Exit Cave, Tasmania

D'Entrecasteaux River Sumps exploration 2013

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STC

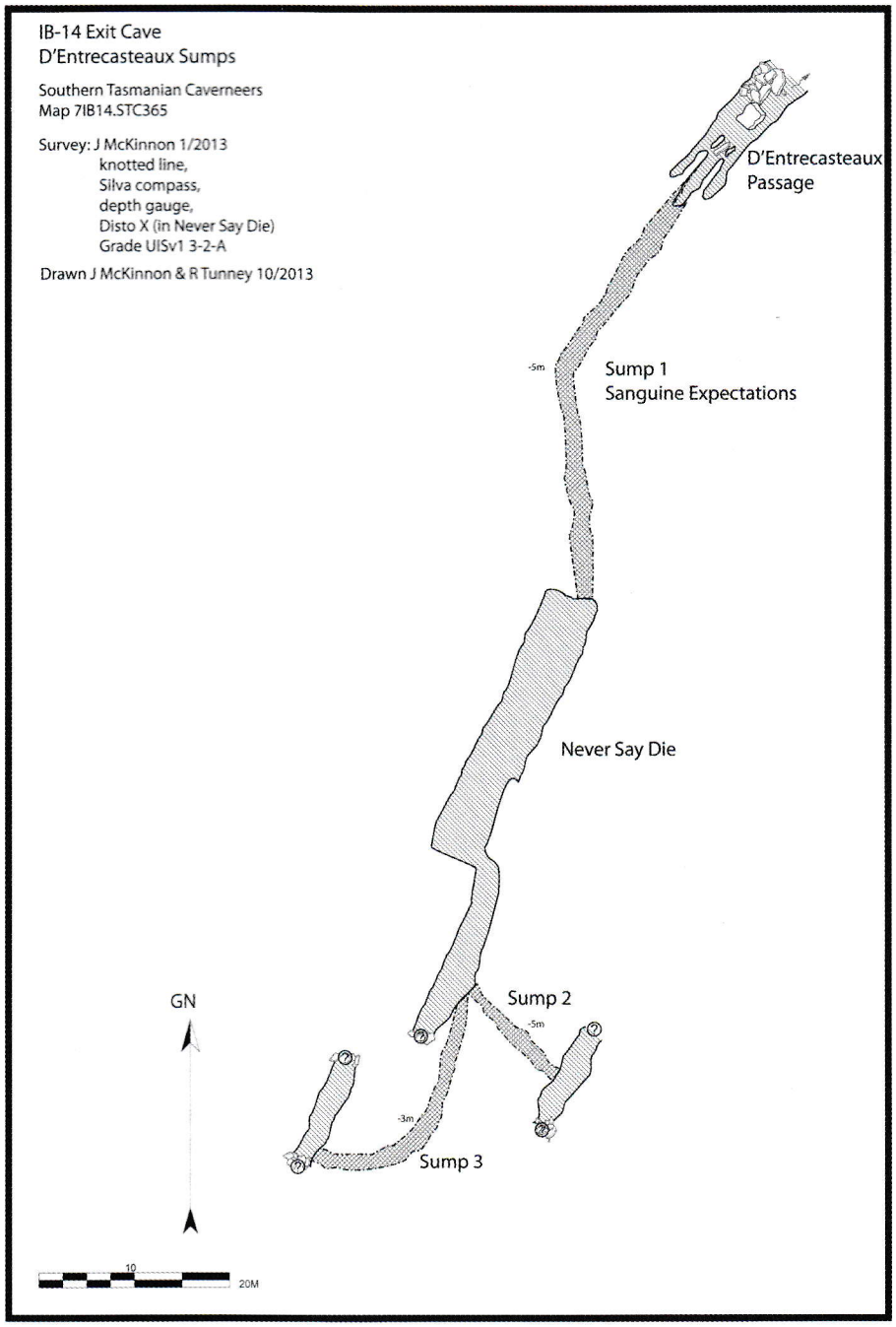
BACKGROUND

Exit Cave is a large, multi-entrance system in Southern Tasmania. It is arguably the longest cave system in Australia. (Cue the arguments regarding Bullita in the NT.)

The cave has been known for many decades, and multiple expeditions and day trips have been undertaken to explore and survey it, mainly in the 1960s and 1970s. Despite all this attention no comprehensive map yet exists. That topic alone would warrant a book. Currently STC is undertaking a multi-year survey and map exercise, coordinated by Tony Veness.

The D'Entrecasteaux River rises in the Southern Ranges near Pindars Peak. It has a large catchment area and takes large volumes of water when the (frequent) rains are falling in the area. An anabranch sinks and resurges twice, before sinking a third time into the lower southern slopes of Marble Hill. The river reappears in D'Entrecasteaux Passage in Exit Cave.

Despite heavy visitation to the cave over the years, there has only been one attempt to connect the third D'Entrecasteaux River sink with the resurgence of the river inside the cave, several hundred metres in a straight line from where it sinks. The dive was attempted by Bruce Stewart, from the inside of Exit, and he reported an impassable restriction at the entrance to the underwater passage (Bridge 1995).

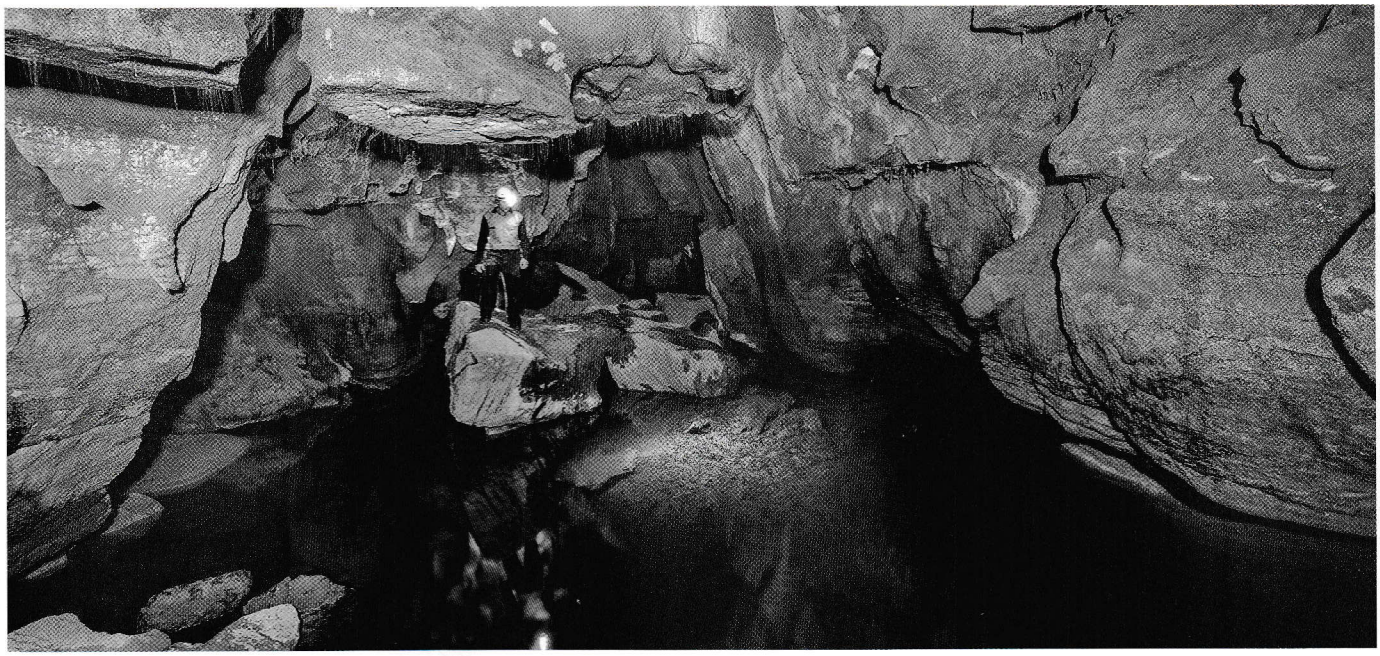


EXPLORATION

I decided it was about time to try to make the connection, and hopefully add the survey to the current mapping project of the cave. An 'impassable' restriction to a back-mounted diver is not necessarily so to a small, side-mounted diver. Dive tanks carried on the side of the body offer a lower profile, and thus divers can fit through smaller openings.

Armed with the (two sentence, second hand) dive report of the previous attempt (Bridge 1995), and the sketch map from that report, I started my first dive in the sump pool on 22 February 2013 with optimism. This proved to be premature, as the restriction at the entrance to the passage out of the sump pool, as reported, was not where the map showed it to be.

Two hours of searching the pool, in less than half a metre visibility, and with a few false starts grovelling (underwater) between tight boulders that had looked promising, and I admitted defeat for the day. I was a little deflated, and confused too.



JONATHAN ESLING

D'Entrecasteaux Passage, Exit Cave

I had waited until late in the summer to start this project, aiming to avoid flood conditions in a river that takes high flow. It seems I had waited too long. In late February, in a drought year, the flow had stopped. Thus I had no flow to show me the entrance to the underwater passage, and the water was very tannic, so visibility was much less than the usually stupendous 1-3 m in Tasmanian sumps.

I returned a week later, and spent another hour in fruitless searching, mostly by feel, in the atrocious visibility.

I had covered all the walls, side passages, cracks between boulders and looked thoroughly again where it was shown as starting on my sketch map. Ric finally pointed to a spot in the middle of the pool where he thought he saw a leaf move slightly. This was my last hope, and, with little enthusiasm, I dropped down to have a look. And there it was.

The restriction was easy to fit through in side-mount diving gear and being a fairly small person. The passage was large enough to be easy to move through and I swam about 70 m before surfacing in a large chamber ('Never Say Die' - NSD). I tied off my exploration line, had a short look around, and headed back out.

On the third trip I explored NSD and found another sump (Sump II) part way along the dry passage. This proved to be small, tight, zero visibility, about 15 m long, and emerged into another passage with air space. I explored this for an hour but much of it was low crawling in thick, gooey mud and water (in my drysuit). Most of this passage is usually sumped.

I only had underwater survey gear with me (knotted line, compass, depth gauge) and decided not to survey this 'dry' passage with that equipment. The fact that it would be a horrible job in my drysuit might have had something to do with that! I was dressed for 6°C water temperature and I was overheating badly in the 'dry' passages, where the temperature was closer to 14°C. The water was also much warmer than usual, at 12°C. You can be too heavily dressed in Tasmanian caves.

I started surveying out from the start of Sump II. I had a Disto X (borrowed from Alan Jackson, under threat of death if I damaged it) for the dry passage survey in NSD, so that part of the cave was surveyed to a higher standard than the underwater bits.

The first sump (called Sanguine Expectations) was also surveyed on this trip.

A few weeks earlier I had discovered that the D'Entrecasteaux Third Sink (IB232), normally sumped, was open due to the dry conditions. So, while I had being playing around from the inside, Alan Jackson and a visiting pommy caver, Chris, had surveyed this to its terminal rockpile. Some of this surveying was done while swimming.

On the fourth and final trip for this year, I planned to look for the main route out of NSD, and hopefully find a way around the rockpile at the end of the passage Alan had surveyed. This would complete the connection from the resurgence through to the main cave.

After a few false leads, I did find a way out of NSD, a third sump, and surfaced in a long (about 50 m) passage. This was looking good, until I found yet another rockpile at the end. In fact, both ends were blocked by rockpile.

More searching failed to find a way around this rockpile so I started the survey out and back to NSD.

CONCLUSION

At the beginning of this exercise, the sump pool inside D'Entrecasteaux Passage was 250 m from the sink (IB232). After the diving, and survey from the sink by Alan and Chris, the gap is now 50 m.

I had a good search at both rockpiles for a way around, with no success; I will return in the 2014 season for another try. This river takes large volumes of water, and I am hoping to find a humanly navigable passage.

CREDITS

Exit Cave is an hour's fast walk from the cars, with a climb and descent of about 200 m. Dive gear is bulky and heavy. The first three trips could not have happened without the help of many Sherpas. Ric Tunney and I did the fourth trip on our own (and left gear in the cave we removed a week later).

The entire exercise was done under the aegis of the Exit mapping project, which has received support from ASF and the Tasmanian Government.

FURTHER READING

More detailed reports have been published in the Southern Tasmanian Cavernеers journal, *Speleo Spiel:* No 395.

The map was first published in Speleo Spiel No. 398

REFERENCE

Bridge, Russell 1995 Surveying in Exit Cave – Australia's longest? *J. Syd. Speleol. Soc.*, **39**(2): 21-31.