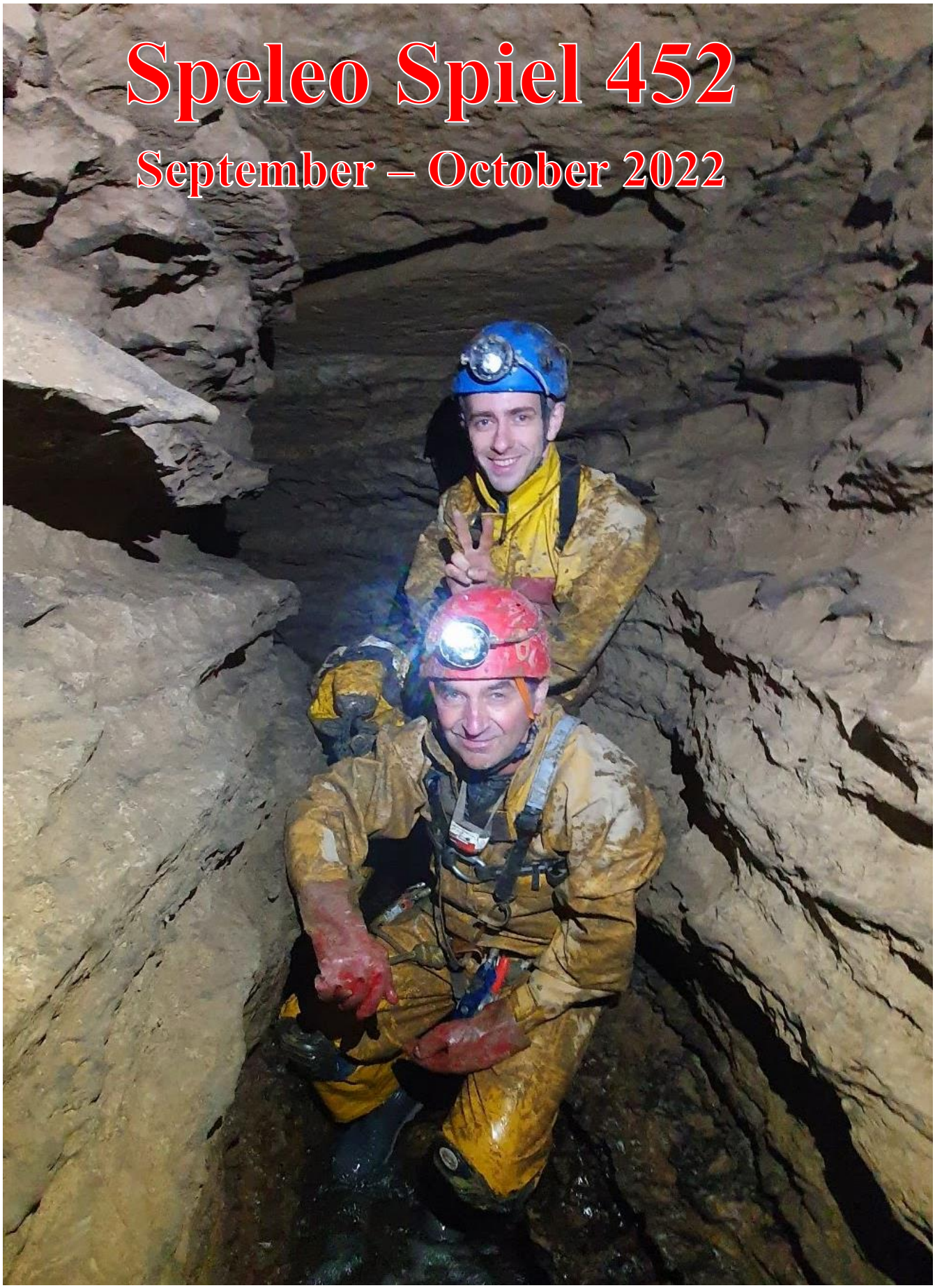
Speleo Spiel 452

September – October 2022



Newsletter of Southern Tasmanian Caverneers Inc. ISSN 2208-1348

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Front Cover: *Gabriel and Rolan in JF-761 Delta Variant. Photo: John Oxley*

Back Cover: *Green becomes her. Jemma Herbert after a fluorescein bath in JF-761 Delta Variant. Photo: Gabriel Kinzler*

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

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The views expressed in the *Speleo Spiel* are not necessarily the views of the Editor, or of the Southern Tasmanian Caverneers Incorporated.

Issue No. 452, September-October 2022

Contents

Editorial

Well, as you'll see, this issue is pretty much all about JF-761 Delta Variant. It has been a big couple of months in Tassie cave exploration history and the tale is told through these trip reports. Of course, this is the culmination of several years of work in this system but it's nice to see the saga reach a positive conclusion.

Or maybe not… It is always dangerous to call a cave system "done".

The positive media generated by the connection of Delta Variant to Niggly was good for the club, and caving in general. A nice change from the media generally only being interested when a rescue happens. The news spread far and wide – media-wise - and I guess that can partly be attributed to it being a good news story in a time of generally disastrous news.

Other caving has been happening and trip reports to provide some variety in your reading are also in this issue.

You will see that several of our newly minted members have been on some epic first/early career trips. These are very impressive performances. It gladdens this old caver's heart.

So, settle down with a nice cup of tea and enjoy.

Stuff 'n' Stuff

The 2021 biennial ASF conference will actually, finally, happen in 2023. It will be a couple of years late, courtesy of COVID problems. It starts on Sunday 16 April with the welcome BBQ. It is being held in Ceduna, SA, with field trips on the Nullarbor. So, if you have ever wanted to cave there, then this is a good opportunity.

All the information you need can be found here:

https://asfconference2023.com/

The physical map archive has finally returned to its old home in Lindisfarne. You will remember, I have no doubt, that Ric (Tunney) became map archivist at the AGM in March, after the archive was split into physical and digital categories. Thanks to Steve Fordyce for extensive phone and email negotiations leading to John Oxley and Gabriel Kinzler picking up the bits and bobs in late August and bringing them to us. Anyone wanting to peruse the maps, or search the files on specific caves, can contact us and arrange to visit.

Gabriel's car wasn't big enough. Lucky (actually good planning) they had John's ute too. Photo: Gabriel Kinzler

"Parks" have replaced the sign at the entrance to Midnight Hole. It is now a very professional sign. That is Rolan's (Eberhard) work. The old one that Ric and I had made up, and replaced at least once with a new version, was in very poor condition. We had taken our eye off the ball there. A copy of our sign is in the archive for posterity.

Photo: Rolan Eberhard

Steve Jacobs (Northern Caverneers) has been doing some reading recently. He found some old newspaper articles relating to caving. This article has some particularly interesting, and amusing, bits.

I can't resist pulling three out of context for your entertainment. Actually, the context does nothing to change the sentiments and imbedded attitudes, but I won't belabour the point, or even comment (that's hard). I think they speak for themselves. We laugh or we'd cry, but it is getting better.

"There has been only one occasion since the inauguration of the club (TCC- Ed) *when the girl members were barred from taking part. A large hole was found near the Newdegate caves believed to be the entrance to another system. One of the men swung into the black deep on a rope ladder…*

Once on the surface, invariably covered from head to foot with mud, the party's main interests centre on food. A wash, and a bed. 'Tis here that the male members really appreciate the advantage of having female caverneers. The boys sit back and smoke and talk caves, while the lasses busy themselves over the campfire preparing food…

Little do visitors dream, when they see mud-caked figures emerge from a hole in the floor of the Hastings Cave, that beneath that mud, there is often an attractive girl, with the heart of a pioneer."

13 Jul 1949 - Girl Caverneers Seek Adventure - Trove (nla.gov.au)

Thanks to Steve for passing them to me.

Trip Reports

Not IB-11 – Midnight Hole

23 July 2022

Jemma Herbert

Party: Serena Benjamin, Jemma Herbert, Andrew Houghton

After a bit of a poke around Mystery Creek Cave a few months ago, Andy (my partner) decided that maybe caving is kinda cool and in particular he'd like to come back and do Midnight Hole. So we came back to do Midnight Hole. Serena came along for the jaunt too.

We were well aware that Andy is built like a barrel, and not one of those little baby barrels. The kind of barrel that you and all your friends couldn't possibly drink in one night, regardless of how little caving you plan on doing the next day. So we were definitely gonna test the Matchbox Squeeze before we committed. I remembered it being not-that-tight, and others confirmed that they reckoned Andy would probably fit if he was willing to try pretty hard.

He definitely did not fit. Not even close. Really, no amount of 'squeeze really hard' was going to do it. Significant surgical reconstructions would be required to get barrel-boy through that hole. At a minimum a quick swap-out for a smaller model of rib cage would be required. Surprisingly, he was unwilling to undergo that surgery then and there with my 3 cm folding knife.

As a guide for local big folk of the future, we guestimate that the Matchbox Squeeze is about the same tightness as the entrance of tunnel #3 at Rock It. It's definitely smaller than #1 and #6. (But obvs check if there's any doubt.)

So we didn't do Midnight Hole, we just had a chill few hours checking out Mystery Creek Cave. We went up Cephalopod Creek and out to the Back End. We were back out with almost enough time to make a second stop of the day at Summer Kitchen, but not quite.

JF-761 Delta Variant

23 July 2022

Gabriel Kinzler

Party: Rolan Eberhard, Gabriel Kinzler, John Oxley

With everyone rambling on about Delta Variant over the last six months, a handful of people hadn't yet seen what all the fuss was about and naturally were keen to jump on the bandwagon. Amongst them were Janine, John and Rolan. Unfortunately for Janine, she bashed her knee one day before the trip, and so the party's average age dropped significantly, by about 10 years *(he is just begging for a comment here, isn't he? I shall resist – Ed)*.

Getting through the tight and meandery entrance series (Test Station Queue, "TSQ") proved difficult for John, who couldn't manage to stay upright moving sideways, and so expended a great deal of energy facing forwards, a lot of the time on all fours, with the added detriment of getting soaked. We eventually reached the Alpha Inlet ("AI"), a little tributary of the main streamway, and started exploring it upstream.

Rolan and I pushed ahead, up the fairly standard, tight streamway, which seemed to follow the same bedding plane as the main drag. After 30 metres or so, we started hearing roaring water, becoming louder and louder as we progressed. We were completely puzzled as to what it could be. We began to imagine what sounded like the mother of all waterfalls and got very excited. But none of this made any sense, since we were still very close to the surface and there was only minimal water flow.

Finally, Rolan had the common sense to lift his head and look into the continuous flattener formed by the collapsed roof on our left: "It's the bloody entrance streamway!" he said. It was a mere three metres away from us. We continued to the end and sure enough, Rolan caught a glimpse of light from the entrance. Astounding.

Rolan in a nice part of the cave.

Photo: Gabriel Kinzler

I noted the possibility of a connection through a little gap where you could see the light, moved some rocks, but then decided we should make a move to check on John, who'd stayed behind. I left a permanent station (DVK1) entrance-side near the gap and we surveyed out, tying into DVA39 back at the intersection with TSQ. The survey shows that AI parallels TSQ all the way to the entrance, the former being ~20 m shorter than the latter thanks to a majority of long straight lines, compared to TSQ's multitude of kinks. AI is faster and arguably easier/nicer: not as tight and winding, much drier, and quiet.

We continued to TSQ's second inlet: the Omicron Inlet ("OI"). At this stage, John had already been shivering for over half an hour: his brand-new PVC suit did little to keep him dry on the way in. I suggested he put on a spare layer, but he argued that he'd be fine if we kept moving. Fine by me, and so we threw ourselves into the inlet without further ado. OI is drier than AI, but also muddier, with a lot of standing water. The roof is higher, but the walls are a smidge closer to each other. John turned around early on, as he was getting exhausted rather than warm. Rolan and I sprinted to the end, dodging four or five successive football-sized chockstones. OI terminates in a mud slope near the surface, which is evidenced by roots growing through the muddy roof. An alternate entrance is possible here, despite not being a great alternative to the current entrance series.

With John left behind again and the option of going down Quarantine Pitch slimming, we exited the inlet without surveying it, sacrilege!

We found John still shivering. I felt bad, but had to make a tough call: I didn't feel comfortable having him go down the pitch given the circumstances, and so it was decided Rolan and I would quickly descend to show him around, and John would start making an exit. In retrospect, it was the right decision. The water levels were quite high and the blizzard created by the waterfall hitting the bottom of the pitch was of biblical proportions. The short section of prusik past it could be deadly if you're slow. John had already been through a similar scenario in KD, a few years ago, and I didn't want to risk it again. The party's average age must again have dropped by 30 or so years when Rolan was awestruck by the spectacle offered by Quarantine pitch and its neighbouring avens and waterfalls, and then the top of Daily Cases. Bonza!

Just before exiting the cave, I confirmed the connection of AI to the entrance. I completed the survey from DVK1 to the cave tag through the gap, with 1.2 m of survey error resulting over the big 220 m loop. Not great, but not too bad, all things considered. I dug out the gap for 5-10 minutes, with Rolan helping behind me. The next party should be able to easily finish off the dig.

Here follows a series of reports on the JF-761 connection with JF-237 Niggly Cave trip.

JF-761 Delta Variant Connection Trip Overview

30 July 2022

Stephen Fordyce

Party: Karina Anders, Ben Armstrong, Rolan Eberhard, Stephen Fordyce, Lauren Hayes, Jemma Herbert, Brendan Moore, Ciara Smart, Petr Smejkal

The stage was set for JF-761 Delta Variant to finally connect into JF-237 Niggly Cave (and thus into the JF-36 Growling Swallet system). A complex process and spreadsheet gave everyone who had been on a trip so far a chance to be on the connection trip, and make the first through trip, coming out the Niggly entrance. Also, taking advantage of lots of excited people to de-rig Niggly as we went. This gave us a 6-week wait and a party of nine.

For reasons of general silliness, a key expedition theme became Disney princesses. Team Rapunzel (Ciara, Karina, Jemma) went ahead to do the rigging and the giggling. The melting point of hair is too low for abseiling, so they let down conventional ropes instead. Team Aerial (Steve, Ben) played around in the water, setting up The Magic Beanstalk (a 150 m counterbalance water-powered bag hauler). This still needs some tweaks but is shaping up to be my single best caving achievement ever. Team Sleeping Beauty (Petr, Lauren, Brendan) pottered around the upper reaches of the cave at a sleepy pace, checking out Superspreader. Team Pocahontas (Rolan) had the ancient (and highly respected) tribal elders of the caving fraternity role. He made the sensible decision to go part way down Daily Cases and head back out the Delta Variant entrance.

We successfully rendezvoused only a little after the time-at-which-things-might-get-angry at the top of the waterfall pitch in Niggly, which had just been rigged. And by 6 pm were all sharing a mix of powdered hot stuff from the communal billy near the C19B station at base of pitches in Niggly.

We merged to become Team Cinderella for the derig on the way out, but despite the late finish, nobody turned into a pumpkin. It was a near thing though, as we got out of the cave at 1:30 am.

Jemma and Lauren enjoy the warmth of the Airbnb oven, and Jemma enjoys my spare socks. Photo: Stephen Fordyce

Steve and Petr

Photo: Ciara Smart

Team Rapunzel

Photo: Stephen Fordyce

The biggest Niggly bottoming party ever!

Photo Stephen Fordyce

Probably lucky Brendan had diarrhoea-coloured thermals
Photo: Stephen Fordyce

The group of nine. Photo: Ciara Smart

Team Rapunzel: Jemma Herbert, Karina Anders, Ciara Smart

Ciara Smart

With an unwieldy group of nine, it wasn't sensible for us to head down the pitches simultaneously, considering that we still had some rigging to adjust, and a final unknown pitch to negotiate. The three of us had been designated as the 'front' team, while the remainder of the group were to hang back, doing useful or at least notionally interesting things in higher sections of the cave.

On the way in, Karina became the first person to fully negotiate the 'Alpha' inlet, which runs parallel to the existing streamway entrance. This new entrance is slightly less strenuous than the old streamway entrance, or at the very least, doesn't necessitate wet feet. In doing so, Karina managed to accidentally overtake Jemma and I, and we almost left her pack at the top of the first pitch. Things went smoothly after that.

We spent some time hanging around on the Daily Cases pitch while Jemma made some pertinent adjustments to the rigging. From Daily Cases, we had to do some route finding, as none of us were very familiar with the way onwards. While the route was simple, it did involve some airily exposed traversing along crumbling ledges where the ropes had been removed.

After dropping the 6 m pitch, we quickly found the top of the next pitch. The top of 'Freedom Day' is a convoluted and currently imperfect pitch head, but we left it as is. After a short traverse, I took the final rope and headed down the first section of Freedom Day until I reached the final rebelay. This was the turnaround point on the last trip.

From there, I tied in the last rope and 'let down' the final undescended pitch, but the penultimate of the day. The second half of the pitch was quite delightful, hanging just clear of the face but within the spray and roar of the waterfall. Upon reaching the bottom, I was relieved to immediately see a tape. This indicated that we had made it to the top of the 'Waterfall' pitch, which had been aid climbed up from Niggly some years prior. While we were expecting this, it was a slight relief to know that the connection was now confirmed as humanly possible, and the water wasn't about to go through an impassable slot.

At the base of the pitch, the three of us regrouped away from the spray of the waterfall and had some much-needed food and hot drinks. The base of Freedom Day is very noisy and unpleasantly subject to spray, but there is a small, warm chamber around the corner. We then headed down into a short meander before we reached the top of the 'Waterfall' pitch, as the rest of the group gradually caught up. Karina took over the rigging here and did an admirable job in challenging and wet conditions. For the sake of efficiency, she took advantage of the existing bolt holes in place from the previous aid climb. Unfortunately, the bolts were placed according to the needs of an aid climb, not a descent, resulting in some of us getting quite wet in the winter flow of the waterfall. The rigging here will need to be rethought on future trips.

By 6 pm, the whole team was assembled at the base of the Niggly pitches, where hot drinks and No-Doz were passed around in preparation for the long ascent.

Team Ariel

Stephen Fordyce

Party: Ben Armstrong, Stephen Fordyce

Our keeping busy job was at the top of Daily Cases, working on another of my harebrained ideas – The Magic Beanstalk. The 150 m vertical waterfall lent itself nicely to a water-powered counterweight rig for hauling bags (and potentially assisting people). With at least several more camping trips and probably a diving trip to the master cave via this new route, the effort of setting it up could be vaguely justified, plus I've wanted to do this for years.

A triple load sharing anchor on the opposite wall to the first rebelay turned out to give a pretty good hang in the centre of the shaft at the level where the waterfall emerges. I hung off this rope while Ben hung off another one attached to the rebelay. Like a weird Newton's cradle, we bounced around over the 150 m drop, pushing off the walls and each other in a complicated relay which eventually saw us both gain the hole where the stream comes out, putting in some concrete screws – one in the floor for the water bag, one in the ceiling to assist us in swinging back over later for adjustments.

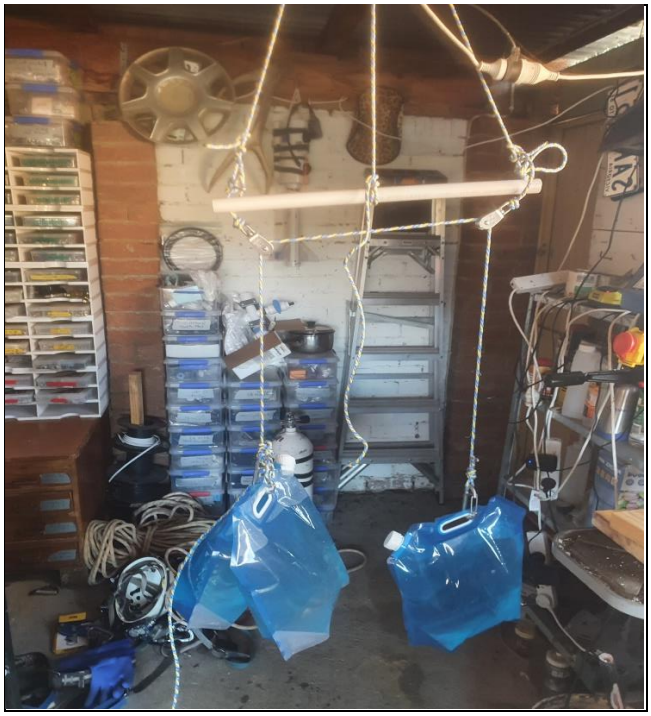
A 100 L diving lift bag was hung just over the lip where it caught sufficient water to fill quite quickly. I think it'll be ok in high water, as the rope is taut and fast water will shoot past it into the void – we'll find out. A hose attached to the lift back runs back to the top station, where an operator can fill multiple 10 L water bags with a convenient valve. These hang on a hook and are attached to one end of the haul line – 7 mm Telstra rope for cheapness and ease of portaging. After the load is attached below, the bottom person pulls on the load rope to lift the top water bags off the hook, and then empties water out of the bottom water bags until the load at the bottom will go up at a reasonable speed.

We finished all the rigging and had to hurry on down before completing the commissioning. Some serious protocols will be required as well (like staying well clear of the drop zone!). A 3 mm orange bottom-haul line with a pulley will be added to help pull loads away from the waterfall (as it turns out the pitch isn't quite vertical).

Rigging the Magic Beanstalk. Photo: Ben Armstrong

The water collection bag, hose and valve

Photo: Stephen Fordyce



Bag development in the garage

Photo: Stephen Fordyce

Team Sleeping Beauty

Petr Smejkal

Party: Brendan Moore, Lauren Hayes, Petr Smejkal

To be honest, I had no idea I would be part of the team until the decision was made at the Daily Cases/Superspreader Junction. I was given two options, getting wet while hanging on rope with Team Ariel or enjoy some cave rumbling along the dry passages of the Superspreader with Team Sleeping Beauty.

For me, it was a simple decision to make. I joined the Sleeping Beauty Team with Brendan and Lauren. The return time limit we were given was an hour, but somehow, we decided that this was unrealistic for the other teams, so we did not rush and we tried to have a proper look.

Superspreader is an interesting part of the cave with an amazing potential to bypass Delta Variant's entrance struggle. Our aim was to head towards survey stations DVF50 – 56 where we would try to poke a tent pole through any little squeeze we could find. According to Steve's and Gabriel's surveys, the passage there is right under the Negative Dig and really close to the surface. If we could poke the tent pole through a squeeze, we could potentially help to find a new entrance.

At the survey station DVF53 and DVF55 we noticed a couple of simple climbs covered with surface debris. There were also a few crickets and some spiders, perfect indicators of the surface being nearby. I could notice a temperature drop at the top of the DVF53 survey point climb, it was definitely colder outside that day! Unfortunately, all the climbs ended in narrow squeezes filled with rocks. We did not manage to use the tent pole anywhere. After some pointless tent pole poking, we decided to start heading back. We met Rolan at the Daily Cases/Superspreader Junction, had a quick chat, some late lunch and started heading down the Daily Cases pitch, catching up with the other two teams.

Team Cinderella (Niggly exit & de-rig)

Stephen Fordyce

Party: Karina Anders, Ben Armstrong, Stephen Fordyce, Lauren Hayes, Jemma Herbert, Brendan Moore, Ciara Smart, Petr Smejkal

The downward teams merged into the 8-person strong Team Cinderella for the trip up Niggly, and the de-rig. Everyone was still pumped (even Karina, by now in her third set of thermals) so nobody took up the offer of taking the two drills and other unnecessary stuff and hightailing it back to the car – it was really nice that everyone put up with the painful waiting and helped with the derig.

We started trickling upwards at maybe 6:30 pm and it probably took an hour before Petr and I (bringing up the rear) were on the rope, taking it in turns to de-rig as we went.

The others waited for us and grabbed heavy bags of wet rope (well-loved since being installed in 2019) to pass along and upwards. It was a great team effort, with a gratifying amount of patience displayed, and having a big group at least helped to pass the time and spread the load. And a big relief to see Niggly finally derigged after six years.

Brendan pooped out his mojo (twice), but got the ascent done despite an upset stomach - a few days later he professed to have enjoyed his second Tassie caving trip. Presumptive gastro-stop is likely to be a feature of his third trip, along

with some slightly more pleasant caving. Lauren, as the other first-timer to the bottom of Niggly, cruised out easily.

Thanks to some water diversion efforts and much snowmelt, the top pitch of Niggly had a gushing torrent of water which baptised all cavers just before we emerged into the cold night – waiting around was not an option!

The last of us got out of the cave at about 1:30 am and we were all back at the cars by 2:30 am. Rolan had camped near the entrance until 11 pm before heading back to sleep in the car – he was sufficiently well rested to drive a crew (and Jemma's dry clothes) back to Hobart.

Ciara received a baptism of snowmelt just before the entrance

Photo: Ben Armstrong

The rest of us adjourned to the Airbnb in Maydena, where we took up a collection to give Jemma something to wear before she crashed out in one of the spare beds. We then stayed up until 5 am sorting photos and data to finalise the media stuff. There was no way meaningful loop closure and complicated survey wrangling was going to happen at that time of night, so we added 4 m to the Niggly depth per the surface survey and crossed our fingers that it wouldn't change much. There is still the possibility of parallel pitches and stuff to help with reconciling any errors.

Rope Testing Sections:

7x 2 m lengths were cut from the worn/middle section of the 105 m pitch to use for testing of the rope, and various washing methods (i.e. pressure washer):

- (x3) Hose wash only
- (x2) Medium Pressure (25 bar) with new rope washer (Cold Fusion v0)
- (x2) High pressure (~100 bar) direct jet pressure washer

The end/knot bits can be dissected to look for injected grit from the pressure washing

Niggly De-Rig Notes:

Ropes were labelled as we de-rigged, and threads generally marked with flagging tape. The single concrete screw was removed and the hole marked with the parsnip. Each of the two long rope sections was cut at a strategic place.

Here are the measurements of ropes afterwards:

Section	**Rope Length**	**Rope Roll**
Entrance Pitch (P10) & access	19 m	?
Tigertooth Pitch (P9) & access	19 m	?
Antidenomination (P85) + P7 & access	110 m	1
Access traverse & P25	46.5 m	1
P26 (wet way) & traverse to P105	49 m	2
Xenophobia (P105)	118 m	2
Bottom pitch & access	21 m	?

Media Report

Ciara Smart

We had spent a while dithering on whether to go down the media path for this event because of the obvious big-headedness that might ensue. In the end we decided to take up the opportunity for several reasons beyond its occasionality: chiefly because it was an excellent feel-good story that showcased caving in a positive light (not a rescue!), and secondly because it highlighted caving as a fun pursuit with a basis in teamwork and science. I was also quietly hopeful that it might create some new member interest in Australian caving clubs broadly.

In an effort to keep the media focus manageable, I contacted only the Australian Broadcasting Corporation (ABC) prior to the trip. They were very keen on the story, and I had to strongly dissuade them from the hubris-inducing concept of preview interviews. I eventually gave them permission to publish an article on the day of the trip, and I promised them first dibs on a post-connection interview. I had anticipated that the article would not be released until we were out of phone reception. Unfortunately, as we were having a team briefing in Maydena, our phones began to ping simultaneously as excited friends read the article and contacted us. If we hadn't been already, we were now committed to returning either successfully or with egg on our faces.

As explained, the day was a great success, and we returned to the accommodation at Maydena at 3 am. While most of the team crashed out or drove back to Hobart, Steve and I sat up selecting shaky go-pro footage and blurry photos to complement the pre-written media release. This was duly sent to the ABC at 5 am, and I managed an hour of sleep before leaving for a 7 am airport drop off. At about 10 am, I sent the media release to a dozen other Tasmanian and national media outlets.

The first call came in around noon, and my phone didn't stop ringing for the next 72 hours. I handled the bulk of the media interest, with support from Steve, and the STC executive broadly who kindly forwarded on media inquiries. The bulk of the media interest came over the next three days, but it took a long fortnight to fully dissipate. During this time, the

team took part in no fewer than two in-person television interviews, three online interviews and nine radio interviews, in addition to a solid smattering of other informal media engagements. All team members were offered the chance to speak on radio, if not TV, and it was fortunate that we had a large team because the media requests soon became onerous.

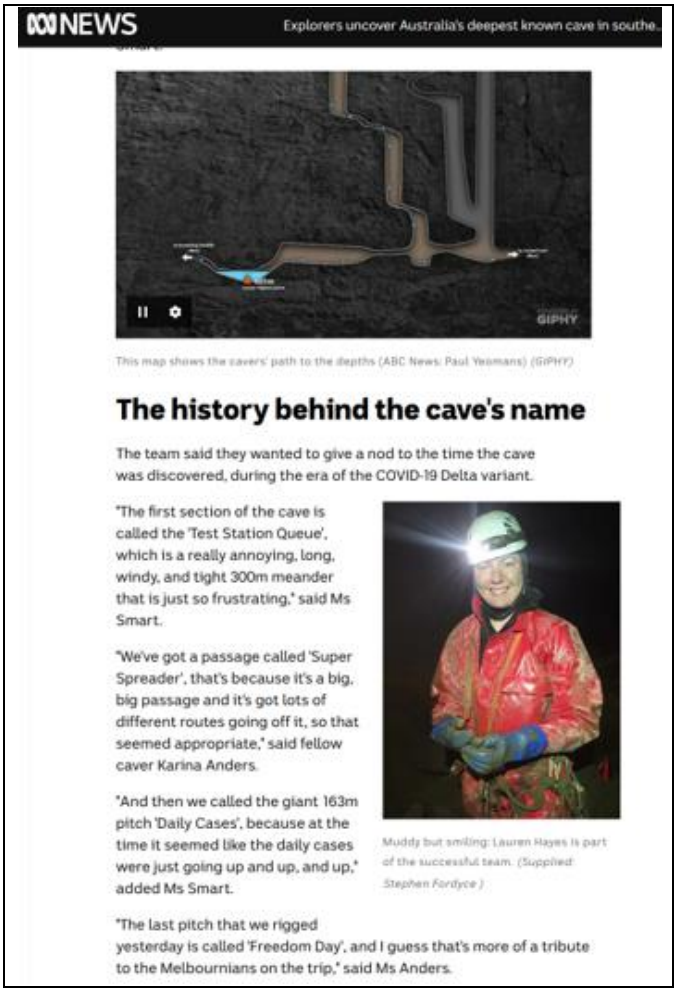
Television

In Australia, the story received wide television coverage. The first interview took place as we washed gear on Jemma's lawn the afternoon after the trip. A reporter from ABC Hobart interviewed Karina and me, appropriately positioned in front of a sprawling mess of dirty ropes. Karina will be forever remembered for announcing that she'd changed her thermals three times during the day due to the wetness *(That was such a brilliant line, particularly with her delivery of it – Ed)*. Half an hour later, Steve and I did a live online interview for ABC News24. Hilariously, Steve's arguably loquacious tendencies meant that he was dishonourably cut off mid-sentence on live TV. Footage from these interviews was shown across state and national ABC networks.

Karina blitzing it with her one-liner

The next day Karina, Ben, Gabriel and I were interviewed by 7News at Fruehauf. Gabriel offered a few pithy one-liners in this interview, including, 'You have to be a bit strange to be a caver,' and 'You have to want it.' Later that day I did an online interview with SBS. Nine News also requested an interview but reneged after discovering they were late to the party. Steve was set for an interview on Channel Ten's *The Project*, but unfortunately this fell through. The footage of our drenching ascent through the torrent on the final pitch was even used in a joke in the ABC program *Mad as Hell (yes, that was a surprise, however they gave no context… you had to know – Ed).*

Ciara doing TV (obviously)



Self-explanatory, really...

Another screen grab.

Radio

We spread the nine plus radio interviews out over the team. We had interviews with many small regional stations, but also ABC Radio National, ABC Radio Drive, Triple J Hack, and ABC Radio Melbourne and Hobart. It was reasonably difficult to convey the physical reality of the cave system, and the logistics of the connection, in a short few sentences to an audience entirely unfamiliar with caves. We used a handy analogy to compare Delta Variant's height to three Sydney Harbour Bridges, or six Wrest Point Casinos, but finer details, like the nature of a 'pitch,' were harder to convey.

The radio and online interviews varied in standard, depending more on the extent to which the presenter had been briefed than on the eloquence of the responder. Perhaps the best interview was that of ABC radio Melbourne with

David Astle, a cartographer and wordsmith who had clearly done his research to prepare for his interview with Steve. Conversely, more than one presenter asked, 'Is it dark?' Several inquired if we were carrying oxygen, a few asked if we had torches, and one wondered how we coped with the altitude sickness *(highlights their ignorance. You'd think they'd prepare better to avoid this, but apparently not – Ed)*. I found one of the hardest questions was, 'What's at the bottom?' Memories of the 2018 Thai cave rescue meant that most presenters tried to steer us down the angle of talking about the danger of caving, but we did our best to emphasise that this was all 'managed' risk. Many presenters didn't quite grasp the reality of the huge verticality of this cave and were more interested in the perceived danger of getting wedged in a seemingly claustrophobic space. One of the clips I provided the ABC was that of Jemma negotiating a challenging squeeze on a prior trip, which was broadcast for public consumption to great effect.

Editorial

Online, the story was republished by literally dozens of media outlets. No more than a dozen wrote individual stories, with most simply reprinting the stories of others. The Australian Associated Press reprinted the story in no fewer than 33 regional publications. The best online article was the feature piece written by the ABC, which was accompanied by the footage, and videos we had provided. I had supplied the ABC with a simple, side-view map of the cave. This was enhanced by their graphics team and did a reasonable job of conveying the height of the cave. A few other outlets also used the graphic, and some helpfully provided a scale bar made up of Sydney Harbour Bridges.

We also attracted significant international interest and were republished in international outlets ranging from MSN (UK), The Daily Mail (UK) and The Epoch Times (USA). The Daily Mail (UK) provided a superb headline, 'Now THAT's down under!' The biggest outlet to take interest was CNN (USA), with whom I did a recorded interview. They published a unique editorial piece, accompanied by a short video, of a respectable standard for public consumption.

'The Conversation,' an online news and editorial platform, used the event to publish a quasi-scientific feature piece on cave hydrology. This was republished by various websites with a scientific lilt, including Science Alert and Australasian Science. The most amusing republish was by 'Nature World News,' who attempted to avoid plagiarising 'The Conversation' by substituting apparently random synonyms. This resulted in some entertaining descriptions, including the following beautifully evocative sentence: 'Because of the unusual geometries of caverns, one may find themselves executing hard movements, bending and wobbling in all sorts of unpleasant ways as they rappel into obscurity.'

Concluding Remarks

While this was a challenging event to explain in brief for a public audience, between the interviews and media releases, most of the bareboned facts were conveyed in adequate clarity. Along the way, Gabriel Kinzler became Gabriel Zingler on live television, and several reports suggested we had bottomed the Dreamtime Sump, but nobody suggested we had discovered the deepest cave in the world.

So close and yet so far…

I can credit the significant public interest to several factors. Firstly, the name, 'Delta Variant,' gave an easy and interesting hook for presenters and editors. Secondly, the Thai cave rescue has remained in the public imagination because of the gazillions of opportunistic feature films, and general awareness of caving seems to be high as a result. And finally, as one journalist put it, 'It's nicer than reading about the war in Ukraine.'

These media interviews, web articles and television snippets have been collected in the archive for posterity. Thanks to everyone in STC who helped with the media inquiries and for dutifully stomaching a select few members enjoying their ten seconds of notoriety.

IB-171 Rocket Rods Pot

6 August 2022

Janine McKinnon

Party: Karina Anders, Jack Holyman, William McKay, Janine McKinnon, John Oxley, Craig Stobbs, Ric Tunney

'Twas the weekend after the historic and dramatic Delta Variant to Niggly connection trip and so the mere mortal cavers in the club ventured forth to demonstrate what relaxed caving is all about. Karina obviously wanted a foot in both camps.

We left the car park on a cold and showery morning around 9:15 am and the walk took about 45 minutes. It is a pity the entrance has no shelter as it was cold and drizzly and we all had to wait on the surface whilst two new concrete screws were placed for the rebelay. The old spit is definitely dead. John wanted to do this rigging, so he did.

John and Ric went down first so they could bottom-belay our new cavers, Jack and William, if it was needed. The two new boys managed the 34 m abseil ok, albeit with the odd bit of trepidation at the rebelay. It was significantly warmer, and drier, in the cave.

We wandered about the various areas of the top chamber for a couple of hours. It is quite a maze-like place as massive pieces of the ceiling have fallen creating small "passages" and flatteners. It is also surprisingly well-decorated.

Prusiking out took a while. Jack couldn't get his Croll to hold on the rope and so I swapped mine with him. This worked for him. I had no trouble using it but I guestimate that I weigh half what Jack does. It might be getting towards the end of its life as club kit, so probably needs keeping an eye on.

Dead spider as art. Photo: John Oxley

Some of the pretties. Photo: John Oxley

It has that "Renaissance grand masters action shot" look about it. Photo: John Oxley

We sent Karina up first so she could check out the tagged doline nearby. Her report follows.

Eventually we were all on the surface, the last of us arriving after Karina had returned from her expedition. Such efficiency is to be marvelled at (you decide whose efficiency you are marvelling at).

We have left the SS hangers on the concrete screws for now. The screws are not stainless, so this is not a long-term thing. It will allow parties to do trips here easily for a year or so whilst we decide if more permanent rebelay anchors should be placed or not.

We were back at the cars by late afternoon and home for dinner. So civilised.

Rigging notes for entrance pitch. (as at 6/8/22)

P 34 m. Rope length: 42 m minimum.

"Primary" anchor from 2 small trees of choice beside entrance. None are "bomb-proof", thus Y hang from two. 2-3 m length tapes are sufficient.

Rebelay from 2 SS hangers on concrete screws (in-situ) 1 m below lip. You can stand on small ledge. There is also a spit here, but is jammed with dirt.

Free hang to bottom.

Concrete screws placed 6/8/22.
SS 8 mm hangers left in-situ 6/8/22.

IB-177

6 August 2022

Karina Anders

Party: Just me

Janine suggested whilst we waited for everyone to get out of Rocket Rods to check out IB-177, which is only about 50 m up the hill. I grabbed the rope, tied it around a big tree and descended into what looked like a promising pit. I was quickly disappointed as it only went for about 5 m. Nothing but the bottom of a big pit. You couldn't see that from the top though, so the whole exercise was worth it. I prusiked back out, derigged and was back at Rocket Rods before the last two people got out. A nice way to pass the time.

JF-489 Perfect Pitch Pot, JF-761 Delta Variant

13 August 2022

Gabriel Kinzler

Party: Karina Anders, Jemma Herbert, Gabriel Kinzler, Ciara Smart

Following the Delta Variant/Niggly connection, it was discovered that the new depth of the Growling/Niggly system was probably not 401 m as announced in great fanfare, but likely still around 397 m. This is probably due to a fudge-up in the second historical survey of Niggly *(and there's lots of history with that – Ed)*. Linking Perfect Pitch Pot and Delta Variant thus became critical, as it should help to fix any such discrepancies. Additionally, PPP's entrance is higher (by a little) than DV's, which would further add to the depth record, incidentally (and funnily) making PPP discoverer and armchair caver Gavin Brett the new all-time record holder. Ciara got fairly excited about the prospect and devised a cunning plan: one team would release dye in PPP, while the other team would carry out a bolt climb in DV, in a highly suspect aven. Jemma was the designated mad climber.

Karina and I were sent to PPP. It was a good opportunity for her to practice her rigging and we actually both learned from the experience. Having dug out PPP twice before, I didn't believe the dye could flow through the tub-shaped thick mud inside the dig. Turns out fluorescein is a lot more permeating than I thought and it sure found its way through, despite the

lack of flow that day. Ciara later made sure to remind everyone how wrong I had been.

Karina, looking shiny and clean, rigging PPP

Photo: Gabriel Kinzler (or is that Zingler?)

Once that was done, we went to DV. Going through the Alpha Inlet with a heavy pack was slightly better than the usual way through the Test Station Queue, but considerably worse on the way out! I know which way I'm going next time. Our second objective of the day was to drop the Girthy Antivaxxers Shaft (aka Antivax) at the end of Nasal Passage. Again, I let Karina set up the rig, until she'd had enough and I took over to finish the job. A diagonal approach line guides you down a gravelly slope towards the lip of the pitch, where a Y-belay drops all the way down, steered clear of the walls by one redirect.

The pitch was measured to be 12 m. Half of it is covered in expansive, thick flowstone: quite a stunner for such a short pitch! As expected, a little pool born from a drippy waterfall is found at the bottom. Such little flow clearly didn't have enough time or power to cut out much of the limestone and the way on soon craps out, albeit with cool little speleothems. It's not all over in Antivax, though: two thirds of the way down the pitch, there is a higher level with hardened false floor followed by another pitch, estimated to be 6-7 m and bypassing the dud passage below. This level is accessed by an awkward traverse which will need to be rigged next time.

Running out of time and not having heard from Jemma and Ciara all day, we packed up and went to meet the pair in Superspreader. We bumped into them halfway to the lunchtime chamber, where the climb took place. Good timing! Jemma's face was entirely tinted in green/yellow (presumably for a few days and still at the time of writing). We had many a giggle for the rest of the day. Their story follows…

Ciara not so shiny and clean

Photo: Gabriel Kinzler

JF-761 Delta Variant and JF-489 Perfect Pitch Pot

13 August 2022:

Ciara Smart

Party: Karina Anders, Jemma Herbert, Gabriel Kinzler Ciara Smart

Although the 'connection' had now been made in Delta Variant, the cave still contains several niggling loose ends. The main objective of this trip was to confirm that Perfect Pitch Pot was connected to Delta Variant. Perfect Pitch Pot (PPP) is a simple 30 m shaft. Until recent times, it had been erroneously assumed to go nowhere. It is positioned directly above Superspreader, an extensive, sprawling side passage in Delta Variant. In recent months, two separate trips had hauled mud out of a miserable grovelling hole at the base of the shaft in PPP (*SS*451), in an attempt to break through into Superspreader. The surveyed gap was only about 10 vertical metres. Despite extensive excavation, the slimy squeeze remained impassable, and so we turned our attention to the Delta side. Within Superspreader, there are multiple dripping avens in roughly the right spot to be the underside of Perfect Pitch Pot. On a previous trip in Superspreader, I'd noticed that the base of one of these dripping avens appeared to have been splashed with muddy water. I suspected that it

was carrying mud recently disturbed by the dig in JF-489, and it was in roughly the expected position.

To solve the outstanding question, this trip targeted the connection from both directions. We split into two teams at the Niggly gully. Karina and Gabriel went to Perfect Pitch Pot, while Jemma and I went into Delta Variant and into Superspreader. After descending the pitch, Karina and Gabriel released 300 mL of fluorescein into the weak drip at the base of PPP. For good measure, they poked a flagged tent pole through the squeeze, which we hoped to see from the other side.

Inside Delta Variant, Jemma and I reached the nominated aven quickly. We could see a light drip coming from the ceiling. The drip was clear, with no fluorescein to be seen. Jemma begun a very impressive barehanded aid climb up the aven. Initially, she gained height quickly by squeezing through a horizontal split, from where she was able to make a high stance and place the first bolt. This climb was about 7 m in height, and Jemma was able to make fast progress by placing several tricams instead of bolts. About halfway up, to great excitement, we noticed that the steady drip had taken on a slight yellow tinge. This tinge quickly became the characteristic virulent green that we had hoped to see. To amusement and dismay, its path fell directly into Jemma's face as she attempted the aid climb, although it did conclusively prove that we were climbing the correct aven. Jemma's eyebrows remained yellow for some time.

You don't see stream that colour every day

Photo: Ciara Smart

Progress slowed at the top of the climb where Jemma reached a very tight vertical squeeze which she was not entirely confident of passing. From below, it was an amusing sight to see Jemma's legs dangling in space as she contorted herself through the small gap. Eventually she made it, and I followed her up. The squeeze was as strenuous as Jemma made it look, highly uncomfortable on both the sternum and the hips.

The position of the anchors forces you to go through the tightest section of the squeeze. Unfortunately, the rock is dubious in the widest section of the gap, making it difficult to reposition the anchors.

Jemma channelling Saturday Night Fever (if you squint hard enough)

Photo: Ciara Smart

After the squeeze, we found ourselves in a small, slightly decorated chamber of about three metres in width where we had a poorly judged jelly snake lunch. The wall was streaked with tendrils of fluorescein, slowly leaching out from the top of another 4 m climb. This climb had a deep crack, into which Jemma managed to place several tricams on her way up. At the top of the climb was a tightish passage, about 2 m in visible length. It carried a small flow of water. Unfortunately, we couldn't see the tent pole through it. I climbed up after her and had a half-hearted attempt at the squeeze. While the squeeze is not impossible, it is very awkward and the two of us had run out of energy. A hammer will be useful to reposition some rocks for a future attempt and one of the top anchors needs work.

We descended the two short pitches, leaving the rope in place. We settled on a name for the climb, the Phosphorescent Phlegm Pitch (PPP). This continues the PPP theme and connects it to the viridescent events of the day and the viral event of our era. On the way out, we met Gabriel and Karina coming up Superspreader. They had also had a successful day, having dropped the Antivaxxers Shaft in the Nasal Passage, and discovering another pitch after that.

JF-1 Pushing tempting drafts in dingy squeezes

27 August 2022

Djuke Veldhuis

Party: Nina Birss, Stephen Fordyce, Djuke Veldhuis

"We'll start out with a nice easy warm-up trip on the Friday." Steve had promised. It was now late Friday morning and I stood bleary-eyed in my caving gear ready to bash through a bit of bush. Not for the first time, I envied the locals who live in this beautiful and exciting place. How much more exploration would I get done? How much better and more useful a caver could I become?!

18 hours earlier Nina and I had our Thursday night flight from Melbourne to Hobart cancelled, so we promptly drove back from the airport, grabbed just about 4 hours of sleep at home and drove back to the airport for a rescheduled 7 am flight. At Hobart airport we were met by an upbeat and cheery Steve. A few hours driving later, we finally trundled up the logging track to JF-1.

"We'll take the more direct route to JF-1 through the bush this time," Steve promised. We arrived at JF-1 about 40 minutes later having taken a convoluted route much like we had during an initial recce trip in 2019. Not for the first time I mused about the impressive mapping done by locals in the latter half of the 20th century, especially in times before GPS. You really don't see JF-1 easily unless you're on top of it, but then it doesn't get a lot of traffic.

JF-1's entrance isn't much to look at, a slope with a huge fallen eucalypt is mired in mud and rock, and a slippery affair to slide down unless you take the vertical approach as we chose to do. It had been over two years since I had visited Tassie to go caving and I was full of excitement for this weekend's trips. JF-1 is a small cave with a healthy amount of mud and grease, some overlapping and interconnected chambers as well as popcorn-lined passages leading to breezy ends, many too small for humans. Nonetheless, one of the farther passages appeared promising and our objective today was to see whether we could move some boulders and make headway.

Before getting to our pushing front, there was a tightish corkscrew twist to navigate. In anticipation of tomorrow's squeezes in Porcupine, Steve had planned JF-1's trip in part to help me get my 'head in the game'. I needed it too. Although I am 'average' by Dutch standards in terms of size, I often find myself being the largest in a caving party. After two years not caving, my confidence in squeezes had dropped to an all-time low. Damn. This was embarrassing. Not going was not an option and after much patience, cajoling and friendly taunting from Nina and Steve, I finally did it. Of course, I would have to reverse the squeeze too. Steve had an answer to that. So, after I had done it once, he told me to do it again, forwards and backwards. And again. And again. Half a dozen or so times in and out of the squeeze later and I just about got my mojo back.

Onwards through another low squeeze and a slippery slide down a bedding plane. We all just about managed to arrange our limbs and alternated in a Tetris-like manner so we could see the pushing 'front'. Much crowbarring, pushing, shoving, grunting and we managed to get another body length forward. The distinct breeze continued to entice us, but the next entrenched floor boulder once again halted progress. Somehow four hours had passed since we first abseiled in and we had a dinner date waiting in Maydena. An enjoyable warm-up day even if the handful of meters of progress were disappointing. JF-1 holds more pushing opportunities yet!

Nina looking on as Steve descends into JF-1 the direct way avoiding the slick mud and log slope. Relatively dense vegetation around JF-1 as this photo aptly illustrates. Photo: Djuke Veldhuis

JF-1 is generally friendly, but does have a few squeezy bits.

Djuke getting her head back into the caving squeezes game after several years without caving on account of pandemic.

Photo: Stephen Fordyce

JF-387 Porcupine Pot Connection (with Asterisk) to JF-35 Gormenghast

27 August 2022

Stephen Fordyce

Party: Nina Birss, Stephen Fordyce, Djuke Veldhuis

Background and Introduction

A long time ago (2016), in a galaxy far away (pre-COVID, with me a Tassie caving rookie) I was part of trip which checked out a lead in Porcupine (see *SS*414, p16) upstream of the base-of-pitches rockpile, and where a goodly stream was purported to be from Gormenghast. I was keen enough to wear a 3 mm wetsuit under my cordura suit, and green enough to forget my gumboots that day. I volunteered to put the wetsuit to good use and crawled into the awful wet thing while Sandy Varin took video (my runners feature prominently) and enjoyed my discomfort. To quote my trip report of six years prior: "the sump was written off as too desperate".

I visited again in 2017 on a survey fest with Petr and Andreas, and we added the lead to the survey (it was found in the original 1980s exploration but not surveyed at the time). It curved away from the master cave nicely towards Gormenghast. During Melbourne lockdowns and the creation of the QGIS project with overlays of cave surveys, Gormenghast proved problematic as the original survey data was nowhere to be found, but eventually I overlaid and traced the map. It turned out that there was only a 30 m gap between Porcupine and the Gormenghast sump, which nicely matched the unsurveyed Gormenghast sump series dived by Rolan and Stefan Eberhard in the 1980s (see *SS*195:p 9 for Rolan's 1983 dive, *SS*255:p 9 for Stefan's 1989 dive).

Over the years I'd slowly forgotten my own dire warnings, developed an annoying sense of optimism and an inflated idea of caving magic happening if you push hard enough. A bit of diving success in the area also helped the idea of a Porcupine/Gormenghast connection gain traction, and it started to climb the priority ladder. The Delta Variant/Niggly connection was such a good trip that instead of having a break as originally planned, another ambitious trip was the way to go instead.

Nina wore all the layers to keep warm

Photo: Djuke Veldhuis

The push was always going to be from Porcupine – primarily because it would be an upstream sump, and fresh clear water would come towards me, clearing the inevitable mess of silt and mud in the water so I could see the way on. The Gormenghast reports were of tight and silty dives. That also meant it was a good thing to do in winter, with extra flow. Porcupine also doesn't flood, so that's nice, and for this trip there was no need to go to the master cave (with associated wetness and horror) – it could almost be classified as a moderate day. The survey data and Gormenghast reports indicated a much-reduced dive kit could be used (2-3 bags worth instead of the usual 5-6 – 3 L tanks, no fins, no wing/BCD, a small reel, etc.). Petr was keen (although ultimately wasn't able to make it), and fellow Melbournians Djuke and Nina were happy to make this the middle day of a mad 3-day trip (and gave an excellent account of themselves).

The Push

We completed the requisite faffing and were underground by 10 am, making good progress to reach the start of the push attempt about 12:15 pm. It wasn't exactly a sump, more a tight wriggle with a possible roof sniff and maybe eventual sump. So I changed into wetsuit and went in with a few tools to check it out. Given how desperate my younger self had proclaimed it to be, I'd wanted to bring the full suite of enlarging kit, but without Petr to carry things, this just wasn't possible. I blooded the unsheathed crowbar on getting a few token cobbles out of the way and reckoned I could fit.

Fuelling up on Shapes before the dive

Photo: Djuke Veldhuis

Getting through the super low and tight section was requiring everything I had, and it went into a roof sniff. With ear, then cheek, then eye submerged, the lapping at nostril and ice-cream headache were more than I could bear, so I

made a hasty retreat. I kitted up properly, at least the hood (and mask) would keep my face warm and I could be face down and still breathe. I left the gear-up spot at 1:30 pm and attempted the squeeze again. It was really awful, I was grinding front and back, and constantly pulling bits of kit off things they were caught on. There are ribs of rock above and below, and even with face in the water it was still pretty uncool, and I used an annoying amount of gas unnecessarily. Eventually I took my helmet off to get through into the relative comfort of a mostly submerged canal 30 cm high and 60 cm wide.

Heading off into the flattener

Photo: Nina Birss

The effort of all that had taken a bit of a toll, and the passage was still awfully small. The wriggling continued up cobbled streamway but at least it wasn't front/back grinding any more. I saw an amphipod, the same as those in Sesame. After what seemed like forever I could crawl, and then stand up in a small chamber with a sharp left turn. Life choices were questioned, but at least I was beyond the extents of the 2016 checkout, and could stick it to my younger self.

Back to crawling and then wriggling, I made it to a sump (thank goodness – at least you're weightless underwater). I'd been expecting to hit it a lot earlier, I'd put out at least 40 m of line already. A silty slope was going down, small but obviously passable. It was deep enough to feel the pressure in my ears, but not enough to register on my dive computer, so about 1.2 m. I put in a silt peg at the bottom point of the slope to keep the line off the ceiling and immediately headed up the slope on the other side. Definitely matched Stefan's Gormenghast Sump 2 description of a "classic U-bend", and the dimensions, too. I was pretty sure the connection was made, but had planned on going all the way to survey it.

The ongoing stream passage was of relatively generous proportions, allowing normal walking in some places, pleasant crawling in others. Up to my left was a window into a big void, with some rockpile, easily accessible but not visited due to lack of time/energy/mojo. Just after this I chose to climb up and over a couple of rocks rather than grovel in the stream. I continued running the diving guideline (and left it) to use for survey on the way out, as I hadn't brought the dry survey kit.

Back at the stream, it pooled and looked like sumping – that nicely matched the 1980s report of 30-40 m of nice dry passage. I'd used the 120 m of orange line on my primary reel, and hooked on the 50 m spool I'd brought in case of this. A narrow water-filled canal made for nice going until it sumped as expected – this was presumably the tight first sump which Rolan and Stefan had reported. I was a bit surprised to surface after no restriction in an airbell (this sump is so shallow that it could well not be a sump in drier conditions), but continued on down slope and through a restriction which was a bit tight but not too bad. A surface was above and… clunk, my helmet hit the ceiling before my eyes came out.

I got one eye out of the water and could see it was a dead end in the airspace, which was only about 5 cm. Crap! I quickly checked all around underwater before it silted out, but there was no way on. No current of clear water either. It wasn't a big chamber but I assumed my best foetal position to turn around and face the restriction head on rather than having to negotiate it backwards. I reeled in the line and retreated to the canal and airspace proper.

I was getting cold and feeling the isolation, also a bit confused about what was going on. While I pondered my predicament, I also let the winter currents do their job, watching the floaties in the water slowly but steadily move along. After a minute or so, I headed back in and could see a clearer patch, which I followed to an ominously small hole down to the left. Clear water flow was coming through, and it was dismayingly obvious this was the way. I've done plenty of gnarly tight cave diving, but this would have to be one of the smallest things I've shoved myself through underwater. I was able to get through (both ways) on my belly with both 3 L tanks still on, but it was a near thing, I nearly had to take one off. Hats off to Rolan and Stefan for pushing that thing. There was a distinct blade of rock forming the top/side of the hole, and matching Stefan's description, including how it forced him onto his back to pass it. Actually, I reckon that blade of rock is part of a large flake which helped form the dead-end room that I first went into.

Once through, I was very glad to surface immediately, albeit in a sea of foam, and in a narrow passage half full of water. A constriction ahead made it look like things unexpectedly sumped again (and I said a very bad word onto the GoPro), but loud sounds of flowing water and a peek ahead put paid to that. I swam/walked forward through more foam to reach the end of the pool and a left turn with the stream flowing down cobbles, with a steeper gradient than previously seen. This had to be it. There had been little foam further downstream in the cave, indicating this particular sump was a trap point for a significant amount of turbulent water from above. The sound of flowing water was also livelier than anything I'd noticed so far.

The lack of an old guideline was puzzling (*yes, wearing my caver diver hat, I have always found some bits of any abandoned old line tangled or wrapped around stuff somewhere, even if they have been abandoned for a few decades in high flow caves – Ed)* , but everything else matched the description of Gormenghast and I was keen to get back – I'd been gone a good while and we had forgotten to discuss when the support team should start getting worried. Failing to get a positive ID on this part of the cave is the asterisk on the connection (and "The Asterisk" is the name given to the section of cave traversed), and I wish I'd gone just a bit further upstream, or wiped the foam off the GoPro to get some more definitive footage (I haven't been

into Gormenghast). It'll have to be confirmed by a trip into Gormenghast – ideally with a quick resurvey (the original data has been lost, and the added survey has a suspicious overlap).

The way out was much quicker and less painful, even with surveying under pretty trying conditions. Mostly anyway – on the way through the Bladerunner Sump, my reg hose caught on the blade of rock and kinked, completely cutting off the breath I'd intended to take. It only took a second or two to troubleshoot, reverse a little, and resolve, but it was a suboptimal experience. I had run guideline through the whole push and used it for survey, leaving it in-situ (*So that should be visible on the Gormenghast side on a dry-caving visit as confirmation- Ed)*. It has knots at 3 m intervals, and the change in elevation for each shot was estimated. My dive computer didn't register any of the sumps so I had to guess those too. Not the most accurate of survey methods, but the loop closure from the Growling/Niggly connection showed it's not too bad really.

I was rather dreading the awful ribbed squeeze within sight of home, but managed to grind through it ok (and to the amusement of the waiting sherpas), arriving at 3:45 pm after 2 hours and 15 minutes away. It seemed like much longer, but I guess the survey distance was only 110 m. We reunited, had a hot drink and packed for the trip out, leaving at about 5 pm. Both Nina and Djuke did an awesome job with proper sherpas loads, nailing the nasty pitch heads and enjoying the complex rigging, and we were on the surface at a creditable 9 pm, still cracking jokes and in good spirits.

Djuke was reactivated. Photo: Stephen Fordyce

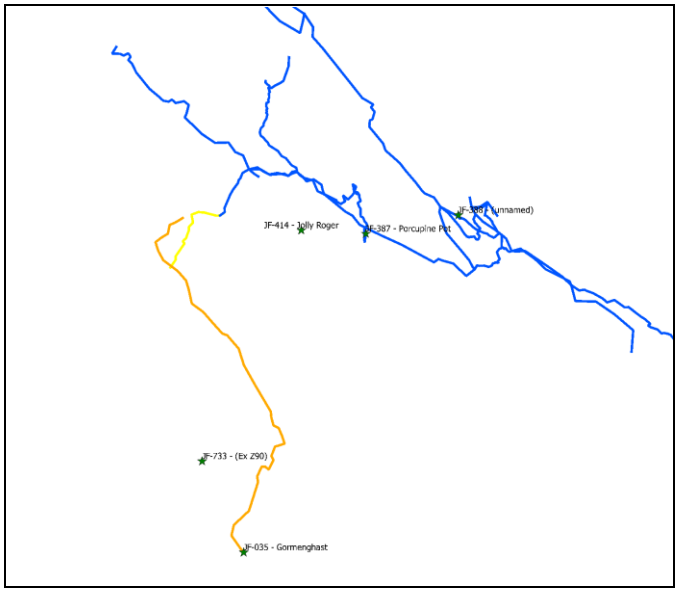
Diving Equipment

- 2x 3L tanks
- 7 mm semi-dry wetsuit
- 3 mm wetsuit gloves
- Sump harness (no buoyancy control)
- No fins
- No weight belt

Gas Pressures

- Start: 230/240 bar
- At first stand up chamber: 180/205 bar
- At far extend of push (cookie SF19-116): 140/150 bar
- Home: 80/140 bar

The survey



Survey plot, showing Porcupine (blue), the push (yellow), Gormenghast (orange) – loop not closed, 60 m error

Nina portraying "cave chic", complete with wrapper stuck to hair

Photo: Stephen Fordyce

JF-761 Delta Variant and surface day

28 August 2022

Nina Birss

Party: Nina Birss, Hugh Fitzgerald, Stephen Fordyce, Lauren Hayes, Ben Hazell, Djuke Veldhuis

The day started off with the crazy pack up of our accommodation and squishing everything back into the hire car, classic last day of a mainlander weekend mission. Our leftover booze was placed into the creek at the Niggly track carpark to keep cool as our future reward for a weekend well spent. So far, we'd been just a little too tired to enjoy much of our RnR, as the other trip reports explain. The Niggly track is as beautiful as I remember it, and we all warmed up pretty quick. Lauren did a great job of removing the majority of the water off the trees for us.

Our packs were fully loaded, and none of us were really sure on what our achievements might be for the day. Carrying shovels, drills, SRT kit, ropes, bucket and of course dye (always necessary on a Stephen surface trip) we felt like a squad of gnomes. The pickaxe was left behind as we all agreed that it was borderline ridiculous.

Our mission was to explore the possibility of a surface connection at the end of Superspreader ("Negative Dig"). The survey data suggested that the cave direction and rifty roof nature should gain us a new entrance with some effort. The original data suggested a -3 m (above ground level) connection existed but with a rerun of the data it was better established that if we found just the right spot we should be standing on just 70 cm difference between the cave, give or take 1 or 2 metres *(I love the estimated difference vs possible error – Ed).*

Our biggest challenge to this mission would be finding exactly where that 'right spot' might be, and knowing our chances I went ahead and assumed it'd be under a massive Mountain Ash. But challenges are also opportunities and through discussions with the Victorian Speleological Association (VSA), Stephen had borrowed a pair of mega radio beacon locators built several decades ago by Peter Robertson, which looked like something out of a "Stranger Things" episode. When they got pulled out of their barrels in the kitchen, we were all keen to have a practice play with them.

We arrived at Niggly keen to explore around. Djuke and Ben were excited to see the Niggly entrance after all the recent media hype and success of the STC crew. We followed the cliff edge along and around another 100 m to a GPS point that was suggestive of correlating to the underground passage. There were a couple of typical karst surface features that may have been indicative of a filled-in entrance. The first a 2-m cliff of rock facing into a gully and the second a small doline shaped depression slightly higher up the hill. So whilst Stephen got his kit on to enter the cave we began poking around to see if we could gain some easy though unlikely success. A predetermined 12.15 pm radios-on time had been set; in addition to the VSA's tech we also had a couple of handheld UHF radios that would hopefully allow easier voice communication.

As a team we made fast work on moving loose soil, small rocks and hitting a layer of cave-like clay, however, each dig location did not look overall promising.

The real fun came about after lunch when the radios went on. After an uncertainly quiet start, we finally heard a 'helloooo' shout from the UHF radio. The doubts about our stupidity were dismissed. I had been thrown under the bus as the surface expert in radios use and until we heard Stephen's voice through the UHF, I had a small feeling that my 5 min kitchen crash course may have been not quite enough.

Once Stephen turned his mega radio locator on (at the floor of Negative Dig, at a best guess of station DVF52, later marked with flagging tape) to transmit the strong consistent beep was relatively easy to pick up with our surface receiver. Between the two devices and their hula hooped shaped antennas, we were then able to triangulate where Stephen's underground position was. When the two antenna hoops are facing each other, like the two palms of your hands, the transmitted signal would be easily picked by the receiver. But if you turned one of the antenna hoops 90 degrees, so it is side on with the other, there would be a lull of quiet as the signal was no longer being received. So through this method we traipsed around the uneven terrain and established a central point that Steve must be below. We couldn't quite find the dead centre above his antenna but there may have been some irregularities in the signal, the ground or our angles. Regardless, we poked at the triangulated ground and Stephen replied to tell us that our noises sounded loud and close. We then explored the other radio features whereby Stephen below ground switched to receiving mode, and we on the surface transmitted. The mega radios successfully bleeped again and through the in-built mic we were also able to establish 2-way voice communications via the radio beacons.

Nina demonstrating how not to gain signal with the VSA's mega radio locator beacons

Photo: Djuke Veldhuis

Our radio location identified for us that where Stephen was sitting was not underneath either of our current excavations but below a narrow gully on an outcrop of rock (the survey error was found to be 4.4 m in the horizontal). So the previous two digs were abandoned and 'our' (mostly the amazing Ben's) efforts were refocused on achieving the 70 cm (plus or minus 2 m) dig at our new location. Things progressed quickly and it was very satisfying to lift a few larger loose rocks out of our hole. Eventually we reached a thicker layer of rock unlike the earlier digging which appeared to take the shape of a downward rift choked with mud and progressively getting narrower. Our combined efforts and the variety of tools available to us made some great progress on widening this discovery. However, our 4 pm cut off time was reached and we had to abandon any success for a future dig party.

Djuke and Hugh also completed a side mission dye release in the nearby JF-F1112 stream, Stephen derigged JF-489 Perfect Pitch Pot (and pronounced the terminal dig would benefit from the removal of some ceiling rock) and the Niggly weather station was brought back for some repairs. Down in the carpark we said our farewells and enjoyed our well-earned creek-cooled drinks.

Super big thanks to all involved in the weekend, the JF forest is such a magically amazing place to hang out in. Huge shout out to Stephen for putting together a trip of mini missions with a variety of cave exploring and related activities. Special mention to Djuke for being the best airport companion.

JF-761 Delta Variant

3 September 2022

Gabriel Kinzler

Party: Jemma Herbert, Gabriel Kinzler, Penny Player

A light trip on which I meant to re-sketch Nasal Passage (botched it when we surveyed a couple of months back) and the bottom of Quarantine Pitch all the way to Daily Cases (existing sketches not good enough). Penny Player, a complete beginner, joined my party of one despite multiple warnings, and after Jemma vouched for her and accepted to chaperone her throughout the day.

Yet more photos of happy campers, or in our cases, cavers.

Photo: Gabriel Kinzler (doing a selfie)

I set off on my own while Jemma and Penny would go at their own pace. I took some splay shots at the bottom of Quarantine, then sketched the area, as well as the upper access to Daily Cases, the access to COVIDsafe, and finally all of Nasal Passage. At Girthy Antivaxxers Shaft, I replaced the redirect made of a chain of my carabiners by a tape.

As I returned to Quarantine, the timing was perfect as Jemma and Penny had just dropped the pitch. We went for a looksee in Nasal Passage then started heading out. Penny did really well, all things considered. Fit but not yet cave fit, and otherwise had a good understanding of systems and the cave environment. She asked all the right questions, applied herself and was patient with herself.

On the descent, I discovered that the rope past the last rebelay was starting to be seriously damaged in two places, where it rubs against a prominence. I took the rope out for retirement/replacement. The new one needs to be longer to allow usage of the 4th rebelay anchor, which was never put to use because the rope would have been too short to reach the bottom, and no one bothered to fix it despite ~15 trips. Guilty everybody!

Definitely past its usefulness in this form

Photo: Gabriel Kinzler

Strongs Cave, Witchcliffe, Margaret River

10 September 2022

Ciara Smart (photos and text)

Party: Vito Macolino, Ciara Smart (STC), Jay Anderson, Ross Anderson, Andrew Green (Cavers Leeuwin)

Vito and I escaped the end of the Tasmanian winter by spending a few weeks botanising in the West Australian sunshine. As we were travelling through the Margaret River region, I got in touch with some local cavers. They generously offered to take us to Strongs Cave, a permitted cave in the Witchcliffe region.

We reached the gated entrance after a three-minute stroll through impressive karri forest. The cave entrance was a short 4 m drop which we negotiated on rope. From there, the cave was horizontal, and mostly at a comfortable walking height. The cave itself was highly featured, and geologically interesting. It was formed by a streamway, the last dribble of which dried up only thirty years ago. The streamway is now defined by a thick carpet of tree roots which have grown up into the cave in search of moisture.

In places, the roots have grown up from the floor level and formed a thick, matted nest around individual driplines, sometimes atop solid rock.

Root carpet visible in streamway

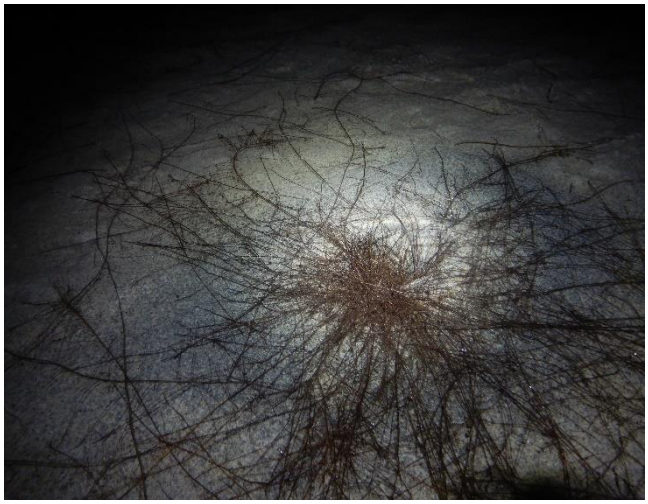
The cave itself was made of crumbly, sandy limestone on top of a gneiss base layer. The walls were marked with streaks of yellow, which showed where the sandy dunes had grown and paused over the ice ages, before eventually solidifying. Several granite boulders were visible throughout the streamway. As we walked up the streamway, Jay looked out for isopods, pseudoscorpions and other forms of troglobitic life. The club had a permit to collect these organisms for the West Australian Museum. We found many crawling among the thick mat of roots in the streamway. The cave was highly decorated, with many helictites, shawls, straws and stalactites. The most impressive formation was the famous 'Judges Wig.' This was a large, pure-white formation hanging in an isolated section of the ceiling. We spent lunch here, and took the requisite tourist photos.

Collecting cave fauna

It was nice to be wearing cotton overalls, albeit in dusty conditions, but I wasn't used to the warm temperatures and found myself struggling in the 17 ° C underground heat. I could also feel the impact of higher carbon-dioxide levels, as I found my heart racing and head pounding in the easy walking streamway. The others seemed totally unaffected.

The Judges Wig

We spent about five hours in the cave, our time was slightly prolonged by a final extended negotiation with a belligerent cave gate. Thanks to Jay and Ross from Cavers Leeuwin for facilitating the trip, it was lovely to see a different caving area.



Roots formed around a drip

All the trip photos can be found here: https://drive.google.com/drive/folders/1gEdGbFLuv243u_xMZn_WGuVFHCHHEzDc?usp=sharing

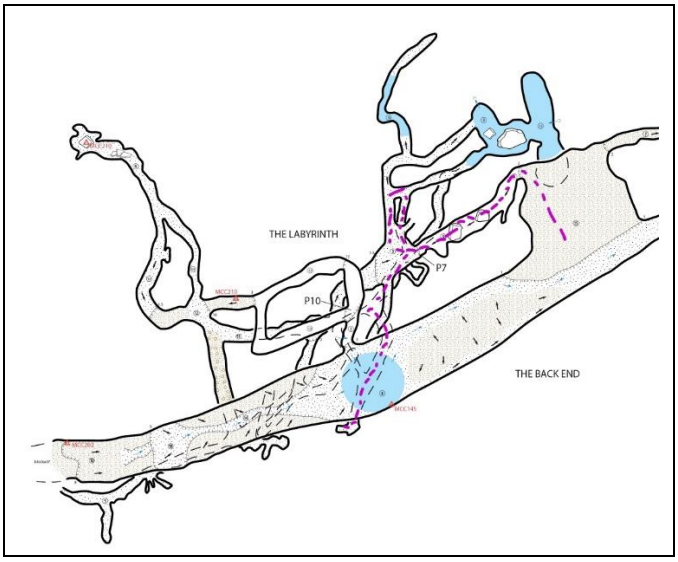
IB-10 Mystery Creek Cave Sump Checkout

16 September 2022

Stephen Fordyce (photos and text)

Party: Lachlan Bailey, Stephen Fordyce, Simone Lee

When asked "what might be a productive thing to do" as a shakedown in Ida Bay, Alan suggested that we check out the sump at the end of IB-10 Mystery Creek Cave (MCC). The water is next seen in Exit Cave 200 m away, and a connection would be a good 'un. We did a pulldown through the Midnight Hole entrance for funsies, and it was a useful orientation to the cave the day before the rescue exercise was in it. Lachlan and I were pleased to take the score to 1:1 for pulldown trips with/without losing any ropes, the Matchbox Squeeze was found to be respectable, and we found our way to the Back End of the cave without any trouble.

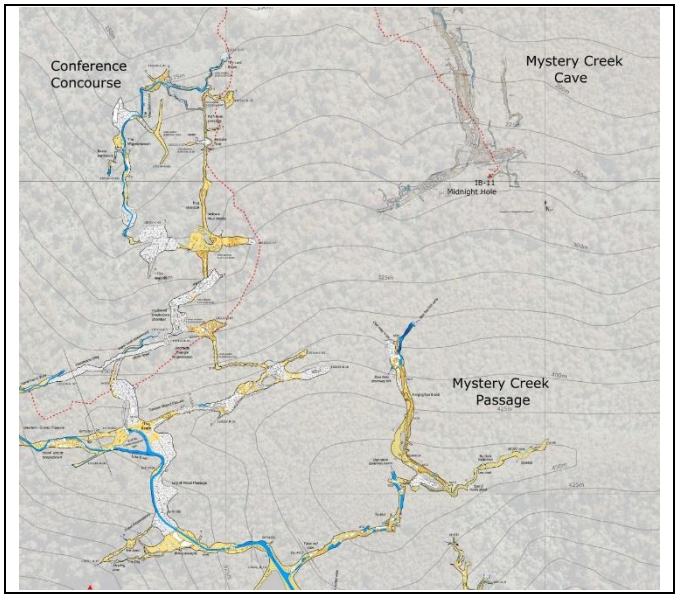


Our route to the sump is shown in purple on this excerpt of MCC map 7IB10.STC166 by Alan Jackson (2010)

Alan had said *"Yeah, the end of the main stream is the Labyrinth area. Easiest way to get down there is to take a ladder or a rope and SRT gear (there are some concrete screw holes in good spots from the rescue exercise) but you can get down there with no gear with a bold step across the pitch and a thrutchy free climb. Then it's just a maze of intersecting rifts – water levels variable depending on rainfall. What I would call the 'downstream sump' is in the area of the dotted passage underlying the large circular pond drawn in the higher levels. Last time I was there a white 15 cm trout winked at me. The next spot that water is seen is the spot Janine dived (then roof-sniffed) a year or two ago in 'Mystery Creek Passage' in Exit (a long way into the cave)."*

*SS*436, p18 has details on that dive. File "2021_08_14_exit_complete_a0_300dpi.png" in the electronic archive is the best overview between IB-14 Exit Cave and Mystery Creek Cave.

He also added *"The Mudslides area is now out of bounds (Special Management Zone) for rare and exotic cave beetles. Not very good dive prospect, either, IMO."*



Excerpt from file "2021_08_14_exit_complete_a0_300dpi.png" showing the relationship between MCC and Exit Cave

I did some half-hearted research and found a file in the electronic archive imaginatively named "IB-10 Trip Report.TIF" which is a 1998 report where Arthur Clarke, Dave Rasch and Jeff Butt went to this area and looked around (it mentions a draughting bolt traverse with 30 m of passage visible, at the top of the access pitch). Rolan mentioned that he thought a mainland party had dived the sump at some point.

We couldn't be bothered negotiating the pool which guards the climb up and to the P10 where the concrete screw holes presumably were, so went via the P7 as shown below. A 17 m rope and some reasonable natural anchors got us down the pitch, it didn't seem free-climbable. It was a good thing we had the map, as it was a bloody labyrinth all right. The map doesn't show a slippery rift climb, which is only 1.5 m but pretty difficult without help.

Just shy of the "sump", after the two passages rejoined, Lachlan and Simone stayed on a shelf while I tackled the wet bit. The water was more than gumboot depth and flowing slowly – seeming like less than the whole stream, but maybe that's just a function of the larger cross-sectional area. It was very tannin stained – the colour of well-brewed tea. I nearly squeezed through a gap on the left with dry feet but failed, and walked the couple of metres to the end in knee-deep water.

Vaguely clean and well-formed passage

At the end where the passage jags right, the flow seems to disappear under a rock, apparently with space for a person to get under. At the end of the right-hand bit, I could stick my head into a hole and see back down to a small bit of water, which looked like a shallow pool not of the main flow. The rocks around here were loose and easily diggable, with potential ways on ahead and up to the right.

My impression of the streamway passage is that it was smallish but fairly well defined and clean – not the jumble of rockpile you might expect consider the location under the large passage-with-pool above. The collapse at the end was consistent with a lead coming in from up and to the right, so diving the sump down and to the left might yield some clean passage and progress. A dig-around back to streamway might be possible too.

I was going to recommend a more thorough look and perhaps dig at some of the other little passages to the west of the sump before getting too carried away with dive attempts, as these are much further along the major fault line (I'm not sure of their level, or how close they get to the local water table). However, looking at the combined Exit/MCC map, the MCC stream should head south at some point, and is in fact apparently overdue. Actually, it's not obvious from the MCC map, but the stream heads quite straight in a direction of approx. 200deg (true) for some distance in clean passage, and actually just clears the south side of the large overlying passage at the sump.

This increases the case for diving the sump quite a bit. Visibility would be really poor with the tannin, and with it being a downstream sump and silt being carried ahead of the diver – worth contemplating the correct season or scoping it in summer. The flood levels in MCC (and the apparent lack of them in Exit) suggest some kind of constriction at base level, but there is always the chance of a dive giving access to a new dry chamber with access over the top.

The sump…

So while I don't have any plans for diving the sump, I'd welcome someone giving it a go. More investigation into the mentioned bolt traverse and/or exhausting higher-level dig possibilities might also be wise. I made a GoPro checkout video of the sump which will live in my personal archive – ask me for it.

JF-761 Delta Variant

19 September 2022

Stephen Fordyce

Party: Lachlan Bailey, Stephen Fordyce, Simone Lee, Petr Smejkal

We had a productive trip with an early start (6 am wakeup in Maydena, leaving the car at 8 am). With a bit of help from the rest of us, Petr spent a long day (until 7 pm!) prospecting on the surface above the end of Superspreader. More work is needed, but things were promising enough to tag JF-758 Negative RAT Hole.

The rest of us went in and gingerly tackled Vaccine Strollout - the chossy rift traverse over the top of Daily Cases. We laughed, we cried, we collectively pooped our pants a little.

Most of the rock was made of cheese but there was a layer higher up that finally accepted a welcome pair of anchors. We made it almost to above the far end of Daily Cases, but were stopped when the rift widened to 4 m for the last bit.

Some high energy aid climbing gained a few metres into a tight rift in the ceiling with actual good rock, where we called it quits for the day. It'll be painful, but I'm still keen to push across to a potentially interesting hole on the other side.

Simone (mostly) enjoyed her first trip into Delta Variant, and acquitted herself well, the time spent in my SRT practice tree was well worth it. Being a DV veteran, Lachlan experimented with new and exciting ways to torture himself in the Test Station Queue, hauling very respectable bags in both directions.

JF-761 Delta Variant

25 September 2022

Gabriel Kinzler (photos and text)

Party: Henry Garratt, Alan Jackson, Gabriel Kinzler, Ciara Smart

Ciara and I set out to make this trip our ultimate to Delta Variant. Not that we don't like the cave – quite the contrary – but after ten trips there and slow progress plaguing the project, we are ready to move on to something new. We recently started drawing up the DV map and needed to round out the final bits of the survey. Alan and Henry tagged along for a tourister to the bottom of the cave (and for a bit of logistical help; much obliged, guys). The master and the apprentice left us to our own devices at the Omicron Inlet.

In the zone…

Advanced surveying skills - mud management

Ciara took charge of book work and did a great job of it, as usual. Alan later indulged in a bit of benevolent prejudice, stating that "women do such a better job at surveying, because they have much better handwriting than men" – heh. In any case, either were we not very fast, or Omicron was so torturous that it took us almost two hours to survey the 150 m of its tight and awfully muddy meander. After seeing the end with Rolan on a previous trip, I had a feeling this inlet would run back all the way to the entrance, just like the Alpha Inlet does. And no surprise here, that's exactly what happened.

The far end of Omicron Inlet is situated exactly one metre under the cave's entrance. The end is noisy with several big drips, while the soft mud, loose rocks and draught are good corroborating evidence of the location. No daylight visible, but it probably wouldn't take much digging to find your way through. Omicron has very minimal flow (successions of mud pools throughout), but it is just as tight as the Test Station Queue, so not the dreamed-up "better way in". Delta's entrance series is strange: three parallel active streamways starting from the same point and all converging again downstream. You could almost consider Niggly's Tigertooth Passage as the "fourth parallel". I Can't think of any other similar case in Tassie, from my limited knowledge anyway.

We need to start a collection of "priceless facial expressions"

With that chapter closed, Ciara and I stormed down Quarantine Pitch and to the end of Nasal Passage's dry section for our second job of the day. We had a quick lunch, wasting no time as we were in a race against the boys who were probably already on their way back up. I bottomed Girthy Antivaxxers Shaft to survey the underlying passage discovered last time with Karina, while Ciara busied herself rigging a traverse above me. There, a window halfway down the pitch leads into a 10-metre stretch of false floor, varying from thin, to thick, to thin, to non-existent: a second pitch (8 metres), which bypasses the clogged passage underneath. Meanwhile, Alan and Henry arrived on the scene and Ciara eventually got all four of us down the new pitch. It led us into a couple of roomy chambers, the second one decorated with an assortment of thousands of very thin needles of calcite, almost hair-like, as well as flowstone and other glittery bits. Fortunately, the cave crapped out quickly, which aren't words I thought I would ever utter. Water flow is present but small and disappears between rocks on the floor. Based on the plotted survey, it looks like the stream follows the same bedding plane as Superspreader, Nasal Passage and the entrance series, in this case on a direct collision course with the bottom of Jemma's old 'COVIDsafe' pitch.

Alan and Henry reported a cruisy descent/ascent of the cave, stopping just shy of Niggly, above the waterfall tyrolean. Alan was kind enough to resketch all the bits below Daily Cases, as Steve's sketches from memory just weren't going to cut it. As expected, Henry did a solid job of caving, helping and being very good company, kudos. We derigged both Antivax pitches and exited.

Steve had confirmed he'd recently replaced the damaged rope we took out on the previous trip with Jemma and Penny, and that the new rope used an additional rebelay. Unfortunately, we noticed on ascent that this didn't improve the rigging, since there still are at least two rubs, and the rope again needs to be coiled out of waterfall's reach. I would have relocated the anchor, if it wasn't for Henry's generosity taking the rigging bag 40 m above me… Whose never-ending problem is it now?

The upper levels of Delta Variant still have quite a few secrets to uncover, mainly in the form of aid climbs. I can think of six just off the top of my head: two in Superspreader, two in Wet Nasal Passage, one in Dry Nasal Passage, one at Vaccine Strollout. They will all be marked on the upcoming map of the cave.

Other Exciting Stuff

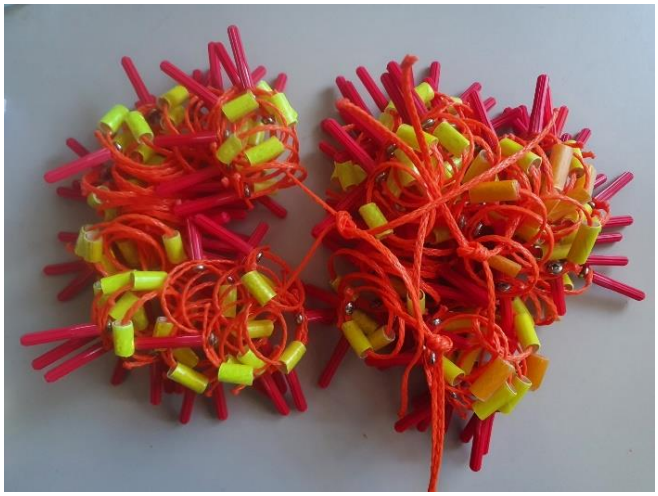
Parsnips Instructions

21 July 2022

Stephen Fordyce (text and photos)

With input from others, I've been making markers to put in concrete screw holes after they have been removed, to make it easy to find in the future (and stop them filling up with crud). Having a long root and a flexible top, they are a bit like a carrot, but that was going to be way too confusing with carrot bolts. Thus, they are "parsnips".

The design has ceased evolving, so here's how to make them (suits 6 mm drilled hole but you can just change the wall plug and screw for other hole sizes). I'll put a copy of this in the STC archive.

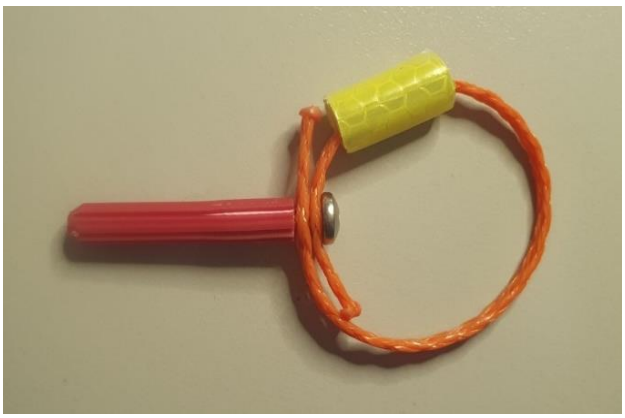


What's the collective noun for parsnips?

Bill of materials:

- Phillips head screw, 8 G x 20 mm, stainless steel 304 (https://www.scrooz.com.au/8g-x-20mm-stainless-304-self-tap-pan-304-pack-100, pack of 100 for $8.40, PLEASE USE STAINLESS STEEL EVEN THOUGH YOU CAN'T GET IT FROM BUNNINGS!).
- Plastic wall plug, 6 mm x 35 mm (https://www.scrooz.com.au/wall-plugs-plastic-red-x-35mm-grab-pack-of-100 or from Bunnings, pack of 100 for $6.45).
- Reflective tape, 50 mm wide x 5 m (eBay https://www.ebay.com.au/itm/183522801014?hash=item2abacfb576:g:ZlcAAOSwBN9c70Nr&frcectupt=true or from Bunnings, etc. – about $15, I prefer yellow).
- 13 mm clear heatshrink (https://www.altronics.com.au/p/w0956a-clear-13mm-heatshrink-1.2m-length/ or from Jaycar, Digikey, 1.2 m length for $4, get a couple of lengths, about 20 mm per parsnip).
- 8 mm diameter PU (polyurethane) (eBay, get 3 m for total ~$20). Other materials (i.e. Vinyl or polyethylene from Bunnings) would probably work but might also collapse in the heating process. About 20 mm per parsnip.
- String – I use braided 3 mm orange cable pulling line (https://ebtsupplies.com.au/3mm-x-1000m-orange-pull-line-rope/?gclid=Cj0KCQjwz96WBhC8ARIsAATR2502ci7fXuNpwK9Y0t-IXR__085UlW0nK3HSmiQxvGkYY8ehm32HgEaAkBoEALw_wcB), but it comes in 1000 m rolls, so ask an electrician or a sump diver for 10 m or so. About 160 mm per parsnip.

Assembly:



Here's one I prepared earlier

1. Make the reflective beads:
    a. Stick the reflective tape on the 8 mm tube (give it a wipe first). Lengthways can work, or in a very elongated spiral pattern, or with short bits of tape next to each other. The tape isn't super flexible or sticky enough, this is probably the most painful bit of the process. A solid piece of wire up the tube to keep it straight can help. You'll need to experiment.
    b. Feed the clear heatshrink over the now-reflective tube. It may be tight, and you might need to stick to shorter lengths, which is fine because you're going to cut them up anyway. Probably a good idea to do this as you put the tape on.
    c. Activate the heatshrink with a hot air gun, cigarette lighter, camping stove or flamethrower. Check the reflectiveness is still good.
    d. Use decent scissors to cut to length (~15 mm), discarding any scungy end or burnt bits.
2. Make the strings:
    a. Cut to size and heat seal the ends.
    b. Or just cut with the heat source and save double handling.

   c. Check your length before getting too carried away and making a zillion too-short ones.
3. Assemble the parsnip:
   a. Put a bead on a string.
   b. Feed the tip of the screw through each end of the string to make a loop with bead on it. Pick a good spot in the centre of the weave, about 10 mm back from the end.
   c. Shove the screw into the wall plug and twist by hand so it hopefully stays there.
   d. Once you have a good batch, use pliers to hold the wall plug (try not to flatten it, the wall plug will tend to split), and a screwdriver (preferably a powered one) to tighten the screw into the wall plug. No need for it to be super tight and crush the string.
   e. Thread onto a bit of spare string or put on a carabiner reader for action.
4. Using the parsnip:
   a. The parsnips are pretty robust, and have had an excellent survival rate casually hung off SRT kit through some very nasty caves (Turret, Sesame, etc.).
   b. Take out your 6 mm concrete screw (duh!)
   c. Push the wall plug part of the parsnip in firmly. It will get tight and stop as the end of the screw inside the wall plug gets level with the wall (i.e. you won't be able to push it in all the way, that's ok).
   d. Orient the string and reflective bead for optimal visibility to those seeking it next.
   e. If there's too much mud on it… lick it off!
   f. To get it out, just put a finger through the loop and pull.

Junee-Florentine (JF) Dye Tracing Experiments Update – A Missing Sub-Master Cave?

20 July 2022

Stephen Fordyce

I'd promised an update after assorted JF dye tracing in January, but the main focus of summer was the detectors in JF-210 Sesame Cave, which weren't retrieved until April. Because of the effort of setting/retrieving in Sesame, the program was focussed on quality over quantity so that we could do bigger and better spaced dye releases, to give the Sesame detectors the best chance possible for a definitive result.

So of the 152 dye releases in the register to date (!!!), only 13 happened in January. As always, thanks to everyone who went out and about doing detector stuff, or waited while I faffed. Appetite is winding back, as is the experiment, and I've ceased running the phone in the bush near Junee which was uploading daily data. There are still detectors in Porcupine (1), Growling Swallet (2), Niggly (5) and Junee (2), so releasing of dye for extra data points is still very useful if anyone is heading out that way. There are still a few caves on the wish list, like Voltera, Satans Lair, and a few others. And opportunity for detectors placement in the likes of Threefortyone and The Chairman.

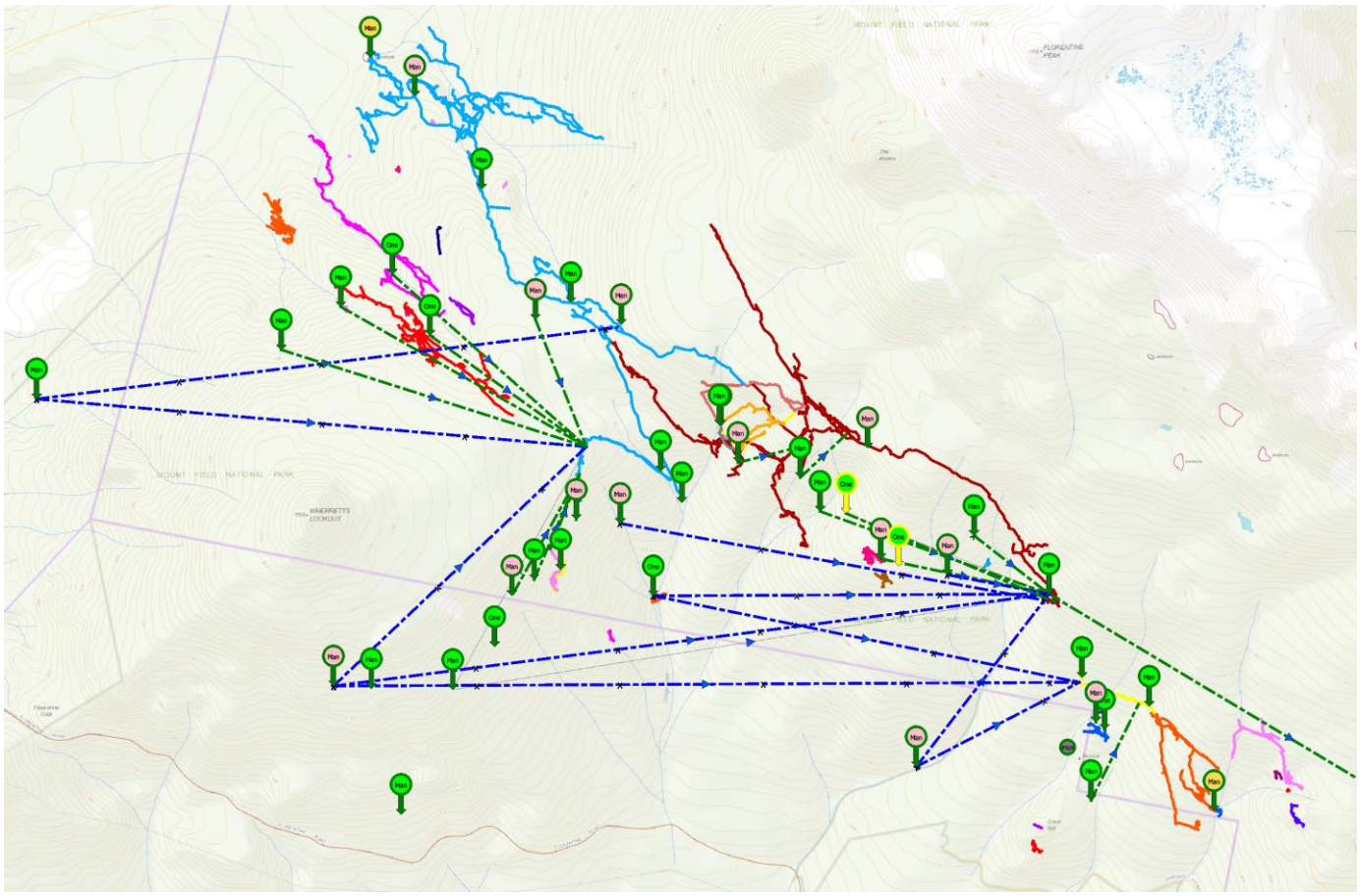
The January detector collection confirmed a bunch of links already known or theorised, like the caves at the contact on the east side of Wherretts Lookout going to Frownland in Growling Swallet. This also set a new record for detector deployment, with the Dreamtime detector still happily flashing away after 11 months and having 40% battery left.

However, when the Sesame detectors finally gave up their data, I wasn't sure whether to be excited or disappointed – there was only one positive result, from the most obvious link, JF-364 Tarn Creek Swallet. Having put plenty enough dye in (and with most traces detectable at the Junee resurgence), this meant a whole lot of convincing negative results, and a big question mark over what happens to many big swallets east of Wherretts Lookout.

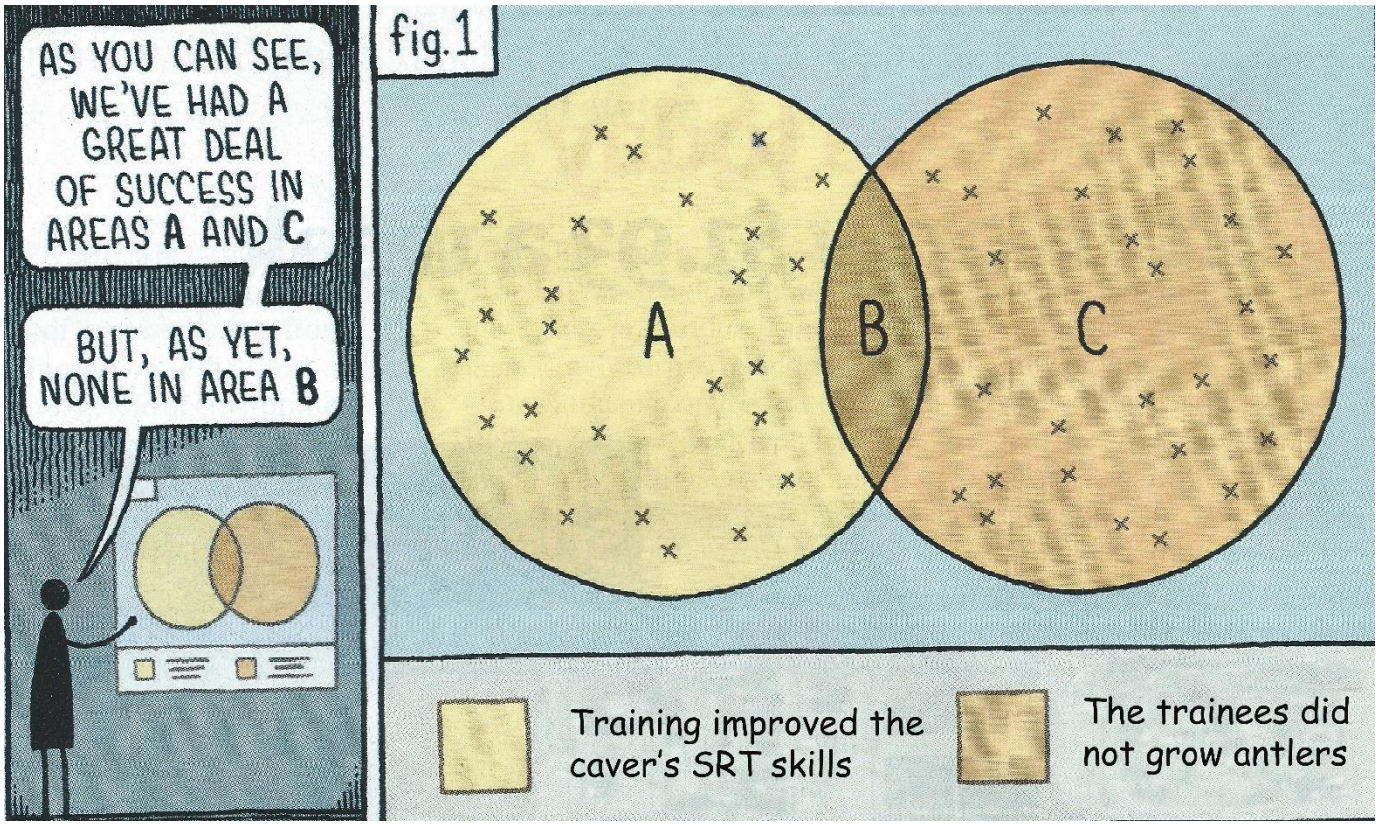
Swallets such as JF-398 Boulder Jenga, JF-568 Chrisps Creek Swallet, JF-647 The Slip Swallet and several smaller ones in between have now been given convincing negative results to the end of Niggly Cave, Dreamtime in Growling Swallet, and the sump in Sesame Cave (but they definitely go to Junee Cave). There is a 300 m gap between Niggly and Sesame, where I theorise a large combined sub-master cave stream joins the master cave. It seems unlikely that it could bypass Sesame to the south without being joined by water from Ring Hole or Tarn Creek Swallet. The caves are so keen to follow the same lines, that Sesame and Niggly are flowing towards each other on a collision course, such that the Sesame water must do a 180-degree turn and run back parallel to itself towards Junee.

This lends a good deal of excitement to the discovery of the Biohazard sump, possible streamway and apparently converging passage (from the appropriate side) at the end of Niggly in January. Sufficient time has passed to consider a return, especially via a newly-minted Delta Variant entrance.

JF-131 and JF-256 on the south side of Wherretts Lookout have also failed to show up anywhere other than Junee. It's interesting to note that Wherretts' eastern swallets typically flow to Frownland if they are on the contact, but direct to Junee if lower down (JF-396 and JF-719 are 180 m horizontally apart but that's enough). Wherretts' western (JF-386 Wherretts Swallet) and northern (JF-588 Resonance) swallets flow to Dreamtime as expected. The far western JF-238 Four Road Swallet is effectively the only one of the Wherretts Swallets not to show up at Junee, but could do with a repeat as the conditions weren't great.



Cave passages, dye releases and tracing results around Wherretts Lookout to date (simplified for clarity, not all results shown). Positive results in green, convincing negative results in blue. Growling Swallet in light blue, Niggly Cave in maroon, Sesame Cave in dark orange and yellow (bottom right).



Adapted from a Tom Gauld by Janine McKinnon

The Last Page