Speleo Spiel 408

May—June 2015

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

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Front Cover:
Milos enjoying Mothers Passage JF 345 Ice Tube. Photo by Petr Smejkal.

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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Contents

Editorial

Better late than never ... so they say? Greg might have other ideas but you can be the judge if you get to the end of "Other Exciting Stuff".

So that things line up I will tell you that there are some trip reports in this issue. Milos gives an account of an Ice Tube adventure. Fittingly his last trip in Tasmainia before returning to the Mother Land. The ghost of Dickon Morris returns to haunt Andreas and Petr refrains from drowning newbies in Growling.

Matt Cracknell

Stuff 'n' Stuff

Janine IS a machine!

At the recent ASF Conference in ExmouthWA, Janine won the female section of the rope skills course. She came third in the female section of the 30 m prussic with a time of 2' 22". (The winner was Asha from WASG in 2' 16".) Janine is blaming her failure on her Pantin which kept disengaging from the rope. Her time meant she won the Masters section, both male and female!

Ric Tunney

STC publications on the Karst Information Portal

As agreed at the June 2015 meeting, digital copies of all past issues of Speleo Spiel and Southern Caver have been submitted to the Karst Information Portal (www.karstportal.org) - "an open-access digital library linking scientists, managers and explorers with quality information resources concerning karst environments".

These have now been posted on the KIP and are available to anyone who cares to search for them. The Spiel can be accessed directly at:

www.karstportal.org/taxonomy/term/12992

and the Southern Caver at:

www.karstportal.org/taxonomy/term/12990.

(They can also be located by searching for the titles within the site but this produces lists in a very strange order.)

IUS is encouraging all cave and karst groups to provide digital copies of their publications to the KIP. The benefits of having our publications on this site are (1) that they can be accessed by anyone interested, (2) there is another secure copy of our digitised publications to help guard against their loss and (3) if anyone asks you for a copy of a back issue, you can refer them to the KIP.

The KIP is maintained by the University of South Florida Libraries (with the support of the National Cave & Karst Research Institute, the University of New Mexico Libraries and the International Union of Speleology).

I have undertaken to provide them with further copies as they are published.

Greg Middleton, Librarian/Archivist

Trip Reports

JF345 Ice Tube

Growling Swallet through trip

2 May 2015

Milos Dvorak

Cavers: Milos Dvorak & Petr Smejkal.

It is over 19 months since I came to Tasmania for a short-term visit at the University of Tasmania to improve my research skills and finish my PhD. Like a real adventurer, I started the exploration of an immensely distant and foreign country on my own. My first attempts involved bushwalking but Petr mentioned the possibility of exploring Tassie underground.

After three months here I participated in my first SRT training, followed by my first underground experience of dark and depth in Midnight Hole. Matchbox Squeeze and Serenas Slippery Slot tested my character but I was rewarded when I saw the scenery of Bohemia Chamber. This was my excruciating start at STC and I have taken the chance to get underground many times after that.

For my last caving opportunity before returning to the Czech Republic, Petr suggested Ice Tube. We started a week of preparation, with anxiety, collecting of information, expectation and anticipation. It was a big challenge for both of us. Alan Jackson gave us some tips how to find the entrance of the cave and also some tips how to safely do it. We had checked a map and collected gear from Geoff and mentally prepared for the Saturday.

We expected a long tiring day, so we left Hobart at 6:30 am. The day started great, beautiful sunrise followed by dry warm day even in the Junee-Florentine valley. We checked the water level at Growling Swallet entrance and surprisingly it was very low. Then we continued our track, following Alan's notes. The entrance looked to me similar in size and shape to Trapdoor (vertical rock southern wall about 15 m high and rounded northern side with a single stream running into it). It was 9:10 am when we entered; we had some karabiners, a couple of 9.5 mm ropes (41 m and 68 m), chocolate bars and peanuts.

After approximately 5 minutes walk we reached the first pitch. We abseiled it and pulled the rope down. My heart pumped a bit faster when I realised that with the fallen rope we lost our last chance for return the same way (except the cave rescue of course). From this point, we had to get down another 300 vertical metres and try to get out through Growling Swallet. Neither Petr nor I had ever been in this cave before and we were surprised how smooth the trip was. The water level wasn't high at all and we managed to stay reasonably dry until Killing Joke. At the last pitch (Never Forever) we followed Alan's instruction to get through Fallopian Rift: "*To enter Mothers Passage you need to get off about half way down the last pitch (Never Forever). There is a fairly obvious muddy ledge. I think there's still a tin can on the ledge as a marker about 4-5 metres down – it's big enough to fit a couple of people while they take their SRT gear off etc. Then a very tight but short rift/squeeze (Fallopian Rift) and then you drop down to the floor of the passage in a very slippery muddy climb, then just follow the horrible muddy passage to Mainline.*"

Long story short we started from the wrong ledge. The realisation that we started from the wrong ledge came to us after we were stuck at the muddy bottom of the Fallopian Rift. However, after half an hour of climbing up and down we found the right spot. Another half an hour took us and our cave packs through. We enjoyed our modest lunch when we reached the main line of Growling Swallet. So far, 4.5 hours underground. Full of energy we started our walk out. The labyrinth at Bronchial was excellently marked by plenty of tapes (thanks Alan!). We did not have any complications at Necrosis or Herpes either. Even the ladders were not that difficult. We also had a quick look at Trapdoor waterfall – not much water that day. We had another fast snack at Slaughterhouse Pot to get enough energy for the rest of Growling Swallet. Again the water level

was very low, the lowest I've seen here so far. We left the cave at 5:10 pm, time in cave altogether ~ 8 hours.

The rain was quite strong when we got out of the cave, and unexpected. I reckon another few hours in the cave would have surprised us with a bit of a flood. Luckily we were fast enough not to get trapped inside and I can say that my last trip to a Tasmanian cave was an unforgettable experience.

When we were cleaning gear the next day we found a massive cut on the 68 m rope. We assumed that the rope was damaged when we were abseiling Maelstrom Pitch. If you plan a trip to the Ice Tube be aware of the sharp cliff that sits right underneath the bolt.

JF210-211 Sesame Cave

A weekend of Dickon Morris flashbacks

16 May 2015

Andreas Klocker

Cavers: David Bardi, Andreas Klocker & Sandy Varin.

After an amazing caving expedition to Mexico, fighting the caving withdrawals and trying to survive that thing called work, Sandy, David and I decided to go for some JF fun, even though we knew that it would involve a shock to our bodies re-adjusting to Tassie cave temperatures. Hence, we planned to continue the exploration of JF633 Ring Hole and drop the two virgin pitches we found previously.

The first thing about JF caving which got into our minds walking up the hill to the cave, which we completely forgot about during the Mexico expedition, was the crazy Tassie weather, or more accurately, snow melt. It snowed in the Florentine all week before and Saturday was one of these beautiful sunny days melting all of that white stuff. Needless to say is that Ring Hole – with a little entrance sucking up a substantial creek – was going mad! Immediately memories of scenes in flooding Boulder Jenga and the crazy face of Dickon Morris appeared in my mind, giving me enough shivers to remind me not to be so stupid to head into that cave under current conditions. Nevertheless, David obviously didn't have these memories and tried to enter the cave. I think I almost froze to death and drowned by watching, but luckily after a few minutes later his blue glove appeared out of the water-filled entrance, followed by his red helmet, and finally the rest of his body. Funnily enough half his body felt numb ... and we decided to give up on this suicide mission.

So to not waste a day in the JF, having piles of rigging gear in our packs, we decided to head to nearby Sesame Cave instead, since I knew this cave needed some re-surveying and pushing. We first looked at the lower entrance and when I saw that even midget Sandy struggled to get through the squeeze just behind the entrance, we decided to try the higher entrance instead. The first two pitches were easy after placing a few bolts (since nobody has been in this entrance since ladder/11 mm rope days). The third pitch was a surprise – since Sesame was not a plan for that day and I hadn't studied its maps – and a very tight awkward squeeze which I volunteered to do first suddenly opened up and turned into a pitch head which I realised a bit late. Luckily I could free-climb it, but once on the bottom decided that a rope would be a nice thing to have ... and there was another picture of Dickon in my mind after he slipped through the Fistula in Boulder Jenga. Two times a picture of Dickon in my mind is more than enough for a year's worth of caving and so it was time to be a bit more sensible.

We then continued down the cave and, after a bit of route finding, ran out of rope on the first drop in the main rift (we actually had an 80 m rope a bit further up the cave since we hoped to find a big pitch in Ring Hole, but surprisingly nobody wanted to head back and get an 80 m rope to descend 10 m). At that point we turned the trip and headed out, making it back to Hobart at a reasonable time for a beer and curry.

17 May 2015

Sunday we then continued where we had stopped Saturday and rigged the small pitches in the streamway. Soon after we reached the last pitch down the main rift with an obvious survey station above it. Instead of heading down this pitch we headed along the rift, bridging over the top of the pitch, to have a look at the cave beyond. Just beyond the last pitch the rift developed a very dodgy looking false floor with a loose-looking ledge leading around it. While Sandy and I weren't sure if we should proceed without a rope, Dave ran ahead and had a look at the continuation beyond. After some time (probably minutes in Dave's mind and hours in Sandy's since she was starting to freeze) I went looking for Dave and soon found him trying to find his way back through a rock-pile. Once my Scurion showed Dave the way back we started to head out and derig. We came to the upper parts of the streamway, just below the two longer pitches, I noticed a draughting hole leading off the main route. Sticking my head in I quickly realised it was a bit tight, but the tight bit was short and could easily be passed with a bit of modern technology and some convincing. From what I could see through that restriction it looks like it leads into a 5-6 m drop. That lead is definitely worth a return trip, especially since Sesame needs more work anyway to stitch together the very sparse survey data and sketches which exist of that cave.

From there we headed out and de-rigged. Most of this went smoothly and we were almost out when Sandy suddenly went very quiet (a bad sign!) when she tried to move through the squeeze above the third pitch head ... and as we found out later she had dislocated her ribs (I had no idea one could do that ...). Nevertheless, Sandy made it out of the cave and we moved on to have a good burger in town, and then on to the airport to the 'business as usual scenario' – a delayed flight.

Even though we didn't make it to our big leads in Ring Hole this was a very fun weekend re-exploring a cave I've walked past many times but never been into. After this weekend I looked through previous trip reports and surveys to find out that most previous surveys and sketches are missing, so I guess it won't be my last trip to Sesame, especially since there's apparently an undived sump at the end pointing towards downstream Niggly ... and Sesame is a great backup plan to Ring Hole which will be in flood a few more times this winter.

I should also mention that while in general this cave is a very easy trip, doable in the worst of rain, both entrances involve tight awkward squeezes, so if you're built a bit larger then beware – you might not fit! At the moment all of the cave is de-rigged again with colourful straws in the holes drilled for 6 mm concrete screws, so re-rigging should be quick.

JF4 Khazad-Dûm – JF14 Dwarrowdelf

Exchange social event

17 May 2015

Alan Jackson

Team Stupid: Laure Gauthiez-Putallaz, Alan Jackson, Janine McKinnon, Michael Packer & Petr Smejkal.

Team Slow Motion: Serena Benjamin, Yoav Bar-Ness, Sarah Gilbert, Dan Haley, Amy Robertson & Ric Tunney.

Team Quoll: Rolan Eberhard.

Team Stupid got away early and rigged Dwarrowdelf, installed two eye-bolts at the ledge at the top of the last pitch and shot out (nearly drowning on the fifth pitch). Team Slow Motion was just gathering at the entrance as Team Stupid exited. Team Quoll arrived independently at about the same time and shot down to photograph and record a quoll skeleton at the bottom of the cave and Team Slow Motion, presumably, had a tediously slow experience attempting to place a caver at every rebelay in the cave simultaneously.

Team Stupid walked to KD and found lower than expected water levels – medium, but not high. Dodgy pull down rigging was employed and the four untested bolts from 25/4/15 were tested and tagged (except for the two old bolts on the sixth streamway pitch – ask Pax about that). The two new bolts in Dwarrowdelf were tested and the cave derigged. A wet, cold and longish day.

Table 1. JF4 Khazad-Dûm rigging guide 2015.

	Rope (m)	Anchors	Notes
Main Route to Streamway			
+5 p (Scaling Pole)	9*	2x P-hangers up high (overhead) but technically on right wall when viewing from the top	A permanent rope is in place on this pitch. If someone removes it unexpectedly, bypass it via the Serpentine Route.
4 p	6.5	2x P-hangers on back wall over pitch, one above other	Join the dots
15 c	18*	Naturals	Easily bypassed with traverse and climb but beginners and the infirm might like a rope
28 p ('Dry 90 footer')	35.5	Single P-hanger approach bolt on left wall and 2x P-hangers at pitch head high on left	Join the dots
9 p	11	2x P-hangers, one high on right wall and one lower on left	Join the dots
21 p ('Wet 70 footer')	29.5	2x P-hangers high on left wall (approach bolts) and 2x P-hangers 5 m out along rift, one each side.	Join the dots
Streamway to Bottom			
6 p (Streamway Pitch 1)	12.5	Single P-hanger approach on left wall. Multiple naturals at pitch head	Join the dots
9 p (Streamway Pitch 2 – 'Pedestal')	16.5	3x P-hangers for 'mini bolt traverse' rig (ignore). 1x P-hanger at top of pedestal climb, 2x P-hangers on wall in 'corner' up on pedestal, 1x P-hanger on large projection over pitch proper	The 'mini-bolt traverse' is awful – avoid. Permanent rope is in place to protect climb (now prusik) up onto the pedestal and over to 2x P-hangers. Rig from 2x P-hangers over edge, using single p-hanger on projection over pitch as a redirect (extended on a short tape). Can use last 'traverse' bolt as a rebelay below the redirect if desired, but pretty pointless.
5 p (Streamway Pitch 3)	13	3x P-hangers – first on left wall over waterfall/drop for approach line then two a few metres along the rift	First bolt not ideally positioned for approach line, but better than nothing (just). Join the dots
8 p (Streamway Pitch 4 – 'chute')	17*	Single P-hanger on right at start of 'chute'. Single p-hanger on left near edge of pitch. Single p-hanger on left (right while abseiling) 1.5 m above ledge. Then naturals	Link the three P-hangers as a traverse line to the ledge. If low water, can go directly down off last bolt, or use large natural on platform. If high water, continue along ledge and lasso large natural up high (~5-6 m tape or trace) and install rebelay
8 p (Streamway Pitch 5)	11.5	Naturals	Various large naturals. Can IRT with fat rope or install a rebelay over the first edge
9 p (Streamway Pitch 6)	15	1x P-hanger approach line high on right wall 3 m from pitch. 2x P-hanger on right wall over pitch	Join the dots. If you don't like the step across the void to access the Brew Room then another ~8 m of rope allows a traverse to be tied off to naturals on the far side
42 p (Brew Room)	50*	2x P-hanger above 'knife edge' divide. 1x P-hanger ~4 m further down, 1x P-Hanger ~12 m further down	Permanent rope rigged from 2x bolts in window into Brew Room (free climb no longer required). Then join the dots.

So, in theory KD-DD is now thoroughly bolted. There are still some bits that could be improved but it'd be wrong to take all the fun out of rigging this cave. I'm happy that all the stupid and unsafe rigging has been fixed, but everyone's opinion is different so I'm happy for people to raise any improvements they'd like to see (but I'll probably just shoot you down). All the bolts have been tested. Not quite all the bolts have been tagged, so let me know if you're visiting either of the caves and I'll give you a job to do. A revised rigging guide has been prepared (Table 1).

JF4 Khazad-Dûm revised rigging guide

KD has had somewhat of a refurbishment lately. A revised rigging guide is provided here to replace bits of Butt (2003). I've copied the layout and style of Butt (2003). With a few exceptions (indicated with an asterisk [*]), the rope lengths are based on accurate post-trip measuring of ropes. No changes were made to the Serpentine Route and this section has been excluded.

Summary of changes since Butt (2003):

Old Loxin eyebolts have been removed;

New bolts installed on Scaling Pole pitch, Pitch 1, 'Wet 70 footer', Streamway Pitches 1, 2, 4 and 6, and final pitch (Brew Room);

Permanent rope installed on Scaling Pole pitch, Streamway Pitch 2 ('pedestal' pitch) and final pitch (to access the initial window in the Brew Room).

Reference

Butt, J. 2003. Khazad Dûm (JF4)-An Updated Rigging Guide-July 2003. *Speleo Spiel* 337: 29.

JF229 Welcome Stranger

Beginners' trip with three kids

23 May 2015

Petr Smejkal

Cavers: Matt and Jasmine Cracknell, Nick and Leo Perkins, Petr and Patrick Smejkal & Nirved Upadhyay.

Beginners' trips might get a bit slow sometimes so I thought let's make it more fun and organise a beginners' AND kids' trip into Welcome Stranger. Silly me.

For the trip we had a group of two beginners, Nirved and Nick, and three little possums, Jasmine, Leo and Patrick. Matt [*I am never certain about anything – Ed.*] and I were convinced that with two of us experienced cavers' nothing could go that wrong.

The trip begun smoothly at the car park, kids were pretty excited and after a few crackers and some candies we started our slow walk toward the entrance. The gate was blocked with a bit of debris and it took me a while to locate the keyhole but after few minutes we got in and our adventure with the kids started. The cave exploring started as lots of fun, neither kids nor beginners had any problems with the entrance crawl and also the water level in the stream was reasonably low. Kids were showing how brave they are and the group was moving slowly but cheerfully forward.

The kids got tired probably after an hour. From then the trip was getting less and less fun. It started with a bit of occasional crying and it ended up with tears, blood and a soaked $500 dollar camera lens. Well that was the moment when all of us were thinking it is time to go back then Matt said that aloud and we all happily agreed. On the way out the kids discovered a giant Tasmanian cave spider; this did not contribute to a good atmosphere either, but at least it speeded up our return to the cars.

Dry clothes, bit of chocolate for tired kids and warm miso soup for upset dads at the car park perfectly cleared up the tension of the previous half an hour. Well it was fun at the end, and definitely a few good moments that will stick in my memory.

Cheeky kids about to go caving.

JF36 Growing Swallet

It was flooded so Welcome Stranger beginners trip instead

6 June 2015

Petr Smejkal

Cavers: Chris Lang, Niall Macdonald, Nick Perkins, Petr Smejkal & Nirved Upadhyay.

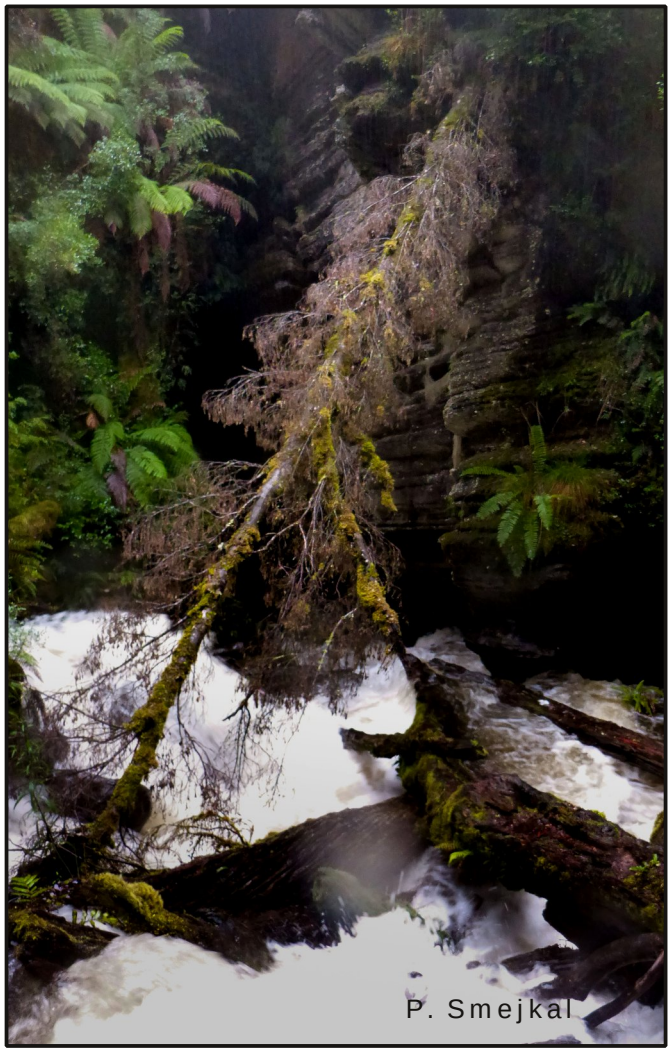
I organised this trip to take four beginners into Growling Swallet. I was checking the weather forecast in Maydena during the week and according to the rainfall I expected slightly elevated levels of water but nothing that would stop us in going inside. Well I was wrong again. I had the first feeling that this trip will not happen when we spotted patches of melted snow on the Junee-Florentine road.

The next bad feeling I had was when we had to stop the car due to a fallen tree blocking the 8 Road. I did not take any saw this time but it was five of us and with a bit of push and pull we managed to move the tree to the side of the road. There were a few more trees and branches over the road making us unhappy but we managed to get all the way to the car park.

We knew definitely that this trip would not happen when we got to Growling. I have never seen so much water falling inside. In fact we could not even cross the river. The current was strong and water was too high. We had a bit of a look, took some photos and decided for a peaceful excursion in Welcome Stranger instead.

There was another tree fall on our way to our alternative plan cave but nothing that five men could not take care of, or four men and one woman if my wife had been there. For me this was the first trip to Welcome Stranger without my son and I have to admit it was rather enjoyable. Instead of keeping an eye on Buddy I could spend my time here taking photos and checking some side passages. Also it might be worthwhile to mention that the water level in this cave was low.

A very unpleasant smell surprised us when we reached the sump at the end of the cave. The source of this smell was an impressive mould growing over some crumbs left here by previous visitors. We also found a hook knife sitting in the water close to the sump (maybe Janine's? I still need to check it). Despite the strong smell we had our lunch here to make sure that the mould would not starve to death.



Growling Growling Swallet.

At the end and despite all the negative surprises it was very pleasant caving day. On the way home we were excited to check Russell Falls. What a disappointment when we discovered that the water level in Growling does not say anything about water levels in other rivers coming from Mount Field National Park. The water level in Russell Falls wasn't much higher than in the middle of a hot summer.

2015 ASF conference field trips

Cape Range, Exmouth

18-30 June

Janine McKinnon

STC members: Sarah Gilbert, Janine McKinnon & Ric Tunney.

I can't recall ever going to an ASF conference before, apart from running field trips for the last conference STC organised in the early 2000's. There are several reasons for this, but mainly it comes down to limited holidays when I was working. The opportunity to visit the Cape Range, and Ningaloo, coupled with now being retired, inspired me to change my habits.

There were several options for caving and surface wanderings on each of the pre and post trip days. A brief account of the trips I was on follows.

Pre-conference trips

Three days were available for caving before the conference. About thirty participants turned out for the first day. A party of six of us headed off to C254 to have a look at our first Cape Range cave, and possibly push some small passage at the bottom. We had a GPS location but none of the party had been to the cave before.

We had a pleasant hour and a quarter navigating to the cave. The route was somewhat circuitous as a couple of canyons got in the way of the direct path. Spinifex was abundant but not too much of a problem. The temperature was a bit warm for we Taswegians but not ridiculous. All was looking good.

All rigging in the Cape Range is on naturals, and there are no rigging notes, just the odd helpful hint from Darren (Brooks). The rock is very young (40 million years at best), and extremely well weathered and fractured, and often very sharp. So we took a few minutes working out how to rig the entrance pitch safely. This proved to be the tale for all rigging on trips. Finding belay points that are solid and reliable and in good positions is not straightforward.

I headed down first and rigged (slowly) down the four pitches with a single 65 m rope. I hate using one long rope as I always end up in a tangle. Nothing new this time.

The rock was a beautiful light reddish colour and

heavily water worn with threads and sculpting everywhere. It was a very pleasant surprise to me. Stunningly beautiful. A pity the fragility of the rock made most of these brilliant looking rigging points useless.

The final drop we rigged with a second rope and dropped into some largish horizontal passage with decorations at the end, about 50 m from the bottom of the rope. We found the hole in the floor to where the crawl-way was, and discovered we needed a rope for an 8 m pitch. Oh, that was the rope we just used. We thought about going back and taking it off the pitch (which looked like a climb really) but time was now running short. We were expected back at the cars before dark, less than 3 hours away.

As it was also stiflingly hot and humid, and we were running rivers of sweat, we all opted to call it quits at this. We lacked the motivation to re-organise to get a rope for this drop, and prudence suggested we didn't have the available time anyway.

We weren't sure if anyone would come on another day so we de-rigged as we left.

We arrived back at the cars a half hour before dark.

The next day Ric and I again teamed up to do two caves, Corkscrew and Bell. The plan was two parties swapping over.

We did Corkscrew first. This was a 20 m horizontal walk from the car. So far, so easy. A crawl entrance led to a tight pitch head just out of day light. I headed down first and rigged that pitch, did three short (less than 4 m) climbs, rigged a second pitch and dropped that. I was now still only 30 m deep. The cave is small dimensions, quite tight in a few places, but a beautiful red coloured rock.

I was breathing a little more heavily than usual at the bottom of the second pitch. I waited quietly to see if my increased breathing rate was due to the high temperature and airless, stifling atmosphere.

Did I mention that they have CO_2 in these caves in a totally unpredictable way?

I moved on to check the top of the next (10 m) pitch, still with elevated breathing.

David Butler (NC) came down next. He reported a raised breathing rate but thought it was the hot, stifling atmosphere. I waited, undecided about going down another pitch if it was CO_2 problems. Alan (Caton from RSS) came next and started puffing like a train. Ric followed, hit the deck, and promptly headed back up, saying it was hard to breathe. So, we'll call it elevated CO_2, shall we?

I decided going down another pitch probably wasn't a good idea so we left, leaving the cave rigged for the other party.

Note: This proved to be a good plan as only one of them went past the tight squeeze at the top of the first pitch, and he stopped only a short way down pitch two, blaming high CO_2.

Bell Cave was a five minute walk from the car, and some 500 m from Corkscrew. This is just a single pitch of 20 m into a large room. Two short tunnels lead off and terminate.

Our final pre-trip was a hole in a creek bed that Darren had found but not dropped. New cave! C849 was an hour's walk from the car. Thank goodness for GPS is all I can say about finding it in fairly featureless terrain.

The drop, first reported to us as about 60 m, and getting shorter at each briefing, turned out to be 10 m. We dropped into a large chamber that obviously takes huge amounts of water in cyclones. The leaf litter on the floor was deep and plentiful. The cave proved to be only this one large chamber, about 20 m long. By the time we surveyed, exited and returned to the car we had filled in a short winter's day quite efficiently.

During the conference we took a group of friends from Hills Speleology Club, a club in Sydney, back to C254. Our plan was to visit the bottom chamber, but they had had enough of the heat and humidity by the decorated section at the bottom, so we failed to get there, again. Interestingly, this was now our fifth trip down these caves and whilst Ric and I found it hot and stifling, we weren't as distressed as the Hills people (on this, their first trip underground in Cape Range). So I guess we had acclimatised a little.

As a counter balance lift had to be arranged for one of them up the top pitch (due to exhaustion), it was all for the best that we didn't do the bottom pitch.

Post Conference Trip

Again, we had thirty-five participants for this event. This was about double what the organisers had expected, and as we were camping up in the range, with no facilities, for several days, it presented them with quite a logistics issue. They managed brilliantly with group water supplies, public shelter areas, three camp toilets and LOTS of cooking and assorted camping gear for us fly-ins.

We went in Saturday (4WD access only) and set up camp. Sunday, Monday and Tuesday morning we caved, and most left in the afternoon.

Our first cave - C429 - involved several pitches, all straight below each other, and small horizontal passage that had not been followed to its end. This passage needed surveying and exploring.

Four of us were allocated this job, but as one was Ric (won't crawl very far these days) and another was Kerry (won't crawl at all) I guessed that Sarah and I would end up with the job.

I rigged to the bottom, having the now familiar problem finding reliable belay points with a good hang. Sarah followed and we headed in to start organising for surveying. Ric joined us at the start of the survey for the first 10 m, before reaching his tolerance for squeezing and crawling, and then left. Kerry we never saw underground. He entered last, bottomed the pitches, turned and went out, and back to camp.

Sarah did book, I did the rest. We surveyed 50 m to a cairn, the last point for the previous exploration party, and another 50 m to a (dry) sump with some decorations. The end (happily!) was a short distance past this. That had taken about an hour and a half. It was slow going.

We de-rigged and found Ric waiting at the surface for us.

The next day's cave, C201 Pteradactyl, was a hike for an hour through interesting karst pavements. The cave had been rigged the previous day so we had an easy job to bottom the cave and de-rig.

As was starting to appear typical here, we found several short pitches on top of each other (in this case eight pitches, all less than 10 m except one of 12 m), and a short section of horizontal development. The rock was again very water worn and beautiful colours.

Sarah joined us again for this trip.

Tuesday (30 June) morning we had time for a quick cave so I, plus a few WA cavers, did C126, a cave with a short 8 m drop and a 50 m pitch, just a five minute walk from camp.

"Quick" turned out to be a bit optimistic. I was rigging, and the first short drop was set up quite fast. However, I had instructions (third hand) that there was a flowstone belay giving a free hang to the 50 m pitch. As it happened, a large flowstone formation was positioned above the pitch at roof level. I assumed this was it. I spent some time trying to get a tape over it, but it was an awkward spot. I then saw that I didn't have a

long enough tape anyway, so Greg (Thomas - WASG) went back to camp for more tape. On his return I tried again, and finally had to take my helmet off to try and see why I could not throw the tape up over the feature. It was solidly attached, there was no hole on the far side. Doh.. This wasn't the flowstone I was meant to use.

Another 20 minutes faffing about with crappy belay points and Greg pointed out a TINY piece of flowstone thinking about staying vertically attached to the wall over the pitch. Surely not. Really, no. But yes, that was the only flowstone around and it had a nice thread and gave a free hang.

Oh well. Backed up to another less dodgy thread, and back to the entrance rope would have to do.

When all was ready I got on VERY tentatively and waited a minute. All seemed good (I was still there). A beautiful free hang with lovely rock to look at followed. A re-direction was needed 2/3rd of the way down.

Greg and his son Andrew followed. I went for a wander along the horizontal passage at the bottom. This terminated after some 50 m. There was a significant temperature rise about half way along the tunnel which was a bit weird as it was good sized walking passage and the change was like an invisible door.

The cave finished with a vertical slot filled totally with clean, white and pink rocks, totally different in appearance to the dark red and dirty rock of the cave. It looked like another vertical entrance filled in by river rocks washed down from the surface.

I started up whilst Greg and Andrew poked around at the bottom.

I was very pleased with the 4 minutes it took me to do the 50 m prusik (including redirection). I'm not bragging (much) but as I am past my best, and it's all downhill from here (and earlier), I just want to slip this in whilst I can still do it.

Alan Caton on the walk to C254.

On the drive out we stopped for a quick look at Owls Roost. One of those "five minute caves". One minute walk from the car. It has an impressive entrance with a huge fig throwing its roots down the entrance. An old ladder, circa 50 years ago at a guess, drops the 8 m to the cave floor. It is just a large cavern with some decoration and used as an owl's roost in the past, surprisingly. At least that is what the bones in there are, I understand.

All the trips were very enjoyable. The rigging was fun, and interesting in parts. The caves unexpectedly (for me) quite beautiful.

The field trips were excellently organised under testing conditions.

Thanks to WASG for organising an excellent conference, and field trips. In particular, as this is a report of the field trips, Darren Brookes, Ian Collette and Greg Thomas, for massive amounts of work on said field trips.

Other Exciting Stuff

Proposal for establishment of new ('background') Regions for the recording of non-karst (and isolated karst) caves in Tasmania

Greg Middleton

Cave (Entrance) Numbering in Tasmania

In 1968, when *Speleo Handbook* was published by ASF, Goede (1968) wrote:

"Tasmania is one of the few, if not the only State of Australia where the use of cave numbering systems has not come into favour, and identification by name is preferred. However in keeping with the treatment of cave lists for the other States I have taken the liberty of using auxiliary numbers when listing the caves, to facilitate reference to them in this Handbook."

Perhaps the exercise of compiling the lists for the handbook drew attention to the desirability of adopting cave numbering. In any case it was not long before Albert Goede put forward formal proposals for cave numbering (Goede 1969a). These were immediately adopted by TCC: "The cave naming and numbering system proposed by Albert [Goede] was discussed at the last general meeting [probably 7 October 1969] and was accepted." (Anon. 1969). It may be noted, however, that Goede had already recorded that, at Ida Bay on 14 June 1969 "The cave [Revelation Cave] was added to our list of numbered caves (No. 1)" (Goede 1969b) and he had reported doing some more cave numbering at Ida Bay (Loons Cave "I2" and "I3" and Bradley Chesterman Cave "I4", "I5" and "I6") on 24 August 1969 (Goede 1969c). The "I" was subsequently changed to "IB" (but anyway, it was not the general practice in Tasmania at the time to include an alpha-prefix on the actual tags).

Goede (1969a) also reported:

"Some cave numbering has been carried out by us in three areas - they are Ida Bay, Loongana and Precipitous Bluff. Three caves were numbered in the Precipitous Bluff area about ten years ago [28 December 1960]. The identifying letters PB were used followed by the numbers 1, 2 and 3. They were painted in yellow paint on a rock face at the entrance to each cave."

This rather insensitive numbering gave way to the use of small metal tags (as in mainland states) when the system was adopted, but this establishes December 1960 as the time of the first numbering of cave entrances in Tasmania.

Kiernan (1970) reported on the allocation of numbers to the three clubs then in existence in the state:

"At long last cave numbering is under way in Tasmania. The system adopted is that T.C.C. has numbers 1 - 200 in all areas while S.C.S. has 201 - 400 and T.C.C. (N.B.) 401 - 600. The clubs will apply their allotted numbers in all areas and will move to a new series when all have been used. This system appears to offer the most convenience, and also fits in with numbering done already by T.C.C. Due to there being a clear division between all Tasmanian caving areas it appears unnecessary to have an alphabetical prefix on the tags, although one is necessary for reference. No firm decision has yet been reached on areas and

Table 1. Tasmanian karst areas (2012).

Code	Area name	Geological Age	Rock type	~No. of cave entrances (2012)*
AB	ADVENTURE BAY	Triassic	Sandstone	4 / 0 tagged
AI	ALBATROSS ISLAND	Pleistocene	Dune lst. and calcarenite	4 / 0
AM	MOUNT AMOS	Devonian	Granite	2 / 0
AR	ACHERON RIVER	Pre-Cambrian	Dolomite	7 / ?
AS	MOUNT ARROWSMITH	Pre-Cambrian	Metamorphics	3 / 0
BB	BLACKMANS BAY	Permian	Mudstone	3 / 0
BH	BUBS HILL	Ordovician	Limestone	41 / ~40
BI	BIRCHS INLET	Triassic	Sandstone	2 / 0
BO	BLAKES OPENING	Pre-Cambrian	Dolomite	3 / 0
BP	BREAKNECK POINT	Pre-Cambrian	Quartzite	2 / 0
BR	BUTLER RIVULET	Ordovician	Limestone	4 / 0
BY	BOYER	Permian	Limestone	1 / 0
C	CRACROFT	Ordovician	Limestone	16 / ?
CA	CARDIGAN RIVER	Ordovician	Limestone	8 / ?
CB	CAPE BARREN ISLAND	Pleistocene	Limestone	2 / 0
CC	COOK CREEK	Pre-Cambrian	Dolomite	4 / 0
CH	LAKE CHISHOLM	Pre-Cambrian	Dolomite	1 feature
CI	CRAGGY ISLAND	Devonian	Granite	1 / 0
CK	CLAUDE CREEK	Ordovician	Limestone	1 / 0
CL	CRADLE LINK (ROAD)	Tertiary/ Pleistocene	Glacial moraine till	2 / 0
CO	CORINNA	Pre-Cambrian	Dolomite	1 / 0
CP	MOUNT CRIPPS	Ordovician	Limestone	243 / 243
CR	CHEYNE RANGE	Pre-Cambrian	Dolomite	3 / 0
CS	CASTRAY RIVER	Ordovician	Limestone	??
CV	CHAUNCY VALE	Triassic	Sandstone	7 / 0
D	DEVONPORT	Tertiary	Basalt	1 / 0
DB	DUBBIL BARRIL	Ordovician	Limestone	3 / ?
DF	DODGES FERRY	Jurassic	Dolerite	1 / 0
DH	DON HEADS	Tertiary	Basalt	2 / 0
DL	DONALDSONS LANDING	Pre-Cambrian	Siltstone	2 / 0
DN	DENISON	Pre-Cambrian	Dolomite	1 / 0
DR	DANTE RIVULET	Ordovician	Limestone	8 / ?
DV	DAVEY RIVER	Ordovician	Limestone	3 / 0
DW	DE WITT ISLAND	Ordovician	Limestone	2 / 0
E	EUGENANA	Ordovician	Limestone	12 / 11
EC	EDDY CREEK	Pre-Cambrian	Dolomite	11 / 0
ED	EREBUS DENISON	Pre-Cambrian	Dolomite	-
EG	EAGLE CREEK	Ordovician	Limestone	-
EH	EVERLASTING HILLS	Pre-Cambrian	Dolomite	3 / 0
EI	ERITH ISLAND	Pleistocene	Limestone and Granite	4 / 0
F	FRANKLIN RIVER	Ordovician	Limestone	83 / 83
FB	FOSSIL BLUFF	Tertiary	Limestone	7 / ?
FC	FRENCHMANS CAP	Pre-Cambrian	Dolomitic Schist	7 / ?
FG	FLOWERY GULLY	Ordovician	Limestone	13 / ?
FH	FOREST HILLS	Pre-Cambrian	Dolomite	3 / 0
FR	FRANCISTOWN	Triassic	Sandstone	7 / 0
G	GRAY	Permian	Limestone	3 / ?
GA	GORDON ALBERT	Pre-Cambrian	Dolomite	4 / 0
GC	GOODWINS CREEK	Ordovician	Limestone	2 / ?
GI	GOAT ISLAND	Pre-Cambrian	Conglomerate	2 / 0
GP	GUNNS PLAINS	Ordovician	Limestone	150 / 150
GS	GORDON SPRENT	Ordovician	Limestone	11 / 11
GV	GOLDEN VALLEY	Ordovician	Limestone	4 / 4
H	HASTINGS	Pre-Cambrian	Dolomite	44 / 8+
HA	HARDWOOD	Ordovician	Limestone	3 / ?
HAM	HAMILTON	Triassic	Sandstone	2 / 0
HC	HUSTLING CREEK	Ordovician	Limestone	34 / 2
HD	HILLWOOD	Jurassic	Dolerite	2 / 0
HI	HUNTER ISLAND	Pre-Cambrian	Quartzite and Slate	2 / 0
HO	HOWTH	Pre-Cambrian	Conglomerate	1 / 0
HR	HIGH ROCKY POINT	Pleistocene	Dune lst. and calcarenite	1 / 0
HS	HAMPSHIRE	Ordovician	Limestone	1 / 0
IB	IDA BAY	Ordovician	Limestone	291 / 219
IG	ILE De GOLFE	Ordovician	Limestone	4 / 0
J	JANE RIVER	Pre-Cambrian	Dolomite	7 / 0
JB	JUBILEE RIDGE	Pre-Cambrian	Dolomite	2 / 0
JD	JUKES DARWIN	Ordovician	Limestone	7 / ?
JF	JUNEE FLORENTINE	Ordovician	Limestone	655 / 432
JH	JACOBS BOAT HARBOUR	Pre-Cambrian	Quartzite	1 / 0
JR	JULIUS RIVER	Pre-Cambrian	Dolomite	8 / ?
KG	KENT GROUP	Devonian	Granite	4 / 0
KI	KING ISLAND	Pre-Cambrian	Quartzite	4 / 0
KR	KEITH RIVER	Pre-Cambrian	Magnesite	11 / 9
L	LOONGANA	Ordovician	Limestone	67 / 67?
LA	LOWER ANDREW RIVER	Ordovician	Limestone	2 / ?
LB	LOUISA BAY	Pre-Cambrian	Schist	2 / 0
LC	LONGBACK CREEK	Pre-Cambrian	Dolomite	2 / ?
LF	LIFFEY FALLS	Permian	Mudstone	1 / 0
LG	LOWER GORDON	Ordovician	Limestone	10 / 0
LH	LOWER HUSKISSON	Ordovician	Limestone	2 / 0
LL	LAKE LEA (was Vale of Belvoir)	Ordovician	Limestone	19 / 19
LM	LOWER MAXWELL	Pre-Cambrian	Dolomite	4 / 0
LO	LORINNA	Ordovician	Limestone	8 / 8
LP	LIBERTY POINT	Triassic	Sandstone	2 / 0
LR	LANCELOT RIVULET (Maxwell)	Pre-Cambrian	Dolomite	6 / 0
M	MOINA	Ordovician	Limestone	4 / 4
MA	MOUNT ANNE	Pre-Cambrian	Dolomite	53 / 23
MC	MOLE CREEK	Ordovician	Limestone	513 / 410
MF	MOUNT FAULKNER	Triassic	Sandstone	4 / 0
MG	MESA-GLEICHENIA (Creeks)	Pleistocene	Glacial Moraine Debris	4 / 0
MI	MARIA ISLAND	Permian	Limestone	7 / ?
MK	McKAYS PEAK	Pre-Cambrian	Dolomite	2 / ?
MM	MOUNT MUELLER	Cambrian	Dolomite	3 / ?
MN	MOONLIGHT CREEK	Permian	Mudstone	2 / 0
MO	MOUNTAIN RIVER	Triassic	Sandstone	1 / 0
MQ	MACQUARIE ISLAND	Jurassic	Basalt	5 / 0
MR	MOUNT RONALD CROSS	Pre-Cambrian	Dolomite	14 / ?
MU	MONTAGU	Pre-Cambrian	Dolomite	6 / 6
MW	MOUNT WELD	Pre-Cambrian	Dolomite	8 / ?
N	NELSON RIVER	Ordovician	Limestone	8 / ?
NC	NEWALL CREEK	Ordovician	Limestone	4 / ?
NEW	NEW RIVER	Ordovician	Limestone	?
NL	NORTH LUNE	Ordovician	Limestone	14 / 9
NR	NICHOLLS RANGE	Ordovician	Limestone	12 / 12
OL	OLGA	Ordovician	Limestone	3 / 0
OT	OATLANDS	Triassic	Sandstone	3 / 0
P	PRESTON	Tertiary	Basalt	1 / 0
PB	PRECIPITOUS BLUFF	Ordovician	Limestone	36 / 36?
PP	PINDARS PEAK	Ordovician	Limestone	4 / ?
PR	PIEMAN RIVER	Triassic	Sandstone	2 / 0
PS	PRIME SEAL ISLAND	Devonian	Granite	1 / 0
R	REDPA	Tertiary/Pre-Cambrian	Limestone / Dolomite	9 / 9
RA	RANGA	Pleistocene	Limestone	2 / 0
RB	RISBYS BASIN	Ordovician	Limestone	7 / ?
RC	ROCKY CAPE	Pre-Cambrian	Quartzite	2 / 0
RI	ROCKY BOAT INLET	Cambrian	Dolomitic Greywackes	11 / 0
RO	ROSS	Jurassic	Dolerite	4 / 0
RR	ROGER RIVER	Cambrian	Dolomite	4 / ?
S	SOUTHPORT	Permian	Mudstone	1 / 0
SB	SURPRISE BAY	Ordovician	Limestone	10 / ?
SC	SOUTH CAPE BAY	Triassic	Sandstone	3 / 0
SD	SCOTTSDALE	Devonian	Granite	1 / 0
SH	SHADOW LAKE	Jurassic	Dolerite	1 / 0
SI	SISTERS BEACH	Pre-Cambrian	Quartzite	2 / 0
SL	SOUTH LODDON	Ordovician	Limestone	2 / 0
SM	ST. MARYS	Permian	Limestone	1 / 0
SP	SCOTTS PEAK	Pre-Cambrian	Dolomite	7 / 7?
SR	SAVAGE RIVER	Pre-Cambrian	Magnesite	7 / ?
ST	STOODLEY	Pre-Cambrian	Conglomerate	6 / 0
SX	STYX RIVER	Pre-Cambrian	Dolomite	6 / ?
T	TROWUTTA	Pre-Cambrian	Dolomite	3 / ?
TC	TIMBS CREEK	Pre-Cambrian	Dolomite	7 / ?
TI	TREFOIL ISLAND	Pleistocene	Limestone	3 / 0
TP	TASMAN PENINSULA	Permian	Mudstone	9 / 0
TR	TIGER RANGE	Ordovician	Limestone	1 / 0
TS	TIM SHEA	Pre-Cambrian	Dolomite	5 / ?
UH	UPPER HUSKISSON	Ordovician	Limestone	1 / 0
UM	UPPER MAXWELL	Ordovician	Limestone	3 / ?
UN	UPPER NATONE	Devonian	Granite	3 / 0
UW	UPPER WELD	Pre-Cambrian	Dolomite	11 / ?
VB	VARIETY BAY	Permian	Mudstone	3 / 0
VF	VANISHING FALLS	Ordovician	Limestone	6 / ?
W	WELD RIVER	Pre-Cambrian	Dolomite	8 / ?
WA	WESTERN ARTHURS	Pre-Cambrian	Metamorphics	1 / 0
WC	WHITE HAWK CREEK	Ordovician	Limestone	20 / 20
WE	MT WELLINGTON (Lost World)	Jurassic	Dolerite	5 / 0
WL	WILSON RIVER	Ordovician	Limestone	3 / ?
WM	WEST MAXWELL-ALGONKIAN	Pre-Cambrian	Dolomite	5 / ?
WN	WARRANE	Triassic	Sandstone	2 / 0
WR	WHYTE RIVER	Pre-Cambrian	Dolomite	2 / ?
WT	WILMOT RIVER	Ordovician	Limestone	10 / 10
WY	WAYATINAH	Jurassic	Dolerite	1 / 0

**Note: The number of entrances and the number tagged are approximate – they give an indication only.*

prefixes."

Cave Areas in Tasmania

Goede (1969a) had proposed a list of prefix letters to indicate "areas". (Just what these areas were was not spelt out, but presumably they were seen as "karst cave areas".) The list included 25 areas, using a single letter where possible – but relating only to karst areas; no mention was made of how non-karst caves were to be dealt with.

In 1973 Goede, Kiernan, Skinner and Woolhouse produced a new list of caves (Goede et al. 1973), apparently intended for a new edition of *Speleo Handbook*. (The new edition was not published, but eventually morphed into *Australian Karst Index 1985* (Matthews 1985a).) The new list of "areas" (the term was still not defined) comprised 34 - still all karst areas. Non-karst caves continued to be conspicuous by their absence.

By the time the *Australian Karst Index 1985* was produced, the number of Tasmanian "areas" had

increased to 77, of which two (Dodges Ferry, DF and Mount Wellington, WE) are obviously not karst. One sea cave in dolerite was listed for Dodges Ferry and three fissure caves in dolerite were listed for Mt Wellington.

In 1988 Kiernan carried out a survey of caves and karst areas in Tasmania (Kiernan 1988). He identified 105 of what he called 'carbonate localities', to all of which he assigned area codes. He thought about 49 of these areas were known to contain caves. He also identified three 'parakarst localities' and 42 'pseudokarst localities' but he did not suggest area codes for any of these.

In 1999 Clarke prepared an overview of the state of cave documentation in Tasmania at the time (Clarke 1999). He listed 123 cave areas, of which about 40 were non-karst. At that time the recorders "assigned area codes for new karst and non-karst areas that were simply devised or arbitrarily 'made-up' from the character initials of part or all of a local geographic or regional area name where the caves occur" (Clarke 1999:13).

As ASF Karst Index Coordinator for Tasmania, Arthur Clarke maintained the official list of cave areas and their codes. By the time he transferred this duty to me in 2012 there were 152 areas, of which about 51 were non-karst, as shown in Table 1.

Cave and Karst Numbering Code

Under ASF's *Cave and Karst Numbering Code* (current version, 2006, www.caves.org.au/codes-and-standards/finish/7-codes-and-standards/13-cave-and-karst-numbering-code), provision is made for there to be three types of Area Code:

Localised area: the type most commonly encountered: an outcrop, or series of outcrops, forms a natural grouping with a natural name and a manageable size; …

Large tract area: Where the host rock forms a large continuous tract it may be more convenient to subdivide it into several more manageable "areas", each with a separate area code. …

Background area: to accommodate isolated caves, which do not fall into nor warrant their own area designation. This typically includes boulder caves, rock shelters, sea caves, lava caves and isolated karst caves.

Rule 7: If it is decided to use background areas to number caves within a state the whole of that State should be divided into suitable background areas.

Formerly it was suggested that a Z be used to prefix all Background Area codes (so that they would sort last in any list of caves or areas ordered by area code) but this has been dropped from the latest version.

Other States

According to the Numbering Code, Victoria has been divided into four "natural" areas by visible boundaries to cater for isolated caves. These are designated NW, NE, SW and GP (Gippsland) Zones and, of course, Victoria has its own highly idiosyncratic "Volcanic Areas" of which 11 are named but then all caves are lumped together under the designation "H".

In both WA and SA, where known surface features are virtually non-existent over large areas, a single area designation has been used to cover all caves not in existing local areas. WA uses the code "MIS" (Matthews 1985a: 6.13-14). South Australia listed no isolated caves in *Australian Karst Index 1985* but Lewis (1976) suggested "if caves are discovered in this Region [outside the 9 designated Regions], and it is decided by the Records Officer of the day not to associate them with one of the existing designated Regions, then the letter prefix 'R' be used, standing for Remote Areas".

For many years NSW employed a series of background areas based on 1:250,000 topographic map sheets, giving codes such as J5D (Bega), I5P (Canberra) and I6E (Sydney). In practice they were mainly used to number sea caves. In 2011, however, the Convenor of the NSW Speleological Council Cave Numbering and Documentation Committee, Peter Dykes, revised the state's cave and karst numbering system, retaining most of the existing (localised) karst cave areas but assigning each to one of 14 entirely new "Karst Regions" (Dykes 2011). The 94 cave areas were rigorously redefined, mainly using catchment boundaries and ensuring the boundaries interlocked and that each area fell within only one region. Because NSW karst areas are generally discrete, as in Tasmania, there are inevitably large parts of each region, which are not covered by a karst area, so a series of new "catch-all" areas (which can hardly be called karst areas) were defined. As far as possible the regions were based on major catchment boundaries and reflected "a natural grouping of cave areas based on location, common speleo-history and geological factors" (Dykes 2011: 8). None of the "areas" expressly relate to non-karst caves, though in practice, some of the new "catch-all" areas may contain only non-karst caves. One region covers NSW's only significant offshore island, Lord Howe Island.

Proposal for Tasmanian Background Regions

My main concern in reviewing Tasmania's cave areas is that their number has been increasing dramatically in recent years and not in accordance with any rational system or principles other than the need to provide an area name and code to allow documentation to proceed whenever 'new' caves are reported outside existing areas. The number of karst areas has not increased very dramatically (75 in 1985 to 102 in 2011) – the major growth has been in areas to accommodate non-karst caves or similar features (2 has risen to 51), which are generally in low numbers (currently there is often only one cave in a non-karst area and an overall average of three caves per non-karst area).

My suggestion to overcome this problem (which will otherwise continue to result in the proliferation of small areas) is to define a limited number of exhaustive background areas, perhaps called "Cave Regions" – roughly on the NSW model – which could provide for the orderly numbering of caves outside the established karst areas. I envisage most of these caves and related features being in non-karst lithologies, but isolated small pieces of karst, not warranting the establishment of new cave areas, could be accommodated. A difference from the NSW model in what I am suggesting is that the Region would itself be the background area, whereas in NSW additional areas have been created within the Regions to "fill the gaps" (non-karst caves being numbered within these new areas, rather than within the Regions themselves). This appears to me to require the creation of more, essentially unnecessary, areas.

I have therefore attempted to define, purely for the purpose of orderly documentation of cave and related features outside established karst areas, a series of cave regions which would jointly cover the whole of Tasmania. Figure 1 illustrates a possible arrangement of 11 such regions, based on agglomerations of catchments, and islands, plus Tasman (and Forestier) Peninsula - which is already a (non-karst) area. I believe Bruny and Macquarie Islands need to be retained as separate regions.

The regions are unashamedly based on catchments, mainly because they are relatively easy to locate and don't change much (if we ignore the efforts of the HEC), unlike mapsheets, municipalities, roads, etc. Most non-karst caves don't cross surface divides so this should not be a problem. It is always possible that what we see as a group of non-karst caves could be split by

one of these drainage divides (e.g. Mount Wellington). If this proves to be a problem we can either tweek a boundary to keep all of the 'group' together or live with the fact that some of the 'group' are in one region, some in another.

As far as I know, no non-karst caves in Tasmania have been physically tagged with entrance numbers * so no re-tagging should be required by these proposals. Few of these caves have even been surveyed so not many map numbers will need to be amended. Indeed, numbers for non-karst caves have really only been used on maps and, rarely, in the scant documentation. It is largely because I hope to improve the documentation of the State's non-karst caves that I would like to make these changes in the near future.

Effects of the Proposed Changes

If the proposed 'Background Regions' are introduced in Tasmania, the following changes to existing (non-karst) areas would be required. The approx. number of recorded caves is given in brackets. No changes to karst areas are proposed at this time.

Bass Strait West (BW) would incorporate – Albatross I. (4), Hunter I. (2), King I. (4).

Bass Strait East (BE) would incorporate – Craggy I. (1), Erith I. (4), Kent Group (4), Prime Seal I. (1). There is a question as to whether it is worth retaining the existing karst areas, Ranga, on Flinders (1 or 2 untagged caves) and Cape Barren Island (2 untagged caves) but they are not changed by this proposal.

Tarkine Region (TK) would incorporate – Breakneck Point (2), Cradle Link § (2), Donaldson Landing (2), Jacobs Boat Harbour (1), Pieman River (2), Rocky Cape (2), Sisters Beach (2).

Central North Region (CN) would incorporate – Devonport (1), Don Heads (2), Goat I. (2), Howth (1), Liffey Falls (1), Stoodley (6), Upper Natone (3).

Derwent Region (DW) would incorporate – Blackmans Bay (3), Chauncy Vale (7), Dodges Ferry (1), Hamilton (2), Mt Faulkner (4), Mt Wellington (5), Oatlands (3), Preston (1), Shadow Lake (1), Warrane (2), Wayatinah (1)

Esk-Ringarooma Region (ER) would incorporate –

Hillwood (2), Ross (4), Scottsdale (1)

East Coast Region (EC) would incorporate –

Mt Amos (2)

Gordon-Huon Region (GH) would incorporate – Birchs Inlet (2), Francistown (7), Liberty Pt. (2), Louisa Bay (2), Mesa-Gleichenia (4), Moonlight Ck. (2), Mt Arrowsmith (3), Mountain River (1), Southport (1), South Cape Bay (3), Western Arthurs (1)

Bruny Island Region would incorporate – Adventure Bay (4), Variety Bay (3)

Tasman Region (TM) would incorporate – Tasman Peninsula Area (TP) (9).

Macquarie Island Region (MQ) would continue – Macquarie Island Area (MQ) (5).

Caves would be renumbered in an arbitrary fashion except where it is possible to reconstruct the historical order in which the existing numbers have been allocated.

* I've since come across CV1 at Chauncy Vale, tagged by John Wylie on 10 July 2003. A decision will have to be made as to what to do with this as I do not propose to retain that area.

§ Cradle Link Road happens to partly coincide with the boundary between CN and TK; at this time I don't know exactly where the caves are (but SRCC suggests TK).

Modifications for consideration

During initial discussions some variations to the above were suggested. Apart from any other suggestions, readers might like to comment specifically on these if providing input:

1) Combine Bass Strait West and Bass Strait East into a single Bass Strait Region (15 recorded, untagged non-karst caves).

2) Split the very long, thin East Coast Region into two (Upper and Lower?) (but note that only one cave is currently recorded in this region).

3) Incorporate Tasman & Forestier peninsulas (Tasman Region, 9 caves) into East Coast (or Lower East Coast).

4) Incorporate Bruny Island (7 caves) into Derwent.

5) Do the codes for the Regions need to be identified to distinguish them from the Karst Area codes? Use of bold or italic type, or underlining has been suggested, or we could use 3-letter codes (and change the one existing 3-letter karst area code, NEW) – but is any distinction really necessary?

Consultation

I would propose the widest possible consultation with interested individuals and groups before any decisions are made in relation to these proposals. Please feel free to distribute this paper to anyone likely to be interested.

Please send any comments, corrections, criticisms or related ideas, preferably before 30 June 2015 *[Whoops! - Ed.]*, to the ASF Karst Index Coordinator for Tasmania: Greg Middleton ozspeleo@iinet.net.au

or PO Box 269, Sandy Bay, Tas 7006.

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Figure 1. Map showing proposed "Background Cave Regions" for Tasmania.