Speleo Spiel 403

July—August 2014

Newsletter of the Southern Tasmanian Caverneers Inc., PO Box 416, Sandy Bay, Tasmania 7006, AUSTRALIA ISSN 1832-6307

Front Cover:
Looking up from the bottom of JF398 Boulder Jenga. Photo by Liz Rogers.

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.

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Southern Tasmanian Caverneers Inc.
PO Box 416, Sandy Bay, Tasmania 7006
ABN: 73-381-060-862
http://southerntasmaniancaverneers.wordpress.com/

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

Contents

Editorial

My apologies for the lateness of this issue of the *Spiel*. It has been low on my list of things to do due to several factors. One of them was the unexpected, terminal failure of my laptop and another was my reluctance to wade through the unmanageable contents of my email inbox. In response to this I have set up an alternative email – drmjcracker@gmail.com. Also I have a dropbox folder that serves as a repository for *Spiel* articles and photos. I can provide access to this folder on request and I encourage people to use this for article submission. I also apologise for the lack of hardcopy *Spiels* ending up in (the limited number of) members' letterboxes. This will be rectified ASAP.

Spiel #403 contains the usual Junee-Florentine sphincter tightening trips, complete with the obligatory stuff-ups and false starts. There is also a trip report detailing the latest attempt to relocate "caverns measureless to man" in the Hastings area. Other Exciting Stuff is full of tabular information, which gives me headaches trying to generate graphical proofs. These tables summarise a range of topics including musings on rigging in Ice Tube and an exhaustive list of the possible depths of this iconic vertical Tasmanian cave. Finally, if we didn't know just how anal Alan is he proves it to us by listing all the known caves within (suspected) mobile phone range of Hairy Goat Hole ... twice.

Matt Cracknell

Stuff 'n' Stuff

Pitch lengths

As an interim, using the pitch lengths in *Spiel* #402, these pitches enter the Longest Pitches list:

#14 – 80 m JF207 Voltera.

#21 – 60 m Hydrophobia, JF398 Boulder Jenga.

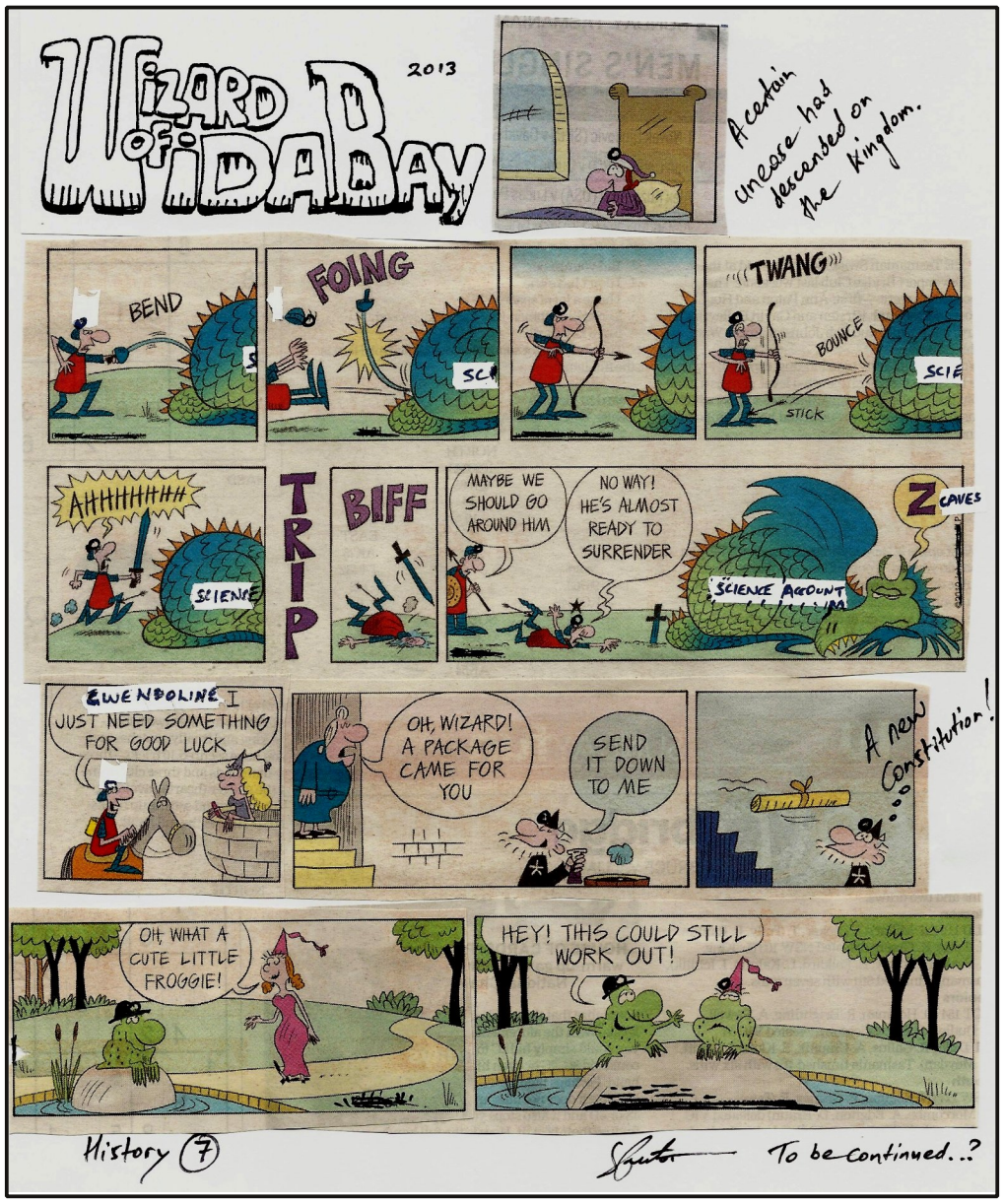
Ric Tunney

Errata

Rolan Eberhard has provided the following clarifications to his article on Dromaius Cave in *Spiel* #402.

1. The article incorrectly states that Dromaius Cave is the only Tasmanian cave where emu bones have been recorded. In fact, Emu Cave (JF154) in the Florentine Valley was named with reference to emu bones, which were recovered from there by Albert Goede in 1978.
2. The photo caption which reads 'Tasmanian emu (*Dromaius novaehollandiae diemenensis*) bone deposits in Dromaius Cave, Mole Creek' should not be taken to imply that emu bones are necessarily present in this particular photo. The image shows a portion of the deposit containing bones which are yet to be identified and may or may not include emu. The editor devised the caption, as none was provided by the author.

Rolan Eberhard



Bunton after Parker and Hart

Trip Reports

JF398 Boulder Jenga

10 May 2014

Andreas Klocker

Cavers: David Bardi, Andreas Klocker, Dickon 'boulder choke expert' Morris, Liz Rogers & Sandy Varin.

It turns out that some mainland photographers are much slower at writing trip reports than taking photos so I decided to get the rust out of my brain and remember the details of this memorable trip and write it up myself. The first thing which comes to mind, for any trip in Boulder Jenga, is WATER! This trip wasn't any different ... If anyone who has read the last *Spiel* still does not understand that Boulder Jenga and water are linked as closely as Tony Abbott and a narrow mind, then you might as well jump off a bridge ... because you're hopeless!

This weekend was also going to be Sandy and David's first 'dry' (aka non-diving, even though the limits between dry caving and cave diving were a bit fuzzy here) caving trip to the JF. Both of them have done some dry caving before, but we all know that caving on the mainland is a bit different! We went on Saturday morning – the plan was to continue the survey from where Dickon and myself stopped the last time (AD60 in the 'wet route' just before the Rock Garden) and continue it to the sump, with Liz taking some photos on the way. In addition to this we also brought a single 3 L dive tank to find out if the final sump is just an extreme roof sniff or a proper sump.

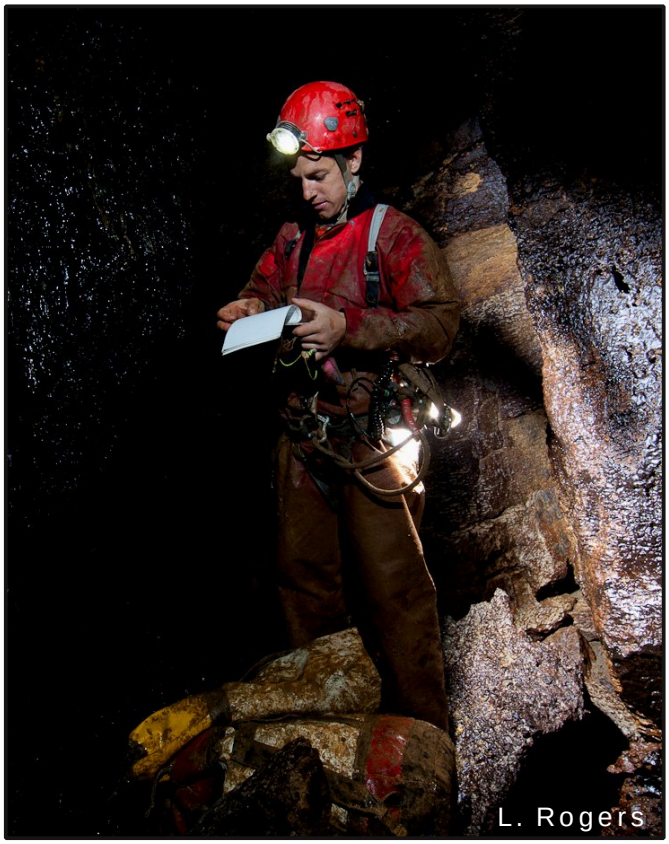
Things went smoothly to the bottom of the big pitch. We followed the 'dry route' to the Rock Garden and started surveying. Dickon played with the DistoX and I did the bookwork, David and Sandy helped Liz with some photography. Once we arrived at the roof sniff everyone looked a bit cold but since we had a dive tank with us, and nobody wanted to carry a full dive tank out of a cave, we went for it (first David and Sandy thought about staying behind and waiting ... but luckily peer pressure works well!).

Liz had said she'd give the sump a go. Once we got there Liz' heating vest failed and I knew that the honour of jumping into this frickin' cold muddy horrible wet thing was mine. I geared up into my very rudimentary cave diving gear (a single tank attached to a SRT kit, no fins, a static climbing rope tied to me, and a 3 mm short-sleeved wetsuit in 8°C water – the absolute nightmare of most CDAA or GUE divers). Obviously the sump didn't do what we hoped, which would have been a short duck-under but it went straight down for a couple of meters. At the bottom it felt like it did a U-turn with lots of silt accumulated on the bottom. Since breathing in this inadequate wetsuit was far from optimal (have you ever see a steel tank bend inwards when taking a breath?!), we decided to come back to the sump with proper gear sometime in summer [*Gluttons for punishment! – Ed.*].

We were all frozen by this point so we started heading for home, which went well until the big pitch ... First

JF398 Boulder Jenga, lots of random looks.

JF398 Boulder Jenga, Sandy having lots of fun (I don't think there is another picture which describes Boulder Jenga as well!)!



JF398 Boulder Jenga, The Kaiser.

Liz and David went up OK but when Sandy started off and arrived at the redirect things went a bit pear-shaped. The rope above the redirect was caught underneath a flake, and due to the sharp angle of the rope Sandy couldn't pass the redirect. After some screaming between Sandy, Dickon and myself (the waterfall makes this chamber really noisy) we found out that Sandy wasn't so sure about change-overs. Dickon climbed up to Sandy, explained to her how to down-prusik, then both of them climbed down. Dickon went back up and fixed the rope on the way. Then Sandy (with a slightly changed facial expression) went back up the rope and I followed. Obviously this all took a while, and the cave wasn't getting any warmer.

I got to the top of the pitch but Liz and David had already left for the surface. Dickon was worried that they would get lost in the boulder pile so he raced up to check on them, which left the big bag and dive tank with Sandy and myself. Luckily Sandy proved to be much tougher than most mainland cavers, especially after her epic on the big pitch, and helped me with great effort to get this bag through the boulder pile. Further through the boulder pile we then bumped into Dickon who came back to help, and soon after we exited. After a tiring walk through the forest (I think Sandy was ready to give up at that point) we made it back to the car where the other two were waiting.

The biggest surprise then came on Monday, just two days after the trip, when Sandy and David asked when they can come back for more JF adventures!! I thought I had broken them ... Maybe soon we'll have more people who are great cave divers AND are actually capable of getting themselves to the sump!

Eight Road fix up and some Settlement caves

20 July 2014

Alan Jackson

Cavers: Stephen Bunton, Milos Dvorak, Alan Jackson, Anna Jackson, Chris Sharples, Patrick (Buddy) Smejkal, Petr Smejkal & John Webb.

John had organised for a load of road gravel to be dumped (gratis) on the Eight Road near the ever-expanding bog hole. He then assembled a small chain gang to relocate the gravel from the pile to said bog hole. First we gathered any larger rocks from the shoulders of the road to make a firmer base then we shovelled on the gravel. It came up pretty well but might need some maintenance in the near future once it's settled.

There was a bit of time left in the day so we continued down the Florentine Road to the Settlement to investigate some of John's Norske Skog holes. We started with a small hole 10 m off the road which required a bit of spade work to get into (luckily we had more spades, shovels and rakes between us than an episode of Backyard Blitz). Milos was trogged up and looked keen so he squirmed in to check it out. Bunty then went in head first to place a tag – JF631 – on the right wall a metre in. He had to be pulled out by his legs. Milos was calling out to us and Petr stepped in as interpreter. A 10 m drop, not free-climbable, with water at the bottom was the verdict. Petr and Chris both took turns at verifying this and all were in agreement. Tag, GPS and photo done, we jumped back in the car and moved back along the road to another random spot.

John led us up onto a flat-topped ridge to another new hole. John said he'd only been in a bit and that beyond the entrance chamber was a tricky climb with passage corkscrewing back under the climb. By the time we'd got to the cave it was being referred to as Corkscrew Cave. We had a quick look, negotiated the climb and checked the low clay-floored continuations. It was large enough to warrant a proper survey, so we retreated, tagged the entrance (JF632) on the right wall a couple of metres beyond the drip line, GPS it, photographed the tag and headed for home.

JF463 Constitution Hole

21 June 2014

Petr Smejkal

Cavers: Milos Dvorak, Adam Hooper, Andreas Klocker & Petr Smejkal.

Andreas and I spoke about a caving weekend at Alan´s Vietnam presentation at Bunty's place. Andreas organised a survey for the weekend 21 and 22 of June. The plan was to finish some leads found at Constitution Hole by Alan.

On Saturday we were a group of four, Andreas as a trip leader, Adam, Milos and myself. When we arrived at the Eight Road, the clouds cleared and we had the most beautiful winter day we could wish for. We entered the cave around 11 am, I rigged the first two pitches and left Hang Glider for Andreas. At the bottom of Hang Glider we turned left and went into The Rock Pile. We were following Alan´s notes to find Station XX44. Our plan was to find Station XX95 and then continue to Alan´s lead. Alan´s notes said to stick to the left wall. We followed this and found a rift dropping into a slippery 10 m climb which seemed untouched. I climbed down and found a reasonably well decorated chamber with another climb.

The new chamber was pretty close to the junction where I had left the others and we could communicate. When I got back, the others were thinking what to do next. We unsuccessfully tried to find Station XX95 so we decided to survey the new bits instead. Andreas, Milos and I climbed down the rift, Adam preferred to wait at the junction where we started since he was worried about the climb back out of the rift, which, after watching Milos get scared on the way out, was probably a good idea. We reached the chamber and climbed down some more. At the bottom of this climb we had to negotiate a squeeze through some decorations. After a further few meters it got too small. There was some interesting looking dolerite above our heads, which looked like a very old riverbed.

On our way up we mapped what we found. When we got to the junction where Adam was waiting it was 4 pm and time to go back to the surface. We were back at the car park by 7:30 pm.

The plan was to return the next day and finish Alan´s lead. Milos decided to stay at home on Sunday as he hurt his thumb and was a bit tired after our Saturday caving in the newly found part of the cave.

JF463 Constitution Hole

22 June 2014

Adam Hooper

Cavers: Adam Hooper, Andreas Klocker & Petr Smejkal.

Could there be any place better to visit than Tasmania when you are from the Mainland?

I arrived into Hobart and found Andreas in his scenic office at the pier. The many ocean and Antarctic going boats in the harbour echo my feelings of Hobart as a port of adventure and exploration [*Reach for the bucket! – Ed.*]. While the boats all moored prepare for their journeys I too have come to find Hobart as a personal port of adventure serving as a mooring for preparation prior to journeys and adventures.

But while the ships leaving port will take up sail in an easterly direction, my bearing for adventure and exploration will be sailing West and particularly up the Derwent towards the JF and the wilderness that lies further to the South.

It has been 18 months since my last visit to Tasmania's caves where Janine, Pax, Rick, Pat, Andreas and I spent some time bumping around underwater in Junee resurgence. It was during this trip that Janine kindly spent some time down at the quarry teaching me some SRT basics. Now armed with some foggy memories and photos taken on my phone of equipment set-ups as well as being further fuelled with inquisition as to whether the enthusiasm with which Andreas describes his Tassie caving experiences was justified, I arrived eager and ready to go.

Following the usual greetings on Friday we headed out to experience the Dark Mofo Feast where food, drink, and modern art combined with good company to ensure that we had a much needed catch up. On Saturday morning's drive up to JF the fog that filled the valley paired well with the fog we were experiencing in our heads. For details of Saturday's trip see Petr's report on this page.

Sunday morning's stiff bodies headed back to Constitution Hole to further interrogate the rumoured leads that may be found just beyond the last points reached by Ken and Alan on their trip in January 2014 (Jackson 2014).

With the pitches already rigged and the route familiar in our minds we bounced down the first few drops and through the meander, which has one restriction to negotiate. We arrived at the top of the last main pitch for our trip, known as Hang Glider. This is approximately 40 m deep and has several rebelays.

The flowstone and ornaments make for a beautiful pitch. Just beyond Hang Glider a large aven ends with the all too familiar Rock Garden collapse. With both Andreas and Petr scouting for a way through the collapse we discovered an additional route to the original, while the original is up high with an airy climb followed by a down climb, the second is a faster and more direct line through at almost streamway height with a restriction at the end.

Petr then made the tenuous solo up the feature identified on Al's map and aptly named as the "Dodgy Climb" utilising a slimy bit of tape for what was probably just mental security.

A rope was fixed that enabled Andreas and myself to SRT and free climb up. We travelled through some more rock collapse and walls that were lined with popcorn features and small decorations. Just beyond this we reached the last survey point of Ken and Al (APK20) from where we continued up through a meander, through some collapse and finally to a collapsed aven. With no obvious potential from this

A steaming pile.

point we began the survey back to the last known survey point. The new cave section explored would only amount to approximately 30 metres in distance.

On the return journey we stopped briefly at a drop of about 5 m close to APK20 that Andreas was able to chimney down to investigate. It did not go any further; in the process we discovered some large fossils.

We made our way back to the Dodgy Climb and then back to Hang Glider, now with SRT equipment almost indistinguishable from the mud I attached my mud paddy to the line and made slow progress on our exit. Petr raced ahead and made what appeared as an effortless ascent, meanwhile I floundered around like a Junee Salmon* on the rope with ascenders that took preference to the open position.

Petr commented later that the only difference between a hard cave and an easy one is mud. Having had a reasonable ascent the day previous and now to be faced with what felt like three times as much work with the mud, I tend to agree.

Thanks Andreas and Petr for taking the time to share with me these amazing places and your patience with my mainland SRT skills and for Janine for taking the time to train me up last year.

*A Junee Salmon is a rare species indeed, often seen on beginners' trips on slippery rappels. Characterised by its distinct wriggling motion as it tries to find a footing on the wall it resembles the powerful motion of an Atlantic Salmon writhing around on the deck of boat.

Reference

JACKSON, A. 2014. JF-463 Constitution Hole. *Speleo Spiel*, 400:16.

Jenolan Caves

5-6 July 2014

Andreas Klocker

Cavers/Divers: Adam Hooper, Andreas Klocker, Liz Rogers, Greg Ryan & Al Warild.

(Awesome) Support: Tabitha Blair, Deborah Johnston, Rowena Larkins & John Oxley.

While mainland caves are known to Tasmanians as being boring with no potential for exploration, this is certainly not true for the cave diving exploration to be done on Australia's northern island. Jenolan Caves has huge potential with lots of active exploration going on. After a break from Jenolan diving for me (I haven't been there since I moved back to Tassie) it was time to head up for another trip to do some great dives, catch up with the local cavers, and practice my sump diving skills for some Tassie projects next summer. At the same time Liz was keen to head back to Jenolan to take photos since on her last trip the weather gods weren't happy and caused a flood, limiting the viz to zero. Luckily for Liz and myself, being the only two cavers who had to fly in to get to Jenolan, Greg offered us lifts from and to the airport, his place to stay, a lift to Jenolan, and organised (and even cooked) food for us – has anyone ever enjoyed more luxury on a caving trip?

When we arrived at Jenolan Saturday morning, the first thing that needed to be done was to fill tanks ... this almost didn't happen due to the compressor not behaving as planned. Luckily Adam knows how to fix engines, and after some messing around we got it to fill tanks. Another thanks to Nipper for lending the group the compressor, and Greg for picking up the 100 kg beast before the trip! Since Adam, Liz and myself haven't seen lots of the classic sumps in Jenolan before, we planned a tourist dive from Blue Lake via Cerberus and Two Bridges to the Mud Tunnels, finishing off with a quick dive through the restriction in Upstream Lethe

Jenolan Caves, Greg and Liz in Downstream Imperial.

(which was first broken through and explored just last year by the SUSS divers), and obviously (at least for everyone who knows Liz) her camera came along. Lots of strobes were tied to Adam and myself. After a not very pleasant start of the dive heading away from Blue Lake towards Cerberus (you have to push yourself backwards down a tight rock pile) the sump started to turn into a very pleasant tunnel and a really enjoyable dive – a look at Liz' photos does it much more justice than my written descriptions. Luckily on this dive we surfaced in several dry chambers on our way, giving us a chance to chat and get instructions by Liz for the photo shoot of the next sump. Deb and Greg also followed us from dry chamber to dry chamber via the tourist caves, pointing us towards the right way on as the line is tied out of view of the tourist groups in sections making it hard to spot. When we arrived at the Mud Tunnels, Al jumped into the water as well to have a look at a lead in Upstream Lethe. He was followed by Liz with her camera and Adam, who on this dive figured out that a drysuit is not ideal in tight restrictions – a good laugh for me and a reason for Liz to take a selfie since her model didn't fit through the restriction!

On Sunday Greg joined us for a dive into Downstream Imperial, with Rowena and John helping us get the dive gear to the sump via the Wool Shed which involves a short climb and a ladder. As we then found out, this many people in a sump are a bit much. We had Liz and Greg in front to take photos and start the silt cloud, with me being third and occasionally being able to sneak up on Greg and Liz close enough to enjoy the good viz, and producing more silt, and Adam being at the end practising his zero-viz technique!

After getting back to the cavers' hut not too late, and socialising a bit more, Greg, Liz and myself drove back to Sydney, well knowing that the 4 am start Monday morning to get flights and to the office would be a lot of pain but it was definitely worth it!

As all cave divers know such a weekend would not work without amazing dry caving support, so THANK YOU to Greg, Deb, Tabitha, John and Adam (both Greg and Adam spent lots of time in the freezing cold on compressor duty)! I have rarely been as spoiled as much as by Greg this weekend with lifts from/to airports, to Jenolan Caves and Greg feeding us all weekend!

Thanks guys!

Jenolan Caves, Adam and Liz.

Looking for the legendary lost cave at Hastings

12 July 2014

Chris Sharples

Cavers: Arthur Clarke & Chris Sharples.

Legendary lost caves are a bother. Even more so, if they're known then lost, e.g., Hairy Goat Hole in JF and Cub Hole at Hastings. Then there are the rumours of caves which you don't even know who was supposed to have actually once found them. You know that most such stories of the latter sort are probably garbled misinterpretations of something somebody thought somebody else had said they once found "in them thar hills" but can't seem to remember or clearly describe its exact location anymore. Nevertheless, stories got repeated and like whispers in the dark, they take on a life of their own until nobody actually remembers how the story started, but it has become an established part of caving folklore. So you know there's probably nothing in it, but then again you can't help wondering "what if…?"

Ever since Chris conducted his early mapping of the geology of the Lune River – Hastings area during his UTAS Honours year (Sharples 1979) and Arthur commenced his own studies in the Lune River area and North Lune karst (Clarke 1990a; 1990b), we have been spasmodically returning to try and tidy it up by slowly piecing together a geological map of this area (see Clarke 1998a; 1998b; 1998c; and Sharples 1994; 2003). Phil Jackson (Jackson 1990) has also provided some information on dolomite on the north side of Hastings Ridge. Interestingly, the Geological Survey of Tasmania has never bothered to devote resources to mapping this area in any systematic way. That's probably good for us, since it provides an excuse to go blundering around in the bush down south, indulging in what some readers might consider a somewhat nerdy hobby of compiling a geological map outcrop by outcrop and donga-bash by donga-bash. It's kind of like doing a jigsaw puzzle where you only get a new piece every few months, but it keeps us off the streets and in the bush, and Chris has now got to the stage where he thinks we have more or less pinned down the boundaries of the Hastings Dolomite - at least as far as will ever be possible from surface mapping, since a big chunk of the boundary is probably covered by superficial Quaternary sediments in the floor of Creekton Rivulet valley on the north side of the Hastings Ridge.

In the course of his mapping, Chris had repeatedly heard a rumour of a legendary "lost cave" in the dolomite on the north side of the Hastings Ridge. He first heard the rumour from Kevin Kiernan, and subsequently Arthur passed on some more details (see below). The basic story is that prior to the discovery of Newdegate Cave on the south side of the ridge (probably in late December 1917: Clarke 1999a; 1999b), timber getters working in the Creekton Rivulet valley on the north side of the ridge had found a stream cave that was well decorated with straws so there was talk of opening it up for tourism via the logging tramway. However, the idea was dropped after Newdegate Cave was found and the cave (if it exists) was subsequently forgotten and 'lost'.

In June 2014, Arthur provided the following additional information to Chris in an email: "I first lived down south at Dover around 1971 and in my early days down

there (in the early 1970s) I used to visit the Skinner family quite regularly when Roy (Skinner) was the Superintendent of Hastings Caves. I remember with my former wife, being wined and dined by Roy and his first wife Pem, when they had a visitor: Basil Rait coming down from Hobart. Basil was the Tasmanian Tourist Bureau historian and it was he who was telling us all about this supposed horizontal efflux cave with straws located at the foot of the north side of the ridge, with its waters draining into the Creekton Rivulet; a cave which the old timers/ Strathblane Mill workers had wanted to get developed for tourism, but it was very much surpassed and forgotten after Newdegate Cave was discovered on the SW side by Huon Timber Company loggers." Arthur further indicated to Chris that the cave was reputed to be not far from the end of the old (now overgrown) Strathblane tramway towards the upper reaches of the Creekton Rivulet valley; this logging tramway and much of its associated infrastructure had been documented by Parry Kostoglou (1994) during a Forestry Tasmania archaeology project.

It was clear that if it was real then the legendary cave could not be Bell Chamber (H216), the only well documented cave on the north side of the ridge, since the latter has no straws as cavers discovered last year after relocating the site, then grovelling around inside it on a STC winter solstice outing in 2013 (Cracknell 2013).

When the time rolled around for yet another (belated) STC Winter Solstice event based at Francistown, we decided that it was time to go looking for this legendary cave, on the off chance that it might actually exist. Arthur had made a previous foray to this area back in March 2005 reporting the presence of a dolomite spire and what he thought might be some dolomite cliffs. It was during this donga-bash in the company of Wayne Chynoweth, a tramway historian, that a dolomite swallet entrance was discovered located near an old log landing. Formed immediately underneath the basal Permian conglomerate, this small cave was recorded as Two Gum Entrance (HX31). There were lots of cave crickets there, but no straws! Together with this cave's location, Chris also managed to pin down the eastern boundary of the dolomite on the north side of the Hastings Ridge to his reasonable satisfaction based on field observations, subtle inferences and extrapolations from the very sparse dolomite and Permian siltstone outcrops, and 'floating' fragments of silicified dolomite. The resulting geo-boundary appeared to be pretty close to the end of the Strathblane tramway (see Figure 1), so that seemed like a good place to start looking.

Paying no attention whatever to Phil Jackson's assurance that he had looked all over the place for the lost cave already and there was nothing to be found, Arthur and Chris set off down the north side of the Hastings Ridge on Saturday 12th July 2014 (descending from the Adamsons Falls Track). The plan was to relocate some dolomite cliffs Arthur thought he recalled at the bottom of the spur we were following, and then head eastwards towards the tramway looking for creeks that might flow out from any caves. The going was pretty open in the forest on the northern slopes of the ridge, and we found some old pink tapes Arthur recalled marking the route with, but despite a brief search we found no dolomite cliffs. After spending some time mulling over several small streams at the foot of the spur, including one that contained clear water, (it seemed likely they were ordinary surface streams flowing off Permian siltstone bedrock and not indicative of a karst origin), we set off eastwards along the base of the slope bounding the south side of the Creekton Rivulet valley floor at about the level where (by extrapolation from previous mapping evidence – see Figure 1) the upper boundary of the dolomite is likely to be. Then we struck a problem. The base of slope also marked the start of the seriously horizontal donga with episodes of cutting grass and other nasty scrub that we were suddenly reminded (from previous exploratory excursions) was a feature of the Creekton valley floor vegetation.

It only took about a minute of probing the edge of the horizontal scrub to conveniently conclude that – having been out for several hours and seeing that it was the middle of winter – the better plan was to retire from the fray at this point, perhaps to return on a longer summer day with a better game plan. It didn't take long to blunder back uphill to Chestermans Road and before long we were back at Francistown commencing our shared mid-winter feast and the sampling of Arthur and Siobhan's fine fruit wines and liqueurs, which after all was the main object of the weekend.

Does this story have a moral? One that springs to mind (pun intended) is: "If at first you don't succeed, skydiving is not for you!" However, Chris conclusively proved that particular saying wrong a long time ago, and we are not quite prepared to give up on the legendary lost Hastings cave just yet. After all, we can't lose – even if it doesn't exist, we are bound to collect more information along the way as additions for Chris's geology map of the Hastings karst area.

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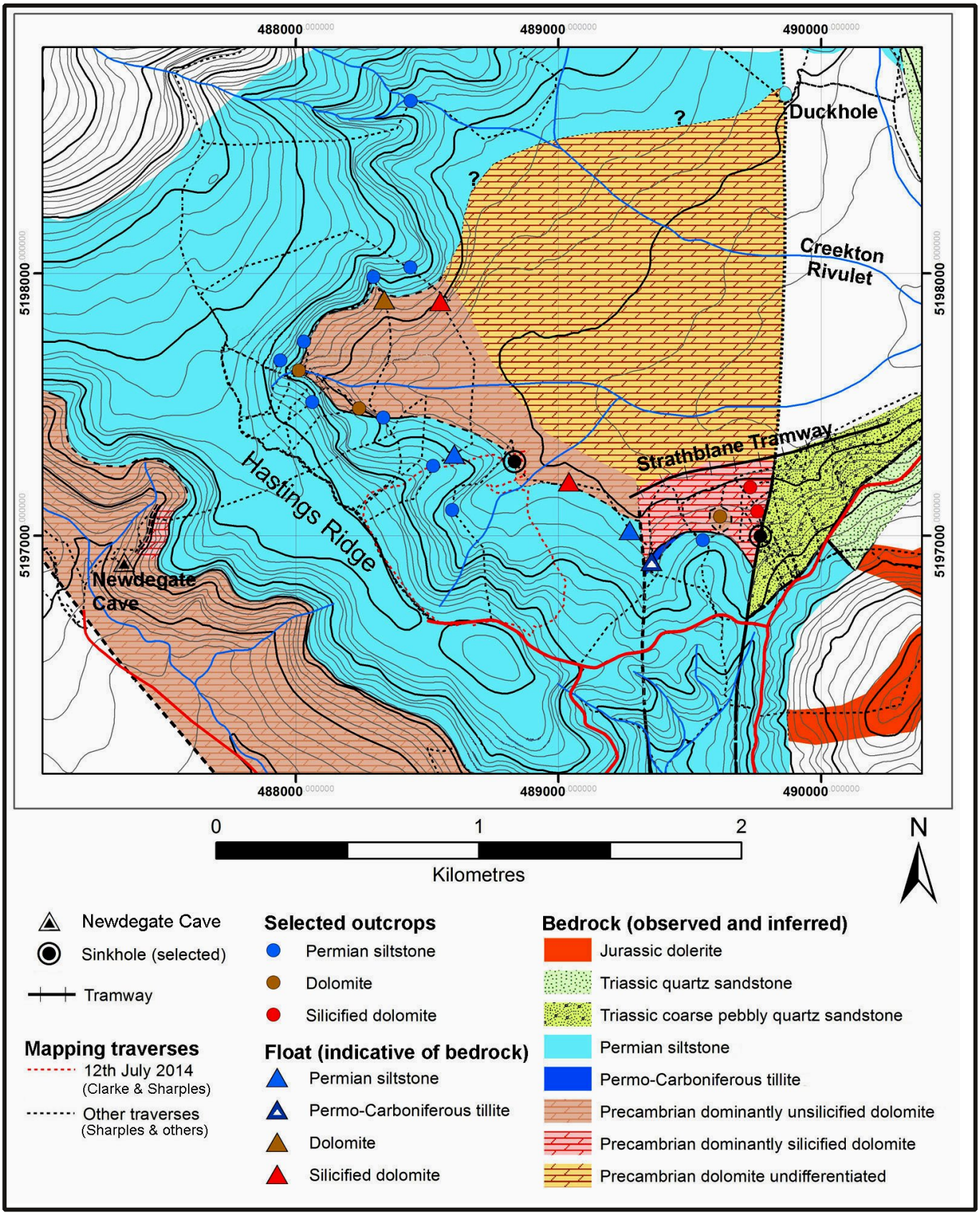


Figure 1. A sneak preview of Chris's mapping of observed and inferred bedrock in the Hastings Ridge area (extensive overlying Quaternary sediments are mapped in a separate layer which is not shown here). The eastern, southern and western boundaries of the dolomite on the north side of the ridge are now reasonably well constrained by observed outcrops and float indicative of outcrop (selected key data points indicated on map), but the northern boundary is buried beneath extensive Quaternary sediments and its approximate location is inferred by extrapolating an observed north-eastwards dip on the mapped unconformity surface, and by assuming the mysterious Duckhole Lake is at least partly of karst origin. Recorded field traverses over the last ten years (since Chris bought a GPS) are shown. Chris plans to publish a map showing the full extent of the dolomite on both sides of the ridge (with some explanation) when he gets around to it. Map coordinates are MGA Zone 55 (GDA94 datum). Note locations of cave entrances have been removed.

JF207 Voltera

26 July 2014

Alan Jackson

Cavers: Alan Jackson & Laure Gauthiez-Putallaz.

With such a vast number of cavers we needed some alternatives to prevent traffic jams. Laure and I would investigate the options off the side of the 80 m pitch with the hope that they'd either bypass Fistula or lead to an independent system, or both.

We commenced at the rebelay adjacent to where the main water lands on a big ledge, about half way down. I tied in a new rope and 'pendulumed' across to the spray-lashed ledge. A nice little pitch of around 7 m dropped down on the other side so I called Laure in and rigged the new pitch quickly to get out of the wind and water. Naturals abounded for the rigging. At the base of the pitch the passage descended steeply for ~10 metres then terminated in a nasty little choke. So much for the Fistula bypass. Back from the choke a narrow rift headed back in the direction of the 80 m pitch. Laure pushed this for a bit (and could hear the water at the base of the 80), but it started getting a bit vertical and intimidating without rope. Assuming this would just connect back in with the original route anyway we retreated, surveying as we went. The only vague opportunity of a navigable connection to the lower passages would lie in the realm of a traverse at the head of the 7 m pitch – it looked like there could be continuing passage at this level over the choke below.

Our next option was on the opposite side of the main shaft where a fossil side passage heads off. We ascended to the next rebelay up, tied our rope in and dropped about three metres to a ledge on a large fallen slab. The slab has created an 800 mm space which we crawled up until we could peer over the edge into the target passage. After much gardening we picked a spot, whacked in a few bolts and Laure headed down to investigate the first level about 10 metres down. This proved to be blocked with rock after only 10 metres or so. I joined her, placed a redirect in the form of a tape knot jammed in a crack and continued down to the next level another eight or so metres down. This was more spacious and more promising. A circular shaft dropped away below but the sound of the water at the bottom of the 80 could be heard so we didn't bother looking at this. Instead, we headed away from the pitch over the large fallen blocks. The passage continued to the head of a ~70 degree clay slope about 20 m long. We retrieved the end of our rather annoying 96 m rope from the base of the previous pitch and threw it down. From the base of this 'pitch' was another hole with a long pitch and the sound of water at the bottom, which once again we discounted. A steep descent over blocks was followed to a flat bottomed passage which lead to a 2.5 m pit in the dolerite clay/rubble matrix that abounds in this section of cave. My legs were long enough to bridge the passage and traverse the pit but Laure couldn't quite manage it so we installed a traverse line, again by running back and dragging the tail of our unnecessarily long rope. At the bottom of the pit it got too narrow. Beyond the pit the passage ascended into more clay/rubble-floored fossil passage. A left branch finished in an unassailable ~7 m wall but a right hand branch presented a free-climbable 4 m wall of choss and fill. The spacious chamber at the top split into three ascending routes. The left lead to a small domed chamber filled with dolerite infill; the middle lead to narrow ascending passage eventually blocked with lots of mobile dolerite; the right was free of dolerite but ascended very steeply via a sketchy 15 m climb until the roof proved to be sealed with large dolerite boulders. Basically, we were pursuing fossil inlets east of the current sink which have all been filled with a rather impressive amount of dolerite. We surveyed our way out.

We figured it was too late to head deeper into the cave, expecting that we'd just meet the others mid retreat and get in their way. The retrieval of the 96 m rope proved entertaining as we opted to thread it out of the cave, having no bag space left to pack it. Laure managed to drop the end she was hauling, which I had to retrieve and take up to her. In my haste to do so I forgot to untie the other end from the rebelay so had to return to my previous 'anti-snagging' position before heading out.

Since it was obvious the others, with the possible exception of Rolan (his bag was missing), hadn't exited the cave yet we figured we'd be productive rather than just sit in the car while we waited for them. We located JF-208 nearby and ran a surface survey over to the JF-207 tag. The others started appearing by the time we finished that task so we packed up and headed for home.

The two undescended shafts might be worth dropping one day but it seems highly likely they'll just connect into the base of the main 80 m shaft. There's a possibility that they could allow access into adjacent fossil passages and an alternative route to who-knows-where but perhaps that'll be something to keep the next generation keen.

JF207 Voltera

Master Cave or Bust

17 August 2014

Alan Jackson

Cavers: Nat Brennan, Laure Gauthiez-Putallaz, Alan Jackson, Andreas Klocker, Michael (Pax) Packer & Petr Smejkal.

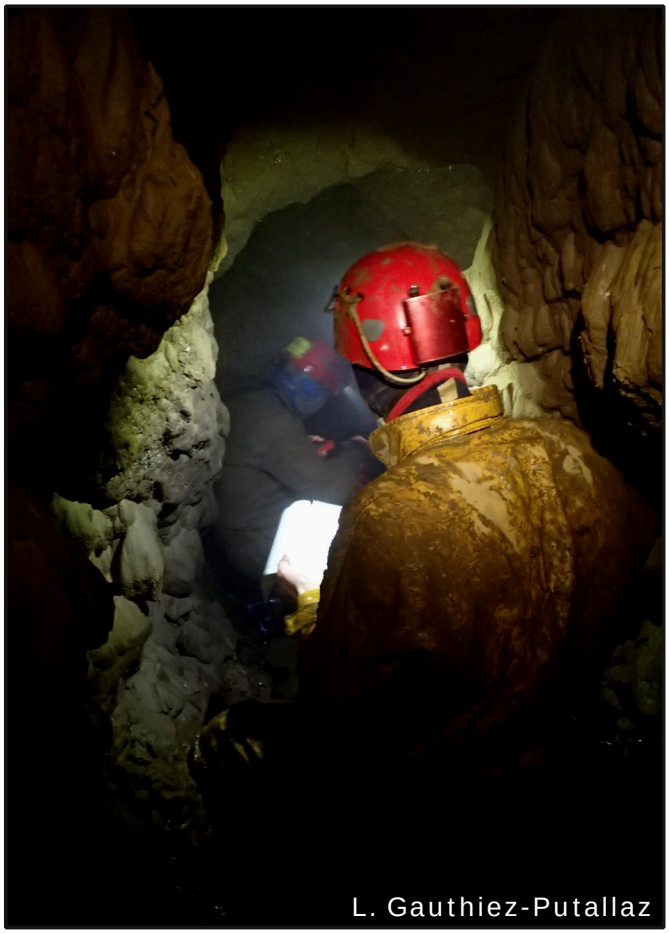
The trip didn't start well for me. I discovered upon arrival at the end of Chrisps Road that one of my gumboots had made a dash for freedom on the drive up. Bugger. Everyone enjoyed a laugh at my expense before we traipsed into the bush with eleven gumboots and one sandshoe between us.

The hydrology is quite confusing in the mid and lower levels of Voltera so I dumped a film canister of fluorescein into the stream at the entrance before heading in. The large waterfall that comes in halfway down the 80 m pitch was glowing green, so that confirmed the obvious to us.

Progress was hampered on the big pitch when Pax discovered that a stupidly short rebelay loop was too much for his budding SRT skills. After a bit of faffing he admitted defeat and called Petr down from the superior rebelay to assist. Problem solved and some lessons learnt, we started our assault on Fistula. I've done tighter but there's something about this thing which really intimidates me – despite having fallen through it with ease on a previous trip it still gives you the feeling that you're about to spend half an hour wedged by your pelvis in a horizontal position with the floor over a metre below you. The new bolt (new to me) and the short ladder on the lower section of the vertical bit made life much easier than the only other time I'd done it.

Laure and Petr arrived at the bottom of the pitch below Fistula shortly after, having somehow overtaken Pax. Presumably they did it before Fistula, since overtaking an ant would be challenging in the close confines of that bastard passage. We waited for a few minutes but no one arrived so we selfishly shrugged our shoulders

Alan dressed himself today.



Alan and Petr starting the survey at the hideous sump.

and decided we'd head on down to identify the remaining leads and tourist the recent finds.

The water that dribbles in at the bottom of the second pitch (after Fistula) wasn't green but the larger amount of water that comes in about 30 m into the meander was green, so it confirmed our suspicions. There's not much water here though, so it's only a small percentage of the total entrance water. Halfway between there and the next inlet, where a slightly larger stream enters from an inlet off to the right, we overtook the dye front and the waters were running clear. The second inlet was also running clear but since we'd overtaken the dye we couldn't be certain that this water doesn't also come from the entrance stream.

At the third pitch, after the endless meander (Stairway to Niggly, I believe Dickon has christened it), we found the delightful 65 m 11 mm rope asking for a lift out of the cave. We threw it aside in horror and decided it was a job for Petr on the way out. I'd not been down this pitch yet, neither had Petr and Laure had only been a little past this point (where she'd fallen in the rift and destroyed her confidence on the last trip). It was pretty nasty passage and the handline on the tiny two metre pitch was adequate but only just. The last pitch was larger and more impressive than I expected and at the bottom we found two more ropes neatly coiled awaiting transport … ugh! I poked my head into a narrow lead that appears to drop down to a small muddy room off the side of the pitch but didn't feel like getting that muddy (little did I know what awaited us round the corner). More tight, crumbly, muddy shit ensued and then I went low when I should have gone high and had to swear a lot. I also cut my forehead after having to remove my helmet to fit through.

The next obstacle was 'the pit' – a tricky little 2.5 m diameter pit in the floor with shitty rock and a shower of water (the same water we'd been following since the long meander). Dickon said there were two leads here. One was a descending low passage with amazing squishy mud. Laure slid down this for ~ 10 metres till it crapped out and the only way on was to excavate the mud floor into a similar parallel passage. This one had 'later' (or it might have been 'never') written all over it. We then braved the free-climb of the pit, noticing the 'upstream' passage that hadn't been pushed half way down but ignoring it for now (proper pushing was for when the others caught up). So we continued down the other way through more horror mud and slippery climbs. Laure took another fall and landed on her arse on a muddy ledge. Unfortunately the mud was just a thin veneer and a sharp rock was underneath. She had a quiet moment alone to gather her thoughts and fight off the pain demons then we continued on into the nice big passage. I can see why Dickon had thought he'd cracked the big time here. Very nice spacious passage, big mud banks and the sound of a healthy stream in the distance. At the stream junction we headed upstream for a tourist to the big aven/waterfall inlet – impressive bit of cave.

Petr spotted a small drop at the back of the aven to a muddy stream passage which hadn't been pushed and hadn't been mentioned by Dickon as a lead, so while Petr shot back out to the stream junction downstream to get the survey gear, Laure slipped in to see if it went. It did, so we left a note on Dickon's last survey station stating our intentions to the others and all headed in. Small vadose horizontal passage was followed for about 30 m till it started going up very steeply, eventually unclimbable. We surveyed out and decided to investigate the deepest point (where the joined streams flow). It started well but soon got horribly low and sumped, quite similarly to how Serendipity ends – no real prospects short of an epic British-style dig.

Surprised the others hadn't arrived yet, we started heading out of the cave. At the first muddy climb up we cursorily investigated where the small stream issues from a tiny hole in the bank. Dickon had flagged this as a crap but possible lead. The water coming from the hole in the wall was turbid and obviously the water that we'd been following but the other water was crystal clear (but very low volume). We didn't bother doing the

flat out crawl in six inches of water, even if it was clear water, and that 'lead' is still there for the taking.

Back at the pit we dumped Laure's bag and headed into the new dry, uphill passage. 40 metres later we could hear a healthy stream. We dropped down and it was quite a bit of water and it was green. So we'd found the rest of the entrance water. I shot upstream first via a series of sketchy climbs and followed it till it started getting a bit too small for my liking, but still negotiable. Petr then joined me and we surveyed back down before we followed Laure in the downstream direction. The passage was narrower here, super muddy and descending steeply (following the ~20° dip). Eventually it crapped out in a horrible little sump with froth and vegetation all up the walls. We surveyed out to 'the pit'. While having a bite to eat Laure noticed a new addition in her bag – the second survey kit that the others had. So, they were somewhere near, or at least had been. There was no note so we theorised a bit then headed up to the last pitch. Here we found more evidence – Andreas's cave pack and spare Scurion battery. The plot thickened. Not able to be 100% sure that there was no one further into the cave we decided to leave the pitch rigged but we collected the two spare ropes and tied Andreas's bag to the bottom of the pitch rope so it could be hauled up from the top next trip if necessary.

Our next stop was the top of the third pitch. We noticed that the 65 m rope was missing, presumably taken out by one of the others. Here we had to push 'Dave's lead' which was still rigged from Dave's efforts the previous trip. We got to the muddy climb that stopped Dave and scaled it, only to find that the passage was blocked with sediment a further five metres on. We surveyed out, stripped Dave's rigging, packed everything up and launched ourselves at the bastard meander. About half way through we found the 65 m rope and did a re-pack to accommodate it. At the larger stream inlet I climbed up it as far as I could to see if it would go but the last few metres were not free-climbable and the top looked too tight anyway. At least it cleaned my suit a bit. Fistula was a minor epic with heavy bags and the big pitch was pleasant and spacious in contrast.

We got back out to the car about 8:30 pm to find Andreas's car missing, so we knew at least one of them made it out, or it had been stolen. Once back in phone range pieces of the story started coming in. The other's had had a poor time of it. Nat had bailed at Fistula, after having noticed that her rack was worn through to dangerous conditions and the injury on her hip (from a recent hit and run bicycle accident) was proving very painful. She had apparently hitchhiked back to Hobart with some drunk bogans! Pax and Andreas had continued on but at some point Pax lost his ascender, so Andreas had given him his Pantin as a substitute and turned him around at the bottom of the third pitch.

JF207 Voltera, Laurie in the cosy confines of Stairway to Niggly meander.

It was Pax that had made the 65 m rope make it as far as it had up the meander. Andreas had then come down to find us, but only found Laure's bag and no note, got angry, slipped on a climb and hurt himself, got more angry and headed out. He caught up with Pax and they headed out together (Pax found his ascender too).

So one group had a good day while the others had a shocker. Despite being on the 'good day' team, I'm currently hobbling round like an old git with aching everything – I'm too old for this shit. Voltera is a hard cave.

Survey data

All up we collected 256 m of new stuff. The new streamway sumps at about -310 m, so no new deepest point or way into the master cave. The total cave length is ~1370 m and I suspect it won't get much longer.

JF221 Owl Pot

Checking out the sump

30 August 2014

Janine McKinnon

Cavers: Natalie Brennan, Milos Dvorak, Janine McKinnon, Michael Packer & Ric Tunney.

As the title says, I wanted to see if the sump was a dive prospect. It isn't. 100% certain of that, after 15 minutes up to my neck in the water, feeling all around the walls. To paraphrase Terry Pratchett: It's mud all the way down. Despite this, Pax and Nat had a rigging lesson, and practised de-rigging. Milos practised changing from prusik to abseiling half way up the bottom pitch, due to communications issues, Ric hurt his elbow in a slip and turned back at the top of the waterfall pitch.

All out by 4.30pm. So all good.

JF221 Owl Pot, Janine searching in vain for the next big s..t hole.

Other Exciting Stuff

JF345 Ice Tube

30th Anniversary Trip with Notes on Rigging and Surveyed Depth

23 December 2012

Rolan Eberhard

Cavers: Serena Benjamin, Rolan Eberhard & Stefan Eberhard.

The two senior members of the party were 18 and 19 in May 1982 when we initiated a series of TCC trips which pushed Ice Tube to a new depth record of 345 m. With only a couple of years caving experience behind us it was a steep learning curve and all the more intense because of it. I've been back to Ice Tube several times but the notion of a 30th anniversary trip had a pleasing kind of symmetry to it. Serena was keen and, in a way, this added to the symmetry, because Ice Tube was just history by the time she arrived on the planet [*I always thought Serena was from a different planet, and Rolan seems to suggest so here too - Sub. Ed.*].

In reporting this trip I am mindful of the need to spare the reader from tedious reminiscing. However, I have indulged myself slightly on that count by including Table 1 which lists the 1982 rigging description alongside a current one. This underlines the evolution of vertical caving style over the intervening decades and the technology and attitudes which have facilitated it. It is of course a moot point whether the net results of this are all good, although it is certain that the changes profoundly affect the nature of the caving experience in many ways. Caves like Ice Tube are now safer and accessible to cavers across a broader spectrum of fitness and skills than previously. This need not detract from our ability to enjoy them and learn from the experience.

The trip itself went incredibly smoothly. The pitches were not overly wet. The rigging has been improved, if somewhat overdone in a few places and marred by use of sub-optimal materials (see below). We were at the bottom in about three hours and back on the surface in daylight after about eight hours underground. This cave surely is the crème de la crème of wet vertical trips in the Florentine Valley. Nothing yet found compares in terms of sustained verticality and uncomplicated sporting appeal.

Rigging notes

Table 2 is a compilation of rigging information based on the recent trip and older reports. It includes rope lengths for each pitch (as opposed to pitch length), based on the measured length of the ropes used to rig and descend the pitches. This information is particularly useful in planning bounce trips, as the pitch lengths on the survey do not allow for rigging. The table does not include parallel shafts, of which there are several. These provide alternative options to the regular route down the cave, although none are set up with modern rigging.

The fixed rigging was extensively upgraded by Damian Bidgood and Phil Rowsell in 2005, transforming Ice Tube into a modern clip-and-go style of caving experience. All pitches on the standard route are now bolted with 10 mm stainless dynabolts and all exposed traverses have fixed lines.

The rigging is suitable for either bounce trips or pull-downs, with chains and rings or maillons in place on most pitches. Unfortunately, the chains and maillons are not stainless and show obvious corrosion after eight years in the cave (Plates 1 and 2). This problem is potentially compounded by galvanic corrosion due to mixing of components made from different grades of steel. Ultimately, the rusting parts will need to be replaced.

One of the pitches between Placebo Effect and Ramp Pitch is set up in such a way as to create potential for a three way load on the central maillon (Plate 3).

The lower pitches in particular still require more than average focus, especially during pull-down trips as there is scope for ropes to get hooked up on projections part way down the shafts. We retrieved the severed portion of one such rope, left by some bumbly in 2009.

Notes on depth

The published 1982 survey indicates a depth of 345 m from a station in the vicinity of the higher of the two connected entrances within the Ice Tube doline (marked 'daylight hole' on the survey; subsequently tagged JF360). This station is neither physically marked nor the highest point in the cave. By logic and convention the depth of a cave should not exclude a doline which is part of the cave entrance.

Several alternative depths for Ice Tube have been published. These include 354 m, following the discovery of a link between Ice Tube and Growling Swallet (Eberhard 1984, 1986), 375 m, following a dive to 19 m water depth in the Coelacanth sump in Growling (Hume 1988, Eberhard 1988, 1990, 1992) and 360 m (Eberhard 1995, Butt 1995, Tunney 2010). The latter figure was put forward when it was found that the depth claimed by Hume (1988) could not be reconciled with available survey data. Interestingly, survey data for Ice Tube and Growling Swallet held in the STC archive does not exactly corroborate any of these figures. However, the dataset contains obvious errors and anomalies and cannot be taken at face value.

I have not attempted to resolve the above difficulties. In fact, I have probably added to them by additional surveying in the entrance doline. My object in this was to obtain an indication of the extent to which the original survey underestimated the actual depth of the cave by adopting an essentially arbitrary point as the zero datum, i.e. starting point. My survey comprised a few legs with a disto, commencing at a point which I believe is close to that adopted for the 1982 survey. This is about one metre above floor level on the rock face immediately left (facing into the cave) of the upper of the two connected openings within the doline, i.e. JF360. Based on my recollection of what was done in 1982, this point is probably within about one metre of the original station. I have not physically marked the point and would not want it to assume any sort of authority.

I surveyed from the above point to the lower lip of the doline, which is located at the top of an overhanging face close by. I also surveyed to the higher, upslope side of the doline, to a break of slope where the gradient of Ice Tube stream increases as it commences cascading into the doline. Thus, the survey takes in the highest points in the cave according to both the 'lower edge rule' and the 'upper edge rule'. I favour the latter as the more meaningful indication of the depth of cave (Eberhard 2010).

The results of the survey suggest that depth of Ice Tube is about 11.1 m (upper edge) or 7.2 m (lower edge) greater than recorded in earlier references. However, it is unclear how this translates in terms of the total depth of Ice Tube/Growling Swallet. Table 2 canvases some options in this regard, ranging from 352.2 m to 386.1 m. It is debatable which of the results, if any, should be taken as a current best estimate for the depth for Ice Tube. This issue is probably best approach by repeating some of the surveys.

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Table 1. Rigging notes for Ice Tube, based on trips in 1982 and 2012. Pitch length is taken from the 1982 survey. Rope length is the measured length of rope used to rig and descend the pitch during the bounce trip described in this article. The source for the 1982 rigging is Eberhard & Eberhard (1982).

Pitch	Pitch length (m)	Rope length (m)	1982 rigging	2012 rigging
1	25	30	Belay a 40 m rope with a 5 m trace to the bollard just before the pitch on the northern wall. Originally rigged directly down the waterfall, a drenching can be avoided by re-belaying with a short sling to the rock projection low-down in the rift, at the top of the shaft. One protector required on lip. Abseil 7 m pendulum across the arête and re-belay with a jammed know in the custom made slot. A protector is required for abseiling on the ultra-sharp lip and another one just below.	Traverse rift at top of shaft using fixed Bluewater to double bolt belay. Rig Y-hang from two and descend 7 m to sharp arête; cross to parallel shaft and re-belay to natural bollard (tape or trace); descend dry face.
2	22	26	Anchor a 27 m rope to the small bedrock pillar with a 10 m trace. A tie-back to P1 is essential as this anchor point partially disintegrated on the last trip. Traverse out over the pit and hang rope down the slot on the left-hand side. The result is an awkward take-off point (one protector necessary on lip) but at least a partially dry descent. Bolting may make this pitch easier and safer.	Traverse left at top of shaft using fixed Bluewater to double bolt belay.
3	n/a	n/a	From the base of P2 a rather airy traverse (Placebo Effect) above the next waterfall leads to a climb down into a dry fossil passage extending to P3 and P4. This is the easier route although it is also possible to continue along the streamway to a wet 8m pitch that requires a 15 m rope anchored in the roof with a long trace. Two protectors necessary.	Traverse high in rift above waterfall for about 15 m, to a point where it is possible to down climb into dry passage below. There is a double bolt belay in case a rope aid is considered necessary.
4	7	8	Belay with at least 3 m trace or tape. Use of a 15 m rope allows for a back-up to P4. One protector at top.	Y-hang from double bolt belay with chain.
5	19	23	Anchor a 20 m rope with a 5 m trace around the projection low down in the passage on the eastern side. One protector needed on the lip and another one half-way down at the overhang.	Y-hang from double bolt belay with chain. Redirect using tape knot jammed in crack to eliminate rub point partway down.
6	29	34	A truly pleasant abseil against the wall which drops down to the streamway again, in a large chamber. Belay in roof with a 5 m trace. 30 m rope is sufficient and no rope protectors required.	Y-hang from double bolt belay with chain. Bolt re-belay partway down.
7	47.5	58	Two bolts on the right had side are the only tie-off points (8 mm bolts and hangers required). The bolts were placed in March and June 1982, no responsibility will be accepted for their condition. A re-belay to a` spike 4 m down the shaft with a 6 m trace eliminates the need for rope protectors. A 50 m rope is just adequate.	Traverse out above shaft using fixed Bluewater to triple bolt belay with old tapes. We re-belayed to a rock spike 3 m below the bolts (using long tape protected by a rope bag over sharp edge; trace would be better) to alleviate abrasion on the first few metres. Two further bolts about 10 m apart are available for re-belays part way down the shaft.

Table 1 (cont.). Rigging notes for Ice Tube, based on trips in 1982 and 2012. Pitch length is taken from the 1982 survey. Rope length is the measured length of rope used to rig and descend the pitch during the bounce trip described in this article. The source for the 1982 rigging is Eberhard & Eberhard (1982).

Pitch	Pitch length (m)	Rope length (m)	1982 rigging	2012 rigging
8	12.5	13	This pitch is essentially a continuation of P6. Tie a 15 m rope to the end of P6. One protector required on the ledge. Ideally this pitch should be rigged separate (and dry) from an alternative anchor point.	Y-hang from double bolt belay and chain.
9	3	Combined with P10 using 51 m rope	Approximately 5 m of tape is used to rig this drop leading onto P8. This could probably be free climbed if necessary.	Y-hang from double bolt belay and chain.
10	44	Combined with P9 using 51 m rope	Tie-off to both bolts on the left-hand side (one bolt hanger required). A 47 m rope is adequate for this very wet pitch. One or two protectors needed at the top and another two or three one-third of the way down at the corner. A re-belay somewhere down the pit would reduce the protection problems.	Y-hang from double bolt belay and chain.
11	36	25	There are three dubious anchors low down which require a long trace and tapes. This pitch is excessively wet and can be done with a 40 m rope and only one protector on the lip.	Double bolt belay with chain on wall plus double bolts on floor close to lip of shaft (we used a tape to equalise loads on the floor bolts and keep the rope off the lip, which was tied back to the higher bolts).
12	13	17	Belay with several long traces around rock flakes on the left-hand ledge. A 20 m rope is sufficient with one protector on the lip. A tie-back to P9 may be desirable which would necessitate an extra 10 m of rope.	Traverse left on fixed Bluewater to double bolt belay. Consider hanging a gear sack below the bolts to protect against a rub point near the top if doing a bounce trip.

Table 2. Depth of Ice Tube based on various combinations of cited depths and data.

Source	Key survey stations	'Lower edge rule' depth (m)	'Upper edge rule' depth (m)
Published map of Ice Tube (Eberhard et al. 1982)	-	345 + 7.2 = 352.2	345 + 11.1 = 356.1
Deepest caves lists (Eberhard 1984, 1986)	-	354 + 7.2 = 361.2	354 + 11.1 = 365.1
Deepest caves lists (Eberhard 1988, 1990, 1992)	-	375 + 7.2 = 382.2	375 + 11.1 = 386.1
Deepest caves lists (Eberhard 1995, Butt 1995, Tunney 2010)	-	360 + 7.2 = 367.2	360 + 11.2 = 371.2
1980s survey data in STC archive	#IT0 (Ice Tube entrance); #IT64 (bottom of Ice Tube)	346.2 + 7.2 = 353.4	346.2 + 11.1 = 357.3
1980s survey data in STC archive	#IT0 (Ice Tube entrance); #MLSUMP (Mainline)	352.0 + 7.2 = 359.2	352.0 + 11.1 = 363.1
1980s survey data in STC archive	#IT0 (Ice Tube entrance); #COEL19 (Coelacanth sump)	343.6 + 7.2 = 350.8	343.6 + 11.1 = 354.7
As above plus 19 m for dive (Hume 1988)	#IT0 (Ice Tube entrance); #COEL19 (Coelacanth sump)	343.6 + 19 + 7.2 = 369.8	343.6 + 19 + 11.1 = 373.7

Plate 1. Fixed rigging in Ice Tube (December 2012). Note evidence of corrosion to chain.

Plate 2. Fixed rigging in Ice Tube (December 2012). Note combination of stainless with other steel components.

Plate 3. Fixed rigging in Ice Tube (December 2012). Note potential for three way loading of maillon.

Whatever happened to the search for Hairygoat Hole? The saga to date

Alan Jackson

Many may recall, undoubtedly with great delight and wistful pondering, the most recent efforts to find JF15 Hairygoat Hole. This was attempt three in the club's history, if you don't count the original discovery. Stefan Eberhard was the first to get excited about it in 1986 (Eberhard 1986). He didn't find it but did locate a few other tagged and untagged features. Jeff Butt and co were next, between 1999 and 2000, conducting a large number of trips (too many to bother referencing them all here) and discovered many new and old caves in the process. Like Stefan before them, they failed to find JF15.

Jeff *et al.*'s work was typically thorough and well documented with the glaring exception of cave tagging; rather he referred to most of the caves with a 'hole' prefix (usually 'hol' in the GPS) and then a few with an 'A' prefix just to keep it interesting, which lead to Arthur, as STC's Karst Index Officer at the time, assigning a vast number of JFX cave numbers to all the caves (about 40 of them!; Clarke 2000). Add to this a few other historic X caves, Rolan's Z-cave efforts from the 1990s and some other random bits and pieces and it was all a right mess.

Sometime around 2009 I decided to clean this mess up as a cover for having yet another look for JF15. The task proved to be rather overwhelming as I sorted through the tomes of literature, surface survey data, GPS coordinates, unpublished notes in the paper archives and other such guff. I'm disappointed to say that not only did we fail to find JF15 but we also failed to clean up every last X, Z, A and Hol/Hole cave; we did, however, get pretty close.

I can't seem to muster the enthusiasm to finish off the last few bits and pieces (I last had a go in 2012), so I've decided it's time to publish the following table(s) which will hopefully provide a useful summary of things should anyone ever wander into this particularly 'holiferous' part of the JF looking for unfinished business. The table(s) lists, to my knowledge, all the features and caves recorded for the area between the JF447 Pitfall Pot gully and JF14 Dwarrowdelf, as well as a few random outliers which received the same 'hol' and x-cave treatment during the 1999-2000 period. I've only included information in the references column for those 'hol', 'X' and 'Z' caves that haven't been re-located and tagged, as the current version of my 'JF References' spreadsheet can be used to track down any information for the tagged ones very easily. This spreadsheet is updated with the publication of each new *Spiel* and forwarded to the Electronic Archivist (Ric) periodically – just contact Ric or me if you ever want the latest version.

Most of the columns should be pretty self-explanatory. The 'Hole number', 'JFX number' and 'JFZ number' columns all refer to the random numbering systems used by Jeff, Arthur/Karst Index system and Rolan respectively. You'll notice that some lucky holes had four separate numbers assigned to them before finally getting an official JF number and tag! 'GPS' indicates whether the cave has a GPS coordinate in the club records. With the exception of Hole 2 (JFX65), all GPS waypoints were collected post 2009 and therefore post 'selective availability'. Hole 2's waypoint was collected by Dave Rasch at the time of discovery (1999). 'Surface survey' indicates whether the cave has been linked into the surface network, and whether the tag has been surveyed in or just some bit of flagging tape, tree or rock in the vicinity of the entrance. 'Survey' indicates if a cave map has been produced and published. 'Useful refs and notes' lists any references to that particular cave that I consider useful for locating the hole at some point, but as alluded to in the previous paragraph, I've only populated this field for caves that haven't been re-found and tagged. 'Photo tag' indicates whether a photo of the entrance, showing the relative location of the number tag, is safely stored in the Electronic Archive. There are two versions of the table: Table 1 and Table 2. Table 1 is arranged numerically for the 'Hole' column, which essentially reflects the chronological order of

discovery, while Table 2 is arranged numerically for official JF numbers. This should make it easy to track down what you're looking for regardless of your aims.

In summary, the only documented caves in the area we didn't find are:

- JF15 Hairygoat Hole
- JF16
- Hole 2/JFX65 (but this cave is an outlier and wasn't even searched for)
- Hole 22/JFX91

In addition, we have Serena's 'New' and 'Newa' entrances to investigate and possibly tag (if they prove worthy) and possibly the cave described in Peter Shaw's email to the author, published in *Speleo Spiel* 400: 25.

References

CLARKE, A. 2000. A Complete List of the Known Caves in the Junee-Florentine Karst. *Speleo Spiel*, 318: 13-27.

EBERHARD, S. 1986. Resurrection of the Hairy Goat. *Speleo Spiel*, 222: 4.

Table 1. All caves arranged numerically by Jeff Butt 'Hole Number' (largely chronologically by discovery). Fields highlighted yellow indicate jobs still to do.

Hole number	JF-X number	JF-Z number	JF number	Name	GPS	Surface survey	Survey	Useful refs and notes	Photo tag
1	64		JF437		Y (AJ)	N	Y	located NW of Sunshine Road	Y
2	65			[near JF-1]	Y (DR)	N	N	SS312:10	N
3	66		JF520	Oxhole, f or p	N	Y (tag)	Y		Y
4	67		JF521	Stonefish	N	Y (tag)	Y		Y
5	68		JF522	Runny Right Nostril	N	Y (tag)	Y		Y
5a	69		JF523	Left Nostril	N	Y (tag)	Y		Y
6	70		JF524	Peanut Paste	N	Y (tag)	Y		Y
7	71		JF525	Bethin [connects to JF-5]	N	Y (tag)	Incomplete		Y
8 [A2]	72	9	JF563		Y (AJ)	Y (tag)	Y		Y
9			JF10	Splash Pot	Y (AJ)	Y (tag)	Y		N
A1	74		JF562		Y (AJ)	Y (tag)	Y		Y
A2	72	9	JF563		Y (AJ)	Y (tag)	Y		Y
A3	21/75		JF494		Y (AJ)	Y (tag)	Y		Y
A4	76		JF495		Y (AJ)	Y (tag)	Y		Y
A5	77		JF496	Fossils Hole	Y (AJ)	Y (tag)	Y		Y
A6	78		JF498	Complex	Y (AJ)	Y (tag)	Y		Y
A7	79		JF500		Y (AJ)	Y (tape over hole)	Y		Y
10	73		JF250	Scratch Pot	Y (AJ)	Y (tag)	Y		Y
11	80		JF261	Itchy	Y (AJ)	Y (tag)	Y		Y
11A		7	JF474	Conspiracy	Y (AJ)	Y (tag)	Y		Y
12	81		JF21		Y (AJ)	yes (tape over shaft which has been obliterated by a log)	Y		Y
13	82		JF505		Y (AJ)	Y ('over' hole)	Y		Y
14	83		JF504	Bark Canoe Cave	Y (AJ)	Y ('over' hole)	Y		Y
15	84		JF22	Stuck Hole	Y (AJ)	N	N		Y
16	85		JF503		Y (AJ)	Y (tape over hole)	Y		Y
17	86		JF262	Musk Hollow I	Y (AJ)	Y (tag)	Y		Y
18	87		JF264	Musk Hollow II	Y (AJ)	Y (tag)	Y		Y
19	88		JF508		Y (AJ)	Y (tape over hole)	Y		Y
20	89	6	JF509	Blue Frog Hole	Y (AJ)	Y (tape on tree 1.5 m above hole)	Y		Y
21	90		JF506		Y (AJ)	Y (tape over hole)	Y		Y
21A			JF507		N (but very close to JF-506)	Y (log above hole)	Y		Y
22	91				N	N	N	SS317:11-12	N
23	92	10	JF476	Coitus Interruptus	Y (AJ)	Y (tag)	Y		Y
24	93		JF499	Crowbar Pot	Y (AJ)	Y (tag)	Y		Y

Table 1 (cont.). All caves arranged numerically by Jeff Butt 'Hole Number' (largely chronologically by discovery). Fields highlighted yellow indicate jobs still to do.

Hole number	JF-X number	JF-Z number	JF number	Name	GPS	Surface survey	Survey	Useful refs and notes	Photo tag
25	94		JF497	Butt Hole	Y (AJ)	Y (tag)	Y		Y
26	95		JF596		Y (AJ)	Y (tag)	Y		Y
27	96		JF528		Y (AJ)	Y (tag)	Y		Y
28	97		JF529		Y (AJ)	Y (tag)	Y		Y
29	36/98	8	JF447	Pitfall Pot (Frog Pot)	Y (AJ)	Y (tag)	Y		Y
30	99		JF531		Y (AJ)	Y (but not tag)	Y		Y
31	100		JF530	Nettle Trap	Y (AJ)	Y (but not tag)	Y		Y
32	101	20	JF481	Waist Deep	Y (AJ)	Y (tag)	Y		Y
33	102		JF482	Knee Deep	Y (AJ)	Y (tag)	Y		Y
34	103		JF480	Claytons Nine	Y (AJ)	Y (but tied into GPS point of cairn)	Y		Y
35			JF472		Y (AJ)	Y (tag)	Y		Y
36			JF479		Y (AJ)	N	Y		Y
	104		JF473	"Dry Valley Headwall"	Y (AJ)	Y (tag)	Y		Y
			JF1	JF One	Y (?)	N	Y		N
			JF4	Khazad-Dum	Y (?)	Y (tag)	Incomplete		Y
			JF5	Khazad-Dum	Y (AJ)	Y (tag)	Incomplete		Y
			JF9		Y (AJ)	Y (tag)	Y		Y
			JF12	Logfeed	Y (AJ)	Y (tag)	Y		Y
			JF13	Dribblespit Swallet	Y (AJ)	Y (tag)	Y		Y
			JF14	Dwarrowdelf	Y (AJ)	Y (tag)	Y		Y
			JF15	Hairygoat Hole	N	N	Y		N
			JF16		N	N	N		N
			JF17		Y (AJ)	Y (tag)	Y		Y
			JF18		Y (AJ)	Y (tag)	Y		Y
			JF19		Y (AJ)	Y (tag)	Y		Y
			JF20		Y (AJ)	Y (tag)	Y		Y
			JF40		Y(AJ)	Y (tag)	Y		Y
			JF69		N	Y (tag)	Y		Y
			JF439	Endpoint	Y(AJ)	Y (tag)	Y		Y
			JF446		Y(AJ)	Y (tag)	Y		Y
			JF475		Y (AJ)	Y (tag)	Y		Y
			JF477		Y (AJ)	Y (tag)	Y		Y
			JF478	Eel Hole	Y (AJ)	Y (tag)	Y		Y
			JF483		Y (AJ)	Y (tag)	Y		Y
			JF501	Clip Joint	Y (AJ)	Y (tag)	Y		Y
			JF502	Raincoat Cave	Y (AJ)	Y (tag)	Y		Y
			JF595	Bald Pig	Y (AJ)	N	Y		Y
New				unexplored	Y (SB)	N	N	SS392:8-9	N
Newa				unexplored	Y (SB)	N	N	SS392:8-9	N
			JF597	Fan Out	Y (AJ)	N	Y		Y

Table 2. All caves arranged numerically by official Karst Index Database JF number (tag). Fields highlighted yellow indicate jobs still to do.

Hole number	JF-X number	JF-Z number	JF number	Name	GPS	Surface survey	Survey	Useful refs and notes	Photo tag
			JF1	JF One	Y (?)	N	Y		N
9			JF10	Splash Pot	Y (AJ)	Y (tag)	Y		N
			JF12	Logfeed	Y (AJ)	Y (tag)	Y		Y
			JF13	Dribblespit Swallet	Y (AJ)	Y (tag)	Y		Y
			JF14	Dwarrowdelf	Y (AJ)	Y (tag)	Y		Y
			JF15	Hairygoat Hole	N	N	Y		N
			JF16		N	N	N		N
			JF17		Y (AJ)	Y (tag)	Y		Y
			JF18		Y (AJ)	Y (tag)	Y		Y
			JF19		Y (AJ)	Y (tag)	Y		Y
			JF20		Y (AJ)	Y (tag)	Y		Y
12	81		JF21		Y (AJ)	yes (tape over shaft which has been obliterated by a log)	Y		Y
15	84		JF22	Stuck Hole	Y (AJ)	N	N		Y
10	73		JF250	Scratch Pot	Y (AJ)	Y (tag)	Y		Y
11	80		JF261	Itchy	Y (AJ)	Y (tag)	Y		Y
17	86		JF262	Musk Hollow I	Y (AJ)	Y (tag)	Y		Y
18	87		JF264	Musk Hollow II	Y (AJ)	Y (tag)	Y		Y
			JF4	Khazad-Dum	Y (?)	Y (tag)	incomplete		Y
			JF40		Y(AJ)	Y (tag)	Y		Y
1	64		JF437		Y (AJ)	N	Y	located NW of Sunshine Road	Y
			JF439	Endpoint	Y(AJ)	Y (tag)	Y		Y
			JF446		Y(AJ)	Y (tag)	Y		Y
29	36/98	8	JF447	Pitfall Pot (Frog Pot)	Y (AJ)	Y (tag)	Y		Y
35			JF472		Y (AJ)	Y (tag)	Y		Y
	104		JF473	"Dry Valley Headwall"	Y (AJ)	Y (tag)	Y		Y
11A		7	JF474	Conspiracy	Y (AJ)	Y (tag)	Y		Y
			JF475		Y (AJ)	Y (tag)	Y		Y
23	92	10	JF476	Coitus Interruptus	Y (AJ)	Y (tag)	Y		Y
			JF477		Y (AJ)	Y (tag)	Y		Y
			JF478	Eel Hole	Y (AJ)	Y (tag)	Y		Y
36			JF479		Y (AJ)	N	Y		Y
34	103		JF480	Claytons Nine	Y (AJ)	Y (but tied into GPS point of cairn)	Y		Y
32	101	20	JF481	Waist Deep	Y (AJ)	Y (tag)	Y		Y
33	102		JF482	Knee Deep	Y (AJ)	Y (tag)	Y		Y
			JF483		Y (AJ)	Y (tag)	Y		Y
A3	21/75		JF494		Y (AJ)	Y (tag)	Y		Y
A4	76		JF495		Y (AJ)	Y (tag)	Y		Y
A5	77		JF496	Fossils Hole	Y (AJ)	Y (tag)	Y		Y

Table 2 (cont.). All caves arranged numerically by official Karst Index Database JF number (tag). Fields highlighted yellow indicate jobs still to do.

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24	93		JF499	Crowbar Pot	Y (AJ)	Y (tag)	Y		Y
			JF5	Khazad-Dum	Y (AJ)	Y (tag)	incomplete		Y
A7	79		JF500		Y (AJ)	Y (tape over hole)	Y		Y
			JF501	Clip Joint	Y (AJ)	Y (tag)	Y		Y
			JF502	Raincoat Cave	Y (AJ)	Y (tag)	Y		Y
16	85		JF503		Y (AJ)	Y (tape over hole)	Y		Y
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3	66		JF520	Oxhole, f or p	N	Y (tag)	Y		Y
4	67		JF521	Stonefish	N	Y (tag)	Y		Y
5	68		JF522	Runny Right Nostril	N	Y (tag)	Y		Y
5a	69		JF523	Left Nostril	N	Y (tag)	Y		Y
6	70		JF524	Peanut Paste	N	Y (tag)	Y		Y
7	71		JF525	Bethin [connects to JF-5]	N	Y (tag)	incomplete		Y
27	96		JF528		Y (AJ)	Y (tag)	Y		Y
28	97		JF529		Y (AJ)	Y (tag)	Y		Y
31	100		JF530	Nettle Trap	Y (AJ)	Y (but not tag)	Y		Y
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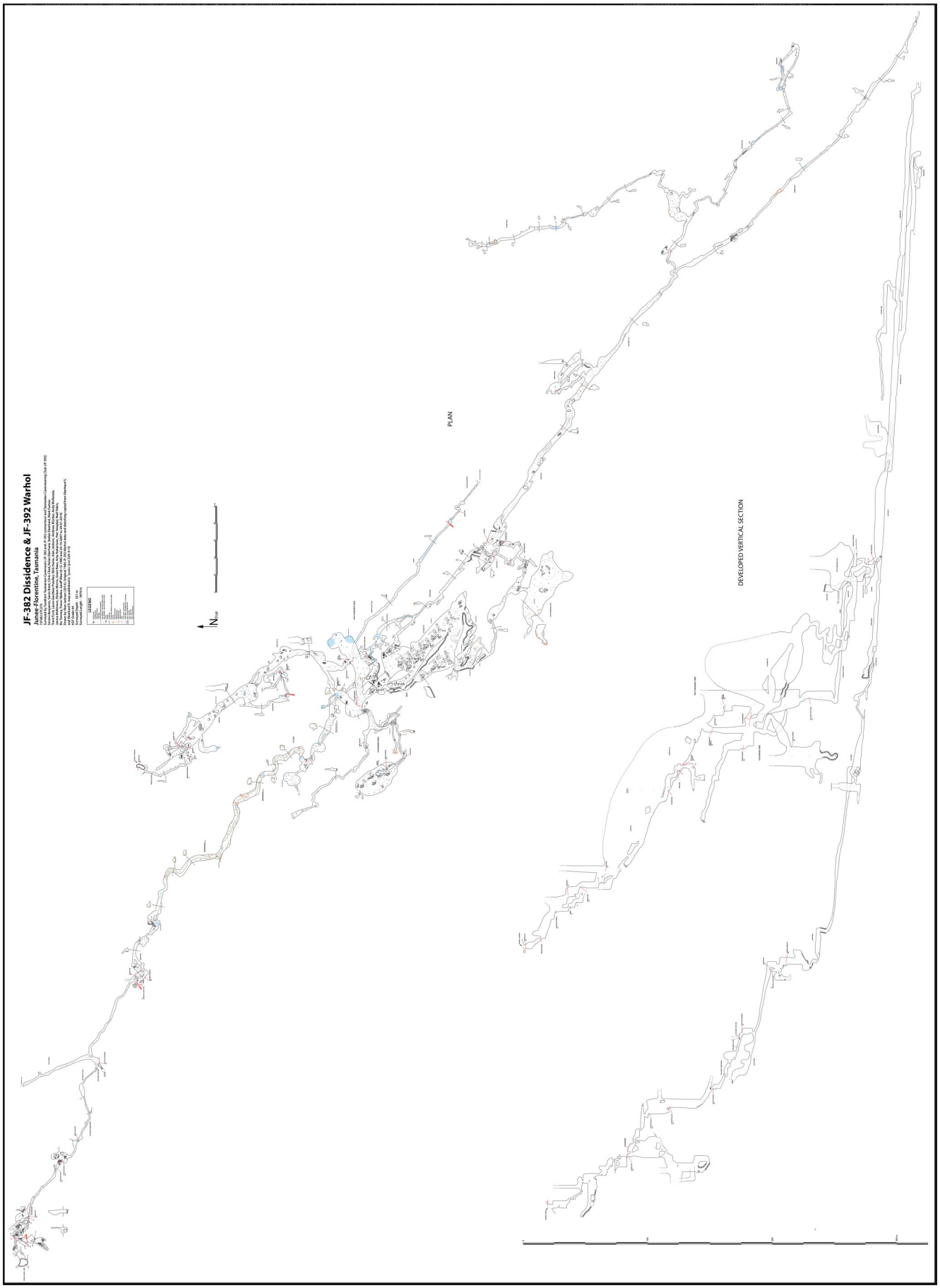
8 / A2	72	9	JF563		Y (AJ)	Y (tag)	Y		Y
A2	72	9	JF563		Y (AJ)	Y (tag)	Y		Y
			JF595	Bald Pig	Y (AJ)	N	Y		Y
26	95		JF596		Y (AJ)	Y (tag)	Y		Y
			JF597	Fan Out	Y (AJ)	N	Y		Y
			JF69		N	Y (tag)	Y		Y
			JF9		Y (AJ)	Y (tag)	Y		Y
2	65			[near JF-1]	Y (DR)	N	N	SS312:10	N
22	91				N	N	N	SS317:11-12	N
New				unexplored	Y (SB)	N	N	SS392:8-9	N
Newa				unexplored	Y (SB)	N	N	SS392:8-9	N

Surveys



Note full resolution version is avaliable from the STC Electronic Archive on request. Contact Ric Tunney: rtunney@caverneer.net.au.