gambier Council Lessee Ph: (08) 8723 2299	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. Please book public holiday dives with lessee.
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. Bookings from Forestry Office - key from Lady Nelson.
Nettle-Bed (5L290)	P	Mt Gambier 5290	Contact ForestrySA by mail, phone 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 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.recreationse@saugov.sa.gov.au
McKay's Shaft	S		Contact South East representative Phil Argy at Mt. Gambier access and indemnities.
Tank Cave	P	Mr. DYCE	Access Manager: Harvey Grantham Email: lemaire@senet.com.au Ph: (08) 8370 9816
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	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 CDA website.
Burrinjuck	S/C/P		This is a tri rated site. Please see details in issue No. 73. There are no specific access arrangements.

UP-COMING COURSES

CAVERN/SINKHOLE AND CAVE COURSES, PERTH, W.A. RUNNING PART-TIME EVERY APRIL AND OCTOBER

Please call Gary for further details on
Phone 0402 339 652 or email gary.bush@bigpond.com

CAVERN/SINKHOLE COURSE RUNNING SEPTEMBER 3RD TO 16TH & NOVEMBER 5TH TO 18TH

CAVE DIVER COURSE RUNNING NOVEMBER 26TH TO DECEMBER 2ND

Please contact Warrick or Jane
Phone 03 9579 2600 or email aboccean@dingley.net

CAVERN/SINKHOLE COURSE RUNNING SEPTEMBER 6TH TO 9TH & NOVEMBER 23RD TO 26TH

CAVE LEVEL COURSE RUNNING SEPTEMBER 14TH TO 16TH & OCTOBER 17TH TO 19TH OCTOBER

Please call Linda Claridge for further details on
03-5565 8793 or e-mail garinda@tpgi.com.au

Minimum of two candidates.

UP-COMING COURSES cont

ADVANCED NITROX COURSE NOVEMBER 10TH & 11TH

Please call Gary Barclay for more details
on 03 5565 8793 or email garinda@tpgi.com.au

BASIC NITROX COURSES ALSO AVAILABLE

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FOR SALE

PEE VALVES – \$65.00

JUMP REELS – \$65.00

Please call (03) 5565 8793 or
Email: garinda@tpgi.com.au

GUIDELINES DEADLINES

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

Deadline	for publication
20th Aug	Sept
20th Nov	Dec
20th Feb	March

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 CDA A ratings. Instructors must lodge their current insurance details and renewal fee or packages will not be issued and certifications rejected.

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

Deb Williams
Instructor Materials Officer

ACTIVE CDA A INSTRUCTORS

Any Instructor wishing material contact - (03) 9562 9264 or email: debwilliams@one.net.au

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

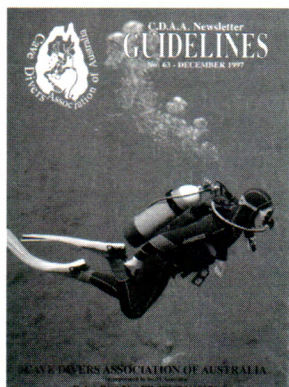
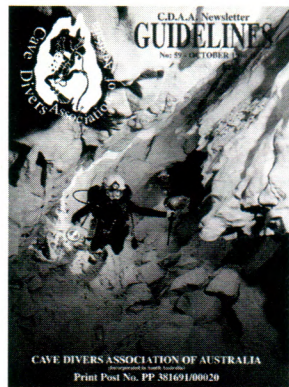
INSTRUCTOR	CN	S	C	STATE	PHONE
NSW & ACT					
Nick Jones	•	•		ACT	0408 423 017 m
Peter Grills	•	•	•	NSW	(02) 4950 6262 (8am - 12 midday)
Gary Norgard	•	•		NSW	(02) 4968 4588 h
Andrew Robertson	•	•		NSW	(02) 9548 5987 h 0417 664 255 m
Des Walters	•	•	•	NSW	(02) 6041 1405 h (02) 6025 3506 w
Liz Butler		•	•	NSW	0409 463 176
SOUTH AUSTRALIA					
Greg Bulling	•	•	•	SA	0409 095 927 m (08) 8265 4978 h
Glen Harrison	•	•	•	SA	0427 608 609 m
John Hanson	•	•		SA	(08) 8269 1083
Max Marriot	•	•	•	SA	(08) 8447 3360 h
Richard Megaw	•	•	•	SA	(08) 8344 1733 h
Richard McDonald	•	•	•	SA	(08) 8295 4140 h/w
WESTERN AUSTRALIA					
Gary Bush	•	•	•	WA	0402 339 652 m (08) 9367 4701 h
Marilyn Boydell	•	•		WA	(08) 9349 5646 h
Steve Sturgeon	•	•	•	WA	(08) 9527 7667 h/w 0418 940 143 m
VICTORIA					
Stephen Arnel	•	•	•	VIC	(055) 26 5230 h
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
Timothy Vernon-Smith	•	•		VIC	0418 325 309 m
Frank Zeigler	•	•	•	VIC	(055) 236 392

TANK CAVE DIVING SCHEDULE 2001

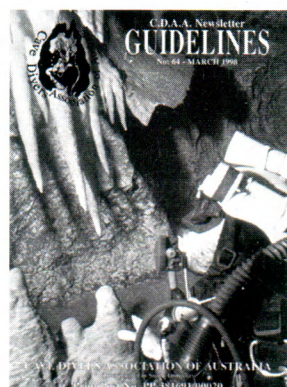
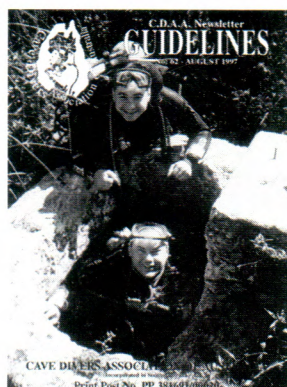
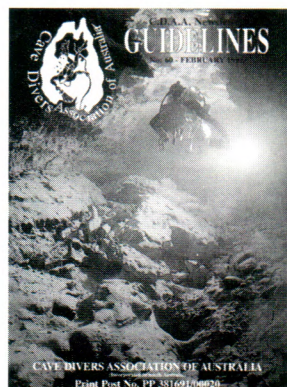
JANUARY 2001	DATE	FEBRUARY 2001	DATE
Saturday	13th	Saturday	10th
Sunday	14th	Sunday	11th
Friday (Australia Day)	26th		
Saturday	27th	Saturday	24th
Sunday	28th	Sunday	25th
MARCH 2001	DATE	APRIL 20001	DATE
Saturday	10th	Friday (Good Friday)	13th
Sunday	11th	Saturday	14th
Monday (Labour Day VIC)	12th	Sunday	15th
		Monday (Easter Monday)	16th
Saturday	24th	Saturday	28nd
Sunday	25th	Sunday	29th
MAY 2001	DATE	JUNE 2001	DATE
Saturday	5th	Saturday	9th
Sunday	6th	Sunday	10th
		Monday (Queen's Birthday)	11th
Saturday	19th		
Sunday	20th	Saturday	23th
Monday (Adelaide Cup)	21st	Sunday	24th
JULY 2001	DATE	AUGUST 2001	DATE
Saturday	7th	Saturday	4th
Sunday	8th	Sunday	5th
Saturday	21st	Saturday	18th
Sunday	22rd	Sunday	19th
SEPTEMBER 2001	DATE	OCTOBER 2001	DATE
		Monday (Labour Day SA)	1st
Saturday	1st		
Sunday	2nd		
Saturday	15th	Saturday	13th
Sunday	16th	Sunday	14th
Saturday	29th	Saturday	27th
Sunday	30th	Sunday	28th
NOVEMBER 2001	DATE	DECEMBER 2001	DATE
Saturday	10th	Saturday	8th
Sunday	11th	Sunday	9th
Saturday	24th	Saturday	22nd
Sunday	25th	Sunday	23rd

	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 Cocklebliddy 1979.	\$2.00		
		DAN Emergency Handbook. Revised 1995 edition by <i>Lippmann and Bugg</i> . 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.	\$55.00		
		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		
VIDEOS		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 Martyn Farr.	\$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 - Andrew Wight.	\$29.95		
		Florida "Window to a Hidden World". The ultimate cave diving adventure. Andrew and Liz with fellow cave diver-explorer Wes Skiles, 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: Andrew & Liz Wight.	\$29.95		
		Mexico "Water of the Gods". An exploration of ancient Maya ruins and underwater caves. Under the dense jungle of Mexico's Yucatan Peninsula lies a vast freshwater source relied upon by the ancient Mayas - a mysterious and complex people who built and occupied complex limestone cities in this region for over two thousand years. The Wights explore their hidden caves, uncovering their beauty and mystery, and providing a link to the past. Producers: Andrew & Liz Wight. Director: Liz Wight.	\$29.95		
		Cuba "Beneath the Surface". The underworld of Cuba. This documentary explores the role water has played throughout time in the history of Cuba. It reveals some of the many beautiful aspects of this magical Caribbean island, explores the bizarre subterranean caverns and provides unexpected contrasts with Cuba's turbulent history. This is an expose of a Cuba we believe we know. Producers: Andrew & Liz Wight. Director: Liz Wight.	\$29.95		
	CLOTHING		Anniversary Edition T-Shirts. Colour: White, Blue. Sizes: Medium only.	\$5.00	
			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		
		Beanies. Navy only.	\$17.95		
		Caps. Black only.	\$19.95		
MISC.			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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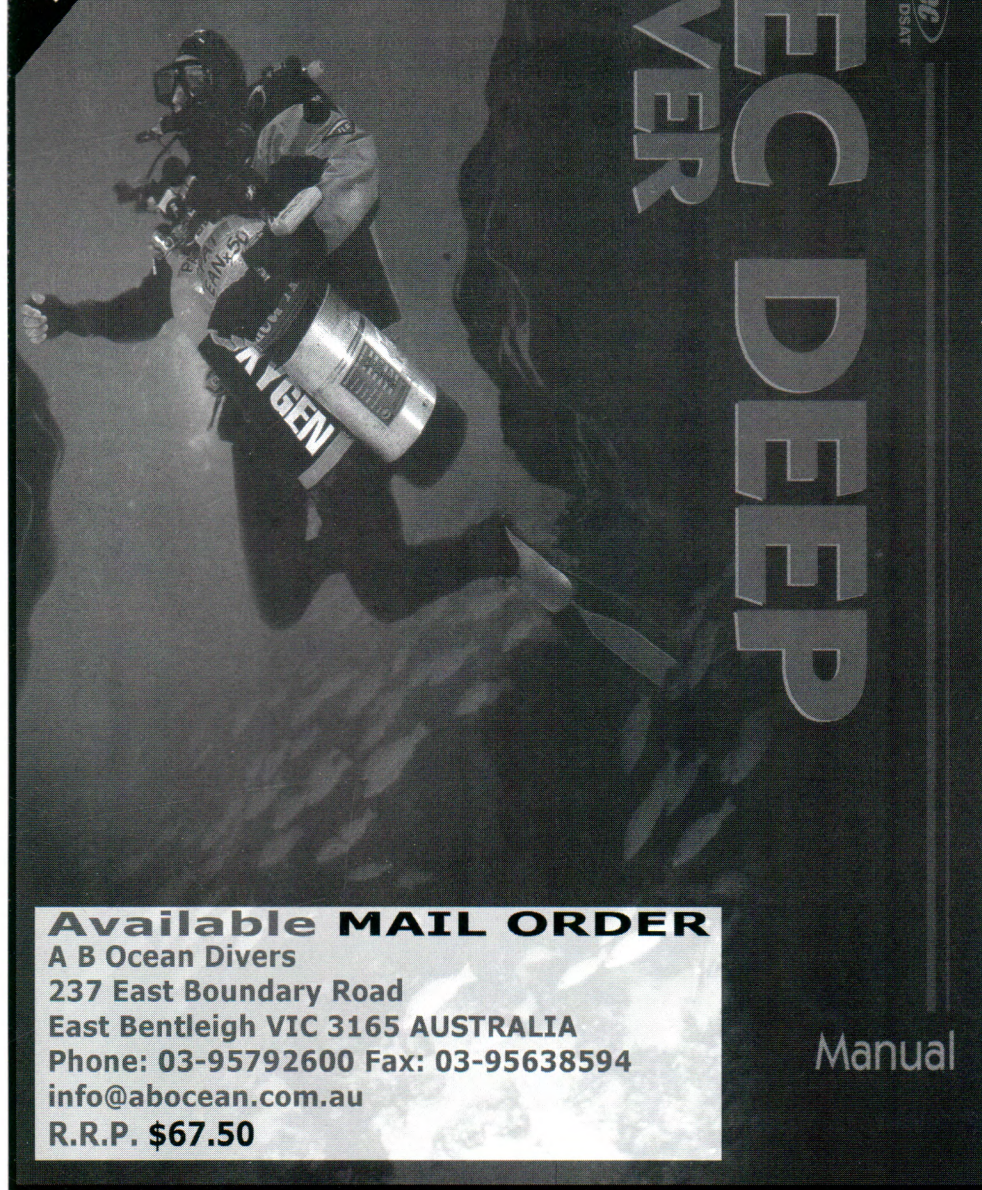


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