

IB-14 Exit Cave, Ida Bay, Tasmania

D'Entrecasteaux River Sumps exploration continued

December 2014

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STC

BACKGROUND

Exit Cave is a large, multi-entrance system in southern Tasmania. The left anabranch of the D'Entrecasteaux River sinks at IB-232 D'Entrecasteaux River Third Sink and reappears in D'Entrecasteaux Passage in Exit Cave.

In February and March 2013 I undertook a series of trips to explore and survey the passages between these two points (McKinnon 2014). I was unable to connect the two entrances at this time, but thought another attempt was warranted. So, in late December 2014 I returned to complete some survey tasks and attempt to pass the rockpile that had stopped my progress in 2013. This time I had another diver along to help. I thought this would make the job much easier. I didn't realise how much easier it would be.

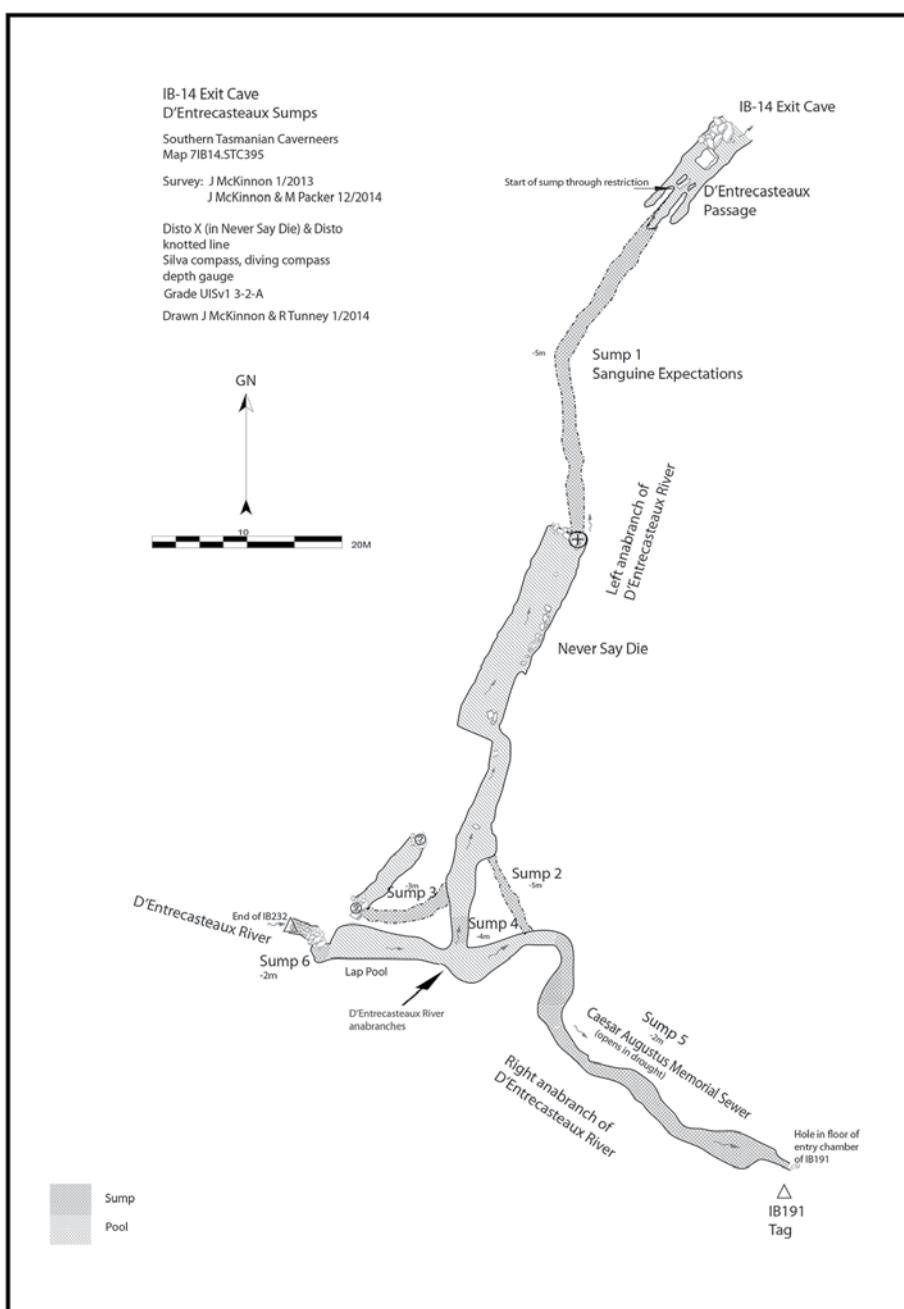
We had chosen this time of year as we were hoping to catch the water levels at the optimum height to continue explorations of the flow. Too early in spring and the levels would be too high to access the site, too late in summer and the low flow conditions makes finding the way on difficult (as my previous attempts had proved).

THE APPROACH

The team this year was very small. Just myself, Michael Packer (Pax), my dive buddy and recent discoverer of caving, and Ric Tunney, perennial support, sherpa and general multi-task guy.

The walk to Exit Cave takes between one and one and a half hours, depending how heavy one's pack is. There is a 200 m high saddle to cross. The sump is 20 minutes walking (and a little scrambling) inside the cave.

Thus, getting a load of diving gear to the dive site is hard work unless a reasonable number of sherpas are available; each diver's gear creates four loads. We did not have it easy this year; we had an extra diver and fewer sherpas. So I had prepositioned some



of the gear at the site in early December.

On Boxing Day we three headed into the cave with our first load.

I had anticipated that we would be doing

a fair bit of diving, as we attempted to find an underwater route bypassing the rockpile, and also survey underwater sections.

Thus, we each carried twin larger tanks



Lots of room to sort gear

JANINE MCKINNON

and a set of small three-litre tanks. The large ones were to be used for commuting through Sanguine Expectations (SE - the sump in D'Entrecasteaux Passage), and any long dives further into the system, and the small ones were for the shorter daily tasks I envisioned being our main activity. These small tanks we planned to carry back each evening and refill. The large ones would stay in the cave for the whole exercise, and would have sufficient air to complete their tasks safely. That was the plan. A heavier carry than strictly necessary at the beginning and end, and light carries during the project.

The following day, 27 December, we ferried the remaining gear to the dive site and prepared to start.

The thick line that I had placed at the end of activities in 2013, from the surface of the sump pool through the entrance restriction to SE, had been abraded and broken sometime in the intervening twenty months. I had seen this when I inspected the sump after dropping gear a few weeks earlier, so I had carried in a hundred metres of Tels-tra line to replace it, and run a (hopefully) more permanent line all the way through the sump. This was some of the line I had purchased with the ASF grant for re-lining Junee Resurgence in 2014. The grant had allowed for any surplus line to be used for other cave diving lining tasks.

The plan for this first day was to reline the sump and visit the areas of the cave I had explored last time. This would re-familiarise me with the system, and allow Pax to get a feel for it, before starting more difficult tasks. We also thought we might have a poke at that rockpile as a first priority.

THE CONNECTION

I dived first, laid the line, and waited in Never Say Die (NSD) chamber for Pax. Once he arrived we dropped tanks and waded off upstream to explore the system.

The water level was about half a metre higher than 2013, and the flow was visible. This was good.

We passed the line heading into Sump 2, went over the line into Sump 3 (both still taut, so in situ) and swam through the roof sniff in between. We followed the swimming passage to the right to a rockpile. I thought this was the Sump 3 rockpile I found last year. (I now have reasons to doubt that.) I could see large passage through the rockpile at the far Left end, and gaps up through it.

There was a moderate volume of water flowing through the rockpile in many places, and we determined that the rockpile was probably sufficiently leaky to allow for flood flows to be coming through it.

We took off our harnesses and fins. I moved some rocks and started squeezing up. I needed to remove my helmet. I just fitted through, and then started gardening behind me for Pax. Meanwhile, he had found a squeeze way through further to the right, and was down at water level. I had a clear path down the 5 m to the water, and dropped down. We reunited and swam out of the rockpile to find ourselves in Sign Of The Times (SOTT) passage. We were through! We followed this to the entrance of IB-232, where the river sinks to enter Exit Cave, just to be sure we were in the right place. We spent some time exploring the maze of passages in this entrance area. The sink was open but obviously higher than 18 months ago.

We retraced our (swimming) steps to the rockpile. Significant water was flowing through a hole on the RHS (looking downstream) and I crawled through it several metres. The water then sumped. We looked for the permanent marker Alan Jackson had left at the furthest end of his survey of IB-232 in 2013 but couldn't find it. We then went back through the rockpile and headed down stream past the junction back

to NSD and along the smaller passages in that direction.

A few metres past the turn to NSD I found the end of my line through Sump 2. So this short sump cut through the wall from NSD into the passage leading to the main IB 232 flow. This meant that the rockpile I had found on the day I dived through Sump 2 last year, and didn't look closely at because I thought it was not the correct direction, was the rockpile to IB 232. If I had but examined it more closely at the time. Damn. There must be a lesson here.

We continued on, along the muddy crawlways I explored last year. The higher water levels made it swimming and sliding rather than sticky, deep mud crawling, so we moved much more easily and quickly than my progress last year. A few places were short roof sniffs, with a very short duck, but we got through. We went further than I got last year and Pax reached a climb up from the stream where the water suddenly went through slots too small to fit. We decided to return the next day to survey and do the climb.

Ric was waiting back at the base at the start of the passage. We left caving suits and lights at the cave entrance and walked out to the car in an hour with light packs.

SURVEYING

The next day we left all dive kit at the end of the sump, except fins for swimming. We moved to the start of survey Sump 2 position, as a known survey station, and the start of swimming.

We surveyed down to the rockpile, up through the rockpile, and joined in to Alan's permanent station on the rockpile at the end of SOTT, left in March 2013. (Yes, we found it this time.) We then swam back to the junction with NSD passage and started the survey in the other direction.

We surveyed through low passages, in water and with a couple of roof sniffs and a duck, until we couldn't follow the water any further as it disappeared into cracks. There was a climb up here (at yesterday's turn-around point), which we surveyed up, and found ourselves in a dry chamber with access to the surface. We surveyed to the entrance and found a tag, IB-191, which we surveyed to. Another entrance joined to Exit Cave.

This was the end of the day's work. This was the end of our plans for this exercise too, and so we started packing gear for the removal once back at base. We carried all gear back to the cave entrance, in two loads each, and secured some to pick up the next day, and some to carry out then. It was raining as we walked back and the river had risen a little.

IB-14 EXIT CAVE, IDA BAY, TASMANIA

GEAR RETRIEVAL AND TIDYING UP

It had rained heavily during that night and was still pouring the next day, so we deferred the final gear retrieval for three days. When we returned we planned to look at the D'Entrecasteaux River sinks and IB-232 entrances, and survey downstream IB-191 from the entrance chamber as well. The river at Exit Cave was significantly higher, by about 1 m.

IB-232 sumped. We moved on to IB-191 and found that the upstream passage (that we had surveyed on Monday) sumped, too. Pax and I then followed the downstream cave to its terminus in a rockpile with the stream sumping into small, but not impossibly small, passage. This is probably worth a look at during low flow times to see if it is crawlable, or diveable.

FINAL RESULTS

■ Connection and survey from D'Entrecasteaux Passage in Exit Cave through to IB 232 entrance complete.

■ Connection and survey from NSD to IB 191 entrance complete.

■ Labyrinth of side passages in SOTT still not surveyed.

■ Another water connection from downstream end of IB 191 to Exit Cave suspected but not confirmed.

■ NSD accessible with airspace all the way from IB 232 sink in low water conditions.

THOUGHTS

We did not follow the dive line from NSD through Sump 3 to a rockpile, as at the time I thought it was just undercutting the wall and arriving at the rockpile that leads through to SOTT.

This was a big mistake as I now do not think it arrives at the same place as the rockpile we climbed through to SOTT because:

a. The survey data from last year points to a different passage.

b. The rockpile doesn't look the same (from viewing video taken last year).

c. We didn't find the dive line (from last year) near the rockpile we surveyed through this year.

d. There were more holes in this year's

rockpile (including the two we climbed through).

I strongly suspect that Sump 3 leads to another rockpile, or a part of the one we were at this year but not accessible from it, with other passage accessed from there. As this is what the survey data says, we have included it on the map.

Another visit in the future to check this Sump 3 terminus should be planned.

Given the very poor visibility in this water, we would not have seen any potential side passages running off underwater along the passages we swam and surveyed. Possible dive exploration along these walls may find additional passages.

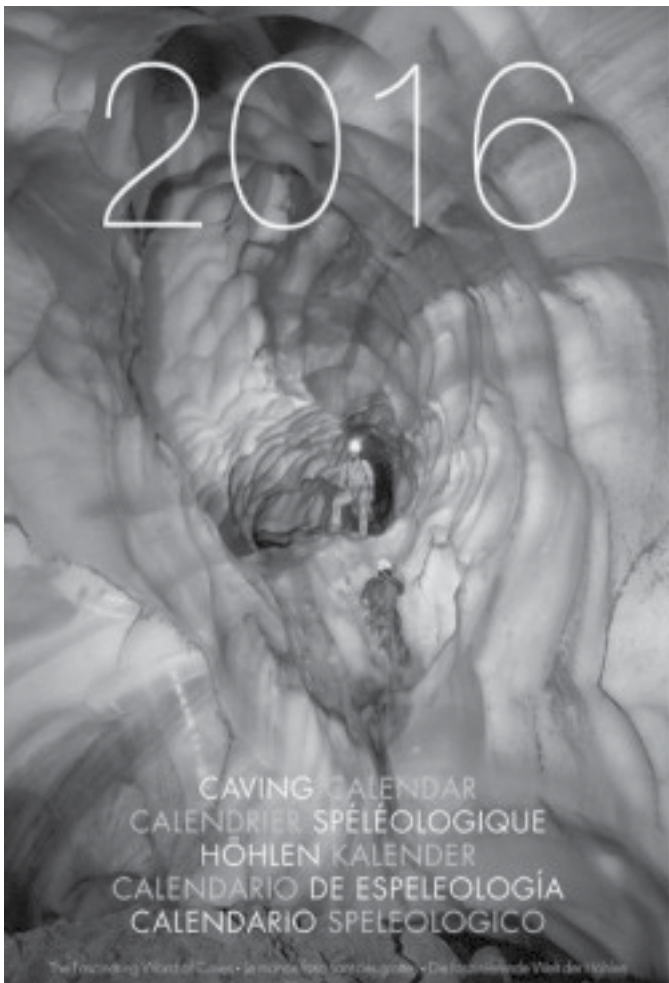
And finally, thanks to ASF for supplying the Telstra line.

If you are interested in viewing a short video of our endeavours, it is on Vimeo. Go to: <https://vimeo.com/118454518>

REFERENCE

McKinnon, J. 2014 Exit Cave, Tasmania. D'Entrecasteaux River Sumps exploration 2013. *Caves Australia* 196: 20-21

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