

# CAVES

No. 162

August 2004

The Journal of the Australian Speleological Federation

# AUSTRALIA



## MEXICO — 2004 Cheve expedition

*Jeff Butt — in memory*

*Glowing lights of early Tasmanian show caves*

*Protecting intellectual copyright*

*Ning Bing — WA*



## Coming Events

In particular, this list will cover events of special interest to cavers and others seriously interested in caves and karst. A similar list in the ACKMA Journal will give more attention to meetings of specialist scientific interest. Both of these lists will be just that: if you are interested in any listed events, contact Elery Hamilton-Smith on: [elery@alphalink.com.au](mailto:elery@alphalink.com.au). If you plan to visit North America or Europe, we can probably provide details of the many local-regional meetings which take place there.

### 2004:

- Sept 13-18 TRANS-KARST: First International meeting of the Vietnamese-Belgian Karst Project, Hanoi.  
 Sept 24-25 China Caves Symposium, London (Royal Geographic Society).  
 Sept. 25 ASF Executive Meeting, Bankstown Sports Club, Sydney (tentative), Winfried Weiss 07 4122 3274 (H).  
 Sept. 25 Cavers Dinner, Bankstown Sports Club, Sydney, Joe Sydney 02 9875 1887 (H).  
 Sept. 26 NSW Speleo Council Meeting, Klemm St, Bankstown, Megan Pryke 02 9524 0317 (H).  
 Oct. 9 ASF Executive Meeting (alternative date), Melbourne.  
 Oct. 10-16<sup>th</sup> Limestone Coast 2004: International Conference at Naracoorte and Mt Gambier. It will include the final meeting of ICGP 448 and a workshop on RAMSAR Subterranean Wetlands. Co-sponsored by ASF, see full page notice within & for further details go to <http://www.environment.sa.gov.au/parks/naracoorte/events.html>  
 Oct. 30 CSS 50<sup>th</sup> Anniversary Dinner, Canberra. Contact Rosie Nicholson 02 6231 6665.  
 Nov. 6-7 SSS 50<sup>th</sup> Anniversary, Wombeyan Caves. Contact Ross Ellis 02 9630 5384 or email [rcellis@bigpond.com](mailto:rcellis@bigpond.com)  
 Nov. 17-25 IUCN World Conservation Conference, Bangkok.  
 Nov. 28-Dec 5<sup>th</sup> International Symposium of Biospeleology, Raipur, India.

## And Looking Ahead

### 2005 and beyond

- Jan. 2-8 25<sup>th</sup>ASF Conference, Dover, Tasmania (see separate note in this issue). Contact Ric Tunney [runney@tassie.net.au](mailto:runney@tassie.net.au) or see AusCaver 160 & 162, also <http://www.tesa.com.au/stc/cavemania/>  
 Jan. 2-8 4<sup>th</sup> Speleo Art Exhibition, Dover, Tasmania in conjunction with 25<sup>th</sup> ASF Conference – see website above.  
 Jan. 2-8 ASF Annual Council Meeting, part of Dover Conference, Winfried Weiss 07 4122 3274.  
 Feb. 2-6 7<sup>th</sup> Mexican National Speleological Congress, Monterrey, Mexico.  
 Feb. 8-12 65<sup>th</sup> Anniversary Congress, Speleological Society of Cuba, Havana.  
 Mar.. 29-Apr 2 CAVEPS: 10<sup>th</sup> Conference on Australasian Vertebrate Evolution, Palaentology and Systematics, Naracoorte, S.A.  
 Apr. 10-17 ACKMA Conference, Westport, New Zealand.  
 Aug. 21-28 14<sup>th</sup> International Congress of Speleology, Athens, Greece.  
 2007 January, 26<sup>th</sup> ASF Conference, South Australia, celebrating 50 years of the Australian Speleological Federation.  
 2007 ACKMA Conference, Buchan. This will be part of the celebration to mark the centenary of the discovery of Fairy Cave.



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## CAVES AUSTRALIA

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**COVER:** *Mexico: Pitch 2 in "Barbie Cave" — a  
breath of fresh air after an incredibly  
tight on-rope squeeze.  
Photo Al Warild.*

*Layout and design: Jacqui Fry*

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\* Contact Joe Sydney for rates.

### NAME CHANGE

**Caves Australia  
(August 2004),  
formerly known as  
Australian Caver  
magazine.**

CONTENTS





## NSW Government attempts to abolish Jenolan Caves Reserve Trust

(from Chris Norton)

ASF is currently involved in extensive lobbying in order to ensure a secure future for four significant karst areas in NSW. At present, ASF has had some success in persuading the Opposition and a number of crossbench MPs in the Upper House to vote against legislation designed to implement the Government's proposed reforms.

The Jenolan Caves Reserve Trust administers four karst areas in NSW: Abercrombie, Wombeyan, Borenore and the iconic Jenolan Caves. The Trust is administered by a board comprising representatives of many stakeholder groups, including ASF. The Board is independent and is directly accountable to the Minister for the Environment. In recent times, the Trust has obtained a good reputation for cave management, and is generally considered to be superior in terms of cave management skills to the National Parks and Wildlife Service (NPWS).

Traditionally, the Trust has operated on a generally self-funding basis, with funds from the more lucrative Jenolan operation subsidising operations at Abercrombie, Wombeyan and Borenore. However, the Trust has been able to obtain occasional one-off treasury grants for significant projects, like the recent upgrade of the Wombeyan Sewage Treatment Plant. It has therefore not been completely financially autonomous.

Last year, as a result of an identified need for substantial infrastructure spending, the Trust asked the Minister to conduct a review into how it might better be able to position itself within the Government in order to better access funding. A review was conducted by the Council on the Cost and Quality of Government. Essentially, the Review was complementary of the Trust, finding that the Board was committed, cohesive and had performed well in managing the four reserves given the limited financial resources available. The Review confirmed the need for the infrastructure funding identified by the Trust. It also considered that the business model under which the Trust operated needed to be improved, as at present revenue from cave tour operations and other sources is insufficient

to cover the Trust's long-term financial needs.

As a result of the Review, the Government decided to break up the reserves under the Trust's control. Abercrombie, Borenore and Wombeyan were to be handed over to NPWS, to remove the need for cross-subsidisation. ASF understands that the Government's preferred option for Jenolan involves licensing a private operator to conduct cave tours, which are currently run by the Trust. In line with this proposal, when the Trust Board's term expired in January, a new board was not appointed but the Minister appointed an administrator for six months to facilitate the transfer of the reserves to NPWS and devise a new business plan for Jenolan.

At ASF's Council Meeting in January, the Council passed resolutions supporting the continuation of the Jenolan Caves Reserve Trust, and authorising the Executive to pursue the matter. A committee was formed comprising John Dunkley, Nicholas White, Jay Anderson, Megan Pryke, Keir Vaughan-Taylor and Chris Norton. This committee has been in regular email correspondence and has been active in meeting with many people within the Government.

However, the Government has to date been unwilling to shift from its position. The Government has introduced into Parliament a bill designed to amend the legislation establishing the Trust enabling the Minister to appoint the Director-General of NPWS in the place of the Trust Board to manage the reserves. The bill in its present form is opposed by ASF.

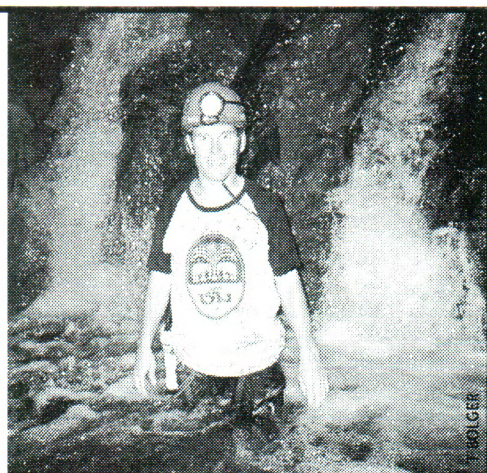
At the time of writing, the bill had passed through the Legislative Assembly (the Lower House), where the Government has the majority, although the Opposition voted against the bill. In the Legislative Council (the Upper House), the balance of power is held by crossbenchers and we understand a number of them intend to join with the opposition in opposing the bill. ASF has been active in ensuring that politicians are aware of the issues regarding the management of the reserves so that they can make an informed decision as to whether to support or oppose the Bill.

Further updates will be provided as the issue progresses.



Canberra members Terry Bolger and Neil Anderson recently returned from a productive expedition to karst areas of western and central Thailand. In a very remote part of north-west Kanchanaburi province a large stream passage left unexplored from a previous trip was further explored and surveyed to a massive rockfall. In Phitsanulok province nearly 4km of new cave passage was explored in surveyed in several caves. We hope to obtain a more detailed account for an upcoming issue.

*Terry Bolger in the stream passage of Tham Huai Tong Thai cave, Kanchanaburi, Thailand.*





## CALL FOR ASF AWARD NOMINATIONS!



Nominations and submissions are now being called for ASF awards.

Anyone can submit a nomination. All nominations are treated as confidential and will be judged by the ASF President and at least two past Presidents on the merit for the award.

I now invite members and clubs to give consideration to nominating anyone they feel deserves recognition for services to speleology in any of its various aspects.

Nomination categories are:

### Major Awards

Edie Smith Award

Fellowship of the Australian Speleological Federation

Certificate of Merit of the Australian Speleological Federation

### Special Awards

Australasian Cavelife Award(ACA)

Caving Equipment Award for Published Excellence

Deciding on who receives an award is complex. Detailed information is required on why this nominee deserves such award, along with theirs and your contact details. Details such as these aids the President when presenting the award at the CaveMania's Cavers Dinner, Tasmania.

To allow time for the meaningful consideration of nominations, nominations must be received by 31st of October 2004. Award nomination can be sent to:

Lloyd Robinson

Awards Convener

P.O. Box 175

KEIRAVILLE NSW 2500

or at [http://www.caves.org.au/i\\_awards.html](http://www.caves.org.au/i_awards.html)

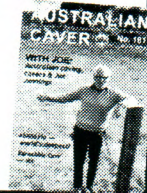
*I look forward to receiving your nomination!*

## JOE JENNINGS — TRIBUTES FLOW IN!

AC161 readers were astounded at the work undertaken by Joe Jennings in the early years of Australian speleology. Some colleagues missed an opportunity to remember their time with Joe and have asked if they could contribute in a future issue.

As Caves Australia is overwhelmed with 'friends of Joe' responses, we are calling for more tributes. Short contributions and pics can be sent to: [jsydney@choice.com.au](mailto:jsydney@choice.com.au)

(Please copy also to [andyspate@aliencamel.com](mailto:andyspate@aliencamel.com) to arrive not later than 30 September 2004).



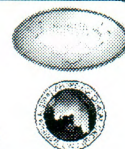
## Passing of Ric Brown

Sad news to hand, in that Ric Brown of SRGWA and WASG has passed way.

Ric was SRGWA president a few years back, an ASF member since about 1996 and has made significant contribution in WA and caving. We are very sad to have such a young and passionate caver go.

More details to hand in CA163.

Our condolences to Ric's family and WA cavers.



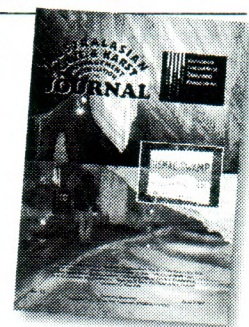
## What's in ...

**ACKMA Journal**  
June 2004 No. 55



*Articles of interest in this issue include:*

- The Best of the West — Mary Traves
- Significant Karst Purchase in New Zealand — Ian Millar
- Ancient Rock Feature Destroyed — Press Report
- Shades of Death Cave, Murrindal — Dennis Rebbechi
- A Small Cave Restoration Project — Steve Bourne
- Photographic Prize to Arthur Clarke — Kent Henderson
- The Changing Face of Outdoor Certification — Alan Jevons
- Legendary Black Water Rafting Update — Van Watson
- 11th Australasian Bat Conference — Dianne Vavryn & Mary McCabe
- Lampenflora, Part Two — Andy Spate; plus a number of book reviews.



The ACKMA Journal is published quarterly in March, June, September and December. Any ASF member is most welcome to join ACKMA and thus receive the journal. Indeed, many cavers are already members!

Kent Henderson, Publications Officer

**Visit: <http://www.ackma.org>**

## Invitation to all cavers — NSW Annual Cavers' Dinner!

**NSWSC**

It's on again, the NSW Annual Cavers' Dinner and all cavers are invited, especially cavers from other states!

HCG will again host the dinner at Bankstown Sports Club on Saturday 25 September with a selection of fine meals and entertainment. Entertainment to include a guest speaker and door prize! Drinks available at club prices! Children welcome! Cost per: \$35 per adult. Children: Price on request!

Please mark your club diaries with this important event!

Invitations will be mailed to NSW clubs!

To book your ticket, contact: Joe Sydney, M: 0405 039 398, [jsydney@choice.com.au](mailto:jsydney@choice.com.au)

## New South Wales Speleological Council Meeting

**NSWSC**

Sunday 26 September 2004 ( the day after the cavers annual dinner!)

Venue: NSW Cave Rescue Headquarters, Klemm St, Bankstown Airport.

NSW clubs are reminded that a NSWSC meeting will be held on 26 September 2004. Please advise Megan Pryke of your clubs nominated representative.

Megan Pryke — [meganandalan@optusnet.com.au](mailto:meganandalan@optusnet.com.au)



## Year of the Southern Ningbing

*Caving in one of Australia's remote regions. The Ningbing range is situated in the north east corner of Western Australia and this is a story about a fantastic year of caving and exploration.*



JOHN CUGLEY

David Woods, a massage therapist is a member of WASG and lives in Kununurra. With a passion for caving for over 17 years, David often visits isolated regions such as the Ningbing's and the Nullabor in search for that deeper cave.

The Southern Ningbing's never appeared to have much potential in comparison to other areas in the 40 kilometre long Devonian Reef System north of Kununurra. So in the last four years we had been concentrating our exploration and relocating caves in the Central Ningbing, where potential seemed greatest for finding an extensive system.

The only time I had been in to the Southern Ningbing area was with Stefan Eberhard in 1998. He was keen to check out the sump at the end of KNI 19 (Mapped and surveyed by SRG 1991— Ian Riley), for a possible cave dive. And possible it was. KNI 19 became the first Ningbing's cave dive and Stefan found no end to this underground system. On this trip I did find a nice joint-controlled cave associated with a gryke, only about 150 meters from the entrance of KNI 19. We began surveying that same weekend in 1998 but we hadn't managed to get back to this area since then. Until July 2002 the area received little attention.

Paul Hosie and Geoff Swann, both cave divers and club members, had been in contact with Stefan about KNI 19 as they too were keen to explore the underwater passages of this partially explored cave. Geoff and I had organized a time earlier in the year and on the 20<sup>th</sup> July 2002 the cavers and divers headed out to the southern Ningbing. Upon arrival I geared up along with Paul Hosie and Geoff Swan and took them

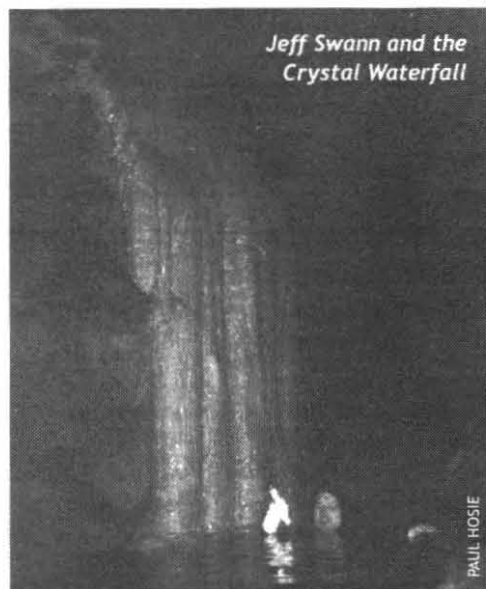
into KNI 19 to have a look at the sump and to check the bat populations in the cave. A leaf nose bat roosts in this humid system and numbers vary throughout the year. There were only a couple hundred of bats, which was not many compared to the thousands of bats that can sometimes inhabit this cave. The sump was at a higher level than when I was here with Stefan in '98. The divers inspected the sump and we exited the 110 meters out of the powerfully sculpted phreatic tube.

We waited until after dusk, just to let the bats exit with no obstruction and then the gear was hauled into the cave. Shortly after, Paul and Geoff began their first dive in KNI 19. They came out sometime just before midnight with big smiles and plans to go in again tomorrow to map and survey the area so far explored.

The next morning after sleeping in (that was everybody!), John pulled a long one and stayed up way past his usual bedtime of 8.00pm. Toni and John were drinking and talking the night away until about 2.30am when he noisily found his way to bed. At 3.30am I was awoken again to the sound of John hurling and heaving all over his swag ... probably because he couldn't move by this stage. Another repeat wake up call at about 4.00am, at which point I moved my sleeping positions to avoid the pungent, fumes wafting my way!! When John arose he was looking rather seedy, but after a bit of breakkie we began deciding our plans of what to do with the day. Geoff and Paul Hosie were off to do their second dive. John, Paul Cornish, Leonie and Clive decided to trek down to a spring marked on a map not too far from KNI 19. The spring had also been tagged as a feature by SRG (KNI 18), but had not been relocated by John or myself. I had been given a bit of vague information on an aboriginal art site by a local bulldozer contractor, it was a bit of a long shot but I



David Woods (author) looking into KNI 51.



Jeff Swann and the Crystal Waterfall

PAUL HOSIE

ALAN PRYKE



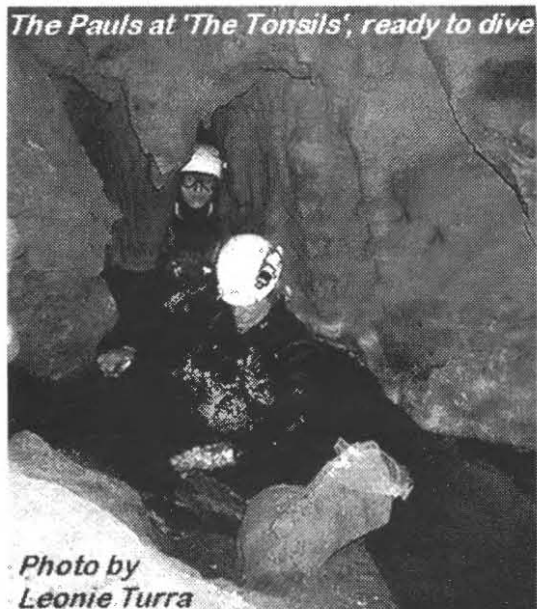


Photo by  
Leonie Turra

thought they had enough people going to try and find the spring, so off I went in the opposite direction to see what I could find.

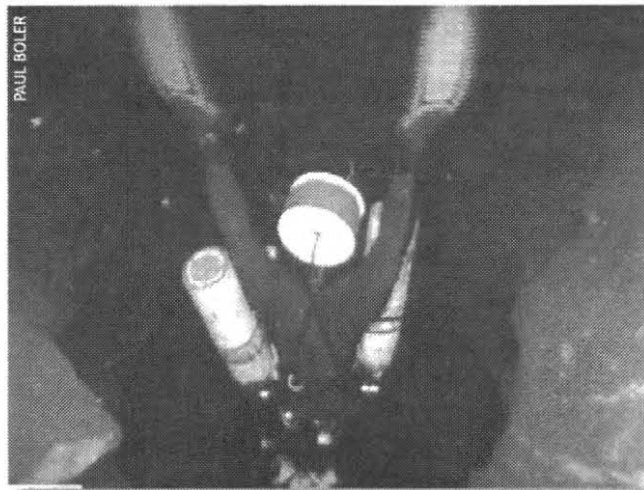
After walking along the base of the range for a couple of uneventful kilometers, I rounded a corner and saw a small dense patch of vegetation. As I got closer I noticed that there was a dry creek bed amongst the trees. This started looking a lot like the creek that comes from the outflow, which is KNI 19. I started to get excited as I followed the creek up to the foot of the range. I jumped for joy, as this also was another outflow!

This cave was phreatic also and it was evident that during the wet season a great deal of water would flow at pressure from its 1.5 metres wide and 0.5 metre high exit.

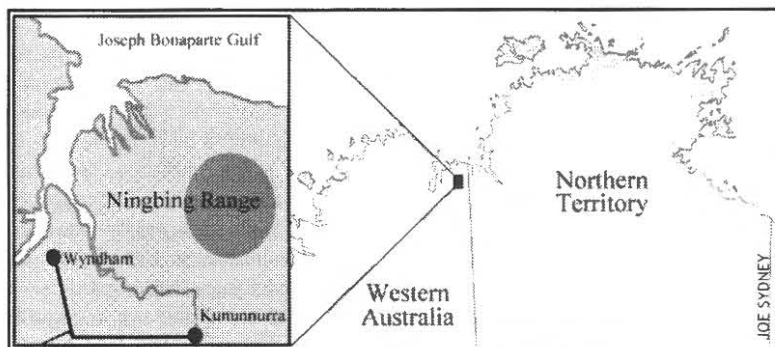
On the bare limestone at the entrance were exoskeletons of fresh water crabs, already bleached by the hot Kimberley sun. This was an encouraging sign as maybe a permanent source of water lay within. Being alone, I had only a short crawl beyond the entrance. Once in the cave it widened to about 4 meters but stayed quiet low. I crawled about 20 meters in, to shine my light another 15 meters with no sign of the cave petering out. It now felt even more promising but I crawled out, GPS'd the location of the cave and kept on wandering above ground to where I discovered the Aboriginal rock art. The old fellow who told me about the paintings was accurate with his location and I managed to find it, however the art was very weathered and most of it was hardly visible. It appeared to be an undisturbed site, which is always good to see.

After a short break in an overhang that looked out over the Southern Ningbing, I explored a few other possible depressions to see if there were to any more nice surprises waiting to be found. I followed the base of the range as it started to cut back into a shallow valley with some fig trees scattered around. I explored the area but only found a few exposed limestone plates. After checking another shallow valley with no luck it was time to head back to base camp to help pack up.

However, instead of retracing my steps, I took a short cut back to the first outflow. This took me up into the range a little and I walked a course parallel to the one at the base of the range. Being 20 metres



Diving deeper  
in KNI 19.



## So, where the hell are the Ningbings?

The Ningbing Range lies 50kms North of Kununurra which is in the East Kimberley Region Of Western Australia. This rugged limestone range was formed in the Devonian Period, around 350 million years old. In this time the sea covered large amounts of the Kimberley Region and a reef complex was formed by calcium secreting organisms. The reef has since been through many geological changes including uplifting and erosion from ice, water and wind, forming the caves that we have today. The Devonian Reef complex that makes up the Ningbing Range is quite similar to the Devonian Limestones of the West Kimberley.

The Ningbing Range runs for about 40 kilometres in a north-south direction. The old grey limestone is studded with large boab trees and ranges from tower karst (up to 70 meters in height) to incredible pavement terraces spanning hundreds of square metres — at its widest point it is up to 7 kilometres wide!

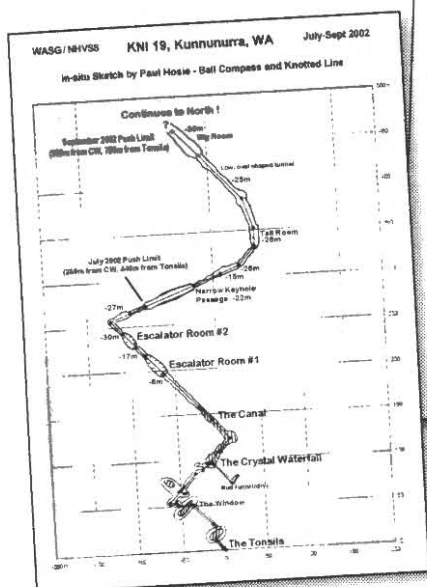
We have a tropical wet and dry season in the Kimberley. The dry season is from April through to October, as is our active caving season. Heavy monsoonal rains in the wet make access to the Ningbings impossible. The Ranges are surrounded by black soil floodplains, which no 4WD or motorbike can get through. Depending on budget, a helicopter would be helpful but the caves have very dangerous flash floods through the wet and caving is done with extreme caution.

The Ningbing Range is situated on Carlton Hill Station. Permission is necessary to gain access to this property. This area also has traditional owners that live at a community in the area. Cultural sensitivity is acknowledged and respected. Anyone wishing to cave the Ningbing area or Kimberley can contact local cavers David Woods (0417 178 310) and John Cugley (9169 1465).

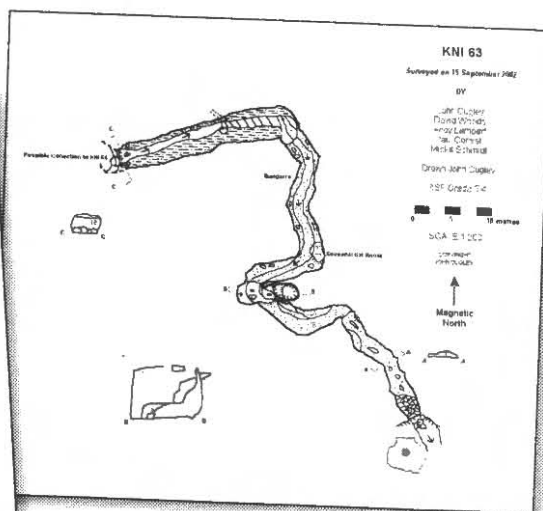
Exploration has been sporadic since the late eighties with most of the work being done by SRG and WASG. Myself and four other members of WASG are permanent locals in Kununurra and since 1998 exploration and surveying has begun again. We have also been relocating lost features that were tagged and surveyed in the late eighties and early nineties. Through the passage of time these locations had been misplaced, but slowly these missing features are being rediscovered.

The area, as with the whole Kimberley, holds great caving potential in the future.





**KNI 19 – 100 mt into cave – The Tonsils. Map drawn by Paul Hosie.**



**KNI 63. Map drawn by John Cugley.**

higher and about 100 metres in. I checked all depressions and large fig trees on my way back to my first find of the day. I thought my luck must have ended when only 100 metres from finishing my search a large fig tree gave way to a collapse in the limestone. Yes! This was definitely an entrance of exciting proportions. The tree shaded a fairly gentle slope down 8 metres to the bottom of a chamber. I decided to gear up and go take a short look.

Once at the bottom of the daylight chamber, I noticed signs of water that had flowed down at

this level and on to a passage leading into a low phreatic tube. After a short crawl this passage had kept it's size of 3 metres wide and 1 metre high. The cave showed no signs of ending so I exited the cave and GPS'd the location of its entrance, and walked gleefully back to camp.

I arrived back to camp and cracked a nice cold stubby. The crew who had gone to find KNI 18 strolled in shortly afterwards. I was amazed that no tag had been located, or the spring, as the map had suggested. And it was only 1.5 kilometres away. However, they did stumble into another joint-controlled cave. A nice one too. Paul Hosie and Geoff completed their dive with great success and they had found no end to KNI 19.

The area was definitely exceeding its previous reputation.

When I was walking back to the camp, I was thinking about what had been discovered that day and how I had thought the area would hold little potential. With it's low limestone hills covered in cane grass and boabs, it looked to be bare of any caves, especially in comparison to the block limestone of the Central Ningbing.

Until this day, the area kept its secrets well disguised!

I decided I would definitely be back sooner, rather than later.

(More on Ningbings in future issues). ■

# 9 LED

## 'SPORTMAN' HEADLAMP BRIGHTEST LED HEADLAMP ON THE MARKET

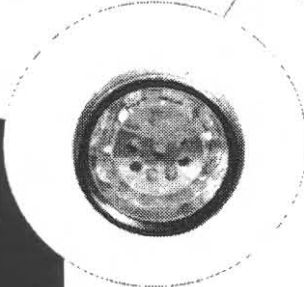
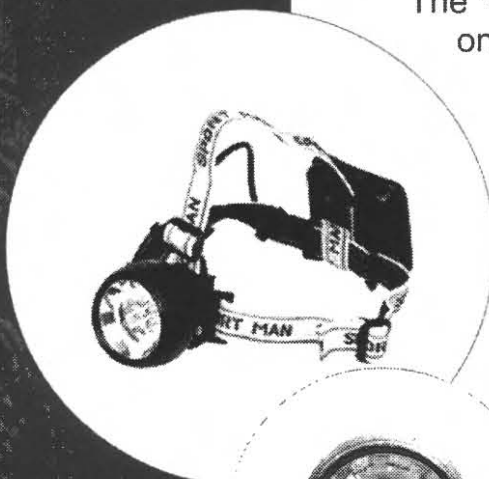
The "Sportman" is for extreme sports - built as one of the most rugged headlamps on the market.

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# Acetylene Illumination of Early Tasmanian Show Caves

*This article is based on a paper presented at the 24<sup>th</sup> Biennial Conference of ASF in Bunbury, WA, January 2003. The Conference Proceedings (to be published shortly) contain a comprehensive reference list which should be consulted for further information.*

## INTRODUCTION

Many cavers will recall with some nostalgia the days of carbide lamps, particularly hand-held ones. They produced a warm, wide beamed light of light and the ability to shine where you wanted them to without having to turn your head. And you could always warm your hands! Carbide lamps are still used in parts of the USA but have been out of fashion in Australia for many years due to their adverse environmental impact, the problem of waste disposal, and difficulties in obtaining carbide. Many cavers will, however, be surprised that for many years, acetylene lighting was used on an industrial scale in some of our tourist caves, and that Tasmania was the leading exponent.

Tasmania, the apple isle possesses some unique and interesting speleological features. One aspect of cave tourism in Tasmania, which has fascinated me since reading a about a brief mention of it by Greg Middleton in 1988, is their illumination by means of an acetylene generator.

Acetylene illumination, although interesting and novel at the time, really damaged the cave environment. The noxious smoke and gas filled the cave, formations were stained, ceilings became covered in soot, and spent carbide was a problem to dispose of. All this, plus the usual development damage the caves endured, remains today a time capsule or window into this fascinating period of cave tourism.

This short article is a result of my studies into this little known and documented piece of Australian spelean history.

## Invention of Calcium Carbide and its early use in caves

The English chemist, Edmund Davy first documented calcium carbide, in 1836. Ideas and improvements were made in 1862 when Frederic Woehler [nationality unknown] discovered that when calcium carbide came into contact with water, acetylene gas was given off. Davy had noted that a noxious gas was produced when combined with water but failed to see any significance with this reaction. Easy commercial manufacture of calcium carbide only began after 1892 when Thomas L. Willson of

Spray, North Carolina discovered that passing a high ampere low voltage electromotive force through a finely powdered mixture of coke and lime produced calcium carbide. This method of manufacture became the standard for all carbide manufacturing plants worldwide.

In 1987 in a comprehensive work on American Miners' Carbide Lamps, Gregg Clemmer noted several references to acetylene illuminated caves in the U.S.A. He records that in 1908 Mammoth Cave, Kentucky were considering installing an acetylene generator outside the cave and piping the gas to burners positioned alongside the underground passageways. The La Jolla (pronounced La Holya) Sea Caves near San Diego, California were being illuminated with acetylene as early as June 1909. Wonder Cave near Monteagle, Tennessee in 1909 had a large 100 burner system installed and this was later increased to 200 burners. Additionally, Mount Tabor Cave, Ohio was fitted with a similar system, using over 4000 feet of piping. Although these caves are all in the USA other cave areas worldwide would have experimented with Acetylene.

## Commercially Available Carbide in Australia

Tasmania with its hydro electric potential had Australia's only commercial calcium carbide



*Baldock's Cave, Mole Creek Caving Club member in period costume with kerosene lamp on top of bellows or acetylene holding tank.*



## By Stephen McCabe

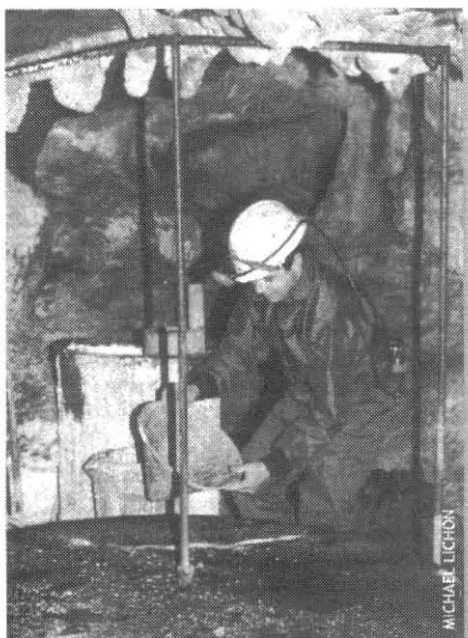
An active caver and Vice-President of Highland Caving Group, Stephen enjoys caving along with outdoor sports and the history of cave illumination. This interest takes him too many of the oldest tourist caves around Australia in search of documenting artifacts and lighting history.



ACETYLENE ILLUMINATION



**Baldock's Cave:**  
**Stephen McCabe**  
**examining remains**  
**of Acetylene**  
**Generator at**  
**baldock's cave**  
**entrance.**



manufacturing plant at Electrona, south of Hobart. It seems unlikely that Tasmanian caves were illuminated by Tasmanian carbide, as this plant didn't come on-line until about 1924, after most, if not all the show caves finished using it as illumination.

Carbide Import companies such as Slade, C.H. & Co of 304 Kent Street Sydney and the Federal Oil Co., Ltd of 33 Rowe Street Sydney advertised in 1916/1917. Gillies Bros., of 74 Collins Street Hobart were importers of a wide range of related material and hardware. Similar companies or agents would have supplied the various caves with their carbide requirements.

#### **The Tasmanian Experience**

Five individual caves in two different locations in Tasmania were at one point in time illuminated by acetylene gas generated in a stationery system with piping plumbed throughout the general visited area of the cave. These caves are King Solomons, Marakoopa, Baldocks and Scotts Caves at Mole Creek, and Gunns Plains Caves near Ulverstone in Tasmania's north. All of the first four present and former tourist caves are located near Deloraine. An early pamphlet in the Tasmanian State Library says of the first four: *"There are four sets of caves, which compare favourably with any in Australia. They are lit with acetylene and can be visited either by day or night."*

#### **King Solomons Cave**

In their 1978 booklet on the Mole Creek caves, Andrew and Roy Skinner state that King Solomons Cave was discovered in 1906 by a timber splitter named Poachin while hunting. He later opened the natural entrance to the floor. Somewhere between July 1908 and July 1909 King Solomon Cave was illuminated by acetylene. By 1913 a Mr. E.C. James was Proprietor of the Cave, which were still *"lighted with acetylene"*. The Skinners note that between the years of 1930 and 1933 Mr. W. Marchant was the Cave Guide. In the guide book: *"Deloraine, The Tourist's Paradise"* mention is made of the recent cave *"purchase by the Government Tourist Department (Tasmanian Tourist Association) and (that they) will be opened up at an early date; and lit up with electricit"y*. Although undated, an advertisement for the Racing Club of Deloraine advertising their Spring Meet Sat. Dec. 9 1922, and their Easter Tuesday 1923 Meet enabled me to conclude that in 1922 the caves were still lit by acetylene. As this guide is of great importance to this article I will refer to its date as 1922. Another presently undated information sheet by The R.A.C.T. Touring Service states that *"the lighting with power provided by a stationery engine, is most effective and shows to advantage the many extraordinary formations which vary from slender and fragile pieces to one which weighs about three quarters of a ton and is held by a small neck"*.

It would appear that when the change over to electricity happened in about 1922 or 1923 all the lead piping, burners and

reflectors were removed. Fortunately the acetylene generator remained and is now a feature at the end of the modern day cave tour as at 1997. Two oval legends with raised stamping soldered to the tank state that the unit was manufactured by a 'C. Davis. Furnishing Ironmonger'. This appears to be the same Charles Davis who in 1933 was granted a Registered Design for a Carbide Lamp. At that time Charles Davis Limited was located 64 Elizabeth Street, Hobart. This would indicate that the acetylene plant is of Tasmanian manufacture. Company research in this area may provide additional information.

#### **Marakoopa Cave**

The Skinners recorded that George and Harold Byard discovered Marakoopa Cave around 1910. The Byards obtained a lease covering the cave and opened it to tourists in 1912. The guide 1922 Deloraine Guide, as dated from the Racing advertisement, records that Byards (Marakoopa) Cave was owned at this time by the Tasmanian Tourist Association. No relics of the acetylene plant or piping are left in the cave other than former pipe anchors drilled and inserted into the cave wall.

#### **Baldock's Cave**

Baldocks Cave was one of the Government operated show caves in Mole Creek. By 1913 Baldocks Cave was under the control of The Northern Tourist Association [NTA] with its headquarters in Launceston. Acetylene illumination was in use by the middle of 1908. Twelve years earlier J.C. Wiburd of Jenolan Caves N.S.W. visited Mole Creek. In a report to the NTA he encouraged gating the entrances to prevent obtaining access without the right authority. Thus preventing the cave being *"destroyed by sperm or other grease from candles, markings from names, but not least, destruction of the stalactites by breakage, which I am sorry to say almost every visitor seems to delight in"*. Candle composition varied between different brands, most contained sperm oil which was rendered down from sperm whale blubber, a major industry in Tasmania at the time.

It appears that the NTA over time developed the cave and are responsible for installing its lighting system. By July 1917 the Tasmanian Tourist Association which was founded in May 1893 and was a rival to the NTA took over its Launceston offices. On 27 November 1934 the Bureau was formally separated from the railways and became an agency in its own right (Archives Office of Tasmania 1997). Again in the guide *"Deloraine, The Tourist's Paradise"* (Anon 1922) the writer describes a trip to Baldock's Cave. *After picking up the guide a span of half a mile lands you right at the entrance of the Caves These caves are owned by the Government, who have made a wonderful difference in easy access by enlarging narrow openings and making a footpath all the way through, so that the visitor may walk through in comfort, keeping quite clean and thus fully enjoy what one can only describe as "Aladin's Wonderland"*. He also adds that *at present they are well lit up with a large acetylene gas plant, but which is shortly to be replaced with electric light*. It would seem that this never happened.

Baldock's Cave abounds in relics of this acetylene era. In the entry chamber the near complete generator body and broken guide frame still stands in its original position. All the lead piping is long removed but a number of burners with reflectors and in-line gas cocks still exist as does remains of two wooden bridges. Wax still covers the burners from the cave guide illuminating each station as the tour progressed.

#### **Scott's Cave**

An article published in 1909 in the Daily Telegraph on Scott's Cave documents that *"During the past twelve months rapid strides have been made in the development of the caves in Mole Creek district. "Baldock's," "The King Solomon," and "Scott's caves have all been illuminated with acetylene gas"*. The Skinners say that Scott's Cave was operated privately as a tourist cave for ten years from 1908 by family members. However, the 1922 Deloraine guide records a visit to Scotts directly from Baldocks Cave: *"Returning from Baldock's caves after the two mile span the road branches off to the right for*



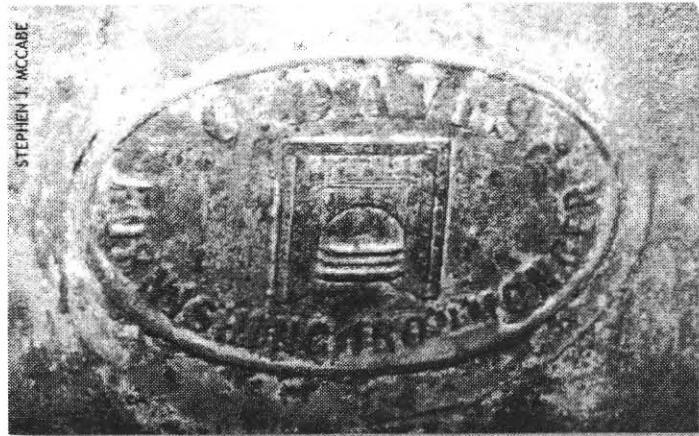
Scott's caves. The guide and owner, Mr. Scott lives at the end of the road. Leaving the car here a walk of three-quarters of a mile brings you to the entrance. These caves are well lit up with acetylene and although the smallest of the Mole Creek series, one well worth a visit". It becomes apparent that Scotts Cave was operated longer than ten years as previously thought as the Archives Office of Tasmania possess a Visitors Book for Scott's Cave dated Jan. 1911 to June 1927. Written on the inside cover of the Visitors book is 'Gorden Scott, Proprietor, Mole Creek'. The only photograph known to me of anything involving the illumination is the one in the Skinner book page 12 of Mr. Anderson Scott standing next to what remains of their acetylene Generator. Access to this cave could not be obtained when I visited the area in 1997.

#### Gunn's Plains Cave

As early as 1912 another tourist guide noted that "the caves (at Ulverstone) are quite dry and are well lit with acetylene gas", while the complete Guide to Tasmania issued by the Tasmanian Government Railway Department in 1913 records on page 85: "Gunns Plains Caves are about 18 miles from Ulverstone, and within 200 yards of the macadamised (road surface made with successive layers of small broken stones rolled in with some binding material) road. They are well let up by acetylene gas, which throws into relief some wonderful and beautiful shawl formations of the limestone within the caves. The drive to the caves passes through Gunn's Plains, and is one of the most beautiful in Tasmania". In 1930 the Ulverstone Tourist and Progress Association installed electric lighting in the caves and control later passed to the National Parks and Wildlife Service. The State Government spent 1,400 pounds on new lighting in 1958. In 1981 Des Wing had been guide at the caves for the past 22 years having started in 1959. According to Des in an interview in 1981, the caves were found in 1906 when a local by the name of Bill Woodhouse was shooting possums. He hit one and it fell out of the tree and into a cavern. Family involvement began in 1916 when Des's grandfather, Ethram was guide. Then his uncle, Graham Maxwell took over and after 42 years handed the responsibility on to Des in 1974. The dates indicate that both Des and Graham's service overlap as Graham appears to have begun in 1932. However other sources indicate that Graham Maxwell began in 1929, so these dates cannot be considered too accurate. Certainly by 1934 a contemporary tourist pamphlet mentions that the caves were electrically lit, and another in 1936 states "that further inland, but within one hour or so motor drive, are to be seen wonder-inspiring sights of nature - the caves at Gunn's Plains, electrically lighted. Not having visited the site, I don't know if anything remains of the former acetylene plant.

#### Photographic Documentation

Other than postcards very few photos remain from the early tourist caves of Tasmania. Although postcards exist of formation in the various caves, images of the lighting apparatus were apparently not documented or in some cases removed from the original photograph. Note that the postcard of 'The Marble Pillar, King Solomon Cave' has a pipe running across the formation, a similar image can be seen on the postcard of 'The Shrine, Scott's Cave'. 'The Marble Hall, Baldock's Cave' postcard No.464 by Spurling & Son, Launceston is a particularly



**C. Davis Furnishing Ironmonger brass legend soldered to side of King Solomon Cave Generator.**

good example of a reflector / burner assembly which was rubbed out of the original photograph. Note: lower RHS circular mark to the right of the stalagmite. Further research is required in this area, photographic material in the Tasmanian Museum and Art Gallery as well as material in private local history libraries may provide more insight into this exciting period of gas lighting.

#### Conclusion

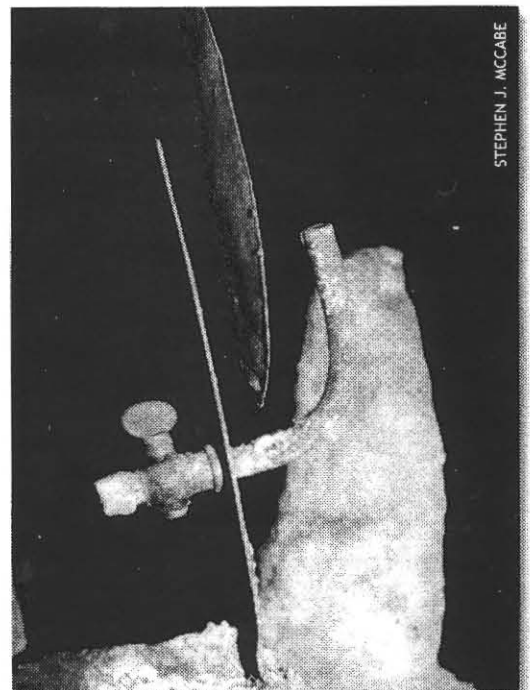
Although there is both physical and written evidence of generation of acetylene for illumination of tourist or show caves in Tasmania, very little substantive information appears to have been preserved in relation to its engineering or use. I would appreciate anyone with further information, references, or even photographs contacting me either directly or through the Sydney Speleological Society or The Highland Caving Group.

#### Acknowledgments

I would firstly like to acknowledge the help of Gregg S. Clemmer for allowing me to use parts of his published work on American Miners' Carbide Lamps, and for obtaining copies of cited material from the Library of Congress in Washington, USA. Michael Lichon and the Mole Creek Caving Club for organizing a one-day visit with permit to three of the caves mentioned.

To Roy Skinner for your correspondence, and providing a copy of his book, *The Mole Creek Caves*. To Tony Marshall, Senior Librarian (Heritage Collections) of the State Library of Tasmania for his assistance on my visit. The Archives Office of Tasmania for obtaining all my requests on my two visits. Ross Ellis, editor of JSSS and Prof. Elery Hamilton - Smith AM for their help and encouragement. I would also like to thank Grace Matts for offering to present this paper on my behalf, David Rothery and Norman Poulter OAM for proof reading most of the manuscript and comments over a number of weeks. The complete, fully referenced paper will appear shortly in the Proceedings of the 24<sup>th</sup> ASF Biennial Conference.

**Burner and gas cock assembly with reflector.**





# Mexico – 2004 Cheve expedition

*This is a story of 'our' part of the expedition through the eyes of Marta Candel, one of the Spanish team members.*

The 2004 Cheve expedition was organised by US caver Bill Stone to run from early February until early April 2004 and surrounded by an exceptional amount of hype, (see Caverace, <http://magma.nationalgeographic.com/ngm/caverace/week9/index.html>) especially considering that it was only a recce expedition.

What colour is the sky? In the heart of the Sierra de Juarez in the north of the Mexican state of Oaxaca, it's green.

We've been here for two weeks. Connected to civilization by a single walkie talkie that often as no doesn't reply to our questions. For three days now our companions who are supposed to be on the other end have given no signs of life.

We are organised into two groups. One has stayed in the Presidencia in the village of San Francisco Chapulapa. The other established a forest base camp at 2500 m asl. in the middle of nothing, and the middle of everything: the Mexican cloud forest.

As we left the village accompanied by seven mules that carried most of our food, water and equipment for three weeks in our high camp, the mule drivers wasted no time in asking "What are you looking for in the caves?" They were convinced that there must be gold, silver or archaeological artefacts that would motivate us to travel 9000 km to go under the ground. When we explained that we'd only come to explore the caves and make maps of what we found they nodded their comprehension, then a short time later asked "Is there gold in there?" and told us stories of fantastic hidden treasures.

In some Mexican caves, especially those near villages or towns, you can find a great variety of religious objects thrown into the pits in days gone by: offerings thrown into the entrance to the world of the dead. At least that's how it was explained to us by Faustino Navarrete, the owner of the mules that were carrying our gear. In pre-hispanic times caves were often used as cemeteries. Often the colonial priests destroyed all they found in order to eliminate the "false religion". During the war of independence, the reform, the intervention and the revolutionary period of 1911 to 1920, they served as as much as

refuges for fighters as for whole villages hiding from sporadic assaults on their homes.

Our exploration area however, was quite a way from the nearest village and there was no indication that anyone had ever lived there.

The day begins in the high camp. A few more attempts to contact the guys in Chapulapa and we give up. Tomorrow we'll try again.

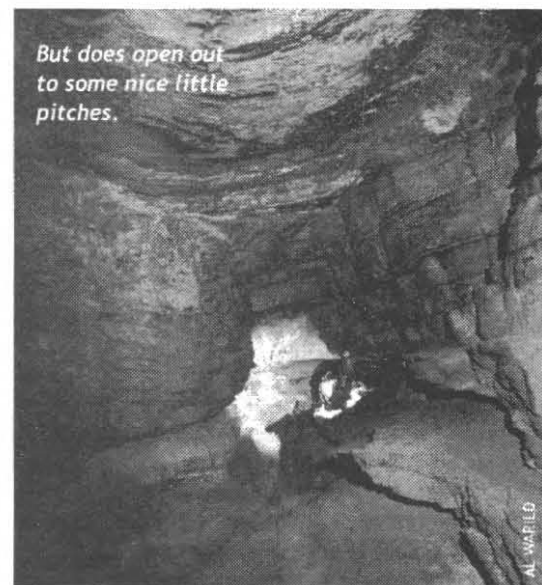
Armed with a topo map, compass and GPS, each day we head off in a different direction looking for wet season stream beds and where their waters sink. Crawling into every entrance we find, into every hole that it's physically possible to squeeze a person into. An especially tough job for the smaller cavers of the expedition. The rest stay outside listening for any sound that transmits information from within: moving rocks, karabiners clinking against the walls, speculating and hoping for the call "It goes!" This is the magical phrase. It always makes it possible for the next biggest person to fit into the smallest passage. We search the cave with the greatest care, all our senses alert. Water and air. These are the keys to finding the way on. The water because it created the caves, the air because it shows other entrances or a cave beyond. The cave breathes, all you have to do is listen and interpret its breathing and it will tell you what lies ahead.

And so we continue. Some continue exploring the jungle, positioning new caves on the map and finding new routes to them through the exuberant vegetation, others continued down the caves.

We finally contacted the Chapulapa team. They'd been working in Sumidero del Aguacate for a week without exiting the cave. They were convinced that the Aguacate was going to connect with Cheve cave and they were digging – removing rocks and mud from a crevasse near the terminal sump, never admitting defeat despite the abundant signs that it wasn't going anywhere. They'd climbed into holes in the roof, looked in every corner, but the airflow only led to an impenetrable crack.



*The first way-too-far in Barbie is tight.*



*But does open out to some nice little pitches.*



Not much luck this year. The two caves hoped to be keys to a back door to deep in the system both finished quickly. A whole month spend forcing their way into Sumidero de la Barranca Estrella without success and Aguagate was going the same way.

For more than 20 years cavers have been exploring caves in this massif. Cavers from all over the world have joined forces to disentangle the underground mysteries of Mexico.

Cheve Cave was first entered in 1986 and at -1484 m it occupies 9th place in the world's deepest caves list and first place amongst the deep caves of the Americas. The cave finishes in two sumps. In 2003 divers passed the first one and reached air-filled passage, but immediately beyond the second sump the cave was blocked by an impenetrable mass of boulders that only the water could pass. Cheve has been dye tested and has a potential of 2,547 m, emerging 17 km away in the Cueva de La Mano on the Rio Frio de Santa Ana at an altitude of 300 m. For three years in a row teams dived in La Mano but never found a route through the rockfall. Meanwhile, exploration higher up the mountain continued. In 1989 Cueva Charco was discovered and over many long years it eventually reached 1276 m but never made the hoped for connection with Cheve.

The 2004 expedition was organised by the US Deep Caving Team (USDCT) and made up of cavers from Australia, Poland, Holland, Spain and USA. The principal objective this year was to find another entrance to this huge system and find the main drain that collects the waters from the massif above and takes them to the resurgence at La Mano. This would easily beat the current world record cave Kubera-Voronia in Abkhazia at 1713 m and pass the mythical 2000 m mark — something as yet never achieved in a natural cave. The mythical limit was once -1000 m. But advances in techniques and equipment have taken us way beyond this limit. There is now a genuine race to be the first to pass -2000 m.

But this year it was not to be. Our expedition finished with kilometres of jungle explored and a multitude of new caves entered. The two most promising were edging towards -400 m deep, with strong airflow, but with no time left, they'll just have to wait until next year. Perhaps they are the long hoped for entrances to the first -2000 m deep cave?

Whether or not they are, we'll continue caving because what's really important is that the exploration of those very few remaining corners of the Earth never stops. Between us all we're writing the history of exploration of this planet of mountains and caves and green skies.

*Marta Candel Ureña*

#### Postscript

One of those -400 m caves—Barbie Cave, (not it's real name) reached an estimated -450 m (only surveyed to -340 m —slackers!)

#### Post Postscript

As we were leaving, the news hit that there was a major rescue underway a few 100 km to the north. Apparently several British cavers were trapped in a flooded cave. The Mexican media went bezerk and stories of illegal British Army personnel on manouvres or looking for uranium in Mexican caves suddenly sprung from the imaginations of journalists. TV current affairs announcers started a "dob in a caver" campaign to rid the country of these undesirables.



**Alan Warild**  
An expedition caver from way back. Alan lives for expeditions to deep caves, preferably in the more remote corners of the world and usually as part of an international

team — like forming part of the Australian/Spanish/Polish contingent of the US Deep caving Team.

The cavers refused rescue by the local authorities, which did nothing to calm the media, and waited for their own divers to arrive and bring them out. It was of course not mentioned that there are no caver divers resident in Mexico capable of such a dive. The politicians weighed into the show and once out of the cave, the cavers were expelled for caving illegally on tourist visas (the same tourist visas that cavers have used since foreign cavers first set foot in Mexico), and told not to come back for two years. Perhaps the cruelest irony was that only a few days later, a well-known Mexican caver drowned cave diving and US divers were immediately called in to look for him.

...and Barbie awaits us...

*Alan Warild*



*"Coral snake crawl". It's amazing what falls into these holes...*

*San Francisco Chapulapa, our home away from home in the Sierra de Juaraz, Edo. Oaxaca, Mexico.*





## Limestone Coast 2004

P.O. Box 134, Naracoorte, South Australia 5271

<http://www.environment.sa.gov.au/parks/naracoorte/events.html>

The closing workshop of IGCP 448 - Global Karst Correlation, and The First International Workshop on RAMSAR Subterranean Wetlands Naracoorte Caves Reserve, Naracoorte, SA, 10-17th October 2004

ASF is proud to be a co-sponsor of this important international event

### PROGRAM NEWS

There have been 16 papers offered to date, together with 8 poster presentations and 50 attendees from Canada, Hungary, Italy, Japan, Romania, Slovakia, Slovenia, United States and, of course, Australia.

Please take the opportunity to look at all aspects of the Naracoorte Caves Web site and you will see that the area has hosted an immense research program. Many of those who have been part of this program at Naracoorte Caves will be attending and presenting, providing on-site opportunities to discuss their specific research interests.

Although we list several associated activities on the website, we are also willing to try and assist with arrangements if you wish to visit any other specific karst areas.

### ASSOCIATED EVENTS

Pre-workshop specialised symposium and excursion October 2-9. *Multi-phase, multi-process speleogenesis: impounded palaeozoic karst of New South Wales* led by Dr. Armstrong Osborne. Maximum 20 places.

Itinerary includes: Wellington, Borenore, Jenolan, Wombeyan & Bungonia Caves, approx. A\$800.

Post-workshop specialised field trip October 17-19.

*Subterranean Wetlands of the Limestone Coast* led by Mia Thurgate. Maximum 8 persons

Conservation and management issues related to drainage schemes, groundwater pollution, recreational use.

Post-workshop short course for karstland managers October 17-23.

*Living on Karst: dealing with the potential environmental and sustainability issues in karstlands* led by Prof Elery Hamilton-Smith, Charles Sturt University.

Short course available for credit or stand-alone, involving field work & assignments in the Limestone Coast area

*Post-workshop Excursion to Tasmanian Karst Areas*, led by Ian Houshold. Details available shortly

### COSTS: Workshop registration & accommodation

For full details of events please visit the website above.

Workshop Registration fee of \$500 includes lunches, some dinners, teas, all transport during the Workshop, plus Workshop Handbook and Field Guide. Partners \$150.

Accommodation is additional, and for 7 days varies from \$35pp. for camping, \$70pp. bunkhouse to \$679 (double) for a motel. A full list with costs and booking form is available on the website, including requirements for the cheaper options. Breakfast at additional cost. All accommodation will be booked on attendee's behalf, as per indication on your Booking Form.

Attendees are **STRONGLY ADVISED** to book early. If your selected accommodation is fully booked when your booking is received, you will be contacted with suggested alternatives (which may prove more expensive).

### PUBLICATION

Proceedings of the Workshops will be published by ASF in *Helictite*, the Journal of Australasian Cave Research.

### FURTHER ENQUIRIES

Kent Henderson, Workshop Secretary, P. O. Box 332, Williamstown, Victoria, Australia. 3016. Fax: +61 3 9398 0523. Email: [kenthen@optusnet.com.au](mailto:kenthen@optusnet.com.au)

**CLOSING DATE FOR REGISTRATIONS: 1ST SEPTEMBER 2004.**



## CAVEMANIA FIELDTRIPS



### Pre-Conference

These trips will be by prior arrangement with the people concerned. Cavers interested in going caving en route to CaveMania will need to make their own arrangements with regard to permits, any guidance or advice from local contacts, food and accommodation. Rob Squibb ([rsquibb@southcom.com.au](mailto:rsquibb@southcom.com.au)) of Northern Caverneers is willing to co-ordinate some trips in the Mole Creek area.

### During the Conference

We have arranged a day of fieldtrips for Wednesday 5th January 2005, to Ida Bay and Hastings, in the Dover area. The Hastings Experience, who are the operators of Hastings Cave National Park, have offered a range of options. They operate tours of Newdegate Cave and Adventure Tours to King George V and Mystery Creek Cave. Guided tours of Newdegate Cave will be free of charge and the other tours will be at a nominal rate to cover some of the cost of staffing. Cavers who are attending CaveMania will be able to join guided tours of Newdegate Cave at any time during the conference and there will be no charge for this if they show their nametag.

Cavers may choose to explore other caves in the area on this day but they must be self-sufficient since CaveMania organisers will be otherwise occupied. There are a number of interesting hydrological features to be found within the Hastings Cave National Park and attendees will be encouraged to visit these.

The Fieldtrips Day will culminate with a BBQ at the Hastings Thermal Pool at 6pm. Cascade Beverage Company has kindly supplied a quantity of Pale Ale for this occasion.

### Post-Conference

Starting on Sunday 9th January 2005 there will be two weeks of scheduled fieldtrips in the Dover, Maydena and Mole Creek areas. Depending upon demand there is the possibility of a number of mini expeditions to explore other karst areas in Tasmania's northwest. Local cavers will act as guides for a number of easier vertical and horizontal caves but cavers wishing to do anything too gutsy will need to be self-sufficient.

The first week of trips will be concentrated in the Dover area. The highlight of the program will be the opportunity to abseil the Gordon Dam on Saturday 15th January 2005, under the auspices of Aardvark Adventures for a nominal cost. The second week of Fieldtrips will be concentrated on Maydena (Juneeflorentine) area and Mole Creek.

Cavers wishing to visit Kubla Khan on one of the CaveMania fieldtrips will be expected to help in some of the cave cleaning program for this, Australia's most



# IPS CAVEMANIA FIELDTRIPS CAVEMANIA FIELDTRIPS

spectacular non-commercial, cave. This project will be co-ordinated by Dave Wools-Cobb (wools@southcom.com.au). Steve Blanden has offered to run trips in the Gunns Plains and Loongana areas.

All CaveMania Fieldtrips will incur an administration cost of \$10 per person per day unless advertised otherwise. There will be an opportunity for cavers to practice their vertical caving skills and demonstrate their competence at the Far South site before embarking on any of the official vertical cave trips.

For Pre and Post-Conference Fieldtrips participants will need to arrange their own accommodation.

For descriptions of the caves and for more details on all CaveMania Fieldtrips see the CaveMania website; <http://www.tesa.com.au/stc/cavemania/>

## Margin Note on SpeleoSports – What, No Speleosports?

Comment has been passed about what appeared to be an omission from the CaveMania program, namely Speleosports. Whilst STC realises that Speleosports is a bit of tradition at ASF Biennial Conferences, we feel that we do not have the resources to stage this event. However, we do have a wealth of caves in the vicinity and STC believes the emphasis of this Conference should be on real caving, not artificial caving. If on the other hand some mainland person or club feels that they could organise the Speleosports, provide the infrastructure and the prizes, we would happily allocate time in the CaveMania program.

## CaveMania Photographic Competition

Grab you camera, get out there and go caving. Now most importantly, Show us what you are up to! The ASF Biennial Conference Caving Photographic Competition is on again.

Entries can be made in the following for the following media Prints, Slides, Digital and to reflect the changing times in which we have Manipulated Digital. (Digital photos are considered to be just as you take them, whereas manipulated digital images can be photoshopped for artistic effect, to remove blemishes and to increase the impact, either dramatic or humorous.) The images must be those of the photographer. (We will need to rely on the photographer's honesty as to whether they took the image and as to whether or not they manipulated it.)

Again we are running the traditional major categories of Entrances and Surface Features, Passages and Chambers, Cave Decorations, Cave Sciences including

Biospeleology, as well as Cavers in Action.

There is plenty of scope for your creativity and plenty of chances to win. You don't have to attend the conference to enter. Entries are \$1.00 per entry with a minimum of \$2.00 per division and a maximum of \$5.00 per division. Prize winning photos from previous ASF Conference Photographic Competitions are not eligible to be entered.

So, get snapping!!

Entries close at Registration 2nd or 3rd January 2005. Entries will be viewed on the evening of Thursday 6th January.

For further details of rules, conditions and categories, see the article elsewhere in Australian Caver or for the complete version and an entry form, visit our website at <http://www.tesa.com.au/stc/cavemania> or write to CaveMania at PO Box 198 North Hobart 7000 for a hardcopy.

## Summary of Rules & Conditions for ASF Conference photo competition:

It is not necessary to attend the Conference to enter the CAVEMANIA photographic competition. Any posted entries must enclose payment (cheque/ money order) to cover return postage, in addition to the entry fee. Details will be posted to the ASF Conference website or can be obtained by contacting the conference organisers at PO Box 198, North Hobart Tas. 7002.

*Any part of a photograph or complete photograph that has been awarded a prize in any previous ASF photographic competition is not eligible.*

## Categories (photographic media and presentation)

(P): Prints (from film or digital camera) can be: colour or monochrome; machine-printed, hand-printed or digitally printed. Print size must be a minimum size of 13 cm x 18 cm (5" x 7") and a maximum size of 27.5cm x 35 cm (11" x 14"); preferable that they ARE mounted on cardboard mats; maximum mat size 16" x 20" (40cm x 50cm). Prints can be on any print medium and multiple pictures may be mounted together, but each photo will constitute a separate entry.

(S): Slides... 35mm format only, unless you supply your own projector to show other slide formats. Slide entries will be viewed by conference participants on the evening of 6<sup>th</sup> January 2005.

(D): Digital... photographic images in ".jpg" format taken with a digital camera or digitised (scanned) as film camera images (from slide, negative or print).

(MD): Manipulated Digital... photographic

images taken with a digital camera or digitised from a film camera (in medium image size ".jpg" format). Images maybe manipulated in any manner to produce the desired "artistic effect" that the photographer/ artist wishes to achieve.

## Divisions

1. Entrances/ other surface karst features;
2. Passages/ chambers;
3. Cave decoration/ formations/ deposits (includes speleogens, petromorphs, speleothems, bone deposits and clastic fills);
4. Scientific (cave conservation/ research/ dye-tracing/ cave life or biology);
5. Cavers in action (humorous/ technique/ surveying/ historical).

## Entry Conditions

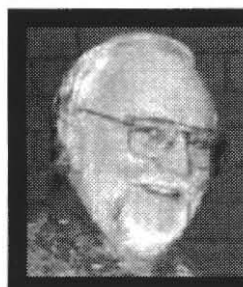
- (a) Entry fee is \$1.00 per entry, with a minimum fee of \$2.00 per division in each photographic category.
- (b) Maximum of five (5) entries per division in each category.
- (c) NOTE: that all digital or manipulated digital images are to be presented as medium image sized (500kb-1mb) ".jpg" images on floppy disc or CD, with images clearly labelled or defined according to division and category, possibly grouped together in defined folders e.g. D3, D4, MD2 or MD5.
- (d) All prints, slides and CD's with digital or manipulated digital images to be clearly labelled with the entrants name, competition division number, any desired title and accompanied by a copy of the entry form (see below).
- (e) Entry forms for all divisions (1 to 5) must be submitted by 30<sup>th</sup> November 2004. The photographs (or CD with folders of digital images in their divisions) along with prescribed entry fees may be brought directly to the CAVEMANIA Conference Registration desk on 2<sup>nd</sup> - 3<sup>rd</sup> January December 2005 (deadline: 2pm on Monday 3<sup>rd</sup> January 2005), provided that an entry form has been received by 30<sup>th</sup> November 2004. All posted print and slide entries will remain unopened until 2<sup>nd</sup> January December 2005.
- (f) Posted entries must bear the sender's name on outside of package and be addressed to CAVEMANIA Photographic Competition, PO Box 198, North Hobart, Tasmania 7002. Posted entries must not be included with other conference material (papers or Abstracts etc.), unless enclosed in a separate and clearly labelled "CAVEMANIA Photographic Competition" envelope.



## Book Review

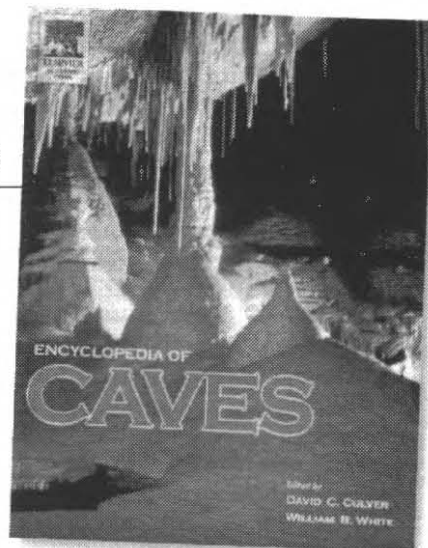
*Encyclopedia of Caves and Karst Science.*

*Edited by John Gunn, Fitzroy Dearborn, New York, 2004*



**Reviewed by John Dunkley.**

John Dunkley is President of ASF, and an author or contributor to several books on caves in Australia and South-east Asia.



This is a truly epic achievement, a great credit to the Editor, John Gunn, his team of advisers, and to the publisher's in-house editors. There were major obstacles in the path to its production, including publisher changes, they were overcome admirably, and the result is a major landmark in the evolution of speleology.

First, the title. Note that it is not Cave and Karst Science, but CAVES and Karst Science. In other words, it's about caves (very much in the plural!), and is thus of value to the curious caver as well as the scientist. Indeed, there is a good balance between the two objectives.

Its introduction states that *"This is the first encyclopedia of Caves and Karst Science and provides a unique, comprehensive and authoritative reference source that can be used both by subject-specialists who wish to obtain information from outside of their immediate area of knowledge and by non-specialists who wish to gain an understanding of the diverse and multi-disciplinary nature of caves and karst science. It will be useful to cavers who wish to learn more about the environments in which they undertake their sport and to conservationists, engineers, planners and others who are charged with developing and managing in a sustainable manner complex karst environments"*.

Let's examine this. Unique? Yes, it is. In the last decade or so there have been encyclopaedic or monographic works on biospeleology, on literature relating to caves and karst, on cave minerals, and on speleogenesis, and less ambitious works on cave history, the world's longest and deepest caves, and numerous specialised works on particular caves and karst areas. But this is indeed the first attempt to cover the whole field.

Comprehensive? Yes, certainly. Some statistics give an indication of its scope: 902 pages, 353 articles, 202 authors, a 94 page index with over 10,000 cross-referenced entries. There are entries for every continent, subdivided into regions (with a lone entry on Antarctica!), some overview of an extraordinary range of countries, and a treatment of 100 of the world's most significant cave and karst sites. For example, just under B & C in the Alphabetical List there are articles relating to Brazil (2), Belgium, Belize, the Bahamas Blue Holes, Britain/Ireland (4), Canada (2), Canary Islands, Caribbean Islands (2), Caucasus: Georgia, China (2), Crimea: Ukraine, and

Cuba, along with regional entries on Calcareous Alps (Austria), Cape Range, Carlsbad Cavern, and Cockpit Karst (Jamaica). Under P you can read about Paleokarst, Paleontology, Palynology, Pamukkale (Turkey), Paragenesis, Patagonia, Pierre Saint-Martin, Phytokarst, Plitvice Lakes, Poljes, Ponors, Postojna, Pseudokarst and a dozen other topics. You get the picture.

Authoritative? The vast majority of authors, most of them academics, are eminent experts. However contributions were solicited and vetted by the editor and / or advisers, and there was no formal refereeing process that I am aware of. There are some anomalies among authors, and in some cases it could be said that they are the best experts actually available. Some entries are by way of discursive essays (e.g. Tourist Caves), others are literature reviews or descriptions of events or species, but as prose they read well and all conclude with a short reading list to augment the overview approach. There has been a commendable effort to provide representative world coverage in content, but contributions had to be in English, so that over half are from Anglophone countries. The list of authors demonstrates just how much the field is still dominated by residents of Europe who comprise over half the total (108, with 26 from Britain and Ireland alone), and North America with another third (66). Australia is well represented with 14 but language difficulties may have prevented more authoritative contributions from the ranks of indigenous scientists elsewhere: non-Russian Asia and the Middle East provide only 7, Latin America 3, and there are none from Africa except a distinguished expatriate who worked there for many years. Thus, the Cheju-do Lava Caves in South Korea has a Japanese author, two articles on South-east Asia were written by Australians, and the two on North-east Asia came from British writers, one of whom also covers (among 10 others) South-west Asia, the Shilin Stone Forest in China, and Ha Long Bay (Vietnam). Some authors have contributed as many as 8, 10 or 12 articles including a few that appear to be largely indulgences.

Australia is well represented. Under Geoscientists Joe Jennings is among 9 rated as "making particularly important contributions to cave and karst science" in the 20<sup>th</sup> century. Building on this foundation and reflecting our growing stature, Australian speleologists number 2 of the 15 advisers and editor, 14 of 202 contributors, and 28 of 353 articles. Four overview



articles deal with Australia generally, its archaeological and paleontological caves, its biospeleology and its cave history, while a further three entries (Cape Range, Nullarbor Plain, Chillagoe and Mitchell-Palmer Karsts) treat specific karst areas of Australia, and there are briefer mentions of Australian sites elsewhere. I cannot assess much of this critically, but the History article is curiously truncated. Largely a list of 'firsts', it nevertheless overlooks recently published accounts of the discoveries of Thomas Mitchell's Assistant Surveyors, and unlike other regional histories in the volume it virtually ends in the nineteenth century. There is only passing reference to the growth of cave tourism at the turn of the twentieth century, and a complete omission of recreational caving, the many caving expeditions to explore remote Australia, and the great cave conservation issues beginning in the 1960s.

A full chapter on this last topic, celebrating the achievements of speleologists in conserving the world's caves, should have graced an encyclopaedic work like this. It is a field in which Australian cavers led the world and I have observed on several occasions that there are entire cave areas here and overseas that would remain unknown or not even be there for managers to manage or scientists to study, other than for the unpaid efforts of amateur cavers.

Quibbles are minor. There is no accessible address list of key speleological organisations around the world, only an odd mixture under the heading of Exploration Societies. Journals on Caves mentions the SUSS Journal (Sydney University Speleological Society) as an example of "outstanding scientific level" but completely overlooks *Helictite*. A list of the most significant speleologists finishes with Norbert Casteret who died in 1987; presumably those notables still active are writing other chapters! There is very little on cave exploration techniques.

Inevitably a work of this magnitude contains errors, and other reviewers have had little difficulty deconstructing entries of interest to them. Following that line of enquiry, for example, I found that 6 of 25 sub-entries in the Index under Thailand are in fact in Myanmar (under which entry they are not listed); the cross-reference is similarly incorrect.

And then there is the problem of brevity, also inevitable in any encyclopaedic work. Thus, I provided the entry on Asia South-East: History. The eight countries in this region enjoy an association with caves stretching back more than a millennium, as well as hosting much recent speleological exploration. How do you keep this to the contracted limit of a rigidly enforced 1,000 words (and few entries in the book exceed 2,000)? I had to dismiss each such country in barely 100 words. It would have been much easier to write 10 times as much, and still present little more than an overview. So omissions in other articles largely reflect the exigencies of space. The wonder is that it has proved possible to cover so much, so well.

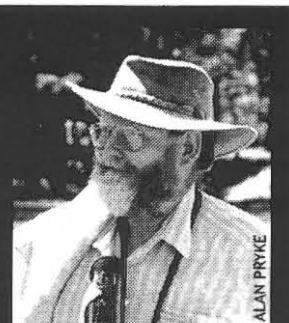
#### Conclusion

This book is a remarkable achievement. For the serious caver, it can be sampled at random for enlightenment on a plethora of subjects speleological. It should excite interest in some almost unknown karsts, encourage greater indigenous cave and karst exploration and research in the developing world, and serve to demonstrate just how much remains to be published in an accessible form. For example, the entry Caves emphasises that there must be thousands of caves waiting to be discovered, and one map demonstrates that there is almost nothing known of karsts in a vast band stretching from the northern Congo across the Sahel to Mauritania.

Speleologists should certainly press for its acquisition by the library of every major urban and regional centre, tertiary institute, geological survey and environmental department in Australia. It should be in the guides' office of more enlightened tourist caves, and is definitely worth having in your club library. But is it worth buying privately? Depends on your priorities and pocket, of course. Considering that its size and scope exceed 4 or 5 more specialised books or texts, the price is not excessive and is less than a modest length of *Blue Water*. But if your finances run to only one book this year, my recommendation would be to buy "*Beneath the Surface*" (the 'Jennings' book), reviewed in *Australian Caver* 159. ■

#### Reviewed by Andy Spate

An active caver and member of Canberra SS for more than 40 years, a Fellow and former VP of ASF, a Life Member of ACKMA, and author of numerous cave science articles. Recently retired he was Australia's first National Parks karst expert (with NSW NPWS), and now runs Optimal Karst Management, a consultancy based in Hall, ACT.



ALAN PRYKE

John Gunn, assisted by an advisory board of 14 members has compiled and edited 353 submissions from 202 authors into a truly international and comprehensive coverage of this field. John Dunkley has asked me to provide a review for this issue of *Australian Caver* from a scientific perspective - I suspect that I have not done this well. He gave me only a few days to dip into the xvii+902pp, alphabetic and thematic lists of entries, 285 B&W photos, 50 colour photos, 325 line drawings, 60 tables and subject and author indexes of this massive tome. The index itself runs to nearly 100 pages! To add insult to the injury of the short time frame, John D sent me a copy of his review (which is to be found elsewhere in this issue) that effectively steals many of the things I was going to write about. The fact that I have now read five reviews of the *Encyclopedia* has made my job a little easier. Like this review, most of the others have a similar reaction to this volume. Amazement coupled with a few criticisms - as it is far easier to pick holes than to discuss constructively.

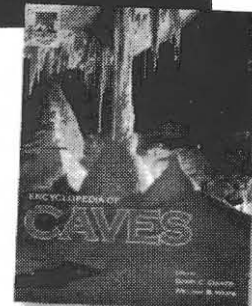
One's first opinion of this volume is... WOW!

Let's be parochial to start with and look at Australia. The continent is well covered with at least eight separate entries directly dealing with Australian caves and karst science. Fourteen percent of the advisory board is Australian, 9% of the entries were written by Australians; 7% of the authors are Australian. Interestingly, and perhaps tellingly, half of the 19 entries dealing with management, conservation and the like are by Australians. Others cite Australian authors comprehensively.

The writing style required for an encyclopedia lends itself to concise, and perhaps, non-technical, approaches that can make for clearer explanations and definitions - this has usually been achieved. Thus the 300-odd snapshot entries provide a splendid introduction to the subject at hand. Although another reviewer has said that the biospeleological entries are "a bit dense with biological names" this would be hard to avoid and removing such things would greatly reduce the value of this work.

Of particular use are the entries dealing with the orders within the great invertebrate subphyla and classes Crustacea, Arachnida, Insecta and so on. These entries should markedly assist those with a non-biological training to understand these important groups of cave inhabitants. However, I felt that the entry on Chiroptera (Bats) is somewhat limited with only discussion of Europe (including Israel) and North America being canvassed and citations limited to those areas (except for a few global reviews). Bonaccorso's recent *Bats of Papua New Guinea* is an obvious omission as is any discussion of the activities of that splendid organisation, Bat Conservation International.

I found the Inception entry particularly useful. Whilst the Inception Horizon Hypothesis is a set of new ideas, effectively codified, the ideas have been lurking in speleogenetic minds for many decades. It is good to see the clear exposition here. The seven entries dealing specifically with Speleogenesis are particularly well chosen topics covering different aspects and setting of cave development and evolution. These discussions are supported by





## NEWS FLASH

### ABKHAZIA WORLD'S DEEPEST — RECORD BROKEN

Krubera (Voronja) has just surpassed -1800 meters.

<http://lentra.ru/sport/2004/07/29/cave/>

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## HELP SAVE AUSTRALIAN CAVES & KARST

The ASF Environmental Fund is completely funded by donations from cavers, caving clubs and public. Your donation or bequest to AEF will assist our work of informing Australians, and conserving Australian caves and karst. To make a contribution or receive an information pack, contact The Secretary or visit [www.caves.org.au](http://www.caves.org.au). Registered as an environmental body by 'Environment Australia'.



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## Book Review continued ...

eight related entries on caves, supplemented by 24 karst geomorphology entries and a similar number on karst processes.

Cave contents are also comprehensively discussed and the entries will answer the questions of most users although Hill and Forti's *Cave Minerals of the World* should be on the shelf next to your copy of John

Gunn's *Encyclopedia*. Importantly it emphasizes that there are other important cave contents than the commonly discussed stalactites, stalagmites and so on. Interestingly, the useful term speleogen does not appear in the index and maybe not in the text.

World cave regions are adequately covered, but probably not as comprehensively as some would like. Australia gets an entry on its own, as do entries on Chillagoe and Mitchell-Palmer and on the Nullarbor. The fabulous karst (and more) landscape of the Limestone Ranges of the Kimberley region of Western Australia deserves an entry in its own right. They are mentioned in the Australia entry but are not to be found in the index.

As well as the mainstream cave and karst disciplines of geology, geomorphology and biology there are incursions into the important fields of archaeology, history and aspects such as diving, photography, survey and similar activities as well as good discussions on the many other aspects of cave use such as religion and military uses. In the eyes of many these may be under-represented in this *Encyclopedia*. Some may argue that they are irrelevant to an *Encyclopedia of Caves and Karst Science* (my emphasis). One entry that may be missing is one that discusses the economics of caves and karst this is touched on here and there but a summary of the values of water, lime and cement and of tourism and perhaps agriculture of karstic terrains might be useful.

A few quibbles... Inevitably there are errors of omission and perhaps fact. Many of the line drawings are unattributed (although all the photographs are) even when it is obvious they are not the creation of the authors of the articles. There are differences in the citing of publications in different articles with one citation being referred to in at least three different ways but all adequate I hasten to add. From my perspective the colour plate section has too many speleothems and bugs I would have liked to see more landscapes and perhaps some karren.

Remember that I have had only limited time to scan this amazing volume. Interesting that the epikarst, subcutaneous karst and similar terms do not appear in the index. Indeed the whole subject of phreatic/vadose relationships does not appear to have been

canvassed substantively. The back cover has a picture of 'Solution pocket developed along a joint...'. But the term 'solution pockets' does not appear in the index and I have not yet found a mention in the text.

In my opinion there is one way in which the volume could have been improved. Cross-referencing of entries could have easily been incorporated. For example, a route to sea caves could easily have been provided in the body of the text as Sea Caves (see Littoral Caves). Many entries are well cross-referenced to other related articles. The very large, approximately 11,000 line index is reasonably good although sometimes some fossicking around can be required. And there are omissions — Yarrangobilly occurs in the text; it is not to be found within the index. However, the complexities of indexing at this scale are enormous and are not easily resolved by technology. Another reviewer decided to look up Lava Tubes and found no entry he found what he was looking for under Volcanic Caves "there are numerous and contradictory meanings of the term 'Lava Tubes' and thus an entry would point in differing directions. But there is an entry for Lava Tube Caves. To each his/her own. It is probably better, when searching for a broad item to use the two listings alphabetical and thematic of entries at the beginning of the *Encyclopedia*. References appear to be comprehensive and the Further Reading lists are especially valuable.

For a volume of facts there are some curiously unsupported ideas or insufficiently detailed captions. For example, although I am not a fan of longest and deepest listings, there is a colour photograph (Plate 1i, facing page 422) of 'World's tallest stalagmite' (from Cuba) with a tiny human figure for scale but the perspective is such that one cannot really get an impression of how big it actually might be. A height estimate would have been nice. The discussion of Littoral (sea) Caves should have been supported by reference to, or entry in the Further Reading list of, the two basic texts on the geomorphology of rocky coasts.

Let's go positive again. One of the best features of the *Encyclopedia* is the up-to-date references attached to each entry and the suggestions for further reading are very useful. This volume is contemporary!

Having recently collaborated with 17 other scientists to produce a large scientific monograph in a time frame of about six months it astounds me how John Gunn, his board and contributors have been able to put together such a detailed and comprehensive volume in only a few short years. They deserve our congratulations and thanks. I am sure it will be a very long time before we see another volume so comprehensively discussing our field. I fully support John D's discussion on the relative cost of this volume and concur with his recommendations on where this volume should be found in the future.





*New from Academic Press*

*The must have reference for **Caving Enthusiasts***

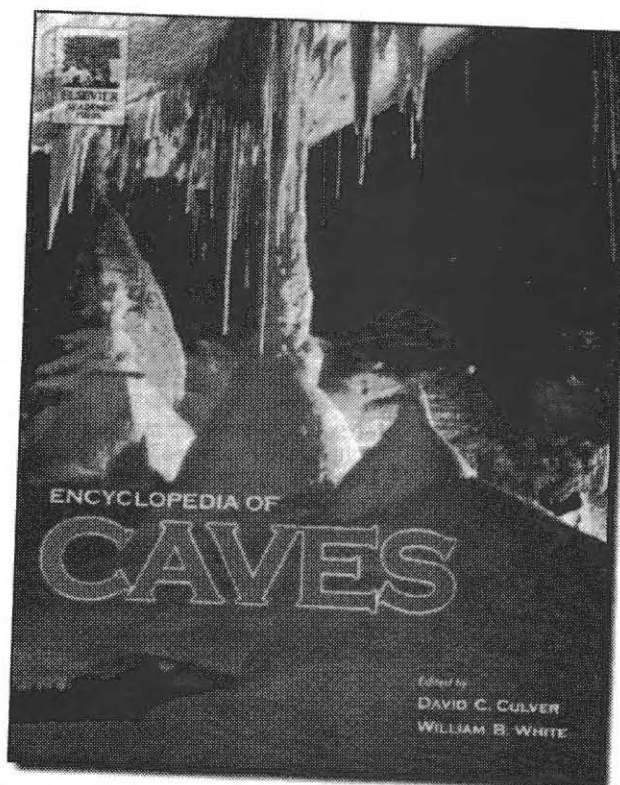
## **ENCYCLOPEDIA OF CAVES**

**David Culver** (Editor), American University, Washington DC  
**William White** (Editor), Pennsylvania State University,  
University Park, PA

*"This monumental and attractively presented reference book belongs on the bookshelf of every person with an interest in caves, endangered species, or the biological diversity of our planet. The hundred or so chapter authors are a Who's Who of the world's cave experts... This book will be an invaluable reference for students, teachers, scientists, and anyone interested in learning more about the remarkable diversity of life and geology that lies hidden beneath our feet."*

- Larry Master, Chief Zoologist, NatureServe

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- Highlights many of the great caves of the world
- Makes information easy to find with alphabetical listings, cross references, suggestions for further reading, plus a full glossary and index



*Encyclopedia of Caves* is a self-contained, beautifully illustrated work dedicated to caves and their unique environments. It includes more than 100 comprehensive articles from leading scholars and explorers in 15 different countries. Each entry is detailed and scientifically sound, yet accessible for students and non-scientists. This large-format reference is enhanced with hundreds of full-color photographs, maps, and drawings from the authors' own work, which provide unique images of the underground environment. The *Encyclopedia of Caves* is an essential interdisciplinary resource for scientists, students, and caving enthusiasts.

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# A dedication to the life and memory of

*Many cavers will have been shocked to hear about the untimely death of Jeff Butt in April most extensive cave systems in Tasmania (Australia), was a leading advocate of cave safety*

After being married for just a month, Jeff Butt died at home in South Hobart with his wife Sarah Boyle beside him on Tuesday morning April 13<sup>th</sup> 2004, at 6.30am. A stalwart of caving in Tasmania and Australia — held in high esteem as an international caver as well — he passed away a little over two months before his 45<sup>th</sup> birthday, after courageously battling an aggressive cancer for just on three years.

His funeral service on Monday, April 19<sup>th</sup> took place near The Springs on the Hobart-facing side of Mt. Wellington; it was conducted by Maggie Best: the same celebrant who married Jeff and Sarah just over 5 weeks before. It was predictably another fine day and many attending cavers — dressed in full caving attire with harnesses and SRT gear — acted as pall bearers. Jeff had been a meteorologist and oceanographer and so it seemed that when he went caving or was the star attraction of the day, you knew there would be fine weather! And this fine weather history was repeated, twice in fact... firstly, on Saturday May 1<sup>st</sup> on a miserable early Tasmanian winter's weekend, there was a break in the weather for the walk to *Newdegate Cave* where a memorial service dedicated his memory was held and similarly for the celebration of his life down the road at the Hastings Thermal Pool and Picnic Shelter. More recently, there was more respite from rain as we stood with snow on the ground nearby, saying our final goodbyes to Jeff in witness to Sarah and Dave Rasch who ceremoniously deposited Jeff's ashes into the turbulent snow-melt floodwaters pumping into *Growling Swallet* in the Junee-Florentine karst north of Maydena. It was Tuesday June 22<sup>nd</sup> — (the day after the winter solstice when Jeff should have been celebrating his 45<sup>th</sup> birthday with Sarah and friends) — that we finally let him go (by the instructions of his will), so in spirit he would be doing the first through trip from *Growling Swallet* to the *Junee (Cave) Resurgence* and with its floodwaters, maybe some of his ashes would splash up high and dry on ledges, so his spirit could linger a little longer in this cave system.

It was a warm autumn (Friday) afternoon on March 12<sup>th</sup>, when Jeff married Sarah Boyle — his loving partner of many years — in a most memorable wedding at the old Springs Hotel site on Mt. Wellington, overlooking Hobart. The 160 invited guests stood in awe as the SES Police Search and Rescue helicopter approached, circled above the trees, and then landed with Jeff and Sarah stepping out to be married, escorted by best man Tim Rudman. It was probably the last time a helicopter would be legally permitted to land on Mt. Wellington, following implementation of the mountain park management plan: indicative of the respect and standing Jeff held within the community of Hobart, particularly in regard to his contribution to search and rescue and the State Emergency Services. Jeff will be sadly missed by his loving wife Sarah and the many others who knew him through caving, sea kayaking, cycling and cycle-touring, rogaining, orienteering, bushwalking, cross country skiing and the State Emergency Services... to name just a few of his many outdoor involvements.

Jeff contributed so much to our knowledge caves, caving and speleology in Tasmania and around the world. Although many of his efforts as a caver have been published in Tasmanian caving magazines — for nearly two decades, he was probably the most prolific contributor of articles — there are aspects of Jeff's contributions to speleology that remain unreported, particularly in regard to his professional accomplishments. His contribution to caving in general, our national cave safety and cave leadership competency standards, caving skills instruction, his efforts in cave conservation, cave exploration, documentation and his levels of excellence as a cave surveyor and drafting

of survey maps, are just a few of so many attributes he contributed to Australian speleology. Amongst the many achievements he will be remembered for: his commitment and dedication to cave safety, maintenance of fixed ladders and pitch head bolts in vertical caves and the more recent rigorous investigation and testing of "glue-in" bolting methods, and — following an initial diagnosis of bowel cancer — the installation and testing of P-hangers in our more regularly visited Tasmanian caves. He also promoted the installation of a permanent log book at the bottom of *Midnight Hole*, in order to monitor the frequency and intensity of the new P-hanger usage.

With cave safety in mind, Jeff organised numerous southern based or state-wide CAVEX: Cave (Rescue) Exercise and SAREX (Search and Rescue Exercise) scenarios in Tasmania, along with stretcher hauling practice sessions at Fruehauf Quarry and helicopter winch-lift rescue practices. In just the seven years since STC formed, he organised six or seven of these rescue exercise events. On the home front, Jeff conducted an annual safety audit of all our various lengths of (9mm and 11mm) SRT caving ropes. Realising that rope testing could become a tad tedious — apart from the fun of watching a heavy weight drop from a reasonable height to test a rope's strength — Jeff always had a diversion on hand: his freshly baked scones with homemade strawberry or raspberry jam from his garden produce at the ready. His unconditional commitment to SRT rope skills and SRT practice sessions at the Fruehauf Quarry cliff faces enabled newcomers to feel safe in pushing their limits. In addition to SRT Skills training, Jeff often ran caving beginners trips, always promoting cave safety, good balance and climbing techniques when on slopes or in rock piles and promoted the use of handline ropes where beginners felt unsure about their own capabilities. He carried a first aid kit on all caving trips, advocating the practice to other cavers, including beginners, suggesting your first aid kit should always contain basic emergency needs for minor and major injuries, plus a space blanket (to ward off hypothermia) as well as spare light globes, additional light sources (including a candle and matches), and a high energy chocolate bar.

Jeff practised what he preached and an example of his own preparedness and training skills in vertical caving techniques is no better illustrated than in the instance of his own slightly assisted self-rescue, following a serious rockfall accident in *Flick Mints Hole* (JF-371) in the Junee-Florentine karst. The incident occurred on July 17<sup>th</sup> 1998 while he was descending into the *Decadence Chamber*; about 160m (four pitches, two climbs and two squeezes) below the surface and Jeff provides us with a graphic account of the accident in his report to *Speleo Spiel* #309. As was the normal custom, the pitch was rigged with a back-up anchor. In this instance, when he was the second person to descend the 15m pitch, the primary anchor collapsed while he was 8-10m down in his abseil. Jeff was a hit by a cascade of falling rock, including two large "football" sized (5-10kg) rock fragments that struck his helmet, smashed his glasses and hit his left hand, both his thighs and lower leg, tearing his overalls apart. With encouragement and assistance from Damian Bidgood (STC member and Police S&R Officer), Jeff administered his own bandages and dressings and despite severe leg and hand injuries, plus very hazy vision — realising that a stretcher rescue was impossible — he exited the cave by improvised SRT methods and painful crawling. He later used his severely battered and punctured caving helmet as a teaching aid.

Jeff always led by example and another thing he taught many of us (apart from caving safely)... was the way to cave, leaving as little impact as possible. In fact



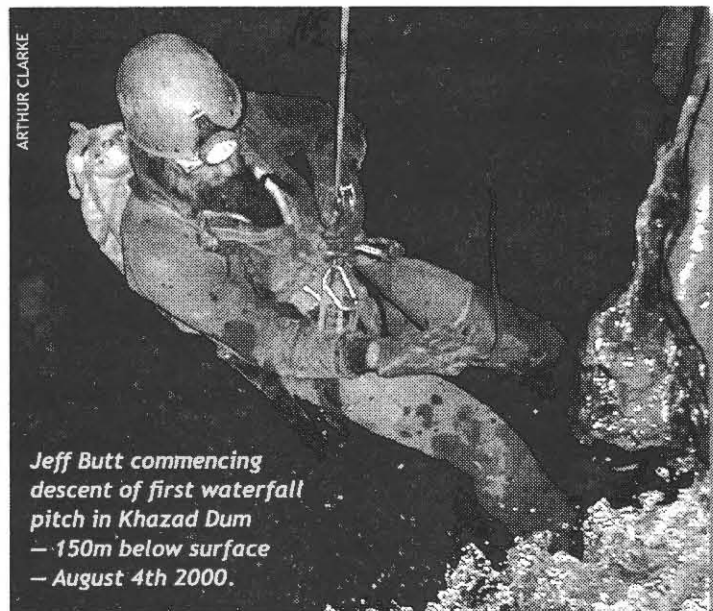
# Jeff Butt

2004. He surveyed and mapped many of the deepest and and a pioneer of some of the first Australian guidelines .

some cavers thought he took minimal impact caving to the extreme... placing his large rubber gloves down on his lap to catch the bread crumbs, so they wouldn't create an artificial (introduced) food source for cave life. Although Jeff always went caving following the principle of "taking nothing but photographs and leaving nothing but footprints", he was strictly mindful that as cavers, we needed to minimise the impact of our feet in caves... walking along the same path, keeping within string lined routes (some of which he helped position), placing our feet where we would avoid trampling on flowstone or precious cave sediments. Again, leading by example, when ever it was possible Jeff avoided walking in cave streams... and was careful not to brush his dirty overalls against cave walls. I remember him as always being self-sufficient in a cave, ensuring that he had screw-top containers or plastic bags to carry out any human waste, food scraps or discarded items. Jeff was a great advocate for the use of electric lighting by cavers, because of the inherent problems of removing spent carbide from a cave when using acetylene generated carbide lighting. As many of his friends will remember, his attitudes towards minimal impact caving were an extension of his life: looking after our environment, self-sufficiency and his philosophy of recycling. Jeff was one of the very few people I knew who washed and cleaned any tins, plastic drink containers and cardboard milk cartons before neatly crushing or compacting them for placement in recycling bins.

As a caver, Jeff was gently mindful of everyone's qualities and abilities in the most technically difficult vertical caves (e.g., *Splash Pot* in the Junee-Florentine and *Anne-A-Kananda* at Mt. Anne), in the most severe of our long, cold and wet stream cave systems (e.g., *Growling Swallet* and *Exit Cave*) and in our most pristine caves where conservation values were paramount e.g., *Three-Forty-One* (JF-341). As mentioned by Dave Rasch at the crematorium service, it should be noted that Jeff undertook some 33 caving trips devoted to surveying, restoration and track marking in the *Rift Cave - Three-Forty-One* system. A copy of the first compilation of the JF-341 cave survey was draped over his coffin at the funeral service and cremated together with his multi-patched and lovingly repaired caving overalls. Interesting timing too Jeff, because the last (May 2004) edition of STC's *Speleo Spiel* was issue number #341.

I would now like to take you back to his beginnings. When I first knew Jeff in 1984 ... at a time when I was still living at Dover (85km south of Hobart), he was working at the Meteorological Bureau in Hobart and living at Facy Street in Bellerive with "Jacko" (Philip Jackson) another early stalwart in Tasmanian caving, when they were both members of SCS (Southern Caving Society). Jeff had come over to Tasmania in February 1984 to commence work at the Met. Bureau after doing a course in meteorology in Melbourne, which itself was inspired by his previous job of weather research in Canberra.



Jeff Butt commencing descent of first waterfall pitch in Khazad Dum — 150m below surface — August 4th 2000.



Jeff Butt uncoiling SRT rope prior to rigging the first pitch into Fizzer (IB-169) at Ida Bay, March 24th 2003.

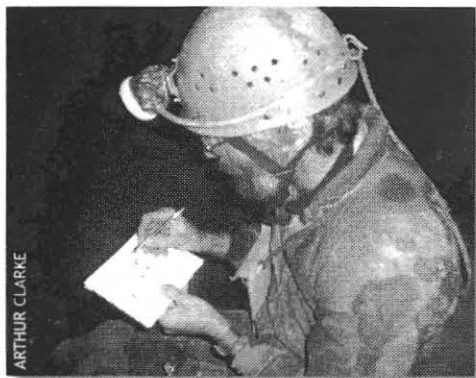
Jeff Butt was born on June 22<sup>nd</sup> 1959 at Ararat, just east of The Grampians in western Victoria and grew up there with his brother (Daryl), where their parents (Alan and Rita Butt) initially had a dairy farm, before converting to milking goats where they bred champion breeders. Jeff attended Ararat Primary School (1964-1970), then Ararat High School (1971-1976) during which time he was awarded several prestigious scholarships and in 1976 his High School Certificate included Special Distinctions in Physics and Chemistry. Continuing on to tertiary studies, Jeff was awarded another scholarship to Monash University in Melbourne (1977-1980) where he completed a pure science BSc (Honours) degree with High Distinctions in major subjects: Physics and Chemistry. Inspired by his parents, who built and designed one of the first solar passive houses in Victoria which also featured wind energy power generation, in 1981 Jeff commenced a PhD at the Australian National University (ANU) in Canberra, where he conducted research on solar energy and alternate energy sources. His interest in this field also stemmed from his own personal study and research into the effectiveness and performance of the energy independent family home in Ararat, which then led him into his lifelong commitment and passion of energy conservation, recycling and re-use of manufactured materials.

It was during his time at ANU, where he studied with Tim Rudman, that Jeff's "love affair" with caving and outdoor adventure activities came to fruition. Jeff joined the National University Caving Club (NUCC) in 1981 and was elected as President of NUCC in early 1982. He actively participated in a range of outdoor "sports" including bushwalking, climbing, canyoning and cross country skiing and was appointed as the ANU Mountaineering Club Equipment Officer in 1982-1983. It was a time when his treasured car (the "ORANA") was still a Torana (the "T" hadn't fallen off then) and Jeff could boast about driving speeds of 120km/h to and from bushwalking trips that took him as far afield as southern Queensland, as well as back to Ararat and The Grampians. An unfortunate accident in early 1982 — not related to his car — forced a change in his study directions and although Jeff reluctantly exited from his PhD study, he found a job in a solar energy related pursuit doing weather research in Canberra, enabling continued involvement with NUCC and the ANU Mountaineering Club.

Following a whirlwind bushwalking and sight-seeing trip to Tasmania in 1981 with Tim Rudman, Jeff was very keen to return here. So... after successfully completing a course on weather forecasting and meteorology in Melbourne in 1983, he was fortunate in getting appointed to a position as trainee forecaster in the Bureau of Meteorology (BoM) in Hobart, after having fears and trepidations that he might get a posting in major city centre like Melbourne or Sydney. In 1984, during his first year at the BoM, Jeff gained a Diploma of Meteorology. He continued work at the BoM till the end of August 1986 when he landed another job in meteorology at the CSIRO Division of Oceanography in Hobart: a position Jeff held till February 1996 when he took an early retirement redundancy, enabling him to concentrate and focus on contract employment opportunities related to some of his new lifelong loves: caving and karst hydrology, cave safety, competency standards and cave leadership skills.

As a weatherman, Jeff was a handy companion to have on caving trips, especially extended overnight or expedition trips when you knew that he had chosen a time when the weather would be pretty stable. His interest in meteorology extended underground as well, where he regularly noted or recorded water levels and cave air movements, air





**Jeff Butt drawing up cave survey plan in the Cub Hole passage of Wolf Hole (at Hastings, southern Tasmania), June 11th 2000.**

ARTHUR CLARKE

and water temperatures, particularly monitoring the meteorological conditions in caves at Ida Bay and in the Junee-Florentine. In fact, when I was still living at Dover, he used to always ring me before coming down to cave at Hastings/ Lune River/ Ida Bay – especially before going into any of the stream caves – to find out how much rainfall we had received in the last 24-48 hours or more. Although I lived some 15km further north from Hastings and Ida Bay, Jeff reckoned my regional proximity was sufficient to give an approximation guide of how “wet” the karst catchment might be, in order to determine the likelihood of runoff or what to expect in the way of possible flood surges or swollen creeks coming from the catchment and therefore whether it was safe to go caving and/ or what to expect.

There had been a number of incidents where cavers had been caught or trapped in Tasmanian caves due to flood surges or rising waters. Jeff was always mindful that as cavers – as well as being adequately prepared for emergencies – we needed to be aware of the weather conditions and rainfall in the days preceding a caving trip and have reliable forecasts, not just day trips but for any planned expeditions. The unexpected or sudden flooding of caves was highlighted by the *Mystery Creek Cave* tragedy at Ida Bay on Monday July 2<sup>nd</sup> 1990, when Jo Cuthbert, a student teacher from Taroona High School drowned while trying to save two students: Anita Knoop and Frances O’Neill, who were also swept away to their deaths when a flood surge entered the cave. Although more than adequately prepared for caving – all wearing wetsuits underneath their overalls – the three teachers and their students had entered the cave during a break in the weather on the afternoon of the fourth day of constant continual drizzling rain, when there was over 85mm in my rain gauge at Dover.

(Although our stream caves are unsafe for caving during such rainfall events, these conditions are highly favoured by karst hydrologists. As it happened, I was down at Ida Bay that same afternoon on July 2<sup>nd</sup> 1990, guiding Rolan Eberhard to *National Gallery*, another cave on Marble Hill, to place a kilogram of fluorescein into a specially made polythene plastic dam, prepared a few weeks earlier by Ian Household and Andy Spate. Our cave entrance had become a waterfall and the plastic dam was in shreds, but we got the dye in and it gave the first positive proof of a hydrological connection to *Exit Cave* from caves near Benders Quarry... but that’s another story. As we departed the area and saw the cars parked at the start of the *Mystery Creek Cave/ Southern Ranges* track, I remember thinking and saying to Rolan that I hoped no one was in the cave that day!)

Many people in Australia, including cavers are probably unaware that the impetus for our national competency and leadership standards in outdoors adventure activities came from Tasmania and Jeff Butt was the driving force behind the protocols and guidelines developed for caving. In the early 1990’s, the former Bush and Mountain Craft Board had been established under the Tasmanian Dept. of Sport and Recreation to develop guidelines for bushwalkers and leaders of all outdoor adventure activities. Around 1992-1993, this organisation was re-structured to become the Tasmanian Outdoor Leadership Council (TOLC) and was broadened to begin developing national standards in outdoor recreational leadership, not just for school teachers and/or commercial guides who might be taking novices on outdoor adventures, but for all those participating in these activities. TOLC engaged the expertise of persons involved with various outdoor disciplines including bushwalking, mountaineering, rock-climbing, ski-touring and caving, establishing a number of advisory groups under its umbrella. The caving advisory group headed by Jeff Butt, assisted by Dean Morgan and others became CLAG: Cave Leadership Accreditation Group. In the national arena, TOLC became a subsidiary body under NORLD: National Outdoor Recreation Leadership Development and with CLAG developing the national guidelines for competency standards of caving in Australia, the ASF (through Alan Jevons) pushed for this Tasmanian advisory group to become a national body and so ASF-CLAG (Tasmania) was born! ASF-CLAG (Tas) was probably the first effective group of its kind in Australia and also provided representation for cavers on a state basis via TOLC and on a national basis through NORLD: which eventually became replaced by ORCA: Outdoor Recreational Council of Australia. Along with his involvement in the documentation of our caves, Jeff Butt used the

Tasmanian caving experience to develop the first national model of Cave Safety and caving standards, the training procedures for maintaining these standards and cave competency leadership skills. Together with Dean Morgan, they compiled the first national “*Caving Safety 1 Course Manual*” (with Version 1.1 published in December 1996) and produced a video of cave safety, skills and training procedures: both these are now in the ASF Library.

Under the auspices of TOLC, Jeff helped establish a number of cave leadership and skills training courses for cavers. He also ran practical training sessions for members of STC – twice a month at Fruehauf Quarry – so cavers could maintain and practise their SRT rope skills. For over a decade and up until early this year, Jeff was employed as a part time tutor and lecturer at the Tasmanian Education Department’s TAFE (Technical and Further Education) College in Hobart, where he prepared and taught a number of courses. Most courses were conducted at the Drysdale Institute – a teaching place that promoted tourism and training in tourist activities – and as well as providing qualifications and experience for caving leaders, Jeff conducted courses in land based navigation and weather interpretation for outdoor recreation students to develop their skills as adventure training guides. His outdoor education guidelines for caving – developed for the Office of Curriculum, Leadership and Learning in the Tasmanian Dept. of Education – can be viewed at the following website: <http://www.education.tas.gov.au/outdoors/education/edcaving.htm>

In addition to his work related to safe caving practices, amongst Jeff’s other karst related professional endeavours and consultancies, he undertook a number of projects with various Tasmanian government departments or agencies. He had been variously employed by Forestry Tasmania, Forest Practices Board, DPIWE, Parks and Wildlife and Hydro Tasmania to document caves in accessible and/ or remote karst areas, survey caves and prepare maps (some of which have been published) and undertake hydrological studies, including dye tracing. Two of Jeff’s most recent jobs included his work on the Basslink project with Hydro Tasmania and his work at Mole Creek with Rolan Eberhard funded through NHT grant monies. In regard to the former, Jeff was engaged to study and report on the likely or possible downstream effects of river bank erosion, siltation and flood surges on the caves and karst along the Gordon River and some of its tributaries. This work has been on-going and includes looking at water loss (through the karst) from the Gordon Dam and associated studies related to the regional karst hydrology. At Mole Creek, Jeff was sub-contracted to undertake other karst hydrology studies as well work involved at specific cave sites such as *Shooting Star*, where he assisted in the exploration, survey and photography of the cave, plus installation of an entrance gate. It is worth noting that three years ago, Jeff underwent a major operation in hospital to remove cancerous sections of his bowel and bladder, so even with several organs removed, and persevering with colostomy bags, he was still actively engaged in rigorous caving endeavours until around February this year.

Jeff Butt was a stalwart of two caving clubs: the former Southern Caving Society (SCS) and its present successor: Southern Tasmanian Caverneers (STC). Prior to the formation of STC, Jeff was President of SCS and for nearly ten years or more, the Editor of *Southern Caver* (the newsletter/ journal for SCS), Search and Rescue co-ordinator for SCS, Quartermaster for SCS, established the SCS website (fore-runner of the present STC website), was Treasurer of the Tasmanian Cave & Karst Research Group (TCKRG) and headed up ASF-CLAG (Tasmania). Our present organisation (STC) is an amalgamation of three former southern Tasmanian based groups: SCS, TCKRG and the Tasmanian Caverneering Club (TCC). It was formed in December 1996, when three of us who – were all in the same role as President of our respective clubs and Editor of our club journals or magazines – commenced amalgamation discussions within our clubs: Jeff (for SCS), Dean Morgan (TCC) and Arthur Clarke (TCKRG). Jeff was elected as the foundation Treasurer for STC and Quartermaster, and continuing his involvement with cave rescue, was appointed as our S&R Officer and the STC liaison officer for Tasmanian Police Search and Rescue, co-ordinating callouts whenever required. In this first year after amalgamation of the three clubs, Jeff was also enormously helpful and supportive to me in my role as the foundation President for STC.

Since the formation of STC in December 1996, Jeff has consistently been a driving force within the club, at the forefront of new cave exploration in Tasmania and the mapping of known cave systems. As already mentioned, he was our foundation Quartermaster and in that role, was devoted to maintaining the STC gear store and equipment, ensuring that all our caving lights were charged and at all times, replacing light globes as necessary and having lights (and helmets) always at the ready to hire out to members and other outside caving groups. In fact, his efforts in organising light hire to other non-STC people has always provided a major component of our STC income.



An another example of his innovative income raising for the club, Jeff devised all sorts of novel and ingenious ways of disposing redundant or retired 9mm and 11mm caving rope: making up floor mats, cat scratching poles and selling it off in various lengths to yachties. In addition to maintaining our equipment, he regularly published an inventory of all our gear, making timely recommendations regarding the purchase of new or replacement ropes and other caving equipment.

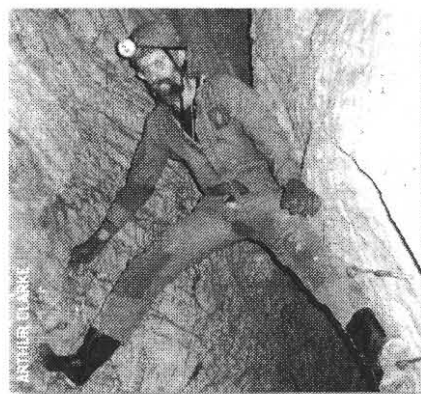
The STC gear store — located behind Jeff and Sarah's house in Clutha Avenue, South Hobart — became a regular venue for STC to hold its Annual General Meetings. (Jeff figured it might be the only occasion each year when some less active STC members would have the opportunity to see what gear or equipment the club has.) Until a few days before our AGM on March 3<sup>rd</sup> this year, Jeff had been hospitalised in the Whittle Ward in Hobart (a palliative care unit), where he spent over a month receiving intensive pain management treatment for his advanced and spreading cancer. At our AGM — just nine days before his wedding — Jeff announced his "retirement" (due to poor health) from the positions of Quartermaster and S&R Officer that he had so capably held since STC was formed late in 1996. In one of his last functions as our previous STC President, Steve Bunton presented Jeff with a framed "Certificate of Appreciation" at the AGM, with the comment that he wished we (as STC members) could do as much for Jeff in his retirement as he had done for us. We were deeply moved with heartfelt sadness, as Jeff — in his typical humility, choked up with emotion and a tear in his eye — gratefully received the honour bestowed on him.

Jeff was known to many cavers here in Australia and overseas, where he attended conferences and took part in numerous expeditions. In 1997, Jeff spent 6 months caving overseas, starting off in New Zealand, then going to North America where for two months he worked as a volunteer at Carlsbad Caverns National Park (in New Mexico) and amongst the many highlights there, he felt very privileged to assist with restoration projects in *Lechuguilla Cave*. Jeff reported all his overseas adventures in the *Speleo Spiel* commenting on the varying standards of cave exploration, surveying, documentation, cave access and general popularity of caving in other parts of the world, detailing visits to caves and karst areas in the UK, France and Switzerland. In 1997, he was amongst the large contingent of Australians who attended the IUS (International Union of Speleology) Congress at La Chaux de Fonds in Switzerland, where — during field trips to some cold, wet and ice-filled caves — it was noted that Jeff had this amazing metabolism for enduring climatically severe conditions without being rugged up in warm gear. On the home front, he attended the "Down to Earth" caving convention at Buchan in March 1999 and the ASF Conference at Bathurst in December 2000/ January 2001 where he took part in the ASF Karst Index discussion group and presented a workshop on the exploration and mapping of caves in the Junee-Florentine karst. Some ASF members will also remember him for being a member of the team that "blitzed" the field winning the Speleostarts competition. Following the ASF conference he went caving at Jenolan, Tuglow, Tricketts Arch and Wombeyan. In January-February 2000, Jeff was involved in two caving expeditions in New Zealand: at Takaka Hill and Harwoods Hole, then on to Mt. Owen for the "Viceroy" expedition with VSA members. One of the many highlights for Jeff was in hosting cavers from overseas or interstate who came to visit him and Sarah, staying at Clutha Avenue, where he had the chance to engage in some reciprocity, taking visitors into some of the better vertical or horizontal caves in Tasmania.

One of my more memorable early caving adventures with Jeff included the time we shared a tent together during the SCS Easter 1985 Cracroft expedition: doing a re-survey of *Judds Cavern* (now *Wargata Mina*), travelling in and out on numerous occasions without ever noticing the hand stencils on the opposite wall. We found numerous extensions in the cave including *Blowhole Fissure* where we discovered another parallel cave system north of *Judds Cavern*, with several vertical entrances. Our expedition successfully relocated a few of these entrances on the surface including the massive 46m deep entrance rift (*The Propylaeum*) and Jeff was the first to descend this new feature. On another occasion in 1985, we camped together in *Crystal Palace* on Mt. Weld during the early days of exploration there before the re-discovery of *Arrakis* and struggled to get a good nights' sleep with the quartz crystal floor poking through our flimsy close-cell foam sleeping mats! Jeff used to pride himself as a home brewer: making fruit wines and stout, often taking a bottle or two on expeditions. A few years later, there was the December 1988 expedition to PB (Precipitous Bluff), during which time Jeff encouraged me to bring in an extra 20litre PVC drum (for food supplies at our campsite in the myrtle rainforest near *Damper Cave*), so I could use the container to make up a home brew of stout for the expedition. In preceding and subsequent years, Jeff assisted me with many overland Suunto and clinometer survey traverses at Ida Bay, locating access tracks and cave entrances, surveying caves...

doing repeated survey trips into the western passages of *Exit Cave*. More recently (in November 2001), we did a re-survey of *Newdegate Cave* together and Jeff drew up the map, so it seemed particularly fitting that his memorial service was held there.

Jeff Butt has been devoted to caving for two decades in Tasmania and many people all around Australia and overseas will know and remember him for the numerous home-made "manufactured" items (and repairs) amongst their gear: trog suits, caving sacks, caving harnesses, cows tails, caving slings, cave number tags, caving lights (waterproof sewer lights or recycled Oldham miners lamps converted to 6volt gel cell systems), battery chargers and hand-held battery operated floodlights. His numerous paid positions and/ or voluntary contributions to caving and speleology on a local, national and international level are almost too numerous to describe in a short (?) dedication such as this. Despite failing health earlier this year, Jeff still found time to prepare a detailed and comprehensive draft schedule of the post-conference field trips for our next ASF Conference here in Tasmania in January 2005. Along with a promo about Tasmanian caving conditions and a cautionary note about our variable weather, Jeff provided an information summary of the major caving areas and the caving trips were coded and rated according to experience level or fitness and SRT rope skills of the participating individuals.



**Jeff Butt (with feet on fixed bolts) bridging marble canyon at Wombeyan Caves in lower stream passage beneath Fig Tree Cave, during post-conference caving trip, January 8th 2001.**

Finally, I would like to emphasise my/our appreciation of Jeff Butt's contribution to the thorough and meticulous exploration, number tagging, surveying, mapping and documentation of the numerous horizontal and deep vertical cave systems in many karst areas of Tasmania which should not go unrecorded in this dedication to Jeff: e.g. especially his efforts in the Cracroft, Hastings, Ida Bay, Junee-Florentine and Precipitous Bluff karst areas of southern Tasmania, plus at Mole Creek. He will be particularly remembered by many for his diligence as a cave surveyor and the accurate production of so many cave surveys using modern surveying methods, checking the results and adjusting the survey details of known caves and correcting the errors of past mistakes produced by more primitive methods. He was at the forefront in the exploration pushes of many of our deepest and most challenging or technically difficult vertical caves, e.g. his endeavours in the alpine karst at Mt. Anne and in the Junee-Florentine valley, where he pushed the limits of human endurance and challenged his own limits of fear. The latter is exemplified by his endeavours in the Junee-Florentine karst. Firstly, consider his minimally assisted self-rescue following an accident in *Flick Mints Hole*, when he was suffering from shock, a head injury including loss of his spectacles and injuries to his arm and leg. And secondly, consider his more recent exploration work in *Splash Pot*, where Jeff described the fear of being in a cave where rescue would be impossible, relating his fear of getting stuck while going through the "Close to the Bone" squeeze or not getting back out again... a cave where he had almost a dozen trips that all involved access via narrow rifts, including a hip grinding, spine and chest abrading vertical squeeze!

For the last decade or a more, I had known Jeff as "JB". However, despite being JB to me and probably several others, Jeff had always been much his own person, a "gentleman caver" and not one to blow his trumpet. Whilst knowing the limitations of caving, JB helped us to develop our passions with humour and light heartedness. He was truly one of nature's gentlemen... always looking out for others, with a generosity of spirit that stemmed from a genuine love of individuals, humanity and the environment. Jeff trod lightly on the earth, always conscious of the impacts we impart on our surroundings, but on the other hand always checking that we were all well and safe in our respective endeavours. JB: you have left us (and ASF) with an exceptional legacy of values and commitments to which we can only aspire, but on which we can also build our futures, perpetuating the memory of your life's work in our continuing lives and caving endeavours.

Tears...

Arthur Clarke



# PROTECTING THE INTELLECTUAL PROPERTY IN CAVE SITE LOCATIONS\*

*To the 24<sup>th</sup> Biennial National Conference of the Australian Speleological Federation Inc. Held at Bunbury, Western Australia 2-8 January 2003*

Sandra Boulter, Solicitor Environmental Defender's Office WA (Inc)

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## INTRODUCTION

From the little I know (EDO WA Cape Range litigation on behalf of the ASF) it appears that Western Australia is a speleologist's paradise. I understand that many cave site locations are not publicly disseminated because of the risks posed to fragile cave ecosystems by vandals, thieves or well intentioned but uninformed amateurs. The question is then raised:

### HOW CAN CAVE SITE LOCATIONS BE SECURED AGAINST UNWARRANTED INEXPERT INVASION?

My paper today provides a brief overview of two protective mechanisms – copyright and confidential information – and follows with a management strategy to forestall unwanted requests for cave site information. (I note in passing that there is no Privacy Act in Western Australia and the *Privacy Act 1988 (Cth)* applies in WA only to corporations. I also note in passing that any proposal to enter a cave that might cause significant harm to the cave or its environs can be referred by any person to the EPA for environmental impact assessment<sup>1</sup>).

### WHAT IS INTELLECTUAL PROPERTY LAW?

Intellectual property law is a group of legislative<sup>2</sup> and common law<sup>3</sup> rights affording protection to creative and intellectual effort. It includes laws on copyright, confidential information, design, patent, circuit layouts, plant varieties, trade mark and business reputation<sup>4</sup>. On general intellectual property principles the holder of cave site locality knowledge would own that factual information but having disclosed the information to a caving group such as WASG, the information would belong to both parties. However, the knowledge itself is neither real nor personal property which can be protected at law<sup>5</sup>. What can be protected is the dissemination of knowledge by the reproduction of works that record knowledge or protection of knowledge that is imparted confidentially. The ownership of a record of factual information and the issue of confidentiality are two separate legal issues.

### COPYRIGHT

Copyright is one facet of intellectual property law. Copyright protects the expression of ideas but not the idea itself. Copyright is thereby a protection of the form of expression of an idea<sup>6</sup>. Copyright is personal intangible property which allows the copyright owner (or those authorised by the copyright owner) the exclusive right to prohibit or do certain acts.

In Australia copyright is governed by the *Copyright Act 1968 (Cth)*<sup>7</sup>. Material is protected if there is a connecting factor between it and the *Copyright Act 1968 (Cth)* (the Act). There is no requirement for registration or notice of copyright, for copyright to subsist in a work. Copyright protection is automatic from the moment the subject matter is embodied in a material form. Copyright may subsist in original unpublished or published *literary works*<sup>8</sup>. A literary work is a type of work which is intended to convey information or instruction, or which is intended to afford literary enjoyment<sup>9</sup>. A literary work for the purpose of the Act does not require literary merit<sup>10</sup>. A written record or map of cave site locations can be a literary work for the purpose of copyright protection under the Act<sup>11</sup>.

### HOW IS A MAP OR RECORD MADE BY A CAVING ASSOCIATION PROTECTED BY COPYRIGHT?

If a caving group through an exercise of intellectual skill, professional knowledge or opinion makes a composite record (such as a map) of cave sites identified by its individual members, the caving group would own that composite record<sup>12</sup>. Ingenuity in the compilation of the cave site record may be another factor contributing to it obtaining copyright protection<sup>13</sup>. Incorporated associations can own property<sup>14</sup>. As owner of the copyright in the record, the caving group would have the exclusive right to reproduce the information in any material form<sup>15</sup>. It is

## FOOTNOTES

\* The intellectual property issues addressed in this paper are based on general principles and are not intended to constitute specific legal advice on any particular issue.

<sup>1</sup> Environmental Protection Act 1986 (WA), section 38.

<sup>2</sup> See for example the Copyright Act 1968 (Cth).

<sup>3</sup> See for example the protection of confidential information.

<sup>4</sup> Butterworths Concise Australian Legal Dictionary, 1997, page 210.

<sup>5</sup> Butterworth's, Halsbury's Laws of Australia [240-505].

<sup>6</sup> Pacific Film Laboratories Pty Ltd v FCT (1970) 121 CLR 154; Autodesk Inc. v Dyason (No 1) (1992) 173 CLR 330; 22 IPR 163.

<sup>7</sup> Butterworths Concise Australian Legal Dictionary, 1997, page 91.

<sup>8</sup> Copyright Act 1968 (Cth) (the Act), section 32.

<sup>9</sup> Butterworths Concise Australian Legal Dictionary, 1997, page 246; Computer Edge Pty Ltd v Apple Computer Inc (1986) 161 CLR 171; 6 IPR 1; 65 ALR 33; Kalamazoo (Aust) Pty Ltd v Compact Business Systems Pty Ltd (1985) 84 FCR 101; 5 IPR 213 at 232.

<sup>10</sup> The Act, section 10(1); Butterworths Concise Australian Legal



the copying of the record or map which would be an infringement of copyright under the Act.

The legitimate use of such records should be identified in the constitutions of caving groups along with what will and will not constitute a breach of copyright. Furthermore, records and map should be marked that they are copyright and in whom the copyright subsists.

#### CONFIDENTIAL INFORMATION

Confidential information can be an intellectual property right which is protected by common law principles. Confidential information is made up of facts or knowledge that is not in the public domain<sup>16</sup>. Information in the public domain cannot be confidential but a combination which draws together separate pieces of information in the public domain, resulting in something different may be protected<sup>17</sup>. The range of information which has been protected by actions for breach of confidence is very broad. Information may be simple or of little commercial value but nonetheless constitute confidential information<sup>18</sup>. Confidential information may be disclosed by oral communication and this may be sufficient to impose an obligation of confidence<sup>19</sup>.

*"...information which on its own is public knowledge may be confidential between the two parties where the information is associated with a particular context and the confidant knows or should know that the association of the information with the context is a matter of special significance, peculiar sensitivity or confidentiality..."*<sup>20</sup>.

Furthermore, possessors of confidential information are often subject to fiduciary duties which prevent them from misusing the information for their own advantage<sup>21</sup>. A fiduciary relationship is a relationship of trust and confidence<sup>22</sup>. The critical feature of the fiduciary relationship is that the fiduciary agrees to act on behalf of another person in the exercise of a power or discretion which will affect the interests of that other person in a legal or practical sense<sup>23</sup>. Clearly, associated caving groups are in a fiduciary relationship with their members<sup>24</sup>.

*"...In the vast majority of cases...the duty of confidence will arise from a transaction or a relationship between the parties...it is well settled that a duty of confidence may arise in equity..."*<sup>25</sup>

Thus equitable remedies to restrain or for damages for the unauthorised dissemination of confidential information may be available to caving associations or their individual members.

An action will lie in certain circumstances to prevent a breach of confidence or to compensate the creator of the confidential information for the consequences of unauthorised use or disclosure of confidential information<sup>26</sup>. To establish a cause of action against a breach or proposed breach of confidence, a complainant must show:

- that the information has the necessary quality of confidence; and
- the defendant owed a duty of confidence to the complainant.
- furthermore, it is likely that it will be necessary to show that some

prejudice to the complainant's interests must or will occur as a result of the breach of confidence<sup>27</sup>.

There are a number of defences to excuse conduct that is a breach of confidence and one of these is disclosure in the public interest<sup>28</sup>. Even when disclosure of confidential information is required for example, by a statute or court order, an action may lie if the information is used by the recipient for some other purpose<sup>29</sup>.

#### ARE CAVE SITE LOCATIONS CONFIDENTIAL INFORMATION THAT IS PROTECTED BY THE COMMON LAW?

When confidential cave site information is disclosed by individual members of a caving association to that association which in turn reduces that information into a record or map held by the association, the member who provides that information should expressly state that the information is confidential and how the information might be used.

Equally the recipient association should disclose to the member providing confidential information how the information will be treated and under what circumstances it will be disseminated. Clearly it is important that the constitution of each caving body outlines how confidential cave site information will be treated and disseminated.

#### MANAGEMENT STRATEGIES

##### WA Caving Associations

In Western Australia I understand that there is the:

- **Speleological Research Group Western Australia Inc. (SRGWA)** which is incorporated under and has a Constitution and Rules of the Association<sup>30</sup>. An incorporated association under the Act means that the affairs of the group are regulated by the Act and its constitution and rules (and any changes thereto) must be approved by the Commissioner for Consumer Affairs<sup>31</sup>. Through its Rules the SRGWA has adopted the Code of Ethics and Minimal Impact Caving Code produced by the Australian Speleological Federation Inc. (ASF). There is no specific affiliation of the SRGWA with other caving groups identified in its constitution or rules but I am informed that it is a member of the ASF.
- **Western Australian Speleological Group Inc. (founded in 1958) (WASG Inc)** is also incorporated<sup>32</sup>. The objects and rules of WASG are outlined in the Constitution and By-laws of the Group. WASG Inc.'s identified as a Full Council Member of the ASF.
- **Caver's Leeuwin Group Inc. (CLINC)** is a subgroup of WASG, its members are WASG members but it is separately incorporated<sup>33</sup> with its own formal constitution which identifies CLINC as an affiliate of WASG.

The three associations each include as one of their objects "...to foster preservation..." of WA caves. WASG Inc qualifies this object by saying that it will be in cooperation with other interested organisations. It is arguable that the object to foster cave preservation would support a decision to suppress a cave site location ensure its preservation and accordingly, suppression of the information

Dictionary, 1997, page 246; and *Computer Edge Pty Ltd v Apple Computer Inc* (1986) 161 CLR 171; 6 IPR 1; 65 ALR 33.

<sup>11</sup> The Act, section 10.

<sup>12</sup> *Saltman Engineering Co Ltd v Campbell Engineering Co Ltd* [1963] 3 All ER 413; and *Coco v A N Clark (Engineers) Ltd* [1968] FSR 415; and *Breen v Williams* (1996) 186 CLR 71.

<sup>13</sup> *TR Flanagan Smash Repairs Pty Ltd v Jones* [2000] FCA 625.

<sup>14</sup> *Associations Incorporation Act 1987 (WA)*, sub-section 11(1).

<sup>15</sup> The Act, sections 13 & 36, and sub-section 31(1)(a)(i).

<sup>16</sup> *Butterworths Concise Australian Legal Dictionary*, 1997, page 246; *Coco v A N Clark (Engineers) Ltd* [1968] FSR 415; [1969] RPC 41.

<sup>17</sup> *Butterworths Halsbury's Laws of Australia* [240-570]; and *Coco v A N Clark (Engineers) Ltd* [1968] FSR 415; [1969] RPC 41 at 47, per Megarry, J.

<sup>18</sup> *Butterworth's, Halsbury's Laws of Australia* [240-560]; *Nichrotherm Electrical Co Ltd v Percy* [1956] RPC 272; and [1957] RPC 207, CA

<sup>19</sup> *Butterworth's, Halsbury's Laws of Australia* [240-570].

<sup>20</sup> *Gurry F Breach of Confidence* Clarendon Press 1904 cited in *Butterworth's, Halsbury's Laws of Australia* [240-560] at footnote 8.

<sup>21</sup> *Seager v Copydex Ltd* [1967] 1 WLR 923; *Butterworths Concise Australian Legal Dictionary*, 1997, page 81.

<sup>22</sup> *Boardman v Phipps* [1967] 2 AC 46; [1966] 3 All ER 721; *Butterworths Concise Australian Legal Dictionary*, 1997, page 157.

<sup>23</sup> *Butterworths Concise Australian Legal Dictionary*, 1997, page 157; and *Hospital Products Ltd v United States Surgical Corp* (1984) 156 CLR 41; 55 ALR 417.

<sup>24</sup> *Associations Incorporation Act 1987 (WA)*, section 13(2).

<sup>25</sup> *Attorney-General v Observer Ltd* [1990] 1 AC 109 at 281 sub nom *Attorney-General v Guardian Newspaper Ltd* (No 2) [1988] 3 All ER 545, per Lord Goff, HL.

<sup>26</sup> *Butterworth's, Halsbury's Laws of Australia* [240-500].

<sup>27</sup> *Butterworth's, Halsbury's Laws of Australia* [240-630].

<sup>28</sup> *Butterworth's, Halsbury's Laws of Australia* [240-990] [240-1025].

<sup>29</sup> *Butterworth's, Halsbury's Laws of Australia* [240-650].

<sup>30</sup> *Associations Incorporation Act 1987 (WA)*.

<sup>31</sup> *Consumer Affairs Act 1971 (WA)*; *Associations Incorporation Act 1987 (WA)*, section 9.

<sup>32</sup> *Associations Incorporation Act 1987 (WA)*.

<sup>33</sup> *Associations Incorporation Act 1987 (WA)*.

<sup>34</sup> I am grateful to EDO solicitor Lee McIntosh who first raised this point with me.



would be consistent with the objectives of each of the organisations.

One of WASG Inc.'s objects is to publish results of its investigations if suitable: By-law 10.4. The Constitution is silent as to the meaning of "...if suitable...". Any member of WASG Inc is entitled to inspect the WASG Inc records: Constitution, at clause 18. The Constitution is silent as to what purpose such inspection can be for. The WASG constitution requires the State Cave Recorder appointed by WASG Inc to publish cave area lists: By-law 10.4. *Publish* is not defined and the By-law is silent as to whom the information should be published. Accordingly, it is likely that the ordinary meaning — to make public — would apply. The WASG Inc By-law 11.0 pertains to copyright in information obtained on field trips and provides that copyright to this information does not subsist in the WASG Inc. However, it does not identify in whom the copyright (of WASG Inc.'s information) subsists. Furthermore, By-law 11.0 does not identify what information is held by WASG Inc in which copyright in favour of WASG Inc.

The WASG Inc Map Curator and SRGWA librarian are responsible for the maps held by their organisations. The WASG Inc Map Curator may sell copies of or lend maps at his discretion. The SRGWA librarian may only divulge confidential information with the approval of the SRGWA committee. The SRGWA constitution is silent as to whom or under what circumstances the committee may authorise the release of confidential mapping information or in whom copyright subsists in respect of cave site records.

CLINC's mapping curator is responsible for the group's maps but their constitution is silent as to whom or under what circumstances map information may be divulged.

All of the constitutions are silent as to the consequences for breach of copyright or confidential information by members, ex-members, officers or the committee. The Three associations each include as one of their objects '*...to foster preservation...*' of WA caves. It is arguable that this object would support a decision to suppress a cave site location to foster its preservation. However, other objectives of the various groups might be said to be inconsistent with this approach<sup>34</sup>. For example, the WASG Inc. constitution has as an objective '*...promote and encourage speleology in all its aspects...*' Furthermore, the WASG Inc Constitution, objective at clause 2.1 requires publication of suitable information and By-law 10.4 requires the State Cave Recorder to publish and update cave lists. Accordingly, in determining to suppress cave site information each of the objectives must be addressed and meshed to a cohesive strategy to ensure a committee's actions are consistent with all of the objectives of its organisation.

#### THE CONSTITUTIONS

Clearly, the constitution of each organisation could, in respect of cave site locations, identify:

- in whom reposes the copyright;
- the criteria to establish what information is confidential and why;
- the circumstances under which information can be released;
- to whom information can be released;
- remedies available to the groups in respect of unauthorised release of map information;
- appropriate security for confidential maps; and
- identification of opportunities to educate the community about the reasons for protecting certain cave site locations.

Constitutional amendments take time and the process is described under the constitution and the *Associations Incorporation Act 1987* (WA) of which the secretary of each group should have a copy. Changes to the WASG Inc By-laws however can be made by the Committee from time to time. By-laws could expand on the meaning of clauses of the Constitution provided that they are not inconsistent with the Constitution.

#### REQUESTS FOR INFORMATION

When asked for confidential information in respect of cave sites a caving group committee should:

- Ensure the request is in writing and that the written request identifies the person or organisation making the request, under

what law, regulation, order or power the request for information is made, for what purpose the information is needed and how the information — if given—will be kept confidential;

- Consider the Associations Incorporation Act 1987 (WA), the group's obligations to be found in its constitution and its rules or by-laws;
- Formally refer the request to the group's committee for its consideration;
- Enter the request into the minutes and record any decisions made in respect of the request;
- Speak to the person who provided the group with the sought after information in the first place as to his or her attitude to the request;
- Consult with the owner, occupier and/or manager of the land under which the material cave sites are located; and
- Identify any known risks of or features that require special care associated with a particular cave and make these known to the person to whom the information is divulged, the site of which is divulged.

#### CONCLUSION

**Can a caving group be compelled to divulge confidential cave site locations?**

There is little doubt that a caving group cannot be compelled to provide confidential cave site locations without a requirement under their constitution to do so, statutory authority or a court order supporting such a demand. Nonetheless, a group's reputation will be enhanced by acting co-operatively with the reasonable request from government agencies or authorities. This could be achieved while at the same time preserving confidentiality in cave site locations. A policy to guide such co-operative ventures would be of benefit to all and mark a beginning in development of a comprehensive strategy to manage this increasingly vexed issue for speleologists. ■

## INVITATION



### 50 years of THE SYDNEY SPELEOLOGICAL SOCIETY, 1954-2004.

The Fiftieth Anniversary Dinner of The Sydney Speleological Society will be held at Wombeyan Caves Reserve on Saturday 6<sup>th</sup> November, 2004, and all members, present and past, and friends of The Society, are all welcome to attend and help us celebrate this great occasion.

**Date:** Saturday, 6<sup>th</sup> November, 2004 through Sunday, 7<sup>th</sup> November, 2004.

**Place:** Wombeyan Caves Reserve, NSW.

**Venue:** Dinner in The Barmah Community Facility.

**Time:** 7.00pm.

**Admission:** By Ticket at the door only, as definite placements are essential.

**Cost of Celebration Dinner:** \$35.00 Adults. \$20.00 Children — under age 12 years.

**RSVP With Deposit:** We must have definite bookings for The Dinner by 31<sup>st</sup> August, 2004, with one-third deposit payable at time of booking. Balance at Meetings or before Dinner.

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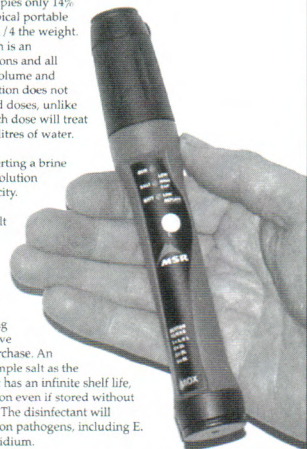
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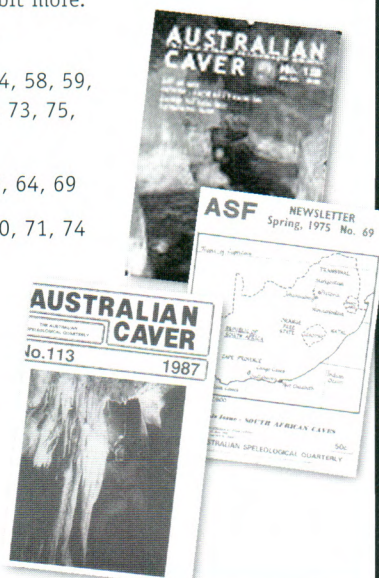
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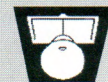
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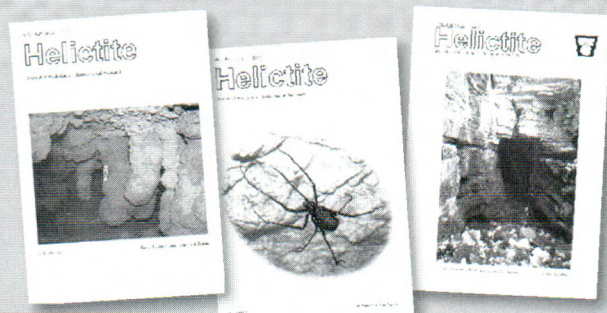
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