Speleo Spiel 431

March-April 2019

Newsletter of Southern Tasmanian Caverneers Inc. ISSN 2208-1348

Front Cover: *The Irish playing in Lost Pot*
Photo: Axel Hack

Back Cover: *A sad end for some poor critter. Herberts Pot, Mole Creek*
Photo: Janice March

STC was formed in December 1996 by the amalgamation of three former southern Tasmanian clubs: the *Tasmanian Caverneering Club*, the *Southern Caving Society* and the *Tasmanian Cave and Karst Research Group*. ***STC*** is the modern variant of the oldest caving club in Australia.

Speleo Spiel

Newsletter of the Southern Tasmanian Caverneers Incorporated

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Issue No. 431, March-April 2019

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Editorial

Most of you who are active Tasmanian cavers will be all too aware that it has been a lean summer of caving in the south of the state as we have been unable to access our two major caving areas at Ida Bay and the Junee-Florentine for much of the time. Bushfires raging in both areas from early January have resulted in roads in both areas being closed. As I write, the Florentine Road (along with many other roads in the South-West) is still closed. Hopefully the Florentine Road will reopen soon as some are getting caving withdrawal symptoms.

You will see in the trip reports that a group of divers braved the possibility of Maydena going up in flames to undertake a long-planned project in Junee Cave at the height of the fires. They received permission to access the cave. The town, and the divers, survived intact. It is also most fortunate as the bulk of the pages of this issue of the *Spiel* comprise the results of that project, in clear and elaborate detail. Steve Fordyce is to be highly commended for the efforts he has put into these reports, and others he has published in the last couple of years.

It is good to see projects and explorations being clearly and thoroughly documented. These reports are not merely for the entertainment of the current reader but as a record for future reference. Many is the time I have attempted to research previous caving or diving explorations from times long gone and discovered all that was recorded was whimsical ramblings meant for amusement, with little or no practical information. This is not only frustrating for the caver/cave diver attempting to extend explorations but is useless as a documentation of discoveries made.

Canyoning is making an appearance in the club, motivated by Alan Jackson, and this has proved most timely with the caving options seriously curtailed. The last issue of the *Spiel* detailed a trip down Many Falls Creek and this issue recounts our trip down its neighbour, Not Many Falls Creek (OK, it doesn't have a name). As you read the report, and cast your mind back to the Many Falls Creek trip report, (or go and re-read it) you can ponder the brain effect called Memory Fade. This is well researched and documented. I was reading about it again recently. "This fading affect *(sic)* bias is a mental filter that makes the negative emotions attached to our memories fade faster than any positive feelings, helping us move on from bad experiences" (*New Scientist*, 16 February 2019, No 3217, Page 8). I have certainly experienced this many, many times in my caving/bushwalking/boating/diving/canyoning career, and the last two canyon trips have proved to be yet two more practical demonstrations of the effect for me. They were great trips in my current memory!

I think all outdoors enthusiasts, particularly long-term cavers, have this as a strong feature of how their memories work. It separates us from those that cave once, or maybe a few times, declare it too hard, wet, cold and horrible and quit, claiming ever-after how miserable it all was. We, however, forget the bad bits, or at least remember them as not that bad and fixate on the good bits. Long may it remain so.

Stuff 'n Stuff

- And here is the latest iteration of the shiny gear that money from Tas Community Fund, Tony Culberg's crowdfunding, ASF, STC consolidated revenue, the quiz night and Irish expedition leftovers allowed us to buy/collate. We now have six bags ready to grab and go with the pictured contents (plus a Michie phone comms kit, which I forgot to include in the picture) - *Alan Jackson*.

- Now we are all prepared if there is a rescue. Below is a link to a newspaper article on our cave rescue kit, in *Hobart Observer*. 15 March 2019
  https://tinyurl.com/yckodxcg
- Trevor Wailes found this wonderful reworking of Simon and Garfunkel's famous song "Sound of Silence" into a caver's anthem, with video. I really recommend that you take a look. https://tinyurl.com/y7hpmnr8
- An interesting TED talk on caving, exploration per se, and the changes technological developments are making to these, given by Hazel Barton, can be found here: https://www.youtube.com/watch?v=PH3mWJhfiJ4
- The latest issue of *Caves Australia* (CA) has just been published and those observant cavers amongst you will have discovered that the digital age has finally truly reached ASF. This is the first issue of CA where only those who have actively registered to receive a printed copy will get one. Otherwise digital is what you get. Well a link to enable you to at any rate.
- For those (hopefully few) of you who did not read your CA thoroughly, there is an advertisement at the end for a couple of new caving lights that look excellent (in the photos!) and are a REALLY good price. So, if you are in the market for a bright and robust caving light but can't afford/don't want to pay for a Scurion then I suggest you revisit the latest issue and check it out. I know nothing about them, so this is NOT an endorsement.
- You will no doubt have heard that the Australian of the Year award this year was given jointly to Craig Challen and Richard Harris, two cave divers and cavers. Just thought it was worth highlighting as I doubt cavers or cave divers will get this honour again.

Office Bearers' Reports

President – Michael Packer

Apart from being possibly the least present president I haven't done much in this role this year other than try to keep meetings to order. This has been possible because I have been supported by a fabulous executive comprised of Chris, Russell and Petr and a very active committee – thanks all.

In an attempt to move into the modern era, I encouraged Russell to shift the club banking system to the online CommBiz platform which has done away with the cheque books and made the authorisation of payments a much quicker process. Thanks Russell for making this happen.

The ASF Conference was held in Tassie this year and was a resounding success by all accounts (I was freezing my arse off in Antarctica at the time). Congratulations must go to the Northern clubs for organising and managing the event and also to all of our members who contributed in various ways.

Consultation with external bodies featured a few times and a strong relationship with various state departments was maintained and fostered through consultation processes largely spearheaded by Stefan and Alan - thanks guys. As a result we hope to see the opening up of some caves in the MC area that haven't been visited for many years and the better management of many of our existing caves.

Lots of rescue gear was purchased and training exercises conducted throughout the year and particular thanks must go to Andreas and Alan for managing this. As a result I'd like to think that we are one of the best prepared and capable clubs in the country to conduct rescue operations.

Nat did a fabulous job of organising the social calendar with a wide range of social activities being organised to keep us entertained whilst not caving - great work. And, perhaps most importantly, lots of good caving was done!

A general thanks to everyone who has participated in any way in the club this year, without you all the club wouldn't exist! I look forward to another great year for the club.

I am happy to continue in the role this year - that said I am equally happy to step aside for anyone else who is keen to take it over.

Vice President – Petr Smejkal

I have been STC Vice President for the last three years and have enjoyed working with everyone on the STC Committee. Unfortunately, I won't be able to continue in this role. With my daughter due to be born in April, I will step down from the Vice President's role and the Committee to focus on my family for 2019 and the foreseeable future.

I wish everyone the best and look forward to some short caving trips in 2019-20.

Social Secretary–Natalie Pausin

No report was presented.

Nat did not stand for this position again.

Secretary – Chris Sharples

I have now been doing this job for three years and may have got better at it (in terms of knowing what to record, not in terms of speed of production of minutes). The secretary's job has mostly consisted of keeping the minutes and clearing the club's PO box as usual, although in the last year there has been a slight increase in the number of email queries directed to the secretary from people interested in joining STC. During the last year the successful club application to the Tasmanian Community Fund for funding to purchase rescue equipment also used a significant amount of secretarial time.

Since my 3-year term is now up I would like somebody else to take on this job for the next three years.

STC Librarian / Archivist – Greg Middleton

Since February 2018 the Library has received 42 new paper journals (about the same number as recent years), bringing our holding to 5,009.

Consideration needs to be given to discarding the large number of duplicate copies of journals and newsletters, especially from STC's constituent clubs, TCC and SCS. These take up quite a lot of space but are of no future value. Anyone wishing to have hard copies of any back issues of *Speleo Spiel* or *Southern Caver* should contact the librarian.

Digital copies of journals are stored on a 1TB hard disk. Additions in the last 12 months include:

ACKMA Journal: #110, #111, #112, #113

ASF Annual Report: 2017

Helictite: Vol. 43 (2017). 44 (2018)

Binoomea (JCH&PS): #167, #168, #169

ISS Newsletter: Vol. 23(2)-(4); 24(1)-(3)

J. Sydney Speleo. Society: Vol. 62 (2018)

SUSS Bull.: Vol. 56(1), (2)

Trog (KSS): Vol. 53(7) – 54(5)

CEGSA News: Vol. 63(1)-(4)

Speleo Spiel: #425 - #430

Troglodyte: almost full set 2(1) 1989 to 28(2) 2018

NSS News (USA): Vol. 76(3)-(12), 77(1)-(2)

J. Cave & Karst Studies (USA): Vol. 80(1)-(3)

Cave & Karst Science (UK): Vol. 45(1)-(3)

No new books have been accessioned; our holding is 426.

Our CD/DVD collection is unchanged at 52.

No new *Southern Caver* has been produced this year. I'm happy to continue in the position.

Public Officer – Serena Benjamin

Brevity is the order of the day when it comes to the Public Officer's Report. I did some stuff, i.e. signed the odd piece of paper. I will not be continuing in this role.

TREASURER'S REPORT (Russell Fulton)

INCOME and EXPENDITURE STATEMENT

For the period 1 January 2018 – 31 December 2018

INCOME ($)	**2018**	**2017**
Membership fees	4,693.50	4,305.00
Donations	950.00	440.00
Speleo Spiel subscriptions	40.00	120.00
Gear hire	84.00	378.00
Interest	121.80	218.96
Grants	8290.00	-
TOTAL INCOME	**14,179.30**	**5,461.96**
EXPENDITURE		
ASF fees	2,967.00	2,990.00
ACKMA membership fee	50.00	40.00
Audit fee	110.00	93.50
Annual Return fee	62.00	61.20
Gear Custodian honorarium	113.40	84.90
Gear purchase and repair	2,196.73	1,603.47
Tas Community Fund rescue equipment	9,430.00	-
Speleo Spiel costs	121.65	322.42
PO Box rental	201.00	196.00
Search and Rescue airfares	-	317.52
Sundries	143.10	2.00
TOTAL EXPENDITURE	**15,394.88**	**5,711.01**
SURPLUS (LOSS)	**(1,215.58)**	**(249.05)**
BALANCE SHEET as at 31 December		
CommBank Business Transaction Account	$4,752.32	$5,967.90
Term Deposit	$10,000	$10,000
TOTAL MEMBER FUNDS	**$14,752.32**	**$15,967.90**

NOTES

1. Membership breakdown:

CATEGORY	**NUMBER**
Single	28
Household	13
Concession	15
Introductory	9
Life	6
TOTAL	**71**

2. Donations included $410 from Tony Culberg's crowd funding campaign and a $500 donation from Jeanette Dunkley. These donations were made for the purpose of rescue equipment purchase.

3. Grants dedicated to the purchase of rescue equipment came from the Tasmanian Community Fund ($6,590) and the Australian Cave Rescue Commission ($1,700.00).

4. Sundries include a $100 deposit for an additional Junee Quarry Road gate key, a $36.50 refund of overpaid member fees and bank charges.

5. Details of the Search and Rescue Gear Project are tabulated below.

SEARCH and RESCUE GEAR PROJECT			
Funding Source	**Budget**	**Project phase**	**Spent**
Tasmanian Community Fund (TCF) STC (TCF-related co-spend) Tony Culberg crowd-funding project -2017	$6,590.00 $2,240.00 $440.00	Round 1 (TCF)	$9,269.92
ACRC grant	$1,700.00	Round 2 (ACRC)	$1,755.21
Quiz night fund raiser	$1,656.00	Round 3 (Quiz night)	$1,625.89
Tony Culberg crowd-funding project -2018 Jeanette Dunkley donation	$410.00 $500.00		
TOTALS	**$13,536.00**		**$12,651.02**
Budget remaining	***$884.98***		

COMMENTS

2018 was a year of significant fund-raising and expenditure on search and rescue equipment and the club is now well resourced in that regard. The club ran at a deficit again in 2018 and following payment of outstanding invoices and allowing for the ~$900 remaining budget to be spent on search and rescue gear, the club will have approximately $3,000 in the operating account at AGM time, as well as $10,000 in an interest-bearing account. $13,000 is a significant amount for a small club and with the club's demonstrated ability to raise funds outside of membership fees, all looks well. The club moved to electronic banking during the year, so payments can now be made via EFT.

ASF have advised that their fee will drop by $5.00 for this year in the categories of Single, Household, Life and Concession. After consideration, the executive is recommending that the STC fee increase by $5 for those categories. Total payment per membership will thus remain the same as last year for all categories except Life members who will enjoy a $5 decrease in fees.

OFFICE BEARERS

The following were Office Bearers as at 31 December 2018

PUBLIC OFFICER	Serena Benjamin
EXECUTIVE COMMITTEE	
PRESIDENT	Michael Packer
VICE-PRESIDENT	Petr Smejkal
SECRETARY	Christopher Sharples
TREASURER	Russell Fulton
GENERAL COMMITTEE	
EQUIPMENT OFFICER	Geoff Wise
LIBRARIAN/ARCHIVIST	Greg Middleton
KARST INDEX OFFICER	Michael Packer
SCIENTIFIC OFFICER	Stefan Eberhard
EDITOR	Janine McKinnon
SAR OFFICER	Andreas Klocker

OTHER OFFICE BEARERS	
TRAINING OFFICER	Alan Jackson
SOCIAL SECRETARY	Nat Pausin
ASF DELEGATE	Sarah Gilbert
WEBMASTER	Michael Packer

Search and Rescue Co-ordinator-Andreas Klocker

Another exciting year as SAR officer has gone by, luckily without any cave rescue.

Nevertheless, we had two near misses:

1) One near miss occurred in KD. One of the team struggled physically during this trip and progress was slower than anticipated and as a consequence that team member (and the other two to some extent) became severely hypothermic. Luckily, even though their call-out (Alan) was contacted, in the end the team got themselves out of the cave. Hypothermia is definitely one of the biggest risks in our caves, and one we are often not well prepared for, so please do not become complacent and be prepared for enduring the cold and wet if you are stuck in a cave for a while and are not moving, whether due to injury or for any other reason.

2) The second near miss occurred on a recent cave diving trip to the Junee Resurgence. A diver ran into problems at depth whilst pushing a restriction at the end of the 2nd sump. The diver was able to exit the sump successfully and return to the surface. The cause of the problem was likely a CO_2 breakthrough due to a combination of using a rebreather at depth, in cold water, and the challenges of a tight restriction. The diver had very limited experience in using a rebreather on cold and deep dives. Further discussion will be necessary to hopefully provide some useful advice and recommendations for future dives.

Both of these cases highlight the need for people to think about their own capabilities when preparing for caving/cave diving trips. Trip leaders also need to take into account individual capabilities and capacities and plan for the worst case scenario.

A lot of other exciting things happened this year as well.

Thanks to everyone's contributions to the cave rescue in Midnight Hole in 2017, all STC members, paramedics, and TasPol members involved in the rescue were awarded a National SAR Professional Commendation Award.

Thanks to a grant by the Tasmanian Community Fund (TCF), a grant by the Australian Cave Rescue Commission (ACRC), the fundraiser quiz night, Tony Culberg's crowd funding efforts, and some of STC's own funds, we were able to spend about AUD 11,000 on shiny cave rescue gear. This puts the club in a very good situation gear-wise if something goes wrong. I have done some PR (an article in *The Observer* and an ABC interview) to thank TCF, so hopefully they will help us again in the future. Thanks to everyone who put an effort into making this all happen!

Brian Evans has taken over as head of ACRC which has been great for cave rescue in Australia. There is now quite a lot happening in cave rescue nationally as you can read in the news emails Brian sends out (and if you do not get those and wish to do so then let Brian know). There is also a national cave rescue workshop planned in South Australia later this year – stay tuned.

We had a successful cave rescue exercise in November with 29 participants in Mystery Creek Cave. 40 people signed up to start off with, but thanks to a sand storm most NSW CRS members could not get to Tasmania in time, and due to the head of the TasPol team becoming sick too close to the exercise the police team could not attend as well. Next time. In my opinion the exercise went very smoothly and everyone learned a lot, and everyone survived the suboptimal weather conditions. Let's do this again next time - with NSW CRS and TasPol.

There were a lot of cave rescue-related things happening at the ASF Conference in Devonport, including a day of rescue-related talks and a practical session post-conference. Thanks to the Northerners for organising.

There has also been a cave rescue exercise up north earlier in the year, organised by Janice March. Several STC members attended and had a great time and learned a lot.

There has been a draft of a Minimal Impact Cave Rescue Code (MICRC) doing its rounds which led to many discussions and elevated blood pressure for many involved. The draft was rejected by ASF, and, led by ACRC, a new (shorter) draft is being created.

The Thailand cave rescue happened, and several STC members, and Brian from ACRC, helped to deal with the associated media. At least everyone on the planet now knows that cave rescue can be complicated and require experts. I also attended a meeting organised by Emergency Management Australia in Canberra where all the good, the bad - and the ugly relating to this rescue were discussed. Main lesson: Good relationships between emergency services and cavers are key for a successful cave rescue!

In the wake of the Thai cave rescue the Cave Divers Association of Australia held a Sump Rescue Orientation Program (SROP) in Mt. Gambier which both Stefan and I attended. Main lesson: Don't mess up behind a sump!!

And a lot of thanks go to Alan for helping a lot with the cave rescue exercise and organising training sessions in advance, and Alan and Nat (and whoever else was involved) in organising the fundraiser quiz night.

My capacity for cave politics has been reached, and I would rather spend my energy exploring caves than dealing with speleo politics for a while, so it's time for somebody else to take over.

Looking forward to another year without a cave rescue!

Webmaster – Michael Packer

A quiet year in the virtual world of web wizardry. The *Spiel* was posted whenever Janine created yet another bumper edition and the web wizard position took over the technical management of the List Server. Other than that, nothing much happened. I am happy to continue in this role for the next year.

Gear Store – Geoff Wise

The gear store has been at Springfield Ave since 2012. I initially thought that having the gear close at hand would lead me to go caving more often but I don't think that has really happened! It will need a new home (unless someone is in the market for a rental property and is happy for the gear store to stay) as I am moving out for the foreseeable future. Being the gear officer has been a largely enjoyable position and has been made easier thanks to the efforts of Alan Jackson who has been the main sourcer of new rope and equipment and organiser of impromptu working bees and rope testing. My main

duties have been checking that all the pieces of SRT kits have been returned, checking that gear people are after is in the gear store before they rock up and the occasional washing of gear when it isn't returned clean. Access has worked pretty well although I think the possibility of accessing the gear store when I was not there using the code has led to some short notice requests. It is always better to try and organise gear borrowing early in case what you want has been borrowed by someone else or I haven't checked my email for a while, rather than leave it to the last minute and run into problems. I have not had to put too many rants about returning and cleaning gear this past year.

This year saw the acquisition of a significant amount of dedicated cave rescue equipment and a couple of new rolls of rope. We also received some rope donated by Emily Sheppard and Abdel Soudan and the Irish expeditioners. Donations of (needed and usable) gear are always welcome. We finally retired the two rolls of 9.5 mm blue water II (K and N) and the Tendon rope we bought from 2014 to 2017 looks to have the longevity of a MAFS relationship (blame Lisa for me knowing about this…). These two ropes (F and G) will probably only have a year or two more left.

A working bee to organise the rescue gear was held on August 5 with some unlucky people washing and coiling 600 m of rope while others sat down and made little piles of shiny gear and dreamt of dumplings. Rope testing was held at the Police SAR headquarters on December 1 where several ropes and steel crabs were retired and Tendon got a bad name as a rope brand. On the plus side we didn't have any issues with the quick release this year after implementing Ric's suggestion of teeny tiny shackles to replace the split rings. Thanks to Damien and Police SAR for allowing us to use their facilities again.

I'm sure everyone is aware that we need a new gear officer and store location by now. The job is what you want to make it. There are a few pedantic people in the club that will help out with the occasional working bee if needed. The main thing is to manage access and occasionally chase someone up to return keys, SRT kits, helmets and lights.

Electronic Archivist – Michael Packer

A busy year in the archives. Ten new maps were drawn and submitted to the archive from Janine, Alan, team Pepper Pot Plateau and the Chris and Gabriel crowd. A further 20 map numbers were allocated to the Irish Contingent with the promise of a range of JF maps… Various people submitted survey data, locations and photos, all of which were included in their respective areas – keep up the good work! After several failed attempts on my part Alan finally retrieved from Matt Cracknell a large box and electronic file of mainly IB info which will be integrated into the archive when I next have a spare evening (or century).

Whilst most of the passengers on the *Aurora Australis* were hurling their guts up over the side during a two-week trip to Antarctica I entertained myself by trying to use a scanner in a pitching sea – which turned out to be almost as exciting as trying to use the running machine in the gym! Entertainment aside, I was able to scan the entire contents of the Mole Creek file from the filing cabinet. Consequently (and with only a few vomit stains) everything that we have on the MC area is now in the electronic archive, next voyage the JF files…

This year I took over the role of ASF Karst Index Officer for Tassie from Greg (thanks Greg for doing for so many years). I hope this will allow for better integration of cave information from across the country.

Four more copies of the Electronic Archive were handed out to various eager recipients bringing the theoretical total number of copies of the archive in circulation to 42. A reminder to everyone that the master copy of the archive resides with me so, if you have anything to add to the archive, please send it to me so I can make sure the master copy gets updated and nothing gets lost. On this topic further work was done on the online version of the archive with a national group being set up after the conference to look at alternatives to the existing but old online databases provided by OzKarst and KID. A full online demo version is in production and should be available for viewing soon – stay tuned.

I am happy to continue in the role for the next year.

Moved by Phil Jackson that the above officers' reports be accepted, *seconded* Pat Culberg, *carried*.

Science Officer – Stefan Eberhard

In addition to significant deep cave exploration, filming and cave diving, mostly in the Junee-Florentine, conservation issues and projects also figured prominently in the club's activities over this past year. And, most excitingly of all, a humble water tracing test helped pave the way to the biggest exploration breakthrough in Tasmania for several years.

Water Tracing

Petr Smejkal continued his fluorescence dye tracing tests in the Junee-Florentine. The main purpose of Petr's experiments was to test portable fluorescence detectors built from cheap and readily available parts. His field tests focused on unravelling the hydrological complexities in Niggly Cave and its drainage relationships with Growling Swallet, Porcupine Pot and Gormenghast. With assistance from other STC members, a number of dye tests were performed, and while some of the results were disappointing, one of the tests suggested that the Porcupine and Growling Swallet waters meet further downstream, and not in the rock pile under Mount Niggly as previously imagined. This finding gave impetus and focus to subsequent exploration efforts which culminated in the biggest exploration breakthrough for several years – more than 600 m of new base level stream passage including a very large chamber and the sump that will almost certainly enable the long sought-after dive connection between Niggly Cave and Growling Swallet. The connected Ice Tube-Growling-Niggly Cave system will be >15 km in length, and might also just crack the 400 m depth mark.

JF341 Conservation Project

In parallel with the dive exploration project underway in this well-decorated cave, most of the old, decaying and aesthetically intrusive pink flagging tape was removed and replaced with trial design reflective markers and thin brick-layers line. The reflective markers - which have a

curved reflective surface for 360 degree visibility - worked well to define the route and facilitate navigation while protecting formations from unnecessary trampling and mud tracking. The trial markers were quick and easy to install, and can be easily removed for photography, replacement- or repositioning. The brickies line was visually much less intrusive than pink flagging tape or white venetian blind cord.

Forum on Cave Access, Conservation and Management

While acknowledging that access restrictions are part and parcel of protecting cave values, across Australia in recent years, there is a disquieting trend by land management authorities towards ever tighter and onerous controls on recreational caving and speleological activities. So much so, that these growing regulatory threats to access are spotlighted in the ASF's *Strategic Plan 2019–2024*. Separately from the Strategic Plan, concerns about these bureaucratic trends catalysed organisation of the *Forum on Cave Access, Conservation and Management*, which was hosted at the 31st ASF Conference held in Devonport in early January 2019. The forum sought to foster engagement, discussion and collaboration between speleologists and cave managers on matters of concern to ASF members. To establish context, speakers were invited to speak about different karst areas and management systems from around Australia. This was followed by a facilitated open panel discussion. The conference was attended by more than 120 speleologists from around Australia, and the forum generated open and constructive discussions about key issues and challenges across most Australian states and territories. The panel responded to questions from the forum and from this public discussion, several key themes emerged and will be reported in the next issue of *Caves Australia*.

Herberts Pot Conservation Plan

This cave has been closed to caving for 25 years, but that situation is now finally changing. The goal of the *Herberts Pot Conservation Plan* is to engage the resources, capabilities and expertise of Tasmanian cavers to assist the Parks and Wildlife Service in assessing the conservation needs for Herberts Pot. The *Herberts Pot Conservation Plan* is a collaborative initiative of the Tasmanian speleological community. The initiative partners are: Tasmanian Speleological Liaison Council, Northern Caverneers, Mole Creek Caving Club and Southern Tasmanian Caverneers.

Cave Access Policy (CAP) and Cave Zoning Statements (CZS)

STC members provided input to Cave Access Policy and Zoning Statements (CAPZS) meetings organised by the Parks and Wildlife Service (PWS). In the Southern Region, the next round of priority caves being subject to zoning are Exit Cave, Junee Cave and all caves in the Hastings karst. In the Northern Region, the zoning process for Kubla Khan and Genghis Khan is in its final stages, and PWS's next priority caves for this treatment include Herberts, Honeycomb, Cow-Spider-Black Shawl, Croesus and Lynds.

STC members were encouraged to proactively engage with the CAPZS process because the zoning and access policies proposed by PWS involve access restrictions including zones where recreational caving is prohibited. The access and zoning statements prepared for each cave are underwritten by the *Cave Access Policy (2014)*, which was scheduled for review in 2017, and **hence it is now very overdue**. In Mystery Creek Cave, the zoning process has resulted in a series of very conspicuous reflective signs demarcating zones and access policies. The efficacy and impact of these signs has been questioned by speleologists.

Owl Pot

A proposal by PWS to install a heavy-duty stairway in the entrance slope (to protect bone deposits and reduce mud tracking) was opposed by the club because of significant aesthetic and construction impacts, as well as safety risks. An alternative proposal in the pipeline from PWS is for a chain ladder, which should entail lower environmental, aesthetic and safety risks.

Junee Cave Diving Project

The main aims of this cave diving expedition in January 2019 were to push and resurvey the second sump and film the beautiful passage "For Your Eyes Only". A secondary aim was to address any potential conservation issues associated with cave diving activities. Seven divers were on site for ten days. Three signs were placed in three areas with sensitive mud banks in For Your Eyes Only. The signs are small plastic plant tags about 50 mm x 40 mm. No other protective measures were considered necessary.

Anaspides *biology*

Biological research includes the continuation of the *Anaspides* mountain shrimp research project, with visiting researchers from Germany and Australia here in February-March 2019. This exciting research has already revealed several new cave-dwelling species of this ancient crustacean, and STC members have greatly assisted this project by collecting specimens from several deep and difficult caves including Porcupine Pot, Niggly Cave, Khazad-Dum and Herberts Pot.

This is my third year as Science Officer. I am willing to stand for this position again.

Training Officer – Alan Jackson

I spent the year making vague, well-intentioned promises to run regular training sessions. I largely failed to deliver on these promises. Someone else will have to have a go at doing it better in 2019 (I quit) (*Except he hasn't really, for now at least – Ed)*.

***Speleo Spiel* Editor – Janine McKinnon**

The required six *Spiels* all appeared within their allocated timeframes, which was a tight fit for me a couple of times. I would like to thank my trusty sub-editors again this year for their sterling efforts in ensuring our magazine is visually and grammatically pretty spot on. Alan Jackson has done his thing with all six issues, and Ric Tunney and Greg Middleton have both contributed as my second back-up. I am happy to continue in this role for the coming year.

AGM Results

Election of Office Bearers

Michael Packer was selected as the Returning Officer for the election of office bearers and all positions were declared vacant. The following officers were elected unopposed by the meeting

Position	**Nomination**	**Nominated by**	**Seconded**	**Proxy votes**	**Result (elected)**
President	Chris Sharples	Janine McKinnon	Ric Tunney	Janine McKinnon, Ric Tunney	Chris Sharples
Vice President	Stefan Eberhard	Russell Fulton	Bill Nicholson, Phil Jackson		Stefan Eberhard
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Trip Reports

JF-237 Niggly Cave Atlantis

13-17 December 2018

Stephen Fordyce

Party: Stephen Fordyce, Petr Smejkal

While I was busily occupied with cave diving shenanigans on the Nullarbor and avoiding Tassie caving in winter, the glimmer of hope given by the Ninja Streamway in Niggly continued to shine (despite the bad memories of rising water and much reduced airspaces on the way out). With a successful dive completed in Porcupine Pot and a jolly good rescue exercise out of the way, Niggly was well overdue for a visit by the time December rolled around. With Ben having recently flown out to Vietnam, and others busy with pre-Christmas commitments, Petr and I made up the party of two.

We had three full days at the bottom of Niggly and four nights underground and emerged victorious with 650 m of surveyed new cave, much of which was glorious base-level master cave and some of which leads to a major new sump. Gratifyingly, we used almost all of the gear we'd hauled in (two heavy bags each), including: drill kit, bolting kit, bolt climbing kit, camping kit, survey kit, sample collection kit and dye tracing kit - pretty much everything except dive gear. It's super exciting that at least the next couple of Niggly trips certainly won't have any chance of being "the last one".

Petr gets an initial reading on the dye detector

Photo: Stephen Fordyce

The grand plan of heading in after work on Thursday resulted in the sub-optimal bed-time of 3:30 am to start things off, but fortunately that didn't seem to have any impact on success. The grinding walk up the hill in the dark was novel and unpleasant - multiple negotiations through the Tigertooth Passage well after bedtime, equally so.

After a late start on Day 1, we continued pushing the Ninja Streamway (projected Growling Swallet water) through 200 m of rockpile requiring Ninja stealth and cunning to navigate and traverse (V*ery witty naming; I love a cleverly-named cave passage- Ed*). A breakthrough was made into nicely-dimensioned open passage named Red Rockets Revenge after Ben's car, which Ben very kindly lent us in his absence, making the trip possible (thanks Ben, we missed you). Much excitement was vented at this first indication that the lead might actually go - this made it into Fraser's latest cut of "Push Day" within days. A second prolonged rockpile section nearly broke us - we spent hours checking improbable leads and shuffling rocks.

"We quickly found a way down and triumphantly singing the Indiana Jones theme song in crazed voices, we charged into the sort of virgin cave that dreams are made of."

I caught up to Petr in a dank and squalid room coated with slimy mud - he'd done a few exciting but short climbs and things were looking ominously terminal, even though a stream could be heard somewhere nearby. Petr had checked all the obvious leads and we both looked at a dubious mud tube in the floor, and then at each other. Enthusiasm had become a rare commodity, but I managed to find a bit and slithered down the Rat Hole, which doubled back on itself quite painfully. The water was louder immediately, and two minutes later I was looking out into big, open streamway passage. Enthusiasm was no longer a problem.

Petr squeezes down the Rat Hole

Photo: Stephen Fordyce

I should note that while there didn't seem to be that obvious a draught, occasional dry patches in the previous rockpiles had indicated that perhaps something big was coming. (There are dry patches on the way to Mother of God too) I did point them out to Petr and suggest that we might be headed towards the lost tunnel of Atlantis. Terribly bad karma to name something you don't even know exists, but luckily we got away with it this time.

We quickly found a way down, triumphantly singing the Indiana Jones theme song in crazed voices, we charged into the sort of virgin cave that dreams are made of. The fabled passage of Atlantis had a large stream of Dreamtime streamway proportions (assuming current low water levels) in open, going passage of satisfying dimensions (2 m wide, 4 m high, rectangular profile, and no more blasted rockpile).

Petr climbs up from the original streamway

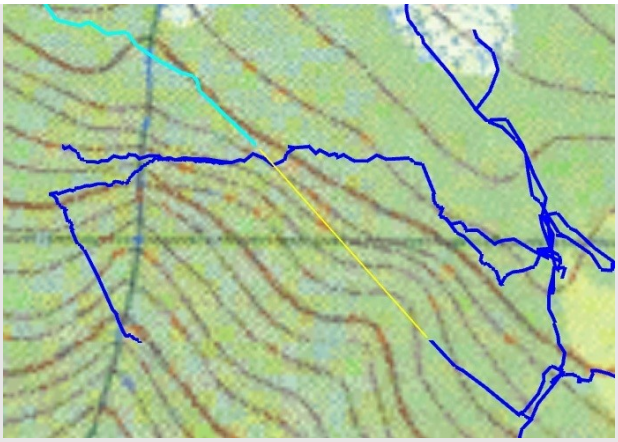
Photo: Stephen Fordyce

"This is a lovely sump pool with every indication that it will connect with the 500 m long Growling Swallet/Dreamtime Sump"

A short while later, a sporting mud climb yielded access to a higher giant fossil passage about 6 m above the streamway, going in both directions. More excited yelling was required as the dimensions of this passage were an impressive 8 m wide and 3 to 5 m high. The Upper Atlantis passage was ongoing in both directions, and obviously needed a lot of time to do justice. A 5 m downclimb which needed a rope also showed both ongoing and branching passages back at stream level. Having spent a bunch of hours pushing nasty rockpile to get to this point, we called it a day and spent a bunch more hours surveying back out. Never were we more grateful for being able to plot survey data in real time via the Topodroid Android app than that night back at Camp Niggly.

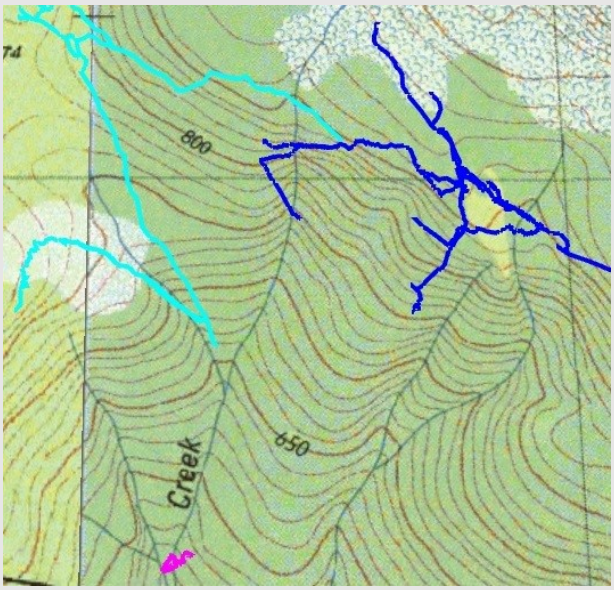
Day 2 we again did our best Ninja impersonations, taking about 2 hrs of hard Ninja-ing (with a single shared caving bag) to reach the comfort of Atlantis. Down the climb (using 6 m tape plus etrier) to the offshoot stream and 150 m easy walking later and we reached "The Pool of Promise". This is a lovely sump pool with every indication that it will connect with the 500 m long Growling Swallet/Dreamtime Sump dive completed in 2014. Finding this sump and connecting these caves has been a dream ever since - the chances of success have been given a hefty dose of steroids! The survey data has been plotted, and is almost eerily well-aligned, with a gap of about 200 m.

The large upper Atlantis passage was pushed in both directions, heading south (upstream) away from the rest of the cave into completely unexpected territory, and ending in "Mount Atlantis", a giant rockpile of Mount Niggly proportions which degenerated into a series of pitches and voids which we didn't have gear to check out. The southbound streamway was pushed a little and not surveyed - it should be possible to get back down to this and continue past the Mount Atlantis rockpile at base level. It appears most likely to be heading for JF-398 Boulder Jenga, with a current gap of 650 m in a straight line. Tiger Mountain in JF-36 Growling Swallet is about 250 m to one side of this line, so may be related also.



Gap (yellow) between the end of the Dreamtime Sump dive, and the Pool of Promise

We also strolled along the high level Atlantis passage north until it hit rockpile, and surveyed (no sketching, our excuse being a party of two) all our new discoveries before again making the long Ninja journey back to camp, and spending the evening poring over the survey data in glorious 3D.



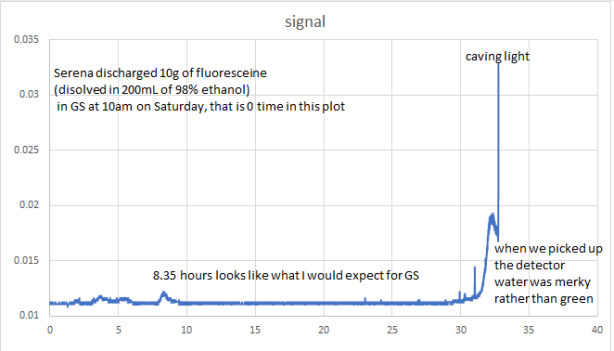
Relationship between JF-36 Growling Swallet (cyan), JF-237 Niggly (navy) and JF-398 Boulder Jenga (magenta)

Day 3 was our last chance to make a dent in the already well-depleted list of jobs and leads, and with a forecast of rain up top, we preferred to stay high and dry. Guided by our new survey data, we soared over the flying fox across the waterfall (yep, so cool) and into the rock-choked passage beyond. A few hours of Tetris (and some other work) later, we again emerged yelling excitedly into the northern end of the upper Atlantis passage. The survey data had proved correct, a 900 m loop with <20 m error was established, and we were able to reduce 2 hours of expert-level Ninja passage to 20 minutes of mostly upright walking and a sweet flying fox trip. Sherpa recruitment for a dive in the Pool of Promise just got a whole lot easier! Due to some technical difficulties we named that section "Vietnam" - ostensibly in reference to where Ben was then, or perhaps due to the amount of unexploded ordinance...

It's interesting to contemplate how a change in the priorities might have seen us save a whole lot of bother in the Ninja Streamway and Red Rockets Revenge. Had we just a few more tools the previous trip pushing beyond the waterfall, maybe we would have broken through. Had water levels or fatigue led us to push there first this trip, the Ninja Streamway and Red Rockets Revenge may never have been fully traversed (*Ah, but life is just a series of "what ifs" - Ed).*

The haul cord dispenser hurriedly thrown together at the last minute performed as expected (some semblance of functionality, interspersed with miserable tangles)
Photo: Stephen Fordyce

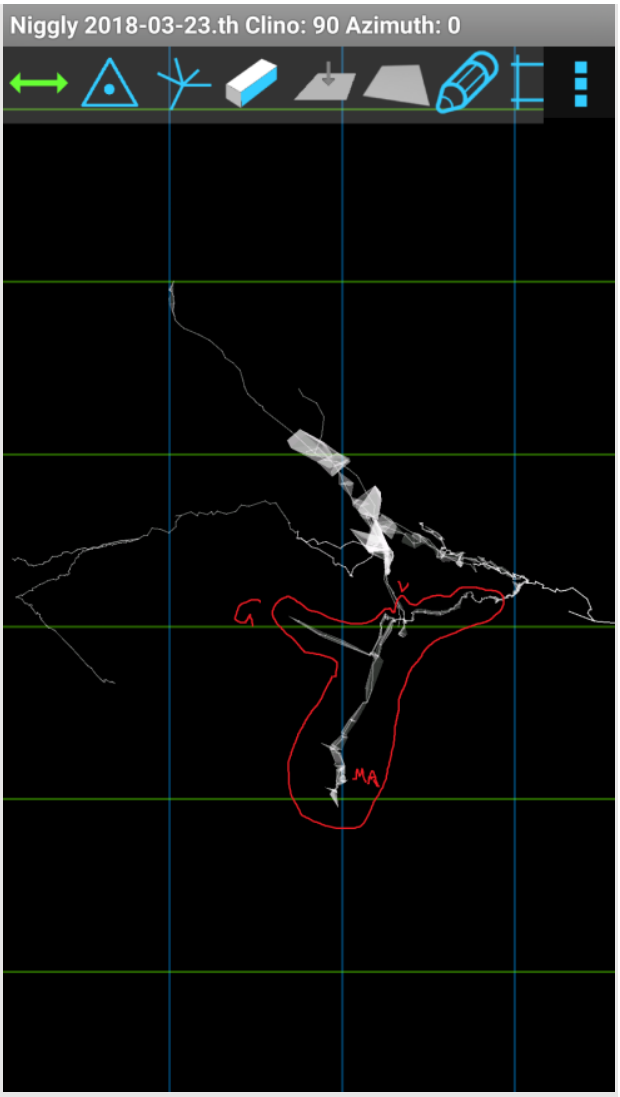
With the shortcut established, this obscure and nasty section of the cave may remain unvisited for ... ever? (Depends how nice we are when de-rigging the flying fox I guess.) So it's probably a good thing we found it first and surveyed it while still excited. The new sections discovered suddenly result in the water flows within Niggly making a whole lot more sense than they did.



Trace from one of the dye detectors, with interpretation notes

We cleaned up a couple of aid climbs, leaving haul cord in place of rope (the finer details of this are carefully recorded, and will probably be the subject of their own report when all are completed), retrieved the dye detectors and did some science before calling it a very satisfactory day. We were able to read the detector logs using my Android phone, although the results were only partly conclusive. Sleep on the 4th night was not easy to come by, with the excitement of the day and the volume of Petr's snoring (he was mortified to have become "old").

"Birthing day" eventually (presumably) dawned somewhere far above and we (mostly me) faffed about getting packed up and ready for the climb out. We eventually made it out and staggered down the hill and back to phone reception for many excited phone calls, text messages and some interviews for *Tartarus* with Andy.



Topodroid screenshot showing the new discoveries (G is the Pool of Promise Passage/projected Growling Swallet water, MA is Mount Atlantis, V is the shortcut from the waterfall, named "Vietnam"). Photo: Stephen Fordyce

This trip will go down in our memories as one of the most exciting ever. The camping methodology continued to pay dividends and I still haven't given up hope on leveraging it some more for another effort at the downstream end of the cave. Four nights was if anything, less miserable than two nights and we managed 8-10 hours of useful caving each day. A (shared) pair of slippers was a welcome addition to the camp.

Cave electronics and camping paraphernalia, plus two very happy campers.
Photo: Stephen Fordyce

A return will have to be made to dive the Pool of Promise, and to push for continuing passage beyond Mount Atlantis. Maybe having dive gear down there will provide an excuse for another visit to the Business Class Lounge (the upward dig there beckons - especially with sturdier tools, and I would really like to install a rope on the climb for any future visitors). All the signs point to a diveable connection of Niggly and Growling, and with the new sump being at -375 m and the final section of the Dreamtime dive hitting 25 m, there is high likelihood of a new Australian depth record, and probably even (just) cracking 400 m! The connection needs to be established before too much investment in a through trip, which would require some major logistical planning.

Big thanks to the Growling Swallet/Gormenghast crew, who dropped small quantities of dye in these caves for us to detect (they wrote a separate trip report about their experiences).

These rocks just between Vietnam and Upper Atlantis were about as loose as they look. Their potential energy is now considerably depleted. Photo: Stephen Fordyce

Irish cavers' reports from their expedition.

January 2019

A more detailed report has been promised, but these "interim" reports are published as they are timely, and you never know when/if the promises will flower. - Ed

JF-232 Udensala.

Petie Barry

Udensala was explored in 1984, and not visited in the 35 years since. Andreas became interested in it due to its position midway between Porcupine Pot and Burning Down the House and had re-explored it down to -90 m a few months earlier. The published survey is intimidating, essentially showing a continuous descent through boulders to -182 m. In reality it's not so bad.

The cave starts off as a series of miserable drippy loose bouldery climbs, then some wet loose pitches, a loose wet squeeze, and then some more wet pitches.

Good solid gnarly caving. At a depth of -90 m the cave changes character when it breaks out into a huge rift chamber - the Culture Bunker. From here a series of climbs and a final 10 m pitch bring you to a depth of -182 m. After getting our bearings here we were back two days later to push the most interesting bit - an extension from the Culture Bunker that had some interesting leads. More miserable drippy climbs and loose bouldery chambers lead down to a 25 m pitch. At the bottom, the downstream lead was quickly killed off. An inlet crawl was followed for 50+m. Still going, but in the wrong direction.

Back again in 35 years for another look, maybe.

JF-293 Whistler

Nick Edwards

After opening a constricted rift we found a series of pitches leading to a tight, muddy, draughty horizontal meander, followed by a series of short pitches in a small dry streamway. At the limit of exploration the streamway breaks out to a window into a wide open space where stones bounce down a steep slope for around 10 seconds (*They're just trying to trick us into grovelling in all that mud - Ed*). Total explored depth around 160 m.

Cold and muddy after another pushing trip in Whistler

Photo: Nick Edwards

JF-380

Roisin Lindsay

Three of us, two large, one small, swung down the known drippy pitches of JF-380 to the 'too tight' section with the frosty draught, smashing in hand (well, in bag) *(Not clear to me what this means - Ed)* The too tight passage was a small rifty squeeze which turned to the right after 2 m, obscuring the way on. When the two large ones had smashed and made slow progress, a finger was pointed at the little one and then at the squeeze. In I slithered with relative ease; an aven which was too tight to get into lay straight ahead, with the main passage diverting to the right and which took the small trickle of water with it. I was

able to turn around where the passage diverted to the right and we smashed at a lump of rock which was preventing the big ones from getting a gander. However after a wee while we decided it was futile, as the passage continued on in increasing tightness, and the draught seemed to be disappearing up the aven.

In summation, it could be worth another look, but as we suspect the draught is just being circulated through the aven and water follows an increasingly cosy route, it's probably not high on the prospects list.

The Z caves

Seamus Breathnach

Within our prospecting objectives, we had hoped to try and locate some of Rolan Eberhard's Z-caves. Somewhere amongst the whispers, we understood that Z-65 and Z-66 (located on the western slopes of Wherretts Lookout) were actually likely to be quite close to Wherretts Swallet. A first excursion bush- bashed their way up the Florentine Valley, making their way to the surrounds of Wherretts Swallet, but no sign of Z-caves. A few days later, we decided to make our way to where the Z-caves were shown on the original map. Parking at the end of 6-road, we took advantage of some cleared forestry to sneak a relatively easy 100 m of progress up the hill. Heading SE, we zig-zagged and bush-bashed our way up the ridge, aiming to find Z-67/68 & 69 on the way. No joy. But at 740 m, right on the contact, we felt a reassuring chill of cool air and found two surface pots about 15 m apart, more or less where Z-65 & Z-66 should be. The first, presumably Z-65, had an abundance of animal skulls at the bottom of a 10 m shaft. A 6 m climb down to the left at the bottom of the entrance shaft ended in a tight rift. Following the higher level passage another 10 m pitch was dropped, and after a further 2 m climb down progress was ended at another tight rift, with a sliver of draught. Z-66 initially seemed more promising but also bottomed out at about 20 m in a tight rift. Both were GPS tagged and will be included in the final report (S*ee header comment. We anticipate reading a more detailed report in the fullness of time - Ed.)*

JF-338 Lost Pot

Brian MacCoitir

The 70 m pitch in Lost Pot.

Photo: Axel Hack

A number of trips were made into Lost Pot. Not necessarily by design but rather because of unplanned events. Over the few trips, gear was forgotten, the drill packed up, wrong bolt nuts were brought and the pièce-de-résistance- a bag of rope was dropped down the 70 m pitch after it had been derigged. Having said that, Lost Pot provided some sporting challenges and spectacular caving. The 70 m pitch at the bottom of the steep entrance passage is subject to any rocks inadvertently moved in the passage because of the slope angle and volume of rubble present. Below the 70 m pitch a number of drops led to a bolder choke which had been the previous final survey point. This was pushed with two leads still trying to get out of the boulder choke.

Some people really "spread 'em" when they abseil

Photo: Axel Hack

The bolder choke was also connected to a parallel chamber by traversing round the head of the 70 m pitch and after negotiating a meandering rift passage with a number of other drops landing on a balcony from which the top of the boulder choke was reached at the bottom of a 25 m pitch. After up-climbing from the balcony, Iron Anniversary chamber was reached by dropping down from an awkward ledge. Again a bolder choke was pushed becoming restricted and required considerable effort in order to progress. On the way out, the top of the bolder choke was checked and an opening to a completely different chamber was spotted in the roof. The team did not have the gear or sufficient time to investigate the open lead, so two possible leads remain at this section. Lost Pot was completely resurveyed during the visits.

More Lost Pot, because they're so good.

Photo: Axel Hack

JF-398 Boulder Jenga

Steve Bus

During the early days of the expedition, Andreas mentioned that this cave should be one of our key objectives of the expedition. On the first trip we dug through several parts of the choke to gain the way on. On the second trip a large boulder slipped several meters and narrowly missed one of the cavers but trapped their tackle sack at the top of a climb. On the final 'theoretical' pushing and derigging trip, a large ~150 kg boulder and several others fell several meters, after I had just stepped off them. The boulders landed on top of one of the squeezes and blocked the way on.

Below the [now blocked] choke the cave opens up into an impressive explored pitch (*Of course it does, now that you can't get there! - Ed)*. On our first exploratory trip, we swung through a window half way down the pitch, close to the first rebelay, and entered a side shaft. A short traverse and a Y-hang attained a solid floor. On the second trip, the team followed a rift at the bottom of the side shaft and enlarged a pitch head to allow a rig into a chamber. An easy traverse gained a continuation which was followed until it met the bottom of the original shaft. These side pitches should provide a wet weather route to the bottom of the cave. Downstream the team looked at numerous ways on. Nothing obvious was found. Where the considerable draft comes from is still unknown. Prize of STC's new rope, some of our maillons etc. for someone who reopens the cave. Or finds the connection from Niggly.

JF-210 Sesame

Axel Hack

Somewhere in Sesame Photo :Axel Hack

Andreas' plan was to get at least some dive-lead (*weights – Ed*) down to the sump of the 1990s extension. On the first trip, ropes were rigged back in and some dive-lead placed at the beginning of Veras Wet Hole. Instead of following the stream through this miserable crawl, a strong draught out a side passage was followed that ended in a mud-covered climb. A second trip was planned to bring the lead through Veras Wet Hole to the sump and finally survey that bit of the cave. However, after a close look involving lying flat out in the stream with our faces half way in the water, it was decided that water levels were too high. Instead the draught was followed once more. We managed to get up the sporting mud-climb and a narrow, outward draughting slope was followed some metres until it ended in a short pitch dropping into a chamber. The slope had clear markings of a previous visit, but it was not clear if the 5 m drop had been pushed. By this stage, even the dry members of the team were starting to get cold so we left this for the next day. Trip three came to a quick end when some of the false calcite-floor after the main pitches gave way, causing a minor hand injury to one of the party of two, but enough to play it safe and retreat.

Arty B&W. Photo: Axel Hack

At New Year's we were back. After a good 10 min of tapping the walls and roof, a spit was placed in the least-horrifying-sounding rock at the top of the mud-climb. Another rope was clipped into that hanger to descend the 5 m pitch. We spotted half-washed footprints in the passage beyond. This, and the typical black-covered mud indicate that the chamber regularly floods in high water conditions. The draught emerges from a small slot at the bottom of the chamber. Unfortunately it is filled halfway with wet and sandy mud and needs some digging (20 mins should do it). Instead of digging tools we had survey kit with us, so we decided to do that instead. A very promising lead.

JF-347 Frost Pot

Roisin Lindsay

We located Frost Pot with relative ease coming from the main track. Rigging from a handy tree, Brían placed a few bolts down to a 70 m shaft.(*Alan Jackson remembers it as 35 m then 20 m. Same as survey -Ed).* Nothing too much at the bottom of the pot, lots of rocks and debris. The only obvious way on is through a very very tight rift. With myself, Claire and Rowena we had a full complement of small people that day, so I tried my luck first whilst Brian looked on with disdain. I went high, I went low but nothing doing and for once in my life my chest inhibited my progress. I could see a muddy footprint on the wall, the extent to which the last person had managed to reach. It was as far as I could go too. From this point the rift continues in the same tightness for ~4 m before opening out possibly into an aven. Rowena made her attempt but with the same result. We concluded it wasn't worth calling Claire, the smallest of all, down to have an attempt. A long term digging project, or even worth digging the debris away from the bottom of the pitch perhaps.

JF-8 Junee Cave:

ASF Diving Expedition Report

January 2019

Stephen Fordyce (with input from other team members)

Party: Dave Apperley, Stewart Donn, Stefan Eberhard, Patrick Fitzgerald, Stephen Fordyce, Grant Pearce, Andrea Russo

A crew from four states (three Victorians, one South Australian, one New South Welshperson and divers from both southern and northern Tasmania) assembled in the height of summer with the goal of making an assault on Junee Cave (JF-8). This is the resurgence of just about all the caves in the Junee-Florentine karst, lying under Mount Field, which includes such well-known caves as Growling Swallet and Niggly Cave (the deepest cave in Australia). The cave is at the centre of the Junee Cave State Reserve, managed by the Tasmanian Parks and Wildlife Service. It's well known for flooding and even summer weather can include snow and torrential rain in the mountain catchment above. While we were lucky to enjoy mostly rainless weather, the nearby bushfires had to be carefully monitored and planned around.

Stewart and Andrea enjoy one of Steve's excellent jokes in the rainforest outside the cave.

Photo: Patrick Fitzgerald

Junee Cave has seen a number of heroic pushes over the years, by many of the who's who of Australian cave diving. Those hoping to dive to the current end of Sump 2 can expect a thorough spanking from the cold water (6-7˚C), depth (max ~65 m) and access (short Sump 1 dive, plus streamway walking both sides, not to mention the cave entrance being 400 m from the carpark). Doing productive "working" dives is even more challenging. As usual, seeing the progress made by previous teams was mind-blowing, especially given the modern technology they did not have access to. Full respect was paid!

While the local Tassie cavers complain about the sherpa loads for 2-tank dives in other JF caves, this dive was an order of magnitude more gear - we collectively used about 40 SCUBA tanks for various things in Junee, plus a scooter, rebreathers, and various other exciting paraphernalia. Having informed the Spirit of Tasmania that we had too many SCUBA tanks to unload (and couldn't empty), they were kind enough to make special arrangements so that we could leave them in the cars.

Pat's "you-beaut" ute was ... well-utilised.

Photo: Patrick Fitzgerald

The Australian Speleological Federation (ASF) was also kind enough to contribute $500 towards consumables for the expedition - rebreather sorb, and helium.

The team arrived at different times and split into groups with different foci and timings. Even with this many people, there was enough space that nobody got in anyone else's way, and with some considered planning, minimal impact was not compromised. The Victorian contingent spent a leisurely two days setting up gear, portaging everything into the cave and preparing to dive Sump 2. For Pat and I, our plan was to stage near Sump 2 everything that would be needed for the entire week of diving (sorb, oxygen, diluent, reels, food, tools, etc.). With odds and ends added by everyone else, this staging area was soon known as "The Corner Shop"! By replenishing our rebreathers in the cave, we avoided having to carry them out each day and saved a great deal of time, energy and misplaced heat. A pair of 7 L tanks were used to transit through Sump 1 (about 200 m long and average depth 12 m). The dedicated setup and clean-up days were an excellent investment and this system made it possible to do long Sump 2 dives on consecutive days.

The streamway cave between Sump 1 and Sump 2 named "For Your Eyes Only" is extremely spectacular and seldom visited. It's also good for photographers taking pictures of models looking speculative.

Photo: Stewart Donn

Once the cave was set up, it was onto the diving, which proceeded according to the fancy of each diver. It's a whole lot of effort, so some preferred to dive only every second day, others had gear to test and of course, getting a feel for exposure limits had to be done with a good deal of caution. "For Your Eyes Only" is a spectacular piece of decorated streamway cave between the sumps, and was the subject of multiple dedicated photography and video days (camera work by Stefan and Stewart, with lighting by Grant, Andrea and anyone else who was handy). It was Stewart and Andrea's first experience in Tassie caves and they did a great job of hauling more than their share of gear, as well as doing some survey dives in Sump 2. They even professed to having enjoyed it.

The end of Sump 2 has been pushed by multiple very capable people, so it was always going to need something special to yield anything new.

"Straight ahead, in the middle of the tunnel was a triangular shaped hole at 55.5 msw with an enticing void behind it, but no chance of getting through."

A good start to giving a push the best shot is to give it lots of shots, and knowing this, our dives could be incrementally increased in duration and productivity. A major advantage in the use of rebreathers is to reduce the amount of gas consumed each dive to almost nothing in comparison to "open circuit", which also made the logistics of multiple dives much easier. Rebreathers are also warmer than open circuit, a major advantage in cold water. Backup "bailout" tanks are still required against the possibility of rebreather failure, but by staging these through the sump and leaving them for the entire project, the amount carried on each dive is minimised without compromising safety. This also means that the overall amount of bailout tanks can be limited to those required for the small number of divers in the water at one time, rather than a set each for the entire team.

Impressively proportioned and decorated passage in For Your Eyes Only. Photo by Stewart Donn

Our early dives focussed on staging bailout cylinders, identifying (and videoing) leads, checking exposure tolerance and adjusting thermal protection, laying and surveying knotted line and fixing existing line, with little time spent at the end. Intermediate dives saw the end reached quickly and smoothly, for maximum time pushing.

The final "clean-up" dives were for the retrieval of gear, line and bailout.

Much time was spent, and technology used, in Sump 2 (my dive log records 14 hours in there across five dives) and some progress was achieved. Sump 2 meanders up and down a bit until dropping to 18 m or so, and then heads steeply down until hitting 64 m maximum depth after 200 m. The deep section meanders along at 54-58 m depth for 100 m and then ends in a rockpile which blocks the (upward trending) passage.

Descriptions from previous trips matched the video and my impression of the end quite well. An open and well-defined tunnel of perhaps 6 m wide and 3 m high was trending up and then blocked by rockfall. Straight ahead, in the middle of the tunnel was a triangular shaped hole at 55.5 msw *(Metres Salt Water. He forgot to change his computer settings to fresh water - Ed)* with an enticing void behind it, but no chance of getting through. Definite flow coming out, although not a gush. 2 m to the left of the centre lead, was a dubious-looking lead 1 m lower and heading horizontal (i.e. most likely further into the rockpile) that would require some serious wriggling in sidemount or no-mount gear. Flow not noticed, but not really checked either.

Steve getting ready for a dive in Sump 2.

Photo: Stefan Eberhard.

To the right, the passage trends around the rockpile and up for a surprising few metres more - to 53 msw. There is then a horizontal lead which might be negotiable in sidemount gear, and upwards in the rockpile would be worth another look. Of particular interest are many blocks of black/ribbed thinly-bedded Benjamin Limestone (kettle to microwave size) which do not match the bedrock walls and ceiling (which are formed in the thickly bedded, lighter coloured Cashions Creek Limestone), and appear to have rolled down from higher up. The presence of these erratic boulders of Benjamin Limestone, which are the next strata in the geological sequence heading north, lend optimism to the prospect of an upwards trending continuation of the sump. Flow not observed, but not really checked either.

"The trouble was, if things didn't go so well, and the theorised air chamber couldn't quite be reached, a brutal decompression obligation and extended exposure would be experienced"

The centre and right-hand leads were most prospective, and in fact the rest of the trip was dedicated almost

entirely to the centre lead and to accessing the void behind it. Two subsequent dives were dedicated to careful and painstaking gardening (as well as some other jobs like surveying), and making a way to access what was named the "Armageddon Room" up and around to the left. The push dive was a tricky one and involved a great deal of planning. If things went well, the cave would open up, mirror the other side and a barrelling tunnel would head towards an airspace and dry cave. This would allow a break out of the water, and, more importantly a reset of thermal and decompression obligations. While very optimistic, it would be a shame to have the time and motivation to achieve this if opportunity presented, but lack a thorough plan or some small but crucial piece of gear. To this end, even a stick of salami was carried, for energy while exploring dry cave on the other side.

The trouble was if things didn't go so well and the theorised air chamber couldn't quite be reached, a brutal decompression obligation and extended exposure would be experienced due to having to go back down to depth and return to the known surface at the start of the sump. In reality it was acknowledged as unlikely that a remote airspace would be reached on this dive and that a careful decision would need to be made according to what the dive presented.

The centre lead/triangle hole, with the Armageddon Room beyond. Photo: Stephen Fordyce (GoPro still)

Near the end of the right hand lead: black ribbed Benjamin Limestone block against Cashions Creek Limestone walls and floor rubble.

Photo (GoPro still): Stephen Fordyce

Getting into the Armageddon Room was via the "Fridge Restriction" and required removal of butt-clipped reels and suit inflation cylinder, and a bit of wriggling, which took some time. Even at this early point in the push dive, the possibility of surfacing in a new air chamber was quickly evaporating. The enticing void beyond the triangle hole was found to be a squalid, nasty thing (although trending up a slope), with enough space to turn around and tie off the reel but not much else. The highest point reached was 52 msw, a couple of metres beyond the tie-off point, with rubble and rockpile pinching off to the ceiling.

While a second set of eyes never hurts, I sadly pronounce the centre lead a "no go". Getting in, and then out again is not a trivial exercise and would only be possible for an experienced sidemount diver. About 10 m of 3 mm orange line was added (not surveyed) and left in place - it will be interesting to see what this does after some time in higher flows. Compared to other parts of the cave, more flow would have been expected. Most likely this is just due to flow filtering through small gaps in the rockpile, but it's also possible there may be a bypass and another way on. Other sump dives further upstream in the master cave system have been in relatively small, uncollapsed passages that I feel may be recent bypasses of more ancient collapses and rockpiles.

Historical Chris Brown reel (from the 1999 expedition) sees the light of day again. Photo: Stephen Fordyce

"In what turned out to be a supreme team effort, knotted line was laid, surveyed, and retrieved, as most of Sump 2 had previously only been surveyed via ready reckoning"

In the spirit of leaving the cave environment in better condition than we found it, a good deal of old line was retrieved from Sump 2 and brought out - particular kudos goes to Dave for the time he spent on this task. Alas the deep section still has as many as four lines running in parallel! Also recovered was a reel with "Harry" on it (the day before he became Australian of the Year - it's no doubt now worth millions) of vintage approximately 2009, and a Chris Brown reel/heirloom dating back to the 1990s. Nothing was left in the cave apart from some of the "clotheslines" set up to help keep the large amounts of gear tidy/out of the way. We were careful to stay in the stream or below the winter high water marks (with a few already well tracked exceptions), and were confident that our impact was minimal. Three discrete signs were placed in three areas with sensitive mud banks in For Your Eyes Only. The signs are small plastic plant tags about 50 mm x 40 mm, marked with permanent ink asking visitors to avoid the mud banks. No other protective measures were considered necessary.

In what turned out to be a supreme team effort, knotted line was laid, surveyed and retrieved, as most of Sump 2 had previously only been surveyed via ready reckoning. The result is not perfect, but a reasonably accurate survey is claimed and we have in fact reduced the length of the cave. Gathering more survey data should be on the list of future visits. *Anaspides eberhardi* (a species of cave-adapted Tasmanian mountain shrimp) were everywhere in both sumps, and pale native fish with eyes (*Galaxias truttaceous*) about 20 cm long were spotted, including near the far end of Sump 2.

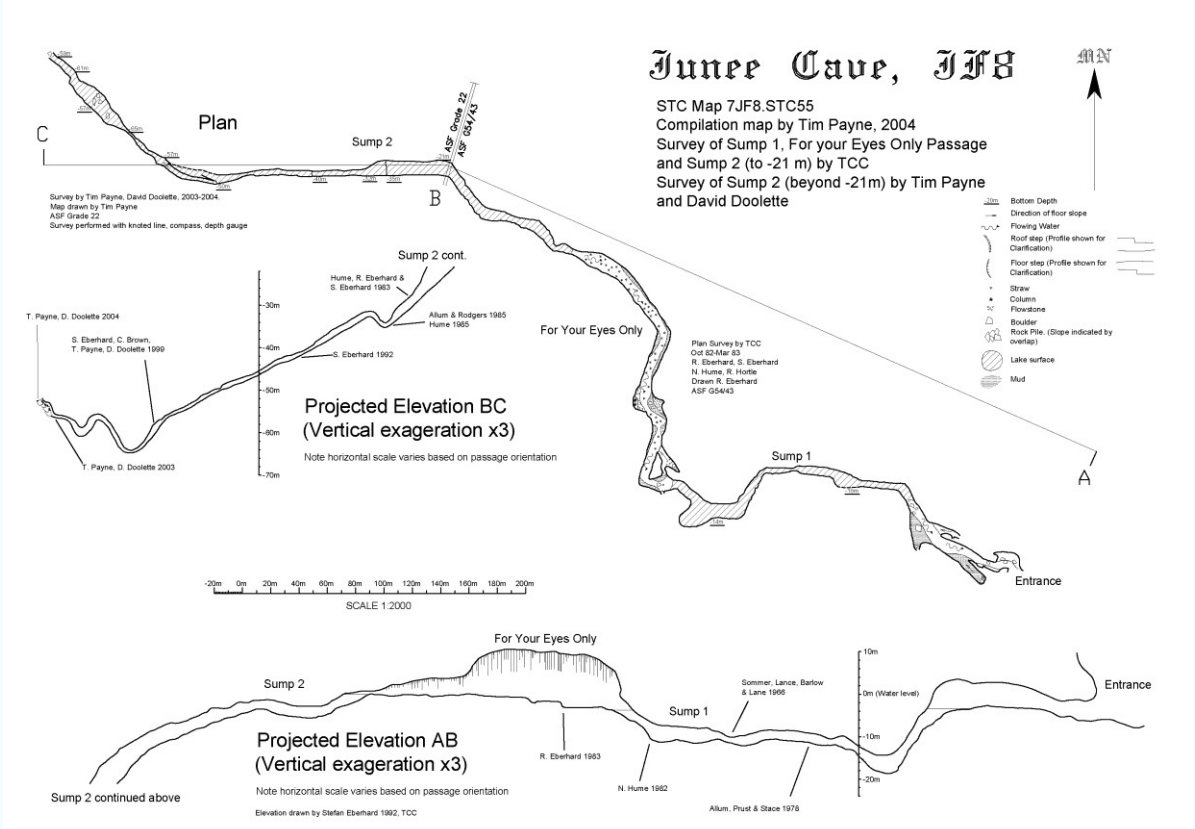
Black rock characterises much of the cave, including the Sump 1 home-side pool. Photo: Stewart Donn

A lot of video footage was taken with a Sony A7iii and Keldan lights in FYEO and Sump 1 (although it was quite silty when filmed) and while there is rather average GoPro footage available of all of Sump 2, it would be fantastic to film it with a better camera and video lighting. This would take some co-ordination and a bit of luck. Sump 2 didn't start crystal clear, and silt was disturbed easily, although visibility was never low enough to be a big worry (either in or out). At this stage, a return has not been written off, but is not planned either. There are still things to do and leads to check and push-best of luck to any who venture there.

Thanks again to everyone on the team, and to the ASF for its generous support. A special thanks to Andrea (with assistance from Stewart) who over-catered so drastically that the entire team was fed a delicious dinner on more than one occasion. Honourable mention goes to the owner of our accommodation, for leaving a slab of beer in the fridge for us.

Further details (dive profiles, gas mixes, schedule, thermal considerations and more) are available in the Addendum to this report (*following immediately - Ed*).

The obligatory team brag pic. Left to right: Stefan Eberhard, Stephen Fordyce, Patrick Fitzgerald, Grant Pearce, Andrea Russo, Steward Donn, Dave Apperley Photo: Stefan Eberhard



Existing map of Junee Cave - compiled by Tim Payne, including original survey from entrance to 22m depth in Sump 2 by Tasmanian Caverneering Club.

JF-8 Junee Cave, ASF Diving Expedition Report – Addendum

January 2019

Stephen Fordyce

Well it seemed like the report was just about at capacity but there was still all this gold left. Odds and ends, notes and suggestions. The sort of stuff that will hopefully be invaluable to anyone planning a return to Junee Cave.

Junee punchlist - jobs for next time:

- Make a better video record (it will need to be on the first dive)
- Check the Sump 2 walls better - the left hand wall (on way in) seems unlikely to yield anything, but the right might. The shallows give the impression of being wide, flat and more meandering (and are well worth a check) than the steep slope from about 18 m down to 63 m. The left (while going in) wall did seem to be fairly vertical, the right wall was perhaps more of a slanted ceiling, and there was no indication of side leads. With a biggish team and lots of light, a new video record and wall check could be done together.
- Push the right-hand end lead
- Second set of eyes on centre and left leads
- Wall check in Sump 1 - it's been done, but it's quite fascinating, and there is a theory that more water comes out of Sump 1 than goes in (i.e. there's an infeeder in there)
- Re-survey Sump 2
- Continue line replacement (a whole lot of 7 mm Telstra line will probably still be available)
- Remove old line in deep section

Gardening efforts at the end:

The triangle hole is ... not going to look like the photo in the report. The way to get into the Armageddon Room is to the left and then up through a slot (should be obvious if the line survives, as I think it will). Get in touch if you want to hear more.

Survey:

A concerted effort was made to fully re/survey Sump 2. Data was collected for the entirety of the sump, with some cross-check data also collected. I believe the result is ... reasonably accurate. I have made a number of leaps of faith and massaged a few bits of data to come up with the result. Another go at it next time would be nice.

Statistics:

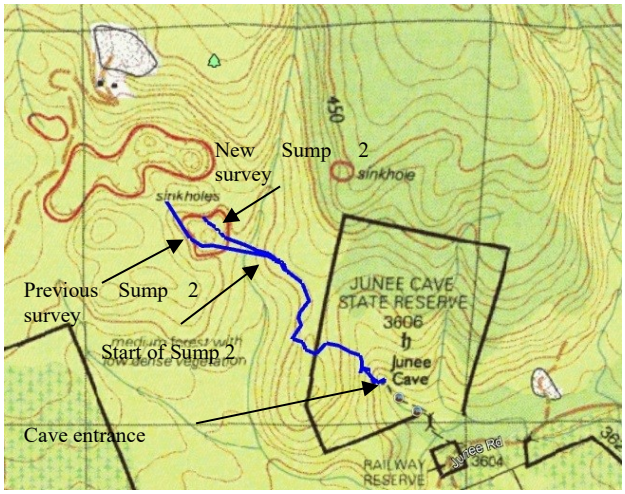
- The updated Sump 2 surveyed length is 300 m
- There is a surveyed distance of 535 m from the entrance to start of Sump 2

According to the survey, the deepest point in the sump is 64.4 m below the JC1 station at the mouth of the cave. With the depth of this point recorded as 63.8 mfw *(metres fresh water -Ed)*, in reality (allowing for drops through For Your Eyes Only and also in the streamway near the entrance) the cave at this point is probably about 5 m higher than the survey indicates. If the cave entrance is in fact at 291 m ASL, then the deepest point in Sump 2 is estimated to be at about 230 m ASL, and the terminal rockpile at 220 m ASL.

The topographic maps of the area show the giant dolines which Junee is heading straight towards (and indeed, appears to be under) as having their bottoms at about 325 m ASL. As such, there is some 100 m of vertical gap between the two, and only 50 m from the bottom of the dolines to the surface towards which the sump appears to be heading.

I have visited these dolines (*SS 421*) and the four connected ones are giant, old, and have little to no indication of entrances (or even rock). The most eastern pit is the most prospective, but still a very long shot. The doline under which Junee currently ends, is smaller, less choked and does have visible rock. No draft was observed and if not for the location, it would not be a good prospect. It would be a desperate dig, but perhaps a worthy one.

I don't give up all hope of cave passage bypassing the dolines. The main multi-doline is obviously old, and has had a lot of stuff washed into it. Perhaps the stream has made another way, that may yet allow passage by humans.



Misc survey notes:

1. I've tied survey station JC1 to the (2009) GPS co-ordinate from the STC archive. Previously, the GPS co-ordinate was tied to station JF8, but this is inside the cave (see file "JF-8 Junee Cave.jpg") so very doubtful.
2. The original survey data of Sump 2 is still in the file but is disconnected (will show as warnings on compilation)
3. The shot R19-07 to 2019_PF_2 doesn't look right and is probably bogus.
4. My depth readings were in metres salt water and they are converted in the data spreadsheet. Pat's were in metres fresh water so didn't need conversion.

Day by day rundown:

The schedule seemed to go quite well. I would run essentially the same one if visiting again.

Previously ... Dave had done a lot of work tidying line in Sump 2.

Day 0: Orientation trip to the sump in the afternoon.

Day 1: Set up/prep gear (regs on tanks, rebreathers readied, drytubes packed, etc.). Leave for cave after lunch. Portage all gear to Sump 1. Set up Sump 1 home side clothesline. Quick dive (for those interested) through Sump 1 to check the line, ferry some gear, plan routes and placement of gear piles to avoid damage to the cave, and have a quick orientation up to the start of Sump 2.

Day 2: Shuttle all gear through Sump 1 and through For Your Eyes Only to Sump 2. Set up Sump 2 clotheslines (Sump 1 far side assessed and not required) and clip off deco cylinders and wet dive gear in the water. Set up "The Corner Shop" dry base on the closest beach to Sump 2. Test the stove and other gear. Make ready as much as possible for deep dives the next day.

Day 3: Deep dive #1 (136 min)- cave orientation, Sump 2 video record/lead identification, line fixing, place staged bailout cylinders, general shakedown. The entirety of Sump 2 (including the far end) recorded on GoPro.

Day 4: Deep dive #2 (166 min) - survey the deep section, push centre lead, stage more bailout.

Day 5: Deep dive #3 (154 min) - push centre lead harder. Linework/survey of other sections.

Day 6: Deep dive #4 (187 min) - push through the Fridge Restriction into the Armageddon Room - the cave is unlikely to go further from here. Approx. 10 m line laid, up to 52 m depth.

Day 7: Rest day from deep dives. Linework/survey of other sections.

Day 8: Deep dive #5 (194 min) – clean-up dive. Retrieve gear from the end of the cave, retrieve survey lines and reality check some bearings, retrieve staged bailout cylinders.

Day 9: Pack up Corner Shop, take all gear off Sump 2 clothesline. Portage back to Sump 1, shuttle through Sump 1, portage out to cave mouth, transport back to carpark. Lay gear out for brag pic, and pack cars for departure the next morning. A big day, but even with standing around chatting and taking photos, not ridiculously so.

Day 10: Another hour or two of packing cars in the morning, then departure.

Temperatures, and Thermal Protection:

Exposure, more than any other factor, was the limiting factor for just about everything.

The cave water was 7˚C (6˚C in the deep section of Sump 2), and the cave was near enough to this also. The weather outside ranged from 15 to 35˚C. Different exposure protection was required for different scenarios (i.e. short active dives, portaging gear, long deco dives, etc.). Below is what I did, and would do again.

- Portaging gear to the cave mouth:
  - Shorts, T-shirt, hat and sunscreen
- Changing into drysuit:
  - On the "high and dry" rock platform just inside the mouth of the cave (bring a tarp) where it's cooler
  - I still had to get into the water as quickly as possible to avoid sweating
- Portaging gear to from cave mouth to "beach" near Sump 1:
  - 3mm wetsuit, or whatever you're wearing. Gloves optional, hood not needed.
  - Expect a few sections of waist-deep water, some rock-hopping and also knee-deep water
- Sump 1 transit dive:
  - I was ok in high quality 7 mm semi-dry (with explorer socks, wetsuit socks, wetsuit boots), dives varying from 6 to 25 minutes.
  - Others were ok but getting chilly in their "standard Mount Gambier kit"
- For Your Eyes Only portaging (Sump 1 to Sump 2):
  - Overheating and sweating in a drysuit is a major consideration here
  - Drysuits also tend to be less flexible, more likely to be damaged on sharp rocks (especially lower legs), and require considerably more energy expenditure as a result of both
  - I wore my high quality 7 mm semi-dry (with explorer socks, wetsuit socks, wetsuit boots) for portaging on setup/clean-up days. I wasn't cold at all (despite stopping at times to sort things out) and didn't have to worry about sweating.
  - The wetsuit socks under wetsuit boots made a big difference, well worth doing
- For Your Eyes Only transit (Sump 1 to Sump 2, carrying minimal load):
  - Wearing two undersuits and my drysuit (and carrying no load), I had to move slowly, and frequently stop/swim to prevent overheating and sweating,even with hood off.
  - This is why the setup and clean-up days were so important to me.
- Sump 2 no-deco dive:
  - Open circuit dives were done by Stewart up to 30-45 minutes, which were about the limits of his thermal endurance, in supplemented Mount Gambier undergarments.
- Sump 2 extended/deco dive:
  - Maximum runtimes of 60 minutes were about the average limit of thermal endurance without heating. 5 mm wetsuit gloves were sufficient for some divers, inadequate for others.
  - Runtimes of 3+hrs with heating and in reasonable comfort were completed

- I wore a trilaminate drysuit, with Halo3D undersuit + Fourth Element Artic undersuit + 2 layers polypropylene thermals (one of which provided about 60W of active heating). Two pairs of explorer socks plus polypropylene heated socks (which didn't do much). My toes would go numb and feet get very cold by the end of a long dive, as would my face and lips. Apart from that, deco was quite ok.
- The dependence on heating was quite sobering, and the stage battery was actually left at 6 m in the event of heater battery failure.
- Gloves: 5 mm wetsuit gloves were the minimum used for long dives (3 mm used for Sump 1 dives and portaging), and successfully by some team members for dives up to 1hr in Sump 2. Dry gloves were also used and were effective. My hands got pretty cold and useless in 5 mm wetsuit gloves at depth and on deco, but were quite happy once I turned my wetsuit glove heating on (approx.. 25 W per hand). I generally did the entire dive with glove heating on. Note that the glove heating drastically impacted my compass!

Other useful gear:

Several things were used to good effect for possibly the first time in Junee. Plus others worth remembering for next time:

- Wheelbarrow (for portaging car to cave, Olwolgin-style) - highly prized by nearly everyone
- Note the path was judged too narrow and rooty for a trolley. Hiking packs were also used - much easier than the wheelbarrow, but much less payload.
- Tarp for changing in the mouth of the cave
- A tarp for The Beach (home side of Sump 1) wasn't necessary
- A tarp for The Corner Shop (Sump 2 store) was good for repacking sorb on
- Scooter - my 1000 Wh battery was sufficient to do three trips to the end of the cave and back, plus ran heating for most of my deco, and didn't need to be taken out.
- For the saving of time and effort to get to the back, it was well worth carrying in.
- There are a few low sections, it's low vis, and stirring up silt should be avoided, so a reasonable amount of cave scootering experience is necessary
- Stage battery (1400 Wh) - also ran deco heating, and didn't need to be taken out (was left at 6 m as spare heating, wasn't used much)
- Drytubes and caving bags for transporting sorb, snacks, spares and gear through Sump 1
- Caving bags or hiking packs for portaging through For Your Eyes Only
- A small caving bag stuffed with Telstra rope for replacing line (similar to canyoning rope bag method)
- A catch bag for stuffing old line into (there's a whole lot of it still in there)
- Thick bungee loops with labelled survey station markers - put the loop on a rock so it stays if the line breaks or washes away.
- undersuit heating, and also glove heating (see dedicated section)

Conservation: take nothing but ancient reels, leave nothing but ... clotheslines?

We were aware (and had been reminded) that portaging a large amount of gear and having a rather large number of people in the cave greatly increased the risk of damage, particularly in the rarely visited and fragile "For Your Eyes Only" section. One objective of the checkout trip into FYEO on the first setup day was to check the route and gear staging places.

By staying in the stream (in almost all places, the easiest route anyway) apart from a few obviously pre-loved climb-arounds, and mud banks certain to be washed clean in the next flood, I think we were successful in making no additional lasting impact. Gear was staged at:

1. The Beach - sandy/muddy low area near the start of Sump 1
2. Sump 1 clothesline - Telstra rope rigged to hang gear in the water, independent of but next to the guideline, ready for shuttling through the sump
3. The Sump 1 sandbar (far side) - gear was left partly submerged and clipped to guideline, plus left on a low mudbank
4. The Corner Shop (30 m back from Sump 2) - a mud/pebble shelf just above river level
5. Sump 2 clothesline - Telstra rope rigged to hang gear in the water, independent of but next to the guideline, ready for gearing up
6. Sump 2 - various bailout cylinders, and spare heater batteries were left at relevant places underwater

The clotheslines were left rigged in anticipation of being useful and as an aid to conservation for the next visitors. The Corner Shop, old line, leftover food, old sorb and everything else was cleared out. Survey markers on bungees were left on rocks through Sump 2, while the knotted survey line was removed.

In the spirit of leaving the cave better than we found it, a good deal of old line was retrieved from Sump 2 and brought out. Alas the deep section still has four lines running in parallel. Also recovered was a reel with "Harry" on it (the day before he became Australian of the Year - it's no doubt now worth millions) of vintage approximately 2009 and a Chris Brown concoction dating back to the 1990s.

State of the cave & line:

- The primary tie-off is to a spit style bolt placed in 1992 in the wall just above water level. A clothesline for hanging tanks and gear is very close but not connected.
- If you are leaving bailout at 6 m, you'll want to wait until the 3rd (?) time the cave goes below this depth!
- The top section of the cave is mostly 6-7 mm line in reasonable condition. There are few if any line arrows, and some tape distance markers which are no longer relevant.
- In about 17 m you may notice a microwave-sized rock which has fallen on the original thick line and has been bypassed by orange line. This marks "Andreas' lead".
- Be prepared to repair line, especially from about 50 m to the deep point at 64 m. It appears to have decent flow, and the rocks are very sharp here. The rest of the horizontal deep section has plenty of lines which all appear intact (although partly buried) - perhaps pick the best looking one and pull it out of the silt as you go.
- Similarly, be prepared for unexpected line-breaks which may occur when the line is gently pulled on near a frayed point, which are not always obvious. Two unexpected line-breaks occurred on dives in the second sump, much to the surprise and consternation of the divers, who fortunately were able to repair and re-join the severed sections.
- Visibility was never zero (despite much fluffing and occasional poor technique), and the way on generally obvious.
- The thin white knotted line which we had to leave is the most recent. Near the end it goes close but is not connected (maybe 0.5 m jump) to the orange line which heads right/up and into the Armageddon Room. The white line continues up into the right hand lead, and ends a few metres before the furthest point.

Diving Information:

For dive duration, see the section on schedule. A 2.5 to 3 hr dive was typically required to spend 20-25 minutes at depth, using gradient factors of 50/70. Thermal protection and heating has been covered previously - I'll mention again that this was the determining factor in dive duration.

Gases used were:

- Deep bailout, and rebreather diluent: 15/55 (15% oxygen, 55% helium, balance nitrogen)
- Mid bailout: 50/15
- Shallow bailout: 100/0

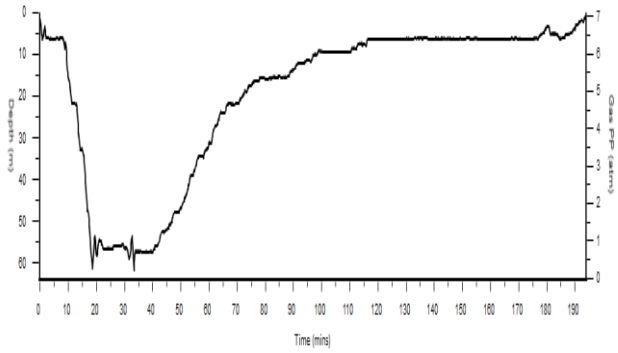
Using the same deep bailout and diluent meant that we could transfill from large bailout cylinders into small diluent cylinders at The Corner Shop, rather than taking them out of the cave. The same applied to oxygen.

The deep mix was selected to allow for some extra depth if needed, a good buffer against narcosis and also with consideration to keeping gas density down. There's a spreadsheet if anyone is that interested. Yes, there are too many 5s in the bailout/deco mixes!

Each diver carried a minimum of a 12 L steel of deep mix bailout, and we staged Sump 2 bailout at:

- 3 m: 40cf of oxygen
- 6 m: 2x 40cf of oxygen, 1x spare heating battery
- 21 m: 80cf of 50/15
- 57 m: 80cf of 15/55
- (another 80cf of 15/55 was also staged at the end of the cave for the push into the Armageddon Room)

I used a pair of 5 L cylinders as dedicated diluent and oxygen cylinders and got at least three dives from them. Larger cylinders were advantageous when filling by transfilling, as a low pressure fill was still plenty for a dive. I had also carried in a set of 3 L cylinders, and used these on one dive, with a fair bit of gas left. A 40 cf of air ran my drysuit and wing inflation for four dives (given the nature of the cave, I was happy running both from one source to conserve diluent and had hoses on other cylinders if necessary). Fresh sorb was used for each dive.



Fairly typical dive profile - this one being from the cleanup dive

For Sump 1 transit, I used a pair of 7 L tanks. I could easily make a return trip breathing only the one tank and still having a healthy safety margin - this tank was then the only filling required each night. A typical transit trip took about 10 minutes. My fastest trip through Sump 1 was 6 minutes and using 450 L of gas (65 bar from one 7 L). My slowest trip through Sump 1 was 23 minutes.

MC-202 Herberts Pot

17 February 2019

Janine McKinnon

Party: Cath Hemley (NC), Steve Jacobs (NC), Janice March (NC), Janine McKinnon (STC), Bob Pennington (NC), Ric Tunney (STC)

The cave has been closed since the mid '80s. Initially, if I recall correctly, because the farmer stopped allowing access across his property. Then "Parks" gained ownership somewhere along the way and closed it. Now it's gated and they are working on a management plan prior to opening it up for caving by ASF members. Hopefully not too long a time away. Those of you who are really interested in correct history can check all this up. I can't be bothered.

So we are now in the phase of assessment and familiarisation trips into the cave by members of the Tasmanian caving clubs. This was the second of these trips, the first having been the day before. It was a joint effort, as the party names attest. We could have done our separate things in there but we all decided it would be more efficient, and fun, to make it the one group.

The walk to the cave is now about 50 minutes, through National Park land and skirting around the above-mentioned farm. This is a pity as access across the farm allowed for a much shorter route. There is a track of sorts, which is really just a taped route in places, but the walk is easy by southern standards.

Janice at the gate

Photo: Janine McKinnon

We finally got underground at 11 am. The entrance series has its moments of confusion in route finding but they didn't delay us for more than a couple of minutes here and there, as opposed to the hour we spent trying to find our way through a rockpile in the main streamway, but I jump ahead a bit here.

The entrance series was sportier, with narrower passages, than I had remembered ... in that I hadn't remembered it at all and thus assumed it was an easy stroll not worth remembering. It took us until 12:30 pm to arrive at the junction with the main stream. Our plan for the day was to go downstream, which after a short lunch break we did.

We had an easy run for 50 metres or so, then had a rockpile to find our way through. Onwards to a small 3 m climb down a waterfall and we thought we were now flying through the cave. Dangerous hubris here as we promptly found the way down the stream at the bottom of the climb blocked. We found a way into a small side chamber and then followed a few cairns up through rockpile into a large room above the stream. An hour was less than pleasantly spent trying to find the way on from here, which eventually proved to be back down at water level and through a gap in the rocks we hadn't seen (having been distracted by the cairns leading upwards).

Things got a bit faster from here. We strolled easy passage, and scrambled through various obstructions, for a short while. Then we found the stagnant pools with deep, squelchy mud. Ric decided he'd had enough at this point and turned back before entering the first pool. The rest of us laboured through a few of these before the lost stream reappeared and the floor became nice, wet stream and not mud.

After some few hundred metres (purely a guess here) we came to a deepish-looking pool. There had been a large side passage heading up a short way back so, as it was close to our turnaround time, we decided to look at that and then head home. Deb Hunter having told us the previous night that the way to the downstream sump involved some distance of deep, deep, glutinous, gumboot sucking mud didn't affect our decision at all, at all.

Obligatory Mole Creek pretties snap

Photo: Janine McKinnon

This passage led up steeply into a large chamber. The floor was large clay blocks and we didn't want to damage them. They were pristine. We went a short way along the passage, stepping carefully on the blocks, and reached a point where further progress might damage the floor. We decided to retreat from here and the next party is to bring track delineating gear and carefully mark a route to the end of the passage that will cause the least damage.

This was 3:40 pm. We retraced our steps and were back at the junction with the entrance series in 40 minutes! That shows you the time difference in knowing where you are going (pretty much) with not having a clue.

We stayed as a group on the way up and until the 25 m pitch near the top. I prusiked up first and then headed out of the cave. I exited at 6 pm and found Ric waiting. The others emerged at 7 pm.

We got back to the cars at 8:20 pm.

I look forward to re-visiting the rest of the cave, soon hopefully.

Not So Many Falls Creek

23 February 2019

Alan Jackson

Party: Serena Benjamin, Alan Jackson, Gabriel Kinzler, Janine McKinnon, Chris Sharples

2019 is the year of the canyon (for me, at least). On a whim we decided we'd check out the 'tributary most likely' in the Moonlight Ridge area. The various aerial photography layers and topographical maps, combined with our firsthand knowledge of what nearby Many Falls Creek does, suggested it should be good (at least until the horrible long slog out from the bottom).

"This was when we realised we were in the wrong creek."

Progress up the Southern Ranges Track wasn't too bad. At the turn off point I clearly got a little relaxed and decided that consulting an electronic navigating device wouldn't be necessary and we eased our way over to the edge of the ridgetop through the recently burnt ground until we hit the slopes and the scrub. We did a bit too much west though and without realising it ended up in the tributary of the target tributary (the stream marked on the topo to the west which the cartographers lose for a couple of hundred metres before it joins the other creek). It started badly (dense prickly scrub) then transitioned to more open but almost as difficult (horizontal scrub) then finally relented in some exposed bedrock in the stream bed and a small waterfall. We didn't need to abseil it but we had the gear and were mindful that it might be the only one we found all day so we rigged it down the ~12 m waterfall instead of scrub bashing (easily) around it. Then it really went to shit.

The volume of water doesn't ever seem to be enough to clear a decent vegetation-free channel so it was ducking and crawling and climbing the obstacle course of timber for far too bloody long. Then the gradient flattened out and it got properly scrubby. We stopped in a patch of sunlight for a dejected lunch stop and switched on the GPS to see how we were going. This was when we realised we were in the wrong creek. We pinned our hopes on the going getting better once we joined the target creek and soldiered on through the crap. To our relief the target creek was presented via a lovely sandstone slab cascade into an open creek bed with sun and no bloody scrub (*that was a nice surprise - Ed)!*

Downstream the going quickly started looking really good and the geology changed from sandstone to dolerite (Chris has his uses). The next few hundred metres were very enjoyable with loads of small waterfalls and scrambles which could mostly be negotiated without rope. One ~15 m waterfall certainly needed rope (although it was pretty deep-looking at the bottom, so maybe foolhardy souls could jump it). We chose a line off

Hmmm, It's down there, is it?

Photo: Gabriel Kinzler

a particularly small 'tree' which placed us on the far side of the plunge pool which was thankfully only mid-thigh deep. Shortly after the only proper abseil there was a tricky little 3 m drop which needed at least a handline (rigged off a wedged log 15 m upstream) and then shortly thereafter the party members could pick or choose whether to abseil small drops or do slippery scrambles instead.

Gabriel in action, trying not to get TOO wet on landing

Photo: Janine McKinnon

Eventually it petered out and became a steep boulder-filled channel for a bit then hit the lively Many Falls Creek (with MUCH more water in it then in early January). Then the long tedious rock hop down MFC to the D'Entrecasteaux, then Exit, then the Skinners Track. All up about 15 km in ~12 hours. You could do it in 9 hours easily enough with super fit morons instead of just morons.

So, what did we miss and is it worth going back to do it properly? The aerial photography suggests the majority of the creek upstream from where we intersected it is open with exposed sandstone creek bed (like MFC). Whether they're significant waterfalls or not can't be drawn from the images (*maybe an SRT trip down to the junction and back up? That would be a much easier day ...I think) - Ed)*. What I can be sure about is that the accidental tributary we did is definitely not worth returning to EVER (*concur - Ed*)!

I think the next two targets in this general area are the two main creeks draining to the north of Moonlight Ridge (Moonlight Creek and the unnamed one to the west). Moonlight Creek looks like it has two good sections separated by a long boggy slog and is the pick of them. The other one looks a bit shite.

Other Exciting Stuff

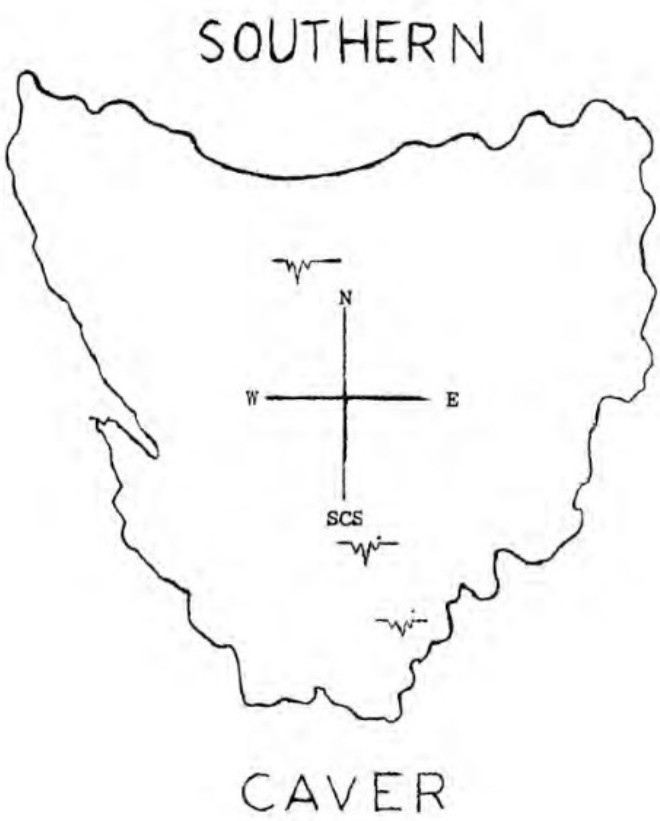
FROM THE ARCHIVE

Just for a bit of difference, here is the cover of the first Southern Caver *magazine (yes, obvious). For those of you too young to remember, or not read up on your STC history, this is the magazine of the Southern Caving Society (SCS), a splinter club from the first Tasmanian caving club, Tasmanian Caverneering Club (TCC).* (Southern Caver *continues as an occasional journal of STC). STC is a re-merger of these two clubs (and a third, Tasmanian Cave and Karst Research Group).*

Simpler times, much simpler graphics.

Note that it cost 25 cents. Speleo Spiel *at the time only cost 10 cents! Rip off I say, unless it had more than twice the information value or content. Old SCS and TCC members can now start a lively argument via Letters to the Editor. I await with baited breath.*

Vol. 1 No. 1

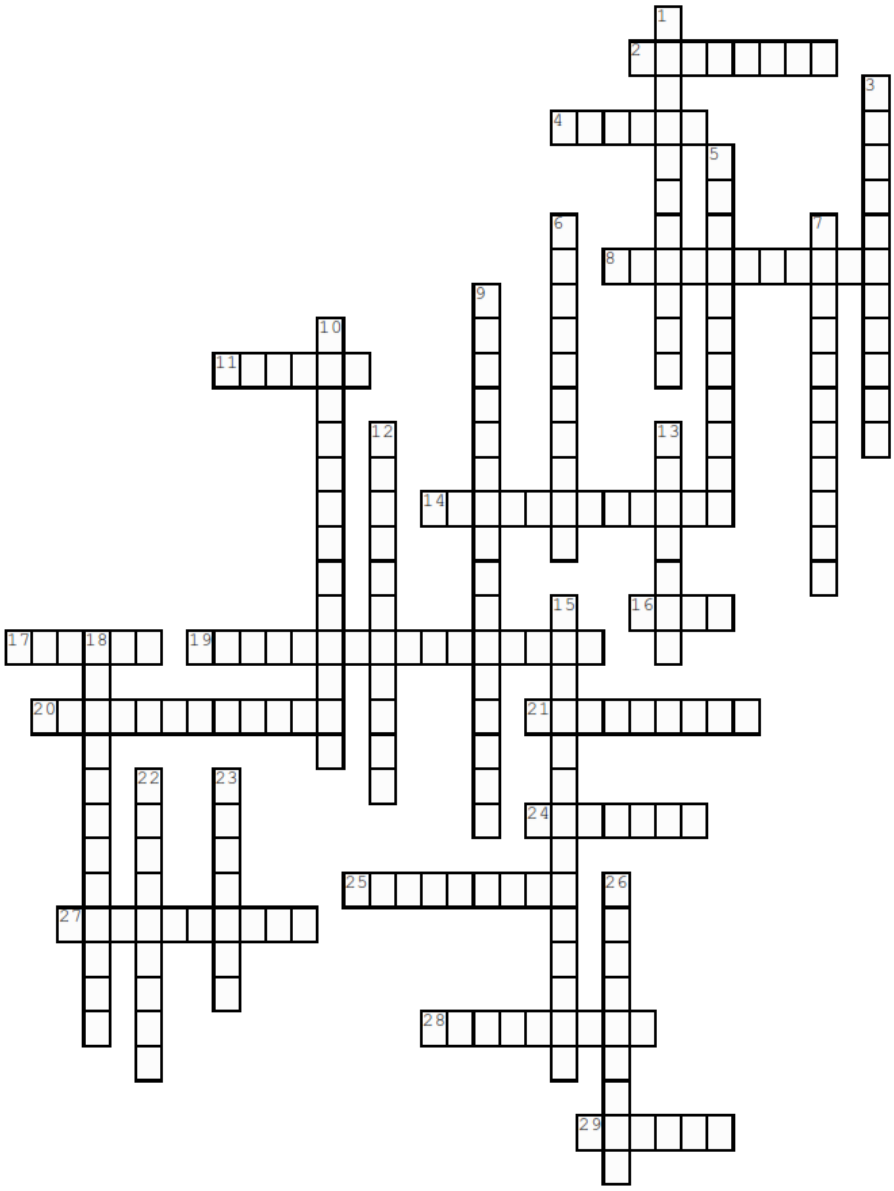


Price: 25c July, 1967

Published By Southern Caving Society, 139 Augusta Rd., Lenah Valley, Tas., 7008

Fun and Diversions

Tasmanian Caves

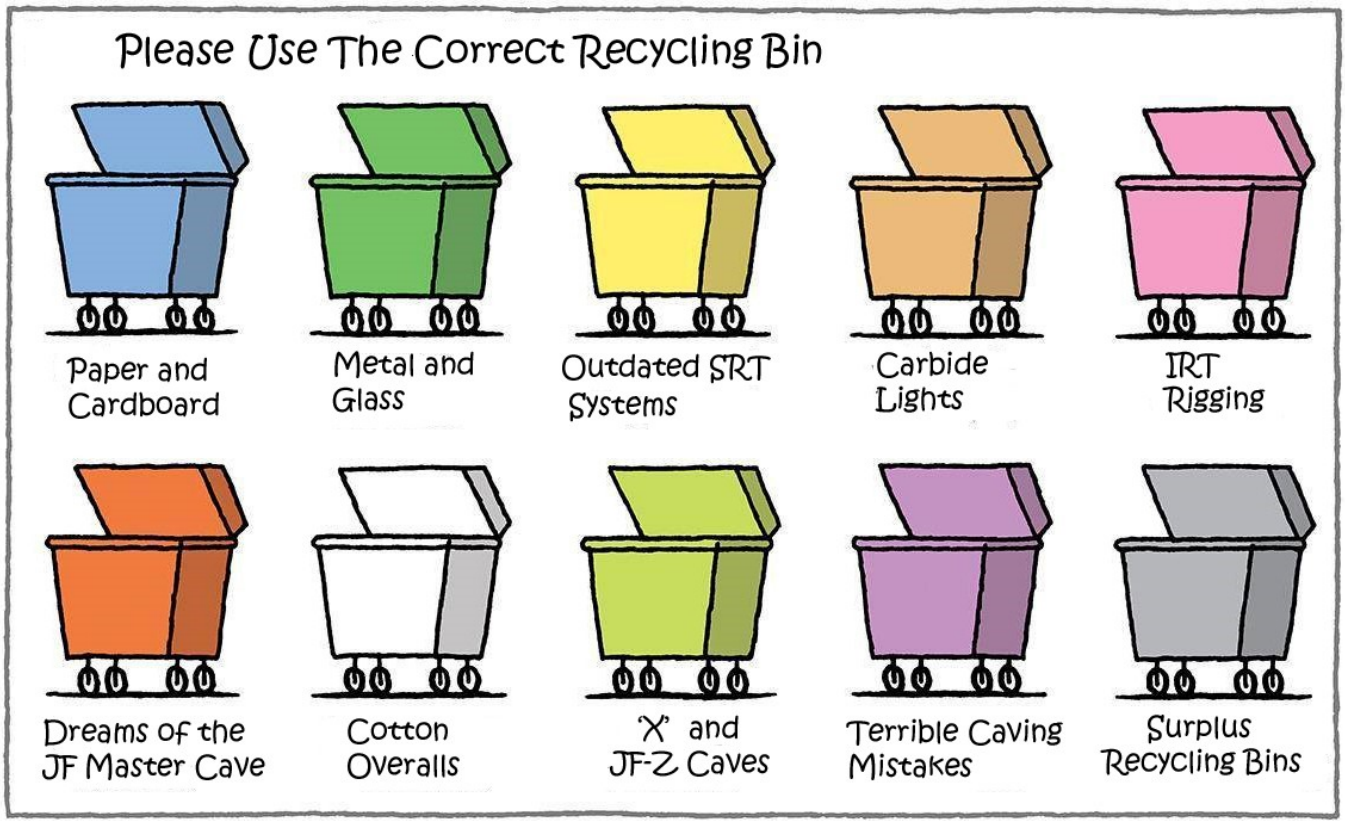


Across

2. Witches love this cave.
4. Bilbo's sort of cave
8. Titus is the Peake character
11. Very edible, the monster loves them
14. Give up, it's hopeless
16. Beware of hostile natives
17. A good cave to take someone you want to get rid of
19. Friendly to someone you don't know
20. Head of the Board
21. A rock it is
24. Hangs nicely around the neck
25. A endemic Tasmanian tree
27. Samuel Taylor Coleridge
28. Hard to keep the bees away
29. It's a long walk uphill

Down

1. The Archer in the sky
3. Watergate informant pseudonym
5. Do you get lost ?
6. A surprising disclosure, or alternately a good read for some types of religiou folks.
7. The home of evil
9. They have one of these in Canberra
10. Is anyone this wise?
12. Don't forget to close this when you leave home
13. Can anyone be that rich?
15. Compulsive gamblers often had this.
18. Computer in Hitch hikers Guide to the Galaxy
22. Not a popular type of vocals
23. Deserts, Dunes and science fiction converge
26. midget dwarves live here



Apologies to Tom Gauld for stealing his idea.

Book Reviews

Janine McKinnon

Post the "Thai Cave rescue" last year a plethora of books on the subject have been appearing. It appears this was a godsend for Ric in the present department as I received one for my birthday and another for Christmas, three days later. Hopefully he won't take my enthusiastic reading of these as a sign to continue this trend for future present requiring events. There are quite a few more out there.

So here is a review for each.

The Great Cave Rescue by **James Massola.**

This was one of the first of the crowd off the presses and was published only about three months after the rescue. Obviously the author was trying to grab early interest. James is a reporter, the SE Asia correspondent for Fairfax Press, thus the style of writing is fluid and an easy read. It is written in a combination of narrative story and factual detailing. He gained interviews with some of the key players involved in the rescue and there is a lot of background detail that did not come out in the media reports at the time. He has also drawn widely on publicly available reported material from many sources. It seems an honest account, outlining at least some of the good, the bad and the somewhat ugly. Don't be afraid that there will be too much technical diving talk as this, and the others too, are aimed at the broader, paying, audience. So technical stuff is kept to a minimum.

I found the book an engrossing read. I recommend it.

The Cave by **Liam Cochrane**

Liam is the South-East Asia correspondent for the Australian Broadcasting Corporation (ABC). He took several months longer than James to research his book, and with a long career in the region he had many more contacts and an understanding of the Thai culture, politics and recent history. This, in particular, allowed for some very interesting insights and backstory of some events during the rescue.

Also because of the extra time he took, and his contacts and cultural knowledge, Liam gained many more interviews from important players and much more "behind the scenes" information than James achieved. He was present on site for much of the rescue and this added his personal touch to his narrative. There were some very interesting and somewhat surprising revelations that he discovered. Many times as I read Ric would hear: "listen to this…!", and remember, I had already read James' book. He, like James, also used information available in the wider media.

As he is also a reporter his writing style is similar to James' and is also an enjoyable and easy read. However, because of his personal involvement there is a greater "first person" feel to the book.

Of the two, I would read Liam's book in preference. It was riveting, and I had already read one book on the subject!

I don't think being a cave diver really had any effect on my immersion in this story. Happy reading.

The Last Page