
COOLEMAN PLAIN

BY KEIR VAUGHAN-TAYLOR

Participants: Ian Cooper, Deborah Johnston, Andreas Klocker, Rowena Larkins, Phil Maynard, Rod OBrien, Alan Pryke, Keir Vaughan-Taylor

23 – 30 January 2013

The Australia Day week long trip has been one of the most productive in years rendering hundreds of meters of surveyed passage. New sections of cave were discovered, surveyed and photographed helping to piece together the puzzling hydrological relationship in two important cave areas, Easter Area and Glop Pot.

Rivers both surface and underground were significantly silted. At the main Blue Waterholes resurgence vivid green algae grows. It might be expected the algae to develop downstream from here however as soon as the water emanates from the underground the algae is prolific. Camping and pit toilets were moved back from the river years ago hoping to reduce nitrate pollution but perhaps the problem begins in the underground water upstream from the efflux.

Many brumbies are seen commonly on the plains. A horse will deposit its dung in one place rather than spread it far and wide over the grass it wishes to eat and so is often piled high in hundreds of places along the tracks looking at time like strange basalt coloured rocky outcrops. I like horses but there are too many on Cooleman Plain.

Full dive kit is heavy to carry, especially so with our current summer temperatures. Despite the heat of the day the cave water would be cold. Deborah and I packed full wet suit, tanks, weight belt and thermals. It was not appropriate for the conditions that prevail in the cave. The trip through the gorge is beautiful and the river track is not too steep although my shoulders are usually aching on the return trip.

Deborah made not one note of complaint and Alan chatted on about every topic that might cross a persons mind. The slippery cascades down the water fall after Whitefish Cave could be nasty if you were to fall. With extra extra caution, no such calamity struck. I needed lunch by the time we sat outside the swift currents sweeping into the river from the mouth of Easter Cave which indicates how early we started off. Munching on beef jerky and nuts observing the Easter cave resurgence waters discolouration didn't bode well for a high visibility dive.



River tunnel formation, Glop Hole. Photo by Keir Vaughan-Taylor

Alan wandered off to complete a survey in CP93 and was to find yet even more new short sections of passage to add to his survey. Deborah and I slipped into the Easter entrance. A short river passage sinks into a short duck under, a strong rope guiding intrepid free divers. We slipped through without turning on our air.

In the other side passage, previously placed guideline representing the far point of past explorations floated forlornly around in the turbid waters. It was abraded and torn from the far exploratory points. Easter's water was seriously silted and uncharacteristically warm. We could have avoided carrying a lot of weight by instead wearing a few thermals and a surfing wet suit. A good plan for the psychic.

I tied off to start the exploration once again setting off through a cylindrical underwater passage into the back most chamber. There was nothing to see at all. In the back most chamber it was not possible to progress any distance in Easter cave and we decided this was not a day we would be diving in Easter.

Rather than struggle back up up the slippery cascades Alan suggested walking up the valley side to the top and walking around the ridge to Whitefish. I have concluded that Deborah chose a better path than I because, today I sport long rose bush scratches raining down my legs like the motifs from the film The Matrix.

For me the climb up the ridge involved crossing unforeseen gullies rock climbs and slippery grass. I took a fall on the grass but managed to avoid slipping too far down through the rose bushes.

We did eventually regrouped at the entrance of White Fish with me completely stuffed from my foolish choice of route. In the heat of the afternoon I sank with relief into one of the cascade pools outside Whitefish Cave raising river water temperature several degrees. (Honest I measured it)

Our next dive was in White Fish. It was apparent there had been a recent significant flood event . White Fish Cave, like Easter was missing its guideline swept and tangled in the first sump. Previous line had remained in place for more than twenty years but some deluge exceeded anything previously and remove the guideline.

Normally a simple and short dive, attempts to lay new line were thwarted by lack of visibility and blockages from logs in small rooms choked with grasses. Grass carried in caught and wedged between logs waved about like some television hair commercial. Several attempts to pass the sump waived my resolve. I was somewhat spooked by grassy hands stroking my faces and arms in what was previously an empty underwater space. Half a dozen white fish attracted by the diving light were possibly keen to find a way back to the sun. Hard to say, since no-one knows what a fish thinks. Fish in Easter can get out anytime but chose to live in the dark recesses. Does a fish make choices or do they just swim in response to immediate stimulation?

Again for the second time because of the blackout I was unwilling to push through the logs and lay line.

There is no water flowing into the entrance of White Fish. As they say in the Road Traffic Authority; “Changed Traffic Conditions Ahead”. Schrodingers Cave only found on our last trip, suggests the water may no longer flow as much as it did into White Fish.

Schrodingers Cave Swallet was very changed. Where once a pool formed in the bend of the river, some water penetrated from the back eddy pool of the river into Schrodingers. Now the eddy pool is gone transformed into a sand bar over which half the river water flows straight into the cave. Inside the cave, the sump we intended to dive and explore was completely gone, leaving dry passage instead. Andreas and Alan followed the dry passage into a difficult rock fall with possible leads requiring knee pads and time. Outside on the hill a new shaft has opened dropping into another section of Schrodingers. The shaft is unstable at this time and was not descended.

Alan’s visit to CP92 produced new section of survey. We hope to link the various caves in the Easter area showing the spacial relationship of the very interesting cave features that we know about.

Alan was somewhat grumpy later realising his surveying device, a Disto-X was incorrectly calibrated. Later relaxing around our camp site we were able to log readings from Phil’s correctly calibrated Disto-X and make the same measurement using Alan’s device. Later I ran a Python program to fit a polynomial correction function and re-calculated the bearings from Alan’s surveys. Overkill perhaps but we are a team of super nerds. Rod Obrien arrived after working at Lake Jindabyne installing large Snowy Mountain Scheme pipe valves. Talk about keen. Work all week in some cold deep lake and race to Cooleman for cold cave and a cold beer. I think he likes the company.

Camping equipment seems to have change over the years. My car is packed with an array of charging devices, lights LEDs, DC to AC inverters, laptop computers diving compressor and hopefully I didn’t forget food. In my car its all in a disorganized state. everything you could possibly want is there but it always takes a little time to get it.

I was keeping chargers for my camera battery in a red box inside the tent alcove. The little waterproof point and shoot needed a recharge for the oncoming dives. A black snake scurried out of the atrium of my tent on my approach. I decided, thereafter to keep the main tent section securely zipped up and summoned caution while rummaging. That night two mice cavorting in my electrical box scampered up between two fabric sections of the tent and over my head. Could be, that is what the snake was after?

While Cooleman baked in a Snowy Mountain summer, as SUSS people arrived, news came that the rest of Australia was drowning in what many think is the climate change reckoning. Brisbane flooded yet again and Bundaberg also in flood crisis and Tasmania was in the grip of flames. Alan reported dire weather predictions. Skies clouded a bit but ominous clouds always bypassed us seeking to rain on some other part of the country .

Tomorrow was River Cave for Deborah and Rod while the rest of would rig ladders in Glop Pot ready for diving the next day. I though it would be a chance for me to have a days rest. A rest day carrying tanks and wet suits and weight belts across the Cooleman Plain and then rigging ladders down a couple of pitches. Lots of fun!

Both River Cave and Glop were dived in two strong efforts in 1965 and 1966 by the Highland caving Group by Bob Smith Allan Moule, John Allen and Pete Newton. (Calcite Issue 10 1965 and Calcite Issue 12 1966). Calcite, in 1965 was a short three page publication with very brief description of any caves they found. Nevertheless on this trip an entire half page was devoted to the SUSS presence on that Easter weekend. In the 1966 Calcite editorial, Evalt Crabb strongly condemned SUSS’s behavior accusing SUSS of drunkenness untidiness and failing to assist in a search for a lost fisherman. Who knows what the circumstances were. SUSS was pretty wild in those days. And as for drunkenness what can I say?



Phil Surveying, Glop Hole. Photo by Keir Vaughan-Taylor

In 1965, cave divers had the luxury of being able to drive with their diving paraphernalia to the cave entrance and their main problem seemed to be finding the entrance of River Cave. Geographical confusion was sorted by the famous Joe Jennings. It was assumed by Highlands that Glop Pot and River Cave would be connected. Today with hundreds of meters explored, no such connection has been established

Highlands offered little description of the River Cave Downstream other than passage length, which they estimated to extend the known cave by 400 feet and ending in a rock pile. In the brief trip reports that was the extent of the description. Their dive in Glop Pot was of limited success consuming much effort and involving blow up boats, ladders and much rigging. It must have been a long and arduous effort. They had a go in the first pot hole giving up in the poor visibility. The second and more interesting pool provided a dive straight down and estimated to reach a sloping floor at 60 to 65 feet. Very interesting because this is much more than our experience but perhaps they found a vertical hole in the lake floor that we may also have touched on in this Australia Day Weekend trip.

Joe Jennings, present on the Highlands trip, later briefly reported the experience in Helictite. Vol 7 Oct 1969. His article has more material upon which to focus from a later dry survey trip done by SUSS in 1968.

Rowena's arrival was somewhat appreciated because of her help with logistics and the extra carrying help. There was considerable tackle to carry across the plain to River and Glop Pot. The walk is beautiful with flies made more tolerable for me continuously swishing my face with a branch from a bush.

Deborah Johnston, Rod Obrien set out to extend the upstream River Cave. Phil, Andreas and myself set up the rigging in Glop pot for a surveying dive the next day.

For Deborah and Rod the dive was difficult. River Cave water visibility was extremely poor. Although guideline was largely intact, the impact of flooding had dislodged sections and line needed to be re-fixed. Rod and Deborah managed to safely re-secure line as far as the previous exploration point in very poor conditions. Although the visibility was preventing easy exploration the temperature at 15 degrees was much warmer than we were used

to at Coleman, experienced as low as seven degrees. At the furthest point Rod made multiple attempts to find the way on discovering the same blind passage I had found on previous trips. Blindly feeling around he managed to locate a downward progressing passage extending the distance from the last exploration point perhaps another 15m. Not very much but importantly the main flow passage had been located ready to explore in better conditions on a future day.

Andreas, Phil and I set out the following day to dive Glop Pot. Over two trips we surveyed from the entrance through to the start of the second sump and has culminated with one of Phil's excellent maps. Fine motivation to get the rest of the survey and get an even bigger map.



Final ladder, Glop Hole. Photo by Keir Vaughan-Taylor



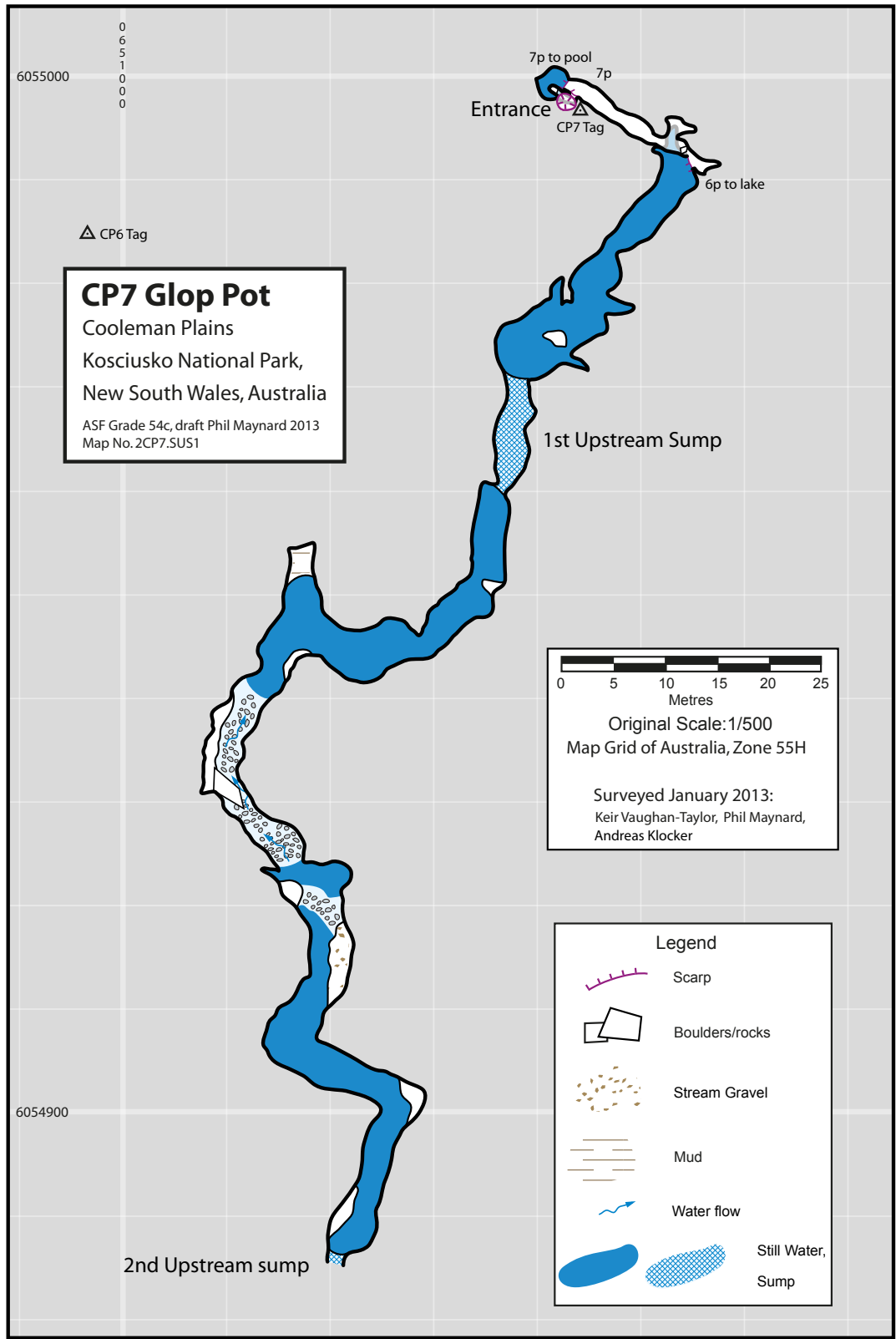
Blade Formation, Glop Hole. Photo by Keir Vaughan-Taylor

Glop entrance is located about 50 meters from the River cave entrance. Inside are two 7m pitches separated by a crawl tunnel maybe 10m long and the second pitch looking down upon black water. The sump viewed from the top of the second pitch appears as a single pool but is part of a larger lake chamber separated into two by a swimmable constriction in between.

I was the first diver in the water and now cognizant that previously fixed guide line might not be fixed any more. That was indeed the case. Abraded guideline untidily wrapped round a speleothem was removed replaced with a more stout orange 3mm line. I wound the old line up into into a ball stuck in our pack and set about making forays into the sump with the hope of laying a fresh fixed line. I knew this sump was short however with zero visibility it took three attempts entering and backing out of the sump trying to find the way on.

Rowena free swimming and keen to make sure the trip was on schedule descended the ladders finned her way around the figure eight shaped chambers accompanying the scuba equipped Phil to the upstream sump. She seemed to be assessing if this trip was a goer or not thus able to decide whether to go off exploring elsewhere. If there was no

way through the siphon there would be some slightly less than exuberant de-rigging of ladders. I was sure, knowing this sump, that a way could be found. No bulky logs and wavy grass for a start



The final trick to getting through was by feeling along the river gravels on the floor which indicated a main water flow. The gravel disappeared under a frothing silt bank but marked just above by a scalloped rock surface completing the directions into next air chamber. Although I had the perception that I was spiraling to the left it was actually a straight line.

The old guide line intact on the other side traced another circuitous route back through underwater rift and fissures. This older route was not at all congenial compared to the new route derived from blind luck navigation. Possibly the new route was exhumed by a recent past flood event.

Andreas removed all this old line leaving only the new line in place. We were easily able to run a survey tape measure through the sump in a straight line estimating the length depth and angle. With this reasonably reliable estimate of the sump extent we connected the survey of the outer cave to the the stream way passage within. Phil was equipped with a Pelican case to get his Disto-X through the sump but he would have to stand in one of the few shallow parts of the figure eight lake to connect into the full cave survey.

Last time I visited Upstream Glop the floor was gravel with a trickle of water running over the gravels. The gravel floor was now gone. instead the passage was knee deep/swimming water canyon all the way to the next sump. Flood had exhumed all the gravel possibly lowering the sump and enabling the current civilized route into the next chamber.

Phil and Andreas went to the furthest planned survey point at the start of the second sump from surveying back toward the entrance.

The line in the second sump was also gone. This second sump is more than 50 meters long and in this visibility it was too ambitious to try on this day. This job will require an electronic compass in a housing to survey. That would have to wait until a later trip. Phil and Andres surveyed while I struggled trying to get my point and shoot to take a half decent picture.

Many of the photographs taken are poor because of water on the lens, cavern fog and my photographer incompetence. Nevertheless enough pictures have worked well enough to give a representation of what is beyond.

Meanwhile Deborah and Rod were having unexpected successes in River Cave.

Visiting River Cave first in 1967, SUSS were unable to progress far upstream or downstream because of the underground river.



Web Feature, Glop Hole. Photo by Keir Vaughan-Taylor

Australia's longest drought is recorded as happening in 1963 to 1968. The dry destroyed half of Australia's wheat crops, the death of 20 million sheep and catastrophic loss of farm income. SUSS, returning to River Cave in 1968 set out with the usual SUSS innovation to float the river using a raft. They "... found the river was non existent. It had dried up leaving only occasional pools and puddles." We know of this trip from a draft of a letter in the SUSS library that was sent to Joe Jennings in 1969 at the behest of SUSS member, the late Glen hunt. The survey bearings were recorded using a Silva compass and distances guessed. Distance estimates totaled more than 1000 feet or about 300 meters of river passage but beyond that downstream sump whatever passage existed was not visited since that time.

Pushing against the current at Jenolan's Lower River teaches a lesson of caution about diving downstream in a cavalier fashion without sufficient regard

for the important return journey. I'd seen the downstream River Cave sump on one occasion in high water where there was a substantial whirlpool drawing in every hapless object that sucked into its path. I was not enthusiastic about a downstream dive because there was so much other cave available to explore. Downstream River was to me a distraction although I knew of the 1968 SUSS letter and was intrigued.

On this occasion the water was low, no whirlpool and curiosity is a powerful motivator.

Using a three litre cylinder Deborah and Rod with some difficulty, located a slot in the downstream lake. It was a canny piece of work by Rod locating the position in the lake where the outflow might possibly be. The intrepid pair slotted themselves through a letter box hole in the side of the lake thus finding for the first time the cave described by our early SUSS explorers.

On the other side stream way passage similar to the River Cave we all know continues as a river/lake section entering into small domed lake rooms with similarly domes alcoves on each side.

It is evident that the description and map of the 1968 team greatly understates the size and beauty of these passages. There are two connections to a rock collapse chamber both through alcoves on the right side and again on the left along a triangular water filled passage that finishes with a climb over jammed river stones. Here there is a climb up to a large chamber of breakdown rocks. After the climb Deborah and Rod found their way into the chamber on the far side to an abandoned river passage containing a shallow pool. They found a second large chamber where the way on appeared to be a long crawl. Deborah not a fan of crawl in her dry suit chose, with Rod, to turn round. They were the first to see the cave with its characteristic rivers because in 1968 it was all dry.

Rod and Deborah had to leave to go back to Sydney. The next day Phil, Andreas and I went to survey what they had found and see if we could push exploration further.

We replaced the orange guideline through the second sump with less visible green polypropylene fixing the outside end just below the water surface unnoticeable unless it is known there is a way on. Surveying through the sump and to the other side we surveyed and mapped our way along the route found by our companions the day before.

There are two connections from the river to the first large chamber, one through an alcove to the right side and another obvious triangular passage on the left with a climb over loose jammed stone and rocks into the chamber. A horizontal basalt layer projects out of the limestone in the tunnel and at one point although small, a delicate insect wing encased in a web casing stood on a piece of basalt. Similar to a glow worm a web like substance shrouded the wing. What snared the winged insect in this sealed off environment is difficult to say but perhaps it is a type of glow worm.

At the last chamber explored by Rod and Deborah, we knew from the map there was a way but it was not altogether obvious. Formed from collapses around the junction of several intersecting streams a breakdown chamber seemed to end in all directions. Rod and Deborah found a difficult crawl seeming to be the way on and dissuaded by the hands and knees grovel in their dry suits they returned with their break through news.

The next day we retraced Rod and Deborahs fin prints to explore the crawl and find that it terminated.

Andreas searched in the rock breakdown finding a small squeeze on the opposite side of the cavern from where we imagined the river course might be. Andreas' squeeze dropped back to a stream in a stand up walk passage well decorated with formation. The stream possessed less water than we experienced in the first passages. It seems to me, likely to be another water feed into the river system that was mostly elsewhere. Another small incoming stream joined the main walk along passage. Somewhere we had lost the main river but this was brilliant illustrating that the Coleman hydrology is made of many inlets and streams.

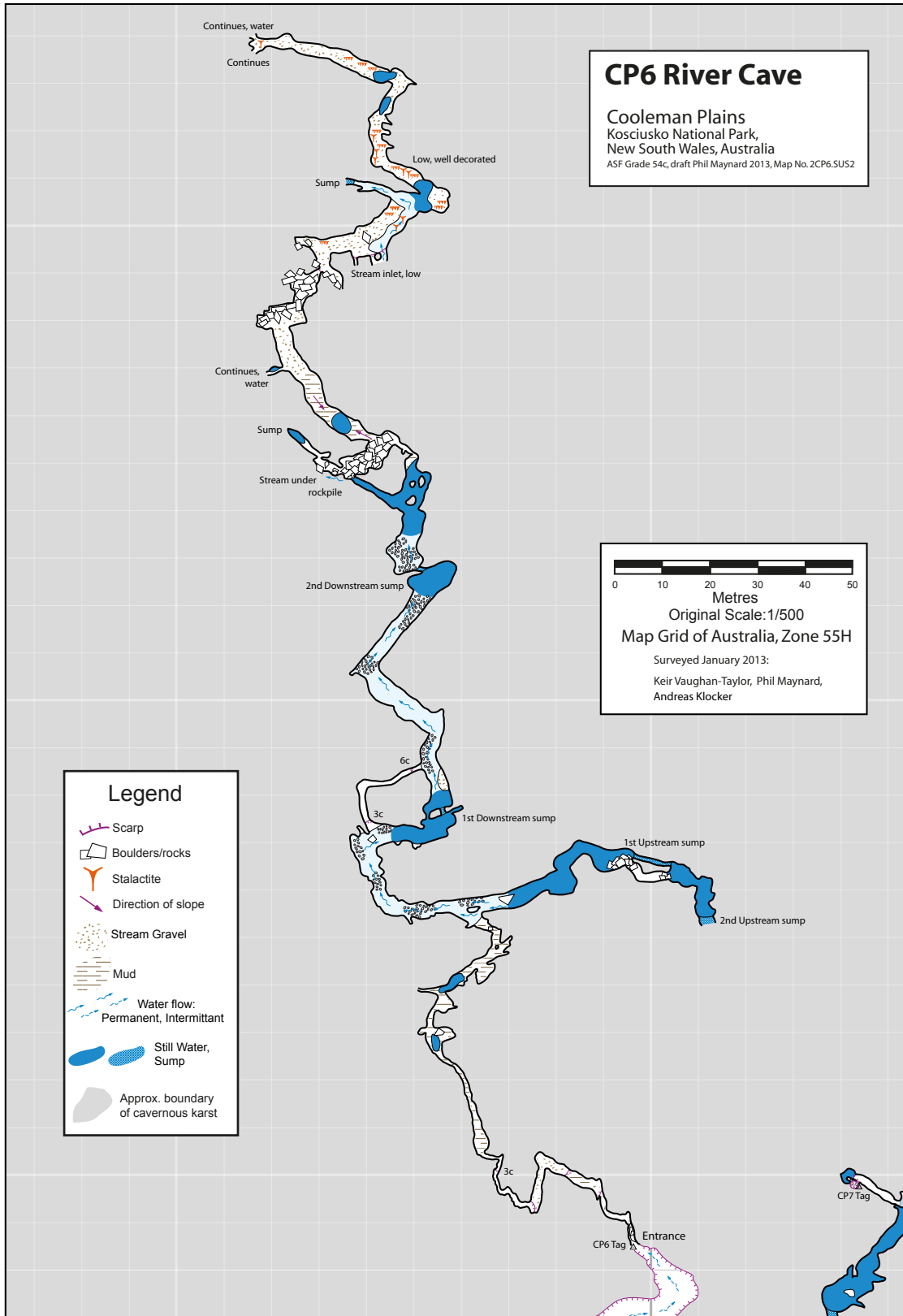
Unlike the rock fall chambers, the stream way tunnels are well decorated with yellow stalactites, shalls and straws. Stream water percolated across river gravels under many formations and then into a lake with a left hand bend in the river, with a course sand bar exposed in this low water, referenced in the 1968 map.

The ongoing tunnel exquisitely decorated finally ending at a small dive able sump and a passage to the left labeled on the 1968 map as unexplored left hand branch. Serpentineous, the left hand branch terminated after about twenty meters in another possibly divable sump.

We surveyed and sketched the cave up to this exploration place (attached map drafts). The 1968 map shows that the sump was dry, a crawlway passage and there is considerable passage estimated from that time, to be a number of long survey lengths totalling more than another 100 meters of passage.



Insect wing, Glop Hole. Photo by Keir Vaughan-Taylor



I can't wait to get back. Maybe Easter.