

IB-14 Exit Cave – D’Entrecasteaux River Sump: Dive 3

Janine McKinnon (& Alan Jackson)

10 March 2013

Party: Johnathan Esling, Chris Holden, Alan Jackson, Fraser Johnston, Janine McKinnon, Ian Stewart, Ric Tunney

Prologue:

The sink (IB-232) had been found, two weeks ago, to be open (had airspace) for tens of metres downstream, and needed surveying. The sump at the end of the D’Entrecasteaux River passage in Exit had been dived upstream and underwater passage followed to surface in a chamber. This all needed surveying and the chamber exploring. A way on needed to be found from the chamber to the sink passage upstream.

Might I suggest that the easily bored, time poor, and just plain disinterested jump now to the summary at the end.

Logistics:

We had the sherpas (more than we needed actually), for the tanks and dive gear that is coming out and back each trip for cleaning. We had the survey team for the sink, we had the diver and support, we even had the photography team. We were set to roll.

The plan was that I would dive through the first sump, explore Never Say Die (NSD), try to find the way on underwater from there, and survey my way back out when I had reached the furthest penetration point of my trip.

The hope was that I would find the second sump leaving NSD and surface in the river passage that Alan and Chris were surveying from the sink, while they were in there.

You can’t blame a girl for being optimistic.

I had Alan’s DistoX for surveying NSD. It was wrapped in two zip lock bags, inside a small Pelican Case, inside a large Pelican Case. It was very unlikely that it would get drowned on the swim through Sanguine Expectations (SE) but I was still very grateful to Alan for having the trust to lend it to me. If I killed it, there is no replacing it as they are no longer available (I’m still kicking myself for not buying one when I could have), so it isn’t just a matter of me buying him a new one.

Ric had calculated that this set up had 6 kg of buoyancy, so we had to carry an extra four lead weights (at 1.5 kg each) to the cave, and strap them around the box, to allow me to get down for the dive. Luckily we had those extra sherpas.

For the underwater surveying Ric had manufactured a plastic board to hold the survey paper. Onto this Ric had glued a Silva compass and a bubble level for taking bearings. Clino could not be done but depth would be recorded at each survey station. Survey stations could not be marked (in a way that would survive the next flood) but they would be at changes in direction of the line. Knots had been placed in the line for distance measurements. There would be some inaccuracy with this as the knots had to be tied into the line before it went onto the reel. As the reel was tied off at several points through the sump, some line was now out of play, and thus changing the length for measuring distance. This could not be helped and I had endeavoured to do as few tie-offs, using as little line as safely possible, to reduce this inaccuracy as much as I could. As visibility was limited to a metre, or less, and my light was only Ric’s Rude Nora, I would be very limited in how much of

the passage I could actually see, thus a sketch was pointless. This was going to be a line survey and nothing else.

Alan and Chris, the tank sherpas, deposited them at the gearing up point at the start of D’Entrecasteaux Passage (the junction), and then left to pursue their agenda.

It took 40 minutes to organise the dive gear, get it to the sump, and get me dressed and ready to go. I started in at midday. The time agreement for me was possibly three hours, probably four, maximum five, and start worrying at six hours. Ric would stay on site at the beginning for half an hour, just in case I had to abort for some reason. I thought that if I got through the first half hour without any dive cancelling disasters then I’d probably be alright for the full exercise (or whatever I could manage in the timeframe allowed).

He would then go away until the three hour mark, or thereabouts, to help with the photography party.

I had a new Gopro3 on my helmet, with the hope that I could record a few hours of the trip, and extract some reasonable video from all that. This was its first use. I only had one working light (2 back-ups, not to be used except in case of Primary light failure) as we were trying to reduce the weight we carried to the cave. Thus I was unsure how well the video would work out. Nothing ventured, nothing gained though.

Ric started the video recording as I started the dive. I would just let it run for as long as its battery lasted.



R. Tunney

Janine commencing the dive.

The dive, survey and exploration:

The dive through the first sump was straightforward and fairly quick as I had done it twice the previous week (in and out) and I had my line to follow. It was a bit slack just past the entry restriction and I had to redo a tie-off. I surfaced in NSD after 7 minutes.

I took off my tanks and mask but kept the rest of my kit on, and went for a walk upstream. Most of the passage floor is under shallow water. After five or six metres I found another long pool. I swam down this to be certain that it sumped (or at least ended), which it did after about fifteen metres. There was deep water all along the right hand wall of NSD (looking upstream), so the way on could be anywhere under there as well, but I had to start somewhere, so I decided to try along the long axis of the passage.

I moved my tanks down to the start of the wade and kitted up again. I had to tie my primary line anchor point several metres

back from the start of the pool as there was nothing to tie to on the walls of the pool. It was all smooth rock.

I started surface swimming, and then decided I would be better on the bottom. I'm still not sure if this was the right call.

With only half a metre visibility it wasn't that straightforward finding my way ahead (a pun there, did you catch it?). I groped along, doing the odd tie-off, and found myself in a small, tight, silty, restricted passage. I shall call it sump II. I was moving forward though, so I kept going. It occurred to me that it wouldn't be that nice if I had to turn around. After a few minutes I surfaced in a passage. I was excited. Yes, I thought! I have broken through to the river passage from the sink! Except it didn't look quite right. Maybe if I turn my head sideways it will look familiar. Nope. Still, optimism prevailed and I called out, hoping Alan could hear me. Nope. The passage was a few metres high at this point and about 2 m wide.

I moved to the bank a metre away, opposite the hole in the wall I had just emerged through, and found deep mud. Yuk. I threw the reel out of the water, and then took my tanks off, managing to get them onto the bank in shallow water.

I had passage in both directions, but it was all streamway, so I started swimming to my right (back into the cave, by my reckoning). The passage went about fifteen metres and was about 3 m wide and 7 or 8 m high. It terminated in a rock collapse. I couldn't tell flow direction.

Then I started swimming down the other direction. This went around a corner and the roof lowered to a half metre above water level. This would normally be water-filled.

I kept going and the passage stayed low and narrowed. After another ten metres, or so, I was in partly water-filled passage about one and a half metres wide and high. The water was half a metre deep and the mud was thick, soft and deep. I realised this passage was usually water-filled and the water moved very slowly, so I definitely wasn't in the main passage of the D'Entrecasteaux River. I started crawling/pushing myself along the water course. This quickly became very tiring and hot. I was dressed for 6°C water in drysuit and two undersuits. The air was about 15°C and the water very tepid. I was also still wearing my buoyancy compensator with two lead weights (3 kg) attached (and my computer on my wrist). A clever idea? No. Hindsight is a wonderful thing. It would have been difficult to remove where I left the tanks so I hadn't bothered. I was now paying the price. The mud was deep on the small bank beside the water and crawling there unpleasant, so I alternated between the water and bank.

I continued for what seemed like kilometres but was probably fifty metres. Roots were hanging from the ceiling. I noted that I had some light flow and the stream was now flowing away from me, where I had started my diving upstream. After about 20 minutes of this I had had enough and decided to turn around. I wasn't where I was aiming for, my gear wasn't designed for this and I was worried about damaging my (very expensive) drysuit, and I was hot and tired. The passage continued in the same dimensions as far as I could see, which was about ten metres.

I retraced my steps. I checked at the bend before my tanks and the water was still flowing away, i.e. downstream, not the upstream I had started with before sump II. At the tanks the direction of flow was not possible to determine.

I found a tie-off point for the line (with a lot of difficulty as the walls were all smooth), tied it securely and cut it.

Note: The exploration line I had on my reel for the first series of dives was 1 mm thick. As I had used most of the 150 m on the reel by the time I had tied off in NSD I had had to put new line onto the reel for this dive. I had used thicker line this time. It was 3 mm thick. The knots are at 5 m intervals.

All the above-described swims and passages are unsurveyed, but are somewhere to the east and south of NSD. (Later consideration is that these are passages paralleling the as-yet-undiscovered main route to IB-232 D'Entrecasteaux Third Sink.)

It was time to start surveying out. I did not have the DistoX with me (and I wouldn't have been game to use it here anyway) and so I could not survey this passage. I decided to start with the survey back through sump II. This I did. Visibility was about twenty centimetres into the sump, and zero through most of it, so basically I counted knots and took one bearing in the sump. It is only about fifteen metres long, so that shouldn't be too bad. Anyone wanting a more exacting survey is welcome to go there and try.

Back in NSD I took off tanks again, and discovered that I had somehow broken the plastic board I was using to hold my survey sheets. My compass was on one piece and the bubble the other. Destructo-girl had struck again.

Using half of the board for my sheets (what else could I do in a chamber called Never Say Die?) I surveyed the chamber with Alan's DistoX. What a godsend this was by now! I then did a sketch. I wish I was better at drawing. Can I blame the half-board for my poor draftsmanship? [*Should that be draftwomanship?* – Ed.]

I carefully packed up the Disto and checked my timing – a bit short of three hours. Now I had a decision to make. To head out, surveying SE as I went, or dive and try to find the 'proper' way on. I was torn, but decided that to keep exploring, and then survey SE, could take more than an hour, and the others (Ric) would start getting nervous by then. I was also starting to think I'd had enough for today and I would have to come back anyway, so out it was.

The survey through SE basically consisted of depth and compass readings at changes in line direction, and counting knots for distance. NOTE: The knots are at two and a half metre intervals on this line.

It was a nuisance keeping my sheets of paper on the half-board. They kept trying to swim away. I was out in twenty minutes, to my surprise. However I'm not totally happy with my survey here, so I might do it again next trip.

No-one was there when I surfaced. Nice to see how laid back about the whole thing they all were. I called, and presently Ric answered, and arrived. Apparently I interrupted "smoko".

I had been gone three and a quarter hours. Ric and I discussed whether I should come back for another dive or not. If not, then we wanted to place a thicker line from the primary anchor point (boulder out of the water) down and through the restriction, so that if my thin (1mm) exploration line was shredded in future floods any future divers would be able to find the start of the underwater passage easily.

I also had the two lines that I had left on my earlier dives (see trip reports for dives 1 & 2) to remove as they went nowhere of use and would confuse future divers. They looked a mess too! These two jobs are to be done as a last act so I have maximum air supply where I need it most.

I had only used about a fifth of my total air supply, so we decided to leave the tanks in the cave and return in a few days for one last try at finding the main passage out of NSD to the outside world (or where the passage has air space at the moment, anyway). Thus it was time to get out of the water.

I was sent to get some soup. As usual, Ric started organising getting my gear (tanks, fins, reels and Pelican Case) back to the junction. I really appreciated this.

Alan and Chris were both in the cave (back at the junction, souping), having completed their job and returned to us. The photographers were just about done too.

I drank my soup and heard what everyone else had been doing, whilst Ric moved gear to the junction, sorted it into staying and going piles, moved the staying gear to a secure spot on the bank and organised the packing of the going out gear.

Back outside the cave entrance, Alan left a note for Tony Veness, and the Distos, at Camp Gumboot.

The trip out and home was unremarkable.

Oh. The Gopro? Despite a few close encounters with low roofs, it was still intact. When I got home and checked the video I had about two hours. The battery went flat after that, I think (it stopped recording anyway). I thought it was good for 4 hours? Oh well, some is better than none. The lack of good light didn't help, but some of it is OK. It is certainly the best record of this area that exists (i.e. the only pictorial record).

And the DistoX? It survived its return through the sump. It was bone dry when Alan opened the box(es). Thank god. I doubt I could have lived down destroying his (irreplaceable) DistoX.

Exploration and survey summary

1. Alan and Chris completed a survey of the main downstream passage, Sign of the Times (SOTT) from the IB-232 sink to the rockpile terminus. They did not survey Lilliputian Labyrinth, the maze of small passages near the sink.
2. Janine explored the Chamber, Never Say Die, and found a sump out of it upstream (sump II). This was dived to surface in more "dry" passage. This was explored (possibly) upstream approximately 20 m and downstream possibly 50 m. It was not surveyed.
3. The direction of water flow in the passage past sump II changed definitely about 10 metres past where sump II joined. Direction could not be confirmed above that position.
4. The sump II was surveyed back to NSD.
5. NSD was surveyed.
6. SE sump was surveyed. Janine is considering doing another one, with more stations, next trip.
7. The way through from NSD upstream to join SOTT was not found.
8. Another dive is planned to try and find the underwater passage out of NSD to SOTT.

Alan and Chris's bit:

After dropping off the tanks we bumbled out of Exit and followed the taped route up to IB-232. It took us a while to find the tag as apparently the entrance has collapsed since Ric placed it and it is now positioned several metres from the cave head wall. It is located on the left bank of the stream (when facing downstream), on a small cliff face up above the incised river channel and collapse debris.

We got our wetsuits on and then started surveying from the tag into the cave – Geoff had trustingly left his DistoX in camp for us to use so we didn't have to spend any more time than necessary freezing in the water. After two legs we decided the way on didn't look very pleasant – it was two metre high passage (half water, half air) but only 0.6 m wide. This didn't fit Janine's description so we opted for route-finding instead of surveying. A few metres in there was a junction with passage to the right. We took this passage which lead to another junction with perpendicular passage several metres on; we went left. The passage was still narrow and high but getting deeper. This section was quite long (~10 m) and had a few perpendicular passages heading off. Chris took one to the left and it opened out into the main passage after a particularly low wet bit (plenty of leg room below the water but helmet off if you wanted to breath); lovely. We cursed Janine for sending us here and decided to push to the end of the big passage.

The roof was quite high with numerous tree roots in this section but it then lowered down, did a left then right wiggle and terminated in a little loop around some rockfall. There were a couple of swims but it was mostly deep wading. On the largest of the rocks in the rockfall, ~0.3 m above water level, I installed an aluminium entrance tag – I had the mini club drill in two dry bags. This was so Janine would know where she was if she came up here. It was stamped with "131003_A_88", had a bit of pink survey tape slipped in behind it and two 20 mm square pieces of red reflective material placed between the tag and the fasteners (I didn't want Janine to miss it!). The number on it was the survey station number according to Tony V's rigorous Exit system (YYMMDD_survey-team-letter_station-number). We were team A for the day, Janine was team B and the others team C onwards. I figured this kind of station might actually last a few years of floods, at least until Janine had finished poking around down there.

We surveyed out, following the nice big passage past our junction with the horrible low wet thing we'd come in, and found the easy way out to the entrance. It turned out we'd come in via the Lilliputian Labyrinth, which I added to my sketch but had no intention of doing again to survey properly. While the water was not as cold as I thought it would be it was cold enough to have me shivering, making book work quite challenging.

We considered heading up to the next sink and resurgence to survey it but decided it wasn't overly important to do so in terms of Janine's project so we opted to surface survey from the IB-232 tag to the IB-14 tag. I've since discovered that Madphil already did this but at least we proved that the two data sets are almost identical, and therefore unlikely to have erroneous legs. We then toured in Exit (going further into the cave than I've ever been before!).

The end of IB-232 proved to be almost 70 m due east (magnetic, not true or grid) of the entrance tag.

IB-14 Exit Cave – D’Entrecasteaux River Sump: Dive 4

Janine McKinnon

14 March 2013

Party: Janine McKinnon (diver), Ric Tunney (support).

You are almost certainly bored to death with long dive narratives. Today’s tale will be presented in as brief a format as possible.

Pseudo-Powerpoint presents:

- Dived through sump I (Sanguine Expectations) to Never Say Die (NSD) and checked along full length of right hand wall (true left) for continuing passage, unsuccessfully.
- Swam to northern end of NSD and looked up aven, it has a closed roof about 10 m up.
- Dived at start of pool at southern end of NSD as per last trip, continued past turn into sump II, and followed the floor upstream (south). This is sump III.
- Checked two side passages off sump III to the right (true left). Both terminated.
- Surfaced at rockpile at end of sump III.
- Checked for way to pass through rockpile at water level, unsuccessfully.
- Did not climb up rockpile to check for leads as drysuit too fragile and no passage visible from water level. This is a possible lead.
- Checked for way around rockpile, unsuccessfully. Water passes through but could not find anything humanly navigable.
- Surveyed through sump III (downstream) underwater back to start of dive. Much of this passage has airspace at present but would normally be sumped.
- Exploration line left *in-situ*.
- Swam on surface through air gap (only possible with these very low water levels) at southern end of pool on left hand side (true right).
- Intersected passage (with airspace) that terminated in rockpile at left hand (downstream) end. Right hand end was rockpile previously encountered. Distance between two approximately 50 m. Airspace the full distance. Roof generally estimated at two to three metres above water level at present. Several blind avens approximately 8 metres high. This passage was not surveyed.
- Checked left hand wall from passage junction (true right) for underwater continuation. Unsuccessful.
- Considered all reasonable options for onward diving southward in the direction of IB-232 sink now exhausted.
- Returned to NSD and prepared to survey through SE again.
- Gopro battery ran out at this time.
- Surveyed SE again. New, thicker survey board remained intact.
- Saw two eels, one almost a metre long. The big one was almost aggressive.
- From the downstream end (start) of SE, put in thicker line from above sump, through the restriction, and into SE a short distance. Almost no attachment points, so line secured to imperfect rock projection in passage floor. There are hopes this will survive floods but no confidence in this.
- Removed two “false lead” exploration lines left over from trip two.
- Support team surveyed from final station in D’Entrecasteaux Passage inside Exit Cave to first station of SE sump dive. 1 station. Sump survey now tied in to Exit survey.
- Support team drank soup and read whilst he waited for diver (approximately two hours).
- Lighter failed to work when diver wanted soup on return. Diver remained soupless.
- Diving finished for this year. Some gear removed and rest to be removed within a week.
- A dive with higher flow rate to look for active streamway might be advantageous in the future.
- A canister diving light was added on this dive. When subsequently viewed, the video produced was much more successful than the previous trip.

Preliminary survey results:

At the beginning of this exercise, the end of D’Entrecasteaux Passage was 250 m from the sink (IB-232). After the diving, and survey from the sink by Alan and Chris, the gap is now 50 m, north-east from sink end.

I won’t bore you with a trip report for the trip to extract the rest of the dive gear.

That Was Lucky!

Stephen Bunton

16 March 2013

Party: Stephen Bunton, Gordon and Jenny Fiander

This was meant to be a pleasant trip through Midnight Hole but it turned out to be one of my most frustrating days ever. Unfortunately I had an audience on the day and now I feel

compelled to write about it for those who were not there. Suffice to say that I walked up and down Marble Hill three times from the Mystery Creek track to the contact, carrying 60 m of rope, in the rain, fully trogged, without finding IB-11. I found plenty of other caves including IB-12, now that must have been close! I found some great karst features, lovely canyons and pretty green mossy walls but not the familiar welcoming hole I had chosen for today’s sport’s plan. How embarrassing!