Exploration of the Elk River streamway

There are strong differences between a cave diver and a sump diver and how they relate to the cave environment, how they configure their gear and what they try to achieve. A sump diver is more than just a cave diver and more than just a dry caver. A sump diver combines dry caving and cave diving techniques in a unique way in order to achieve a very specific goal - negotiating water filled passages in order to explore dry cave on the other side.

While cave divers enjoy swimming around in water filled passages as an end in of itself, to the sump diver the wet stuff is an obstacle that must be negotiated, not the final reward. To the dry caver the sumps are impenetrable and represent an end of the journey, the sump diver on the other hand is virtually unstoppable.

It is not all beer and skittles however, more often than not actually getting to a sump in a dry cave requires not only dragging your own sorry ass several kilometers in, but also carrying a mountain of dive gear to boot. For those of us who enjoy driving up to a dive site, chucking on the tanks and taking a leisurely stroll down carpeted stairs to the water, this might seem a little, well… keen.

Undoubtedly carrying miscellaneous bits of dive gear and tanks to the far reaches of a cave in order to do a dive is rather intense. Yet the rewards are titillating and it is worth wearing down your body and pushing yourself to get there. In my opinion, this is what real cave exploration is all about; strapping on the necessary gear and negotiating some serious cave. When I finally combined dry caving and cave diving it was like that moment when peanut butter and chocolate collided… “two great tastes that taste great together”… Reese’s Peanut Butter Cups anyone?

My very first sump diving experience was courtesy of Forrest Wilson, who invited me along on a trip to Snail Shell. Snail Shell is the longest continuous cave in the Tennessee Central Basin region and has more than 14.5km (9 miles) of surveyed passages. Our trip to push the second upstream sump felt like a big effort, especially with the diving equipment in tow. We spent over 10 hours underground and traversed over 4km (14,000ft). At the end the boys (Mike Young, Adam (Skip) Kendrick) laid a further 120m (400ft) of line. Yet once I saw the map of the whole system it was clear that our sojourn into the cave didn’t even scratch the surface. The sheer size and potential of these ‘dry’ caves dwarfs the majority of their submerged counterparts.

Being my first sump diving experience I was a bit wet around the ears. I wore a 3mm wetsuit, grossly inadequate for the conditions, which meant I froze. I dragged in tanks that were way too big for a sump only 21m (70ft) in length. Even the sidemount harness was, in hindsight, way too bulky and had too many redundant bits and pieces. I'm sure the GUE folks would have a fit if they came face to face with a sump diver. Gear selection is based on the nature of the cave and whether you can carry it all to the water's edge. Keepings things light and efficient is of primary importance; small tanks, no wing, lightweight harness and often no fins are just what the doctor ordered.

Sometimes you have to be creative and invent your own gear. I once had to jury rig a no-mount harness on the spot in order to explore a small crevice in upstream River Lethe, a cave in Jenolan. I had no hope of fitting into the hole in a standard sidemount harness, so to keep a 'zero' profile I threw some bits of bungee and hose retainers together. The 'Lethe' harness, with some minor modifications has since become my rig of choice when sump diving. It gives me a low profile in the water, yet allows me to sling and walk with 7L tanks for several thousand feet. Sometimes you just have to get creative.

Despite being clueless and ill-prepared, the Snail Shell trip was an incredible experience. The cave is like an underground river, where you negotiate big stream passage by swimming, wading and walking through large pools of water. Along the way you climb over breakdown piles and traverse waterfalls. And in between getting your ass kicked by the cave, you are treated to some spectacular scenery and incredible formations. These tend to distract from the arduous conditions, albeit temporarily. When we finally reached the end of the line and the second sump, the boys encouraged me to grab the reel and spool out a few meters, to experience laying line. By that point I was bordering on hypothermic and playing explorer was the last thing on my mind, so I declined and concentrated on getting myself warm. I did, however, get my first taste of sump diving and I loved it!

So from my first sump diving experience let us fast forward to an adventure across the other side of the world, all the way in Australia in fact, where I did get to play explorer. The Buchan area one of the largest karst features in the state of Victoria, the southernmost state of mainland Australia. It is a farming area; green grass, rolling hills, cows and all that. Underneath this landscape the area is a honeycomb of caves. The Pot Holes Reserve in particular is absolutely littered with caves with over 90 recorded. The Pot Holes narrowly escaped quarrying in the 80s and is now protected by Parks Victoria, which is fabulous given the significance of the area.

In 2006 the Victorian Limestone Caving Team (VLCT) discovered 100m (330ft) of perennial streamway on the Pot Holes Reserve, which they dubbed Elk River, on account of the prominent 'antler' formation found. It was an incredible discovery, as for the first time cavers got a glimpse of the underground river that had long been mooted to exist in the area but had eluded all. Exploration soon stopped, however, as the way forward was blocked on both the up- and downstream sides by sumps.

In 2008 my mate James (Jim) Arundale probed the underwater extensions at each end of Elk River. He found it difficult to push through but eventually negotiated a tight and nasty sump and was rewarded with another 121m (400ft) of streamway passage before another sump

terminated his progress. Finally, in August 2009, with Peter Freeman coordinating the Victorian Speleological Society (VSA) effort, Jim and I prepared to tackle the second downstream sump. I became a partner in crime to what surely is the biggest heist of the century!

We joked about finding kilometers of passage before descending, but to actually find 1.5km (5000ft) of passage, basically all in one go, was just mind-blowing. I mean really, who actually finds that much cave passage these days, especially in little old Buchan?! The Buchan caves while interesting, tend to be reasonably small. The longest pitch is only 40m (130ft) long and most of the caves seem to terminate all too early. While hopeful, we were not expecting to hit the jackpot. Yet, we scored, and what we found surpassed all our expectations.

Elk River it seems is the main drain for the area, the long lost and much theorized about master cave system. The cave is of outstanding importance in Victoria and is the most important since 1907-1910, when Frank Moon discovered Fairy and Royal Caves (the Buchan Show Cave system). The discovery totally re-writes the books about hydrology and geological structure in the area. The drainage doesn't go in the direction most expected, towards the only significant visible resurgence in the area. In fact, it goes exactly the opposite way! Further, it is easily the deepest cave in Victoria, now over a 105m (350ft) down, and it has the potential to drop further still. Which is incredible given that none of the caves in the Buchan area go deeper than 200ft On top of that, it has the potential to become the longest continuous stream passage in Victoria. These accolades have meant the cave system is now referred to as the Murrindal Potholes Eastern Master Cave (MPEMC). The official name doesn't quite roll off the tongue, so we continue to affectionately refer to it as Elk.

The descend down to the actual water level is a trip in itself, and if you add to that numerous bags filled with heavy diving equipment, you are facing a slog. The entrance to the streamway is via Baby Berger cave and involves an abseil, a bit of laddering and plenty of crawling before you hit the water. One crawl in particular is, what can most politely be described as an absolute nuisance. Finally there are a couple of roof sniffs in order to reach the sump itself. Roof sniffs are passages almost filled to the brim but not quite. The little bit of space in between the water and the ceiling means that you can negotiate it by floating on your back, nose to the ceiling, 'sniffing' the ceiling. Then, finally, you reach the first and toughest of the sumps.

In all aspects the cave is simply wonderful. We followed the stream, and dived through sump after sump gasping… 'wow', and 'oooh my', and 'oh isn't this just incredible'… in between a few less family friendly expletives. As the cave unfolded before us, it was hard to believe what we were seeing. The cave formations are amazing, with areas of highly concentrated formations such as flowstone, stalactites, stalagmites, rimstone pools and helictites.

The nature of the cave changes so much throughout, from low bedding planes to high rift passages, to large chambers and narrow rifts. Then there are a series of waterfalls and climbs, a couple of which required some optimism and interesting acrobatics to free climb on our first trip through. Then, not to be forgotten is the deep, slippery mud, overlaid with water, which makes walking painful and strenuous. Every step feels like you're falling into a ravine of snow, but in this case there are no snowshoes that can come to the rescue. All in all there are 9 sumps in the cave. While they are a beautiful cobalt blue on the way in, they get dirty quickly.

On the way out they tend to resemble a mud bath and you must feel and grope your way out, as often you can't even see your own hand on the line. All this certainly makes for a very sporty and memorable trip.

We spent up to 18 hours underground on massive trips that combined surveying, photography and exploration at the far end of the cave. We often got back to the caving hut just before the crack of dawn, yet it wasn't long until everyone was out of bed celebrating the joint achievement. We recounted our adventures in between woofing down a meal… followed closely by a bottle of red. Only then did we collapsed into bed.

It has been a phenomenal experience to be a part of the exploration that has changed the face of the Buchan area forever. The best part - the fun is not over yet. There is still more diving to be done on both ends of the Elk River system and much more to find and explore in the dry sections of the cave. For the moment we have more questions than answers, so we are now faced with recruiting scientists that could help us solve some of the mysteries. For the moment it is a diver-only trip, but we hope to find an alternative entrance that will allow dry cavers to access the system.

Over the course of the four trips we had fabulous support in the dry section of the cave. Without these folks, doing the trip would have been virtually impossible. So a big thank you goes to Peter Freeman, Neil Wilson, Ian 'Chalky' Thomas, Miles and Daryl Pierce and also Ted Matthews, Ken Smith and Michael Collins, who all selflessly grabbed a pack and humped it down to the sump.