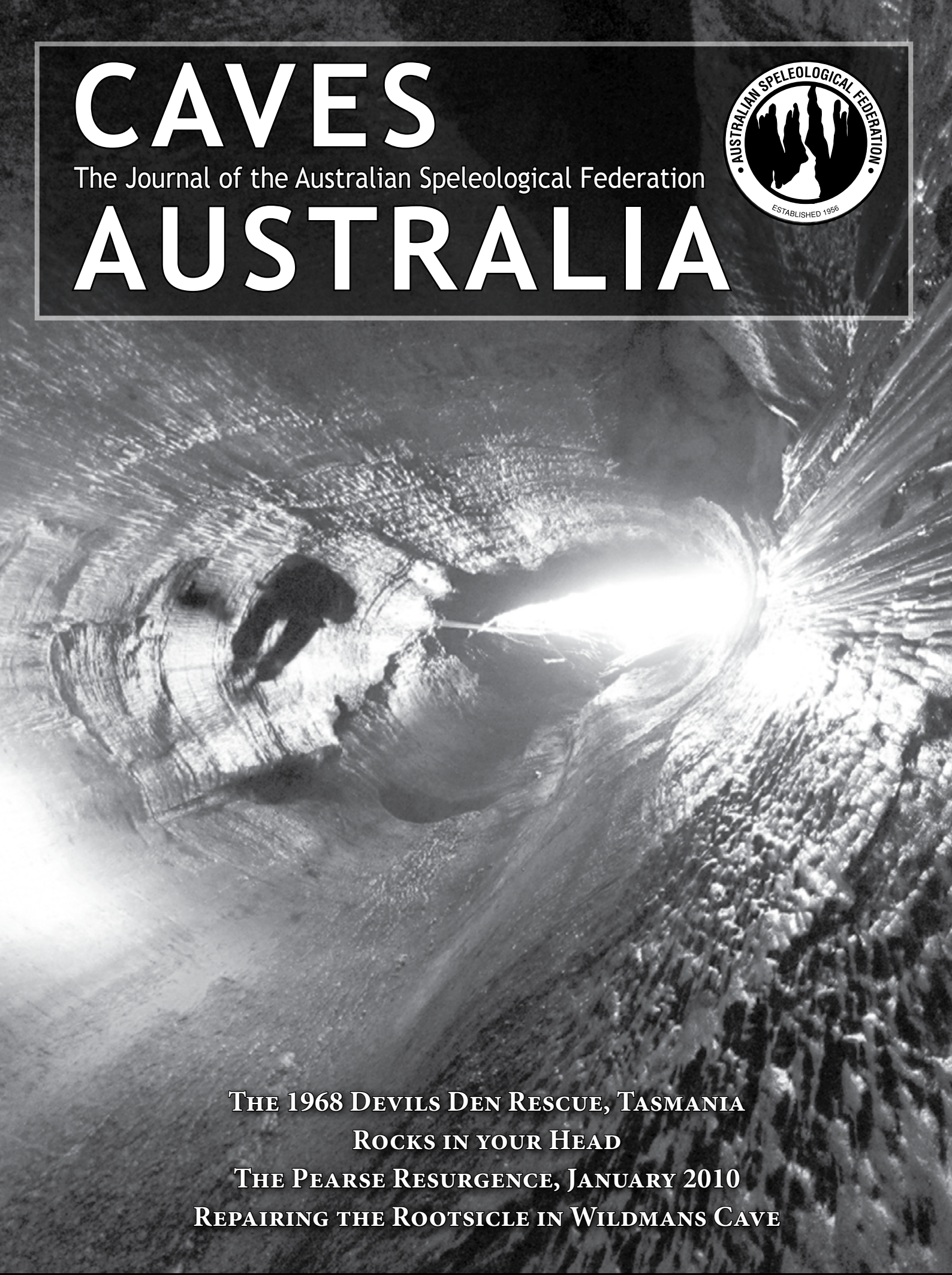
CAVES AUSTRALIA

The Journal of the Australian Speleological Federation



The 1968 Devils Den Rescue, Tasmania

Rocks in your Head

The Pearse Resurgence, January 2010

Repairing the Rootsicle in Wildmans Cave

No. 181 • MARCH 2010
(Printed June 2010)

COMING EVENTS

In particular, this list will cover events of special interest to cavers and others seriously interested in caves and karst. This list is just that: if you are interested in any listed events, Elery Hamilton-Smith: elery@alphalink.com.au or Nicholas White, (Chair of the International Commission) nicholaswhite@netspace.net.au may have further information. The relevant websites also are useful. Details of other regional/local overseas events can be found on the UIS/IUS website http://www.uis-speleo.org/. Although several things are planned for 2010 the detailed dates are not available.

2010

4—8 July

Australian Earth Sciences Convention: Earth Systems: change, sustainability, vulnerability. Canberra Convention Centre, ACT.
Details at http://www.aesc2010.gsa.org.au

12—14 July

14th Australasian Bat Society Conference, Charles Darwin University, Darwin, Northern Territory.
Details at http://conference.ausbats.org.au/

12—16 July

The International Geographical Union (IGU) Regional Conference, Tel Aviv, Israel,.There are karst sessions and a pre-conference field trip on the Dead Sea karst has been arranged for participants of the Karst Commission as well as a variety of other field trips are also available. All conference information can be found on the Conference website www.igu2010.com or via the Conference Secretariat at geography@targetconf.com. For other details contact Prof. Amos Frumkin, Geography Department, The Hebrew University, Jerusalem, Israel 91905 http://tinyurl.com/23ra4oa

21-23 July

4th Session of the IAG Working Group on Geomorphological Hazards (IAGEOMHAZ) & International Workshop on Geomorphological Hazards, Centre for Geotechnology, Manonmanian Sundaranar Univeristy, Tirunelvali, Tamil Nadu, India. This international workshop has been designed to discuss all pros and corns of the geomorphological hazards with special attention on Coastal Geomorphology and Hazards. There is usually some material on karst. Details: http://www.geohazardsmsu.co.nr/

4—8 August

Congreso 70 Aniversario de la SEC — VI Congreso de la FEALC [I] [ID:352], Matanzas, Cuba.
Organisation: Cuban Speleological Society.
Contact: speleomat@atenas.inf.cu *or* admtordpjmt@dpjmt.minjus.cu
Deadlines: Abstracts 2009-12.

7—17 August

14th International Symposium on Vulcanospeleology, Undara, North Queensland. Pre-conference excursion to the Western District volcanic province of Victoria 7—11 August 2010 (meet in Melbourne 6 August). The excursion will visit lava caves and volcanic features between Melbourne and the SA border. 11 August (Friday) Excursion participants return to Melbourne Airport to fly to Cairns, overnight Cairns. A group booking is being organised for this. Participants will travel Cairns-Undara by bus. The symposium is from Saturday 12 to Monday 16 August (5 days). On Tuesday 17 August participants return by bus to Cairns.
Although Australia is not renowned for its volcanic caves or other recent volcanic features, it does possess some large areas of relatively recent lavas, especially in the McBride Volcanic Province of Far North Queensland and in the Western District Volcanic Province of Victoria. This event will enable participants to experience these two areas and a selection of their caves and related features, as well as to make and attend presentations on other lava caves from around the world. Papers and posters on relevant topics are invited! Please note the dates, and order of events, have been changed from those originally advertised. Please book early, especially if you have special accommodation requirements. A limit of 60 persons may be imposed. Notice will be placed on the website immediately when 50 full registrations are achieved. Details of costs, booking and regisatration forms are available at: http://ackma.org/14VSC/
Enquiries: Greg Middleton ozspeleo@iinet.net.au

20—24 October

ISCA (International Show Cave Association) Congress, Slovakia. Liptovský Mikuláš, Demänovská Dolina.
Congress theme: "Complex approach in show caves management and protection".
Information via www.ackma.org.au or directly to http://tinyurl.com/yeuzcs3

31 October—4 November

National Groundwater Conference 2010 – the Challenge of Sustainable Management. National Convention Centre, Canberra.
Email: groundwater@con-sol.com

16—20 November

International Scientific and Practical Conference: Speleology and Speleostology: development and interaction of sciences.
Naberezhnye Chelny, Russia
Three sections are planned:
1. Speleology:
Modern methods of researches using GIS; problems of speleogenesis; results of regional speleological researches; biospeleology; caves in mine working; historical, archeological and paleozoological research; mineralogy; and ice caves
2. Spelestology (artificial caves)
Methods of research and registration of the caves; regional spelestological research results; secondary mineral formation; geoecologic research; and natural and man-made formation of underground landscapes
3. Protection and use of caves:
Cave ecology; juristic questions and the practice of cave protection; and recreational activities and safety.
After scientific discussions a two-day excursion will visit the capital, Kazan, and speleological and spelestological objects of Tatarstan: Sarmanovsky and Aktashsky copper mines (18th century); gypsum caves; and the Kamsko-Ustyinsky gypsum mine, one of the largest in Europe.
Registration:
You should fill in the registration form on the official page:
http://pro-speleo.ru/index/english/0-26 before May 1st 2010.
Secretariat
Gunko Alexey (executive secretary): gunko.a@mail.ru, prospeleo@mail.ru
Dolotov Yurii: dolotov@yandex.ru

2011

10-14 January

The 12th Multidisciplinary Conference on Sinkholes and the Engineering and Environmental Impacts of Karst, St. Louis, Missouri, USA. Details of registration etc are available on the website http://www.pela.com/sinkhole2011.htm This highly successful interdisciplinary biennial conference series is the most important international meeting that concentrates on the practical application of karst science. It serves as a means for geologists and geographers, who study how and where karst develops and how sinkholes form, to interact with engineers and planners, who apply this information to building and maintaining society's infrastructure while protecting our environment.
Since the first meeting in 1984, the goal of these conferences is to share knowledge, experience, and case studies that emphasise scientific understanding of karst with practical technological applications. Karst impacts groundwater and surface water resources, waste disposal and management, highways and other modes of transportation, structural foundations, utilities, and other infrastructure. Karst underlies about 25% of the USA and the land surface of the world, making this conference highly relevant to civil, geotechnical and environmental professionals, as well as to geologists, biologists, geographers, planners, developers, government officials, and others who work in karst areas.

Easter 2011

Chillicon ASF Biennial Conference, Chillagoe, North Queensland.
28th Biennial Conference organised by Chillagoe Caving Club. CCC aims to make the Conference fun and interesting with lots of caving, speleosports etc. Some speakers are already organised, including a couple of internationally eminent ones.

May 2011

19th ACKMA Conference, Ulverstone, Tasmania
Planning is under way for the next ACKMA conference. Details: contact Cathie Plowman or Rolan Eberhard.

27-30 June

6th International Conference: Climate Change — The Karst Record, University of Birmingham, UK.
Three days of oral and poster presentations will be held on the University of Birmingham campus, with accommodation provided on the University Conference Park and in local hotels. Either side of the main meeting, one-day optional field trips will be run to regional karst and tourist attractions.
An announcement calling for poster and oral presentations will be made in late 2010, but if you are interested in attending, please keep these dates free.

CAVES AUSTRALIA

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VACANT

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For contributor guidelines, contact the Production Manager.

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Change of address
Notify us immediately of any address changes to ensure delivery of your *Caves Australia.*

As no issues of Caves Australia *were able to be published in 2007, the publication dates will include the actual dates the issue is produced.*

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ASF

Contents

WANTED
ARTICLES FOR *CAVES AUSTRALIA!*

Whether caving, cave diving or general exploration, *Caves Australia* readers are interested in YOUR story.

It is only with YOUR contribution that we can produce a quality magazine for all to enjoy. For writing and style guidelines, contact the Editor or Production Manager for further information.

Cover: JF-489 Perfect Pitch Pot, Junee-Florentine. Photo by Gavin Brett

ASF Executive

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President's Report

Information, Information, Information

THE YEAR has picked up momentum and my own inertia has distanced me from going caving. As I sit in my armchair in a foreign country I realized I have recently visited some excellent karst areas here in New Zealand and recently in Turkey and from the inviting surface my enthusiasm to delve downwards was kindled in a way familiar to us all.

ASF core business seemingly can get bogged down by inertia and distractions of many forms and it needs constant attention to move things forward and resolve stumbling blocks. Some of the blocks we see are in waiting for people and systems to deliver material or decisions; other blocks are more people-centric with egos and mindsets that need refreshing.

We are living in an era of communication and information. We are surrounded by the need to read and view and process vast amounts of information in our daily lives. We are convinced of the need to be paperless and store much of this information digitally. In our clubs many of our separate pieces of cave and procedure material are being transferred into the digital era and many people are working away at these similar but separate tasks.

Documents may help define who and what we are and claim to be and do. There has been continual revision and production of many documents that ASF owns and produces in the form of procedural documents, constitution and amendments, guidelines and codes of practice. These all need to be reviewed and changes ratified.

We need to have documents that define our liabilities, as assessed by us through insurance brokers, to land managers if and when we stuff up.

We have documents that define the way we act as individuals, how we define our responsibilities to cavers and the caves we visit. We now have revised documents that define the reasons and rationale for the scientific study of a cave and its environment.

We have documents that cross our paths when people are disgruntled with the way things are done or not done and, not surprisingly, we have documents commenting on the jobs well done.

We have and produce a wide range of documents outlining historical sequences of exploration and discoveries, procedures and practices but, sadly, all too few documents planning the future.

We have documents that define our ability to work with other managers as memorandums of understanding.

One of the problems I see is when people invest time and effort in an exercise to document events associated with caves and maps of the internal structures and hence own the intellectual property contained within the documents. What may happen is that the material is never made available to others interested in following up, checking the accuracy or adding to the document. Likewise, people like to securely store and/or publish the information or systematically document an area or a state or the country in a series of atlases. Where there are gaps in our records it may be we don't have information or there is an unwillingness to put what we have up for scrutiny or inclusion.

So my observation is that we need to think about a number of things.

Information from a cave belongs to that cave and the cave's manager(s). But it should be available to visitors who have some need to see the associated information.

People need to work together to allow the timely collection and collation of karst information from all areas of significance in Australia. We need to continue to have in place a hierarchy of co-ordinators in each area responsible, not to dictate their own terms, but to ensure current ASF policy is adhered to.

We need to find funds to accelerate the process from a slow static archival system to a robust storage system of historical karst information, ranging from handwritten field notes to all published works and then to make it more available in a controlled process to the wider caving family.

We need to also collect non-written information from the verbal history contained within each of us.

Our combined store of Australian karst knowledge is being updated and streamlined to meet the challenge and needs of an evolving group of users and developing technology will continue to play a significant role in providing information to clients. Likewise, the expansion and updating and portability of the karst database is being enhanced. Criticisms on the age and incompleteness of the KID database are being addressed and we should see in the near future a portable system for data entry and retrieval linking in to external geographical information systems.

None of the above achievements would have been possible without what represents thousands of hours of voluntary time. Many members are busy people but because of their passion for caving and the belief that caves and karst regions are worth fighting for, they still find time to invest in obtaining best possible outcomes for the conservation of and continued enjoyment and exploration of those wondrous subterranean caverns that we all love.

So, fellow cavers — gather what information we can, while we can and make it available. We will be remembered by our individual contributions to speleology.

Yours in Speleology
Stan Flavel

From the Editor

THE ANTICIPATED June double issue hasn't materialised — 'material' being the operative word. Proverbial fingers need pulling out.

Rumour has it that Ian Curtis has been coerced into handling future editorial duties of *Caves Australia* — our Publications Commissar can be quite persuasive when she wants to be. We welcome Ian on board.

This issue sees Harry returning to the Pearse Resurgence pushing the limits of cave diving and human endurance, rescue events from the past, a glimpse of the (golfing) future on the Nullarbor, stalactite repair works and recollections of a stalwart of Tasmanian caving. Hopefully there's something in it for everyone.

Hopefully there'll be anything to put in issue 182 ...

Timor Appeal Update

Jodie Rutledge
NHVSS

THE CHALLENGE by the Newcastle and Hunter Valley Speleological Society against the approval of a limestone quarry in the Upper Hunter has yielded mixed results.

On March 31, 2010, the NSW Land and Environment Court held that, if appropriate conditions can be drafted to address matters raised in the judgment, the Timor Limestone quarry is appropriate to be approved.

Initially, our members were disappointed at this result; however, the strict conditions that the court seeks to impose aim to protect and preserve any caves and sensitive groundwater dependant ecosystems at the site, a feature common to most karst areas.

JODIE RUTLEDGE

Outcropping limestone with solutional features extraction zone

The likelihood of caves and impact on cave fauna (biota)

The court found it likely that small interconnected voids and fissures would exist in the limestone to be quarried and that there was a sufficient possibility that these voids would contain biota to activate the precautionary principle.

Consequently, the court requires that a pre-blasting assessment protocol be drafted between the parties, as well as an ongoing monitoring program to ensure that the impact on specialised cave fauna (biota) is avoided.

This monitoring program is to extend throughout the life of the project and rehabilitation phases.

The pre-blasting assessment protocol requires the development of measures to assess the limestone for caves and voids before blasting occurs.

The protocol will be developed jointly between Stoneco Pty Ltd, Upper Hunter Shire Council (UHSC) and NHVSS under the guidance of the NSW Land and Environment Court.

In the instance that a cave is excavated during the quarrying process, a protocol has been developed between the parties to assess the significance of the cave and manage accordingly to avoid any further damage.

NHVSS is pleased that the court recognises the value of karst conservation and specialised cave faunas and specifically, the potential that sensitive cave environments exist at this site.

We feel that this monitoring program will provide positive outcomes adding to the understanding of ground dependant faunas in eastern Australia and hope that this will lead to greater understandings and research opportunities in this area.

The impact on the endangered ecological community (EEC) and other issues

NHVSS objected to the quarry development for a number of reasons including concerns at the loss of an Endangered white box ecological community over the site. The court agreed with NHVSS's expert witnesses that the entire project site contains the white box EEC (lifting the originally claimed affected EEC area from 0.2 ha to 6 ha).

However, it was judged that the development would not place the EEC at risk of extinction because the white box EEC exists beyond the project boundaries of the site.

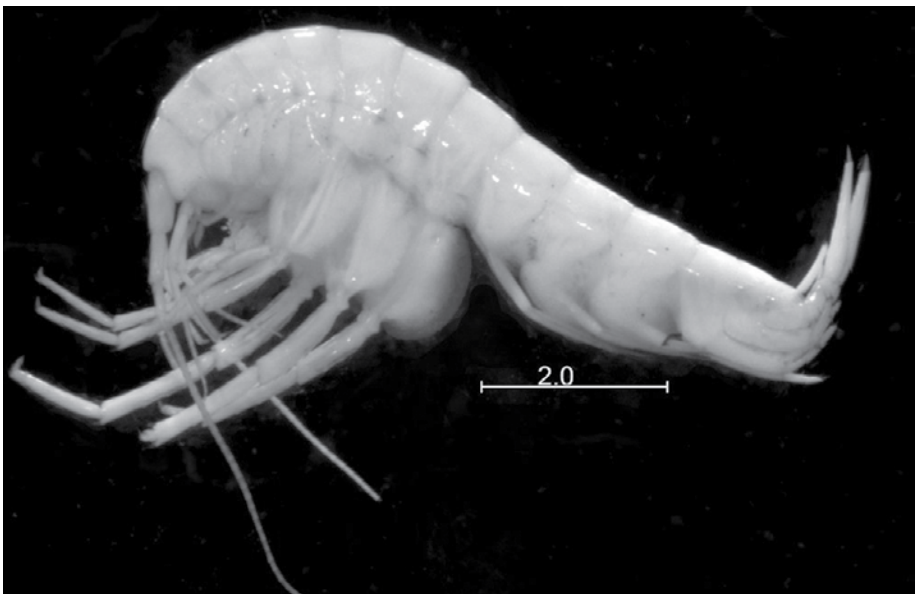
Another concern was the effects that the quarry would have on the squirrel glider population.

It was judged, however, that no significant impact on the squirrel glider population or their habitat was likely to occur and therefore a species impact study is not required. During the court proceedings Stoneco adjusted the size of the stock pile area on the project site to lessen the impact on the squirrel glider's habitat which may have alleviated concerns.

There is a condition that requires UHSC to ensure that all roads and bridges affected are compliant to carry the planned haulage of material from the quarry.

This issue, along with safety, was the main area of concern expressed by the local residents surrounding the site and en route towards the New England Highway.

The court requires a plan for the rehabilitation of the site be developed. During the proceedings the court expressed dismay that a plan had not been developed for the rehabilitation of the site after the project was complete.



STEFAN EBERHARD

Specialised cave fauna may be present, similar to this Neoniphargidae *from Lake Cave*

Summing up

Our experts and legal team are continuing to work hard to assist us in providing evidence to the court in drafting appropriate conditions for the protection of the karst at Timor. The outcome has the potential to influence future management of limestone quarrying in other karst areas in a more sustainable and ecologically responsible manner. An additional hearing is listed for May 28 and 31 for this evidence to be heard in court.

Acknowledgment

Thanks to Stefan Eberhard of Subterranean Ecology (Suite 8, 37 Cedric St, Stirling, WA 6021) for the use of the Amphipoda image.

A Blast from the Past

The 1968 Devils Den Rescue, Tasmania

Susan White
VSA

IN 2009 James Cheshire, from St John Ambulance, approached me regarding the cave rescue in Tasmania in 1968. He was researching the rescue as part of a larger research project on the St John Ambulance Australia Life Saving Medal and other similar St John awards.

In this case it was a cave rescue near Hobart which is of interest to ASF, as various ASF members were involved. As well as the Tasmanian cavers, four VSA members (Peter Matthews, Graeme Wilson, Mal Downes and John Driscoll) also assisted in the final rescue and were subsequently awarded Royal Humane Society bravery awards. James has kindly agreed to us reprinting (slightly edited) the relevant sections of his report. It is a short piece of interesting cave history.

THE MEDAL

The Life Saving Medal of the Most Venerable Order of the Hospital of St John of Jerusalem is regarded as the preeminent and significant accolade that can be bestowed by the Order on any person.

The award was created in 1874, with the Gold Award introduced in 1907, to fill a gap in the then existing awards so that acts of gallantry by civilians done in order to save life on land could be appropriately recognised. In the 134 year history of Life Saving Medal of the Order, and in the 125 year history of the Order in Australia there have been only fourteen people recognised for their bravery and gallantry in eleven separate events with the award of this medal (Cheshire, 2008).

The first award was made in 1906 (Mr Edward Nicholls, Western Australia) and the last in 1979 (Volunteer Ambulance Officer Colin (Sandy) Bourne, South Australia). Interestingly for us, seven of the eleven events have been rescues from caves or other confined spaces, whereas two involve a person armed with a gun, two involve fire rescues, one from a house and the other from a vehicle. Only one Gold Award has been made in Australia and this was for the 1968 Tasmanian cave rescue.

FIGHT FOR TRAPPED BOY ENDS IN VICTORY

A 15-YEAR-OLD schoolboy, pinned beneath a rock-fall 80ft underground for 32 hours, was

The Mercury

Established 1854

93 Macquarie St., Hobart, 7000 Ph. 34 4511 70 St John St, Launceston, 7250. Ph 2 2291.
Registered as Hobart for transmission by post as a newspaper
115th year No 30,559 HOBART: MONDAY, DECEMBER 16, 1968 16 Pages 5 cents

The following section is reprinted from Cheshire, James M.M (2008) Service Above Self An Examination of the Life Saving Medal of the Order A Paper for the St John Ambulance Australia Historical Society, St John Ambulance Australia, National Conference, Adelaide June 2008.

In the history of the Life Saving Medal of the Order there has only ever been one Gold award made to an Australian. It was to recognise events in December 1968 and it was made to Sergeant Eddie Briner of the Broadmeadows Division Rescue Section in Victoria District.

Eddie Briner with the Gold Award, February 2008

The following is a slightly edited version of the material from the longer paper.

THE CITATION

1968 Sgt Edward BRINER Gold Award and Section Officer Alan SMITH Bronze Award: Citation from the Register.

Sergeant Edward Briner and Section Officer Alan Smith (Figure 2) were members of the Broadmeadows Rescue Section of Broadmeadows Division of the St John Ambulance Brigade in Victoria District. This event is examined in more detail below but the detail from the award Register is included for completeness.

On the evening of Saturday 14th December 1968, it became known that one member of a party of four boys, Timothy Walters, was trapped 80 ft (25 m) underground down a narrow cave in the country behind Hobart (Figures 1 & 2). Rescue attempts were immediately organised. A party of seven experienced cavers reached the cave by 11.00 pm and were able to make their way to the trapped boy. He had been trapped by a fall of rock in an almost vertical funnel in the cave. Efforts to free him continued for the next 24 hours against a constant fear that any attempt to move the rocks would precipitate a further and disastrous fall.

The St John Ambulance Brigade Rescue section was summoned from Victoria and

flew to Hobart the following day, arriving at 4.30 pm. Section Officer Smith and one other member were immediately flown to the scene in a helicopter and went down the cave to investigate at 5.00 pm. The cave consisted of very narrow and winding tunnels to a depth of approximately 80 ft (25 m). Several rock falls had taken place and progress was slow and hazardous. About 40 ft (12m) underground it widened to the 'middle cave', and an area big enough to hold several men and their equipment; here Section Officer Smith made his headquarters. From the middle of the cave the tunnel was very narrow and passed directly under a rock fault involving several tons of rock supported by a key stone and precariously balanced. A little further on, the tunnel narrowed to a squeeze measuring only 10" x 18" (254 mm x 457 mm) and through which Section Officer Smith could not pass.

Other members of the St John team arrived at 6.00 pm and were briefed. Sgt Briner was able to pass through the squeeze and to assess the problems of freeing the boy. He returned to the middle cave with his report and his suggestions and then went back to the boy. Meanwhile Section Officer Smith returned to the surface and gave orders for the necessary equipment to be collected and passed down. He then went back to the mouth of the squeeze and passed in a small transceiver set to Sgt Briner thus establishing two-way communication with him. Meanwhile a mining engineer had given his opinion that there was no safe way of getting the boy out without a collapse of the cave; he recommended amputation. A doctor then passed through and examined the boy with Sgt Briner. He found that amputation was completely impossible because of the restricted position and returned to the surface. Sgt Briner then appears to have taken charge. Though he was warned by experienced miners that the cave was so dangerous that there was only one chance in a hundred of success without causing a calamitous rock fall, he determined to employ hydraulic power and move the rocks. He bravely and carefully prepared his attempt well knowing the extreme danger in which he was placing his own life and those of other helpers in the cave. The rocks were moved and the boy was brought to the surface a little before midnight.

The conduct of everyone engaged in this long drawn out rescue appears to have been admirable but in the final analysis it was Sgt Briner who, after 24 hrs of unavailing attempts to free the boy, made the decision to use the hydraulic power to move the rocks. This required determination and great courage and displayed conduct that is indeed a credit to the Brigade.

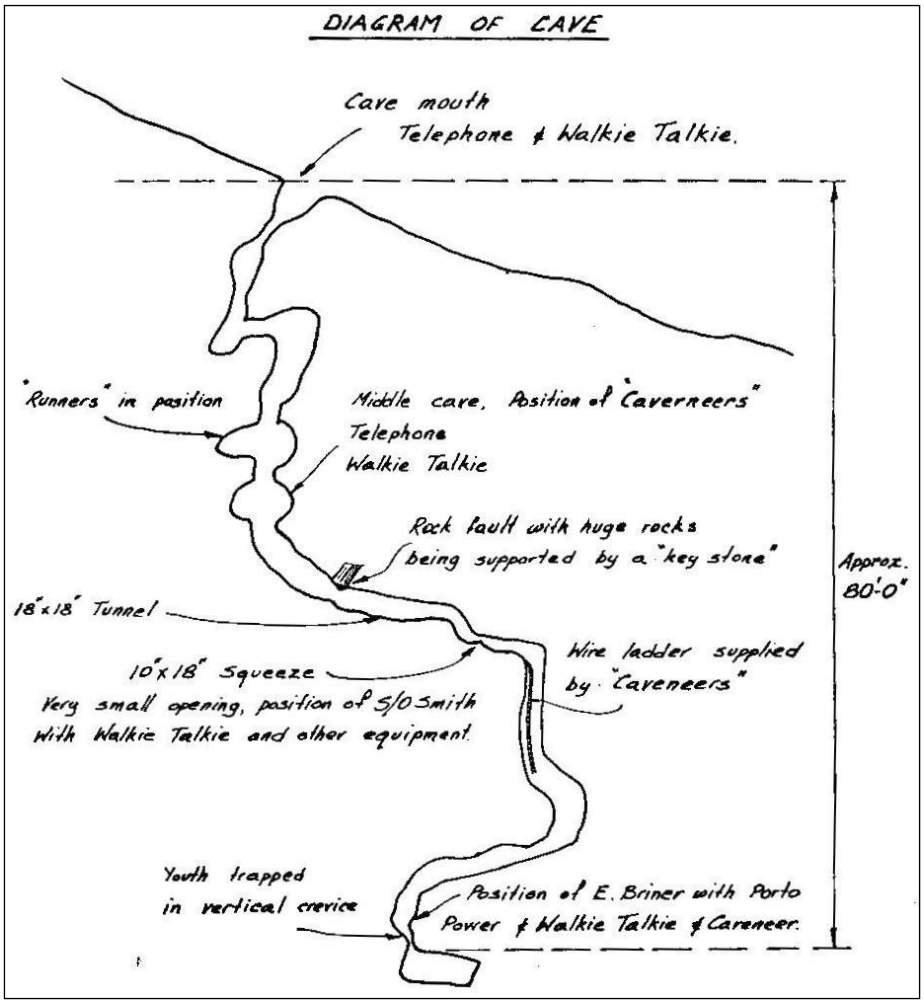


Figure 1: Diagram of cave provided in the report of Sec. Off. Alan Smith

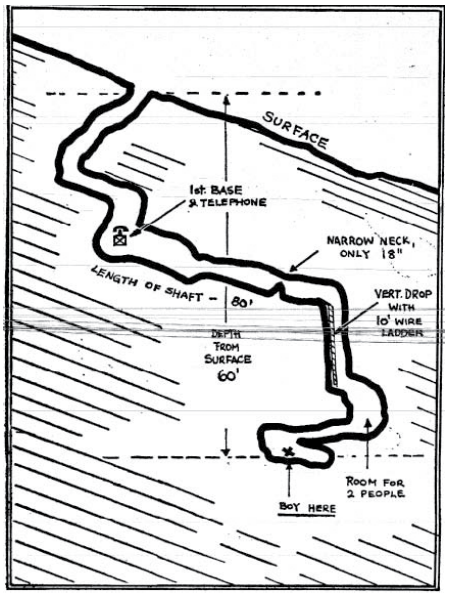


Figure 2: Diagram from Hobart Mercury

2008 marks the fortieth anniversary of the rescue and James Cheshire was very fortunate to be able to meet and speak with Eddie Briner about his time in the Brigade in general, about his time in the Rescue Squad and more specifically about the rescue of Timothy Walter on 15 December 1968. As is often the case with winners of such awards Briner is an engaging man and with an incredible personality which gives only a hint of his ability, intestinal fortitude and tremendous courage.

Briner joined the Brigade as a Cadet at the age of 11 years about 1959 at Broadmeadows Division in what would now be described as in Melbourne's northern suburbs, however at the time the area was more sparsely populated and paddocks were more prevalent than townhouses. As is often the story with youth joining the organisation he did so with a friend from school. He was interested in the being able to go on public duty at the football, hospital duty at Western General Hospital Footscray and the added bonus that girls liked the uniform.

Within six months of joining, Briner had been made up to Cadet Sergeant and was taking a significant part in the training life of the Cadet Division. He remembers as a 12 and 13 year old Cadet going out to Broadmeadows shopping centre and teaching the new cardiopulmonary resuscitation (CPR) techniques that were just coming in to wider use in first aid. In the mid-1960s the closest Victorian Civil Ambulance Service branches were located at Headquarters in Latrobe Street Melbourne, Footscray both about 15 km away, and at Preston about 10 km away. Should these cars be out then it

was not uncommon to have an ambulance travel from Camberwell, a little over 20 km away. As a result of this both the local police and tow truck operators started seeking informal assistance from members of the local Brigade at car accidents.

These members would meet on a Friday and Saturday evening at a member's house of which the local police and tow truck operators would be aware and would be called out to assist at car accidents as they could respond far quicker than could the Victorian Civil Ambulance Service cars. Briner believes that this was probably the catalyst for the establishment of the groups that became the Rescue Sections of the Brigade in Victoria District.

There was however a hiccup prior to the formal recognition within the Brigade of the work that this group was doing. On preliminary examination there appears to be an entire paper if not two just in the detail of the events in the life of the rescue section at this junction however I will just briefly touch on them here. In short as a result of the amount of work being done, increase in the skills of members in extricating trapped persons from motor vehicle accidents, and the increase of equipment having been 'acquired' from various sources the members of this group purchased a vehicle from funds made available by the Divisional Auxiliary. The vehicle was a former Port of Melbourne Emergency Service vehicle. Briner believes that this was the first vehicle owned in the District.

This watershed seems to have caused some concern in the Brigade command which caused the Broadmeadows group to create the Victorian Volunteer Rescue Service. This continued for a period of time before the Brigade officially started the Rescue Sections and provided overall management and direction for the project.

In his time in the Rescue Squad Briner was an extremely active member and was in attendance at all of the major rescue events at that time. He attended the search for the Rt Hon Harold Holt at Cheviot Beach near Portsea on Sunday 17 December 1967, the Southern Aurora train disaster at Violet Town, Victoria, on 7 February 1969, and the West Gate bridge collapse on 15 October 1970. Briner says he remembers the call out to Tasmania in 1969 well as it occurred twelve months after the search for Harold Holt at Cheviot Beach.

The circumstances surrounding the award of the Life Saving Medal in Gold to Briner and Bronze to Smith are simply remarkable, not least of which is the fact that this same event is the subject of the largest number of awards made by the Royal Humane Society for a single action being

Sec. Off. Alan Smith and Sgt. Eddie (Spider) Briner, 1968

seven silver and sixteen bronze medals

THE RESCUE

On the afternoon of Saturday 14 December 1968, a group of six schoolboys aged in the early teens who were walking in the hills outside Claremont, in the State of Tasmania, decided to go on an impromptu climb through a cave which they had accessed on a number of previous occasions. The dolerite rift cave was known as the Devils Den and was located near the top of Mt Fawkner approximately 24 km north of Hobart and 602 km from the Broadmeadows Divisional Hall built by the members of the division including Briner.

A short way into their exploration a rock fall caused four of the group to be trapped. Three of them were pinned by their shoulders and heads and the other merely prevented by them from being able to exit the cave. The remaining two members of the group were at the time of the rock fall outside the cave. Upon hearing the rock fall they re-entered the cave and realised the problem their comrades were facing. These two then returned to the surface and ran to the local police station to raise the alarm.

Presentation of the Life Saving Medal of the Order to Sgt Briner by the Governor, Major-General Sir Rohan Delacombe, 24 April 1971 at Government House, Melbourne.

Local police and rescue units, including volunteers from the Tasmanian Caverneering Club and the Southern Caving Society, attended and by 9.30 pm on the evening of Saturday 14 December 1968 freed all but one of the boys, Timothy Walters, a 15-year-old from Abbotsfield Road, Claremont. Local miners were called in to assist and were able to free the rocks from Walters' shoulders but not from his legs.

The two main issues with accessing and freeing Walters was that to get to him rescuers needed to pass through a gap of only 10" x 18" (254 mm x 457 mm) and that the main rock pinning Walters' legs had become the main structural element preventing further collapse of that passage and the cave was now a very unstable environment.

On the morning of Sunday 15 December 1968 the Tasmania Police Force who were responsible for the coordination of the rescue effort made contact with Victoria Police in order to source additional specialist resources. The rescue had already involved many dozens of specialist and support services including cavers, miners, police rescue, Hydro Electric Commission, Salvation Army and the Australian Army.

About mid-morning on the Saturday, Victoria Police communications, known as 'D24', made contact with St John Ambulance Rescue in order to source what support they could. A joint team comprising two members of St John, Section Office Alan Smith and Sgt Eddie Briner, and four members of the Victorian Speleological Association, Messrs Graeme Wilson, John Driscoll, Peter Mathews and Mal Downes, were brought together for their combined caving and rescue expertise (see photo, page 10).

Although being advised they did not need to bring any equipment, the team took five assorted flexible wire ladders, a cheese of 100 ft (30 m) of manila rope, 1000 ft (300 m) of manila and nylon rope, karabiners and hook belts, hammers and assorted chisels and entrenching tools, hand lamps, rescue harnesses, transceivers and a comprehensive kit of Porto-Power. It was this last item that was to come into its own during the course of the rescue efforts.

The original plan was for the Royal Australian Air Force (RAAF) to provide air lift for the crew and their equipment to Hobart Airport. However it was decided that the lead time required by the RAAF was too long and instead places were found on the domestic Trans-Australian Airlines (TAA) flight. The team departed Essendon Airport on the DC9 jet aircraft at 2.20 pm. Upon arrival at Hobart Airport at 4.30 pm local time the group was met by police and Sec Off Smith and Mr Wilson were flown by helicopter to the scene. The remaining

members of the group were taken by police with lights and sirens activated to the scene by road. Sec Off Smith and Mr Wilson conducted an appreciation of the scene on their arrival.

Sec Off Smith summarises their appreciation in his report to the District Superintendent as follows:

"The cave consisted of very narrow and winding tunnels descending to a depth of approximately 80 ft. Several rock-falls had taken place and progress was slow and hazardous. We reached the "middle cave", which was an area that could hold several men and their equipment. We decided that this would make an excellent staging point. The tunnel from the middle cave was very narrow and passed directly under a "rock fault"; this involved several tons of rock supported by a wedge-shaped "key stone" and balanced precariously. The tunnel continued on to a "squeeze", a narrow opening about 10" x 18" through which I was unable to pass. Wilson continued on and reported that the youth was trapped in a vertical shaft and his legs were pinned by boulders. We decided that an attempt could not be made until the arrival of the rest of our crew and equipment."

The other members of the team arrived on scene about 6 pm. What the Victorian team was able to achieve upon their arrival was to establish good communications from near the entrapped boy and set to work in order to conduct a complete medical assessment.

A doctor from the Royal Hobart Hospital went down the cave and assessed Walters. He recommended that given the assessment on the stability of the cave and likelihood of further collapse the most appropriate cause of action was to amputate the trapped leg and free Walters to be extricated to medical attention forthwith. Briner and the Victorian team members viewed the entrapment and struck up a rapport with Walters. It was on the advice of Briner that an attempt was made to free him using the Porto-Power kits. Porto-Power is a brand name for a hand operated hydraulic apparatus to which a number of attachments can be applied, more often used at the scene of motor vehicle accidents. The more common devices used are 'spreaders' used to separate damaged doors of motor vehicles and 'cutters' used to cut through the pillars of motor vehicles to access entrapped persons.

Briner recalls that Walters' leg was pinned by the rock in a slight concave part of the wall of the cave so that rather than being crushed flat against the floor of the cave it had been wedged in that position.

A 3am victors' feast at Hadley's Hotel, Hobart. Clockwise from left: Mal Downes, Alan Smith, Graeme Wilson, Eddie Briner, John Driscoll, and Peter Matthews.

It should also be recalled that these rescuers were working in conditions usually hanging upside-down in hot cramped conditions in the full knowledge that the cave was unstable and had collapsed in a number of places during the previous hours.

The first attempt to extract Walters by the Victorian team failed when there was a further fall of rock which only served to highlight the danger of the work being performed.

It was about 10 pm that Briner radioed Smith advising "We've done it, he is free and he has no fractures." It then took an additional hour and ten minutes for Walters to be conveyed to the surface by initially being dragged on canvas and then in a Neil Robertson stretcher.

The level of assistance, resources, and multi-agency cooperation provided in the cause of this rescue was quite incredible. Sec Off Smith makes mention of it in his report, Briner makes mention of it in his recollection of the events and it is clear form the media reports that this is also the case. To again quote Sec Off Smith's report:

"Although the actual release of the youth was effected by a St. John Rescue Squad member, using our own civil defence equipment, the rescue was achieved through close teamwork of everyone connected with the operation."

After reaching the surface himself Briner was approached by a male who congratulated him on his efforts, which Briner acknowledged. Briner was then directed to an esky next to a tree by the male who said to Briner words to the effect that he would know what to do with it. Briner found the esky contained some cold beer which he then availed him self of and sat for a rest. It was at this point that another person came up to Briner and explained that the male who directed him to the refreshments was the Commissioner of Tasmania Police.

A short time later the Commissioner of Police made arrangements for the Victorians to be transported back to Hobart and to be put up in Hadley's Hotel, perhaps the most exclusive venue of the day.

When the group arrived around 3 am on the Sunday morning, the Commissioner insisted to the hotel management that the kitchen opened to feed them and that the bar be opened at his expense. After some remarks from management expressing concern about the legality and appropriateness of opening a bar at that time of the morning and on a Sunday, the Commissioner was able to persuade the staff of the benefits associated with opening the bar, given he was responsible for the issuing of liquor licences within the State.

The following day the Victorian team was returned to Melbourne by domestic jet aircraft and the Devils Den entrance was destroyed by the Tasmanian Mines Department.

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1. Cheshire, James M.M. (2008) *Service Above Self — An Examination of the Life Saving Medal of the Order* A Paper for the St John Ambulance Australia Historical Society, St John Ambulance Australia, National Conference, Adelaide June 2008.

Rocks in Your Head!

Paul Hosie
CEGWA

MOST PEOPLE wouldn't even think about questioning the need to wear a helmet whilst caving or abseiling, but some don't seem to get it.

Some people also get a little complacent and maybe forget. For example, a friend of a friend I know told me about this bunch of idiot cavers a few years ago who had all descended into a popular abseiling site near Margaret River — Brides Cave.

It is not only popular with organised groups, but members of the public visit it as well, using a viewing platform that overlooks the impressive, sheer-sided sinkhole. The group of cavers were all standing 15 m below the lip of the hole waiting for their turn to ascend when a voice from the viewing platform screamed "Mummy, look at all those people down there without helmets on. Isn't that dangerous?".

Needless to say, the cavers were suitably chastised and we all quickly put our helmets back on.

A couple of years ago a group of us were cave diving in Weebubbie Cave on the Nullarbor and it isn't uncommon for travellers to drop in and have a sticky-beak.

Normally not a problem, so long as they leave your rigging alone! We were ferrying all our gear out of the cave after a week of excellent diving and began hauling our loads up out of the hole.

To our absolute stunned amazement a group of people scrabbled quickly like rabbits down the hole (using our rope, of course) and into the cave.

They didn't have helmets on (naturally), but they had carefully hung them in a tree near where their vehicle was parked.

So, what is the real risk of getting 'conkered'? From personal experience, again on the Nullarbor, many years ago, my mate Karl was climbing a ladder up out of a big hole in the ground while I waited 20 m below. Out of the blue, a rock the size of a grapefruit smashed into the middle of my helmet and glanced a bruising blow to my shoulder as it plummeted on down. It scared the bejesus out me, but I knew that helmet had saved my life.

Moral of the story — whenever you are in a rockfall risk area, get your helmet on and make sure everyone else has too, whether they are cavers or not. If it does take a knock that might impair its effectiveness, replace it! Good helmets cost about $100-$150 each and not only keep your brains inside your skull, they hold your light up too!!

PAUL HOSIE

Can I go caving now, Daddy?

The Pearse Resurgence

New Zealand. January 2010

Dr Richard Harris
CEGSA

BACKGROUND

The Pearse Resurgence marks the origin of the Pearse Stream located on the eastern side of the Arthur Range, New Zealand. It is a vauclusian spring with an average discharge of approximately 2 cubic metres per second. Dye tracing has proved a connection as far away as the Ellis Basin; a distance of approximately 6 km (Wright, 1982) The cold (6-8ºC) waters of the resurgence were first dived in 1975 but the remote nature of the cave and harsh conditions have precluded extensive exploration over the years.

Several divers have played a major role in the exploration of the Pearse since the earliest dives. Keith Dekkers from New Zealand was pivotal in the early days visiting the cave on several occasions and pushing down the start of the main shaft. 1995 saw an ill-fated expedition led by New Zealand caver Kieran McKay during which one of the divers (Dave Weaver) perished during an attempt at a depth record whilst breathing air.

From 1997, expeditions by Sydney-based diver David Apperley made the most significant advances in the cave's exploration with the first use of a decompression habitat (2000) and culminating in the exploration of the cave by Apperley and Rick Stanton (UK Cave Divers Group) to 177 m in 2007.

The author first dived the cave in 2007 with Apperley and has returned on two further occasions, pushing the cave slightly further in 2008 (see the section view, p. 13).

The lower level at 182 m depth poses serious obstacles to further exploration.

Using open circuit (traditional SCUBA) technology, the amount of gas required to perform a single dive to the bottom of the cave would be prohibitive, requiring vast amounts of helium, oxygen and SCUBA cylinders to be taken into the cave. The helicopter trips required would increase exponentially as would the expense and time required for gas preparation. The use of closed circuit rebreather technology allows the same dives to be performed with far smaller quantities of gas and also confers other benefits such as better heat retention and greater gas reserves in the event of an emergency. However, deep cold water diving on rebreathers is not without problems. Carbon dioxide retention is a particular hazard in this setting and a very conservative approach to CO_2 scrubber management is required.

RICHARD HARRIS COLLECTION

Participants L-R Sandy Varin, Richard Harris, John Dalla-Zuanna, Dave Bardi, John Vanderleest, Craig Challen. The divers are holding flag # 160 from the Explorers Club, NY.

GOALS

This expedition to the Pearse Resurgence was undertaken with several goals in mind:

- To develop and utilise a deep mobile decompression habitat to allow ongoing exploration at depth.
- To establish contacts with the New Zealand scientific community and to begin a sampling program of the cave's biota.
- To continue a video and still photo survey of the cave.
- To continue the exploration and mapping of the cave.

PARTICIPANTS

Six Australian cave divers, all qualified mixed gas rebreather divers, travelled to New Zealand and camped on site during the expedition. They were: David Bardi (Melbourne), Craig Challen (Perth), John Dalla-Zuanna (Melbourne), Richard Harris (Adelaide), John Vanderleest (Melbourne) and Sandy Varin (Melbourne). The team was assisted locally by Anthony and Elizabeth Honeybone (Christchurch), and John Patterson and Deb Cade (Nelson).

THE EXPEDITION

After shipping approximately three tonnes of diving and camping equipment from Australia to New Zealand in mid-November 2009, the divers met up in Christchurch on January 5th.

Access to the resurgence is either by a two-hour hike from the nearest road, or by helicopter if large amounts of equipment are to be taken in. On this occasion nine helicopter trips were utilised to ferry in the large amount of equipment and the divers. The flight up the Pearse Valley is spectacular and takes in the temperate rainforest and sheer-sided gorges leading to the landing zone. With the final load delivered, the helicopter departed leaving the sudden silence of the bush and constant sounds of

the nearby watercourse.

The relative warmth of summer was chosen for the dive program but even so, the area was prone to wildly variable weather. Warm sunny days with a gently flowing stream can suddenly develop torrential rain resulting in a flooding resurgence. From the time of our arrival the adjacent Eyles Creek changed from a dry river bed to a flowing creek and back to dry again. The resurgence itself is similarly labile.

The steep-sided valley precludes any communication with satellite or cellular phone systems, so the volunteer Mountain Radio HF radio service provides the only reliable means of communication with the outside world.

Everything required for nine days' diving was taken in with the divers, the only predicable resource being the pristine crystal clear spring water flowing from the cave. The cold spring water makes refrigeration of victuals a simple matter and so the divers were able to eat well during the trip. A large communal shelter for cooking, gear preparation and battery charging was established and individual dome tents erected for sleeping quarters.

PLANNING TO DIVE THE PEARSE RESURGENCE

Over the last ten years progress in the exploration of the cave has involved the use of a 1 cubic metre decompression habitat secured in the cave at 7 m depth.

Initially placed by David Apperley in 2000, the habitat allows the last extended shallow decompression stops to be performed in the relative warmth of a dry habitat whilst breathing 100% oxygen. This increases both diver comfort and the efficiency of decompression.

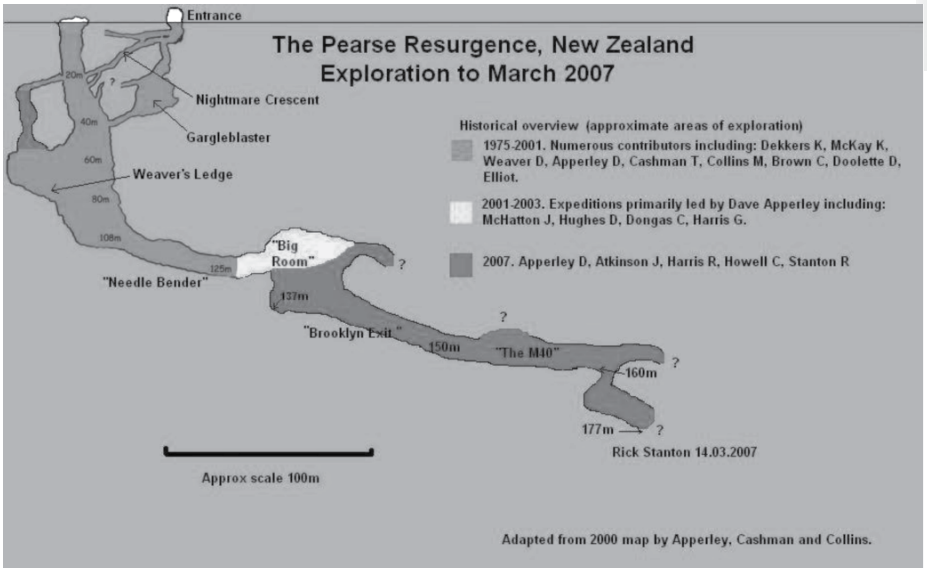
On the author's dive to 182 m in 2008, he spent approximately 2.5 hours in this habitat during the ascent to the surface after diving for only 15 minutes to the maximum depth.

One of the primary goals of the 2010 expedition was to extend the time for exploration of new passage at 180+ m to 25 minutes. This would require a total ascent (decompression) time of more than nine hours. The divers feel they can only comfortably spend between two and three hours immersed in the cold water of the Pearse, and so it was clear that a second habitat would be required at a greater depth.

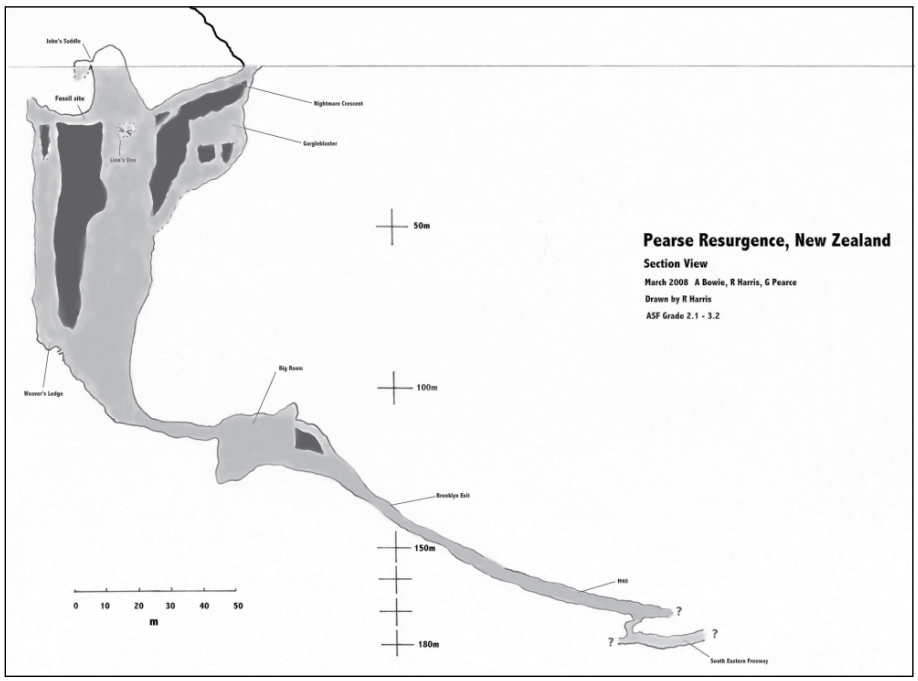
Ideally, this would be mobile so that the exploration diver could enter the habitat at say 40 m, and ride it up to 12 m before exiting and transferring to the 7 m habitat. In this way an actual immersion time of approximately 150 minutes could be achieved.

RICHARD HARRIS COLLECTION

The Pearse Stream... pristine New Zealand wilderness.



Periods of exploration and the map at the end of the 2007 expedition.



Section view of the Pearse Resurgence Cave at the end of the 2008 expedition.

RICHARD HARRIS COLLECTION

The Pearse Resurgence, birthplace of the Pearse Stream.

RICHARD HARRIS COLLECTION

Packing the gear with the Honeybone family in Christchurch.

RICHARD HARRIS COLLECTION

Home sweet home for nine days.

RICHARD HARRIS COLLECTION

The cave radio system built for the habitat. by Joe Sydney

RICHARD HARRIS COLLECTION

An inverted image of the deep habitat showing how it would be rigged underwater.

The author constructed a collapsible "deep" habitat in the style of a large lift bag. When filled with air it would inflate and take on a rigid form, so allowing a diver to sit inside with only the legs and buttocks immersed. The plan was to anchor this deep in the cave and using climbing descending devices, allow the habitat to move up through the required decompression stops from deep to shallow water.

The habitat was tested on a local shipwreck in South Australian waters before the expedition. A known complication was that the cave shaft where the habitat was to be deployed is sloped from the vertical, and hence a system to move the habitat sideways using pulleys and winches was also devised.

In addition to the deep habitat, several new systems were to be trialled in the cave. A communications system from the habitats to the surface constructed by Australian caver Joe Sydney was to be tested. A new 12 V heated undergarment devised by John Dalla-Zuanna would also be trialled following successful testing in some 15º Australian caves. Various combinations of glove systems and dry suit undergarments would also be assessed.

The author would record many of the diving activities on HDV, and four of the divers (RH, SV, DB, CC) would be preparing themselves to do the deep exploration dives if all the systems operated as hoped.

EXPEDITION OUTCOMES

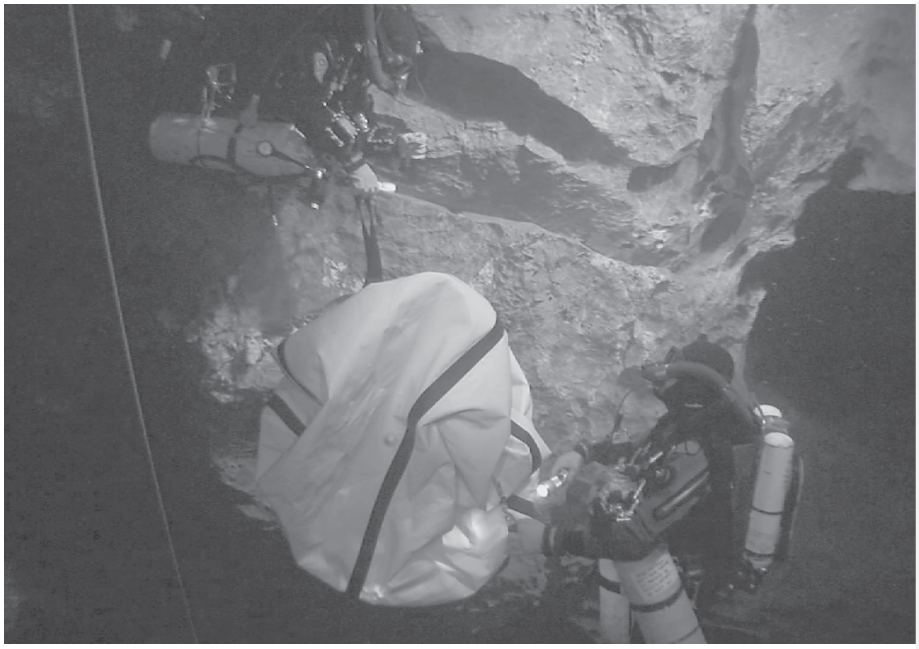
For all the divers except the author, this was the first expedition to the Pearse Resurgence and the first opportunity to perform extended dive times in water below 11ºC. The combined conditions of cold water, dark grey marble (which absorbs dive lights), great depth and high flow require some psychological adjustment and the first few days involved a degree of acclimatisation.

The dives generally commenced shallow and worked deeper during the nine-day period. After rigging the 7 m habitat and installing the surface supplied oxygen and comms unit, work commenced on the rigging of the deep habitat.

Successful installation of this habitat was a prerequisite to further exploration at the 180 m level of the cave. The first priority was to reassess the topography of the main shaft between the depths of 40 m and 12 m. This revealed a significant slope, especially between 40 m and 24 m, which would prove to be a major obstacle to the divers' efforts. The first part of rigging the habitat needed the installation of anchors strong enough to restrain the 700 kg of lift generated by the habitat. Failure of these primary anchors would see the decompressing diver ascend in an uncontrolled manner to the shallow

RICHARD HARRIS COLLECTION

A diver on the 2008 expedition below the 7 m habitat. Note the builder's prop, which provides an anchor point and a step up into the air space



RICHARD HARRIS COLLECTION

Dave and Sandy moving the uninflated habitat into the top of the shaft at 20 m depth.

part of the cave with inevitably fatal consequences as they missed a very large decompression obligation. So the anchors had to be strong and reliable!

Builder's props (Acrow props) were installed as a first anchor between two rock ledges. Eyelet bolts were also inserted into the marble after drilling 12 mm holes. This required the use of pneumatic drills and diamond tip hole saws, a very lengthy and laborious process in such hard rock. A single hole at 40 m depth would take two to four dives and consume more than four full cylinders of dive gas.

The days started to tick by and the team began to fall behind schedule due to the slow progress with the bolting. Finally, the primary anchors were complete and the habitat could be deployed and its path up the shaft studied.

Re-direction anchors were then needed further up the slope and the process was repeated in shallower water. As the habitat rose in the water column, it was winched sideways towards the redirection point. From there, it was captured by a fixed line, and the process repeated up to the next rebelay. By the time the habitat cleared the third and final rebelay and was free to rise into clear water, only three days of dive time remained.

Several things remained to be done before the exploration dives could begin. A full test run with the push diver in the habitat was required, and further deep build-up dives needed to be performed.

The final decision to proceed or abandon the deep exploration was made when the author's rebreather electronics malfunctioned and hence the deep exploration was abandoned.

Once over this disappointment, the team rallied to make the best of the remaining time. For those who hadn't been to the site

RICHARD HARRIS COLLECTION

Craig Challen banging home an eyelet bolt.

RICHARD HARRIS COLLECTION

Craig Challen drills the hard marble wall at 40 m

RICHARD HARRIS COLLECTION

The deep habitat being rigged at 40m.

before, dives to 125 m were made and the beauty of the cave enjoyed.

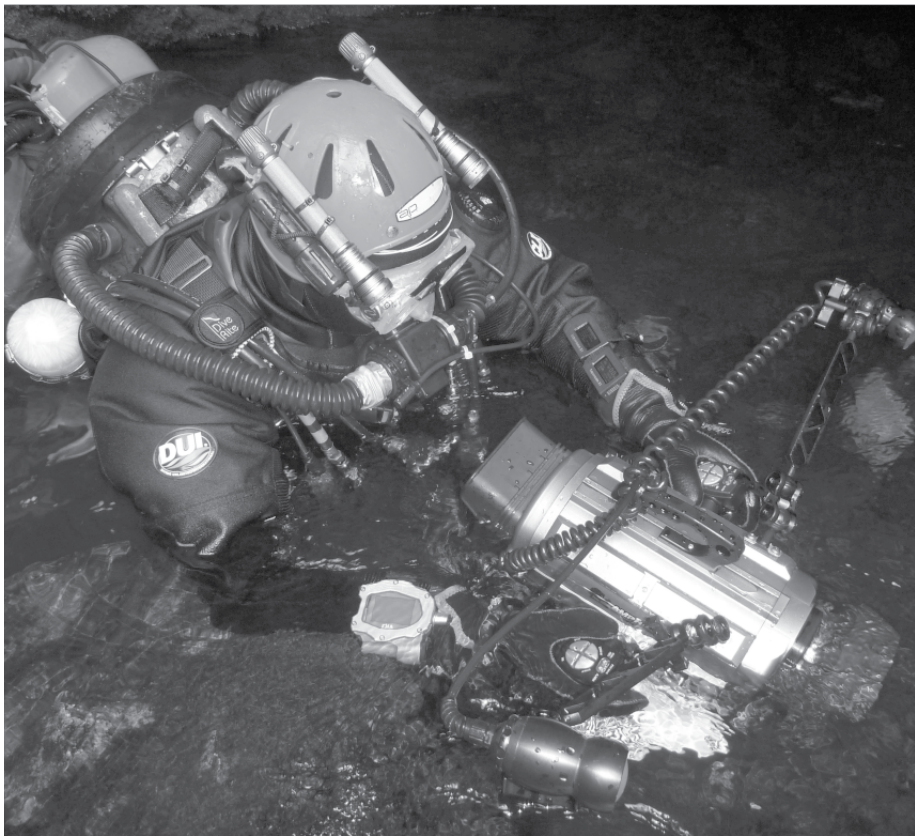
A number of smaller side passages in the first 60 m were explored and several missing connections on the existing map were made.

A test run in the deep habitat was made by the author with the assistance of the other divers, and a number of modifications were planned for the next visit in 12 months' time.

Numerous dives were videoed and large areas of the cave were imaged to be reviewed later by a karst geologist. A short documentary will be compiled documenting the efforts of the team.

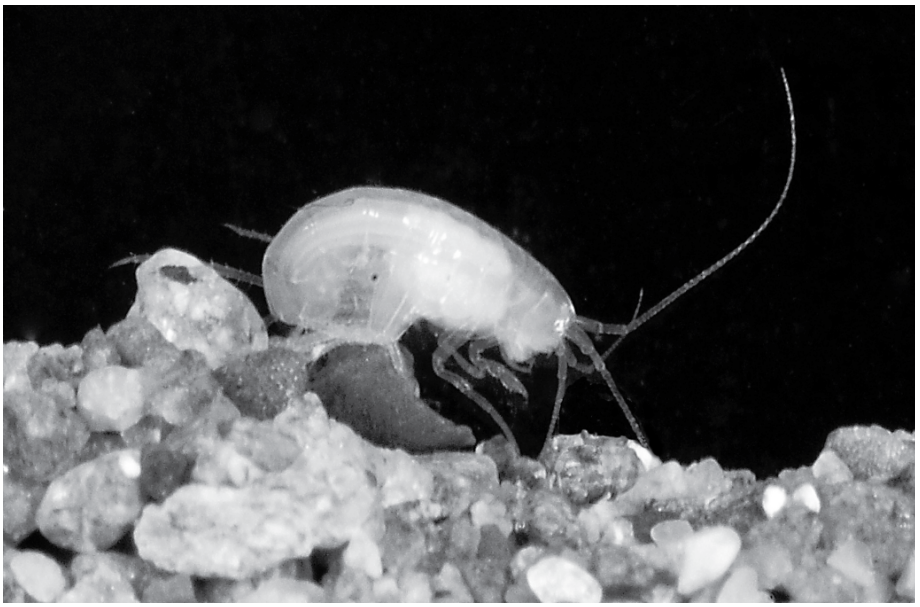
During the course of the diving activities, a number of cave-adapted invertebrates were noted in different areas of the cave. Four specimens of a 3 mm white amphipod and a 5 mm white flatworm were captured and given to Graham Fenwick, an invertebrate systematist at the National Institute of Water and Atmospheric Research (NIWA) in Christchurch.

Planning is already under way for a more comprehensive assessment of the cave's biota on the next trip. A collaborative research project between the cave diving team and NIWA is being discussed.



RICHARD HARRIS COLLECTION

Richard Harris prepares to dive with the HD camera.



A new species of amphipod? Image by Nelson Boustead, NIWA.

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ACKNOWLEDGEMENTS

The divers would like to thank the Honeybone Family in Christchurch, "Oz" Patterson and Deb Cade in Nelson, BOC Nelson, Syd Deaker and Action Helicopters, Chris Holman from SCUBA Imports and Liquivision Computers, Sue Crowe (Tabata Australia) and Waterproof Gloves, rEVO Rebreathers, Sea Optics Adelaide, Damien Griggs (DKG Drysuits) and Weezle Skins, and O'Three Dry Suits for their very generous support and assistance.

Vale Max Jeffries

Laurie Moody
ex-TCC

I FIRST had the privilege of meeting Max Jeffries in 1973 on my first official trip to the Junee area as a member of the Tasmanian Caverneering Club. Max, a long-time resident of Maydena, was a self-employed contractor for ANM for many years before joining the Forestry Commission prior to his eventual retirement.

His interest in caving began with the pre-Khazad-dum conquest in the early 1970s and he was one of those people responsible for cutting the track to the cave.

Max was notably extremely adept in using chainsaws and repairing them. He was also responsible for many cave discoveries in both the Junee-Florentine and Western Florentine areas.

Perhaps one of his most notable discoveries was that of Beginners Luck Cave. Max was also one of the main figures responsible for the formation of the Maydena Branch of TCC in 1975.

Cavers from clubs throughout Australia frequently dropped into his former residence in South Street, Maydena, to seek information regarding cave locations, advice and sustenance and occasionally gear. Max was also instrumental in acquiring the necessary permits from ANM and on more than one occasion assisted with looking for overdue cavers and helping with cave rescues.

Max often accompanied me on many of my trips into the Junee-Florentine and nearly all of these excursions ended up with a coffee at his place before heading home. We got to know each other fairly well over the years and after my retirement from caving in 1980 we continued to keep in touch. Ill-health eventually found Max in the Corumbene Nursing Home at New Norfolk where I continued to visit him. On my last visit in 2009 I noted a marked deterioration in his condition and was later deeply saddened to hear of his passing. I'm sure all of the caving fraternity who came in contact with Max over the years will feel the same. Our condolences to his daughter Helen and sons Tony and Tim and their families.

LAUROE MOODY

Louise Moodie and Max Jeffries in JF107

LAUROE MOODY

LAUROE MOODY

At Max's 70th birhday (left with Therese March)

Repairing the Rootsicle in Wildmans Cave, Wombeyan, NSW
2nd – 3rd May 2009

Garry K. Smith
NHVSS

SITUATION

There were 15 pieces of shattered speleothem rootsicle which, when realigned in order, measured approximately two metres overall. The repair of the broken rootsicle, as opposed to a standard stalactite, presented a number of unique problems:

- The centre of the rootsicle consisted of extremely decomposed timber (tree roots) with a consistency of papier-mâché and a jet black colour.
- The centre core (rotten timber) was extremely wet and held water like a sponge.
- The calcified layers over the original tree roots were, in places, very thin (2-3 mm).
- Toward the middle of its length, the rootsicle split into two before rejoining over the last 750 mm of length. The lower section consisted of solid calcite, thus making it much heavier than the upper section.
- The attachment point on the cave roof had a constant drip of water which became even worse when drilled to accommodate glue and an anchoring pin (threaded bar).
- The correct alignment of the rootsicle meant that when installed it would be hanging on a slight lean. Hence a jack or mechanical support system during the glue-setting period was not practical.
- The height of the roof meant that a small stepladder was required to gain access to the attachment point for drilling and glueing.

GARRY K. SMITH

The broken rootsicle in Wildmans Cave, Wombeyan

EQUIPMENT

Equipment included: groundsheet, packing foam, DSI chemical anchor glue, Super Glue, 5 minute Araldite, battery drills and extra batteries, specially sharpened carbide-tipped drill bits, dust puffer with long thin tube, 316 grade stainless steel threaded bar (4 mm, 6 mm & 8 mm), surgical gloves, glue mixing spatula and mixing tin, stepladder, cloth rags, hammer, cold chisel, pliers, hacksaw, scissors and two-way radios.

316 stainless steel threaded rod was used as this grade of stainless is saltwater resistant and as such, will not corrode in cave conditions. There were three sizes of threaded bar used. These were pre-cut into pins of lengths M4x50 mm long, M4x75 mm long, M6x75 mm long, M6x100 mm long and M8x100 mm long.

EQUIPMENT SELECTION METHODOLOGY

Surgical gloves were used to reduce contamination of the speleothem from skin contact and perspiration as well as to protect the workers from contact with glue.

The DSL chemical anchor tube containing the glue is the type used in coal mining for rock bolting and is manufactured by Dywidag-Systems International Pty Ltd. It is a high strength polyester resin which sets quickly in water and sticks to almost anything. The composition varies with the grade of DSL anchor tube and generally fits into the range of, 6.9% – 11.9% Polyester Resin, 78% – 87% Calcium Carbonate, 4.4% – 6.0% Water.

The DSL chemical anchors used for this repair contain two colours (green and brown) of glue and a white internal hard-

SONIA TAYLOR-SMITH

The segments laid out in assembly order

ener tube, all contained in the one plastic tube. When the green and white agents were mixed together they set in about two minutes, while the brown and white set in about 10 minutes. Obviously the cave temperature will have some bearing on setting times.

SONIA TAYLOR-SMITH

Drilling hole for support pin

SONIA TAYLOR-SMITH

Threaded pin glued in a more solid section

Clear-setting 5-minute Araldite was used on the mating faces of the speleothem as the glue dried quickly and went clear when dry. This allowed the excess glue on the outside of the speleothem to be easily wiped off or scraped away when partly set.

Tungsten carbide masonry drill bits were sharpened so as to have a positive rake similar to a metal cutting drill (not sharpened like a masonry drill bit with negative rake). The drilling speed was slow to reduce heat generation in the speleothem. The hammer (percussion) setting on the battery drilling machine was not used to reduce vibration of the fragile speleothem segments. Cooling water could be used if the speleothem or drill bit started to warm up.

Because the repair was in a chamber not far from the surface, we were able to use two-way radios to communicate with people on the surface in the event that we needed extra equipment or assistance. The entrance pitch was tight, so the radios saved lots of trips back and forth to the surface.

SONIA TAYLOR-SMITH

GARRY K. SMITH

Andrew with the repaired rootsicle, before attempting to attach it to the roof in Wildemans Cave

REPAIR SEQUENCE

The segments were first aligned on a groundsheet in their correct order and orientation, then each mating joint checked for small missing chips. Sorting out the jigsaw and aligning segments in order was certainly a challenge.

Once satisfied that all components were accounted for, a battery drill with specially sharpened tungsten bit was used to carefully drill down the centre of the speleothem. This usually coincided with the path of the rotten tree root. Everyone coming in contact with the speleothem wore surgical gloves.

One person held a section firmly against a solid support for another person to drill out the centre hole, just over half the length of the stainless steel support pins. The holes were drilled several millimetres larger than the diameter of the pin to be used. This allowed some room for glue and assisted in aligning the outside surfaces. For the sections where the centre consisted of rotten wood, as much of the rotten material was removed as possible, to ensure the adhesive had a solid surface to bind to.

SONIA TAYLOR-SMITH

Checking the alignment before inserting pins and glueing

Once both mating pieces were drilled, the pin was inserted without glue to check that the adjoining outer surfaces of speleothem could be aligned exactly. If needed, the holes were enlarged to allow room for the pin to float more freely to align the outer surfaces.

When all mating parts could be aligned, glueing commenced. The appropriate quantity of glue was squeezed out of the DSL chemical anchor tube on to the bottom of a tin can for mixing with a spatula. On most occasions, the slower-setting chemical anchor glue was mixed up and smeared on the pin and inserted into the hole. Once the glue-covered pin was pushed into one piece, the Araldite was put on the speleothem faces and the two halves pushed together. Excess clear Araldite was then wiped off the outside of the joint. On most occasions it was easier to let the Araldite partly set before scraping the excess off. This reduced the smearing of sticky glue on the outer surface of the speleothem.

SONIA TAYLOR-SMITH

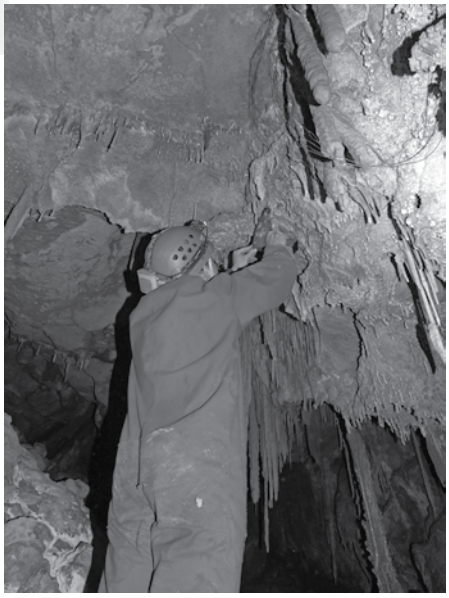
There are now just two pieces to join

GARRY K. SMITH

Enlarging the pin hole before final connection to the roof

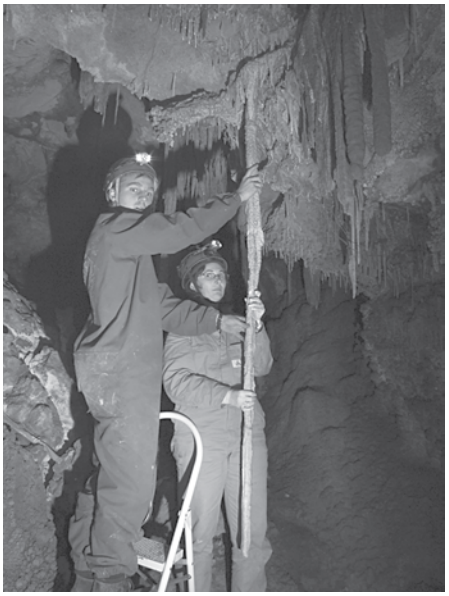
GARRY K. SMITH

Inspecting the portion which stayed attached



GARRY K. SMITH

Andrew drills attachment hole for the repaired rootsicle



GARRY K. SMITH

Andrew and Jodie still supporting the repaired rootsicle while Garry takes the photo

To reduce waiting time, fast setting superglue was used to fix a few small chips in place.

Because of the overall length of fragile speleothem, the sections were joined to make two complete halves and were then joined together while resting on foam supports.

After all our efforts the top half remained attached to the ceiling; however, the middle section was very weak with little calcite around the rotten tree root and could not support the weight of the bottom section which fell off.

ACKNOWLEDGEMENTS

People who supplied repair equipment were: Andrew Baker, Jodie Rutledge, Garry Smith and Peter Grills.

People involved in the hands-on repair work were: Andrew Baker, Jodie Rutledge, Alan Wright and Garry Smith.

Assistants who carried and fetched etc: Michael Rutledge, Sonia Taylor-Smith and Alan Wright.

Photographers were Sonia Taylor-Smith, Jodie Rutledge, Andrew Baker and Garry Smith.

DEFINITION

Rootsicle. n. roots of trees or plants which grow into a cave cavity and become calcified. The roots, and speleothem comprising the rootsicle. This is very similar to a rhizomorph, which is a speleothem originally formed around tree or plant roots, which may have long since decayed, but the calcareous deposit has preserved their shape and form.

GARRY K. SMITH

The final result

By Grikey!

Celebrating cave names 2

Continued from *Caves Australia* #176:10

Stephen Bunton
STC

"SO ARE THERE any that you haven't done then? And any you'd still like to do?" my captive audience inquired.
(You better get out your cave atlas for this lot!)

"Well there's
Koonalda, Mariolda, Mt Etna, La Grieta,
Voronja, Provatina, Badalona, Lechiguilla,
Ant Cave, Wasp Cave, Gnat Cave, Termite Cave.
Weta Cave, Whale Cave, Possum Cave, 'n' Goat Cave.
Selminum Tem, GESM, PSM, BU-56, Jean Bernard,
Mammoth Cave, the longest one! Castleguard but it's too hard!
I'll do it for a dare, man. I'll go everywhere man.
I'm saving up my fare man?
I'll go anywhere.

I'd still like to do
Crack Pot, Jack Pot, Pox Pot, and Schneeloch,
Camooweal, Giants Hole, Goanna Cave 'n' Holloch.
Postojnska Jama, Loongana, Undara, Corchia, El Sotano,
Golindrinas, A Touch of Class, Tet Anus, Chillagoe's not far to go!
The Boob Tube, Naked Lady, Awe Chasm, Bulmer Cavern,
Root Cave, Shooting Star, Curtis Interuptus, 'n' Carlsbad Cavern.'
I'll go anywhere man. I don't really care man.
I even say a prayer man,
To get me everywhere.

On the hit list there's still
Skeleton, Ilium, Duodenum, Caecum Slither,
Ning Bing, Skinny Thin Pins, mine can't dither.
Skull Cave, Cork Hole, Haemorrhage Hole, Dent de Crolles.
Colon Cave, Loons Cave, Photon Cave and Hornet Hole.
Mudgee, Pygmy, Zulu, Jeju. I'd like to do Ghar Parau.
Slater Crater, Organ Grinder, Golfball Gobbler! Wouldn't you?
I'll go anywhere man, you can make it a pair, man?
I could drive the van man.
We'd go everywhere.

Like
Purification, Lamprechstofen, Boesmansgat, Batmanschacht.
Oh I forget… yes Oubliette. Armanath, now there's a laugh!
Con Cave, Art Cave, Lascaux… can't see it now!
It's some sort of fake cave. Tick Cave.
Frog Cave, Milodon Cave… and there's Wiburds Lake Cave!
Albatross Pot. I'll do the lot. Sarawak Chamber or Wind Cave.
Instead there's Reseau Ded, Old Homestead and others in my head!
I'll go anywhere, man. Aint got no time to spare man.
Don't stop to do your hair man.
We've gotta get to everywhere.

Then there's
Machete Pot, Jam Pot, Fuzz Pot, T-Pot, Cow Pit, Top Hole.
Cape Range, Gunns Plains, Clam Cavern, Hammer Hole.
Muruk, Mimbi, Sterkfontein, Cappadoccia, Clearwater.
Kims Crack, Contact Hole and The Black Hole of Col Carter.
Aladdin, For Your Eyes Only. That'll hurry my death along.
I can't hold my breath that long! And of course, Barralong.
Wellington, Yallingup, I bet you think I make these up?
I've not been everywhere, man. Ambition drives me spare man.
No need to despair, man.
I'll go everywhere.
One day!
Yeah…"

Memorabilia

Lindsey Gray
SRCC

These songs are taken from a book put out by the SBWs, The Sydney Bushwalkers Club Songs. *I was a member in about 1957. My first wild caving trip was with this club to Wee Jasper, NSW.*

WHO PUT OUT THE OOLITE *(Tune "Changing of the Guard")*
Now they've got me caving,
A pastime most depraving,
It's almost past believing,
But here I am at last;
My girl friend likes to spelio
At morning noon and night,
So now I'm here way down below,
Like some old troglodyte.
But as you see I'm all of a fright –
For –
Who put out the oolite in this 'ole,
Lord, have mercy on my fearful soul,
My hurricane lamp is short of gas,
The squeeze hole's tight – I feel an ass –
Why oh why did ever I come here?
The place is queer.
Water's dripping down my neck like rain,
All my bones are wracked with awful pain
Attacked with wild hysteria
And dreadful claustrophobia,
Oh, please, put on the oolite once again.

SQUEEZE HOLE SONG *(Tune: Keep right on to the End of the Road)*
When a bod's stuck right in a squeeze hole tight
Or trapped in a sharp S bend,
Make no comment bright on his end in sight
Though all that's in sight is his end.
For if the mind should panic the body may swell
And trapped for good he may be,
So spray his toes with the garden hose
And treat him with cups of tea – of tea – of tea
And treat him with cups of tea.

But if this won't work, shun the short sharp jerk,
For a tug may well dislodge
A ton of dirt or his shorts and shirt,
So you see it's a dangerous dodge.
Take a rope around some convenient part
If you want your friend to live,
Let three men on the rope, grease him up with soap,
And something has got to give – to give – to give,
And something has got to give.

If he's still stuck fast there is just one last
Resort that you yet may try.
For the die is cast and all caution past
It's a case of do-oo or die.
Take an oxy blow-torch or some other flame
That burns with an intense heat,
And with action sly this flame apply
To the poor trapped victim's seat – his seat – his seat,
To the poor trapped victim's seat.

Fore! Lawn! Nullarbor?

Norman Poulter OAM
SRGWA, STC

Forlorn: Desperate, hopeless, abandoned, forsaken, deprived of, in pitiful condition, of wretched appearance. — *Webster's Dictionary*

NULLARBOR LINKS.COM

WHILST in conversations with the new manager of the Madura Roadhouse during the early days of our SRGWA Nullarbor trip of December 2007, mention was made that there was a distinct possibility that a proposed "Nullarbor Links" golf course between Kalgoorlie in WA and Ceduna in South Australia would shortly be under construction.

The idea had apparently originated between the then manager of Balladonia Roadhouse and chairman of the Kalgoorlie-Goldfields Tourism Board around 2004 with a view of "keep[ing] the many travellers ... in the area a little longer." (Kerr 2009). Kerr's article in the magazine of the Campervan and Motorhome Club contained a couple of pictures of the Madura and Balladonia greens, all very nice and green — at the moment, but his closing statement has ominous overtones, "The tourism and other possibilities are endless!"

Based on an 18 hole course, with one or more holes at each locality, it was envisaged that golfing participants would take 3-4 days or a week to work their way from one end of the Nullarbor to the other, paying a one-off entry fee of $50 plus a per-hole rental for clubs, if they weren't carrying their own.

With few exceptions, most roadhouses grew out of an ad-hoc service provided by local grazing stations. By the early 1970s, all roadhouses were stand-alone enterprises, subject to the vagaries of the financial times, usually providing aside from fuel, accommodation, meals, salty groundwater showers and limited mechanical assistance. The roadhouses became 'feast or famine' concerns, always searching for ways to improve their bottom line. In order to survive, services were downgraded; the first to suffer was mechanical breakdown facilities.

Many roadhouses had their fingers burnt when they upgraded accommodation and installed desalination plants prior to the opening of the all-weather highway in the mid-70s. The anticipated huge increase in tourist traffic did not occur due to the untimely intervention of the Middle East wars and resultant oil shortages and accompanying price increases. The Nullarbor has always been an expensive place where fuel is concerned — quite often seemingly out of proportion to everywhere else — but during that period prices were almost obscene, although comparable to the fuel shortages of more recent times.

By the time the oil began flowing freely and cheaply again, tourist traffic attitudes had changed. Cars were almost 'out' and bus tripping became popular. Even that changed over time. There is no east-west bus service any more, only specific charter groups, mainly to see the seasonal west coast wild flowers.

From time to time some roadhouse operators or enterprising employees eyed the caves in their area as a money-making resource. Weebubbie Cave had been used in this way as far back as the 1960s.

With all this in mind - when I was writing up my 2007-8 trip report later, I was prompted to make the following observation about the proposed Nullarbor Links: "Such a project may ultimately have an adverse effect on the caves of the regions as roadhouses search for other ways to entice the travelling public to 'linger longer' in the various locations". (Poulter 2008) That is still my main concern.Now that the project is a reality, as of October 2009 there are aesthetic concerns as well. How long will it be before any novelty effect wears off? There are only so many hard-nosed golfers amongst the travelling public willing to part with a lot of accommodation money to slowly "swing and putt" their way across the Nullarbor — and what about their long-suffering families? What are they going to do amongst the heat, dust and flies? Do they try to whistle the tune about mad dogs and Englishmen? Given that the Nullarbor is a very windy and dusty place, is the upkeep of the courses the responsibility of the sponsoring companies or the roadhouses? Nothing would be more off-putting than tacky, worn-out surfaces and I can't see the normally cash-strapped roadhouses, coupled with their high staff turnover, spending much in the way of course maintenance. If the whole enterprise becomes unviable, will the affected areas be rehabilitated and by whom?

In years to come, will visitors to the Nullarbor be presented with yet another forlorn example of humanity's disregard for our delicate environment? I hope not.

REFERENCES

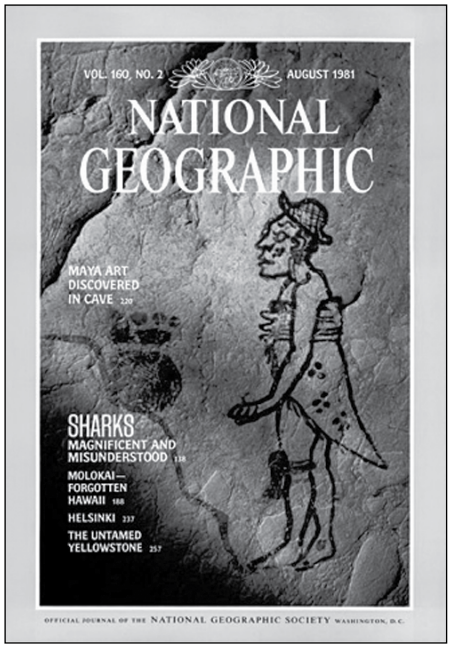
Kerr, Colin, 2009 The Nullarbor — Golf's Longest Drive,*The Wanderer,* 24(11) 32-34

Poulter N, 2008 Nullarbor trip report *The Caver's Chronicle.* 35 (1)

www.nullarborlinks.com

Got time to look for a good read?

Brooke Grant
VSA



IF YOU 'Google' 'national geographic caves' one of the references listed in the search results is Cave-Related National Geographic Articles in the DC Grotto Library.

When you open this website you get the following introduction and a handy list of article titles:

'Cave-related *National Geographic* magazines in the Grotto Library

'The DC Grotto Library has a collection of National Geographic magazines from 1934 through 1997 that contain cave-related articles.'

The good news is that there is an index to the articles. It was produced by a caver in Australia, Glenn Baddeley, who created the index and posted it on his website.

If you are interested in a specific topic you can go to Glenn's website at http://home.mira.net/~gnb/caving/natgeo.html and use your browser's search function to find keywords.

The index lists the article titles, Glenn Baddeley's comments about the articles, and the date of the issue containing them. Only the issues in the Grotto Library are included.

The first article listed is 'The Forgotten Valley Of Peru' [Caves in the Colca Valley — Peru] January, 1934.

The final article listed is 'The Most Ancient Americans' [Fort Rock Cave and Wilson Butte Cave — USA. Caves only shown on map] October, 1997.

As Glenn suggests on his website, keep an eye open for second-hand *National Geographics* — you might find the reading pleasurable.

Website:

http://www.caves.org/grotto/dcg/HTMLs/dcg-nat-geo.html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