

MCG NEWS

Newsletter of the Mendip Caving Group



Departure Lounge, Upper Flood (by Charlie Allison)

Number 339
January 2007

www.m-c-g.org.uk
Founded 1954

Upper Flood Does It Again.....

text by Julie Hesketh, photos by Tim Francis

"Tony Jarratt was so happy down the Hunters that he was practically crying in his beer!" ~ Quote from UK Caving Forum.

As if we hadn't had our fill of excitement and success recently, Upper Flood has gone and done it again and revealed another 500m or so of passage – and this time it is REALLY pretty.....

The Descent article was barely hot off the press on Friday 1st December when Mike Richardson, Bill Chadwick, our guest Tony Jarratt and I headed off for a pre-weekend trip down Flood. The main objective of the day was for Tony to give us some expert advice on how we might secure the boulder choke and to assess the West End choke/collapse. We were also hoping to do a bit of much-needed surveying. Water levels were high after the torrential rain and storms of recent days but the Lavatory Trap and Canal were easily passable. Tony suggested that whilst the boulder choke wasn't ideal it was pretty much as stable as we could expect with the exception of some walling up of a large boulder (though this will give more psychological reassurance than physical support of the choke!) Near the first acroprop some infilling was done to close up voids in the choke to limit any movement.

The streamway was a real treat in high water conditions and it certainly rivals many sections of Welsh cave stream passage in character in wet weather. Despite our fears, it was passable to the end with some of the usual trickles that form inlets into the stream flowing strongly. We taped the occasional section in need as we headed towards the end of the cave.

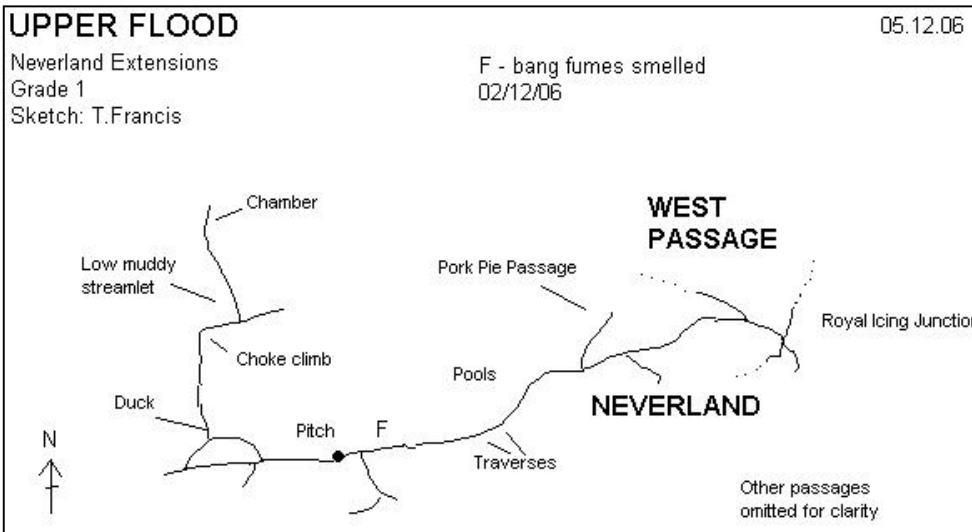
At Royal Icing Junction we split into two with Mike and Tony heading off down West Passage to assess and 'encourage' the West End Choke whilst myself and Bill had planned to survey in the East Passage area. Before we did that however I thought that I would satisfy my curiosity and take a look at the "Neverland" Grotto just off the start of West Passage. This incredibly beautiful grotto had been so-named as we had considered it too beautiful to take cave traffic and we had thought that perhaps it might want photographing and then taping off for conservation reasons. I took off my helmet, wellies, oversuit and gloves and

From the editor



Good Heavens! When will it stop? I am having difficulty keeping up with all the breakthroughs. I'm not complaining, but just as I bring out a newsletter with all the latest news, it is quickly superseded. The previous newsletter was to be the last until the new year, but here we are again with yet another breakthrough. It's great really and I have so much from other members that I can't fit it all in, so apologies, but it will be in the next issue. Many thanks to you all, and diggers, have a break for a bit eh!?

The discovery of the "new" Upper Flood will rank as one of the most exciting and interesting finds of Mendip in the last 30 years. Not my words, but those of Andy Farrant, geologist and editor of Karst and Caves of Great Britain. You can read more on pages 5-8. **Yvonne**



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Crystal Floor



Brian at the crystal wall



The Pom Poms



The Cornet



above: Pork Pie Passage, below: Doug in grotto



above: Pork Pie Passage; below Tim in Stal Grotto





Grotto



Dongwoo at the Pools, Neverland



Above: Julie, Neverland; below : Traverse and Curtain



carefully crawled forward on my fingers and toes though the passage guided by instructions from Bill "left a bit – mind your back!" The passage turns a corner, lined with white crystals running along the walls suggesting it was once filled with water. On it went for around 30m of the most exquisite and unusual formations I have ever had the privilege to see – gossamer thin icy curtains, club shaped formations 20-30cm long (pom-poms) hanging down from the walls completely made from ice-white crystal and one stunning carrot shaped crystal encrusted formation again 25-30cm long hanging from a tiny straw, luckily set slightly away from the main drag of the narrow passage.

Bill sat waiting as I disappeared off emitting a stream of ever more distant echoing "oohs and aahs!" whilst investigating the truly world-class formations. The final obstacle was a white flowstone boss behind which the pretties abruptly ended and the passage rose up to a low bedding plane around 18 inches at its widest. The infill was easy to move aside, even without gloves and I busied myself here for a few minutes encouraged by the blackness beyond and the sound of what I imagined was a dripping aven. Unwilling to "push" a new squeeze totally alone, I returned to get Bill who duly stripped off to the bare basics and assisted with the bare-handed digging. After just a few more minutes of shifting rocks, we popped out into a magnificent decorated Aven – 25 feet high and with two ways off.

We could barely believe our eyes. It was incredibly beautiful. Barely able to contain our excitement we headed downslope over a calcite slope with razor sharp crystals attacking our hands and feet. Ducking under a sharp right hand bend took us off into more walking sized passage, past a hole on the left and through a thigh-deep pool and finally to a point where the passage was nearly blocked by a 15 foot high active flowstone inlet from the left wall, glued to the opposite wall with a solid white curtain the same length.

Shimmying up the flow, it was obvious we could climb over it to passage beyond. At this point we raced back (carefully) for the others and found them at Chuckle Choke, having "sorted" West Passage Choke. Tony offered more encouragement to Chuckle Choke itself before we headed back down Neverland. This time at the breakthrough we turned right up slope to another sparkling grotto. Gour dams and lakes with snow white dinner plate sized islands formed from large crystals, rise several inches out of a gour pool that marked the end of the passage for us – not wanting to put the formations at risk by pressing past them. These most unusual formations were christened the "pork pies" for their likeness to Bill's favourite caving snack.

We all pressed on downhill then past the curtain climb and to a large water filled hole in the floor that requires further investigation. The exposed traversing over the top of the hole required a little nerve but Tony pressed on, past another hole and down a 12' climb to more walking sized passage into which he disappeared off

into the echoing distance. He was gone for a good few minutes, returning to tell us that it was going “on and on!!” but leaving it open for the MCG to push. We exited the cave eight and a half hours after going in, tired but exuberant though slightly startled that our surveying trip had turned into something quite different.....

The following morning, Doug Harris, Dongwoo Park, Tim Francis, Brian Snell and myself set off to finish off Tony’s going lead. Slightly waylaid by Brian deciding to freestyle down a slippery slope (though his face stopped his fall by connecting with the cave wall...later 4 stitches by his eyebrow, courtesy of A&E!), we reached the traverse where the nature of the cave changes a little and we leave the pretties behind.

We pressed on beyond Tony’s footprints, past a muddy passageway off to the left which heads off to a tight blind pot. Interestingly at this point we could once more smell fumes that must have come from West Passage but the air cleared a little further on from that point. Straight on past the muddy passage we almost immediately found a 15’ balcony pitch overlooking what looked like ongoing passage. Damn! Brian went back to fetch the rope from the traverses that we had rigged this time around. Doug did the heroics and traversed around the pitch head to another climb into an oxbow, the roof of which lowers and becomes partly water filled before rejoining what we considered to be the main route. Alas, this closed down in a flowstone choke but Tim furtled around in the water to find a low muddy duck into.... you guessed it.... more walking sized passage!! We were off again! After 50m or so we encountered a massive boulder choke with darkness beckoning beyond one particular caravan-sized boulder. Tim climbed up this technical and exposed overhanging boulder and disappeared off once more – followed by Brian and Dongwoo. This climb will need to be permanently roped or laddered as a fall from here would be a very serious matter.

Tim reports that down slope to the right enters a more solid chamber, perhaps 40ft high. It’s all flowstone on the right hand wall and quite a drip comes in. He climbed up the rift at the far end but it closes down. In the floor they excavated a few rocks to follow the streamlet down slope. It starts off very muddy and low but again pops out into walking sized stuff. The next chamber is a very fault controlled large chamber, probably the largest in the cave so far at 60ft high with huge jammed boulders in the roof. It really felt like the sort of place that miners could come in by, but there was no evidence of any debris or remains. The air is very fresh and there are enticing voids up ahead – perhaps calling for a maypole. In the floor the water trickles away on mud and under rocks. Our time was up and so we headed out. Another seven and a half hour trip to the most welcome MCG Christmas dinner you can imagine.

We later discussed at some length whether “Neverland” can and should take cave “traffic” and debated whether what we had found justified a trip through the area. It is a controversial topic but on balance we decided that given what we had found, we had made the right decision. All trips into that part of the cave in future will need to be done in clean gear and for a purpose – i.e. no tourist trips for now at least.

So, what does this all add up to? Well we reckon that these latest discoveries add up to around 4-500m to the cave and would take Upper Flood to about 2.5km in total - making it the 5th longest cave on Mendip, behind Swildons (about 9.5km), St. Cuthbert’s (about 6.7km), Wookey Hole (about 3.7km) and Eastwater Cavern (about 3km). The discovery of bang fumes shortly before the pitch by the inlet with the blind pot would strongly suggest a connection with West Passage near here. The trend of the new passage is west, north-west and then west-north-west and so our best guess pending a line survey is that we are running parallel to West Passage and then underneath it. We still haven’t regained the stream and this new passage is almost certainly old abandoned fossil galleries with Chuckle Choke and West Choke still offering the most likely routes to regain the stream.

This weekend’s activities have rather extended our “to-do” list which currently looks a bit like this:

- Survey East Passage and the passage straight on beyond Royal Icing Junction;
- Taping – plenty to be done, particularly in Neverland and Pork Pie Passage. Any exploration/taping must be done in cleanish furies – we suggest taking an Ortleib bag in to carry kit through the pretties. My Tesco carrier bag just wasn’t up to the job!
- Have a good look around East Passage as there are almost certainly leads that have not been pushed 100% due to bad air.
- Perched sump - whilst it was heavily bailed around a month ago, it still requires more bailing. It had slightly refilled again but not by much. There is a bucket there now to assist efforts.
- Charnel inlet is actively being pursued by Mark Ward and Doug Harris.
- Check out the boulder choke near the breakthrough point at the Departure Lounge. Theory is that there may be a route back over/into the boulder choke towards the Red Room that may be more stable than the present route into the Departure Lounge. Both Mike and Tim have been up for a very brief recce but returned with tales of hanging death up there, though Mike reckons it is worth a furtle. Take spare undies;
- Check out the results of the bang at West Passage and Chuckle Choke once the fumes have subsided;
- Install a fixed line on the traverse, Around 20m of rope should do it;
- Install a ladder at the technical climb beyond the duck.

See you there!

The Prospects at Upper Flood

by Andy Farrant

The existence of the Blackmoor master cave has been predicted for a long time, and at last, the effort has paid off. The discovery of the new extensions to Upper Flood swallet ranks as one of the most exciting and interesting finds of Mendip in the last 30 years. It is also an excellent opportunity to test the general theories of cave development on the southern flank of the Blackdown anticline. Studies of GB, Longwood, Manor Farm, and Charterhouse Cave over the last 40 years, by Derek Ford, Tim Atkinson, Pete Smart and Willie Stanton have provided a general model of cave development for this part of the Cheddar catchment. These studies have been reported in various papers in the UBSS Proceedings.

The aim of this article is to give my initial thoughts on the extensions to Upper Flood and hazard an (educated) guess as to what the rest of the 'Cheddar Master System' may look like. The prediction are just that, prediction, and I'm sure any new extensions will throw up some surprises (which no doubt will prove perfectly logical in hindsight).

Upper Flood Swallet is located at the eastern end of the Blackdown Pericline. It is developed entirely within the Black Rock Limestone which here dips around 10-15°, in contrast to c. 25° at GB and up to 70° around Burrington. To the south, the dip gradually increases until it reaches the more typical values seen elsewhere on Mendip. The limestone here is cut by a network of joints, minor faults and fractures which trend south-east or south-south east. The orientation of these joint systems are clearly evident as many of them are mineralised and shown on the 1:10,000 scale geological map as mineral veins.

The gentle dip is why the old part of Upper Flood Swallet has such a shallow gradient. It meanders first along strike and then gently down dip without gaining much depth, and is more akin to cave development in South Wales where the dip is similar. Because of the shallow gradient, the length of the initial vadose section of passage is much longer in Upper Flood than any of the other swallet caves on Mendip.

The sudden intersection of a large vadose canyon at the breakthrough point suggests that the old part of Upper Flood may be a more recent inlet to the original sink which lay down-valley of the car park. The recent extensions trend south-east or south-south-east along the line of the major joints. The water follows these joints aslant the dip as a fairly low gradient vadose canyon. Occasional east-west dog-legs occur which may be along minor faults (such as seen in GB Rhumba Alley), or strike sections along prominent bedding planes. Because the passage follows the joints at an oblique angle to the already low dip, the gradient of the streamway is remarkably low for Mendip. This is in marked contrast to the majority of central Mendip swallet caves which are orientated down dip and descend rapidly to the water-table. Those passage segments in Upper Flood which trend south with the dip may have a steeper gradient.

The present base-level is seen in Longwood at c. 40 m OD. This gives a hydraulic gradient between the sump at the end of Longwood and the resurgence at Cheddar of 6.6 m per km. Applying this to the distance to Upper Flood suggests the sump level should be around 50 m OD.

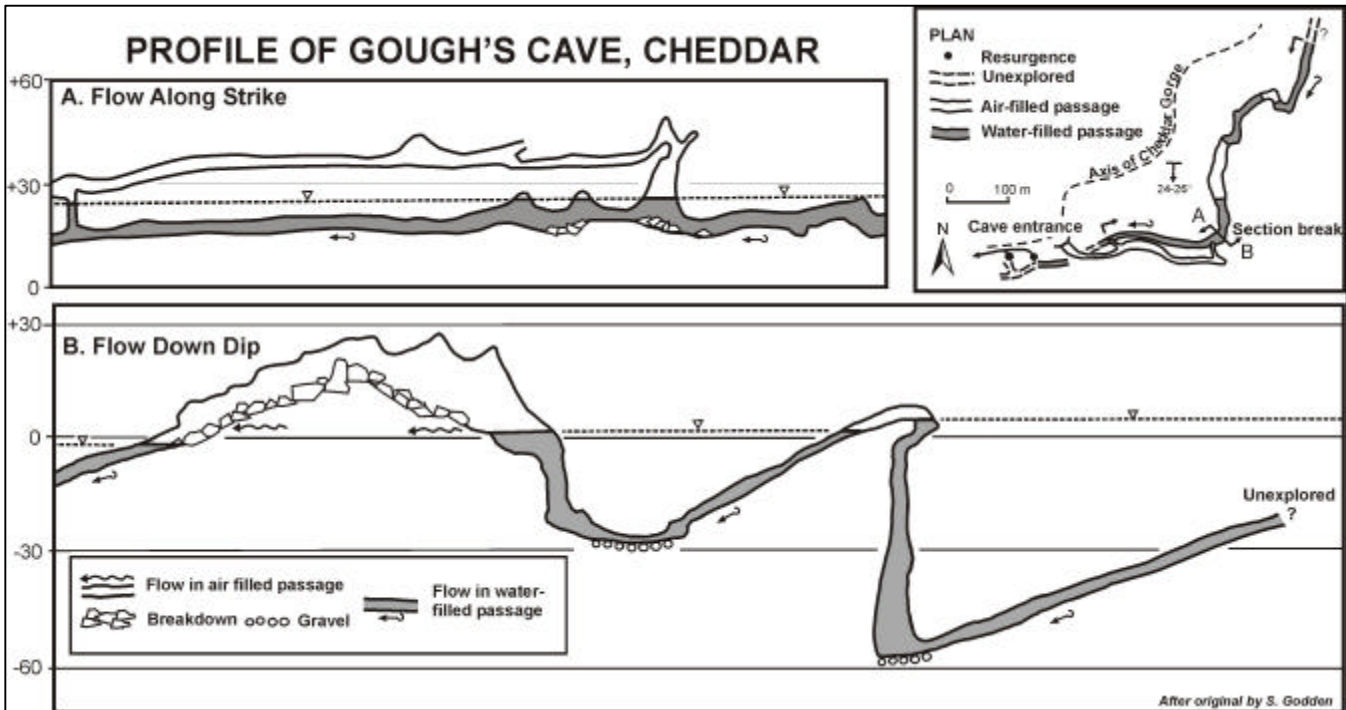
Waterwheel, Grebe Swallet and Manor Farm

As yet, the water from Waterwheel and Grebe Swallet has not been seen in Upper Flood. These caves probably feed into an independent parallel streamway to the west of Upper Flood. West Passage may represent a flood overflow route between these streamways aligned along strike on a bedding plane, or along a minor east-west trending strike fault, and hence offers the tantalising possibility of a link between these two systems. Similarly, the Manor Farm streamway probably also continues on a south or south-south-easterly trend, partly along a minor fault, but the steeper dip of the limestone here means that much of the active streamway may be sub-water-table in deep phreatic loops or along fault guided phreatic rifts.

It is likely that these sub-parallel streamways will continue to flow to the south or south-south-east, along the jointing, with some east-west strike orientated doglegs until they reach the core of the Cheddar syncline (or a minor fold structure on its northern limb). Here it may well meet the water from Tor Hole, Wigmore and Bowery Corner which probably flows along a conduit orientated along the centre of the syncline en route to the resurgence in Cheddar. By this time though, the passages will be at or below the water-table.

The water from Tor Hole and Wigmore Swallet has to traverse the Portishead Formation (Old Red Sandstone) core of the North Hill pericline. It does this by utilising a fossil Triassic valley infilled with Dolomitic Conglomerate. The streamway probably flows along the base of the conglomerate at the contact with the underlying sandstone via a generally horizontal low gradient streamway interspersed with numerous shallow sumps. At some point between the Castle of Comfort and Yoxter, the conduit re-enters the Carboniferous Limestone.

At this point, the passage may change orientation into a series of east-west trending generally shallow phreatic conduits interspersed by a series of north-south trending deep phreatic loops similar to the further reaches of Gough's Cave or fault-guided phreatic rifts like Golgotha in Reservoir Hole (see figure 1). The water from Upper Flood, Grebe and Manor Farm should enter as joint aligned tributaries from the north.



Profile of Gough' Cave, Cheddar, showing how flow along strike is generally horizontal, with some minor looping segments, compared to deep phreatic dip oriented loops. From Farrant 1995 and (from UBSS Proceedings, Vol. 19 (1), 1991).

The water from Longwood and GB, being more or less due north of the resurgence at Cheddar are more likely to follow deep looping flow paths, and may well not intersect the main Tor Hole – Gough's conduit until quite close to the resurgence. The evidence from Bone Hole and Reservoir Hole suggest that the north-south joint sets play an important role in guiding conduit development in this area. Most of the conduit will be below the water-table; work by Peter Smart and Paul Hodge suggests that only around 9% of the Longwood-Cheddar streamway is vadose.

Tyning's Barrows is somewhat unusual in that it dog-legs to the west, flowing along strike and then down dip along the joints. I suspect that when it meets the water-table the conduit will take a more typical north-south trend towards the postulated resurgence at Cheddar. It may be that it remains an independent conduit right until the resurgence.

High-level relict passages

Most of the major swallet caves on the south side of Blackdown contain relict high level phreatic passages now abandoned by the stream. These are related to former water-tables. Four such phreatic levels can be identified, and all occur at the same elevations in GB, Manor Farm and Longwood, suggesting their position is controlled by the elevation of the resurgence.

The highest known former water-table is in GB and Charterhouse Cave at 238 m OD, marked by the Double Passage-Chiaroscuro Passage conduit. This is thought to be around 800-900,000 years old.

The next palaeo-water-table level is at 138 m OD. This is represented in GB by the Ladder Dig series, and in Longwood by the Fault Chamber galleries, and is probably around 500,000 years old. Another level occurs at 120 m OD, the remnants of which occur at the end of Bat Passage in GB and the Oxbows in the lower reaches of Longwood swallet, formed around 400,000 years ago. It is possible other lower levels may occur, for example the bottom of Rhino Rift at c. 75 m OD, but evidence is lacking.

It is likely that a similar series of relict high-level passage will also occur in the extensions to Upper Flood. However, the entrance is below the 238 m level, so it is unlikely any passages of this vintage are present in the cave, but relict phreatic passages or roof tubes should occur at around 138 m, 120 m and possibly at 75 m OD. Like their counterparts in GB and Longwood, these relict passages may well be choked with sediments.

Mineral veins and Neptunian dykes.

The extensions to Upper Flood pass beneath the Ubley Warren lead ore-field. Consequently, many of the passages may be controlled, at least in part, by mineral veins and 'neptunian dykes' (sediment filled fissures within the Carboniferous Limestone containing younger Jurassic and Triassic strata). Examples of these infilled fissures are known from Grebe Swallet, Brimble Pit, and around Ubley Warren (Old Farts Dig) where dark clays of

the Westbury Formation were identified. Jurassic fossils were found by Stanton in Semicostatum Ruckle in Grebe Swallet (named after the Lower Jurassic fossil Zone of the same name).

Work by Stanton and others, based on evidence from Grebe Swallet and elsewhere demonstrate that the extensive mineral deposits exploited by the Romans were residual, near surface deposits, formed by the concentration of insoluble lead ore as the host limestone was dissolved away. However, the thin primary mineral veins continue at depth. By the time the Upper Flood streamway passes beneath Ubley Warren, the streamway is probably of sufficient depth not to intersect the near surface residual ore deposits, which explains why the cave was never entered by the miners. However, the possibility of vadose inlets into the streamway linking back up into the mines dug by the Cornish miners in the 19th century remains a possibility, certainly water 'swallows' were recorded in these mines.

Some of these mineral veins and fissures may have been exploited by phreatic groundwater flow from a very early stage, creating 'phreatic vein cavities'. The best known examples occur in Derbyshire, and include Titan, Eldon Hole and Oxlow Cavern. Alas, it should be stressed that any Mendip examples are not likely to be of such large size!

So, the prospects for further extensions look good. There is the possibility of intercepting a postulated Grebe/Waterwheel streamway running parallel to the west, coupled with the prospect of a series of high level relict passages at or slightly above 138 m, 120 and possibly c. 75 m OD. The prospects of more open passage downstream depend on the depth already gained. If the end of the cave is approaching c. 50 m OD, then the amount of vadose streamway may be limited. However, it is possible that perched sumps may exist above this level, possibly associated with former base-levels, limiting exploration.

Authors Note: Much of this I outlined in an email to Tim Francis shortly after hearing of the discovery of the cave, but before I had seen the survey. It was written shortly after the discovery of West Passage. The orientation of the streamway pretty much lived up to expectation, although West Passage is a interesting anomaly. The extensions suggest a good understanding of the role of geology and hydrology on cave development provides a means of predicting at least the general form and style of future extensions, but this method cannot predict the exact course of a passage. We await a detailed survey with interest. Suffice to say, results so far from Upper Flood indicate that the dowzers have been proved well and truly wrong!

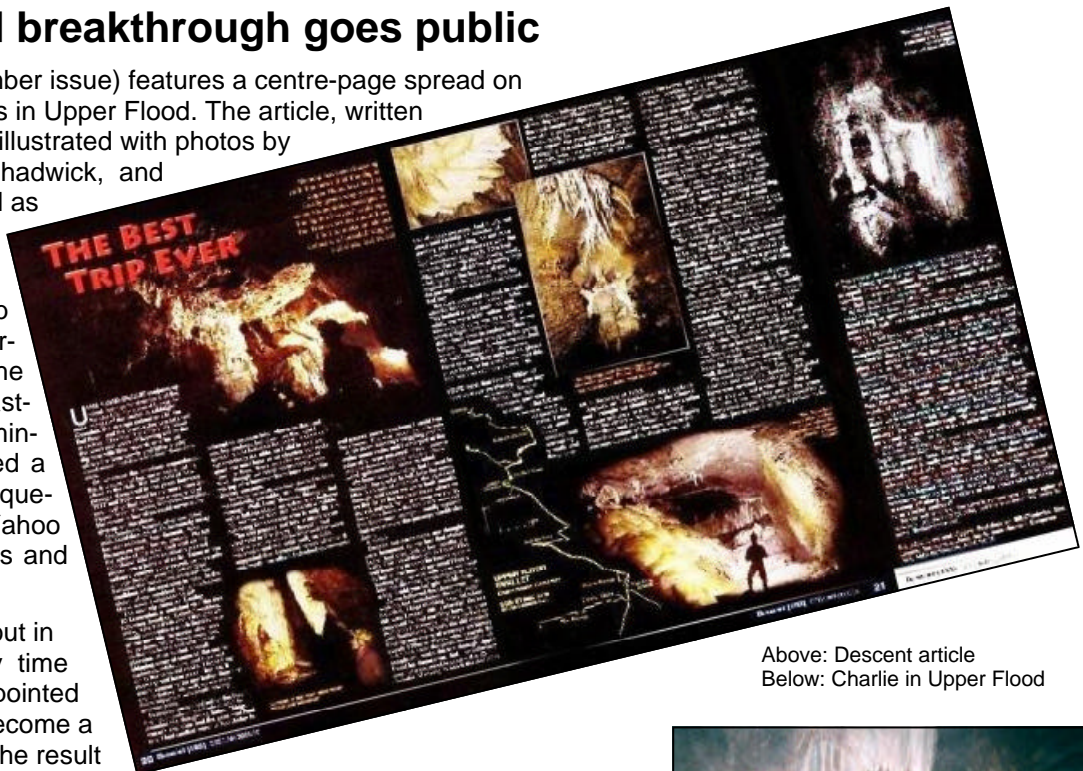
Upper Flood breakthrough goes public

Descent 193 (December issue) features a centre-page spread on the MCG discoveries in Upper Flood. The article, written by Tim Francis, was illustrated with photos by Charlie Allison, Bill Chadwick, and Peat Bennett, as well as Ben Cooper's survey.

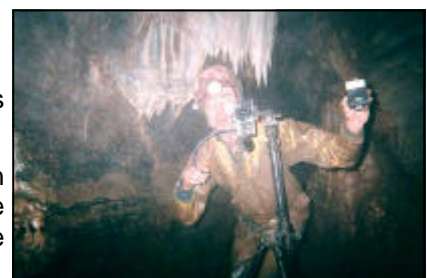
Charlie's superb photo of the Departure Lounge (see the new MCG News masthead) featured prominently and has created a lot of interest with requests on the MCG's Yahoo newsgroup for copies and enlargements.

Copies quickly sold out in Bat Products - every time Jrat sold a copy, he pointed out that this would become a collector's item with the result that punters quickly bought a second copy, doubling his sales! There was a steady flow of MCG members who were seen buying as many as 4 copies at a time.

The discovery is to feature in a forthcoming issue of Mendip Times, and an article will appear in Speleology after Xmas. Of course, all this was before the breakthroughs made on 01/12/06 so watch out for more articles in the next issue of Descent?



Above: Descent article
Below: Charlie in Upper Flood



Committee doings

Believe it or not, there is more happening than just Upper Flood. Here are some recent actions from the committee minutes.

- Many thanks to Mark Ward who has fitted a new, larger, **hot water tank**, two thermostats, new de-scaler and made other necessary changes to improve the supply to **the showers**. The total cost of the work was £467. We still need to fine-tune the mixer for the shower and fit temperature regulators to the sinks to ensure safe water temperatures.
- There will soon be a **meeting for all the current Upper Flood leaders**, potentially at the February members' week-end. The Leaders will be updated on access arrangements and the condition of the boulder choke.
- The committee have decided to refund all **Cotag keyfob deposits** to Members. Full details will go out with the 2007 subs request. In the future (2007 onwards) new members will purchase a new keyfob rather than paying a deposit. Existing members will have to purchase a new Cotag keyfob when their existing keyfob expires. The battery lasts 3-5 years depending on use and costs about £15.00 new.
- MCG have made a financial **contribution to MRO** in recognition of their assistance in Upper Flood when Malcolm Cotter passed away.
- Two laminated notices setting out the cave rescue **call out**

procedure have been made (one for by the phone in the cottage and one for inside Upper Flood).

- 14 day **CCC permits** are now in a box in the tackle store (cost 30p). Annual permits for Members have been purchased and will be sent out with the subs request. Two missing/broken Charterhouse caves keys have been replaced.
- The Committee has agreed to **increase guest fees** to £4.00 from 01/01/2007 and to increase the amount from each annual subscription that goes towards cottage income from £5 (1/6th) to £10 (1/3rd).
- The **Upper Flood fund** in memory of Malcolm Cotter now stands at £525.00 plus a potential gift aid claim. Conservation tape has cost £50.35 so far
- Martin Rowe and Brian Snell have been added to the list of **Upper Flood** leaders. (Martin is only a leader for the "old" cave).
- Doug Harris has very kindly repaired the **fire grate** in the lounge.
- Ireland and France have been put forward as possible locations for an **MCG summer 2007 expedition**.
- The March members' weekend is to be a **work weekend**
- Linda Milne has kindly donated a "new" **computer** (with USB) to the club, and Martin Rowe has donated a **scanner and CD writer**.

2007 Annual Dinner

The 2007 Annual Dinner will be held on 24th March at Lyncombe Lodge, Churchill, from 7.30pm - midnight. Tickets will be £23.50

The dinner will be followed by a presentation on the recent discoveries in Upper Flood. Not to be missed!

Cheques and menu choices to Linda Milne by 12th March 2007 01420 562315 or 07767267849 or linda.milne@btinternet.com

For hotel reservations (accommodation but NOT dinner) phone 01934 854807

There will be a coach picking up from Wells, The Hunters and the Cottage. Don't forget to book your seats in advance if possible.

Menu

Cream of Roast Capsicum and Tomato Soup with Herb Croutons

Parasol of Honeydew Melon presented with Fresh Strawberries

Smoked Salmon and Dill Pancake Gateau with Cracked Pepper Mascarpone

Chicken and Herb Terrine with Tomato Salsa

-- 0 --

Poached Salmon on Asparagus with Lemon & Chive Beurre Blanc

Braised Rump of Beef On Mash Potatoes with a Bacon & Onion Sauce

Oven Roasted Chicken Supreme on a Mushroom Compote with a Red Wine Sauce

Roasted Vegetable Coulilibiac on Dauphanoise Potatoes Drizzled with Herb Oil

-- 0 --

Vanilla and Raspberry Crème Brulee

Sticky Toffee Pudding with Toffee Sauce

Citrus Cheesecake with Double Cream

-- 0 --

Freshly brewed Coffee and Mints



Life of Grime

The club is much busier now (good news) and this in-evitably means much more dirt.

The changing room & shower can get very grimy, which is expected from a caving club, but please re-member to clean sinks and showers when you've finished.

Dirty gear should be cleaned in the hosing area/outdoor sink and stored outside or in the shed.

Remember - the Foremans' Lounge does not have its own sinks so washing has to be done in the changing room, not a pleasant ex-perience if you have to deal with other people's grot first!

New members

Keith Thomas
Proposed by Linda Milne and Kev West

Rob Thompson
Proposed by Linda Milne and Kev West