



# FUSSI Newsletter

Vol. 31 | No. 2 | 2019



**THE FUSSI BACKUP TRANSPORTER  
on the way to the Australian Speleological  
Federation's Conference, Devonport. 2019**

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**Front Cover Photo:** FUSSI Members at the ASF Conference 2019. Devonport Tasmania

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# AGM 2019, Minutes and Reports

Meeting open: 19:00

Apologies: Imogen Marshall, Kendall Whittaker, Amber Flamank, Ian Lewis, Heiko Maurer, Edwina Virgo

Present: Clare Buswell, Tania Wilson, Will Cooper, Mark Sefton, Matt Timms, Neville Skinner, Andrew Stempel, Sarah Gilbert, David Mansueto, Dee Trewartha, Ida Moore, Thomas Varga.

1) Minutes from AGM 2018: Minutes accepted.

2) Reports for 2018, Presented by all on the 2018 FUSSI Committee.

- Verbal reports were given by the ASF Representative, Sarah Gilbert and the Public Officer, Thomas Varga. All other reports were tabled.

3) Elections for Committee positions for 2019 - Mark Sefton chairs the election.

- President: David Mansueto nominated by Sarah, Andrew Stempel seconds. Motion carried, David re-elected.
- Secretary: Dee Trewartha nominated by Tania, Clare seconds Dee's nomination, Kendall nominated by David, Sarah seconds Kendall's. Kendall elected.
- Treasurer: Tania Wilson nominated by Clare, Dee seconds. Tania elected.
- Equipment Officer: David Mansueto nominated by Clare, Thomas seconds. David nominates Andrew, Andrew declines. David elected.
- Safety Officer: Andrew Stempel nominated by Clare, Thomas seconds. Andrew elected.
- Librarian: Imogen Marshall nominated by Dee, Matt seconds, Will nominated by Andrew, David seconds. Imogen elected.
- Newsletter: Matt Timms nominated by David, Clare seconds. Matt elected.
- ASF representative: Sarah Gilbert nominated by Clare, Tania seconds. Sarah elected.
- Public Officer: Thomas Varga nominated by Matt, Sarah seconds. Thomas elected.

Elections for extra committee members:

- Membership Officer: Dee nominated, Sarah nominated, both seconded. Sarah elected.
- Event's Officer: Dee nominated by David, Matt seconds. Dee elected.
- Committee: Andrew nominates Will Cooper (in the role of as publicity and library assistant) Tania seconds. Will elected
- Committee: Edwina Virgo nominated by David, (in the role of extra Web assistant) Neville seconds. Edwina elected.

Bank Signatories: motion:

That David Mansueto, Tania Wilson are added as signatories to the term deposit, further, that Sarah Gilbert is added to the Blackwood and Hutt Street accounts bank signatories so that she can view only the financial transactions.

Clare moves, Thomas seconds. Motion carried.

Tania explains that the two operating FUSSI accounts, as distinct from the Term Deposit, are set up differently. The Hutt street account has less money kept in it and only requires one signatory whereas the Blackwood has the bulk of the finances and requires two signatories to operate. The Term Deposit matures on a 6 monthly cycle, falling due approximately in mid-Dec and mid-June. End Of AGM 20.00 hrs.

# AGM 2019, Minutes and Reports

## President's Report

The year, 2018 saw a surge in student members, courtesy of Dee both enlisting many new recruits (reports of underhanded techniques remain unsubstantiated) and securing FUSA Pool funding to subsidise their membership fees, while on the executive there was much gnashing of teeth as the new president decided they should actually act as such.

In 2018, FUSSI sent the 2<sup>nd</sup> largest group to the ASF conference in Tasmania, nearly edging out a local club for top spot. This was achieved through the efforts of many members, flipping snags and FUSA funding, not to mention considerable cat herding by Clare. FUSSI cavers explored the depths of Mole Ck, Mt. Cripps and the few bits of southern Tassie that weren't on fire. Local trips to Yorke Peninsula, Southern Flinders, Naracoorte, A5 and Mt Gambier.

A theme on rescue and communications permeated events, with talks by Ian Moffat, Ken Smith and Harry Harris, including practicals, culminating in an inter-club cave rescue weekend at Corra Lynn including a real-time rescue scenario; a theme that will hopefully continue into 2019.

Member of the executive have attended multiple South Australian Speleological Council (SASC) meetings, discussing landowner liaison, cave access, the Nullarbor Draft Management Plan and, of course, the 2021 ASF Conference here in SA.

In terms of IT, notable changes include the instigation of cloud-based club storage (Dropbox) for both general members and the executive; provision of a digital password manager for executive members (KeePass); migration of the FUSSI website from our own domain (fussi.org.au) to an ASF sub-domain (fussi.caves.org.au).

Membership management has undergone a major change, moving to centralise all membership records within the ASF member database, thanks to Sarah and Clare. Further changes were made to the digital mailing lists, moving from a list within the FUSSI Gmail account to 'Google Groups', thanks to Sarah and Clare. Moving forward I am looking to facilitate ongoing management of these changes with the instigation of a 'Membership Officer'.

Events management is also being fine-tuned, with the instigation of an 'Events Officer' in response to complications in centralised management. The Events Officer will formalise and advertise events, with registration occurring exclusively via event-specific Google Sheets.

We discovered FUSA funding deserves more delicacy than previously given, with the Executive agreeing to be more considered regarding Pool Funding applications and maintaining a 'wish list'. O-Week 2019 did not see the vast numbers of student signups of 2018; voices have been heard muttering the fees are too steep...

In the great tradition of Heiko Maurer, in the coming year I hope everyone has a grand time grovelling in the dirt, while the exec discusses a FUSSI membership fee restructure.

David Mansueto,  
FUSSI President 2018.



# AGM 2019, Minutes and Reports

## TREASURER'S REPORT

<b>Overall Summary</b>					
<b>Opening Balance</b>	<b>Income</b>	<b>Expenditure</b>	<b>Closing Balance</b>		
\$14,693.63	\$19,365.23	\$16,756.98	\$17,169.63		
		<b>Difference</b>	\$2,608.25		
	<b>Hutt St Account</b>	<b>Blackwood Account</b>	<b>Term Deposit <sup>1</sup></b>	<b>Petty Cash</b>	<b>Total</b>
<b>Opening Balance</b>	\$1,113.59	\$7,551.76	\$5,663.24		\$14,328.59
<b>Closing Balance</b>	\$873.51	\$10,267.84	\$5,796.03	\$232.25	\$17,169.63
<b>Difference</b>	-\$240.08	\$2,716.08	\$132.84	\$232.25	\$2,841.04
<b>Breakdown of Income</b>			<b>Breakdown of Expenditure</b>		
<b>Term Deposit Interest</b>	\$132.84		<b>ASF Fees</b>	\$971.00	
<b>FUSA Grants</b>	\$7,558.00		<b>Gear Purchase</b>	\$4,824.81	
<b>Membership Fees</b>	\$2,761.00		<b>Internal Transfer</b>	\$6,200.00	
<b>Gear Hire</b>	\$415.00		<b>Operational <sup>2</sup></b>	\$950.49	
<b>Fundraising BBQ</b>	\$1,811.10		<b>Trip Related <sup>3</sup></b>	\$2,396.72	
<b>Internal Transfer</b>	\$6,200.00		<b>Sat Phone</b>	\$313.96	
<b>Other</b>	\$487.88		<b>ACKMA</b>	\$50.00	
			<b>ASF conference Registration</b>	\$1,050.00	
<b>Total</b>	<b>\$19,365.82</b>		<b>Total</b>	<b>\$16,756.98</b>	\$2,608.25
<b>FUSA Grant Summary</b>					
<b>Grant Type/Number</b>	<b>Date</b>	<b>Amount</b>	<b>Grant for Expenditure</b>		
Pool 1290315	12/4/18	\$313.00	ASF Council Meeting Travel Expenses		
Pool 1291704	3/5/18	\$1,060.00	O Week Promotion		
Pool 1296591	28/6/18	\$324.00	Helmets		
Pool 1301801	23/8/18	\$235.00	Tube Tape		
General 1302597	30/8/18	\$1,000.00	Petzl Stop Descenders		
Pool 1304693	27/9/18	\$276.00	Solar Panels		
Pool 1306954	18/10/18	\$2,000.00	Generator		
Pool 1308976	1/11/18	\$2,350.00	ASF Conference Student Subsidy		
	<b>Total</b>	<b>\$7,558.00</b>			

### NOTES:

- 1) The Term Deposit matures every six months and is rolled over.
- 2) Operational includes, meeting, photocopying, library, and gear maintenance costs.
- 3) Trip related costs include, travel subsidy to ASF conference in Tasmania.

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4) In 2016, the club set aside \$1800.00 to support the FUSSI Nullarbor Research Project. The expenses are outlined below. There is \$1112.56 remaining in this allocated funding.

NULLARBOR PROJECT RESEARCH BUDGET			Funding Total	1800.00
			Remaining Total	1112.56
DATE	ITEM	AMOUNT	WHO	
	Nitric Acid	200.00	Tania	
	pH Strips		Tania	
	45µm Filter Papers		Tania	
9/12/16	Groundwater Analyses - CSIRO	188.10	Tania	
3/4/17	Calibration Solutions	91.84	Tania	
18/5/17	Groundwater Analyses - CSIRO	188.10	Tania	
28/6/17	Postage	19.40	Clare	
	<b>TOTAL EXPENDITURE</b>	<b>687.44</b>		

Tania Wilson. FUSSI Treasurer 2018.

## SECRETARY'S REPORT

Overall, 2018 was another active year for the club. The year began with a promo event that I initiated with Adam from FUSA with subsidised student memberships for 2018 and a partially funded 'Come and Try' Murray River event with lunch provided by the club. This was very successful and resulted in our student membership increasing exponentially. From these new members we have our current librarian, our newsletter editor and more.

A joint rescue exercise was run with Scouts and CEGSA at Corra Lynn, highlighting our strengths and weaknesses and promoting discussion on rescue resources for the State. We trialled a club movie and pizza night which was great fun and while attendance was a little on the intimate side we were inspired to try it again. Another FUSSI snag fry was held at Bunnings which raised a good chunk of funds to put towards the clubs' involvement in the 2019 ASF conference in January.

We gained FUSA funding to assist with sending 5 students to represent the club at the 2019 ASF conference, which was a fantastic experience for all of us and some great oval camping, muddy speleo sports, sleep deprived campsite chats, abseiling down waterfalls, magnificent caving and walks to town for a big brekky were had in the name of club bonding. The FUSSI Facebook page, a 2017 initiative, has gained solid ground and is now a principal event organising platform that attracts new members in its own right. I am still trying to train members to put any appropriate photos and articles on the public page after trips, however there has been some headway such that we have some fabulous new events promo shots and shots of current members to use! I must admit with all this going on I entirely forgot to renew the promo slide for the hub screen this year.

2018 saw the transfer of membership to the ASF database which took membership largely out of the secretary role for the first time and into the capable hands of Sarah Gilbert, our

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ASF rep. We have had a very active exec and extended exec this year with well attended monthly (ish) meetings and thorough discussions. Minutes are now kept on the FUSSI exec dropbox with a definitive copy emailed out once the window for amendment is closed.

The Secretary's tasks this year included coordinating event rosters, coordinating trips, catering for caving trip dinners, events promotion and management, managing membership, applying for Tassie funding, running a club O'week promo with subsidised memberships for students and delicious lunch, mastering the logistics of pizza orders and finance for up to 10 people, managing the public Facebook page and, of course, coordinating and finalising the ever present FUSA annual review.

I am pleased to say the year ends with a fabulous 2019 membership of 121 student members and 50 non-student members. I hope we can welcome more students into the broader range of executive roles for the coming year and continue to evolve into the next.

I am happy to nominate for the position of FUSSI secretary for 2019, or to stepdown as club secretary and take on one of the new offshoot roles that have been created.

Dee Trewartha,  
FUSSI Secretary 2018

## EQUIPMENT OFFICER'S REPORT

In 2018 the FUSSI equipment register was given a major overhaul, with all caving and safety equipment receiving serially numbered identification stickers and the beginnings of more rigorous records collection.

FUSSI is working towards facilitating the ASF ACRC 'Expedition Equipment Kit' in SA by 'loaning out' our rescue stretcher and satellite phone, with David Mansueto nominated as SA contact. Minutia of the plan are still a work-in-progress, but Exec has agreed in principle; a Google Calendar is available for booking details. An Automatic External Defibrillator (AED) was sought through FUSA Pool Funding to join the same, but although successful the AED is in reality a FUSA possession.

Equipment purchases include:

- 125 m of Edelrid 'Super Safety II' 11 mm static rope
- Replacement of all 25 mm tube tapes
- 6 x Petzl 'Stop' bobbin descenders and accompanying Raumer 'Handy' braking karabiners
- 2 x Silva 'Field' plate compasses, purchased early 2019.

Planned acquisitions comprise a long-term plan to purchase an additional 3 Scurion helmet lights serendipitously (as circumstance permits in a cost-effective manner).

Long-term hassles regarding the actual process by which gear ends up on trips and, more importantly, ends up safely back in the FUSSI stores remain unresolved.

David Mansueto,  
FUSSI Equipment Officer 2018

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## SAFETY OFFICER'S REPORT

The club had a couple of incidents over the course of the year one involving heat exhaustion and the other involving a minor cut on a hand in Corra Lynn cave. The heat exhaustion incident was serious, given it was one of those hot summer days you can get at Yarrangobilly. We ended up climbing up to MutMut cave in the late morning heat, and the return journey put us in the hot sun on a steep western facing slope! Heat exhaustion and heat stroke can hit anyone on hot days, symptoms include: headache, tiredness, giddiness, rapid pulse and vomiting. Keeping fluids up is very important, drink them, don't carry it out. This is good to remember when it comes to taking care on such days.



Rigging up a stretcher on the Search and Rescue weekend.  
Photo: Matt Smith

One of my aims in 2018 was to hold a weekend of Search and Rescue practice for FUSSI members and the wider SA caving community. The aim was not only to show how hard a physical rescue is but to train us to be self-reliant in cases of rescue.

The weekend held in mid-September was a success with around 30 people attending. It involved practice with different communication systems, Michie phones, Walkie Talkies, Through Ground Radio, various above ground 'build you own stretcher' exercises, and an in real-time rescue scenario. The feedback provided by those that attended, showed an appreciation of just what is

involved if an accident occurred and highlighted the need to be self-sufficient when rescue is needed.

As the underground environment is not for everyone, as cavers we have a responsibility to each other to know how to get ourselves out of trouble. In that regard FUSSI has, over the past couple of years, put together a pretty good set of gear that will help us, and we need to practice with it but, let's hope we never have to actually use it!



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The club spent some time getting the behind the scene safety processes streamlined, including consent and harassment procedures, in which FUSA provided training and documentation, in particular the booklet, *Be a Better Human*. FUSI has very good backup, trip safety processes including making daily contact with the backup safety person back in Adelaide and letting each other know that we have reached home safely at the end of trips. Although most accidents happen around camp on caving trips, remember that the top of pitches are the most dangerous places to be. You should *always* be on a safety line when doing anything around them. Follow the adage, take your time if you want your life to have time.

As this is my last Safety Officer's report I hope that FUSI continues its long record of caving safely, looking out for each other on trips, training and providing an inclusive environment in which members feel safe, and not afraid to speak up or learn. Caving is, after all, a pretty simple human activity, walking, crawling and climbing, something that we have all been doing since the beginning of time! In FUSI we do this as a team, caring and helping each other. I wish you all safe and happy caving for the future.

Clare Buswell,  
FUSI Safety Officer 2018

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## LIBRARIAN'S REPORT

Overall this has been a quietly productive year for the library as the process of digitising began. The majority of journals shared between speleological groups, both within Australia and internationally, is now almost solely digital, with only a few journals still transitioning to the fully digital system. FUSI has also implemented a digitised newsletter, however hardcopies are available on request.

The year began with a hard focus on completing the Nullarbor vegetation data to be submitted to DEWNR. Acknowledgement must be given to Helen Vonow from the SA Herbarium who was a great support in our ID efforts for the data spreadsheet. The data was submitted successfully and with great praise from the DEWNR office.

The hunt for Nullarbor vegetation knowledge also led to a trip to the State Library from which we have gained the knowledge that many of the books unable to be obtained by FUSI, due to the restricted number of copies available, can still be accessed through the State Library.

An evening of pizza and organisation in October saw a huge improvement in the library storage lockers, as we managed to order all of the journals chronologically and by founding group. Furthermore, the evening allowed us to revisit past journals going back decades to find entertaining stories and drawings.

Numerous books and other resources have also been purchased for the library this year. This includes various vegetation identification books and a recent purchase of the SUSS Map Library (2008) on DVD along with the Tuglow Caves (1998) book. These were obtained via

# AGM 2019, Minutes and Reports

correspondence with the Sydney University Speleological Society who were extremely happy to share their resources and keen to know more about the Flinders Speleological Society.

In 2019 the plan is to continue to digitise the library and create easy access to this digital resource for the members of the society. A portable hard-drive purchased for the library will also be updated regularly and will remain in the library for use. Furthermore, a full inventory list and both sign in and sign out sheets shall be finalised for the library in order to keep track of the increasing number of library resources.

2019 is also going to be a year of increased collaboration with wider speleological societies as many clubs are now also digitising their libraries and the sharing of digital copies is beneficial for all parties involved. Another trip to the Nullarbor is also scheduled and further data analysis and entry will be required for this trip.

It is an exciting year ahead for the library and all involved, and it is hoped that more library evenings will promote the use of the FUSSI library resources.

As the librarian for 2018 I am also happy to nominate again for the role in 2019.

Imogen Marshall. FUSSI Librarian 2018

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## NEWSLETTER EDITOR'S REPORT

The newsletter editor has the responsibility of collating, editing and publishing articles and photographs to showcase what FUSSI does. The hardest part of the job is finding enough material, as writing about an experience is torture compared to doing the activity itself. Writing an article is not just beneficial for the club, but yourself too. You will likely remember it better later in life and have a documented account of the time to revisit.

It is hard to capture the underground world accurately in a photograph due to lighting, dust and the fact that caves are a great place to destroy cameras. Despite this, an image tells a thousand words and is a great way to introduce those who haven't been spelunking to what it looks like, or to show other cavers what a cave that they haven't visited looks like. I encourage you to risk your expensive equipment for the sake of the newsletter, FUSSI and yourself of course! Credit will be given to published photographs and much appreciated by me.

Thank you to all those who submitted articles and photographs. I put together two newsletters; Vol 30, No 2 and Vol 30, No 3. My lack of time management this year dumped the newsletter responsibility to Clare (the FUSSI Safety Officer who already had a great deal more on her plate than me). She composed the other two newsletters released since the last AGM; Vol 30, No 4 and Vol 32, No 1 respectively. I can't thank her enough.

I will run for newsletter editor 2019, and if successful I will redeem myself from this year's blunder.

Matt Timms.

FUSSI Newsletter Editor 2018

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# THE DARKNESS BENEATH

31<sup>ST</sup> Biennial Conference

Australian Speleological Federation

Clare Buswell

ASF conferences provide a space for fellow cavers to get together and exchange ideas, skills, and knowledge every couple of years. The latest conference, held in Devonport Tasmania, was no exception. The programme was filled with physical activities, talks, chances to catch up with fellow trogs and places to go and see. Something like 60 pre and post conference caving trips were organised all over the State, with ASF members offering a variety of caves that needed varying levels of caving skills.

The conference was attended by cavers from all over Australia and internationally and the organisers showed us just how to do it all. Talks ranged from those concerning glow-worms, new developments in fossil research, safety and rescue processes, and the need to develop close ties with outside rescue agencies (police, SES etc).



Just a bit of stretcher wrangling, ASF Conference, Devonport Tasmania.



## THE DARKNESS BENEATH

Films equating cave exploration with those of the skills and determination required of explorers of mountains and other so-called extreme sports, and a film on cave biota “*Sixteen Legs*” both from Australian film makers, had audiences glued to their seats. The five-minute ‘Speed talks’ gave people the opportunity to showcase different areas of caving activities around Australia, e.g, the granite caves of Victoria, or the Nullarbor. The conference dinner, Speleo Sports and the day trip to visit the show cave at Gunn’s plain kept us all busy and entertained. The underground string quintet was wonderful.

FUSSI had 12 members present at this conference, this was a record number of FUSSI members to attend any ASF Conference and it was the largest representation from any ASF club, apart from the organising club, to attend. This attendance was made possible by a grant from both FUSA and FUSSI to its members. I am sure all those of us who attended will remember this conference for a long time and we thank the conference organisers for their hard work and efforts in pulling it off. It was wonderful.



The campground (school oval) for the conference, Devonport Tasmania.

We raise a glass to you as we prepare for our turn at running the next ASF Conference here in South Australia. Bribes and blackmail offers are now open for the next round of speleo-sports!

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## BLACKFELLOWS CAVES’ CAVES

By Andrew Stempel

Photos by Thomas Varga

Members present: Heather, Thomas, Sarah, Sil and Andrew (February 9, 2019)

This weekend was a different adventure for the FUSSI crew, combining some caving with water sports! After a nice cool snorkel in Ewens Ponds we were off to the township of Blackfellows Caves, which we were hoping, well, would have some caves. This was a 30 minute drive west from Ewens Ponds. We arrived in the car park and decided to do a quick survey of the area to locate the caverns from the comfort of dry land. Walking around the rocky coastal cliff side,



# BLACKFELLOWS CAVES' CAVES

we found what looked like 3 potential sea caves. They were all in a row southeast of the carpark.



Dry Surveying of a Potential Cave.

I had paid a whopping \$10 for a wetsuit hire and I was not going to let that go to waste. Therefore, Thomas, Heather and myself decided to go for a bit of a swim to do some “caving” for the day. We struggled into our cold, damp wetsuits and headed toward the boat ramp. This was not the nicest day for snorkelling. There was a bit of a swell and lots of wind to add to the surface chop, but there were CAVES that needed to be explored.

We entered the water at the boat ramp and started the short snorkel around the headland to the first sea cave. Visibility was a whopping 0.00002m and seaweed was everywhere. We reached the entrance to the first cave which seemed promising. We swam in a ways and we were welcomed with a nice sandy floor inside a beautiful sea cave that was somewhere in the ball park of 20-30m deep and that terminated in “Thoma’s Beach,” a small patch of dry sand at the end of the cave. It was agreed that on a clear and calm day this would be the perfect location for a caving beach BBQ, complete with stand up paddle boarding and miniature beach volleyball.

Next we continued around to the next cavern. This was a bit further around the headland and less protected, so we experienced more wave activity in this cave. It was of similar dimensions to the first but had a very shallow rocky bottom with a deeper channel running through the middle. Snorkelling through the channel, the waves would occasionally scoop you up and dump you on the shallow rock. Encased in neoprene, it was hard not to feel like a beached whale in these frequent events. The back of this cave was more interesting than the first as it seemed

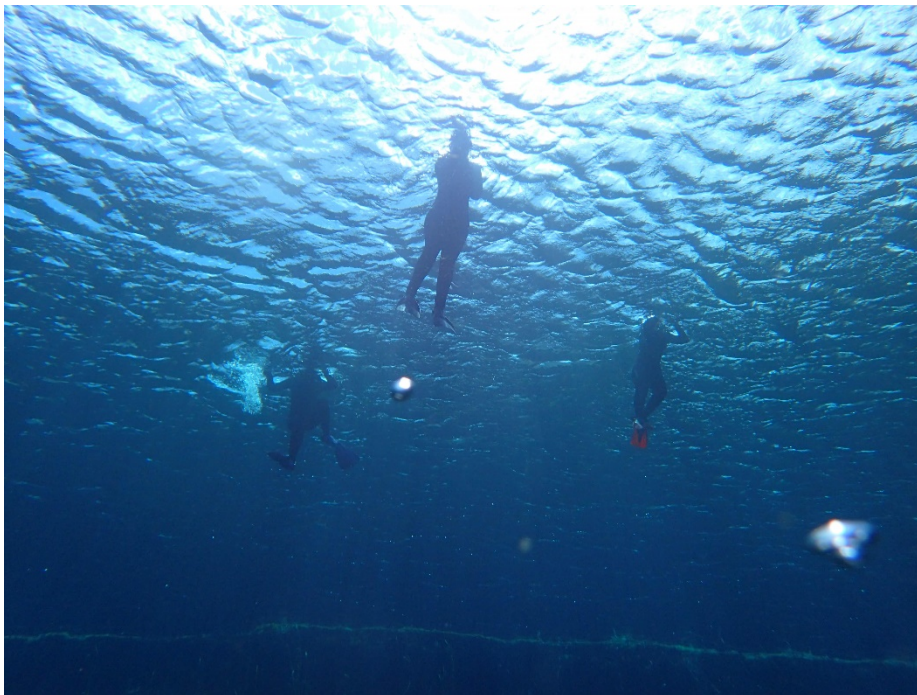
# BLACKFELLOWS CAVES' CAVES

that there may be some side passages toward the end. Thomas took the bait and headed into the back of the cave. At this point a large wave entered the cave and Thomas disappeared under the water as it swallowed the ceiling at the terminus of the cavern. Despite his unexpected dive of a sump, Thomas confirmed that both of the side passages terminated quietly abruptly.

There was one more cave to explore, but it was further around and less protected, meaning larger swells and more surface chop. Heather made the smart decision and headed back to the boat ramp while



Thomas and I ventured into the next cave. The ground was extremely rocky and varied. Confronted with the increased battle with the waves, we took a quick peek and decided to head back for the shore. It proved more difficult to return the way we came, so we opted to head for the shore, exit on the beach and walk above the caves back to the carpark. The 3<sup>rd</sup> cave was not much to write home about, only a few meters deep. Making the other two caves the best options for a future cavers' day at the beach.



All in all, I would say these caves would be well worth a snorkel if FUSSI was ever in the Mt Gambier area and the weather was spot on. It was a nice addition to the snorkelling at Ewens Ponds earlier that day.

At Right: Snorkling at Ewens Ponds

# BE THE BEST DRESSED

David Mansueto

This article hopes to give the novice caver some idea of how stay comfortable in cold, wet caves. The most important concept is that natural fibres (particularly cotton), while a great choice for dry caving in SA, are *dangerous* to wear in wet caves. Not only do they cease to provide insulation when wet, but they are slow drying and do not wick moisture away from your skin. Wet cotton against your skin makes you *colder*. For a long time. Plus, all that water is *heavy*.

Accordingly, the well-prepared wet caver has a wardrobe of synthetic gear that wicks moisture away from the skin (less thermal conduction) and sheds water quickly (less thermal loss and weight), providing insulation even when damp.

It's worth mentioning that there are some natural fibres that defy this generalisation: typically, the wool of animals that are happy living in snow, such as Merino sheep (in particular, those bred for 'superfine' coats that never stop growing, so if not regularly shorn, their 'over-abundant' wool has dire consequences). More esoteric options include the wool of Himalayan yak. [Ed: or Alpaca wool, which is lightweight, with the fibres being hollow].

One downside to nice, natural thermals like merino is that threads of wool are made by spinning together short lengths and so have inherently lower durability than effectively infinite length synthetic filaments. A well-worn merino thermal is likely 'holey'. Fancy (read: expensive) outdoorsy merino products are often blended with synthetics (usually nylon) to add strength, so by paying more money upfront maybe you won't be crying over the holes (which really aren't very insulating) quite so soon. That's not to say you shouldn't buy natural thermals; they're warm and breathe well, so many prefer them in dry, 'low-damage' circumstances.

So, how do you best invest your hard-earned cash on armour against discomfort?

## *Layers*

So, what do you wear in a wet cave? A *trog*<sup>1</sup> suit (or any other portmanteau of {'cave', 'trog'} with {'suit', 'coverall', 'overall'}). If the cave is cold as well as wet, you'll want something under it to keep you warm. This would usually be some arrangement of 'wet' thermals. Wetsuits become the norm when *swimming* in a cold wet cave.

In addition to general clothes, your head, hands and feet should be kept warm and dry. A beanie is a good investment, so is a balaclava and so are neck gaiters. Sometimes you might like to wear all three at once. Insulated gloves can be good, as can wearing thermal gloves under your regular caving gloves. Socks capable of keeping your toes from numbing may receive even more of your endearment than your wetsuit does. Of course, the natural vs. synthetic argument holds here, too. Footwear can be a surprise, too: you may want three sets! Regular caving footwear, thick-soled wetsuit 'boots' capable of walking over uneven ground for hours and wetsuit 'slippers' you can put in your bag for 'de-trogs'<sup>2</sup>.

## *Trog Suit*

The trogsuit is much like your current cotton overalls but is made from synthetic fibres and costs

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<sup>1</sup> 'Trog' being a common prefix for Latin-esque words relating to cave things, from the Latin *trog*le 'hole'.

<sup>2</sup> De-trog being where you change from your filthy muddy shoes to clean ones (and perhaps strip off, too) in exchange for the privilege of seeing a section of cave worthy of the effort keeping it pristine.



## BE THE BEST DRESSED

a great deal more. In Europe, trog suits are common and varied. In Australia, trog suits are bought online and shipped in. Major European players are MTDE<sup>3</sup>, Adventure Verticale<sup>4</sup> (who make an astounding range of suits); and EXPE<sup>5</sup> are likely purveyors. A more common sight are the suits made by Aspiring Safety (Christchurch, NZ)<sup>6</sup> made to measure out of nylon or, for maximum fancy factor: kevlar.

### *Wetsuit*

Wetsuits are garments that can do quite a good job of keeping you warm even when sopping wet. They're made from neoprene (a synthetic rubber) foam 'sandwiched' between nylon (a durable synthetic fabric). They should fit quite snugly. Once you've gotten good and wet, the tight suit will trap a film of water, which your body heat warms. If the suit fits loosely, your warm water will be free to abandon you and you'll have to heat the new cold water that 'flushed' in.

Material thickness is critical, too: the thinner the neoprene is the less it will protect your nice warm water from the cold water outside: thicker is warmer. you may find cavers in wetsuits jumping into water unnecessarily to cool down! Unfortunately increasing thickness also increases apparent paralysis. Surfers might wear 2 to 3 mm wetsuits. Divers might wear 5 to 8 mm wetsuits or 'semi-dry' suits that have extra bits around the hems to keep out water and so improve thermal insulation, as a film of air is warmer than a film of water. Cave divers might wear dry-suits --- that's another game altogether.

Wetsuits come in different styles: hoods, long-sleeves ('steamer'), short-sleeves ('shortie') and sleeveless designs, all either in one-piece or as separate tops/bottoms. One-piece versions are likely warmer; two-piece gives you more options but can result in cold spots. The outer fabric is nylon, the same thing as most trog suits. It's not as thick, but it is often reinforced with rubber patches. This means a wetsuit will stand up to some amount of caving all on its own, although external knee pads are probably a good idea. Many cavers wear their trog suit over the top, albeit as much as a means of acquiring pockets as anything else.

### *Wet Thermals*

AKA your base layer of clothing, worn directly on the skin. While 'traditional' thermals such as polypropylene and merino work (and you should probably have a set of one or the other), we'll call these 'dry' thermals and introduce 'wet' thermals: composite ('multiple things stuck together') synthetic materials designed to be warmer and lighter when wet. The main change comes from bonding polyester pile, that 'feels' dry, insulates very well and wicks water away (likely more so if it's a fancy 'hollow-fibre' version), to some other material which increases durability and helps it hold its shape; the best-known example being Polartec Power Stretch.

There are caving specific under-trog 'onesies'<sup>7</sup> made of polyester, but a good fit is critical for warmth and as they're not sold locally you might find it difficult to try one on. Similar items are

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<sup>3</sup> MTDE: <http://www.mtde.net/fr/category/c9-combinaisons/c19-exterieures/>

<sup>4</sup> AV | Aventure Verticale: <https://www.aventureverticale.com/en/caving/>

<sup>5</sup> Expe: <https://www.expe.fr/uk/verticality/caving/caving-coveralls.html>

<sup>6</sup> Aspiring Safety: <https://aspiringsafety.com.au/product-category/helmets-personal-gear/coveralls/>

<sup>7</sup> AV Undersuit AVSP74: <https://www.aventureverticale.com/en/caving/AV-undersuit-avsp74.html> See also: Expe, 'undersuits': <https://www.expe.fr/uk/verticality/caving/caving-undersuits.html>



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made for surfers and divers, such as Sharkskin Chillproof<sup>8</sup>, that add a 'membrane' layer in the middle for blocking out wind (not a major concern in a cave), but they are very warm, supposedly equivalent to a 3 mm wetsuit and have a price to match their high self-opinion. Adrenaline 2P Thermo<sup>9</sup> is a cheaper alternative, using the same 3-layer concept but much lower areal density ('thinner'). There's also Lavacore<sup>10</sup>, again 3-layers, but similar areal density to Sharkskin for less money ... The catch? The first layer is merino, so it will be cooler and heavier when wet.

You can dress from head to toe in any of the three brands, an ideal configuration being long-sleeve top, tights and a balaclava. You could also try the 'one-piece' which makes a lot of sense from a not-coming-apart-and-giving-you-a-cold-midriff point of view but may add complexity when faced with certain biological requirements ... Socks are available, however there is a better option, discussed shortly.

All three brands are widely available. Some FUSSI members (e.g. divers and 'coldfish') own and love their Sharkskin brand wet thermals, while other, poorer (AKA 'student') members are quite content with their (vastly cheaper) Adrenaline 2P Thermo.

## *Socks*

Special mention should be made of socks. Your feet are the most likely to get wet and to spend the most time being wet. The best-known option is 'SealSkinz' waterproof socks that, you'll now be unsurprised to learn, are a 3-layer composite: merino + synthetic base, waterproof membrane of secret composition (likely ubiquitous ePTFE) and nylon face fabric ... Expensive to make, expensive materials: yep, they're not cheap. That said, their patents<sup>11</sup>, have supposedly expired: 'cheap' knock-offs are already hitting the shelves (some reports suggest the Bridgedale branded socks are actually SealSkinz stock with a different name sewn in).

## *The Daily Question*

So, you've got a great array of options: multiple versions of wet thermals, a wetsuit (or two!), a trog suit, three pairs of shoes. Tomorrow, you're going into a cave. What combination of all this stuff do you actually wear?!

It depends. What does it depend on? How cold it is, how wet it is, how long you'll be wet, how much this affects you, how warm you want to be. How do you know?!

## *It depends*

OK, how cold and wet should be generally fairly 'knowable': cave temperatures, water temperatures and water levels can be fairly constant; cave routes are planned in advance. The problem is that lots of people will assert that they know the conditions, but they will all contradict one another and none will be exactly correct. Perhaps give the most credence to the advice of the trip leader (if they're a local), but don't take their word as gospel as they may well have acclimatized.

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<sup>8</sup> Sharkskin: <https://sharkskin.com.au/>

<sup>9</sup> Adrenaline Wetsuits: <https://www.adrenalinwetsuits.com/>

<sup>10</sup> Lavacore: <https://www.lavacoreinternational.com/>

<sup>11</sup> SealSkinz patent, US: <https://patents.google.com/patent/US6139929A/> See also: SealSkinz patent, EU: <https://patents.google.com/patent/EP0964623B1/>

# BE THE BEST DRESSED

And what about how it affects you? Only you can answer, but if you don't have any prior experience of cold and wet caving, how can you? Well, you probably have some idea: do you wear shorts and thongs year 'round, or perhaps you are the coldfish wearing four layers and a beanie, staring in disbelief at the nutter in shorts and a t-shirt?

## *Case Studies*

Perhaps some examples can provide some frame of reference for what experience you do have. We'll consider two perspectives: a nutter and a coldfish. As context: the 2019 Tasmanian summer, was perhaps warmer than usual; daytime temperatures around 30 degrees Celsius. According to a sign put up by Tasmanian Parks and Wildlife at the King Solomon Cave carpark, all Tassie caves are a stable 9 degrees Celsius internally all year.

Kubla Khan is a fairly long and involved cave, mostly dry except for a swim at the end. In the dry section (standard 9 deg C), the nutter was quite warm wearing a trog suit, 2P Thermo tights and waterproof socks. The coldfish was 'warm enough' wearing the same plus a 2P Thermo long-sleeve and a merino short sleeve. In preparation for the swim at the end, the nutter added a 2P Thermo long sleeve and balaclava, while the coldfish donned a 3 mm wetsuit over their thermals and added a balaclava. Both were warm and happy. The final insult of the cave is the SRT climb out: waiting at the bottom for your turn on the muddy slope can be an exercise in hypothermic tolerance; the coldfish was starting to get cold.

Diamond Cave is a short, dry, sporty cave. Both nutter and coldfish wore polypro thermal long-sleeve & tights under a trog suit. Coldfish was happy; nutter got hot.

Lynds Cave is a streamway crawl, accessed by wading through a river and climbing through a (minature) waterfall. Accordingly, most are likely to concede it is a 'wet' cave. Indeed, wetsuits are recommended. Both nutter and coldfish wore 2P Thermo long-sleeve & tights under a one-piece wetsuit (both around 5 to 6 mm), with waterproof socks. The nutter wore their trog suit over-top. The coldfish didn't wear a trog suit over-top but did wear a short-sleeve merino top over the long-sleeve. Both were very warm; on the way back, the whole team opted to stick to the streamway so as to keep cool; the coldfish even needlessly and gleefully jumped into the pool at the end. To finish off, we all waded back to the car through the waist-height, cold river.

*Editors note: this article came with a large and informative appendix of details on suppliers, textiles and costings etc. If you wish for a copy of the appendix, then please either contact the editor or the author via: [fussi@fussi.caves.au](mailto:fussi@fussi.caves.au)*

# HOW TO MAKE ROPE WASHERS THAT WORK & AT A REASONABLE COST

Clare Buswell

Reprinted from *FUSSI Newsletter* Vol. 19. No 3. 2007 and *Australian Caver* Vol. 175. 2008. pp 17-19

How many of us mainland cavers trundle off to Tasmania, and spend heaps of time scrubbing ropes in streams with a hand-held scrubbing brush? It is a real pain in the hands as the creek is usually freezing and it all takes forever. So a couple of years ago Ivan Riley and I via some experiments turned up the following. I have made the instructions as simple as possible so that anyone can follow it.

## Introduction.

### 1). Things to know about plumbing bits.

Firstly plumbing bits come in different colours and in the real world of plumbing these colours are associated with different purposes. For these rope washers, grey, white and black is used. Grey is used for sewer or down pipes. White is for high pressure and is used for internal plumbing, and on pools etc. Black is poly pipe and is used in the garden for setting up sprinkler systems etc. The high pressure stuff is the most expensive.

All plumbing bits have a size and a production ID number on them. I have given these numbers/IDs here to aid in getting the right bits. The components used in these rope washers are from four plumbing manufacturers: Hardie, Iplex, Philmac and Hansen. All of the plumbing bits used here, you can get from your local hardware store.

When gluing sewer and high pressure pipe to other bits use solvents and glue known in the trade as “pink and blue”. Pink is a cleaner/primer, which roughens the plastic and so makes for a better binding surface before gluing with blue. When using Pink and Blue, wear gloves and do it outside. You will not need a great lot of Pink and Blue so, unless you are going to do some plumbing at home, buy small containers of it. ONLY glue things together when you have *all* the components and have *experimented* with how it all works.

### 2) Brush Makers

You will find them listed in the Yellow pages and their skills are just as important as glass blowers instrument makers, and piano tuners.

You will need to spend time demonstrating and talking with the brush maker about what you want and how long you want the brushes to be. Do not be afraid to canvas the skills of a couple of brush makers. So shop around. Importantly the length of the brushes that they make is contingent on the length of the wire that they twist to make up the brush. Use stainless steel wire.

### Rope Washer for the Creek or the Bath Tub.

This is for used with two people, to wash ropes in a creek or bath tub. One person stands/holds the rope washer under water and the other person pulls the rope through the washer. When I have used this, I generally pass the rope through it twice. Once in either direction, but it depends on how dirty the rope is.

## HOW TO MAKE A ROPE WASHER

You will need the following:

1) Black poly: 2 X reducing bushes 40mm/25mm (1 ½ inch X 1 inch). These are also known as nipples and the type I have used, are made by Philmac. Cost around \$3.15 each.

2) A length of grey sewer 40mm pipe. It is the size that fits D cell batteries. The piece I have is 15 cm long, so I can stand on it in the creek.

3) Grey sewer: 2 X female threaded coupling 40mm. Iplex AS/NZS.1260. DWV 112.40. DO674040. Cost around: 2.80 each.



Components of the Creek Washer

4) Glue only ONE end as:

a) YOU NEED TO BE ABLE TO FIT THE ROPE AND BRUSHES INTO IT.

b) You will find that friction will keep the other end in place as you pull the rope through it. Also you only ever pull the rope through the glued end.

5) The total length of this washer is 28cm.

The brushes are 13cm long and I use 6 brushes on 11mm

rope.



At Left: Creek Washer with one end glued. Leave the other unglued.



## HOW TO MAKE A ROPE WASHER

### Rope washer attached to the garden hose.

The best way to use this beast is to run the rope between a couple of poles/trees/cavers or whatever else is at hand and tension it with a couple of ascenders. Then it is just a simple matter of connecting the hose and running the washer up and down the rope a section at a time.



The Hose Washer Assembled.

You will need the following:

1) Brass or plastic clip-on hose fitting. Screw fitting on one end and clip fitting on the other.

2) 1 X 25mm (1") Nipple. Black Poly. Philmac. Cost about: \$1.90

3) White high pressure, 1 X female Tee Faucet reducer. 32mm X 25mm. PO213225. PN18 AS/NZS.1477. Hardie. Cost around: \$9.50. This is threaded so the hose fitting can go into it.

4) White high pressure. 2 X female Faucet adapter 25 X 32mm. No18/3. AS1477. CLI8. Hardie. Cost:\$3.70 ea. (Plain on the male end: - 25mm, and threaded on the female end:- 32mm.)

5) Black poly. 2X Hansen SRB3220. 1 1/4" X 3/4" poly bush. Cost: \$2.95ea. Philmac also make this but I don't know the part number so look around for them if you can't find the Hansen ones.

6) When you have the brushes then glue only ONE END TOGETHER as below, and screw the rest into it.



The Hose Washer Components

The hose washer with ONE end glued and the other ready to be assembled, which is NEVER glued.

7) Total length of this washer is 17 cm.



## HOW TO MAKE A ROPE WASHER

### *The Brush Maker.*

Take the **unglued** rope washers to the brush maker with a piece of 11 mm or whatever rope diameter that you use the most. Ask him or her what is the longest brush they can make. The brushes for mine are 13cm long. (You should be able to get a brush longer than this.) The brush width is 5mm either side of the wire. Total width including the wire in the middle is 14mm. I have six of them because the sewer pipe is 40mm and the hose washer is 32mm, internal measurement. In the hose washer I use five brushes and the creek uses six. The 10mm Edelrid washes better in the hose washer than in the creek washer and the 11mm Blue Water 2 Plus washes better in the creek washer. Demonstrate to the brush maker what you want and leave the whole lot with them so they can experiment with it and make up brushes to suit.

### Comments.

When you are in the hardware store, fit all the plumbing bits together. You can, if you want, make up a washer using larger diameter pipe. It is really personal preference, as is the length of the washer. The brushes that I had made up cost \$30.00. So that works out at 15.00 for brushes for each washer. Stainless steel wire was used in these brushes so the cost could potentially be reduced by using ordinary mild steel or galvanized wire, but considering the intended use, it is worth the extra to invest in stainless. It is also important to smooth off the ends of the brushes with an angle grinder, rub them on rough concrete or whatever to remove the risk of rope damage from any sharp edges.

In terms of cost, the creek washer cost \$15.00 for the brushes and \$11.50 for plumbing bits, plus a bit of 40mm sewer pipe I had hanging around in the shed. So around \$26.50.

The garden hose washer cost around \$40.00, mainly due to the cost of high pressure fittings. I expect that these rope washes will never wear out. By the way of comparison, the Dobi rope washer that is commercially available retails for around \$34.00 and does not fit onto a hose and is not as sturdy. Have fun.



A Brush in scale with the creek washer



This is what the brushes look like.

# CORRA-LYNN CAVING TRIP

Kendall Whittaker

Kendall Whittaker On Sunday the 7<sup>th</sup> April, a keen group of us met from all directions in little Curramulka ready to set off to Corra-Lynn Cave on the Yorke Peninsula. This was my second caving adventure with FUSSI, and with a notable pre-requisite to bring knee and elbow pads in preparation to squeeze and crawl, I'll be honest and admit I was worried the claustrophobia would kick in and I wouldn't be writing details here describing much beyond the entry to the cave. The challenging and spectacular limestone maze of tunnels extending over three-levels and 14-kilometers, however, allowed no such thoughts in. Handed a compass and a piece of paper that looked to me more like a piece of abstract artwork than a map we set of to explore what Corra-Lynn cave had to offer.

We divided into two groups based on a mixture of experience and blind confidence before we set on our way to explore different areas of the cave. My group set the ambitious goal of making it to Octopus Cavern. To get here we were faced the challenge of navigating some twisting tunnels, tight crawl spaces and some 'creatively' tackled climbs as well as 'elegantly' executed slides down fissures between levels. The caves ranged from squeezing and contorting crawl spaces rewarded by open areas of rocky overlaying surfaces with unique sediments to observe. Corra-Lynn appeared to hold tight of secrets and a history of fossils beyond just the unique exploratory adventure the maze of caverns in itself offered.

The re-grouping at lunchtime was not quite met with our group taking a little longer than anticipated to complete our ambitious path. Nonetheless, we got there and with no shortage of interesting sights, wrong turns, fun and many laughs. Although we are a bunch of foodies and most of us had a pretty fine lunch packed we scoffed it as quickly as we could to get back into the caves for the remainder of the afternoon. We tackled the Beard-Squeeze loop to have a go at climbing up Lower Woodside that Thomas and Andrew had set up for us with ropes earlier in the morning. We took the Drum-stone path, which offered us some cool hollow rock slates to musically tap, but upon unfamiliar territory we turned back to take a better-known path to attack the climb.

Overall, it was a hugely successful and fun day for all. I would like to thank everyone from FUSSI that organized the trip and coordinated the day, and most importantly ensured we were safe and having fun. It was a great group of people with some familiar as well as new faces. Fair to say everybody enjoyed the adventure and the encouragement from the group as we all challenged ourselves and had a go at navigating. No souls were left behind to endure an isolated cavernole lifestyle thanks to the groups' effort as well as some jumper cables and car starting assistance before the final departure.



# NARACOORTE, ENVIRONS AND COFFEE

Sil Iannello

22nd March to 23rd March 2019 - Fox Cave (5U-22), Sand Cave (5U-16) Victoria Fossil Cave (5U-1), VDC (Volunteer Defence Corp), S-102 and T-Shirt printing.

First things first: From my last FUSSI trip to Mount Gambier I learnt that coffee is a necessity, so to get all things moving along without a trip to the local café on a constant basis, I organized a reusable pod coffee machine, good fair-trade coffee and a milk frothing device (thanks Mandy).

## Sleeping Quarters:

Accommodation was at the customary Wirreanda Bunkhouse situated at the Naracoorte Caves National Park, the bunkhouse offers accommodation for up to 50 people and has a fully equipped kitchen/dinning area. I hadn't been here for quite some time and I must say it was nice. I had a warm welcome from the locals feeding on the lush green grass, pretty cool being so close to mum and joey. If you haven't stayed here before, it's BYO linen and watch out for the mosquitoes and millipedes in the room, otherwise good place to stay for a weekend's caving. I arrived early with another VSA member Mandy, we drove from South West Victoria; 4 hours round trip, kudos to you Mandy for making the effort driving from outer East of Melbourne. The FUSSI crew were traveling from Adelaide and were not arriving till quite late, so off Mandy and I went to the local pub for some grub. The weekend consisted of 14 cavers, as this was quite a large number of people, we split up into groups for the weekend. Three groups on Saturday doing either Fox cave, S-102, Victoria Fossil Cave, or Sand Cave and two groups on Sunday doing either Sand Cave or VDC Cave.

## 5U-22 Fox Cave

Cave Notes: Surveyed 1989 – 1992, bat wintering site, tree roots, Speleothems, Sand Cones.

Getting to Fox Cave consisted of driving on a winding dirt track with several gates to pass. The surrounding landscape was quite dry consisting of a mixture of Riparian, Eucalypt and heathy woodland (*Eucalyptus camaldulensis* (River Red Gum), *Acacia* Spp, *Phragmites australis* (Common Reed), *Juncus* spp, Bracken fern and *Xanthorrhoea minor* (Grasstrees), photo at right, with a coastal influence of species including the *Allocasuarina verticillata* (Dropping Sheoak), *Exocarpos cupressiformis* (Cherry Ballart), and *Banksia* Spp. Quite contrary to what it could be looking like, there was a large Swamp that Neville (FUSSI trip leader) pointed out that was completely dry. Neville mentioned the last time he drove to Fox Cave he almost got bogged due to the track being heavily saturated. I take it that it would be a good idea to take a 4WD in the winter months.





# NARACORTE, ENVIRONS AND COFFEE

Sil Iannello



Landscapes heading to Fox cave. Photos: Sil Iannello

We parked at the usual parking spot to Fox cave and trogged-up ready for a sandy adventure. The walk to the cave was only about 100m or so away from the cars. The entrance consisted of a small down climb (2m or so), which a handline was placed to easily clamber down. The entrance was a good-sized arch opening, with scattered boulders and a well-preserved kangaroo skeleton to the far right of the opening. A further clamber down over some limestone boulders leads into a small-sized chamber that tapered down to a gate opening, classic postal slot entrance, literally!



Hannah at the Gate to Fox Cave.

Photo: Sil Iannello

# NARACOORTE, ENVIRONS AND COFFEE

Sil Iannello

## The Sand Cones Chamber

The first leg of the cave before entering the main chamber comprised of a sandy floor, wide spacious smooth cave passage of tubular shape, fossil filled walls and feature decorations of Speleothems. Quite a nice passage to walk, reminded me of lava tube cave type passage that you get on the Victorian Volcanic Plains. Following onto the next section of cave, were two well-formed sediment-filled Sand Cones, this chamber was quite large with high ceilings, a bone deposit exhibit, and a stunning example of tree root penetration from the surface. In this instance it was a call for "Rapunzel, Rapunzel, Let down your hair!". More than six meters long, beautiful brown/red coloured cluster of tree roots hung from the ceiling to the floor and nicely curled up. I can only guess what species this was, from my knowledge of the widely distributed vegetation species identified in the area and their traits, it would be the River Red Gum *E. camaldulensis*. This species obtains its water from three main sources: ground water, rainfall and river flooding.



Bone deposits. Caver in photograph: Sil Iannello  
Photo: Neville Skinner



Next leg of the trip was passing through the main chamber and onto "The Madonna" (meaning "My Lady" in Italian.) I am Italian and was brought up in a religious family and endured all the religious sacraments, so of course I was intrigued to see the Speleothem of Mary holding Jesus. And yes, it was not only The Madonna, but her stalagmite disciples. As we faced Mary, I told my story of the time I was in Italy and my family would not let me leave to go to Paris because I had to stay for The Festival of the Madonna in Reggio Calabria.

At Right: Fox cave tree roots. Cavers: From the left Matt, Sil and Mandy.  
Photo: Neville Skinner



# NARACORTE, ENVIRONS AND COFFEE

Sil Iannello



Natural speleothem formation of Mary embracing baby Jesus.  
Photo: Neville Skinner



Classic image of Mary embracing baby Jesus. Source: Unknown.

Some other interesting features of The Madonna chamber were lots of helictites that clustered the ceilings and several scratchings on the walls, maybe from fauna or people? We all weren't quite sure, but it made for some good conversation.



Natural speleothem formation of 'Mary embracing baby Jesus.'



# NARACOORTE, ENVIRONS AND COFFEE

Sil Iannello

Photograph by Neville Skinner

Following on from the The Madonna, we headed for winding clambering passages of limestone boulders that lead to “The Edelweiss”. A stunning small chamber with dense stalactite speleothems, a well decorated chamber. “The Edelweiss”: *Leontopodium nivale*, a mountain flower belonging to the daisy family *Asteraceae*. Also, a song "Edelweiss" from the 1965 film of the Sound of Music, was sung by Mandy as we entered the chamber. Apparently other cavers who enter this chamber also sing the song.



Speleothem formation in The Edelweiss Chamber. Caver in photograph: Sil Iannello  
Photo: Neville Skinner.

Leaving the Edelweiss required some remembering, but thanks to some trusty features like the lizard on a rock and directional stals, we headed in the right direction to the way out. Heading on the road back to the Wirreanda Bunkhouse, Neville stopped to show us a Runaway Hole.





# NARACORTE, ENVIRONS AND COFFEE

Sil Iannello

Basically, Runaway Holes are depressions in the ground where water has found a way to flow into the underground aquifer. These holes are normally blocked by tree branches, mud and other matter, which are cleared following heavy winter rain falls, allowing the water to run into the aquifer. See above photo. Photographer by Sil Iannello.

Back at Wirreanda, we all re-convened and got ready for Saturday night shenanigans, which comprised of dinner and drinks at the pub, post dinner drinks at the bunkhouse and FUSSI T-Shirt printing. See photographs below, photographer: Sil Iannello.



Great weekend, thanks FUSSI team. Until the next time.

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## TAKE ME TO THE RIVER! CAVING ALONG THE RIVER MURRAY

By Andrew Stempel

March 3, 2019

Participants: Thomas Varga, Edwina Virgo, Heather Duff, Richard Williamson, Eunla Park, Andrew Stempel

This is one of the more popular FUSSI trips that I have yet to experience. I've heard stories of "the sump" and a few references that it "might be a bit muddy," so I had to give it a go. Plus a day on the Murray is always a good idea. All the talk did not disappoint.

# TAKE ME TO THE RIVER!

## CAVING ALONG THE RIVER MURRAY

The trip started out with a stop-off at the Flinders Uni Boat Shed to collect our ride for the day, Safety Sausage, a SCUBA boat borrowed from the Flinders University Underwater Club. Thanks FUUC! The drive to Swan Reach was fairly uneventful, with a stop-off to fuel the boat and ourselves at a local coffee shop in Murray Bridge (Note to self: the coffee shop that we normally stop at, The Davey Establishment, is closed on Sundays!). During our coffee break we met up with Heather and the rest of the FUSSI crew that had met Clare in the hills to collect the remaining gear that we needed. Now caffeinated and with gear in tow, we set off for Swan Reach, stopping at a few scenic spots for a photo or two.



Exiting Punylaroo Cave

When we arrived at the destination there was a quick change into our trog suits and we were off to the first cave. We descended a little track down the steep cliffs of the Murray, followed by a short bit of bushwalking to the entrance of the cave. Thomas told me this cave was a bit of crawling, but I was excited to see a large entrance passage right on the banks of the river. The luxury of walking upright was soon lost as we began our hunching and groveling through the cave. The hunching and groveling continued until we reached the chamber at the end. There was a small search to see if the cave continued followed by a nice break sprinkled with some “in the dark” philosophy. With the conclusion that ghosts are probably not real (the debate will continue), we headed back out of the cave.

On the way out, there was a stop at a side

chamber to have a look at a water filled chamber. Within this room was a small sump that led into another miniature chamber. We were given the opportunity to do a quick baptismal dunk through the very short flooded portion of the cave to have a look in the adjoining chamber. This was quite fun and a bit of excitement in a chilly underground pool, welcome relief from the warm cave environment. After a nice bath in the mineral pool, we headed back out to daylight. Emerging from the cave we were



Tasting the local cuisine. Photographer is unknown.



## TAKE ME TO THE RIVER!

### CAVING ALONG THE RIVER MURRAY

greeted with the sight of the river framed by the entrance of the cave and had a nice swim before we headed off on our next adventure.

A quick stop for some lunch and caffeinated refreshments and we were ready to launch the boat to head to the next cave on the agenda. It was a nice little ride on the water before we reached our destination, a subtle hole in the side of a hill on the banks of the Murray. Thomas was kind enough to watch the boat while the rest of us headed into the dark. I was warned that this particular cave was a “bit muddy” and was surprised to see a very dry cave for the first 100 meters. This quickly changed and we were bogged up in some seriously sticky stuff that was eager to steal your sneakers. Although this mud made for difficult walking, the crawling/belly sliding was spectacular. Towards the end of the cavern there were numerous crawl-ways with tight squeezes that you could just slide your body through without the terror of getting stuck. The group had great fun in this adult-size gymnasium before time ran out and we were forced to head back into daylight.



FUSSI Members displaying the results of their luxurious mud bath treatments.  
Photo: T Varga.

Emerging from the cave, there was some washing up that needed to be done to rid ourselves of mud before we were allowed back on the boat. A convenient hop into the river handled the task quite well and soon we were off on a nice cruise back to the carpark. Goodbyes were had as we headed back to Adelaide, well-caved and refreshed from a great day on the River Murray.

Many thanks to the Flinders University Underwater Club for letting us borrow their boat, and also to Thomas for leading the trip and playing Captain for the day.

## VDC?

William Cooper

The day, Sunday, Twenty Third of March, dawned bright and cool but no one was around to see it. Well, maybe some people were but I was lying in bed with a hangover and a complete lack of desire to go caving. Regardless, I got dressed, had breakfast, and pulled myself together to go with Clare, Sarah, Hannah, Jesse, Neville, Heiko, and Janice to de-rig S-102 which someone (Thomas) had neglected to do the day before. Clare harnessed up and while she was doing so, Sarah and I moved into the small, fenced thicket to start hauling ropes. Clare barked at us to get out until we had harnesses on as the grass was wet and we could fall down the hole and be lost like dead cows. She of course made a valid point, but the gravitas of her order was lost when she let the ladder spools fall down the pitch 10 minutes later. It was to be somewhat of an omen for the rest of the morning ...

S-102 de-rigged, we drove to VDC Cave which has an interesting history. It was used by the Volunteer Defence Force to store supplies in World War II because the army thought that a Japanese invasion of Naracoorte may happen without warning, leaving the locals without a safe place to hide. Though as one caver pointed out, the Japanese could have just put a locked grate over the top of them and that would be that ...

When we arrived at the entrance, Neville and Clare were struck by the feeling that they had not been there before. The entrance, which should have been long and slit-like, was actually two circular solution tubes. We progressed, however, and Sarah did a recon trip down one of the holes. Finding it easily climbable, everyone was sent down on belay with her guidance. While rigging, Clare nearly dropped a stitch plate down the hole to her great chagrin.

When Neville and Clare entered the cave, it became clear that this was not VDC Cave. It was, however a very interesting cave. To the left of the entrance, there was a passage leading over some boulders that followed a series of solution tubes. None of them pierced the ceiling except for the second entrance, but some looked as though they had been blocked off artificially. To the right of the entrance was the main cave. One large cavern with a smaller room through a small opening. The main cavern itself showed evidence of limestone cutting, with several square blocks remaining and some disused and rusted oil cans. It also had a solution tube that appeared to have been widened and squared at some time during its use in bringing stone up and workers down.

Other than this, the cave was remarkable for its fauna, both living and dead. The long expired and rotted carcass of a cat fooled some of the trip into thinking it was a wallaby. Like clouds and tea-leaves, skeletons can appear to be many different shapes depending on ones perspective. There was also a dead lizard which is a common enough occurrence. Neville also found a large, living brown snake to the left of the entrance and some cavers followed him back on an expedition to find it. For what reason I cannot say. Neville also found a live hare at the other end of the cave which delighted Hannah and Janice until it was made clear that I was going to kill it rather than release a pest into the wild. Janice displayed an almost bloodthirsty interest in the hare's death which may be something to watch for in the future. The snake survived to slither another day ...

While not a very decorated or lengthy cave, it is always good to visit new places on trips. Sand Cave, Fox Cave, and Vic Fossil will always be there, but every new cave feels exciting to a fairly inexperienced caver and I hope to continue my exploration next time I am in Naracoorte.



# RUNNING A CLUB TRIP?

Clare Buswell

Sometimes you need to know a bit about what goes on behind the scenes in FUSSI land. Below is a bit about what constitutes a FUSSI trip. This was put together by FUSSI members to make things clear for us all. Some of these decisions are influenced by ASF insurance policies, by Flinders Uni Students Association requirements, Flinders University Public Liability insurance policy and by the ASF Safety, and its Ethics guidelines. Yep, red tape loves to be tied up in a very fancy knot!

- A trip can only be a FUSSI trip when the FUSSI Committee decides that it is.
- A FUSSI member who is not on the FUSSI Committee can propose a trip but they need to do this to and through the Committee, **and**
- A trip can only be a FUSSI trip if it is advertised on the FUSSI website at least *one month in advance*. (It takes time to organize permits, get permission from land owners etc.)
- Further, FUSA must be informed of all and any trips the club runs so we are covered by the Uni's Public Liability insurance. This is done by a member of the Committee filling out the FUSA Events form on: <http://fusa.edu.au/clubs/events/event-stall-activity-registration-form/> We can put up to 10 events on the one form.
- Members going on FUSSI trips must supply their emergency contact details to the trip leader. This is done via the FUSSI membership form. These details are for use in cases only of emergency, were they could be given to the police. It is the trip leader's responsibility to maintain members' privacy details.
- These details are to be kept next to the FUSSI first Aid kit which goes on all trips or in a prominent place in a car, eg, dashboard or front seat.
- All those on the trip should be informed as to what is to occur if an accident occurs and where these emergency details are.
- A club member who is not on the trip is to be informed of the trip's programme and contacted (where possible) at the end of each day's caving so as to inform them that all members are out of the cave and safe.
- All access permissions must be completed and approved beforehand. If they are not, *then all insurances become invalid*.
- Minimum caving group size is 4 people.

The Club has a set of standing orders as well as a Constitution. The Standing Orders give club members and its Committee the right to paint your car lime green even if against your will. Well, not quite, but they do state amongst other things, that the:

- Trip leader has the right to refuse permission for any person on a trip to enter a cave.
- See the links to:

## RUNNING A CLUB TRIP?

ASF Safety Guildlines, ASF Codes of Ethics: <http://www.caves.org.au/administration/codes-and-standards>

FUSSI Constitution and Standing Orders:

<https://fussi.caves.org.au/handbook/about.php#Constitution>

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## NEWS & TIDBITS

Whilst hunting around on the Web, I found the following things of interest. (Ed) I suggest that you do not do this at home!



Photo by Corey Arnold @arni\_coraldo

Wes @grizkid is seen here crawling into an unusually deep and narrow 70 foot (21m) den in order to sedate and re-collar a 320lb (145kg) male black bear around Bryce Canyon National Park. It was one of the most claustrophobic and scary situations of my life. Wes disappeared into the den of this hibernating bear armed with only a short aluminum pole attached to a

## NEWS & TIDBITS

tranquilizer dart. The tunnel was only as big as the bear with no escape except a very quick 50 foot (15m) backwards crawl should he decide to charge.

Wes, 31, is a masters student at Brigham Young University who is currently doing his thesis research on black bear (*Ursus Americanus*) populations around Bryce Canyon National Park. The study is looking at the way that bears in the area are using both natural and human sources of food, and the study is designed to help Bryce Canyon National Park avoid any problems with bears that could potentially see campgrounds and other human features as easy food sources. This kind of research is important in an areas like Bryce that see a lot of tourism as it benefits both bears and humans.

[https://www.instagram.com/p/BBc68EFEori/?utm\\_source=ig\\_share\\_sheet&igshid=1nikwbxvx d3g6](https://www.instagram.com/p/BBc68EFEori/?utm_source=ig_share_sheet&igshid=1nikwbxvx d3g6)

This looks like fun....



Hellhole cave entrance, Santa Cruz, CA, USA. Picture by reddit user u/gavatronicaiton



# WHAT IS ON, JUNE - DECEMBER

*Note: FUSSI holds a general get together/meeting on the Third Thursday of each month except where notified. Programme subject to change.*

Thurs, June 20 <sup>th</sup>	General Meeting &	Guest Speaker. <b>Dr. Rian Dutch.</b> Geological Survey of SA. <i><b>The Geology of the Nullarbor:</b></i> Noel Stockdale Rm. Central Library.
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## EXAMS 24<sup>th</sup> June-3<sup>rd</sup> July

8<sup>th</sup> July – 29<sup>th</sup> July MID-YEAR BREAK

Thurs, July 18 <sup>th</sup>	General Meeting &	Film Night. "Descent 2" Multi Media Rm Union Hub. To be confirmed. Dee Coordinating.
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July 20-21 <sup>th</sup>		Flinders Ranges Trip. Great trip suitable for all.
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Sun, Aug 11 <sup>th</sup>	A Comms Day	Walkie Talkies, Michie Phones, Cave link. On Campus. Flinders Uni. Start time 10 am Full Details available later.
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Aug 15 <sup>th</sup>	6.30pm	General Meeting. Noel Stockdale Rm. Central Library
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Aug 24/25		Naracoorte Trip. A training weekend. RSVP <b>19<sup>th</sup> July, 12 Noon.</b> Don't miss out put your name down. Clare Coordinating.
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Sept 14-15		ASF ACRC training weekend. Flinders Ranges. Clare Coordinating.
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Sept 19 <sup>th</sup>	6.30pm	General Meeting. Noel Stockdale Rm. Central Library.
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**Mid Semester Break 23 Sept -7<sup>th</sup> Oct**

Sept 21-22		ASF National Rescue talkfest. Glenelg.
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Sept 27 Sept to Oct 6 <sup>th</sup>		Nullarbor Research trip. <i>Trip is full.</i>
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Oct 17 <sup>th</sup>	6.30pm	General Meeting. On campus.
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Nov		Kangaroo Is. Clare and Janice Coordinating. Dates to be confirmed.
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## EXAMS 11<sup>th</sup> Nov – 24<sup>th</sup>

**Nov 25<sup>th</sup> END-OF-YEAR Break starts**

Dec.		Lower Sth East. Sarah Coordinating. Dates to be confirmed
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Jan 2020		Buchan Caves Victoria. Sil and Clare coordinating Date tentative at this stage.
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