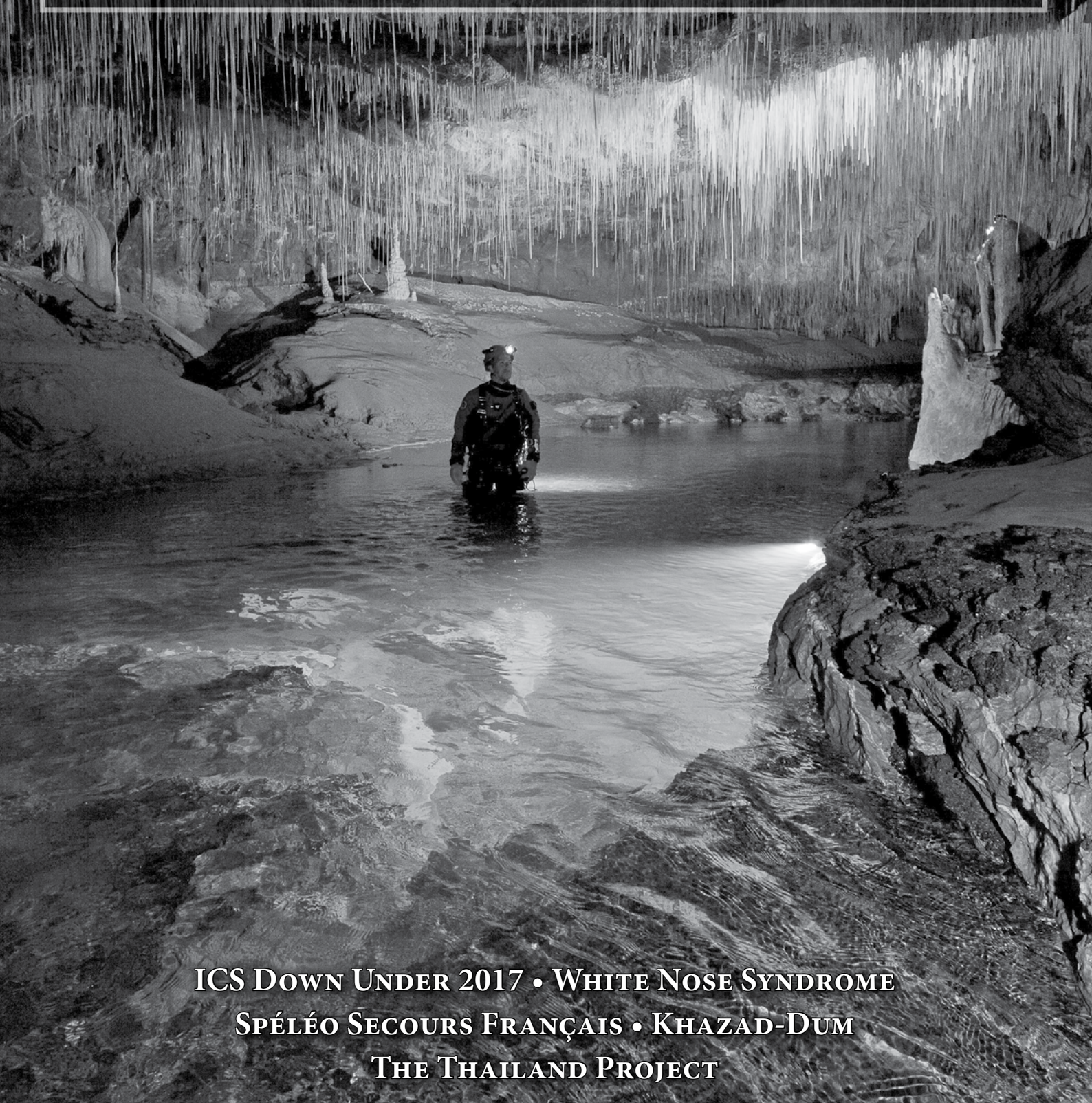


CAVES

The Journal of the Australian Speleological Federation

AUSTRALIA



ICS DOWN UNDER 2017 • WHITE NOSE SYNDROME
SPÉLÉO SECOURS FRANÇAIS • KHAZAD-DUM
THE THAILAND PROJECT

No. 197 • JUNE 2014

COMING EVENTS

This list covers events of interest to anyone seriously interested in caves and karst. The list is just that: if you want further information the contact details for each event are included in the list for you to contact directly. A more extensive list was published in the last *ESpeleo*. The relevant websites and details of other international and regional events may be listed on the UIS/IUS website

<http://www.uis-speleo.org/> or on the ASF website <http://www.caves.org.au>. For international events, the Chair of International Commission (Nicholas White, nicholaswhite@netspace.net.au) may have extra information. This looks like a very busy 2014 and do not forget the ASF conference in Exmouth in mid-2015. I hope we have time to go caving!

2014

September 29–October 2

Climate Change—the Karst Record 7 (KR7) Melbourne. This international conference at the University of Melbourne will showcase the latest research from specialists investigating past climate records from speleothems and cave sediments. Pre and post field trips to karst regions of eastern Australia and northern New Zealand. Workshops on karst hydrology, speleothem petrography, geochronology and geochemistry. Details for registration, field trips, workshops and conference dinner are available on the KR7 website <http://www.kr7.org/KR7.org/>

October 4

Selwyn Symposium, Melbourne. This is a one-day symposium organised by the Geological Society of Australia (Victoria Division). It is currently planned that this will be on the geology of the Nullarbor with some emphasis on the karst geology. For further information contact Susan White susanqwhite@netspace.net.au

October 17–19

Yarrangobilly Caves 60th Anniversary of the Canberra Speleological Society Weekend at Caves House. This will be an opportunity for relaxing and reminiscing, a dip in the thermal pool, a wander through the fabulous show caves, or perhaps even some wild caving. For more details see ASF or CSS website. Please note: CSS is handling the bookings (ie don't try to book separately). Please register your interest in either event (or both) by contacting: canberracavers@gmail.com or by filling in the tick box reply form (available on the web) and sending it to the CSS email address.

October 25

Canberra Speleological Society 60th Birthday Lunch. Yowani Country Club, 455 Northbourne Ave, Lyneham ACT. 11.30am for a 12 noon start. Buffet lunch with some drinks provided. Bar facilities available. Cost: \$35 per person. Payment is required by 30th September, 2014. Should you need to cancel, a full refund will be available until Wednesday 16th October.

November 2–8

7th International Show Caves Association (ISCA) Congress: Jenolan. The theme of the Congress will be 'The Challenge of Sustainably Showing Caves on the 21st Century'. Details, including registration and costs, are available on the ISCA website <http://www.i-s-c-a.com/event/39-isca-7th-congress>.

2015

May

ACKMA Conference, Naracoorte, SA. Details available soon.

June 21–26

Ningaloo Underground 30th ASF Conference: Exmouth, Western Australia. Escape the southern winter (or the northern hemisphere) to enjoy a packed conference program and explore range, reef and gorges with the benefit of local knowledge (always a plus). Details on facilities, accommodation and papers are available on the website <http://ningaloo.wasg.org.au>. The registration form is expected in mid-2014 (see details on page 10). Abstracts for papers are due in by 31 March 2015.

Snottites

Cath Hemley

VSA

IFOUND something in New Guinea ridge recently that fitted a very vague description I remembered of a cave formation called a snottite. I don't know if it is what I found but I thought it was an interesting, rather gross and obscure type of formation other people may find fascinating.

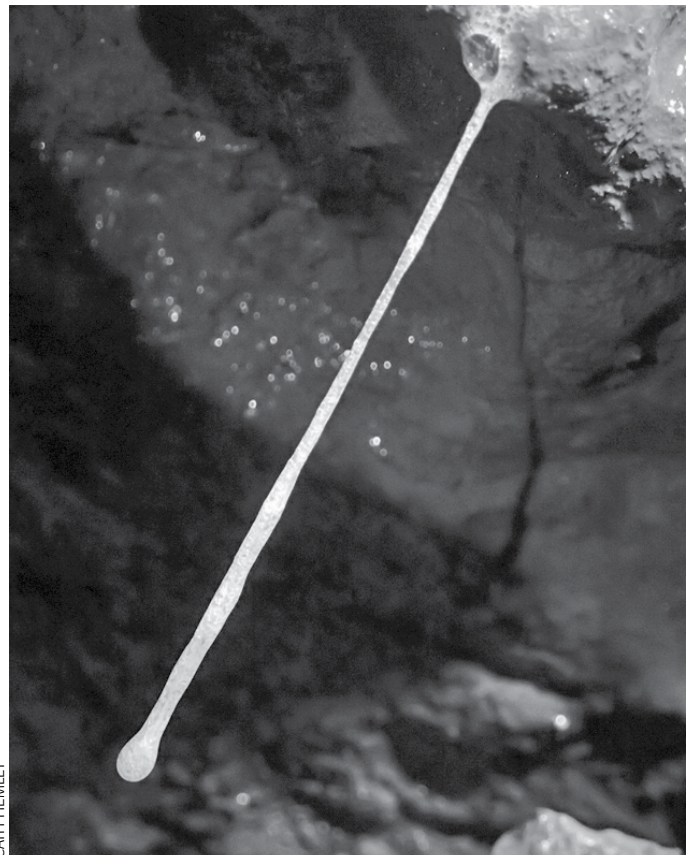
Snottites are colonies of single-celled extremophilic bacteria which hang from the walls and ceilings of caves and are similar to small stalactites, but have the consistency of snot, a slang word for nasal mucus.

The bacteria derive their energy from chemosynthesis of volcanic sulfur compounds including H_2S and warm water solution dripping down from above, producing sulphuric acid. Because of this, their waste products are highly acidic (approaching pH=0), with similar properties to battery acid.¹

Snottites were recently brought to attention by researchers Diana Northup and Penny Boston, studying them (and other organisms) in a toxic sulphur cave called Cueva de Villa Luz (Cave of the Lighted House), in Tabasco, Mexico. The term 'snottite' was originally given to these cave features by Jim Pisarowicz in 1986.

Brian Cox's BBC series 'Wonders of the Solar System' saw the scientist examining snottites in the caves and positing that, if there is life on Mars, it may be similarly primitive and hidden beneath the surface of the Red Planet.

1. Hose L D, Pisarowicz J A. (1999) Cueva de Villa Luz, Tabasco, Mexico: reconnaissance study of an active sulphur spring cave and ecosystem. *J Cave Karst Studies* 61:13–21 (Thanks to Wikipedia)



CATH HEMLEY

CAVES AUSTRALIA

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

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ASF

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Cover: *For Your Eyes Only, June Cave, Tasmania. Model: Andreas Klocker.*
Photo by Liz Rodgers. lizrogersphotography.com

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WANTED
ARTICLES FOR CAVES AUSTRALIA!

Whether caving, cave diving or generally just caving, *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.

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Summerleas Print, Kingston, Tasmania

EDITORIAL

OUR USUAL editor has opted to neglect his editorial duties to go caving on the Nullarbor instead, so you're stuck with me. I'll use this opportunity to discuss the issue of electronic CA distribution.

I'd like to thank the considerable number of people who responded to the article in CA 196. The vast majority of respondents were in favour of the proposed transition while a few others stated that while they understand and support such a move, they'd still prefer to receive a hard copy. Even when pressed on the matter, no one thought the likely cost increase associated with receiving a hard copy to be outrageous.

The process of producing a hard copy quarterly issue with only part time volunteer resources is rather long and tedious, so during the considerable time that has passed since that article was first written there has been much discussion behind the scenes regarding the best way to transition to electronic distribution. The current thinking is to publish new material when it is received rather than in quarterly blocks.

This will get material out in a more timely fashion (articles sometimes spend four months waiting in the wings under the current regime). Hard copies will then be produced probably three times per year, based on a reduced format of the electronic version (i.e. black and white, selected photos etc.). The new electronic format will not only allow for expanded colour photo opportunities but also scope for video and audio where applicable.

More information will be made available soon and in the meantime please continue to provide us with feedback or ideas.

This issue of CA has been cobbled together pretty quickly due to past, current and future absences of key players.

Thanks to those absentees for using what little time they had to keep the Production Manager content and to last minute contributors who had their arms twisted to supply material to fill the gaping holes we had as late as late May.

—Alan Jackson

President's Report

EACH YEAR brings seasons for us to enjoy and depending on where we are situated, the number may range from one to more than four.

Last year I was enjoying a warm tropical marine environment and now the mild and colourful autumn in Canberra is stimulating me.

The coming year will prove exciting and challenging for many of us as we participate in different fractional amounts of time in employment, entertainment, relaxation and exploration.

Some of you may ask 'What is the ASF doing at the moment?' When I think about the question I come up with a list of positive processes and projects currently in action.

ASF is committed to karst conservation in Australia and projects are ongoing into assessing risks to karst and associated flora and fauna are always treated as priority. Currently, areas in North Queensland are being assessed.

The threat of diseases to our bat populations, such as white nose syndrome, being accidentally transferred from overseas is being monitored and assessed by respective agencies. Increased international travel to areas of known or suspected areas containing infection requires very stringent policies of education, reporting and decontamination.

Thinking ahead to UIS Congress 2017, the influx of international cavers and speleologists to Australian caves requires an active understanding and adherence to current and developing policies.

Current developments in publishing and production of speleological publications in Australia at club and ASF level means that paper is being replaced by digital copy. *Helictite* has become electronic, as have many club publications.

Ongoing projects of scanning and converting existing publications and archived paper records to digital formats continue. The further enhancing of these records by making them searchable online is a long-term and achievable goal that will eventu-



ally give us a maintainable, compact and centralised database containing existing Australian speleological knowledge.

Coincident with this digital database is the need to access, acquire and store individual collections of speleologically relevant material where it can be stored appropriately and securely held and then assessed and components integrated into the speleological database. Many collections of speleological publications, photographic images, sketches and maps, and field notebooks are dispersed or lost at the death or retirement of cavers and speleologists. ASF is now active in providing a solution by being able to provide suitable long term storage for these collections and investing in resources to capture, catalogue and process them.

Our cultural heritage is contained within an immense collection of written documents and images. It is completely appropriate to invest money, time and voluntary resources to preserve our unique history. I wish to encourage you all to think to the future by making your past exploits, discoveries and observations tangible and accessible in the present and for future speleologists by publishing your individual chapters into an Australian volume of international speleology. Much of our heritage is verbal and in our heads making it vulnerable to decay and loss by the dreaded 'time moths' eating away at our memories.

In caving
Stan

17th International Congress of Speleology (ICS) Down Under in 2017

Denis Marsh

Speleo 2017 ICS Organising Commission

IN JULY 2013, in the Czech Republic City of Brno, world delegates at the General Assembly meeting of the International Union of Speleology (UIS), voted to accept a proposal from ASF to hold their next International Congress of Speleology (ICS) in Australia in July, 2017.

WHAT DOES THIS MEAN FOR ASF?

ASF (the host organisation) will be responsible for organising and conducting the 17th ICS in Australia (the host nation) for and on behalf of the UIS, in accordance with UIS requirements. The ASF Executive believes it is timely for Australia to increase its participation on the world stage for speleology and share what we do with the rest of the international community.

WHAT IS THE UIS?

The Union Internationale de Spéléologie (in the original French) is the international body for caving and speleology. Formed during the 4th International Congress of Speleology in Ljubljana, Yugoslavia, on September 16, 1965, the UIS is an association of persons (national delegates) authorised to represent the speleologists of the nations (member nations) affiliated to the Union. It is a non-profit, non-governmental organisation which promotes the development of interaction between academic and technical speleologists, developing and coordinating international speleology in all its scientific, technical, cultural and economic aspects. Although the name may be written differently in other languages, the original acronym (UIS) is maintained.

At present, the UIS has more than 60 member countries, located on all continents, and is open to the affiliation of all national associations and federations. The web address of the UIS is: <http://www.uis-speleo.org>.

Since July 20, 2002, the UIS has had a

fixed address: Titov trg 2, Postojna, Slovenia, in space provided by the government via the Institute of Karst Research of the Slovenian Academy of Arts and Sciences, where all the UIS Archives are now stored. The UIS is a legal subject of Slovene law.

It is the General Assembly of the UIS at the International Congresses, consisting of all the delegates of member countries, which decides the direction of the UIS by their votes. For the ballots, each nation has only one vote.

An elected Bureau runs the affairs of UIS between the 4-yearly General Assemblies held at the International Congresses. During each ordinary General Assembly, the titular national delegates elect by secret ballot the Bureau comprised of one President, two Vice-Presidents, a Secretary General who also acts as Treasurer, and Adjunct-Secretaries whose number (usually eight) is determined by the General Assembly. The Bureau is accountable to the General Assembly.

It is during the General Assembly that the activities of Commissions, Working Groups and Committees of the previous four years are presented and voted on. This is also the time for the creation or extinction of Commissions and Working Groups, analysis of the financial situation of the UIS, admittance of new members, modification of statutes, approval of new documents and is where new agreements are made and signed.

During its general meeting at each ICS, the General Assembly of the Union elects, by simple majority of attending delegates, one of the candidate nations to organise the next International Congress.

WHAT IS THE ICS (INTERNATIONAL CONGRESS OF SPELEOLOGY)?

Speleology took its first steps towards recognition as a science at the end of the 19th century. In the mid 1900s the inter-

national speleological community, mostly Europeans, had the idea of holding International Speleological Congresses. In a meeting on August 22-23, 1949, in Valence, France, the decision was taken to hold the first in Paris, France, in 1953. Since then, International Speleological Congresses have been held in Italy (Bari, 1958), Austria (Vienna, 1961), Yugoslavia (Postojna, 1965), Germany (Stuttgart, 1969), Czechoslovakia (Olomouc, 1973), Great Britain (Sheffield, 1977), United States (Bowling Green, 1981), Spain (Barcelona, 1986), Hungary (Budapest, 1989), China (Beijing, 1993), Switzerland (La Chaux-des-Fonds, 1997), Brazil (Brasilia, 2001), Greece (Athens-Kalamos, 2005), United States (Kerrville, 2009) and most recently the Czech Republic (Brno, 2013).

ICSs are conducted every four years, to verify the 'State of the Art' of world speleology. They are hosted by a Member Country whose proposal is analysed and chosen by vote during the General Assembly. Congresses are regulated by the Instructions and General Recommendations for Organizers of International Congresses of Speleology.

All matters relating to speleology are considered during International Congresses. Papers on the various facets of speleology are presented, including scientific areas (geology, hydrogeology, mineralogy, biology, climatology, archaeology, palaeontology and geography), technical work (exploration, survey, rescue, new techniques, documentation *et al.*) and cultural themes (religion, art, music, painting, sculpture, and the collection of stamps and coins). In addition to the formal presentation of papers, Congresses schedule meetings of the various Commissions and Working Groups and provide opportunities for the exchange of ideas and participation in various cultural activities, such as social gatherings, competitions, and technical visits. Excur-

sions are organised to visit the karst and caves of the host country, before, during and after the Congress.

The Bureau collaborates constructively with the Organising Committee of every ICS to establish the Congress program.

WHERE TO FROM HERE FOR ASF?

The ASF Executive considered a number of options for the type of organising body which should be set up to take on this task. Organisation of the ICS in Australia poses a significant challenge for ASF, potentially exposing the Federation to a level of financial risk which will require careful management. Accordingly, members of the Executive initiated informal discussions with legal professionals and it was determined that specific professional financial advice was more appropriate to decide on a direction.

Initially a totally separate entity, such as an Incorporated Association, was considered.

Such a new Association would be totally independent, requiring a contract with ASF to organise and conduct the ICS. It was determined that this was not a good fit with UIS requirements and lacked appropriate levels of control by both the UIS and ASF.

Considering the requirements of the UIS and financial advice from a professional accountant, it has been determined that a Commission be set up within ASF, known as the Speleo 2017 ICS Organising Commission, to organise and conduct the ICS on behalf of the UIS and ASF. Terms of Reference (TOR) for the Commission were drafted in consultation with legal and

financial professionals and subsequently adopted by the ASF Executive.

WHAT HAS THE ORGANISING COMMISSION BEEN UP TO?

The Executive Board of the Commission has been established consisting of: President (Denis Marsh, [OSS]), Vice President (Nic White, [VSA]), Secretary (Jim Crockett, [MSS]), Treasurer (David Butler, [NC]), and UIS representative (George Veni, [USA]). Stan Flavel (ASF President) will be an ex-officio member acting as UIS Bureau and ASF liaison.

The venue has been confirmed as Penrith Panthers Events Centre, Sydney

An inaugural Executive Board planning meeting was held in February and a second meeting was held at the beginning of May which incorporated a visit to the Penrith Panthers to view the conference facilities. Planning of sub-committees is being progressed. A Publications Committee chaired by Sue White (VSA) is being set up, as has a Field Excursions Committee chaired by Cathie Plowman (NC).

Other sub-committees and potential chairs are being developed along with iden-

tifying the many tasks and sub-committee responsibilities. So far these include a Program Committee (includes Scientific Program, Social Program and Technical Program), Promotion Committee, Public Relations Committee, Venue and Accommodation Committee and Finance and Registration Committee.

Administration requirements such as establishment of a PO Box, bank account, letter-head, ABN and tax file number registration have been completed. Other important priorities being progressed include development of a web site and investigation of insurance requirements.

A meeting of the Commission's Executive Board with representatives of the UIS Bureau has been scheduled in Sydney for the end of October to coincide with the UIS Bureau's annual meeting.

HOW CAN ASF MEMBERS ASSIST?

As planning progresses the many tasks will be identified where ASF members can help with the organisation. Should you have particular skills or interests, whether as a club or individual, please contact the Executive Board at: speleo2017@caves.org.au

This will be a significant responsibility and undertaking for ASF members. The more members getting involved, the smaller the many tasks become. The ICS Executive Board's job will be to ensure that the organisation and conduct of the Congress is not only managed but resourced appropriately.

Regular updates on the organisation and progress of the Congress will be featured in future issues of *Caves Australia*, so stay tuned.



Penrith Panthers Events Centre, Sydney

Unusual Caves of Australia – 1

The 'Big Hole' – postscript

Norman Poulter OAM

NC, SRGWA

Shortly after the publication of my article on the 'Big Hole', in *Caves Australia* 196' [Poulter 2014 pp17-18 and 'Laterite Karst' Susan White 2014 p19], an email arrived from Dorothy Robinson :-

"The photo in *Caves Australia* looks like one that fell in the middle of the road in 1979?? The road was then diverted. Somewhere Lloyd has a photo. A truck nearly

drove into it one night. We came through soon after. Dave Dicker also."

During my visit to the cave in April 2013, I saw no evidence of an earlier road leading directly to and from the cave in either a northerly or southern direction—but then again I wasn't looking for such anyway.

I daresay, given the abundant seasonal rainfall, any such evidence would have been masked by regrowth vegetation dur-

ing the 34-year gap between visits. If my article and Dorothy's response are indeed related, such an incident would help explain the elaborate and expensive fence that was erected around the cave, as well as the expansive car parks, as a camp would have been established while a safe diversion was determined and constructed.

Thank you for the additional information, Dorothy.

White Nose Syndrome in bats

Recent information from the Australian Chief Veterinary Officer to ASF

Nicholas White

ASF Conservation Commissioner



White Nose Syndrome fungus on Little Brown Bat

THE Chief Veterinary Officer, Dr Mark Schipp, has appealed to the Australian speleological community (ASF) to be aware of the debilitating fungal 'White Nose Syndrome' (WNS) in bats.

Currently neither the syndrome nor the fungus has been identified in Australia. However if WNS were to occur here it could have similarly devastating effects on Australian bats as those in the US and Canada. Occasionally cave dwelling bats are submitted to animal health authorities in Australia due to unexplained deaths or illness, and these are now tested to rule out infection with WNS fungus.

Dr Schipp sees speleologists as having a vital role to play in preventing the entry of the fungus that causes WNS to Australia as we will be amongst the first to observe the disease if this happened. In recognition

of this position, he has provided the article below which has the most up to date information about the disease, decontamination protocols and steps to take if evidence of the disease is observed.

Cavers and cave managers travelling internationally should avoid bringing in equipment used overseas, especially from areas where WNS is known.

We should also be aware of and observe the decontamination protocols. When hosting international cavers and cave managers the same protocols should be observed.

The issue of decontamination and cross contamination between caves and caving areas has been part of the ASF Code of Ethics for a very long time. Some of the spread of WNS in NE America has been due to bat movement between sites, but there are other instances where humans are implicated in the fungus spread. It is important

to thoroughly clean ALL your cave gear between cave trips.

The following article (pp8-9) from Federal Department of Agriculture, Australian Government, also refers to Histoplasmosis. This fungus does occur in Australian bat caves, especially dry dusty ones.

Cavers should be alert to the occurrence of chest infection and pneumonia shortly after visits to such caves. Australian bat lyssavirus occurs in micro bats and flying foxes. Inadequate knowledge exists regarding infectious status of cave dwelling bats and therefore handling bats should be avoided. As the ASF Conservation Commissioner and microbiologist, I am a member of the Bat Health Focus Group of the Australian Wildlife Health Network and therefore receive their emails and alerts. I will ensure that appropriate information is communicated.

White Nose Syndrome in bats

Department of Agriculture, Australian Government

May 2014

IN 2007 a new disease was seen in cave hibernating bats in the US state of New York, and was retrospectively suspected to have been present the previous year.

The disease was called 'White Nose Syndrome' (WNS) because of the fluffy white growth of fungus that appeared on the muzzle, ears and wings of affected bats. Since then, the disease has spread to 22 US states and five Canadian provinces and had devastating effects on bat populations in affected caves with up 90% of the population dying. The disease affects microbats (small insectivorous bats) as they hibernate in caves. Bats with WNS may die due to depletion of fat stores associated with more frequent rousing from hibernation; cold exposure if they leave the cave to search for food in freezing conditions; or metabolic disruption due to the damage to the wing membrane.

The causative agent is a fungus called *Pseudogymnoascus* (formerly *Geomyces destructans*). The fungus prefers to grow in cold conditions; caves with affected bats typically have an ambient temperature of 2-14°C. The fungus will not grow above 20°C. Bats experience decreased body temperature and immune function during hibernation, which facilitates infection by the fungus. They also congregate in very close proximity while hibernating, which increases transmission between bats and contamination of the cave environment. At other times of the year, body temperature is consistently above the temperature tolerated by the fungus and the disease is not seen.

In Europe, hibernating bats with visible fungal growth of *P. destructans* have been detected, but the fungus has not been associated with mass mortalities of bats. There is evidence to suggest that the fungus has been present since the 1980's or earlier. It is possible that bats in Europe have developed resistance due to a long evolutionary relationship with the fungus. In the USA, bats do not have this resistance and this suggests it may have been recently introduced there. The disease was first seen in the USA in a popular show cave, increasing suspicion that the fungus may have been introduced from Europe.

The spread of WNS in North America is believed to occur mainly by movements of bats between caves during their active season. However, the distances between known

infected caves and newly infected caves are sometimes larger than could occur by this route, suggesting it may have been carried by people, for example those visiting caves. The fungus can be carried on contaminated equipment, clothing and footwear, and this is the most likely potential route of entry of the fungus into Australia. The fungus has been found to survive in the environment in caves for long periods even when bats are not present.

Speleologists have an important role to play in preventing WNS entering Australia and detecting the disease if it did occur here. Below is some information about decontamination of equipment, and how to report suspected disease outbreaks.

DECONTAMINATION OF EQUIPMENT

The best way to prevent entry of WNS on caving equipment is to avoid bringing equipment that has been used overseas into Australia. This applies equally to Australians visiting caves in other countries (particularly in Europe and North America) and to overseas tourists visiting caves in Australia. Decontamination of clothing, foot wear and equipment can be attempted but this may not completely remove the risk that WNS could be brought into Australia. Items that have been used in caves where WNS is known or suspected to occur are at high risk of bringing the disease into Australia and should not be used in Australian caves, even if they have been decontaminated.

Decontamination procedures for equipment have been published in the USA and can be downloaded from <http://www.whitenosesyndrome.org/topics/decontamination> ('Revised Decontamination Protocol' and 'Supporting Decontamination Documentation for Cavers'). A brief summary of these procedures is provided below, however please refer directly to the online protocol documents for more detailed information.

Please note: There is no information confirming that safety equipment will remain as effective after decontamination, so careful thought is required when deciding whether to attempt decontamination of this equipment.

Select equipment that is easy to clean, and preferably will not be damaged by cleaning.

Remove outer garments and footwear as you leave the cave.

Thoroughly scrub and remove sediment/dirt from clothing, footwear and equipment immediately upon emerging from the cave, as these reduce the effectiveness of the decontamination procedure.

Once fully scrubbed and rinsed, seal clothing, footwear, and equipment in a plastic bag or container for transport. A clean change of clothing is recommended. Store exposed gear separately from clean gear, and avoid contamination of vehicles.

Later, clothing should be machine or hand-washed using a conventional cleanser and rinsed thoroughly.

All clothing, footwear and equipment that can be immersed in water should be submersed in water at a temperature of at least 50°C for a minimum of 20 minutes followed by air drying to kill any remaining fungus. Some effective disinfectants are available, but these are harsh chemicals and may damage some items. Refer to the decontamination procedures (links above) for more information.

It is recommended that equipment that cannot be immersed in water (e.g. cameras and electronics) only be taken into potentially contaminated overseas caves when absolutely necessary. In these instances refer to the decontamination procedures for more information about how to use a sealed disposable plastic container (such as a plastic bag) to minimise contamination.

Cleaning and decontamination of clothing and equipment between caves visited within Australia may also assist to reduce the spread of existing infectious diseases, and to prevent the spread of WNS were it to be introduced into this country.

HOW TO REPORT SIGNS SUSPICIOUS OF WNS IN AUSTRALIA

We do not know exactly how WNS would behave if introduced into Australia. However, groups of live bats with fluffy, white growths on the muzzle, wings or ears, or sudden death of large numbers of bats in or around a cave are both highly suspicious. If you observe either of these situations, record the date and location, and take photographs if possible.

Note: While WNS has no known human health implications, bats should only be handled by people who are appropriately

WHITE NOSE SYNDROME IN BATS

vaccinated and experienced in handling bats, due to the risk of exposure to Australian bat lyssavirus (see below).

To report bats with suspected WNS or other unusual signs, contact the state or territory department of agriculture or primary industries. The Australian Wildlife Health Network (soon to become Wildlife Health Australia) maintains a list of wildlife coordinators in each state or territory department or can accept reports directly and pass them to the appropriate person for further investigation (details below). Alternatively, call the Emergency Animal Disease Watch Hotline on 1800 675 888. Single dead bats with fungal growth are probably in the process of normal decomposition and do not need to be reported, however if in doubt please call for advice.

Emergency Animal Disease Watch Hotline: 1800 675 888

Link to the Australian Wildlife Health Network wildlife coordinator contacts:

<http://www.wildlifehealthaustralia.com.au/AboutUs/ContactDetails.aspx>

FURTHER INFORMATION AND LINKS

The Australian Wildlife Health Network maintains a fact sheet on WNS, available on their website:

[http://www.wildlifehealthaustralia.com.au/Portals/0/Documents/FactSheets/EXOTIC%20-%20White-nose%20Syndrome%206%20Jun%202013%20\(2.7\).pdf](http://www.wildlifehealthaustralia.com.au/Portals/0/Documents/FactSheets/EXOTIC%20-%20White-nose%20Syndrome%206%20Jun%202013%20(2.7).pdf)

The United States Geological Survey website has the most up to date information on the situation in the US and links to research on this disease:

http://www.nwhc.usgs.gov/disease_information/white-nose_syndrome/

The White-Nose Syndrome.org website also has information and links to research into this disease. The recommended decontamination protocols are also published on this website and are updated from time to time.

<http://www.whitenosesyndrome.org/>

<http://www.whitenosesyndrome.org/topics/decontamination>

PUBLIC HEALTH NOTES

There is no evidence that White Nose Syndrome can affect humans; however, there are some other diseases associated with bats that can affect people. Speleologists and others in close proximity to bats face a higher risk of infection.

Histoplasmosis is caused by a fungus, *Histoplasma capsulatum*, which is often associated with bird and bat droppings. People may become infected when they inhale the spores in dusty, contaminated environments, particularly in enclosed spaces such as caves. Most people do not develop obvious disease, but severe disease can be seen in those with weakened immune systems. Initial signs are often similar to flu. The best prevention is to avoid inhaling dust in potentially contaminated areas.

Australian bat lyssavirus is related to rabies virus and has caused the deaths of three people in Australia since it was identified in 1996. It has been found in both microbats and flying foxes in most states and territories. People become infected from bites or scratches from affected bats. You should avoid handling bats, particularly those that appear sick, unless you have current immunisations against rabies and are experienced at handling bats. There are rare reports of the related rabies virus being spread from bats to humans in caves in the US, probably by inhalation of aerosolised bat urine or faeces, however this has never been reported to occur in Australia due to Australian bat lyssavirus.

Note: Hendra virus may also be carried by flying foxes, however there is no evidence of direct transmission from flying foxes to humans. A small number of people have become infected with Hendra virus following close contact with infected horses.

For more information about any of these diseases, visit your GP or contact your state public health authority. If you believe you have been bitten or scratched by a bat, seek medical attention URGENTLY. Immediately wash the bite or scratch site thoroughly with soap and copious water for approximately 5 minutes and apply a virucidal antiseptic solution such as povidone-iodine or alcohol. Bat saliva in the eyes or mouth should be rinsed out immediately and thoroughly with water.

Ningaloo Underground

30th ASF Conference: Exmouth, Western Australia

21-26 June 2015



FRAN HEAD



IDA NEWTON



IAN COLETTE



GREG THOMAS



Explore Range, Reef and Gorges

Survive an encounter with
Draculoides brooksii

Snorkel over the reef straight
off the beach

Eyeball a blind gudgeon fish

Cavort with a whale shark

Hunt for new caves while camping
on the top of the range

Experience some of the most
technical multi-pitch caves in
Australia

Learn why Ningaloo Reef and
Cape Range were declared a World
Heritage Area

Get Underground and Underwater
with us in 2015

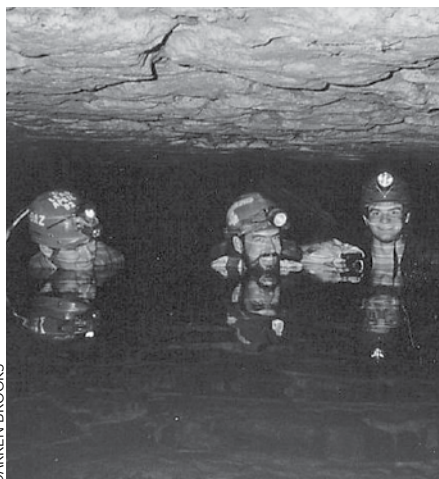
Check out the details at:
www.ningaloo.wasg.org.au
and find us on Facebook

Contact Darren for more info:
dbrooks@westnet.com.au

**Save the dates and
spread the word.**



WASG COLLECTION



DARREN BROOKS

Are map cross-sections a thing of the past?

Bob Kershaw
ISS

THE traditional method of showing what a cave looks like is to draw a passage cross-section or diagram like that shown in the green box in Figure 1.

With modern technology and computer programs, however, we don't need to undertake this troublesome activity anymore! With most of us taking a digital camera and flashes on a survey trip, why do we still spend the time drawing cross-sections in caves as well, when we can place those photographs on our final maps?

The digital camera allows us to see our photograph and make adjustments to the photograph in the cave to get the best shot and often, the cave photographs just become record shots stored in a folder on our computer.

But with a bit more effort in our drawing programs, such as Illustrator and ArcGIS, we can avoid tedious aspects of surveying and produce a spectacular final product for our peers or whomever we are producing the map for, like land managers.

BACKGROUND

A few Illawarra Speleological Society members assisted members of the Northern Caverneers and Mole Creek Caving Club to survey the Cow-Pyramid-Spider system at Mole Creek in January 2014.

The system already had a simple black and white sketch map produced by a Tasmanian school group in April 1974. This map has since been the basis of activities in the national park and cave system.

David Wools-Cobb sought and obtained permission from Parks and Wildlife Tasmania to upgrade the map this year. So, with teams assembled, we included trainee surveyors and cave photographers in each survey team and decided that instead of drawing cross-sections we would use photographs to convey the scene.

The photographer took the point position and then used a model for scale, noting the station number where the photograph was taken while two more of the team took the measurements and completed the

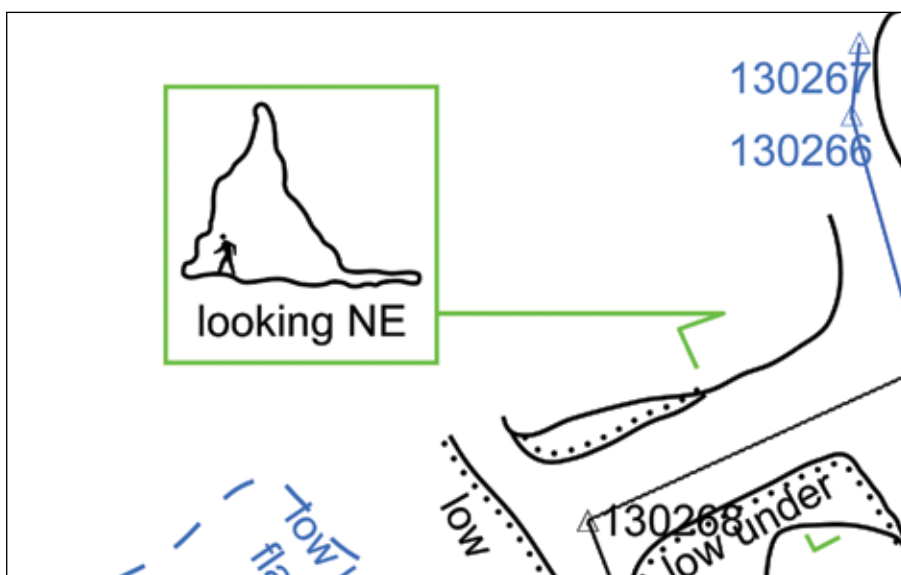


Figure 1 Traditional method of showing what a cave looks like

sketch. We were fortunate to have photographers in each team with good cameras and multiple flashes.

At home, while the cartographer completed the mapping task, the photographer recorded details of the station as shown in Figure 2 and placed it in the corner of the photograph as shown in Figure 3. This was

a great deal of work but the final product is exceptional—I am biased, but it is.

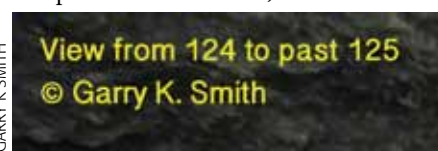


Figure 2

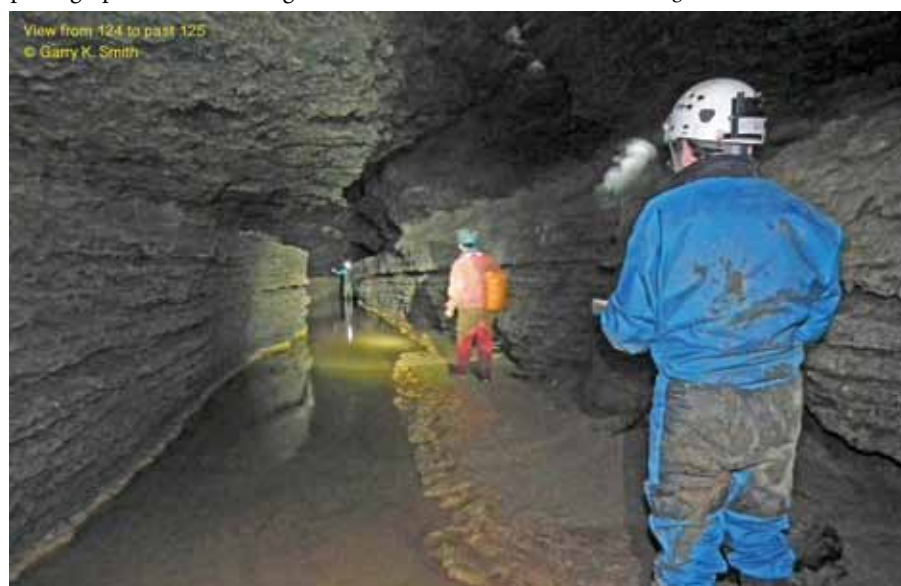
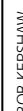


Figure 3



I noticed in the recent *FUSSI Newsletter* (Vol. 26, No. 2, 2014) that many of the photos taken in Old Homestead on a recent trip could easily be placed on the cave map to show what the cave looks like in a form that

ROB KERSHAW

But therein lies the downside to this activity—the extra bag of gear you need to carry or have a slave take for you. You also need a willing model in warm clothes; our model got cold on several occasions. And then there are lots of batteries. All these may be a hassle in remote areas, but I believe the final product is worth the extra hassle.

Spend some of your retirement or pre-retirement spare time upgrading all those old maps you drew many years ago. Bring them into the 21st century using modern technology. Better still, scan your old slides and place those images on your older, newly-digitised maps. The cave is our environment, the camera one of our tools, the computer our canvas. Let us use them to their fullest to present the cave in the best way possible.

Spéléo Secours Français

Peter Buzzacott

Ex-ASF member, now living in France

THE Fédération Française de Spéléologie (FFS) celebrated their 50th anniversary last year (2013) and they are the French equivalent of the ASF.

Twice a year the six north-westernmost clubs hold weekend cave-rescue exercises, as do other regions right around the country.

Places are limited by logistics and so members of each club who apply are selected to attend. In November last year I was privileged to be accepted. Five per car, ten of us from the far west, arrived at the Grotte du Rey, just north of the village of St Georges sur Erve, in time for lunch. Old friendships were renewed over a crusty baguette, new faces were welcomed and each of us registered on the participant list in an abandoned stone cottage.

The fireplace inside radiated warmth while we changed into trogs and boots, before gathering for the safety briefing while my old cave diving buddy, Thierry, made his way into the cave to play victim.

Soon the 30 or so of us were divided into small groups, each with a specific task which was noted on the master register in the command post.

Each name is listed and, every time someone changes tasks their position and activity, is noted by colouring in the relevant box on each day's activity sheet. Each activity had a different colour. Anyone arriving on site goes on the sheet and, once the landline had been established inside the cave anyone coming or going was also noted. In this well-organised way the rescue coordinators could, at a single glance, tell if anyone should be relieved for a break.

I was in the stretcher party and advised that we wouldn't be required till all else was prepared: the victim stabilised, re-warmed, extraction ropes in place and everyone ready. Only then would he be stretched. Meanwhile I was invited to tour the cave and witness each party's tasks.

Entry to the first chamber was through an unlocked iron door above a 10 m abseil. To reach the victim we negotiated some



Pre-exercise safety brief



Entry to the cave is by a 10 m drop through this door



Putting a landline into the cave

delightfully windy passages with low duck-unders through muddy puddles.

Upon arriving I could see the first-aid team patching up poor Thierry, who appeared to have broken his leg in a small side-passage off the large decorated chamber where the 'hot room' team was busily working.

Here my pal Christian was tightening 2.5 mm braided nylon cord that stretched across the room in two parallel lines. Next these lines were joined with two perpendicular cords to form a rectangle suspended over the flattest place in the room.

A clean tarp was spread here, then a foam mattress over that, followed by an MTDE brand rescue warming suit made from sleeping bag-type material and velcro fastening to wrap the sleeves and legs around an injured person.

Silver reflective sheets were hung for walls and a fifth draped over the top to complete the 'hot room'. Now all was ready, the first-aid team half-carried the victim to the tent where he was gently laid down, then two of the female cavers stripped down to their onesies and climbed in with him.

The caver next to me clarified. 'It is for warmth. Next they will remove all his clothing till he is naked.' I considered how wonderfully French this appeared; then he added, 'soon it will be 20°C in there and when he is warm we will move him.'

Imagining hypothermia, I couldn't resist. I had to ask, 'Will they... hug him?', trying unconvincingly not to smile. 'No, no,' said my pal, 'you just need a couple of extra bodies in there and it warms up pretty quickly, plus they will do everything that needs to be done for him like giving fluids or whatever, so we don't have people going in and out to let the heat escape.' A short while later I was invited to peer down into the enclosure from a corner and it did indeed look warm and cosy in there. How absolutely practical!

After half an hour we readied the stretcher, the hot room was lifted away and four of us stood over the patient, removing our hardware to prevent slapping him with a Stop or whatever. I had the hips and faced the caver lifting the chest. In this way we could support each other, even when stepping over the victim.

I was super-impressed with how organised this rescue was. The guy on the land-line reported everyone's coming and going, pairs of cavers quietly applied themselves to coordinated tasks and then the caver at the head gave the command to lift. Thierry rose up from his mattress about 30 cm, the stretcher slid in underneath him from his feet to his head, hands reached in between our calves and the stretcher was unfurled,



PETER BUZZACOTT

Stretcher practice

PETER BUZZACOTT

The participant log charting everyone's whereabouts and activity

PETER BUZZACOTT

Bat hanging beneath a shawl

then on command we lowered him into it. The whole process took seconds. My opposite number and I held each other as we stepped over and away from the patient, then as a team we started strapping him into place.

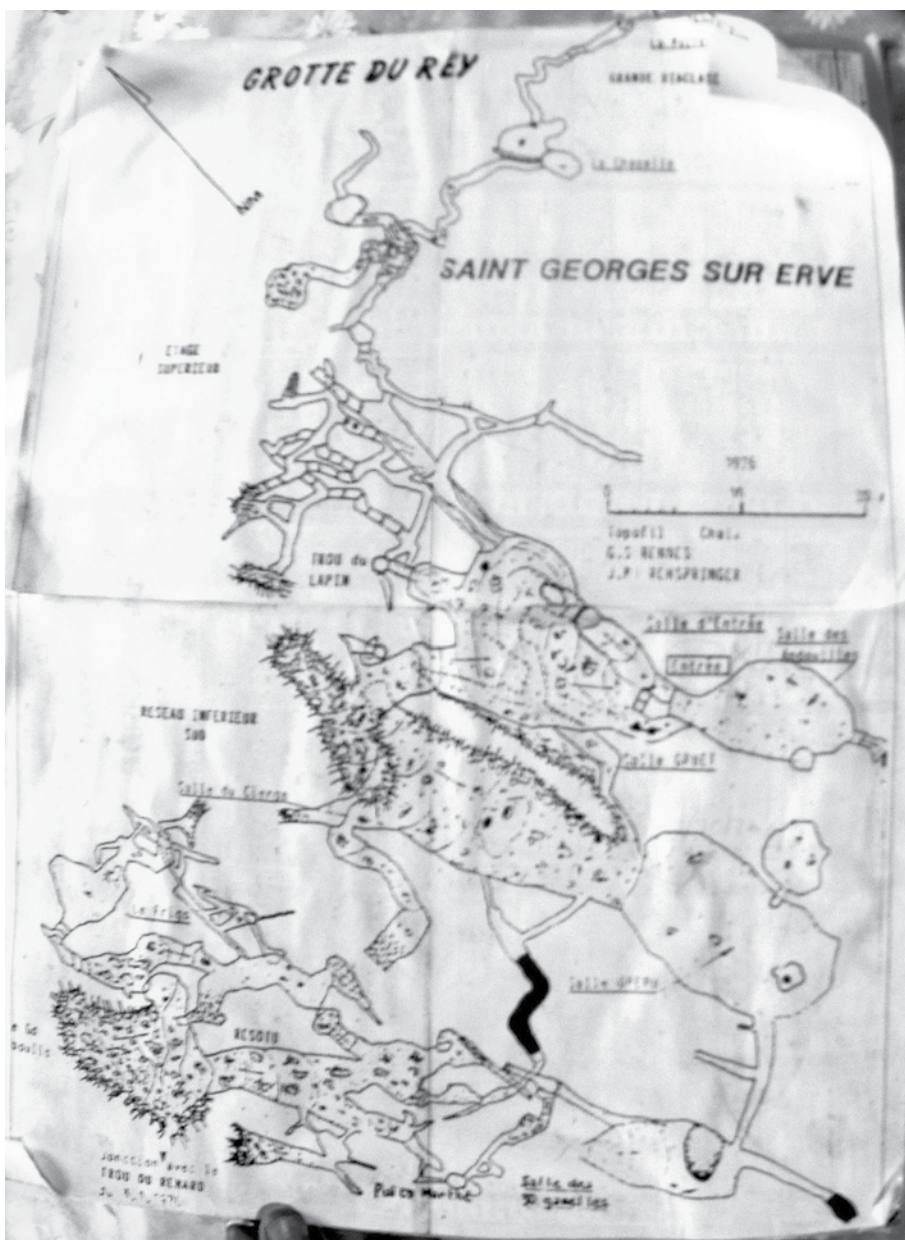
By now he was wearing a set of goggles like you might use while grinding. A Petzl Meteor foam helmet was being gently fitted, his feet were placed in stirrups and everything was double-checked by a second caver. Lastly, he was wrapped in two layers of heavy-duty canvas and these were velcroed into place with his arms still free at the top.

This was it—we were going to stretch him out. After five years in the Army I was prepared for some gut-busting work now and there were only four of us in the stretcher team, so I knew this was going to be a killer. But to my surprise everyone moved over to the first low, narrow section and with a bit of chatter a starting point was decided and then everyone sat down facing each other left and right like a zip.

The four of us lifted Thierry on the stretcher, carried him over to the human chain; they simply took the handles from us and he was passed from caver to caver through the low section. On the other side he was held by the last four cavers while the rest of us moved forward and then the process was repeated. In just 15-20 minutes he was at the ropes getting ready to be lifted out and I must admit I was amazed at how smoothly it went. Even through the low sections and puddles of mud he simply floated along, buoyed by many helping hands.

At this stage Christine, the leader of the first-aid group, started ascending one of the four ropes now hanging down into the cave. A second rope was clipped to the lifting point at the head, another caver clipped on to a third rope while the fourth was held aside as a spare. While all this was happening the stretcher was away to the side with a caver protecting the victim's head in case a rope tail snaked over.

On command, we lifted the stretcher and tension was taken up from above. We moved over to below the entrance, lifted higher and then the stretcher became vertical. We stepped away as it was lifted up, Christine travelling beside the patient and either holding his arm for reassurance or steadying the stretcher by a handle. At the top Christine dropped just below the stretcher, locked off her ascender, and as it was lifted out of the cave she pushed from below, then followed him out.



The map of the cave

We packed up, pulled out the landline, exited the cave, leaving the ropes in place for some fun caving on Sunday. Once changed we drove to a nearby sports complex where we shared accommodation, five or six to a room filled with beds.

After dinner we gathered in a boardroom-type area, opened a few beers and spent the next couple of hours going over every aspect of the exercise.

The ambience was jovial but every possible small improvement was considered and minutes were taken for later circulation. Finally, the debrief concluded just after 10 pm and the Brest crew headed to the games room for snooker, MTV on the big screen and delightful red wine. Vive la France!

ACKNOWLEDGEMENTS

My sincere thanks to GASPARG (my caving club) and the Spéléo Secours Français for an opportunity to participate.

Not speaking the language adds a small degree of risk to my attendance and I am grateful to Emilie, especially, for watching over me. The regional committee of Fédération Française de Spéléologie paid for the entire weekend, including food, drinks and accommodation, and they have my gratitude. I thank the private owners of this marvellous cave for their hospitality, too. An English-language version of the book Cave Rescue is available from www.speleo-secours.com and I thoroughly recommend it for all rescue cavers.

Khazad-Dum (JF-4/5) Sump II

Pushing the 'deepest' sump in Australia

Janine McKinnon

STC

BACKGROUND

The Junee-Florentine is the premier vertical caving area of Tasmania, and thus Australia. Khazad-Dum (KD) is a multi-pitch cave which terminates in a series of three sumps, which connect, at a depth of 293 m. It is the eighth-deepest cave in Australia.

Dwarrowdelf JF-14 is a nearby vertical cave which joins KD in a large chamber at the end of the vertical series, and at the start of the horizontal crawlway section, called The Depths of Moria, that bypasses Sump I and leads to Sumps II & III. Access to the sumps is best made through Dwarrowdelf.

The stream that cascades down the KD pitches last disappears in Sump II, and is next seen in Cauldron Pot JF-2, the next cave downstream. Survey data suggest that the gap is about 100 m. Making the connection by diving has long been a dream amongst Tasmanian cavers; however, only two previous attempts to dive the sump have been made due to the logistical difficulties of getting the dive gear to the site.

Sump III is not, as the number suggests, the last sump in the downstream series, and

thus not the obvious push choice.

In 1987 Phil Hill dived Sump II in difficult conditions, with water levels rising and visibility extremely low. He reported swimming in a northerly direction (i.e. away from the direction of Cauldron Pot) along a rift that became too narrow for further progress after 35 m (Hill 1987).

Stefan Eberhard returned almost two decades later, and dived the sump twice, on the same day, in 2005 (Eberhard 2006). To summarise his account, on his second dive he '...tied on the line reel and continued on through small horizontal passage at 17 m depth (about 0.5 m high, 1 to 1.5 m wide)—definite side mount territory, as back mounted tanks would not fit easily through here. The passage curved to the right and appeared to be trending upwards slightly at my furthest point, another 15 m or so further on. i.e. it's still going.'

Such a tantalising account was just begging to be followed up.

JANUARY 2013

I had been thinking for a while that I

should have a shot at pushing this sump, but the problem was always that old perennial: finding sherpas to carry the large loads of gear to the sump. This was compounded by the need for said sherpas to be skilled and fit SRT cavers, as the sump is at the bottom of a series of pitches of 22 m, 21 m, 55 m, 14 m, 37 m, 67 m and 20 m handline, then along about 100 m of crawls and restrictions. The cave itself is an hour's walk from the cars.

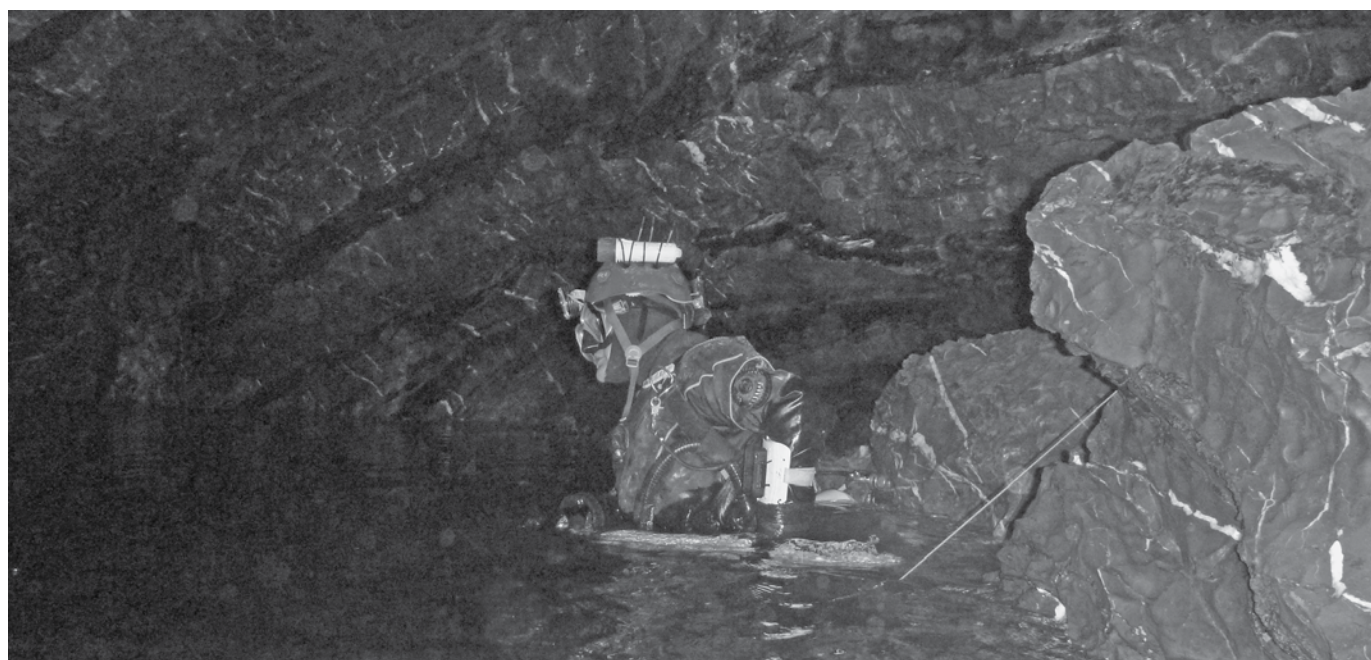
In January 2013 the stars aligned, and between using a couple of mainland visitors and a couple of locals, the trip was on.

Actually, four trips were on.

The cave definitely needed to be pre-rigged before the first dive attempt. Three of us did this the week before the first dive trip.

DIVE TRIP ONE

We had five cavers (including me) to get the gear to the sump. I had pruned the gear to a minimum but it was still a heavy load for each person. I was diving with twin 7 litre tanks, sidemounted. Each of them



CHRIS COXSON

Final preparations before the dive

alone weighed over 10 kg full. We arrived at Sump II two and a half hours after starting into the cave, which was a quick time I thought. Waiting around in the cold was going to be the hardest part for the support team so we got the show underway as quickly as possible and I was ready to dive within half an hour.

I had an exploration reel ready but started the dive by following Stefan's exploration line (still leading down from the water's edge), hoping it would be unbroken and in place as I descended. That would save me a lot of time.

Luckily the tie offs were good, and the line taut, as I descended. Visibility was not consistent but was about 0.5 m in the good bits, and less in most parts. I was trying to check the line, get my bearings, look around, and check my exit, whilst also being aware that speed was of the essence to keep ahead of the silt that would follow me, as the slight flow was in my direction. The passage plunged steeply down to 11 m, and then headed down a steep silty bank to 15 m.

White *Anaspides* (cave-adapted shrimp) were everywhere.

The line disappeared into the silt at the bottom here. It was buried at least a foot deep, and I took several minutes digging it out, producing great billowing clouds of silt in the process.

It was here that the onward direction curved sharply to the right and entered the small horizontal passage. I was lifting the line out of the silt (it was buried a few inches) as I went. Visibility was now zero but with the odd 'opening' of a couple of centimetres, so I got glimpses of the line and the surrounding cave. The line disappeared into much thicker silt about 10 – 15 m into the passage, by my estimation, a guess; it's hard to estimate accurately in these conditions.

I started digging again and after some effort, and lots more silt, I pulled up the silt stake and lead weight Stefan had used previously. I appeared to be at Stefan's furthest point of penetration. I could see almost nothing but the passage did seem to be continuing slightly upward ahead, from feel. Anyway, there was no line continuing further. Visibility was zero. Exit was in zero visibility. I went back for soup, and to give the water a chance to clear.

I waited about half an hour and went in again. I tried to get to the end of the line as fast as I could, but whilst the sump to the start of the flattener had largely cleared to the usual stunning visibility of 0.5 m or less (but good enough to follow a line, or wall), once in the horizontal passage the silt was still in suspension, and visibility zero. I took

a bearing into the passage and read it as SW.

I went to the end of the line anyway, tied in my primary, and started groping forward in zero visibility. A short distance (maybe 5-7 m) past the weight the passage started tending steeply upwards but was getting very narrow, and still only 0.5 m high. I continued a few metres up slope, at about a 45 degree angle, feeling my way. The height of the passage was reducing slightly and the width reducing. It was still wide enough for me to fit through but was starting to get very tight. I waited a few minutes, hoping for a glimpse of what lay ahead, but the visibility didn't change. I called it a day and went back for more soup.

SUMMARY

So I had penetrated to the furthest point of Stefan's exploration on my first dive. I had pushed maybe 5-8 m beyond that point on my second dive. Not stunning success really. Prospects seemed poor for this passage to continue large enough to fit through but there was still some possibility, so planned a return the following weekend.

DIVE TRIP TWO

There had been a few millimetres of rain the previous day and the cave was noticeably drippier this week. The bottom pitch was quite splashy. I wondered how that would affect the sump.

I saw, on arriving at the site, that the flow into the sump was a little greater than the previous week, and the water level slightly higher.

Once in the water, I headed down the line and immediately realised that my visibility was even less than last week. I could see only a few centimetres through the water. The rains had obviously stirred up the silt and there was heavy suspension still in the water. Oh joy.

I headed straight into the passage, still ahead of the silt flow, and tied off some slack line as I moved along. The passage hadn't gotten any larger in the intervening week.

I crawled to the end of the line and tied in my reel. The silt was starting to pass me as I moved ahead but I still had reasonable visibility—well, reasonable being 10-20 cm. I squeezed (you couldn't call it swimming in the confined space) as fast as I could and managed to gain a few more metres before the worst of the silt arrived. I could see I was on a silt and gravel floor, with rock on the ceiling. The bank continued ahead upward at a steep angle (about 45 degrees). I could see the gap between floor and ceiling diminished to about 20-30 cm; too small for me to fit through. The walls narrowed to approximately 0.5 m wide. The silt overtook

me at this point and I lost all visibility. I squeezed backwards out of the passage.

I did not leave the exploration line in situ as I could find nothing to tie it off to.

This had only taken some 15 minutes, I discovered, when I could see my gauges again outside the passage, I had four fifths of my air still, so I now started the search of the pool, in the hope of a bypass passage. My visibility was only a few centimetres at best, so the search was not going to be comprehensive. I attempted to be systematic however.

After another 15 minutes I was starting to get cold (water temperature is 6°C) and had exhausted the prospects in the current environment so decided to call the dive.

CONCLUSIONS

The current dimensions of the restriction at the limit of exploration are too small for a diver to pass through (and I am small). Current prospects in this passage are zero, in my estimation.

Whilst the roof is solid rock, the floor isn't. Some digging might make the passage passable to humans. It depends how deep the gravel and silt are. It is a long shot though.

My inspection of the sump pool for other passage was the best I could manage in the very poor visibility. I was as systematic as I could be. I do not think there are any alternate routes around the main passage from within the pool. I am reasonably confident about this, however, due the circumstances, I cannot say with 100% certainty that this is the case. I do consider the prospects so fleetingly small that I will not be returning.

The cave was de-rigged on a later trip.

ACKNOWLEDGMENTS

I would like to acknowledge and thank the other members of the trips. A sump dive doesn't happen without the support crew.

(Apart from me on all trips):

Rigging trip

Ric Tunney, Ken Murrey (VSA).

Dive trip one

Andreas Klocker, Alan Jackson, Ric Tunney, Ken Murrey

Dive trip two

Alan Jackson, Serena Benjamin, Andreas Klocker, Chris Coxson.

De-rig Trip

Ric Tunney, Jane Pulford.

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- Eberhard, R. & Eberhard, S. 2005 JF-14 Dwarrowdelf — Diving the KD Sump. *Speleo Spiel*, 352: 5-8

Unusual Caves of Australia – 2

Cave at Edith Falls, Nitmiluk National Park, Northern Territory

Norman Poulter OAM

NC, SRGWA

I SPENT a very pleasant but hot, humid weekend at Edith Falls situated in the Nitmiluk National Park, some 60 kilometres from Katherine in the Northern Territory. I was camped beside three very photogenic bush stone-curlews.

The main lower swimming hole, Plunge Pool, was closed due to infrastructure damage caused by an excessive end-of-wet-season rainfall during the Easter period and the perceived fear that there might be estuarine crocodiles lurking in surrounding vegetation.

Several other National Parks in the area were also totally or partially closed for the same reasons or were still flooded.

Early on the Saturday morning I decided to take a two-kilometre hike to the Upper Pool for a swim before it became too hot. It began as a very pleasant stroll, even though it was rapidly warming up.

Native grevilleas were flowering a lovely shade of red, which contrasted well alongside the occasional yellow wattle and pale eucalypts.

I detoured to the Leliyn Lookout, which overlooks the Edith River between the Upper and Middle Pools before descending to the river at the edge of Upper Pool, although I mistakenly thought it was Middle Pool at the time.

Crossing over the river by way of a low boardwalk, I became further disoriented when I reached a lookout which I mistook to be Bemang Lookout. It was not where the information map indicated it should be. I later concluded that it must have been a newly created lookout.

I didn't like the idea of swimming in what turned out to be Upper Pool due to its shallowness near the boardwalk and the strength of the current, which was still flowing relatively strongly from the effects of the Easter downpour. A pool further upstream, beyond a small waterfall, which I thought was Upper Pool, seemed much more attractive, as the majority of the river bypassed the pool.

Still thinking I was at the Bemang Look-



Looking down at the Edith Falls cave. The unnamed pool is in front of the camera, over the hill and below the cave.



Looking out of Edith Falls Cave

out, I began following the trail towards what I thought must be Upper Pool but was in fact an unnamed one.

I came adrift from the trail and ended up adjacent to some new guardrails stacked against a tree in preparation for installation somewhere nearby. It was here that I noticed a cave opening, some 1.5 m in

diameter. I was intrigued as this was sandstone country. There was a large boulder just below the entrance, which made entry quite easy.

I found myself in quite a large cavity. Lacking survey gear, I estimated the cave to be a single passage about 8-10 m long with three entrances, the passage width varying

to 3 m and equally varying heights to about 2 m. The cave was formed in a very large, unbroken block of sandstone with the floor sloping gently downhill.

This was definitely not a boulder cave. Although unseen, there were one or more largish birds or bats in residence as I could hear the flapping of their wings. I was perhaps disturbing them, so I did not venture

from the entrance zone. Swallows may also be using the cave. When my eyes adjusted to the gloom, I had a reasonable look around and then left to make my way down to the unnamed pool for a very refreshing swim. Looking back from the comfort of the pool, which turned out to be quite deep with a gentle current and easy access, I readily spotted the cave's lower entrance, partially

obscured by some bushes. Later, still enjoying my swim around the pool, I observed what looked like another cave at the base of an adjoining cliff, slightly above the pool but at a lower elevation than the earlier cave. I did not investigate; I was enjoying the temperate water too much and the sun and shadows might have been combining to play more tricks on me.

60th Anniversary of the Canberra Speleological Society

CSS turns 60 this year and all our caving friends are invited to join in the birthday celebrations.

We will be holding two events:

LUNCH

This will be an opportunity for people to catch up with old friends, share a story or two and have a laugh. Bring your mementos or photos to share.

When: Saturday 25th October 2014.

Where: Yowani Country Club, 455 Northbourne Ave, Lyneham ACT.

Meet in the Club lounge anytime from 11.30am for a 12 noon start.

Lunch will be a buffet with some drinks provided. Bar facilities will be available.

Cost: \$35 per person. Payment is required by 30th September, 2014. Should you need to cancel, a full refund will be available until Wednesday 16th October, 2014

WEEKEND AT CAVES HOUSE, YARRANGOBILLY

This will be an opportunity for relaxing and reminiscing, a dip in the thermal pool, a wander through the fabulous show caves, or perhaps even some wild caving.

When: Friday 17th to Sunday 19th October, 2014



Where: Yarrangobilly Caves

Accommodation: Friday 17th and Saturday 18th October 2014 in the beautifully restored Caves House.

Accommodation options range from triple, double and single rooms with shared facilities (mostly in the single storey 1901 section) to double and king rooms with ensuite (2-storey 1917 section). Please note, there is a requirement for a minimum 2-night stay and it is BYO sheets and towels for the 1901 section.

Everyone will have to provide all their own food with the exception of dinner on Saturday 18th October, when CSS will provide a BBQ dinner. BYO drinks only.

Cost: Depending on final numbers for the 1901 section, costs will be around \$105 per person. In the 1917 section costs per room will be \$235 for a queen with shared bathroom, \$350 for an ensuite room, \$390 for a 3-person suite (with ensuite) and \$470 for a 2-room family suite for 4 (with ensuite). All prices are for 2 nights and include the BBQ.

To confirm a reservation, a deposit of \$100.00 per room is required by 30 June 2014 and full payment will be required by 31 July 2014. The cancellation policy for Caves House is at <http://www.nationalparks.nsw.gov.au/accommodation-booking-conditions> (all bookings are peak period).

CSS is handling the bookings (ie don't try to book separately), but for general information on Caves House, see: <http://www.nationalparks.nsw.gov.au/kosciuszko-national-park/yarrangobilly-caves-house/accommodation>

Please register your interest in either event (or both) by contacting: canberracavers@gmail.com or by filling in the tick box reply form (available on the web) and sending it to the CSS email address.



One of the expeditions waiting. Who can you recognise?

Taylor and Kerry Hamilton. We left four months later, in May 1985. It was the beginning of a long and fruitful era.

OUTCOMES

In all, there were eight major expeditions and 18 smaller ones emanating directly from this Project and led from Australia. Most took place before 2000 but individuals who had participated joined or led other expeditions later in a few cases.

The earlier trips concentrated on Mae Hong Son province which, except for a seminal archaeological dig by Chester Gorman in 1969, was then virgin territory for westerners and difficult of access.

Shorter side-trips expanded to the better-known but still little documented provinces of Kanchanaburi and Phangnga, and later to Phitsanuloke where Australian cavers were instrumental in surveying Thailand's now longest cave, and to Nan with Thailand's deepest.

We even diverted to Myanmar, still the only significant caving expedition to that benighted country.

In the early trips we discovered and surveyed over 50 km of new caves including the deepest, 10 of the then 17 longest in the

country, and the tallest column in the world (61.5 m).

In time seven books, 22 research papers and about 30 articles were published as a direct outcome, along with six unpublished reports to management authorities.

Kevin Kiernan alone published 14 professional papers, primarily geomorphology and archaeology, notably drawing attention to the coffin sites which proved to be between 1,000 and 2,000 years old. But there were lighter, less focused side trips to places such as to Phangnga and Three Pagodas Pass.

Kerry Hamilton and John Taylor discovered two new species of troglobitic cave fish in the genera *Nemacheilus* and *Homaloptera*, one of which eventually starred in the Caves episode of the BBC's 'Planet Earth' television series. The 30 seconds of included footage of the 'angel-fish', as the Thais called it, or 'waterfall-climbing fish' (*H. thamensis* n.sp.) as we referred to it, involved perhaps a couple of man-months of work for just 30 seconds of broadcast footage. John Spies made his own video of the production of this segment of the program.

As a base we used the renowned Cave Lodge at Ban Tham ('Cave Village') in Pang

Ma Pha district. We owe a great debt to its owner, Australian expatriate John Spies and his then wife Diu Wilaiwan Intikat for organisation of the early expeditions.

John insists that he 'converted' to caving as the result of our trips. Aided largely by their enthusiasm, linguistic skills and local knowledge, we surveyed caves, documented coffin sites of Mae Hong Son province and encouraged professional study and management which had previously been totally lacking.

When we started there were no published records of the existence of the coffin sites in northern Thailand, although several studies had been made of those along the Khwae Noi (River Kwai) in Kanchanaburi Province.

John later put huge footslogging effort into locating new coffin sites in particular, promoting scientific research, conservation and sound management of Thailand's caves and karst, and gaining wide respect from Thai authorities for his expertise and advice.

This eventually led to a grant of \$300,000 from the Thai Research Fund for professional research and protection of the sites in the province's Pang Ma Pha district.

In 1997 the ASF honoured their work with Awards of Distinction to John and to National Parks officer Nopparat Naksathit. John's Award can still be seen hanging in Cave Lodge.

In 1995 John Spies, Elery Hamilton-Smith and I ran what was probably Thailand's first workshop on cave and karst management at Erawan National Park in Kanchanaburi province.

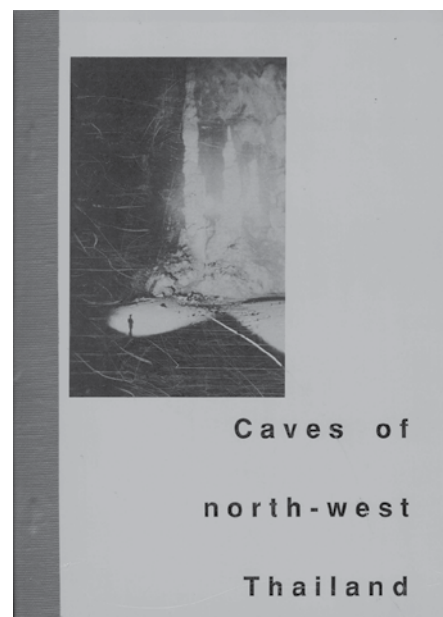
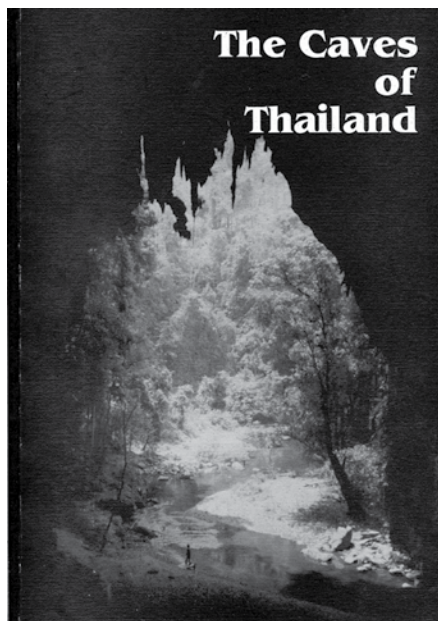
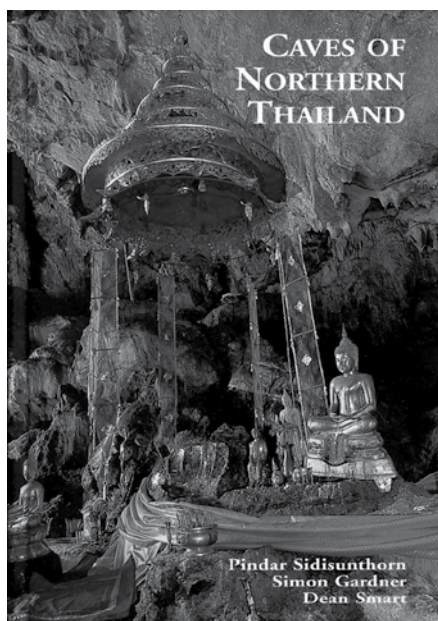
In 2006 the Thai Research Fund sponsored a superbly illustrated book called *Caves of Northern Thailand*, available in both Thai and English versions. Drawing on some of our earlier work, this is a far more comprehensive and enlightening book than the name suggests and it is highly recommended to the general reader.

Although not available in Australia, it can be obtained through Amazon. It includes the ASF's Minimum Impact Caving Code and should go a long way towards raising consciousness of the cultural and natural heritage significance of Thailand's karst resources.

The exploration of the caves of Mae Hong Son province paralleled the march of Thailand's economic development. In 1982 the dirt track from Pai and Mae Hong Son had not been improved since it was built by the Japanese in the 1940s; huge bamboo completely covered its narrow footprint in places, it was often impassable in the wet season, there was no sealed road within 50 km, and almost no motor traffic.



Crossing a stream, Northern Thailand?



There was no electricity in Pang Ma Pha (indeed, Pang Ma Pha district as such did not exist), only three or four tiny shops, and the access 'road' morphed seamlessly into the rammed earth floor of the one noodle shop in Ban Soppong.

There were only one or two primary schools, no government agencies, nowhere to stay other than on the floor of a village headman's house. There simply weren't any tourists, not even backpackers.

We were shown spectacular sites like the Spirit Well (a huge collapse doline above Tham Nam Lang) and told we were the first foreigners to see it. Barely a few dozen western adventurers had ever seen Tham Lot, now a major tourist attraction.

In places there were still a few vestiges of hunting and gathering societies. And there were still many hectares of opium poppies.

The infamous Golden Triangle soon graduated from drugs to tourism. Cave Lodge appeared in 1985. By the turn of this century Mae Hong Son was taking Boeing 737s.

The road was sealed and now sports several passing lanes. Most families own at least a motor cycle, with several pickup trucks in every village and everyone has television.

Tham Lot is on the itinerary for numerous coach tours, hosting tens of thousands of tourists every year, providing employment for 40 or 50 local residents, while the restaurant can handle probably 200 at a time, and you can even kayak through the cave.

At Cave Lodge microwaves, freezers, satellite cable television, running hot water and a more upmarket clientele and their 4WDs have arrived, displacing many backpackers and replacing their \$2 a night bamboo and thatch dormitories with ce-

ment bungalows, ensembles, fans, wide menu choices and even selected Australian wines.

It gave me and many others great satisfaction to see that our expeditions led to so much local interest. Inevitably, though, in time our pre-eminence passed to others. Dean Smart found employment for several years with the Royal Forestry Department as a cave specialist.

On Dean's return to Britain, Martin Ellis bought his records and is the current guru and a wonderful fount of knowledge. Martin has published extensively in Shepton Mallett Caving Club's journal and has nearly 4,000 caves on his database. He believes there are still several times as many awaiting discovery, and he maintains a long list of leads.

WHY WAS IT SO SUCCESSFUL?

We never considered mega-expeditions, generally leaning to Eric Shipton's minimalist model of self-reliance. Our largest contained only 15 people; most had only half as many and many had only one or two. The Thailand Project was unusually productive for several reasons:

1. The advent of cheap air travel
2. A country where foreigners with strange habits and motives were welcomed, often with curiosity but never disdain or antagonism
3. A country with reliable and universally good public and private transport
4. We concentrated on a thorough exploration of just one major karst area, with only minor forays elsewhere
5. We had reliable local logistical support to provide a base and sustain the effort over many years
6. There was a growing local environmental awareness translating into official recognition and support.

WHAT LESSONS ARE THERE?

It is best not to become too tightly organised—be flexible and organic. The Thailand Project was an idea, not an institution.

Time spent in reconnaissance is seldom wasted. Or, as the military tells us: eight Ps: proper prior planning and preparation prevents piss-poor performance.

Small expeditions, even solo ones and especially reconnoitres, can be very efficient, flexible and productive.

Official sponsorship has limitations and may be more trouble than it is worth. We never sought any.

WHAT STAYS IN THE MIND —PIECES OF NOSTALGIA

- Conductors on the government Bor Kor Sor buses, leaning out of the front door as they round up prospective patrons, or waving furiously as the bus overtakes and cuts in front of trucks, cars, songthaews, samlors, motor cycles and buffalo.
- Sipping Singha or Mekhong & Nam Soda in the restaurant car of the Chiang Mai Express, or on the verandah of Cave Lodge.
- The wonderful seafood lunch buffet at the Talay Thong Restaurant in the Siam Intercontinental Hotel, sadly now demolished for a shopping mall.
- Breakfast at sunrise and drinks at sunset on the river-side terrace of the Oriental Hotel in Bangkok—not that we ever stayed there, although Martin Ellis tried it once.
- Floating down the Nam Khong, cooling off under the travertine waterfalls below Susa Cave, or basking in the river below Nam Lang.
- Kevin's ability to write and publish a 20-page paper on mangroves, mountains and munching molluscs, based, so it seemed,

THE THAILAND PROJECT—25 YEARS OF PROGRESS: A PERSONAL RETROSPECTIVE

on 20 minutes of field work

- Seeing the Spirit Well for the first time and being told by the Lahu that we were the first foreigners ever to go there.
- Staggering out of Nam Lang Cave at 3 am to an instant nourishing meal and hot drinks prepared by the Thai camp assistants
- The infamous Miami Hotel on Sukhumvit 13 in Bangkok. Readers might be interested to know that this historic relic of the Vietnam War R&R days is still operating unchanged, although the ghastly air-conditioners were replaced in the 1990s. I have even heard that the transvestite at reception is still there.

FINALLY ...

I eventually tired of the Project—just grew out of it. By the turn of the century the forest, the hill-tribe villages, the caves, the coffin sites, the atmosphere and the excitement remained but were now shared with and enjoyed by many more people, and in that sense diminished.

Mass tourism arrived and others took over the exploration and I felt a bit out of place. The obsession had faded and the Great Adventure was not quite the same. But I wouldn't have missed it for quids. It was a high point in my life and, I know, of others who went, and therefore were bitten or smitten. One of the reasons for giving this talk is to emphasise that the world



Cave Tourism Workshop

still has plenty of karst areas where similar results could be obtained by motivated speleologists without the strictures of China.

Exploration does not have to be of the gung-ho hard-man variety evidenced in Abkhazia, Mexico and Patagonia. In our region I investigated Myanmar and the Philippines in the wake of the early Thailand expeditions.

In 1988 four of us published a report on what remains the world's only real speleological expedition to Myanmar, but the country is still largely undocumented despite widespread limestone occurrence. Indonesia and the Philippines still have massive potential, notwithstanding logistical and political problems.

Laos is now relatively easy to visit, with

some truly huge caves and massive potential despite several major expeditions.

There are local sensitivities to take into account, but several Pacific islands beckon: only a little and nothing definitive has been published on Niue and the extensive caves in the Cook Islands, where there have not been any strongly focused expeditions. The more daring might turn to the Solomons or rethink New Guinea.

For something really exotic further afield, very little attention has been given to Central Asia since the end of the Soviet Union, despite greatly improved access. There is some impressive looking limestone in the Pamir Mountains of Tadjikistan.

In Thailand, though, there is still huge potential.



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