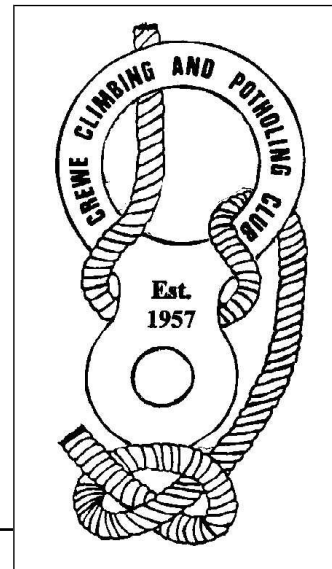


C.C.P.C. Newsletter 102 Winter 2010/11

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25th September 2010: Notts II, Leck Fell Yorkshire.

Eighteen C.C.P.C. Members and friends met up in Inglesport at 9.30 am., with twelve preparing for a trip into Notts II, while the others were intending to enjoy a day on the surface.

The caving group relocated to the parking spot alongside the lane at the first gate, high on Leck Fell, and the usual changing rituals began. There were two other cavers there already, just about to set off to Notts II, which was fortunate, as none of us had been in Notts II before and we had only a vague idea where the entrance was.

Jenny Drake and I were ready first, and set off through the moorland gate, and up the shallow valley where the other cavers had disappeared. Only about 75 metres from the road the valley ended, and a couple of recently planted saplings marked the location of the unlocked metal lid of Committee Pot, our route into the cave.

Climbing in through the small opening, you land on a small platform, with a narrow, vertical shaft dropping away into the darkness. The whole shaft is free-climbable, being supported on all sides by a web of scaffolding tubes, concrete, brick and breeze-blocks, with various lengths of aluminium ladder lashed in place wherever possible. We descended with great care, for about 50 metres or so, amazed at the effort this excavation represented. I'm told that the diggers worked on this task for about twelve years, tunnelling vertically through the rubble and glacial fill, to reach the known passages of Notts II, which were previously only accessible to divers, via the Notts Pot downstream sump. The breakthrough occurred on 23rd November 2000. Amazing.

The shaft eventually bottomed out at a gravelly floor, with a large window through to the base of Mincemeat Aven alongside, but the onward route was low, under the wall, and down a couple of descending squirmy crawls to the head of a short ladder-pitch (about 5 metres). The two cavers ahead had already rigged this, which was fortunate, as the Crewe ladder was still with the rest of our party on the surface.

Jenny and I descended, and then followed a small climb down into a walking passage, with a tiny dribble of water leading onward for about 50 metres to a junction with the main stream passage, which we entered from the left, just where it made a sharp turn to the right. Our route in was named Inlet 13 by the divers, an indication of the number of side passages they discovered when they broke into this amazing 1.3 Kilometre master-cave (at least sixteen inlets have been discovered so far).

Jenny and I set off downstream, following a superb canyon-type passage, with the water racing along ahead, rushing down small chutes and cascading over occasional jammed boulders. In places individual large boulders, were jammed between the canyon walls above. After several hundred metres we passed a rope ladder which was hanging down from a passage high up in the left wall (Inlet 14 ?), and soon afterwards we reached an area where the stream cut down via cascades to the lip of a 2 metre

drop. This was easily passed to enter the boulder floored Kleine Scheidegg Chamber, where the character of the stream-way changed dramatically, with the water disappearing under the wall as a flat-out crawl. An oxbow to the left gave a slightly larger entry to the cobble-floored continuation, but we were still forced to crawl and squirm along in the water (so much for keeping dry !!). The low passage walls and roof were covered with white foam – evidence of recent flooding – and after only another 50 metres or so we reached the sump (30 metres through to Notts III), and thankfully retreated to the previous chamber, soaked to the skin. Looking around, it was startling to see the flood high-water mark at least 20 metres up the walls of Kleine Scheidegg – not a place to be if the water was rising. We headed back up-stream, checking out the rope-ladder passage on the way – it turned out to be a long hands and knees crawl to a dig !

Passing our entry route via Inlet 13, the main-stream canyon continued, with a shower-bath marking Inlet 12 above. We met the two cavers who had entered ahead of us, making their way out, and they told us that the rest of the CCPC party were upstream, ahead of us.

After a short distance the character of the stream-way changed (nick-point) from the high, narrow canyon, to a wide rectangular cross-section passage, with numerous formations festooning the walls and roof. The stream gradient was less, with large, wall-to-wall pools, and slow moving shallow water running amongst the jumbled boulders scattered across the passage floor. Jenny and I ignored the obvious inlets and kept to the main passage until we re-joined the rest of the group, who were busy taking photos or just enjoying the fantastic formations - one particularly huge stalactite, hanging in solitary splendour from the roof in the middle of the passage, has been named 'Vlad the Impaler'. Des and Gill and others had turned off to the right, but the rest of us carried on until eventually we reached an area where the passage walls began to close in, and the water became steadily deeper, forming a canal. Several hardy individuals tried wading, and then swimming, but this was basically the up-stream limit, being the downstream end of the 210 metre sump which the divers had passed to break through from Notts Pot into Notts II.

I had a wander up Inlet 2 (?), just on the left, off the ledges above the start of the sump canal, but I turned back after about 50 metres, although the route continued as a wide arched passage with a mud floor (this leads through into Passchendaele).

We all wandered back downstream and followed the route Des had taken up a major side passage (Inlet 5), with Ralph leading us through a short crawling section into a rift chamber with a hand-line climb, 'No Privates Climb', on the right at the end. This was so named because of the 'shark's-fin' of sharp limestone awaiting anyone losing their footing while struggling up to the passage above !

With no sign of Des's party a few of us pushed on along the crawl at the top of the climb. The low passage must have originally been stunning, with thousands of pristine, white, straw-stalactites, and small stalagmites, but the present situation is really squalid. A liquid-mud-filled trench stretches away into the distance, with many of the roof formations broken off, and the remaining features splattered with mud, where cavers have slithered through. I reached a slightly wider section where Gill was waiting, and decided that I was going no further, but Ann Austin (hardly recognisable under her 'chocolate' covering) pushed on through the next low section. Somewhere beyond, there are good 'pretties' and the passage apparently breaks out into 'The Extension', a large stream-way between a choke and a sump. Back in the main stream-way Sharon and I washed off the worst of the mud then started downstream with Ralph, who had remained remarkably clean and dry as usual.

After about 80 metres Sharon and I explored Inlet 6 – Curry Inlet (the original divers had a meal-break of Hotcan Chicken Madras here) - a major passage on the right, which contained the most incredible formations we had seen anywhere on the trip. I was glad to see that a conservation route had been marked with plastic tape to try to ensure visiting cavers did not inadvertently brush against the gleaming calcite cascades, or knock off roof formations with helmets. As we returned to the main route Keith and the other two Steves arrived so Sharon went back to play tour guide (and photo-model) while I went off to catch up with Ralph.

200 metres downstream from Curry Inlet I passed the low, muddy entrance to Inlet 7. After 50 metres this passage reaches a junction, where turning left quickly leads to the impressive Oliver Lloyd Aven,

with its twin waterfalls. This aven, 27 metres high, is the fourth and final pitch of the new Voldemort Pot entrance into Notts II.

When I caught up with Ralph, he was with Jenny and Ann, just starting up the caving ladder pitch at the beginning of the long climb out to daylight. Once clear of the pitch, Jenny and I headed off up the entrance shaft, leaving a rope rigged for the others to use for self-life-lining. The four of us were soon out, enjoying the brilliant sunshine, and it wasn't long before the rest of the group started to appear. This was a brilliant trip, just rounded off perfectly with a pint at the Marton Arms, Ingleton. The most frequently repeated comment heard today was, "Why haven't we done this before?" No doubt we'll be back for more.

The Cavers: Ann Austin, Sharon Brandwood, Steve Colley, Neil Conde, Jenny Drake, Ralph Johnson, Keith Joule, Des Kelly, Gill Kelly, Martin Kelly, Steve Knox, Steve Pearson-Adams.

Colin 'Steve' Knox

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'Descent' articles about Notts II:

No. 159: April/May 2001, pages 20-22, *'The Quest for a Dry Way'* - Andy Walsh.

No. 179: Aug./Sept. 2004, page 35, *'Nice Weather for Ducks'* - Dave Ramsay.

No. 183: April/May 2005, pages 20-22, *'Pleasures of the Palm'* - Dave Ramsay.

No. 185: Aug./Sept. 2005, pages 26-29, *'A Little Light Relief'* - Dave Ramsay.

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To find Voldemort Pot:

From Notts II entrance continue in an easterly direction up the slope, past the rocky outcrops at the head of the shallow valley. Cross the heather covered moorland to the derelict stone wall about 165 metres away. Turn right, uphill, along the right side of the wall for 150 metres, to where the wall cuts through a deep, steep-sided shake-hole. From the lip of the shake-hole turn right and look for a vague, heather-filled drainage ditch, trending west. The entrance is in the ditch, about 33 metres from the shake-hole, just before the ditch reaches another, very shallow shake-hole. The lid is a plastic grid with rope handles, with a 3 metre deep shaft below. [Jim Sloane: flickr]

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Croesor Rhosydd 10 October 2010

For photos of Croesor, its boats and bridges <http://www.aditnow.co.uk/photographs/Croesor-Slate-Mine/> is well worth a visit. Note that the pretty wire bridge now lies under the water, due to a collapse.

Nine of us took the long walk up to Croesor initially via the 4x4 track to the North from the Cwmorthin car park. We then followed odd pieces of yellow tape to Rhosydd before crossing to the Croesor adit, a doddle above ground on a nice day. The mines closed in the 1930s and the lower halves are now under the water table. Getting through them means crossing many flooded chambers and the trip can easily average 6 hours for well-prepared visitors, who know the route. Others may need to plan to keep themselves warm, fed and watered for longer as 15+ hours and a call-out to North Wales Cave Rescue is not unknown.

Once kitted-up and on our way, the first obstacle was not long in appearing. An 80ft abseil into the huge, crumbling Chamber 1 East. Waiting to go down the pitch we had time to admire the flakey roof and the floor strewn with massive boulders. We could hear slate falling as people abseiled down and I abseiled very gingerly when it was my turn. Nothing fell. At the bottom, I was on my own as the chamber is not safe enough for the previous caver to wait for you. Unclipping from the rope, I tiptoed very quietly out into the middle of the chamber, unsure of the way on and having to decide whether to scramble over 10ft blocks or go around, whilst trying not to look at the roof. Al, who was in front of me, regularly looked out from the safety of a window at the far end of the chamber, which helped to

guide me. A few years ago, a group was rescued from here after a massive block fell from the roof and although no one got squashed, the shock was enough to stop them in their tracks.

Next, another abseil of a similar size, again, done with care to avoid loosening the slate above you. Many bits of rope protection such as garden hose had to be removed and replaced above you en-route and this prolonged the agony of feeling like a tiny fly just hanging there waiting to be swatted.

I am not sure about the order of the other obstacles but I think that the first boat trip was next. Here the water level (and boat) was two foot below the mine floor. With the aid of a knotted rope and Simon also lowering me on a safety rope, whilst holding the boat steady with a piece of string, I probably did a good bum-first entrance into the boat. One of our party fell in here and had no buoyancy aid but managed to grab the boat. He must have been very cold on the rest of the trip as it is very, very draughty all the way through.

The remains of the first bridge were a couple of comfortably thick dods of wood with safety lines to clip on to. Watching other people go across first and wearing a buoyancy aid meant that I was not concerned about crossing. Towards the end the wood felt soft and swollen though, so it is rotting.

The concentration required for clipping on to the right safety lines/zipwires etc means that you do not even notice the drop. In fact, I forgot to look. The various bridge crossings had better roofs than I expected. I had had visions of the whole lot giving way and me being squashed or drowned and squashed. Throughout the trip, the fixed ropes and zip-wires were in good condition.

The main zipwire is really fast. I had to say "1, 2, 3" a couple of times before I walked off the ledge. Simon had told me to stop half way to get a photo but pulling on my safety connector didn't slow me down. Anyway, I grabbed the main safety line and sat there swinging above the flooded shaft while Simon took a picture, aware that I was hanging over a long drop into very deep, cold water.

Another zipwire crossing is in the chamber that only has one sad and lonely cross beam suspended from the roof. Needless to say that I did not stop for the usual photo opportunity but lifted my legs and sailed over it to safety on the other side.

The final bridge is in two halves. The first half is a 2 inch wide tram rail, 15ft long, suspended half way by a rope, with safety wire and rope to clip onto. Then you stand in the middle on a large cross beam, haul yourself up a couple of feet to clip onto another short zip wire and safety line. This one is horizontal and there is no run up, so you pull yourself along. Don't forget your gloves!

Straight after this is the 'Chamber of Horrors'. From above you can see the sad remains of a couple of plastic boats under the water and you hope that your boat does not suffer the same fate. You abseil down 15ft into a boat, again trying to get in bum first so as not to tip it up. I landed okay but there was a horrible hissing sound at first which I promptly forgot as I was hauled across the water by a string pulley system. Before I got there and luckily while no one was passing in the boat, the pulley system dislodged a lump of slate from the central pillar, which splashed into the water and was large enough to have taken out the boat and the occupant. We were going to cross this chamber in twos for safety as the boats do not last many trips due to the sharp slate. Unfortunately one boat only made it across once before it was unusable. Another member of our party fell in at the end of the second boat trip and started to sink but Evan was tied on safely and managed to grab him. Apparently, in caving suit and a furry, without SRT kit, you can swim/float for around 30 seconds, so if the idea of swimming a flooded shaft ever seems like a good idea, think again unless you have a buoyancy aid that you are sure will keep you afloat.

From this chamber a short prussic up takes you through to the last bit of Croesor and into Rhosydd. This mine was in a much poorer shape. A 40 degree slope of various sized slate scree, which moved as you ascended, was not my idea of fun and as we had to crouch under a low roof, we couldn't help but see it move. 'Oh no, I have undermined the slope' kept going through my head. Would it be my fault that the people below were buried or would someone above me be responsible for part of me being chopped off? Once we had climbed one, we had to go down another one. Same problem except you could see the friends whose lives were in your hands.

There is a collapsed 'Twill' (hole) where the chambers have broken out to daylight. It is very beautiful from below, you feel that you are nearly home and some groups choose the difficult walk out here. Another previous group was rescued from around here as they had started out late in the day and then thought that they were lost because they could not see daylight!

I was grateful when we made it to the adit to make our way out for the long walk back down to the cars.

For the last two years I have turned down this trip as trip reports made it sound like too much adrenalin for me. It is unlikely that I will be going back except a part of the Rescue Team for lost/strayed/injured/squashed.

As the mines are in a state of constant collapse, you need to carry the kit to get you through and to sit and wait for rescue. The route and kit required changes as parts collapse. Pulleys, boats, ropes, slings, floatation jackets, spare everything and an idea of how you would get out on your own are probably prerequisites to a trip. Better still go somewhere else.

Heather Simpson.

Is this a record?

22 Jan saw 25 (yes, twenty five) of us assembled at Bull Pot Farm ready for action. It was pretty obvious that one cave couldn't cope with those numbers without loads of hanging around so eventually we ended up splitting into 3 groups. County to Wretched Rabbit, a circular route down Lancaster Hole with the rest in BPOTW. Maybe Darren should stop informing members of the whereabouts of future trip!!

Speedwell.

Three different jobs under way!

1. The management had come up with an elaborate plan for installing a pump on a swinging arm based at the waters edge down The Bottomless Pit. Fortunately, thanks to Len, the swinging arm was manufactured in record time the total cost amounting to zero! Various personnel were involved in installing the pump and connecting up the water and power supplies despite being hindered by the pump manufacturer supplying the wrong fittings – on 3 occasions!
2. A light had “failed” 20 metres above the deck immediately above the low water mark again at the Bottomless Pit. A dubious rope placed by Moose Nixon many years ago hung down from anchors of unknown quality and when questioned Moose advised against climbing it (I think we had already come to this conclusion). Our plan was to climb the dubious rope placing thunderbolts for protection every meter or so. Sadly after about 1/3 of the way, despite all our efforts, this method failed due to the wall overhanging more than we anticipated. We ended up bolting up the wall for the remaining distance placing compression anchors immediately below and the above the top of the overhanging section. On arrival we found that the lamp hadn't failed but the glass was very badly shattered causing a “frosted effect, probably due to rapid

flooding when it was hot. John Harrison produced a new light which is now working well. Plans are afoot to recover an old pump from the pit and another from the Bung, the latter is to be refurbished and kept in a state of readiness.

3. The pipes placed on Leviathan at the bottom of JH had been lengthened in an attempt to prevent the water percolating through the boulders that form the floor of the shaft causing them to slump as the tailings are washed out. This was rather short resulting in cavers having to pass a duck followed by a ladder climb similar to that on The Bung before accessing JH. There was an added danger in that the water could continue to undermine the boulders forming the floor from below. Several visits were made and the pipe has now been extended as far as the Speedwell Streamway. Plans are underway to either replace or repair the “overflow” pipe running down Leviathan from the second “overflow” dam. Watch this space.

“The following article was written (By Alan) for the forthcoming edition of Pennine Way-the journal of the Pennine Fell Runners. Hence the oddball title, and over-the-top explanations!”

Cross Training, or Caving with a Difference:

How many Cavers does it take to Change a Light bulb?

It all began in Speedwell Cavern back in October last year. Speedwell Cavern is one of the more remarkable show caves in Castleton: the normal tourist trip here is almost entirely done on a boat. Going back in history, this mined level began life in the late 18th Century as Oakden’s Level and became widely known as Navigation Mine because of the boats which were used to transport lead ore (galena) from the various rakes and mines on the hillside above back to the surface by an underground canal.

During the building of this canal, the miners broke into a huge natural chamber which they crossed at mid height by building an underground aqueduct. At the base of this chamber was a lake, which the miners used as a dump for all the waste rock they extracted during the creation of their canal tunnel. Funnily enough, the level of the lake never seemed to go up, no matter how much rock was thrown into the water, and, because of this, the lake was given the name The Bottomless Pit! However, the main reason that the lake never rises is because there are overflow channels which take excess water through the system to resurge at Russet Well and Slop Moll in the Peak Cavern Gorge down in Castleton village.

Today’s tourists are treated to a trip down a long stone staircase to a boat in the canal, and then they are taken on a voyage through the tunnel to view the Bottomless Pit. Miners propelled their boats by lying in the bow, and walking their feet along the ceiling of the tunnel (known as “legging” - far cheaper than pit ponies). Modern cave guides sometimes do this for effect, but usually they rely upon an electric motor for propulsion.

With regard to Bottomless Pit itself, the idea that the lake never rises is, unfortunately, false. The lake can and does rise when the Peak Speedwell system floods, which it does up to six times a year during periods of heavy weather, or when lots of snow is thawing in the Peak District. And it can rise to quite a dramatic height - sometimes well above the level of the canal itself!

Because of this, back in October, some of Crewe Climbing & Potholing Club’s elder statesmen (including yours truly) were working in the Bottomless Pit with the intention of setting up a series of float switches which would be triggered whenever the water level of the lake reached specific heights - causing warning lamps to flash in the shop on the surface, and giving the owner plenty of time in which to curtail any trips down the mine. Setting up the switches wasn’t the problem; the really difficult bit was rigging a series of pull cords and guides, so that employees standing on the viewing platform could perform a weekly test to see if the float switches were working correctly. There is no access to the Bottomless Pit, you see, other than by means of SRT (Single Rope Technique, a posh term for sliding up and down bits of rope).

During the work, we were also asked to look at a light which was some seventy feet or so above the normal level of the lake, concealed behind a rock arch. This lamp, which was used to illuminate the lake for the tourists on the viewing platform, had become very dim, and, in the opinion of the cave owner, needed a new bulb. However, the light had not been visited since the original installation some 15 years previously, and the only access to it was via a very old and decrepit-looking rope which hung from the centre of the huge, domed chamber ... a rope which looked very worn and furry indeed.

This old access rope had been installed by the same chap who discovered, among many other things, a huge 300 foot shaft called Leviathan, and the even taller (and more famous) shaft known as Titan - a local caver who goes by the name of Moose. So, as you might have guessed, the appallingly exposed and overhanging nature of the approach to the light's position didn't bother Moose one bit; he had simply bolted his way up the impending walls to get there. But when asked about the rope he'd left in position, Moose agreed that it was very old, and definitely need replacing.

So, not really wanting to trust the old rope itself, we looked for Moose's bolts. These would be "spits" or threaded compression collars, sunk into the limestone so that a caver could screw a bolted hanger into the rock for use as direct aid in climbing etc. Unfortunately, as already stated, the Bottomless Pit has probably flooded almost to the roof some ninety times since the introduction of this lamp, and, because of this, the walls are liberally coated in a thin layer of black, sticky mud. Finding spits in this would be very difficult, and, even if they could be found, they were quite likely to be rusted and clogged with mud and gunge.

Consequently, a couple of weeks later I started bolting afresh. I didn't use spits, like Moose did, but a kind of self-tapping rock anchor which has come to have the generic title "Thunderbolt" amongst cavers, but which is usually marketed as something like Multi Monti, or Ankerbolt. Unlike spits, these just involve drilling a hole 8mm wide by 60mm deep, and then screwing the anchor in, and the advantage over spits is that the rock isn't compressed in any way, and the bolts can be removed, and even replaced with stainless steel bolts if needed, using the original hole as a pilot.

The plan was to prussick up Moose's old rope and, at the same time, lay a series of Thunderbolt "runners" so that the climber could be protected by a second caver on the shore of the lake, using a climbing rope and Grigri. Moose's rope had been clipped into an old corroded bolt about 20ft above the bottom, and it was beyond this point where the route started to overhang most dramatically.

The bunch of "Elder Statesmen" referred to above is known in the caving community as "The Coffin Dodgers" - basically a group of pensioners-cum-cavers under the direction of Ralph Johnson, himself possibly the oldest caver on the planet, who have precious little better to do than to go about the Peak District caves and mines repairing things that are broken, and doing any other odd jobs that might be thought to be useful. And, at the same time as the Bottomless Pit lamp job, we had another job on the books which also happened to be in the back of Speedwell Cavern.

As you may be aware, Speedwell connects to Peak Cavern by either the (very pretty) White River series or the (very aptly named) Colostomy Crawl ... and you would never believe which is the most popular of the two routes!! Although the Speedwell entrance is not generally available to cavers, there are two high entrances which are used by cavers quite frequently. One is the above-mentioned Titan (incorporating the largest single pitch in the country) and the other is James Hall Over Engine Mine (JH for short), which, when taken all the way through to Peak Cavern, provides the deepest caving trip in England. Trips from Titan or JH to Peak are justly popular, and both pass through a back-filled stretch of boulders and "tailings" (a miners term for the finely ground gravel which is left over from "dressing" or mineral processing) at the foot of the Leviathan shaft - this pile of boulders is known, believe it or not, as "The Boulder Piles". Who says cavers can't come up with imaginative names?

Recent movements of the huge rocks in this section were causing more than a little concern, and, although the immediate instability had been quickly remedied by shoring sections of the boulders with scaffolding, the root cause of the problem still needed addressing. This was the water from Leviathan, which had been redirected by the original explorer (Moose again) in the mid 90s, to enable a mud sump to be passed - it was on the other side of this sump that the base of Titan was later discovered.

The redirected water was, however, washing tailings from around the backfilled boulders, causing the loosened rocks to collapse. Our job was to make this water pass through the section via a conduit formed by large diameter plastic pipes.

So, in amongst dangling and drilling our way up to the errant lamp in the Bottomless Pit, we also had to go and navvy in the Boulder Piles, and this was no mean feat either, for just getting there meant wading through half a kilometre of ice cold water (yes it was the other half of the miners' Speedwell canal) which varied between waist and neck deep.

My next two trips were involved more with the Boulder Piles pipes, although I usually dropped down the Bottomless Pit rope on the way back to see how work was progressing with the lamp bolting. In my absence, ex BMC Treasurer Brian "Griff" Griffiths had been press-ganged into doing some of the bolting during this period, and he was ably assisted by Christine Wilson, a Peak cave leader and Masson caver (and definitely NOT a coffin dodger ... yet).

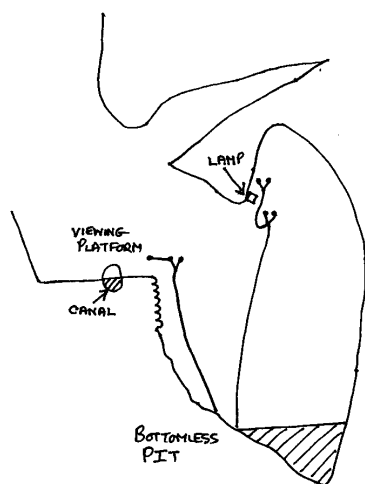
After one trip where the pipe work had been well and truly extended beyond the tailings section, I returned to the Pit and abseiled to the lake shore. Christine was just below the light, drilling away with a very Disney-esque stream of limestone "fairy dust" sprinkling down from where she was working. Shortly after my arrival, she ran out of thunderbolts and descended to the Lake, whereupon I agreed to take up the new replacement rope and two stainless steel goujons (bolts) and fix a Y hang for the new rope just above her high point, a few feet below the lamp. The following week, we returned and I ascended past the lamp and fixed another stainless steel Y hang on the new rope above the lamp.

Having anticipated that the job was nearing completion, I had brought along the new bulb and so, working my way back down the rope, I got to a point where I could unscrew the 6 self-tapping screws which held the front lens of the lamp unit. Unfortunately, I didn't think to bring anything to keep the self-tappers from falling into the lake below, so I had to put all six in my mouth ... and cross my fingers and hope that I wouldn't need to shout down to Christine.

Screws out, I wedged my multitool into the lamp and levered the glass free - to be greeted by the kind of bright, glaring light which would stop any God-fearing saint dead in his tracks, whether on the road to Damascus or not. Remember, I was dangling above 70-odd feet of blackness at the time - not the best situation in which to jump out of one's skin! So, trying not to open my mouth and let the screws drop, I closed my eyes and waited a few moments to let myself get used to the new brilliance. What had I done, I wondered. Was it a loose connection which had just re-connected itself? Should I get Ralph to shut off the supply? No, I thought, no shouting ... please!

And then I noticed the glass. Like the windscreen of a car that has been hit by a small stone at seventy miles an hour, the whole pane was shattered. Crazed, white lines and tiny squares had turned what should have been clear glass into an opaque piece of ceramic. This, if nothing else, proves how high the flood water gets, because it must have been caused by the heated glass of the lamp meeting the cold water of the lake, and, suddenly contracting with a literally "crazy" effect.

So, coming up with the very original phrase "Let there be light" (quietly mumbled, of course, because of my gob-full of screws) I punched out the glass with my gloved hand, showering a different kind of fairy dust down into the lake. And, indeed, there was light! I bet the tourists on the viewing gallery were impressed!!



On the way back down, I started to remove the thunderbolts, which were now superfluous as we had re-rigged the whole access route with good rope and good anchors. However, as I descended, the overhanging series of bolts got further and further away from the fall line and, because I still had loads of bolting gear dangling from my waist, not to mention a pretty hefty drill and a double battery in an ammo box, my puny arms started to feel like over-used pipe-cleaners as I slowly unscrewed each bolt and twanged with a steadily increasing feeling of insecurity out towards the middle of the vast chamber. Eventually, about half

way down, my weak arm muscles had had enough, and I was forced to concede and abseil down to the shore and let Christine (who at least didn't have the drill etc, and in any case has arms like Popeye) finish off the job of pitch-stripping.

A week later, we returned yet again to remove excess rope, to consolidate the anchors, and to set up a releasable deviation so that the access rope could be pulled out of sight when not in use. And the week after that the Coffin Dodgers' pet electrician, Darren, took advantage of the safe access and replaced the whole unit.

What now? Well, current work involves sorting out a clogged up dam some 30 metres up the great Leviathan pitch, and repairing some of the aerial pipe work which Moose installed back in the 90s to divert the water towards the Speedwell streamway. Can you see a theme developing here? Maybe, but, as they say ... never a dull moment!!

Alan B.

The 2010 Boulder Piles Problem (originally written for TSG newsletter).

I've been asked to write this report on the work which has gone into keeping the Boulder Piles route at the back of Speedwell open. I am aware that many people have helped with this project, and that there are certainly more than the few mentioned within this report. Apologies for this. Ideally, Wayne should create a Blog on the new Peak Speedwell site so that all work can be recorded easily and by anybody. This will enable a "round-up report" like this to be much more inclusive and accurate. I will be extremely grateful to anybody who spots any significant omissions and gets in touch with me to help to fill in the gaps!

The Boulder Piles refers to a feature which disrupts the lively Speedwell stream as it passes from its birth at Main Rising to its downfall at the Bung. As the name implies, it is a pile of huge rocks which bisects the stream, forcing it to find its way through the cracks between the boulders, and, in times of flood, causing the stream to back up to great depths. Although you can climb over the boulders to get from one section of the stream to the other, looking up, you can see that the boulders continue upwards - you are going through the choke, not over it.

Although I call it a choke, it is doubtful that it is in any way a natural feature. The passage from here to the end of the Far Speedwell Canal is liberally blessed with many stemple slots, indicating that the miners had some kind of platform or even a tramway running down to their boats, and it is likely that the area filled by the Boulder Piles would have been open to the foot of Leviathan in those days. The situation we have now was almost certainly created by the Old Man as a back-filling operation in the latter days of mining operations, whereby large slabs of rock were stacked and cemented together by tailings.

Being very accessible from Speedwell, the Boulder Piles have been known about for a long time, but it is doubtful that the early explorers realised just how critical a section of cave this dramatic pile would become. For today it is the key to two justly popular routes - Titan to Peak, descending the deepest known natural shaft in the country, and JH to Peak, currently the deepest caving trip in England.

Consequently, when SUSS caver Brendan Sloan reported via the UK Caving forum on April 22 that the boulders had moved, and that the situation in the Boulder Piles was deteriorating, several of us in the caving community realised that this was a situation that needed addressing as a matter of urgency. Unfortunately, Brendan's forum post coincided with a second report concerning the state of both the stonework and the laddering at the Bung dam, yet another key feature on the critical path between either JH or Titan and Peak Cavern.

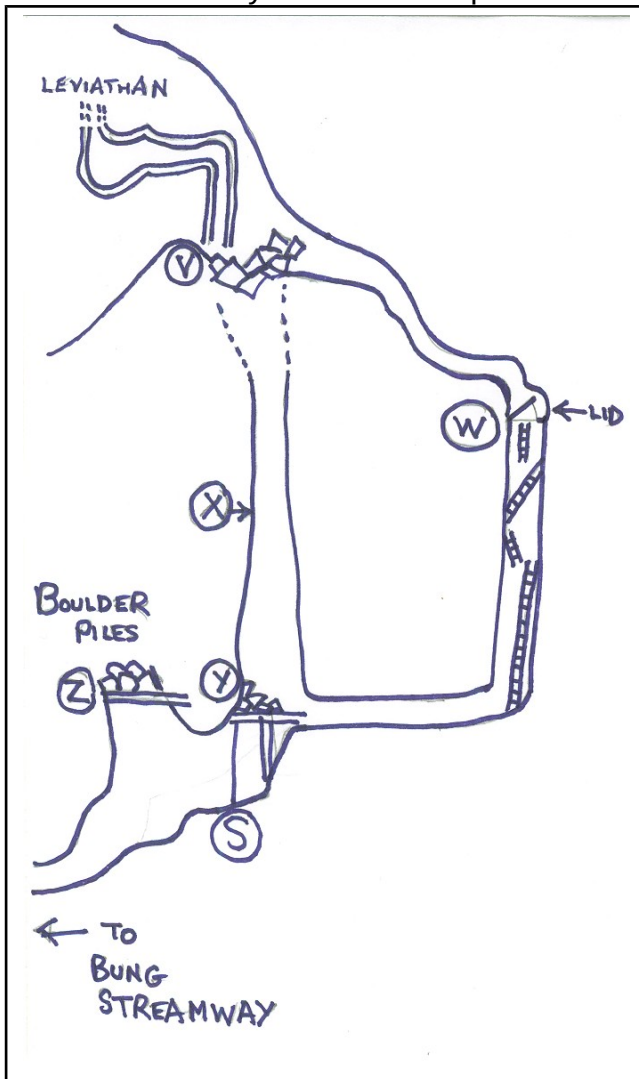
After some initial investigations by Martyn Grayson and others, it appeared that the situation was becoming more stable, although it was agreed that the source of the problem was water from Leviathan above which was removing the tailings from between the boulders. During this period, the water in the Far Canal was almost non-existent, with the only deep pool being right at the Bottomless Pit end. This enabled groups from SUSS, TSG and CCPC to take engineering equipment, scaffolding, mortar etc through to Far Speedwell with relative ease. It

also enabled the essential work on the Bung dam wall to be completed, and the old ladder to be replaced by a spanking new stainless steel one!

While helping with this other work on the Bung, in addition to some clearing up which had become necessary in Cliff Cavern, I took some photographs of the Boulder Piles situation and made a rough survey. It was clear that the Leviathan water, which was raining down on the section of choke just before the solid ladderway tunnel, had managed to create a new shaft between the solid rock and the pile of boulders and tailings, and that the latter pile was in danger of further collapse ... unless this water could be re-routed somehow. Coincidentally, around this time, I had an interesting discussion with Ron Hammond about both the Boulder Piles and the dams, while doing some radio location near Ecton. This chat, and a fine paper by Dave Nixon from PDMHS Bulletin Vol 13 No 3 from Summer 1997, confirmed that the situation as we understood it was correct. I wrote up my findings and listed several suggested solutions - not all mine by any means. The report detailed below was distributed in an attempt to get things moving while a few of us went on various jaunts abroad.

REPORT ON THE PROBLEM AT THE BOULDER PILES, SPEEDWELL CAVERN

This is a summary of the current problem based upon several visits to the Boulder Piles.



The ribbed Leviathan pipes are approximately 5" (black) and 4.5" (green) in diameter and appear to join together with a sleeved fitting with outer clips. During the original work creating the connection between JH and FSE, these pipes were introduced, together with a dam, to redirect water away from the FSE entrance passage, which was sumped, and into

the Bung Streamway. The exit flow from the pipes is directed onto the Boulder Piles (point V) at the opposite end of the chamber from the entry to Far Sump Extensions.



The caver descends from here to the Bung Streamway through a lockable, double-hinged trapdoor (point W), which also acts as a draught-excluder, to a series of ladders down a natural shaft leading to a crawl which heads back under the Boulder Piles.



This crawl soon meets the piped water as it tumbles down a shaft formed by a gap between the stacked boulders and tailings (point X) and a solid rock wall.

Here (point Y) there is a section of scaffolding which was put in place when JH was originally connected to Speedwell. Water washing down the wall of rocks and tailings (point X) has eventually loosened some of the rocks which have fallen onto the scaffolding - which now appears to be deformed.



The quantity of rock supported by this scaffolding is not great, and could be re-stacked locally with suitably skilled man-power - this would remove the immediate danger. The on-going problem is the water washing down the rocks/tailings side of the wet shaft which is exposing further boulders and these will eventually fall (some distance) onto the same scaffolding. The picture below was taken directly up the wet shaft and shows the wall of rock and tailings to the right, and the solid wall to the left. The boulder just right of top centre is a good example of one being exposed by the downwash.



Passing beneath this scaffolding etc., the caver descends beneath another section of boulders held up by scaffolding (point Z), although this appears to be quite stable, before entering a crawl which leads to the Bung Streamway. This last section has been covered with tailings which have been washed down by the pipe water.

POSSIBLE SOLUTIONS

1. As has been stated, the immediate problem of “hanging death” at point Y could be dealt with fairly quickly, given a small but experienced digging team. One problem of working at point Y is the “shower bath” which comes down the shaft from point V. This discomfort could be addressed by either temporarily redirecting the pipes to the other side of the boulder piles (which could re-sump FSE entrance crawl if prolonged) or by creating a temporary funnel (could simply be a tarp) at a high point in the wet shaft and piping the water through to the Bung Streamway.
2. Once the immediate problem has been removed, the scaffolding at that point needs to be replaced by RSJs supporting Armco barrier as per Len Kirkham’s solution.
3. The pipe water needs to be permanently piped through to the Bung Streamway to prevent the same problem from happening again. This could be done by (a) continuing the existing pipe through the route the caver takes - including making a draught-proof hole for the pipe in the lid, (b) digging through at point V (depth to dig is uncertain as the wet shaft has not been scaled) and continuing the existing pipework that way, or (c) creating a large permanent funnel high up in the wet shaft, and piping down from that.
4. Some work will probably be required to stabilise and strengthen the rock / tailings wall of the wet shaft. A good suggestion might be Armco barrier held against the tailing wall by steel stemples, footed against the solid rock wall.

Ann Soulsby took on the job of co-ordinator, which involved negotiations with cavers from various clubs, arranging access via Speedwell (Many thanks to John Harrison) and trying to source equipment.

On August 16 a small working party consisting mainly of SUSS and TSG members went in to assess the feasibility of the report recommendations and to take measurements of the pipes to enable Henry Rockliff to make some connectors.

Rob Eavis completed an assessment as follows:

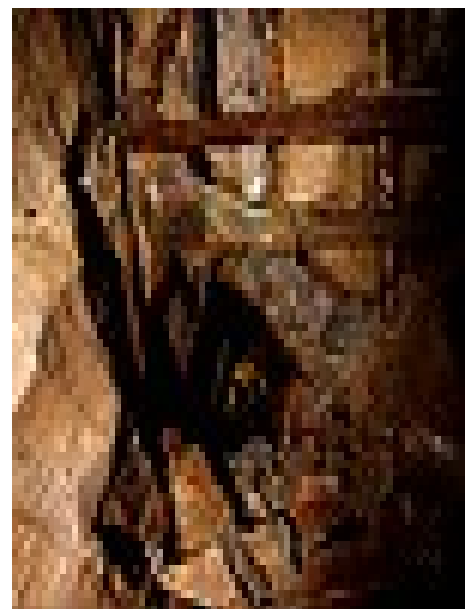
1. The scaffold frame is very strong still, but could quickly do with at least a 1 x1m length of scaffold to easily increase its strength (plus a 90° and a swivel clip).

2. Moving boulders off this framework would be dangerous and may be unnecessary for the short term. It's interesting to note that there is a lot less weight on the frame than there was before the collapse. It may also encourage more subsidence from above at the moment. I think this should be reviewed as soon as the frame above is in place.
3. While RSJs would be the "best" way to secure the aven, it may be overkill and would be more difficult to fit, leaving the workers in the danger zone for a longer time. Instead the tailings wall could be secured well using a vertical scaffold barrier. This could be installed in one trip, I'm happy to co-ordinate if people are OK with this plan. Materials required would be: 5 x 4m, 2 x 3m, 1 x 2m, 10 x 90° clips & 5 x swivel clips (All galvanised)
4. With water levels as low as they are at the moment, the small amount of water coming down the aven would not prevent the work getting done quickly and safely.
5. We did manage a voice test from Leviathan (V) through to the top of the collapsing aven (X). My guess would be they are 4-5m apart. Looking from below some of the boulders are very precarious, and not resting on much more than tailings and hope. Unfortunately I do not think it a good idea to start disturbing this from above to find a route through for the water pipes.
6. The air gate at the top of the ladders (W) would be easy to get a single pipe through. It could be routed through the framework and kept out of the way of passing cavers quite easily. To get both pipes down this way would be much more difficult. Of the two pipes, the green one takes the majority of the flow (100% at the moment) and is the most flexible. I propose this pipe is rerouted first, and then the situation reviewed regarding the other pipe.
7. One other option for the water that hasn't been discussed is changing the point at which the water sinks in Leviathan (V) to somewhere further into the chamber, with the idea of dropping it though the boulders above the second section of shoring (Z - While some may say this is just moving the problem, the shoring here is much more substantial, has no open voids, and should be pretty easy to do. We could at least test to see if possible, and maybe it's a solution for one of the pipes?

On August 22 work began in earnest when a work party from SUSS comprising Henry Rockliff, Tim Webber, Katie Dent and Rob Eavis did some excellent work introducing a mesh of scaffolding which it was

hoped would help to keep the whole pile stable while further work

was underway. Sometime later, in October, another team of SUSS volunteers, including Ben Stevens and Henry Rockliff, took in enough pipe (Affectionately known as Operation Boa Constrictor) to extend the main green Leviathan pipe down as far as the bottom ladder. This made the ladderway crawl pretty wet, but it immediately removed the major problem - the shaft above the scaffolding was now dry.



View of collapse from underneath – Rob Eavis

Throughout the back end months of 2010, various jobs in the Bottomless Pit for John Harrison of Speedwell enabled some of the Crewe CPC and Masson cavers, under the direction of Ralph Johnson, to gain regular access to the site, and the pipe work was further extended as far as the solid crawl that leads out to the Speedwell stream. At around the same time, a group of Masson cavers, including Lee Langdon and Christine Wilson, entered JH and examined the dams to see what work if anything was needed. Henry Rockliff had already reported that the main dam was OK, but the lower, over-spill dam was filled with rocks and tailings, and that the associated pipe was split part way down. The Masson team confirmed that this was the case, and took photographs so that work on the dam and its pipe could be planned. They also cut a channel in the ladderway crawl which would help to keep the route dry.

On the first of February 2011, Christine Wilson and I started work on the black dam. This back-up dam channels overspill water and tailings down a black pipe and, in normal conditions, very little water goes this way, but in flood it takes significant quantities. Unlike the green pipe, which has been re-routed via the ladderway, the black pipe still discharges into the boulder piles and, ultimately, this too will need to be addressed.

Various discussions revealed that many cavers who regularly pass through JH were totally unaware of this dam because it had become so choked with stone and tailings that it simply looked like a nice flat ledge ... a handy place to stand while waiting for your turn to abseil down the last drop.

After removing the ropes from the lower section of Leviathan, we tied off the black pipe at the junction below the leak and lashed it back to a good belay above the dam for support. Once ropes were out of the way, we spent some 2-3 hours clearing the dam of rocks and rubble. Eventually, we were able to see the exit pipe, and reset the heavy duty metal mesh with reasonable sized stones. The lower section of Leviathan was then re-rigged with fresh rope.

Before we had any chance to do a repair on the black pipe, the whole area, including the Peak-Speedwell system, was hit by the huge flood on 05 February 2011. This sumped much of Peak, and sank both boats at Speedwell. Jim Lister entered JH on Sunday 06 February, and reported that water was rising from the stopes, and that sections of the Cartgate had become significant ducks.

The following Sunday a small group from TSG descended JH to assess the damage. The dam which had been "clean" was now a third full of tailings and rocks, although it appeared to still be functioning correctly. Down in the ladderways, however, one of the higher junctions had blown, and our next job is to restore this, and try to devise a more robust way of connecting the pipes.

The work is on-going. Still to do are repairs (and, possibly, partial replacement) to the black pipe and improved jointing in the new section of green pipe.

Long term objectives should include devising a sound, permanent route for an extended black pipe, so that it too discharges into the Speedwell stream. This may well entail fully excavating and shoring the "new" shaft which was created by the water back in April 2010. This would completely remove the cause of the problem (as we understand it) and would also improve the stability of this important route.

The other long term objective should be a formal system of monitoring sections like this so that future problems are identified and dealt with before they become a major undertaking. We are fortunate in the Peak District to have a pool of enthusiastic cavers to draw on, but, if we are to protect the future of these systems, these volunteers need some direction, and we look to the Peak Key Holders as a body to provide this direction.

Report by Alan Brentnall and Ann Soulsby

Report continues in Boulder Piles – The story continues.....

