

RESCON'd from Wookey

by Duncan Price

RESCON is a cave rescue conference organised by the British Cave Rescue Council held every two years at various locations around Britain. This year the event was held on Mendip 6-8th September 2019 based at Ebborways Farm in Priddy where there were various activities and entertainments. The Wessex Challenge cavers' assault course competition was also held there on the Saturday evening. This was won by a team from the BEC who dominated the event due to the club's reputation for "everything to excess."

One of the main events this year was a rescue practice at Wookey Hole where a live casualty was to be dived out from Chamber 22 to Chamber 20 on a stretcher and then handed over to a non-diving team to take out of the cave. Previous attempts at practising transporting a casualty underwater have met with variable outcomes: most notoriously the "death" of the victim (Dave Pike) at Wookey Hole. The Mendip Rescue Organisation report on the accident can be found in the Wessex Cave Club Journal Vol. 19 No.217 July 1988 on page 195 which I reproduce in its entirety here with explanatory notes in parenthesis [like this].

Wednesday 18th November [1987] Wookey Hole Cave.

The Somerset Section of the Cave Diving Group staged a sump rescue practice demonstration using the Kirby Morgan Bandmask apparatus [a full-face mask which covers the diver's eyes, nose and mouth] for observers from WESSFED [Wessex federation of diving clubs]. After some open water training in the First Chamber, Dave Pike agreed to be towed through to the Third Chamber by Malcolm Foyle and Kevin Gannon. A line was laid, and the trio did a circuit of the

lake to check the equipment and get the right buoyancy. This is now a well-rehearsed technique. They then headed for Three and their approaching lights could be seen by the reception party there. Vented air was visible and audible as normal. Then, suddenly, something clearly went wrong under water and the divers quickly headed back to One without surfacing. The helpers onshore raced back on foot.

The divers surfaced at speed with Dave Pike and it was immediately obvious that he was not breathing as the mask had flooded. Bob Drake stripped off the helmet whilst others cut off the weight and cylinder belts. Dave's face was grey and his lips blue (cyanosis). Richard West could not find a carotid pulse and the pupils were fully dilated and did not react to torch light. He immediately started E.A.R. [expired air resuscitation] whilst Bob carried out E.C.C. [external cardiac compression]. It was then about 9 p.m. and the patient had stopped breathing for several minutes. Someone left the cave to raise the alarm and call for an ambulance. Bill Lewis of WESSFED assisted with the E.C.C. A faint carotid pulse was detected after about two minutes. Richard West continued with E.A.R. with pauses to clear blood and note the noisy exhalation cycles. After a tense eight minutes, the patient showed signs of recovery and pupil reaction occurred. With further assistance, regular breathing was restored after ten minutes and the patient placed in the coma position and covered with warm clothing. Dry retching did not interrupt the steady breathing and it was with considerable



Left: Bob Drake, Jeff Price, Dany Bradshaw, Bob Cork and Alan Mills (stretcher) at Wookey in the 1980s. Photo by Rich West

Right: Divers surrounding stretcher at Vobster in 2015. Photo by Duncan Price

relief when he recognised his helpers after twenty minutes. Dr Ashman from Wells arrived at that moment and ambulance men quickly followed. The patient was taken to the entrance in one of the cave's wheelchairs and thence to Bristol Royal Infirmary. He has since made a full and remarkable recovery. Equally remarkable must be the work of those who resuscitated Dave from this near drowning in fresh water; particularly Richard West. The prompt action of the two divers with him was clearly crucial.

Dave Pike was able to give full details of what had happened to an enquiry held with all concerned on Sunday 22nd November. By agreement with the Cave Diving Group, Steve Wynne-Roberts carried out tests on the equipment to simulate the reported malfunctions. Fred Davies assisted. Their report will be considered by the CDG and MRO would await their subsequent recommendations.

I remember the incident quite well: I hadn't started cave diving at the time but happened to be on Mendip for Dave Pike's "wake" at the Hunters' Lodge Inn where the "deceased" was very much enjoying the event. Dave subsequently had a "first birthday" party a year later...

The cause of the accident was investigated by Fred Davies and Steve Wynne-Roberts. The flow of air to the face mask also served to demist the glass and purge the mask of water. The flow had been turned up so the diver could see clearly and defeat any leaks – consequently the first stage iced up due to the excessive air consumption. Bob Drake describes the Kirby Morgan Bandmask in CDG N/L 85 p. 3-4 and mentions some of these issues. He also describes the technique of transporting the casualty face-up – a practice which today we would find unacceptable since any water entering the mask has nowhere to go but into the diver's airway. Fortunately, Dave Pike had the presence of mind to remember his training from Oliver Lloyd that "dry" drowning was preferable to inhaling water, so he held his breath until he passed out! The incident was mentioned in the Somerset Section CDG's report to the

following newsletter and a comprehensive report of the incident and findings published in CDG N/L 87.

Naturally some members of the CDG took a downer on doing cave diving practices with a live victim. Others took up the challenge of doing it safely and I had the pleasure of being the body in a stretcher which was hauled around Stoney Cove (a flooded quarry that is used as a dive centre near Leicester) over 20 years ago. We kept things simple: I was put in the spine board and the straps were done up. A pair of diving cylinders were attached to the stretcher in a sidemounted configuration and I was taken for a guided swim. Despite wearing fins, it was almost impossible to use them, and I was heavily reliant on my minders to urge me along. At one point I was dragged underneath one of the "attractions" – an aircraft fuselage – to prove that it was possible to get a diver through a restriction. With my arms free I could also swap conventional regulators.

This technique was refined at various training sessions in open water and a new generation of full-face masks arrived on the scene which were safer to use and included gas switching blocks so that the air supply could be obtained from multiple cylinders. We practised with these at CDG training camps – almost drowning the (then) CDG Chairman, Bryan "Scoff" Schofield, at Vobster Quarry when he was put on his back underwater. Video footage of one such session is in the first of the YouTube videos listed at the end of this article. Still no-one was brave enough to give it a go in a cave.

This attitude changed after the Tham Luang Nam Nong rescue in Thailand in July 2018. Thirteen people were evacuated by diving through some challenging flooded cave passage using full-face masks. Furthermore, the victims were completely helpless – anaesthetised and restrained with cable ties so they were effectively a "package" for divers to manoeuvre through the cave like a tacklesack.

A couple of the divers involved in the Thailand gig were motivated to bring their experience home and develop techniques to recover an injured caver through a sump. British cave divers are, to some extent, living on borrowed time in that there has never been the need to carry out an evacuation of someone with a spinal injury by diving. With the growing interest in aid climbing beyond sumps, it is perhaps inevitable that

someone could hurt themselves seriously. So far, we've been lucky with only accidents which left the diver still able to help themselves: e.g. arm, back and facial injuries (Martin Holroyd, Boreham Cave, 1986 – see CDG N/L 92) or broken arm (Andy Goddard, Notts Pot 1996 – see CDG N/L 119). Even a minor injury can make it impossible for a cave diver to don their



diving gear as I found out when I dislocated my thumb in Daren Cilau.

Chris Jewell QGM and Connor Roe MBE spearheaded the effort. Chris is the Cave Diving Group's BCRC representative. They honed techniques at Wookey Hole, using the resurgence pool as a convenient training site. I helped at a practice there on July 21st, 2019, which culminated with Chris being taken to Chamber 3 and back on a stretcher. The underwater environment is relatively benign: mainly roomy sumps, but there were a couple of restrictions to pass with the casualty en route. I filmed the activities and put the footage online. The scene was set for the main event at RESCON and, despite powerful voices threatening to scupper the event, I volunteered to offer my services as the casualty.

Saturday 8th September was a general familiarisation with the procedure and several divers took on the roles of victim and minders. I was unable to attend this as my employer was celebrating the 100th anniversary of the founding of the company by having an open day at work with bouncy castles, BBQ etc. My role was to oversee several science demonstrations in the canteen with vacuum pumps, Van-de-Graaf generators and other stuff that made bangs, sparks and flames. At least we didn't set the fire alarms off and cause a site evacuation! I did make it to the end of the day's event at Wookey Hole Caves to hear John Volanthen GM give a talk on "recovery" – it is a touchy subject and John described his experiences in candid detail. I contributed by describing incidents at Pwll-y-Cwm in 2011 and at Aber Las Mine in 2014. Besides the mechanics of the body extraction there are considerations of evidence collection, wellbeing of those involved and the victim's next of kin, as well as issues surrounding legal procedures and closure for those concerned. One of my friends sums it up as "... a skill set that no one should really want to develop. It is just a shame that occasionally they come in handy."

We'd agreed an early start for me to get ready to be extracted from Chamber 22 to Chamber 20. My wife, Naomi, had misgivings about the whole exercise but agreed with me that we had to practise the scenario before it was needed. I was confident in the selection of experienced divers who were to take part in the exercise – they were all good friends whom I trusted implicitly. I chose Gavin Newman to keep me company in Chamber 22 while I awaited rescue and someone who was tasked with carrying my dive gear out alongside me, prepared to come to my aid if things went wrong. One condition of the exercise was that I provided my own cylinders and regulators for me to wear on the stretcher. The divers involved in coming to 22 were told to use a pair of 12 litre cylinders to afford plenty of gas. Normally one could dive from the resurgence that far and back and still have ample reserves. I was going to have the same amount of air for the dive back out. I also selected the set of regulators that I'd loaned to Connor for the

Thailand rescue. I'd recently used these for the Ogof Cnwc to Pwll-y-Cwm through trip and I knew them to be in top form. (It might be difficult for a non-diver to understand, but I have lots of sets of gear and will use the most conveniently configured equipment for any one dive rather than bring out my "best" kit – think of it like using an old oversuit for a digging trip but a new one for a photo trip).

I arrived at Wookey Hole on Sunday morning 9th September around 8:20 to find Gavin already there. We'd arranged to meet Chris, who was apparently without a mobile phone having driven over it the previous evening. Gavin and I signed in and started getting ready. We were soon joined by Chris and I gave him my gear to use on the stretcher. He swapped out the inflator hose on one of them and added another to the other to fit his buoyancy compensator which was to be used on the stretcher. With Chris's help we set off from 9(2) at 9:30 – Gavin first wearing a wetsuit and 2x300 bar 7 litres cylinders. I wore my Decathlon one piece 7.5 mm wetsuit with a rash vest underneath – I had intended to put on a nylon oversuit as an extra layer to keep out flushing (this was the configuration I'd used to dive out from Daren a week ago) but left the oversuit in my car. I carried a bag with a rocket tube containing 4 kg lead, a stove, cup, instant latte coffee sachets, 2 small tins of sausages and beans (the only cans I could find with ring pulls), chocolate and salted peanuts. I'd also packed the bag with a single-skin 4-man tent bought on special offer in Tesco and destined for 24 at some point. I used a pair of smaller tanks – 6 litre water capacity with a 200 bar working pressure. This was more than enough for the dive, but it didn't allow me an extravagant reserve.

I arrived just behind Gavin in 22 cursing the fact that one of my regulators was giving me a very wet breathe due to debris (from Pwll-y-Cwm probably) trapped under the exhaust diaphragm. Ordinarily I would have stripped the second stage and fixed it for the dive out, but this didn't seem necessary. We set up camp above dive base on a convenient area of sand. This was close to the place where the Cave Link communications unit had been placed on an exercise in 2018. Our spot gave us a commanding view not only of the dive base, but also the point where the line surfaces in 22 if one ignores the branch line to a more convenient de-kitting area. By the time the reconnaissance team of Craig Holdstock (who is an anaesthetist) and Gareth Davies arrived with the Cave Link unit in a dry tube we were starting our second brew. Charlie Reid-Henry arrived soon after with one of the 12's for me. We were not able to get the comms working but received one message (sent from outside the cave) and were unable to reply. Eventually Charlie was sent out as a runner (swimmer?) to inform the others what the situation was. No-one had a slate to write stuff down on. It turned out the Cave Link sets has not been "paired" on the surface (the sets were from different teams) and this was why we were

unable to talk to the unit in Chamber 9.

Chris, Laura Trowbridge, Josh Bratchley MBE and Robert Thomas arrived with the spinal board, rigid stretcher and other stuff passing Charlie as he was diving out. I walked down to dive base and was put in the spine board standing up to save time (I was not warm and there seemed no point in making me cold doing it lying down). I donated my surplus buoyancy compensator to add buoyancy to the rigid stretcher (which we had decided not to use since I'd made my own way to dive base) as it was very heavy in the water. No-one had a tool kit to change the hoses over, so it had to be orally inflated since the hose for it was on one of the regulators for my 6's which Gavin would carry out. My fins were put on me, and the big cylinders offered up to my sides. These required clipping on at the waist and by the shoulders so that the tanks were held close to me. There was one moment where I thought to myself "Oh fuck! What have I let myself in for?" but this soon passed.

In the water I was neutrally buoyant – I think that some lead was added to me to give the wing something to work against when shallow and I felt comfortable. Following John Volanthen's advice, I wore cutters on both arms as well as my dive knife. I made sure that I had felt down my body to know where all the straps were. I also kept my lightweight harness on closest to my wetsuit. It occurred to me that I needed to be able to wear tanks to dive out if we had to abort, or worse still, cut myself out of my bondage underwater. Everyone packed up to dive out and I began my journey.

I was able to pull myself along the inclined bedding underwater at the start of the sump that leads into the main river passage and even use my fins to frog kick (after I'd confirmed this, I just kept my feet together and let others do the work). I'd snorted some decongestant before diving and had no problem clearing my sinuses. I also swapped regulators frequently and only used 30 bar in total by the time I reached 19. Robert went ahead with Chris driving the stretcher while I kept one hand on the line and shone my handheld torch ahead of Robert's who was pointing his back at me. I tried to grip Robert's harness but couldn't: I feel that it would be reassuring if I had some contact with another diver – maybe I could have a strap to tug on to alert them but not be hard-connected to the lead diver.

My visibility was limited by the head restraint – I could only look down at the line but was able to fend off jump lines and other obstructions. We went at a cracking pace with Josh struggling to keep up – he was swimming behind and below me and able to see me changing regs. Gavin followed with my tanks having been instructed to pass me gas if everything went tits up. In retrospect it would have been better to equip



*Duncan on stretcher being hauled into Chamber 19.
Photo by Chris Jewell*

Robert with three tanks and act as back-up. After 7 minutes of easy going I was met in 19 (the sump pool that leads into Chamber 20) by Rob Harper and turned on my back – I had to be rotated horizontally with one cylinder rolled over my semi-submerged body. Ideally, one cylinder should have been removed and the stretcher turned over the top of the remaining one. Since the cylinders were tight to the stretcher this was not an issue. Lying on my back I kept the right-hand regulator in while the tanks were removed and had to swap mouthpieces in the water. This resulted in a mouthful of the sump. No-one was able to remove the left-hand second stage from my neck strap, so I drew my knife and cut the bungee knowing that I had plenty of spares at home.

When the second tank was taken off, Robert gave me air from one of his tanks with a regulator on a long hose attached to the cylinder. This sort of configuration is standard for diving instructors so that they can share air with students in difficulties. I stayed on air (holding the mouthpiece against my face with both hands) until the rigid frame was in place and I was hauled away from the surface of the sump pool.

I thought the haul went well – it was a slow process with ropes and pulleys having to be set and re-set. There were a few obstructions to get around and the chest strap was quite tight on me. I was comfortable even though I was still lying on the buoyancy compensator with the elbow of the inflation hose sticking in my side. Once placed in a flat area, I discovered that the team planned to carry the stretcher to the highest point in the lake chamber of 20 nearby and lower me on a Tyrolean traverse to the tourist walkway below. This was news to me, and I made my excuses to be let out of the stretcher so that someone who was not soaked in his own urine and in need of a fag could take over. As soon I reached the car park I

called Naomi and then texted John as promised, much to everyone's relief...

There was a debriefing session at the Mendip Cave Rescue store next to the Belfry (BEC HQ) in Priddy where several good points were made. Some of these I list for future reference:

- The tent was nice – it gave us something to do and provided shelter. Needs 2x2 m to put up (£17 from Tesco) and it is now in Chamber 24 for support divers to enjoy whilst waiting for divers to return from the depths beyond.
- Stove and hot food were excellent. Craig shared a Crunchie with me which was welcome. No one else apart from Craig, Gavin and I had food to my knowledge.
- Communications were abysmal – people seem fixated on technology. A hard-wired dual-wire or earth-return telephone cable could have been quickly cable-tied to the line.
- Every diver should have a slate and pencils. Every diver should have a BC – with as many spares as possible for trimming out heavy stuff – like the frame stretcher.
- There is no reason on earth why there should be any space left in dry tubes – pack them out with food, torches and balaclavas! Even on a practice.
- Put long hoses on the cylinders the casualty is using. Keep them on air where there is any danger of them taking on water.
- Finally, we agreed that I could have been taken out at 9(2) – even though it would have meant posting me through a couple of underwater squeezes – but at least hauling me out earlier gave the non-divers something to do in Chamber 20.

I'm now much in demand as a professional cave rescue practice victim: I was back in Wookey Hole for another event on October 1st where I was hauled high into the roof of Chamber 9 using a counterbalance technique onto the safety netting below a loose bit of roof (!) and then swung across and up onto the staging used by the Wild Wookey groups to abseil down from the high level series. I don't think those managing the haul appreciated such a stout caver being used as casualty.



For further reading on Mendip Cave Rescue check out this new e-book available as a free download from the Mendip Cave Registry and Archive website:

A HISTORY OF MENDIP CAVE RESCUES & INCIDENTS

Complete with photographs, illustrations and statistics from the M.R.O. and M.C.R. archives, newspaper reports, and log book extracts, this book covers 350 years of incidents from 1669 to 2019 with detailed accounts of each rescue undertaken.

by Alan Gray

Available to view or download in pdf format (767 pages, 15 MB) on the Mendip Cave Registry and Archive website www.mcra.org.uk

You've been home for two hours after a long day caving. The wet kit is hanging and just started to dry, a meal is cooking, and you've had a shower to wash the dirt and some of the aches away. After the meal you plan just to sit down and relax until it's time for bed.

The telephone rings!

A party of six trapped by flood water below the 20 in Swildon's Hole. The meal is forgotten, although your stomach thinks otherwise, wet caving kit is thrown into the car. It's dark and still raining.

This will be a long hard rescue...

