

## The Story of these photographs of the Ninth Chamber of Wookey Hole Cave

By R. E. Davies

The Cave Diving Group Letter to Members No. 11 records the discovery of the Ninth Chamber by F.G. Balcombe and D.A Coase on 24 April 1948. This chamber is 350 feet from the telephone base in the Third Chamber and plans were made at once to photograph it. However, five years passed before this was accomplished on 28 June, 1953 on the first visit to the chamber since G.I Marriott left it on 9 April 1949.

On 31 January, 1953 Balcombe and I started to renew the guide and telephone wire to the chamber, but owing to shortage of time and an incident involving a supporting diver the line reel was taken only part of the way and left on the floor below the Seventh Chamber.

The successful operation was on 27/28 June, 1953, and was carried out by the divers : F.G. Balcombe, J.S. Buxton, D.A. Coase, R.E. Davies (i/c) and J.A. Thompson, assisted on shore by members of the Bristol Exploration Club and the Sheffield University Mountaineering Club. After some time spent assembling and testing the oxygen breathing apparatus, Balcombe and Coase set off at 23.35 hours to belay the new wire and get it to the Ninth Chamber. At 00.36 hours they reported by phone that they had arrived. They had had a difficult job climbing the mud slope to Nine and reported the wire they had paid was safe to pull on. The sound-powered phone at the Base in Nine had thus remained

functional in its waterproofed box although the signals from it were very faint and it had no bell, so a battery operated field telephone was taken through by the next party who also carried the cameras, flash bulbs, tools and emergency supplies.

Small cameras were put in Kilner-type jars, wrapped in rubber bags and put in the waterproof "frog-sacks". They thus remained at constant pressure. My (larger) camera, along with a tin of silica gel, was sealed with a candle flame into a bag of thermolabile plastic (Pliofilm), put in a tied rubber bag, in a pressure-compensated ammunition tin, in a frog-sack. This camera had the external pressure (up to 26 feet of water) acting on it, but the silica gel prevented the condensation of water inside which might have affected the mechanism.

Cameras were taken in a pressure- compensated frog-sack which had a 6 cubic foot oxygen cylinder connected to it and was fitted with a flutter-valve near the opening.

As the sack was taken deep and the walls collapsed, it could be blown up again with oxygen and this helped to keep it waterproof and, by increasing its buoyancy, made it easier to handle. Tools, tripods and less delicate equipment was carried in an unmodified frog-sack which collapsed and became much heavier the deeper it was taken.

The next party dived at 01.02 hours. Buxton, the least experienced, went first with the unmodified frog-sack, so he would have a clear view. Thompson followed operating the compensated frog-sack and I came last, available to help should the need arise. We moved steadily away from Base until we reached the Gateway, just past the Seventh Chamber, where Thompson signalled that Buxton could not find the way ahead

As the mud has risen. Neither of these two divers had been farther than this before so I felt my way along the wire, found the way down to Mudball Alley, slid down under the low roof and guided them through. Then along we crawled and up the long slope to Nine, where we turned to air breathing at 01.30.

The new telephone was connected and tested so Base no longer needed to man their phone continuously. The next four hours were spent in exposing the negatives of the accompanying photographs. They were all taken either with large or small size flash bulbs, and, in general, each flash was used by all cameras to ensure success. There were four cameras taken, but unfortunately the best one, belonging to Coase, developed a mechanical fault and could not be used. After the photography, a low-grade survey was made of the Chamber and at 05.30 we reported to Base that we were about to leave and expected to return at about 06.00 to 06.10.

We were all rather tired by now and had some glucose and Benzedrine before starting. During preliminary testing Thompson's Aflo had failed and he got back to Nine with a hand torch. This became temperamental and finally defunct during our stay in Nine, so the plan for return was :- Thompson and I go together using my light, followed by Buxton and Coarse with the normal and compensated frog-sacks with Balcombe as rearguard.

Thompson and I slithered down the mud slope for 26 feet into the Bear Pit with no trouble except for pain in the ears owing to sluggish eustachian tubes. However, at the bottom of The Staircase from Eight to Seven, Thompson found that the wire went into a narrow crack and could not be followed. Luckily Balcombe had warned me of this danger so after a bit of a gentle persuasion we managed to free it and found the way up. Once through I stood up in the gully where Marriott's body had been found and looked up and back.

There seemed to be a clear open route to the Eighth Chamber over the low arch of rock under which we had just emerged.

This fitted with my memory of finding Marriott's lost oxygen cylinder below the Eighth Chamber by swimming high above the floor through the Seventh Chamber and then straight down to it without following the low, narrow, awkward route taken by the wire.

The rest of the trip back was very pleasant with relatively clear water and the growing relief from strain which comes at the end of any long operation underwater. We got out at 06.15 with the good news that we had the photographs, and waited for the other three divers to come. Well, they didn't, so at 07.07 I went in to find out what was wrong and bumped into them coming out through the muddy water.

As soon as all the divers were out of the water Sybil (Bowden-Lyle) went off at once as arranged to send the usual telegram to my wife that we were all safe, but it turned out to be premature as both frog-sacks were lost!

In the Bear Pit, Coase had had trouble with a leaking face-piece whilst holding the wire, his Aflo and the compensated frog-sack. This left no free hand, and finally he had to let go of the sack and blow a lot of bubbles to clear the mask. Buxton saw this, thought there was a serious emergency, dropped his sack and went to help. They all got back to air in Nine, regrouped and came back to Base through thick muddy water with no sign of either sack. This was a blow. The cameras were worth well over £100 but the negatives were almost priceless. However, it was no use searching in that mud so we left the cave for breakfast, the first food for 16 hours, whilst the water cleared itself.

The less valuable unmodified frog-sack clearly was on the bottom somewhere, but the compensated one could either have sunk down or floated up. It certainly wasn't in Nine, but it might have been in the air surface of Eight above 24 feet of water. This was awkward because whilst only a swimmer could reach it, he probably couldn't sink it. The following plan was therefore evolved. Coase and I, as the more experienced swimmers, would swim by the high route to Eight, look for the one or possibly two sacks on the floor, and clip it or them to the wire with rope loops and karabiners. Every effort was to be made not to stir up the mud until the sacks had been sighted. If only one sack was seen Coase was to deal with it whilst I went up to the Eighth Chamber surface with 50 feet of wire on a reel, tie this to the bag and swim back by the top route to the Seventh Chamber where Balcombe and Thompson were to wait for us and act as beacons, since both Coase and I might be high above the wire in muddy water and thus need some target to aim for. These two divers were heavily weighted so they could then pull down the floating bag and retrieve it. Coase and I were to act independently and on the way out we were to signal to the beacon divers what we had found so they could follow the wire and collect the sacks. Any diver in trouble who couldn't get to Base was to get to Nine and use the phone. Base was therefore to man the phone continuously. We all renewed our oxygen and soda-lime supplies and hoped we had thought of all contingencies.

Coase and I did a practise swim in the Third Chamber to check trim and buoyancy and the four of us set off at 11.19 in fairly clear water. We had an uneventful trip through Four, Five, Six and Seven, but then got a shock when, on aiming towards the top route I went straight into a black wall of rock!

No way on was visible so I did a nose-dive for the bottom route with Coase at my flippers and got through a very tight nasty place along way to the right of the wire. This led to the mudball Alley all right and 20 feet ahead, well off to the right of the wire was one, and only one, frog-sack, not the one with the cameras in it. I went for this, looked round for Coase, but saw only the mud I had stirred. Whilst I was dragging it to the left, feeling about in the mud until I met the wire, Coase had passed me, reached the Bear Pit, seen nothing and returned.

I touched the wire as he was passing back along it, but could not make him understand that I had found one of the sacks.

It turned out later that the fastening of his main cylinder had come loose and it was flapping about so he was returning quickly. At Seven he gave thumbs down to indicate that he had found nothing and started back, but dropped his Aflo. His signal and his lack of leg movement while retrieving his Aflo from a crack alarmed Balcombe who followed him back to Base to make sure he was all right. On returning to his post he met Thompson coming out because he had been so confused with the movements in the mud that he thought that both Coase and I had come out. However, they soon settled that misunderstanding and went back to shine their lights as a guide for me.

In the meantime I had floated to the surface of Eight and was surprised to find no trace of the missing sack. After swimming right round and taking a spot compass-bearing for Nine (east) I went down to 15 feet and along horizontally until I hit a mud slope which to my great pleasure led to the Nine-One surface Here I had a rest and looked around, but not a trace of the frog-sack was to be seen. This was very tricky as it meant that the container was probably jambed somewhere under the water which was now getting rapidly opaque.

There was nothing for it but to spiral round the walls of the Bear Pit and hope. Before very long I saw it between the Eighth and Ninth hidden in a pocket in the roof at a depth of 12 feet and invisible except from immediately below. It was still the right way up. Very thankful and pleased I lay face up against the roof, pulled it down and towards Nine, then shot up out of control in a cloud of bubbles back to Nine once more. It had expanded a lot when floating up from 24 feet down in the Bear Pit and was several pounds buoyant. It dragged me up scraping the walls and when I surfaced I found I had lost the line reel and dropped my Aflo. The line reel is still there somewhere, but as my Aflo was clipped onto my kit I soon pulled it back into reach. It was easy to clip the sack to the wire in Nine and I lifted it out of the water onto a ledge for extra safety and had a rest for two minutes.

Whilst this caper was going on Balcombe and Thompson got worried because I had not glided down from above them and decided to come and see what I was doing. It must have been disturbing to them when they got to Mudhall Alley and saw no light at all above them, just cloudy water and rock. They then started back to their post again and were at the narrowest part when I caught up with them. My fingers sliding along the wire in the (genuinely) inky blackness touched another hand which at once seized mine and gave two taps, meaning go back to base. I returned the signal and we crawled to the Gateway again where there was more room and visibility was at least one foot. I signalled bags found, (two fingers up, and thumbs up) and tried to indicate that one was in the Ninth Chamber itself.

This needed five, then four fingers, but as five fingers up means dire emergency, this only led to confusion. The original signal was then repeated, I pointed the way for them to go, waved goodbye, swam back to Base, checked Coase was back, turned to air at 11.46 and told them the news.

At 11.56 Thompson appeared with a bad headache and dazed from carbon dioxide excess. Two minutes later Balcombe arrived with the first frog-sack. They had thought my signals meant that the two sacks were tied together (!) and when they only found one they returned. Thompson brought it back, but as it was very heavy in deep water and as he moved too quickly, he developed carbon dioxide excess, so dropped the sack for Balcombe to bring, and came out on his own. The important frog-sack was still in the Ninth Chamber and since the rest of the team was a dazed diver, a diver with unreliable kit and an inexperienced diver, there was nothing for it but for Balcombe and me to return to Nine again and collect it.

I removed my fins, added more weights to the belt and once more we fitted full oxygen cylinders and replenished soda-lime. We then tested the kit for leaks and entered the extremely dirty water en route for Nine. By now it was 13.01 hours, but this was a perfect trip without incident. Balcombe collected the sack and operated the pressure compensator whilst I followed behind and heeled it through the narrow places. We reached Base again at 13.25 and found that both sacks were still dry inside.

The accompanying photographs show the results of this memorable expedition to Wookey Hole.

Although we had been assembling and testing kit, photographing and diving for 20 hours this was not the end as there was still the 200-mile drive back to Sheffield. In fact, this expedition involved me in 42 hours without sleep, 400 miles of driving, 16 hours in the cave, 5 hours in the Ninth Chamber and 1hr. 41 minutes underwater!

Still it certainly was a fine operation, full of excitement, with the outcome un-certain until the very end. I hope the unique photographs we were able to obtain will give some idea of the Ninth Chamber of Wookey Hole Cave and will be of added interest because of their dramatic history. Their very existence depended on a piece of team-work unparalleled in the history of cave diving.

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R.E.D.

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Link to the photographs <https://www.mcra.org.uk/photogallery/index.php?/category/21>

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