

IMPERIAL COLLEGE CAVING CLUB

# THE HOLLOW MOUNTAIN II - DRAFT ON SEPTEMBER 11, 2013

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# Contents

<i>2010</i>	9
<i>Vodna Sled</i>	9
<i>Expedition Overview</i>	9
<i>Expedition Findings</i>	9
<i>Leopard — 1.5 km of new passage</i>	10
<i>Wonderland</i>	11
<i>Prince Consort Road</i>	12
<i>The Palace of King Minos</i>	12
<i>Tolminska Korita</i>	13
<i>Sidewinder, Crack in Time</i>	13
<i>White Bishop, Stalemate</i>	14
<i>Roaring Floor Tease (Muddy Window off Happy Monday)</i>	14
<i>Deep Leads (Below BIG ROCK CANDY MOUNTAIN)</i>	14
<i>Insomnia - Republika Streamway</i>	14
<i>Balamory</i>	15
<i>Original Exploration Stories</i>	15
<i>Pushing Insomnia</i>	15
<i>More Horror with Jan.</i>	16
<i>Happy days with Jan.</i>	16
<i>Balamory</i>	16
<i>M2 — Kavkna Jama</i>	18
<i>Exploration Outlook</i>	19
<i>Migovec's Long Term Prospects</i>	19
<i>Underground Logbook</i>	20
<i>Found in 'AggregateofMig2007-2010.doc' : Jarv Typed up?</i>	20

<i>2011 — Izgubljeni Raj</i>	23
<i>Introduction</i>	23
<i>Cave Discoveries</i>	24
<i>The Serpentine &amp; Let na Drugi Svet</i>	24
<i>Insomnia</i>	25
<i>Kamikaze</i>	26
<i>Other Leads</i>	28
<i>Prospect for 2012</i>	28
<i>October M2 / Kavkna Jama</i>	29
<i>Contributed Stories</i>	29
<i>Attempted rigging of Big Rock alternative, 2011</i>	29
<i>Setting up camp: my first time in Vrtnarija!</i>	30
<i>Dream 2 and Penguins Egg</i>	31
<i>Finding Salvation</i>	34
<i>M2 Super Action</i>	36
<i>Alex Pitcher Award - Jonathon Hardman</i>	39

## *Editorial*

Looking back over the caving exploration between 2007 and 2012 it almost seems like it was a pre-ordained story; rags to riches, from a seemingly hollowed out mountain long past its glory days of exploration to the longest cave in Slovenia. Living it, it never seemed like this, rather a more confused and complicated picture, individuals actors without a script, pulling together in some vague direction but towards perhaps an achievable objective.

If exploration were a rational expenditure of efforts towards a known end, the scenes would be rather more simple to describe - we realised how close we were to the connection of Vrtnarija and Kavkna Jama (M2) after more carefully analysing the 2007 “Kill ’em All” survey data. To pursue this, we rebolted and rerigged Kavkna Jama in 2008, while exploring on the other side in Vrtnarija. In 2009 we established a camp in Vrtnarija at the nearest suitable point to the closest approach, and used it to massively increase our time at the pushing front. In 2010, 2011 and 2012 we camped deeper in Vrtnarija, while pushing Kavkna Jama from the surface both during the Summer and on Autumn / Winter trips. In 2012 we connected the systems, forming the longest cave system in Slovenia, and one in which the vast majority of cave passage is at depths greater than 500 m.

However, this isn’t the real story of exploration. Rather, it is the story of the people involved that is the true history of Migovec. For the connection was not made in the obvious location between Kavkna Jama and Vrtnarija, but down at 650 m of depth, as the result of yet another successful, to the point of routine, pushing trip. Motivated by the connection target, during 2008 we flung ourselves into the exploration of Captain Kangaroo, Vrtnarija. At the grim pushing front were the youngsters, highly motivated but lacking the experience to go deep. Lacking in time at the pushing front we determined to go back and camp in 2009.

“The art of roughing it is in smoothing off the edges.” Stories of draughty campsites, cassette players slurring to an undignified quietness, shivering through the night, and unlabelled plastic bags of miscellaneous white powder were retold by the experienced members, and duly obsoleted by careful consideration of the logistics. We went back with free standing tents, layers of fleece, MP3 players, modern winter-mix gas stoves and LED fairy lights. We went back to stay, and almost effortlessly pushed this tough branch of the cave down to

550 m.

This new generation of cavers, who cut their teeth in Captain Kangaroo, suddenly found themselves with the endurance and know-how to successfully explore at depth. Though the connection of the systems were certainly still a major aim of 2010, 2011 and 2012 expeditions, we were mainly there to push deep new cave passage. We re-established Camp X-Ray (550 m deep) as our main base, and improved on it year after year till it became a truly palatial location. And now that the going was once again deep, we were rejoined by the more experienced members of our club, for whom the prospect of another grim rift in Captain Kangaroo was not suitably motivating. And as our collective abilities improved, normality shifted. Exploring over multi-day camping trips, hot bunking and the considerable feat of endurance just to reach and return from these depths became standard practice. That which was just-possible the year before became the standard trip, that which was beyond our reach became achievable.

I am proud of the time that I have dedicated towards these expeditions, and every moment spent with the people involved. There are others in the club who have contributed very much more. We were all volunteers - we did all this because we wanted to, but little would get done if we only did things that were fun. Spending your free-time down caving stores fettling kit is neither particularly enjoyable nor directly rewarding. Carries in the hail and rain are arduous and unpleasant. I don't think it is possible for this document to understate the sacrifice of time and effort made by expedition members and friends. Forever lacking in adequate funding and gear, unrecognised and often misunderstood, we have achieved our exploration on a wing and a prayer.

This exploration report is dedicated to our many friends who assisted, sponsored, carried, hosted and advised. You all contributed to the achievements documented herein.

And so, Ninety-Nine years after Apsley Cherry-Garrard returned to South Kensington with the Penguins Eggs, we return to our college with a minor news story and a few pretty photos for their website. For those involved in the exploration of Tolminski Migovec far more precious are the memories of friendships formed deep within the Hollow Mountain. The prize was not the destination we arrived at, but the path we forged in getting here.

We were always in the longest cave in Slovenia, we just hadn't realised.

Jarvist Moore Frost

We shall not cease from exploration  
And the end of all our exploring  
Will be to arrive where we started  
And know the place for the first time.  
Through the unknown, unremembered gate  
When the last of earth left to discover  
Is that which was the beginning;

At the source of the longest river  
The voice of the hidden waterfall

T. S. Eliot





# 2010

## *Vodna Sled*

Vodna Sled 2010 was a clear success - in all we discovered 2.2km of new passage, all below -500m, all in Vrtnarija using CAMP X-RAY (RELOADED, now a plush four bed camp at -550 m) as a base. The majority of the discoveries lead from a horizontal series near ZIMMER chamber with numerous un-pushed leads for next year and over 1.5 km of passage. Significant amounts of exploration also took place in TOLMINSKA KORITA concluding with a connection to the 'deep' level at -653 m, and pushing the REPUBLICA streamway from -744 to -802 m.

## *Expedition Overview*

Twenty-two expedition members travelled from the UK for a total of 65 person-weeks in the field, with 88 person-trips in our callout roster. Seventeen from the UK stayed at underground camp, along with six Slovenes from the local JSPDT club, a total of 95 people-nights at camp. All successful exploration took place on camping trips. This was the first expedition for three first-year UK students, all of whom stayed at underground camp and discovered significant quantities of new cave.

In all, the cave consumed a kilometre of rope for the rerigging of the main pitch series, and newly explored sections left rigged (or with rope pulled up) for 2011.

No work during the 2010 expedition went into M2 (Kavkna Jama), directed towards forging a connection with Vrtnarija. However, during the early Autumn two JSPDT trips capped through the tight rift at the very end of the cave (~-390m), discovering and then descending a ~60m pitch.

The prospects for 2011 are extremely good. The extensive horizontal development has led to the discovery and initial exploration of a number of independent streamways and associated pitch series, in a horizontal slice of the mountain we have never visited.

## *Expedition Findings*

The initial effort of the expedition was directed into setting up underground camp. As the first pushing trips from this underground

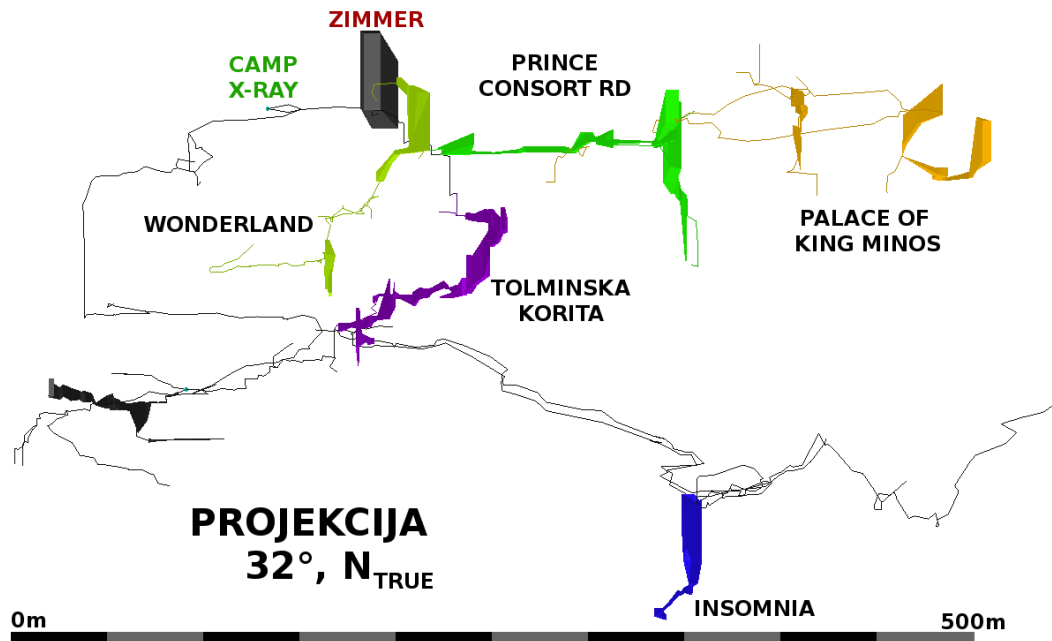


Figure 1: Colour coded diagram of new cave discovered & surveyed in 2010 in Vrtnarija.

camp came back with positive news, exploration based from camp (i.e. deep in Vrtnarija) quickly became the main focus of expedition effort. This came at the cost of further work in bounce trips down Captain Kangaroo (Vrtnarija, the likely connection region to M2) and M2 / SysMig itself.

The usual surface bashing continued, looking for new cave systems on the plateau. A revisit was made to the area north of Kuk. This region is heavily cratered with clear cave development, but the fear is that the limestone is too broken and chossy for a human sized entrance.

We first visited this region with a serious aim of cave exploration in 2008, and returned in December 2009 on a 'winter recce' by a two person team with ice axe and crampons to identify which surface features were actively linked into extensive underground systems through the holes blown in the snow. Several more entrances were identified during this recce, ones that were likely to be continued to be ignored in the summer due to their unusual position.

These entrances were relocated this summer, but no new descents were made.

### *Leopard — 1.5 km of new passage*

Leopard became the great focus of exploration this year. This lead (a window off Zimmer chamber, now a 15m 'up' pitch) had also been originally discovered in 2001, but the drop that it led to had lain untouched since then. This was partially due to its loose and muddy nature, but also that deep exploration had concentrated on good leads elsewhere (most particularly the lower Vrtnarija level accessed with the bottoming of BIG ROCK). This took several sessions of rigging and gardening to successfully conquer, and is now named

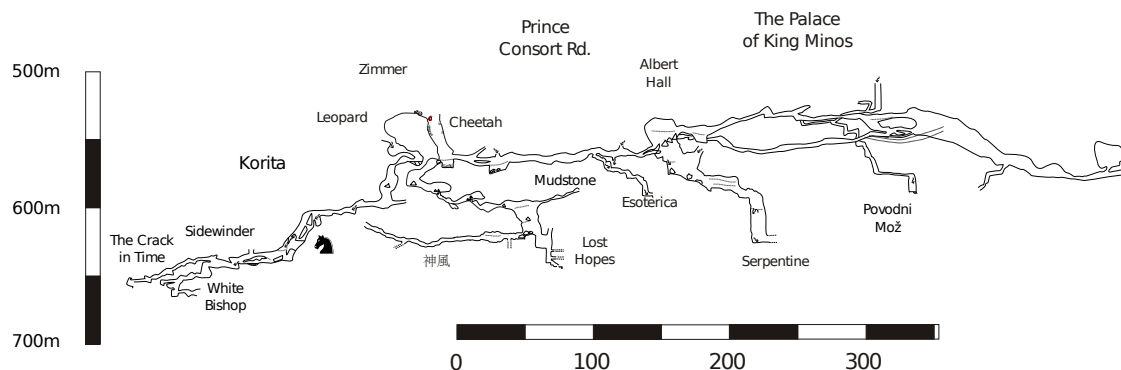


Figure 2: Extended elevation of new cave discovered in TOLMINSKA KORITA and PRINCE CONSORT during 2010 Expedition.

Cheetah (P35m), because of the sense of having cheated death that it engenders on passing. There are several windows off Cheetah, which are definitely promising, although not easily accessible because of the broken nature of the rock.

At the bottom, it intersects a horizontal, fossil passage, which has been explored in three main horizontal parts:

Wonderland (heading South) linking into Rolling Stones, Surprise, Mudstone Traverse, Kamikaze and finally Lost Hopes. Mainly dry with large breakdown chambers.

Prince Consort Road (heading North) was initially pushed to THE ALBERT HALL (from where the SERPENTINE meander leads off to the IT WILL RAIN FOR A MILLION YEARS pitch), bisects three streamways (one of which was pushed and forms the Esoterica series) and includes considerable calcite formations.

From THE ALBERT HALL a climb was made into the PALACE OF KING MINOS. This passage is complex, and side branches have neither been fully explored nor surveyed. The known passage leads via Minotaur Rift to terminate in the Queens Bed Chamber where the draught disappears towards the ceiling.

Together this passage leading off from Cheetah has been explored to over 1.5 km in length, and we are sure that more is yet to be found.

A significant volume of air flows through these regions, indicating that there may be further developments.

### *Wonderland*

Wonderland is the southern-most of the horizontal development, leading directly off from Cheetah. It was pushed to a small pitch dropping into a boulder filled chamber, Rolling Stones, which was the limit of the first exploration trip due to the lack of rope. This chamber is situated right below Zimmer, about 40m deeper. There is a further, as yet unpushed, pitch going down between the large, seemingly unstable, boulders on the floor.

A happen stance crawl behind some boulders led to further draft-ing passage (Hidden Surprise), which, after traversing another chamber and crawl, finishes in a chamber with a massive hole in the floor (Kamikaze pitch). The passage continues on the far side of the pitch

(traversed on mud along the left wall), however, due to the collapsed ceiling, these developments are almost two-dimensional (Mudstone Squeeze). The squeeze, which is filled with interesting fossilised mud formations, was pushed to the limits of comfort, although it still continues.

Kamikaze consists of a series of small ledges. From the second ledge a tell tale breeze led to an interesting bedding plane crawl pushed upwind but still untouched downwind. The pitch was bottomed (Lost Hopes), wherein an inlet was followed down a 10m pitch to a series of squeezes and rifts which quickly became tight. There is a ledge halfway down Lost Hopes, with a perhaps larger abandoned rift.

These three leads (Kamikaze, Mudstone, Lost Hopes) are of interest as they now form the most Easterly extent of Vrtnarija at depth, seeming to ‘spear’ through the large N-S geological feature that contains the majority of the horizontal passage.

The whole area of Wonderland is extremely dry, quiet and rather spacious in its scope. It is particularly reminiscent of the higher level passage in the Easegill system, Yorkshire.

### *Prince Consort Road*

Prince Consort Road is the passage going north from Cheetah. Several streams intersect it and some formations have been found there. The discovery of stalactites covered with helictites proved particularly exciting! The passage leads to a small boulder choke which was easily surpassed and led to a large chamber (the Albert Hall). Before the Albert Hall, three apparently unique streamways have been found:

One intersecting the passage along a traverse (water chokes into boulder floor), then around a small chamber at about halfway to Albert Hall, on a corner of the main massage approximately 2/3 of the way to the Albert Hall a small rift to the east, and a nice white-sanded water inlet to the west. The latter leads to an unpushed pitch under the main passage, there is a cairn and note mentioning the lead. Of these, only the second has been pushed, into the Esoterica series. Strangely this wet, tight rift has only been visited once during the expedition, even though it is still going!

In the Albert Hall two streams enter the chamber from on high (the ceiling was measured as being over 30m up, by laser disto) and join into a rather beautiful spacious vadose streamway (The Serpentine). Serpentine was pushed and leads to another split pitch (It Will Rain for a Million Years — pushed during a continuing flood pulse). At the bottom of It Will Rain pitch the stream continues and has not been explored.

### *The Palace of King Minos*

North from the Albert Hall a muddy climb lead to The Palace of King Minos. This passage and its continuation (The Minotaur Rift)

has some of the most beautiful formations found on Migovec to date, in particular fine walls of calcite, gypsum and aragonite crystals, mud formations and weird soot encrusted floors. The Palace has a labyrinthine nature with several passages leading back to Albert Hall, the largest loop of which was named Ouroboros

The passage has a classic large phreatic lozenge shape, with some parts undercut by fossil vadose passage. Near the start of the passage a significant breeze blew through a small hole. This was enlarged and found to lead to a small phreatic tube which bizarrely led into an active vadose streamway (Povodni Moř — Water Nymph). Povodni Moř has been pushed upstream to a large active aven (and smaller dry parallel shaft), and downstream to a sump (approximately 2mx2m in size in the corner of a small chamber and taking the small flow) and has hence been derigged.

Continuing along the main Palace passage several horizontal tubes have been explored which lead back into the main passage, though not all have been entered in the survey. Eventually the main route leads to a high and wide rift (Minotaur Rift — 20m high, 60m long) beyond which the best formations are to be found. This passage has a few interesting leads in it: a high, dry, circular, muddy window to the right of the passage near a tiny inlet, 2 small tubes leading off the main passage which both need a little mechanical persuasion.

The chambers beyond Minotaur Rift are spacious and display massive amounts of crystal formation on all available surfaces — there is white ‘popcorning’ almost everywhere, with regions of more intricate needle and feather formations. The chambers decay into a crawl, which almost unbelievably is over a smooth calcite floor. This leads to a classic boulder choke gallery (choking at the end). On the left a small boulder choke climb leads to the Queens Bed Chamber. In this large room, the draught appears to disappear up towards the ceiling - both ends of the chamber are potential climbing projects (~+20m).

The region is extremely reminiscent of Ogof Ffynnon Ddu II in Wales.

### *Tolminska Korita*

This lead of Zimmer chamber had been discovered in 2001 but had lain unexplored until last year, when the first few pits of the active meander were pushed to a larger pitch. Korita developed into cascades of active pitches (Black Knight series) to a duck. The duck was soon bypassed by a 5m free climb into old phreatic level.

The passage beyond soon diverges into two continuations:

### *Sidewinder, Crack in Time*

The higher dust filled dry phreatic level (Sidewinder, Crack in Time) connects into ENVY in the low level via free climbs and two small pitches. It is not particularly surprisingly that the ‘Crack in Time’

was not explored from below, as the connection is made by a long body-sized crawl above a thin (5 cm) crack connecting to known passage (Envy), which happily pops out at the top of a obscure 3 m free climb. Connecting into a 2004 era permanent survey station, Korita now forms a second loop in Vrtnarija, forming Vrtnarija into a figure-8 shape with Friendship Gallery at the waist.

### *White Bishop, Stalemate*

The active streamway descends two 10-15 m pitches connected with a spacious meander incorporating free climbable cascades, before ending in an impassable rift (-662 m).

This water disappears into 'blank mountain' on our survey, but would require considerable effort to progress, and Korita was thus derigged.

### *Roaring Floor Tease (Muddy Window off Happy Monday)*

This was regained by bolt climbing from the bottom of Happy Monday to regain the Muddy Window. The climb in the mud chamber was made, but quickly led to a large boulder blocking the way. A tight rift taking a large draught was left unpushed. Progress is believed to require expansion.

Similarly the traverse to an inlet on Falls Road, and the continuation of Falls Road itself was left unpushed. A small dig was made in Friendship gallery beyond Prima junction, which led to a small unpushed pitch above a stream.

### *Deep Leads (Below BIG ROCK CANDY MOUNTAIN)*

#### *Insomnia - Republika Streamway*

Last year a 'written off' streamway (Republika, leading from Red Cow) was found and pushed upstream to an aven fed watershed, then down the other limb to a rift pitch.

With the promise of being one of the deepest points of the cave a return in 2010 was obligatory. The pitch was found to be 41m and was pushed down a continuing active rift (Insomnia). The end is now only 4m higher than Colorado Sump (the deepest known point of Vrtnarija). Since the limit of exploration is above a small 4-5m pitch it is understood that in 2011 this will inevitably become the deepest passage in the system, and the signs are good for continuing development of depth. The end is 802m below the entrance of Vrtnarija, but the M2 (Kakna Jama) entrance is 75 m higher still, and a connection between the systems would make this point -877m deep overall, with potential for further depth extension.

## *Balamory*

A return to Balamory was thwarted by lack of rope of the exploratory party (one more pitch than expected on route), but the team made good use of the trip to the depths by recovering the camping mats from the deep 2004 camp (The Fridge, near Cactus Junction), and prospecting for other leads with some success.

## *Original Exploration Stories*

### *Pushing Insomnia*

I had travelled down to T'min to clean and get over the cabin fever that develops over the weeks of life on the Plateau. That night, after a slap up meal and a few brusksies, Jan arrived and we had a great evening of beer and bullshit. After the beer, we passed on to the whiskey and the bullshit got increasingly epic. "The leads at the bottom of Red Cow are going to make GW deeper" I told Jan "the next pushing trip will definitely do it". So after walking up the hill having dinner and a little too much to drink at the bivi we set off for the night train.

Soon enough we are at camp and decide to keep going down, looking to continue pushing the Republika lead. I must admit it took a lot of strength not to push the leads that were already multiplying at the I knew the way to Red Cow, having been there with Dan a few days earlier. We soon got to the junction and followed the water upstream. Nice caving, I start feeling the all familiar excitement: here come lots of km of fresh cave!

At one small pitch I turn around and find Jan has disappeared. I turn back to look for him and find him wandering in the wrong direction towards the sump. Apparently he had fallen asleep and started wandering off route. Shit maybe we are too tired for this? Meh! We get to the pitch head for Republika, which I must admit is rather God forsaken and wet and awful. We drop the pitch, I get the drill out and start rigging, brain totally disengaged. As I am rigging I can feel the batteries getting weaker and weaker. I guess there were a few too few bolts at the bottom of the main drop and maybe some of the pitch heads could have been a little neater. It certainly helps to cave with a tall bastard is all I can say :D.

We reach the bottom of the main new pitch and it's a rather God forsaken wet and damp place. The water keeps going down along some immature passage. We follow the water, noting at least one unlikely but unchecked possible side passage. A few hand lines are placed here and there and the drill battery finally dies. Just as well as the last pitch we get to looks like a right nightmare: really tight pitch head etc. By this point we realise it's super late and we are almost certainly going to miss our callout. Time has gone in a blur, we are probably not 100% there mentally to be honest. Still might as well survey out.

The way out is not very remarkable. We bump into Tetley at the

top of Big Rock. He is not too worried, but apparently Gergely was hoping we were crumpled up in a heap somewhere so he could come and rescue us.

James Kirkpatrick

### *More Horror with Jan.*

The next night we get up and decide to do some pushing. The whole day is marred by the fact that - once again - we promised not to push the obvious continuation from Albert Hall. So we decide to have a random bumble around. We try looking for alternative ways around the Albert Hall. No success. Somehow we end up pushing a lead from the right of the passage leading to the Albert Hall (right looking towards the Albert Hall!).

The passage is small and bends under the main route. It is wet and rather grotty. We drop a pitch or two of utter horror and eventually turn around. Surveying out is awful. The book gets wet, my fingers are too cold to hold the instruments<sup>1</sup>. It sucks majorly. At least the passage gets a cool name: Esoterica. O, and no-one has pushed the pitch where we stopped! <sup>2</sup>

James Kirkpatrick

<sup>1</sup> The survey data had to be 'corrected' to avoid the survey self-intersecting due to backwards legs.

<sup>2</sup> Esoterica was not revisited until 2012, where a broken bolting driving prevented any additional pitches being descended. It remains a lead.

### *Happy days with Jan.*

On our last day together we went looking around the amazing passage that we politely left for Dan and Izi. We smashed our way through the entrance of what would become Po Vodni Mos, we looked at the Queen's bed chamber, we pushed down some random tubes at the sides of the main route (has anyone ever surveyed these I wonder, one of them went!). All in all a super chilled day. No surveying and no water. And then we got back to camp, watched some videos and drank a lot of whiskey, Happy Days!

James Kirkpatrick

### *Balamory*

When James and I went to have a look at the bottom of Balamory on the first day of our one-noght camping trip, we didn't make it to the target as an unexpected first pitch used up too much of the rope that we had taken with us.

However, as well as airflow going towards Balamory, there is also airflow in the main passage above, beyond the point where the hole down to Balamory leads off so here are two leads in that area there that are worth looking at.

The upper lead *does* need some way of climbing across a pit to a ledge covered in loose crap (maybe a bolt traverse round one of the walls, though I can't remember how much good rock there was in that area. Subsequent email exchanges on the subject do seem a bit vague as to exactly what was done, and whether the upper



passage had actually been boldly examined or not (Clewin was bold somewhere round there, but it wasn't certain where), but anyone going to potentially move/split the boulder down Balamory (I think it was supposed to be down the third of the three possible 'second pitches') down should also probably plan to look at the upper passage continuation, especially if they have a drill/bolts to help with climbing/traversing belays.

On the way back from this little trip, after grabbing some stashed karrimats from the old camp, that the black black hole across Big Rock was noticed.

The next day, James and I went to the new stuff below Leopard/Cheetah, but since we were doing a push-then-out trip, rather than going to the far end of the 'half' where most of the action was, we went in the other direction from the pitch bottom to do some work relatively close to camp, carrying on where Gergely+???? had left off at the Hidden Surprise pitch.

Gergely had dropped the first section of the pitch to an obvious ledge and followed the ledge to horizontal passage that soon died. James and I were to descend the shaft from the ledge, but it immediately became clear the drill wasn't working and so we had to resort to spits, with James bolting while I waited on the ledge.

Fairly soon the bolt (bolts?) was in and James had descended to a large boulder-covered ledge part-way down the large shaft, where I could safely join him. Some of the boulders were rather large, with gaps between them or between them and the wall large enough to climb down and move around in. While James did the business with the next spit, I wandered around between the boulders to keep busy. Where the boulders met the wall, the wall was somewhat overhanging, and from the lowest easily-accessible place near where I had first climbed down, it was possible to look between the boulders marking the lower limit of easy movement and the wall to see a few metres away/down to where the wall seems to meet the proper floor of the ledge, where there was a layer of white rock flour, with some potentially human-sized space between me and it though with no obvious way to get there.

From where I was, looking along the wall 'clockwise', it also looked like there was a space of some sort ahead of me horizontally, but getting to it didn't look very nice, and after all, I was just in a pile of boulders on a big ledge half-way down a pitch, not in a classic boulder choke as such, so there seemed little point doing anything borderline just to get to a slightly different place in the boulder pile.

However, just as I was preparing to go back up and see how James was getting on, I breathed out a large sigh, only to see it get sucked horizontally away from me between wall and boulders and into the space I had been looking into, which immediately aroused my curiosity.

To get into the space I could see required going horizontally through a not-quite-body-sized vertically-rectangular gap with a short (1m) drop on the other side. After removing all my SRT kit,

and doing some work with a convenient rock hammering edges off the boulder forming one side of the slot to make the gap wider, and progressively blunting sharp edges on the wall side as they proved awkward when attempting to get through, it was possible to slowly and delicately post myself through feet first and eventually emerge free on the other side.

Turning around, a short crawl led to a wider area under the overhanging wall, and a view ahead to where the wall/roof sloped nicely down towards into the floor to leave a wide bedding plane with clearly no way on. Turning around somewhat disappointed, the main wall, which I had been looking away from when I had initially turned round, was seen to have a crawling-height hole in it, which, on approaching, it was clear most of the draught was going into.

That hole led to a small chamber with a further hole leading in turn into the side of a walking-height passage with a good breeze running along it. The draught I had followed initially was clearly just a tributary being sucked into the main airflow.

I quickly returned to James to tell him of the find, and we decided to do a little surveying and exploration. We chose the upwind branch which didn't run a great distance before ending in an upwards bedding-plane slope ultimately blocked by a large slab in the bedding blocking sideways movement into what appeared to be a chamber with a waterfall entering. Capping or plugs/feathers would seem to be needed to shift this blockage. On returning to our entry point, we looked the other way, wondered how far the downwind passage went, but left it for someone else to explore.

We hadn't found a great deal of length, but on the other hand, we had left a decent going lead, and due to the combination of a misbehaving drill making waiting cold and dull work and the luck of my breath showing there was something worth looking at, had ended up finding quite interesting passage in what must be one of the most unlikely of situations.

Thinking partly of the initial nervousness with which I had slowly posted myself between the boulders and the wall, but mainly of the immense luck we had had with the draught, Kamikaze seemed like the obvious choice of name for the discovery.

Dave Wilson

## *M2 — Kavkna Jama*

The JSPDT organised a trip based at the mountain hut at Kal on 2nd October 2010. The terminal rift was enlarged to gain a  $\approx 20$  m pitch and a larger, undescended (due to lack of rope), pitch.

A return trip three weeks later descended the pitch and found it to be  $\approx 60$  m. The cave closes immediately, with a tight rift taking the water and a slightly larger abandoned rift also offering potential. It draughts strongly.

The M2 cavers returned in thick fog, following their footsteps through the 10 cm deep snow. With the coming winter Migovec is

effectively closed for exploration until summer 2011.

### *Exploration Outlook*

In all, 2.2km of new cave was found during the 2010 Vodna Sled expedition, taking Vrtnarija to 8.776 km.

We are in the extremely fortuitous circumstance where we finish the year with considerably more leads in the Migovec cave systems than we started with. The Vrtnarija camp was derigged with the certainty that we will be back next year camping in the same location. Gas cylinders and cans of fish were left sealed in Daren drums with a rock of carbide to keep them dry, the carry mats and tents were left standing to air, and we have a considerable armoury of rope brought back from the pushing fronts waiting for the 2011 team.

The work by the JSPDT in the Autumn has **opened up** M2 once again and brought the possibility of forging a connection back to the table.

The pushing of the Republica streamway (now Insomnia) to within a few metres of the maximum depth of the cave has reawakened the possibility of further depth extension to Vrtnarija. Expedition members have mooted the possibility of establishing an additional 2-man 'deep camp' to benefit pushing trips in the lower reaches of the cave, particularly any revisits to the far North end of the system.

### *Migovec's Long Term Prospects*

It has been a recurrent discussion in our club as to when we will run out of new cave to discover in Migovec. Almost all of our fruitful exploration has taken place within a single square kilometre of the flat topped mountain.

Migovec, being part of a mountain chain that is the first high altitude interruption to moist air from the Adriatic, receives an extremely significant level of rainfall. This summer, Jaka Ortar, a Slovenian geographer, recorded 210cm of rain on Migovec in 100 days (28th July-3th November) with his network of rain gauges. However we have never found any large rivers underground — the known cave can only account for a tiny percentage of the total drainage for the plateau.

Our current hypothesis is that there is no **master system** gathering the water, but instead a complex hydrology induced by cave passage intersecting the underlying (as yet, unvisited) band of Cretaceous shales.

For all Vrtnarija's complexity, the entire cave can be fitted into a slab of limestone slanted at 66 degrees and just 1000x150x1000m.

Certainly, as long as we can continue to find entrances through the frost shattered and heavily cratered surface, there will be enough cave in Migovec for decades more of exploration.

## *Underground Logbook*

*Found in 'AggregateofMig2007-2010.doc' : Jarv Typed up?*

Camp X-Ray Logbook: After about 6 hours of caving, finally made it down. Met Gergely & James on the way down as they were leaving the cave. Last bolt before camp is horrible = needs rebolting / rerigging. 15cm lower would be awesome. Built a tent at the camp. Required some stone movement. Mike got water, me & Jarv built tent, Kate = smoking. NEED WEED! Should have thought about it before. Listening to Massive Attack and getting Raptured. Oh yeah! Kate setting up sleeping space, Jarv went to get more water.

Camp is getting established, looking forward to Worms World Party. Mike = Cooking. Weed is really a missing resource. So far so good. About 5 metres from camp is a hole with water in it = able to hear, quickly got established as peeing corner, hope it's not a lead... Nick

23/7/10 Nice snooze - super warm. Nicola snored like a trooper - just a few minutes into the classic Black Adder session. Broken sleep - particularly as Nicola got up for X2 piss. Awoken @ 10:30AM by the beasts crawling up towards our pits. Tetley & Myles rustled up some hot-choc then wandered off down the continuing passage.

23.7.10 - 2:10pm MD + Tetley Entered Gardener's World ~6:20am. Made our way through, re-rigged zimmer on the way. Arrived at camp at 10:30am + awakened JV, Mike, Kate + Niko.

Wandered around friendship gallery for hour or two. Found nice lead, will investigate later. Sleep now.

23-7 2:20pm

It's good to be back in a sleeping bag at Camp X-Ray - seven years since the last camp here. It's very comfy. I like the tent - some things don't change though, Blackadder on the sound system, smash + tuna etc. Hopefully we'll get some good pushing in tomorrow! Tetley

23-7 6:20pm James and Dan arrive for a quick visit before heading off to push the muddy window 8:20pm Andy + Gergely arrive - I ignore them! Tet

23-7 10:30pm Fucking body won't fall asleep! Must have only had couple of hours at most since Dan arrived... Gergei + Andy turned up at 8ish + now, they have checked our Leopard a little. Tetley's bodily functions are out of control! May bring some corks down for his digestive tract next time. Anyway, now for some food + tea + hopefully can stay awake till bedtime at noon! Myles.

23-7 11pm Myles and I share breakfast / dinner with Gergely + Andy. Fine food! (Ed: Believe this was Tetley)

24-7 12:20 Breakfast with Tet & Miles. Dan & I will visit the lead we killed yesterday (Muddy Window) & survey it, then to Red Cow. James K

24-7 1:30pm MD Back in Camp for 2nd night. Pushed Tolminka today, good lead, surveyed ~8am. Some nice pitches. Covered in

mud. Listening to strange foreign music.

24-7 2:05pm Great push down Korita today - 8 bolts, surveying etc. IT'S GOING GOING GOING... GO THERE! (But try and avoid rigging future pitches in or near the water...) Andy + Gergely have left to push Leopard - James + Dan to survey Muddy Window and then go for a jolly below Big Rock. I've had a great day - thanks Myles. Time for a decent seep. Tet

23:20 24/7/2010 James + Dan return on a high! 9hrs good kip in bed - I feel good! forgot to say I had a shit yesterday... Tet



## *2011 — Izgubljeni Raj*

2011 was another great year deep within Tolminski Migovec. The weather was horrendous — we even had snow! But the cave kept on going. We found over 2.2km of new passage all below -500m in depth, and took the cave to a new deepest point of -888m. All of the exploration took place during underground-camping trips based at X-Ray (Vrtnarija, -550m), with the keenest of expeditioners managing a total of around seven nights underground during the four week expedition.

### *Introduction*

Between 15th July and the 15th August 2011, Imperial College Caving Club had twenty members participate in the Izgubljeni Raj 2011 expedition to Tolminski Migovec, Slovenia. The aims for this expedition were the continued exploration of Vrtnarija, where considerable efforts in 2010 had led to the discovery of 2.2 km of mainly horizontal passage, all below 500 m in depth. At the start of the expedition, Vrtnarija was 8796 m long and 807 m deep.

This summer we had less manpower than last year, but were still attempting to set up a similar four-man camp at -550 m and carry out deep pushing. Our exploration continued routes which were diverse in direction from camp—soon we were taking many hours just to travel from camp to the pushing front and back.

As a result of the reduced manpower and the considerable demands that exploration of Vrtnarija was making on our time, we unfortunately did not manage to contribute towards the exploration of Kavkna Jama and the attempted connection of the Migovec and Vrtnarija systems.

Our efforts were considerably hampered by the weather. We had the wettest summer we've ever experienced on Migovec. We only very rarely had sunny enough periods to dry our caving equipment and clothes. A particularly memorable rainstorm of 48 hours near the beginning of expedition was rounded off by a heavy snowstorm — the first we've ever experienced in 15 summers on this mountain!

For two periods of 36 hours, underground camp was effectively cut off from the surface by high water levels in the cave system, making some of the pitches impassable. Thanks to the quality, warmth, provisions and size of underground camp this wasn't a major problem as exploration simply stopped and the explorers got a lot of sleep

instead. Certainly underground camp was a more pleasant environment than the windswept, rain lashed and barely above freezing surface of the mountain.

In all we discovered 2229 m of new cave passage taking the cave to 11025 m long and 888 m deep. All these extensions have been made at depths greater than 500m, on multi-day trips based at an underground camp. Vrtnarija now has the vast majority of passage, over 8 km, at depths of greater than 500 m.

### *Cave Discoveries*

Our major cave finds this year can be considered in three separate developments within Vrtnarija:

#### *The Serpentine & Let na Drugi Svet*

An active streamway, named the Serpentine, led off from a large chamber (The Albert Hall) discovered along Prince Consort Road. During 2010, this was pushed to -621 m (Will It Rain, for a Million Years?). Exploration in 2011 continued along this active meander.

The initial exploration (Round Pond) descended a 2m climb down leading to an oxbow and 4m pitch. The following trip traversed out along a crack in the ceiling to avoid falling water down a 10m pitch (Longwater) which entered a chamber (also Longwater) with significant iron deposits (in the form of heavy ~4cm thick plates of dark mineral in a vein within the limestone), and a considerable number of orange-stained straws and stalactites.

The boulder collapse in this chamber was bypassed by a squeeze between boulders on the right which entered a crawl-way which soon refound the water flowing from beneath the boulders. A 4m pitch was reached where the bedding plane appeared to intersect a joint. A 3m diameter apparently rather deep pool is present below this pitch. Passage continues in vadose development with the water, which entered a small chamber with a set of cascades (cascade chamber). There is also an apparently phreatic connection between high up in the roof of this cascade chamber and part way up the 4m pitch.

The cascade chamber is rather complex in structure, the cascades falling into a large & deep 4x2m pool. This water flows down a short rift and immediately tumbles down a ~8m pitch (Duffers Drop) which leads via two freeclimbable cascades (requiring very careful maneuvering near to the water) to reach a wet inlet on a large pitch (Drink Your Own).

Behind the large pool in cascade chamber there is a dried pool with haematite deposits and the start of a phreatic crawlway (Rotten Row), which is hidden from view unless you're crouching next to the dried pool. This crawlway leads to a short pitch into the dry end of the rift-developed Drink Your Own pitch.

The cascade chamber also contains a rock bridge which can be



used to traverse over the chamber into a dry scalloped shape alcove and so avoid climbing the direct 2m cascade to the pool.

The maximum depth reached was -688 m. Our surveys indicate that the current termination, at a large wet pitch with two accessible pitch heads (via Duffers Drop, or Rotten Row), is very close to the Republica chamber at -723m, where two streams enter from the ceiling and split. Exploration was halted by the wetness of the pitch, which will require a considerable effort in bolting to rig safely. Drink Your Own is a pitch which has developed in a perfectly straight rift (probably fault controlled), with two streams entering the rift from opposing perpendicular directions (i.e. perpendicular to the rift direction of the pitch), one of which is the Duffers Drop water which we have been following continuously from the start of the Serpentine in the Albert Hall.

The Serpentine rope was derigged back to camp to avoid water damage during winter.

The Serpentine water flows continuously from the Albert Hall chamber to enter Drink Your Own via Duffers Drop. The water entering on the opposite side of this large rift pitch is considerably greater in volume and the source is unknown.

Below the first pitch in the Serpentine, a climb was made to access Let na Drugi Svet (Fly to Another World), which via a series of digs and a 21m pitch led to a large active meander Krt Kova Dobra Dela (Little Mole Done Good), which is has been pushed both upstream (to +19 m) and downstream (to -23 m) and is ongoing. It is possible that this water forms the larger of the streams that enters Drink Your Own.

212 m of passage was found below It Will Rain, and 252 m in Let na Drugi Svet.

### *Insomnia*

Insomnia is the continued exploration of a descending streamway in the 'deep' level of Vrtnarija off Red Cow Roundabout, which started with Republica in 2009 and was left with an active streamway at -802m (Insomnia, 2010). Two pushing trips (Daydreamers) followed this stream down a series of small (5-15m) pitches. The last trip saw this stream disappear into a narrow, too-tight, rift. A bypass was sought via an abandoned bedding plane level (Penguins Egg), which gained the head of a chamber in which the noise of falling water could be heard.

The descent and exploration of this chamber (Winter Journey), found that the loud stream noise could be heard through a too-tight rift formed in a bedding plane with the characteristic -70 degree dip of the passages near the sumps in SysMig. This rift was also issuing a draught, which was followed along the inclined bedding plane (heading North) through a series of muddy squeezes to where it disappeared into an immature rift in the roof. It is hypothesised that this could be the water-driven draught return from a sumped

section. The chamber had considerable thick grey silt deposits, with unusual silt stalagmites on the boulders, which may be evidence of a sump backing up.

The bedding plane was pushed in a northerly direction for circa. 20 m. This is in the direction of the hypothesised dip of the mountain's water table, and so it is possible that continued pushing or digging of this bedding plane may lead to a sump bypass.

Exploration was carried out by trips that started on the surface (confirming good weather for the day), went to the bottom, explored and then returned to underground camp. This was due to us being extremely concerned about the flood response of this new part of the cave. The pitches are active, and due to a combination of the unavoidable cave nature, and 'exploration' rigging, they are wet even in moderate conditions.

The 2011 exploration of Insomnia found 294 m of passage and took the cave to a new maximum depth of -888 m. The pitches were left fully rigged as the intended last pushing trips did not occur due to a multi-day rain storm near the end of expedition.

### *Kamikaze*

Kamikaze is a subtle route through the boulders on a ledge part way down the pitch to Lost Hopes in Wonderland (the name given to the chambers developing South / South East from Cheetah). The original explorer (DW) was making good use of his time while hand bolting down the pitch continued, and the key squeeze through the boulders was only found when the condensation from an exasperated sigh was noticed to disappear sideways!

The sandy crawling passage was originally pushed upwind, to eventually reach a boulder blockage in a spacious bedding plane beyond which a large sound of water can be heard (Kamikaze). There is enough space in the bedding plane to dispose of boulder fragments, if it can be reduced in size, and is an obvious future dig target.

This year we pushed downwind, almost instantly discovering a large chamber (Red Baron) and a bolt traverse over a pit to reach a large (~6m diameter) ascending (at almost exactly 30 degrees, in a straight line for 140 m) phreatic level (The Throne Room). This terminates in what appears to be a cross rift intersecting it, making it a hammer head shape in plan. There is a 6 m undescended pitch at the end, and the possibility of a traverse across this pitch and a continuing crawl way.

Midway along this phreatic tunnel, a climb was made (Serenade) following the draught through a window and into a parallel piece of passage now descending (Amazing Grace). This continued with large sections of passage separated by short boulder chokes where the floor raised to reach the roof (Magic Dragon), eventually reaching a large and extremely muddy pitch.

This pitch, Stuck in Paradise (P69m), took three pushing trips

to make a successful descent, and was conquered by the use of an electric drill and rawl bolts. The rock was too poor, and the pitch literally too muddy to make effective hand bolting possible. The pitch was formed from a series of chambers through which a complicated SRT route was found.

Below this pitch, the route split with the discovery of two extensive horizontal levels:

Lost Miles (originally East Links) is a comfortable walking phreatic passage of 2-3m width, decorated by plenty of crystals, but which does not take a significant amount of draught. Exploration was blocked by a boulder choke after 270 m, which was dug, and nearly passed, this year. After the boulder blockage, the passage seems to continue with a similar dimension. There are white crystals (we believe Calcite and Aragonite) present, but no stalactites. This termination is now the most Southerly cave passage in Vrtnarija.

The Penitence crawl (originally Knee Killer) takes the draught to a boulder choke, and includes some clean white stalagmites (the first seen in Tolminski Migovec) and stalactites. The entirety of Penitence is crawling in passage with a maximum height of one metre. Midway along Penitence a boulder choke is passed, with a collection of approximately half a dozen white stal columns 20-30cm high. Penitence ends in a boulder choke, which was passed to lead to 'Salvation', which ends in two ways on. The first branch of passage ends at a sandy dig with no draught; the other is (what appears to be) an easily passable squeeze, at the end of an ascending passage, with a howling draught. One can hear a considerable roaring at the squeeze which is possibly water. Exploration was halted at an open lead by lack of time, after 349 m of passage from the bottom of Stuck in Paradise. From the start of the Serenade climb, development to the current end of Penitence is almost perfectly South-East in direction and 500 m in plan length.

Until the discoveries this year, Vrtnarija almost exclusively resided in a band of rock less than 200m wide and inclined at 70 degrees. Almost all the horizontal development was confined to 'North-South' development (actually 330 degrees true) in this band. The new phreatic levels off Kamikaze have developed hundreds of metres to the South and East, seemingly unconstrained by this geomorphic feature. They have taken the actively pushed cave passage into entirely blank mountain, and underneath the massive drainage basin formed by the Kuk-Razor valley. As of yet, this passage has been entirely dry, but with a seemingly increasing draught.

Wonderland, and the Kamikaze extensions, were left fully rigged as this area is almost totally dry. The exploration front is now a considerable number of hours of caving from camp, and the lack of accessible water is a logistical difficulty in staying hydrated. However, this entire region discovered so far completely weather independent.

In total, 1.383 km of passage was found in the continuing exploration of downwind Kamikaze.

*Other Leads*

A choke near camp, at the end of Friendship Gallery (Lower Pleasures), was dug and passed to a 28m pitch (2nd Time Lucky) leading to continued small passage. 88 m of new passage has been found. It is hypothesised that this passage may be the natural continuation of the older Friendship Gallery phreatic, before the vadose development of Big Rock occurred.

Big Rock, the 74m pitch at the end of Friendship Gallery was known to have a window from it's first descent in 2003. Recent inspection with modern high powered lights have revealed that it is more that we are descending in the side shaft, and that the main chamber is still to be gained! The chambers are separated by a wall of rock about 20m off the floor of the known pitch. A considerable volume of water can be heard falling down in this other part of the pitch. We have no idea where this water goes or where it could be coming from, though it was hypothesised (in 2003) that water from Big Rock may combine to form the Soda Stream. A drill battery was expended in starting a high traverse in the process of gaining the window. As Big Rock has developed in a long rift and we abseil down the near end, the horizontal distance to be gained is large, perhaps 30m.

A bolt climb was made in the Queen's Bed Chamber, using an electric drill, 8mm rawl bolts and a Raumer 'stick-up'. Progress was halted by the muddy layers in between the bands of good limestone. In order to reach the hypothesised continuation of the phreatic passage, a further 10 m of climb is needed with a solution to this technical difficulty.

A bolt traverse was made to one of the windows on Cheetah, and was found to be a small abandoned inlet cascade.

The oxbow just at the beginning of Prince Consort Road (just beyond the roped traverse past the inlet, on the right) was pushed to a tight inactive rift that leads upstream about 30 m and terminates in a small chamber. Further climbing upstream is possible. This was not surveyed.

Windows in The Albert Hall and Minotaur rift were inspected, climbed, and found not to continue.

*Prospect for 2012*

The pitches in the entrance series to -550m were derigged with the ropes left coiled in situ and the metal removed to the Bivouac on top of the mountain for cleaning and upkeep. The underground campsite was readied for winter with small reserves of food and fuel being left in Daren drums, the tent being flipped upside down and the roll mats stood up to dry. Rope derigged from the Serpentine and other pieces used temporarily for exploration have been left at underground camp for use in future years, along with a dynamic rope for climbing purposes.

With sufficient caver manpower, we intend to establish a similar deep camp in 2012 and continue the deep exploration. Though we have considerable transit times to reach our current pushing targets, the diverse direction in which they are going suggests that at this point Camp X-Ray is a good a campsite as any other.

We are keen to extend our knowledge of the hydrology of the plateau, and feel that more extensive dye tracing with a visible agent will be the best route to understanding both the passage of streams within the cave, and (with larger quantities of dye) identify the resurgence. Due to the sensitive location of Migovec in the Triglav national park and as the potential drinking water source for a considerable number of local settlements, this has to be carried out with full support and agreement of local government agencies & population. As such, putting together a scheme of work & organising permission may require a considerable amount of time.

### *October M2 / Kavkna Jama*

A weekend trip with the JSPDT in October to M2/Kavkna Jama brought back 245m of survey data from discoveries over 2009-2011, adding 100m of depth to M2 and bringing the closest approach between Vrtnarija and Kavkna Jama to 4m (with a +- 30m estimated error of the 1.4km unclosed loop). The lead ends at an easily dug mud floored bedding plane, leading off into a tight rift, with an extremely strong draught. The trend of the cave passage is Northerly, towards the Captain Kangaroo area of Vrtnarija. Even if M2 misses the closest point, Dark Tranquillity, it is hoped that it will intersect another of the Captain Kangaroo shaft series at this depth (Olympic Rift, Dangermouse).

### *Contributed Stories*

#### *Attempted rigging of Big Rock alternative, 2011*

Dave and Jon set off for to try and rig to the window seen across Big Rock the previous year. Attempting to start from the top, Dave bolted leftwards from the top, slowly, slippily, and still in the draught from the approach passage, but after a long time spent placing only 6 bolts, had only reached 1/3 of the way down the initial slope, getting into increasingly poor rock as he went.

Giving that up as a lost cause, D and J both descended Big Rock to have a look from lower down. It became rapidly clear that that would have been the right thing to do in the first place, with, it seemed, only a few bolts needed to reach and then protect a ledge route around to the bottom of the window. It also became clear that the window wasn't a window at all, but a seemingly complete parallel shaft, only divided from the bottom of Big Rock by a ~10-15m high wall at the bottom, with no visible division any higher up - the 'window' seen had been an illusion caused by looking across from

high up Big Rock, where an intervening overhang on the right hand wall had played the part of the top of the window. It wasn't obvious how far down any parallel shaft might go beyond the wall, since all that could really be seen from any suitably high vantage points was blackness, but it did seem that the parallel shaft was a good size in terms of diameter, maybe larger than big rock itself.

On arrival at the bottom, the dividing wall was examined from below, but no easy climbing routes were seen. A clutch of crabs and hangers were retrieved from between the cobbles near the base of the rope, presumably dropped by someone in a previous year, but still in very good condition, so the day had not been entirely wasted.

Dave Wilson

*Setting up camp: my first time in Vrtnarija!*

It was my first ever expedition and after three(?) days of carries in rain and clag, I was eager to experience Vrtnarija and alpine caving firsthand. So when talk turned to plans for setting up underground camp I made sure I was around for the conversation! It was eventually decided that a team comprising myself, Jarv, Jan and Myles would finish rigging down to camp, set up camp and spend a night there before coming out the next day.

The morning was then spent on final preparations: packing the camp tacklesacks, sorting out our provisions, grinding black pepper and packing a cheeky set of survey instruments and bolting kit 'just in case'. Making our way across the plateau to the entrance, I was admittedly feeling a little apprehensive. I'd never been that deep underground before and had heard stories about the slog out from camp. Was I overreaching myself by going down to camp on my first trip? I trusted myself to make it out though, so it was with an air of anticipation that I followed Myles into the cave.

Jarv went ahead to rig while the rest of us followed, each encumbered by at least two bulky tacklesacks, stuffed with sleeping bags and assorted camping equipment. We met Tetley and Jonny in the Urinal series, on their way out from Tetley's traditional Mig fresher initiation to Pico/Swing/Tessellator.

We made steady progress towards camp, chatting while waiting for Jarv to rig, with Myles telling me about the pitches and where to look out for loose rock. I like caving with old Myles. He exudes an aura of confidence and competence. Whether that is true is another point entirely.

Finally we made our way down Zimmer and through Friendship Gallery to... Camp X-Ray! The overturned tent, courtesy of DanG from last year's derig, greeted us. We set about making the camp home: collecting sand to cover the mould which had multiplied in our 11 month absence, building the sleeping platform of rocks, and setting up the beds of comf and sleeping bags. I was introduced to the delights of underground cuisine and the luxury of clean, clean, fleecy comf to wear. Less glamorous perhaps was having to piss into

the same resealable bag as Myles (I think? Check UG logbook! Or maybe this was in our tent...!) I slept well that night.

The next morning after a brew Jan and Jarv decided to have a cheeky push in Serpentine before heading out, while I was to familiarise myself with the cave with Myles. We pottered about Albert Hall and its various branches before finally heading down Serpentine to say hello to Jan and Jarv. We turned around at the bottom of It Will Rain, the 600m of ascent on our minds. At this point Myles said to keep going until Fistful of Tolars as he'd be right behind me. I headed out.

At Zimmer I snagged a sneaky break, deciding to wait for Myles... and I waited, and waited, and waited. Just as I was beginning to get concerned and go back for him, Myles appeared. Apparently he'd got confused in Albert Hall and had to try a few passages before finding the right one back! A bit shaken but otherwise fine, we made our bid for the surface at a steady pace. The prussick out was actually less painful than I thought it would be; the never-ending, one-foot-in-front-of-the-other slog associated with carries was good preparation indeed!

We emerged to a smattering of rain but felt triumphant nonetheless. I couldn't wait to go back!

Clare Tan

### *Dream 2 and Penguins Egg*

Morning. The weather was glorious: the sun was shining, and the sky more blue than white—both rarities on this expedition. I knew there was heavy rain forecast for the next few days, but for now, I sat on the outcrop of limestone outside my tent, relishing the warmth of the sun's rays on my cheeks.

Soon my need for my morning cup of tea became too great to ignore and I ambled to the bivi, the shakehole that I'd already come to love and see as home in a scant three weeks. This early in the morning, the bivi was still relatively quiet as the masses snoozed in their tents, though Tetley and Dan already had the volcano kettle going—perfect.

Brew in hand, I settled myself onto a 'McGowan' (sofas made of dwarf pine needles wrapped in tarp material) as talk naturally turned to people's plans for the day.

"Samo's in a pretty bad shape, but I think I've managed to persuade him to go down with me," said Tetley. They'd made plans to push Daydreamers, an active cascade series at the very bottom of Vrtnarija, but Samo had been a touch too liberal with the vino the night before. "I messed up last night," he continued, frustrated. "All I had to say to him was 'Be Ready', before I went to bed..."

Sure enough, it wasn't long before Samo staggered into the Bivi, looking like he'd seen better days.

"Maybe we could go tomorrow instead. I'll be ready then," Samo suggested.

“Nah, I want to go caving today...”

Dan and I looked on in amusement. However, when a couple of mugs of tea did little to alleviate his hangover, it soon became clear that Samo wasn't in fit enough state to go pushing at -850m in the next few hours.

“Maybe...” Tetley began, eyes taking on that characteristic gleam. Uh oh; I brace myself. Anyone who knows Tetley knows about him and his ‘plans’. I could practically smell one forming in his mind. “...maybe I could go down with Clare today, push Daydreamers, then you and Karin can come down together tomorrow to meet us at camp, and we can swap partners? Of course, I haven't even discussed any of this with Clare yet...”

“Yeah, you haven't!” I nod, eyebrows raised.

Then Samo voiced his agreement, and it was up to me. I hesitated; I'd already made plans for a fun, relaxing jolly to Pico with Kate and Nia... and Tetley's proposal was a trip of a very different nature indeed. But the cave was calling. I thought of the lead we'd left in Daydreamers on our previous trip, the promise of extra depth, the uncertainty of what we'd find below the next pitch... And I was all too aware, as I am sure Tet was too, that this might well be the last opportunity of the expedition to push the deep stuff – the Republika streamway and the Insomnia/Daydreamers series below it are not places you want to be when the flood pulse hits. I looked out of the Bivi to the same blue sky and bright sun I woke up to. Fuck pleasant bimbles, I thought, I'm going down.

“When do you want to leave?”

“As soon as possible,” the Sly One grinned back. It crossed my mind that he knew I wouldn't—couldn't—have said no. I take the piss a lot about Tet's ‘boys’ and manipulations and games within games, but the bottom line is caving with Tetley is just fun.

And so, by sheer serendipity, utter jamminess of being in a particular place at a particular time, I found myself on yet another storming camping trip. It's interesting how much chance affects who you cave with and which trips you do. Neither of us had planned to cave with the other again this expedition and yet there we were, at the entrance to Vrtanarija, ready to face the darkness once more.

“Well,” one of us said, “here we go again.”

Tetley in front, we both danced down the pitches, comfortable with the pace, knowing where to place our feet at each rebelay and the little quirks of each pitch head. I savoured the rare feeling of competence; the back and forth of “rope free!” and “okay!” that I'd come to associate with expedition caving. Innocuous though it may seem, I remember thinking: this is one of the reasons why I love caving.

We soon reached camp, and there we shared a congratulatory brew with Gergely and Izi, who had just pushed 500m of storming horizontal passage (below Stuck in Paradise). We chatted excitedly about the new leads for a while, but we were on a mission and time was marching on...



Once we finished packing our tacklesacks for the second part of our journey, we bid them goodbye and set off. The deep, horizontal stuff below Big Rock Candy Mountain has some of my favourite caving in the system. Not unlike Welsh caving at its best, the meandering rift passages of Highway 32 or labyrinthine tunnels of the Leprechaun series possess a distinct, individual beauty; its existence alone this deep in an alpine cave system is incredible.

We nipped along the passage, familiarity making the journey pleasant. Before long we were back at Republika, then Insomnia, and finally the cascades of Daydreamers. I love returning to little bits of cave I've pushed. It was wetter than before, but the water levels were still safe enough. We established 'base camp' in a little sandy alcove, picking up a bottle of meths and a mess tin along the way—remnants of a sneaky little outpost that Tetley and Samo set up in Republika two years prior.

Tetley started bolting the pitch, and serenaded by the 'tap, tap, tap' of hammer against driver, I busied myself heating up a tin of tuna with the meths, and brought out the slices of fresh bread, transported carefully down in a Daren drum.

"Would you like the sandwich there, or are you coming back here to eat?" I shouted down the passage.

"Here, please!"

So there we were, 840m underground. Myself, clipped into the traverse line, legs dangling over the lip of the pitch, and Tetley, a metre below me, swinging about on the rope midway through his second bolt, each enjoying a hot tuna sandwich. And what a sandwich it was! What luxury! Princes Tuna in Sunflower Oil, king of all underground edible matter...

Then—"Do you think you could roll me a fag?"

"Sure. Well, I'll try my best..." Unbidden, the memory of Myles prophesying that rolling is a life skill that will one day come in handy came to me... Don't drop the bag, don't drop the bag, I told myself. I knew Tet would kill me if I lost his baccy. I rolled a passable cigarette, lit it, and he disappeared down the pitch. I, of course, followed.

Daydreamers continued in the same vein for a while, short 5–15 metre cascade pitches which we took turns bolting. How it teased us! Would it go? Would it sump? Never knowing what exactly we'll find around the corner, a thrill of exploratory caving I doubt I'll ever grow tired of. Eventually, the last pitch we dropped turned out to be a blind one. The water gurgled mockingly into a ten centimetre wide, angled bedding plane rift, and we were unable to follow it.

I couldn't help but feel a little disappointed, suddenly becoming more aware of how cold it was... Camp X-Ray and hot, sugary tea seemed far away. Tetley, perhaps sensing my deflation, offered some consolation, "Don't worry, we'll find a bypass!"

I grinned back. This was still a stonking good trip, regardless.

"On station!" We began to survey.

Though our callout was beckoning and we still had surveying to

complete, we knew we couldn't leave a quasi-lead hanging like this, not when the pushing front was so far from camp. So we pushed on through an old fossil level that continued above the blind pitch, which I'd explored briefly while Tetley was bolting earlier. It didn't look too promising, but it kept going, so we went with it. With each metre gained in the abandoned bedding plane, I allowed myself to hope a little more. But the higher one's hopes, correspondingly, the greater one's fear of killing the lead. Such is the paradox of deep cave exploration. It is both a blessing and a curse, and I would not change it for the world.

Finally, we got to a roomy chamber with the unmistakable rumble of water in the distance. I flashed Tetley what I'm sure was a jubilant grin. It seemed as good a lead as any to leave; we shook hands, and the whole dry series we named the Penguin's Egg, for "if you march your winter journeys, you will have your reward, so long as all you want is a penguin's egg."

Clare Tan

### *Finding Salvation*

Following our 16.5 hour push to the bottom of Vrtnarija the previous day, Tetley and I without discussion agreed on a pleasant 'bimble' for our last push of the expedition. Surprised that none of the other teams had pushed Gergely and Izi's lead below Stuck in Paradise yet, we seized the opportunity with both hands: roll on glorious horizontal passage!

We made our way to the pushing front leisurely, scrounging for hangers and maillons along the way after realising at Cheetah that we'd forgot to pack any, and enjoying a civilised ginger cake ("It tastes better sliced!") and ciggie break in The Throne Room.

Finally we got to Stuck in Paradise, the muddy pitch from hell and the furthest either of us had been in this part of the cave.

"After you," grinned Tetley. "Good luck."

I climbed a short rope to gain a traverse and the start of the descent proper. We had heard the horror stories from Gergely, Izi and Jana, but this is one pitch that has to be experienced to be believed. Sticky mud coated everything—maillons, knots, cowstails—into blobs of uniform brown. Globules of wet mud oozed down the pitch walls of their own accord, punctuating our descent with timely 'plop!'s. Later, on our return, our jammers would slip back down without biting, so thick and slippery was the coating of mud on the rope. I let out an incredulous chuckle.

"How is it?" came a shout from above.

"It's okay, but don't C-rig!" I warned.

God knows how long it was before we finally reached the bottom, very relieved, 18 bolts and 70 metres later. All respect to Dan, Jarv, Jana, Izi and Gergely especially for bolting and rigging the pitch, it was a hell of an effort and superbly done: most beautiful rigging in most squalid conditions!

A couple of fags for Tetley and it was time to rock and roll. 150 metres of painful crawling over uneven rock—Penitence passage, as it was aptly named. We stopped for a bit to admire the clean, white stalagmites midway through, but our minds were firmly on getting to the boulder choke at the pushing front. Thankfully we reached it soon enough, moving the tacklesack through the passage was starting to get tedious.

We set about digging through the choke, spurred on by the strong draught on our faces. After a while of shifting rock and wanton destruction with the bolting hammer, we broke through to delightful walking passage. Ahh yeah! We shook hands and raced down the passage. It soon degenerated to a crawl, but just as I rounded the corner it opened up once more, this time yielding delicious, milky sand.

“Game on!” shouted Tetley, and I am sure the massive grin on his face was mirrored on mine.

“Before this gets trashed, take 10 steps and look back,” he said.

I did as suggested, and the sight of my lone pair of footprints in otherwise unblemished sand looking back at me sparked a strange tingling in the pit of my belly. I’d heard and read such tales about the magic of exploration before, of course, but I’d always treated it with a degree of scepticism, if not actually dismissed it as outright hyperbole. But now, confronted by such an experience myself, it felt intangibly special.

“Shall we call this Salvation?”

“Funny... I was just thinking the same myself,” I replied.

Euphorically, we whooped down the passage, wordlessly agreeing to exchange leads every so often. When we finally stopped at a junction for a chocolate break, Tetley started giggling, “Clare, we’re such tarts!” I couldn’t believe my good luck, not only on this trip, but also on the whole expedition—not in my wildest dreams had I imagined enjoying myself as much as I did on the mountain or finding so much passage underground. On one of our previous pushing trips, Tetley, three-parts silly and one-part sage, told me, “This mountain is really strange.. sooner or later, Mig always rewards those who have put in the effort.” I don’t know about effort, but this was one hell of a reward...

In all we found about 200m of passage before time signalled the end of our discoveries for the day, and we left an easy squeeze with a howling draught for next year’s team to push. Less exciting but nonetheless worth a quick look was a sandy dig off to the right of the junction, reminiscent of the digs below Big Rock Candy Mountain.

Battling dehydration, we raced our callout back to Camp X-Ray. The return journey was smooth apart from - big surprise - Stuck in Paradise. There are sections of this pitch that are quite loose, so we agreed to ascend the pitch one at a time. Unfortunately, we neglected to take into consideration 1) the fact that the pitch is actually made up of a series of chambers and 2) the noise-absorbing qualities of mud. Which led to a rather comedic (though it didn’t

seem so at the time!) situation:

“IS THE ROPE FREE??” I’d shout.

“ROPE... FREEE!” Tetley was shouting as loud as he could from above as well, but I heard nothing.

“IS... THE... ROPE... FREEE?” And so on.

This went on for a good 15 minutes at least. Eventually I thought, fuck it, he must be at the top by now, I’ll just go up. Ascending the pitch was a rather harrowing experience and I arrived at the top to find a rather cold Tetley and a half eaten tin of fish. Yet I knew that for the next 11 months I’d be dreaming about returning to this part of the cave. Oh, the lure of deep cave exploration...

Clare Tan

### *2001’s Winter Journey*

I have never been to the ‘deep’ part of Vrtnarija, below Big Rock Candy Mountain. Or rather, I was with Jana when we pushed Korita to a connection, and free climbed down from an unlikely rift in the ceiling (‘The Crack in Time’) to reach Envy. That tiny taste of dry, ancient, phreatic as I continued down the crawl ways solo to find a PSS left a ticklish taste in my mouth. Such a strange, quiet place.

Time on expedition was running out, so if I was going to get down Big Rock, it had better be soon! Jim Evans was recently up on the mountain, but rather lacking in terms of warm clothes. It later turned out that he’d forgotten he’d sent out a bundle of his warmest technical garments in the minibus, and had thus failed to find them when he flew out. They were safely sealed in a barrel at Ravne, while he shivered up top.

But he was up for a deep camping trip.

Clare and Tetley had headed off in the good weather at the morning, Jim and I were taking rather longer to get ready. As the slower party of the day, we had, by default, drawn the short straw and committed ourselves to a ‘night train’. By the time we were thinking to go, Andrej had arrived. He was interested in M2, but as there were few experienced cavers left on the mountain top, he very readily converted to Vrtnarija.

And so we were off, what a fine collection of Speleologists to be going deep with, I am caving with the very pioneers of deep exploration on Migovec! Jim is having to remember a fair bit of SRT as he goes, but we make steady progress to camp, saying hello to Mike & Ari at around nine in the evening. Apparently Tetley & co. are not to be expected for a considerable time, which makes us rather worried about how strict they were intending to be with their Day Train booking in the camp roster. Now as a 3-person team, we have less flexibility if Tetley & Clare end up between the tracks.

Big Rock is a truly stupendous pitch. It’s absolutely lovely. I eagerly checked out the window on the far side of the rift. It leads through onto an absolutely massive chamber, almost that we’re descending in the side shaft. Tetley’s Spaghetti, where rope thrown

from the top of the pitch ended up impossibly tangled halfway down, I had assumed was Dave & Jonny's newly rigged drill traverse. I was later told that in fact, this rope isn't properly belayed at all, and that Dave took out their piece of rope again. Quite glad that I didn't attempt to get on it!

The conglomerate rock on the floor of Big Rock is very interesting, specs of black, suspected Haematite, glued together with an open sponge of limestone chips. Andrej and Jim soon join me. It is here that our trip starts to go slightly astray.

"Oh, I think my concussion is coming back!" groans Fratnik, his helmet off, exposing the large wound where he was knocked off his mountain bike earlier in the week.

I look for Jim, he's down near the little stream with his water bottle, I assume making the best caving use of a stream, in having a piss and drinking some refreshing water. I do a double take — he has his penis inserted into the wide mouth of the water beaker (as I find out later, the bottle was carefully selected for this very purpose), he then tops up with fresh water and drinks from it. Wow. Minus 650 and all is well.

Navigation soon became rather difficult. Jim and Fratnik have both been here before, but memories fade. Luckily we had stolen the A3 laminated survey from UG camp as we passed through, and this became rather useful in combination with our survey compass.

From Big Rock you can follow the stream, traversing above the trickle of water (Highway 32). The rift is high, and on the way back I ended up doing some crazy free climb back down at the end. Continuing into the cave you reach a sandy oxbow, with a lake to the left, which I assume is the source of the little stream that disappear down at the far side of the oxbow (and, one assumes, forms Brown Rice Inlet). It's an interesting area, and one that would be worth checking out seeing how this 'Highway 32' interacts with Big Rock. We blunder directly into what I believe is 'Postiga', and end up looking down into a chamber with what look like footprints, but for which there is no way down. Backtracking, Andrej remembers that you have to double back to camp, we soon find the rope leading down.

Down into a maze of twisty tunnels. Unfortunately, very few PSSs were placed in this area, and it's only when we pick up the 'Mad Cow' PSSes left by Andy and Rik on their accidental resurvey that we know we're on the right track.

Once out of the small crawly bits of Leprechaun, and having found the subtle 'hidden under a ledge on the right' pitch down, the passage develops into a very curious large phreatic. Andrej comments that he reckons the water never ever flowed here, just percolated away leaving all this silt in place. Certainly there are no obvious stream features, but the few pitches and climbs could be old cascades.

The rigging gets more inspired, and rather minimalist. After a very strange traverse-pitch in a amphitheatre like corner of passage,

we dive through the sandy digs and ‘thomp, thomp, thomp’ our way to what is clearly Red Cow Roundabout. There’s a bundle of old rope here, and an inviting crawlway leading off to the right. With wide passage, plentiful sand, accessible water and little draught, this would make a very nice camp at -736 m.

We regroup, then head down the inviting crawlway. Soon we reach the little pitch and stream, I know this must lead quickly to the original Red-Cow sump but stupidly I don’t go and have a quick look at it, instead heading directly upstream to Republica. We were more than a little bit worried at this point, as Tetley and Clare were meant to be on the Day Train - but it was already past midnight. Were they alright?

In the little crawlway above the stream I hear voices ahead, and sit to wait until Tetley and Clare show up and Andrej and Jim catch up from behind. It is now well gone midnight, they won’t be returning to camp till 3 or 4AM at least. Their Meanders glisten with water, they are upbeat but their wild staring eyes speak a slightly different story. To be honest they are a little short with us, considering they are the ones transgressing their Camp X-Ray booking, apparently just due to exploration fever. They relate their latest discoveries, the original streamway lead is dead, but an abandoned bypass into a chamber has been found. We agree to leave them sleeping till Noon at least, and bid them well.

Onwards to Republica, up a free climb next to the stream. The chamber is not too heavily spray lashed, by traversing you can avoid the twin waterfalls coming in from up high. I have a good look at the ceiling. The original description water being split on a boulder is not quite correct, it’s more that you have water entering at opposite ends of a massive rift, and the Republica chamber is where these two separate routes of erosion have happened to intersect (I’d suspect). The bigger waterfall certainly seems to be the one that feeds the Red Cow sump, but it’s difficult to assess the flow rate for certain.

Republica pitch is rigged with what must have clearly been a speedy minimalism, almost all naturals, with a crazy rebelay in freespace dangling off a sling looped over a rock bridge. As a result, the hang and rebelay are wet, but it could be rigged perfectly dry (after bolting!) with an easy traverse on the large ledge.

Next we know is Insomnia. This has a profusion of stainless 8mm rawl bolts, and no naturals, yet still is rather terrifying in its own way! James KP is very tall, abseiling down onto the swinging traverse rope that crosses the pitch about 2m off the ledge is rather a challenge to execute safely, and the single bolt providing the hang for straight down the 32m pitch is terrifying. Halfway down the pitch there is a bouldery ledge that could be easily gained, and may have some Kamikaze-like lead running off it. The bottom third of the pitch is potentially very wet. Going down you can easily traverse sideways with your feet, on the way back up you have to self-deviate with a spare hand to the pitch wall to avoid swinging out into the spray.

Below Insomnia, you are in a classic bit of stream cave, could be anywhere in Yorkshire as you clamber in crawl-ways above the water. The last item in Insomnia is a hand line on a toboggan, which would be rather entertaining in the proper wet.

Soon into the Dream series, we drop a number of little 10-15m pitches, always near the water. It's great fun, and would be an excellent Grade III in Yorkshire. With such cold water and so far from a place of safety, it's rather more sobering here. The hang from one of the rifts doesn't go quite far enough at one point, leaving you suspended above a deep pool. I kick off the wall behind and try to abseil down in one quick maneuver, but don't quite get enough slack through and swing back dragging my heels through the water. My wool socks are soaked, and my feet will be freezing till I get back to the surface.

Finally we reach a long hall dipping down at about 20 degrees, rope is necessary but you sort of abseil by climbing off opposite sides of the rift. There is a crazy dumbbell shaped rock sitting nonchalantly on a shelf, looking utterly artificial. Finally the water disappears down a crack in the floor, and the human-sized route forces you up onto a ledge. A short, unrigged, pitch leads down, to rejoin the water before it disappears into an impossible rift, the end of the Dream.

We stop for lunch, we don't have much. A few tins of fish and the bread from the Bivi that Clare & Tetley didn't take. I pop ahead along the Penguin's Egg, a series of crawl ways through muddy layers and down dipped bedding planes to finally gain the top of a sloping chamber, the exploration end. I am not filled with massive hope, you can indeed hear water but the rock and everywhere available surface is covered with fine grey silt silt, the cave feels like it is in shutdown. Though Tetley & Clare have certainly left a lead, I can't help but feel that they themselves would not be in such a rush to come back and push here.

I carefully climb down, past strange grey silt-stalagmites growing out of boulders, and find my way to the source of the noise.

On the left, a tight rift issues the clear sound of tumbling water, and also supplies a draught that blows into your face. The too-tight rift is formed along the dip of the overall chamber, but with a strange protrusion of rock on the left that stops one from seeing the source of the noise. I take off my helmet and stick my head in it, no chance of passing it without significant expansion.

I head in the opposite direction at the bottom of this small chamber (North), and follow the draught through a series of little muddy chambers, always at this ~60degree slope of the bedding, clambering up and down, and sometimes wriggling along sideways. There's little dry-pools of mud on the flat surfaces, with collections of colourful pebbles (including lots of little black Haematite flecks) and banded mud structures.

Jim and Andrej arrive, so we press on together. The last little chamber has a rather more tight slope climb out of it, flat under-

neath the inclined ceiling. My head pops out into a more spacious arena and I realise that the ‘ceiling’ I’ve just squeezed under is actually a whole plate of bedrock which has fallen and is now suspended by a mysterious force. I wriggle out underneath it and into a small chamber. The continuation upwards leads to an alcove, in the ceiling of which is a too-tight rift through which I can see draught getting hoovered as I breathe out condensation.

Facing back down the dip, I could head right (further North) rather than back left under the suspended block, and continue down more of this squeezey muddy inclination. I explain the situation, neither Fratrik nor Jim seem particularly encouraged to attempt the squeeze and I am uncertain about climbing back up the slippery mud solo. The passage continues but I do not.

We start the survey, Fratrik passes me the tape under the block and I begin a PSS under where the draught disappears. A name... We’ve had our Penguins Egg, but with my cold wet feet, short rations and horrible tiredness setting in, we are only beginning our Winter Journey.

We continue surveying back into the initial, larger, chamber, and I put a leg down into the deepest part of rift I can reach, from where the tantalising noise of cascading water issues. I know this will become the deepest part of the cave when we compute the data. Following the inclined bedding North, we have definitely gained a few metres of height.

Survey tied in to Penguin’s Egg, and observations made, Andrej and Jim head back to our lunch spot above the last, blind, pitch. I must photograph. I’m so tired already I don’t want to. I mechanically unpack the gear. Photo the mud stal, I tell myself. Ok, done. Right, let’s do the deepest point. I’m trying to avoid repacking my gear, so walking with both hands occupied with flash and camera. Unsurprisingly, I fall off the boulder I’m trying to clamber down. Stupid. Both legs OK, just a bruise. Photo the rift. My watch now says five in the morning. I woke at ten. So many more sites and sights to photograph on my way out, but I just can’t.

I pack the gear away, and quickly return to the others, with one last look back from the massive muddy boulder into this sad chamber, and listen briefly to the tantalising noise of tumbling water.

Now begins the real efforts of our trip. It’s 350m vertically back to Camp X-Ray, but the distance and height really doesn’t matter. This is a fight against tiredness.

We eat the last of our bread, split the equipment, and head out. At the beautiful cascade pitch that demarcates Dream1 and Dream2, we stop on the ledge and make use of the massive Sigg bottle of meths, tuna can stove and mess tin. We have no provisions, but the hot water is lovely itself.

Jim is so cold without thermals and in his Warmbac that he gets into his survival bag at every stop, pulling it down from the top like a massive condom. I fold myself into a crack in the rock, resting against my boots, kneepads and helmets so that nothing touches the



freezing rock. My eyes close, listening to the water falling down the pitch, that odd sensation of sinking into the Earth as sleep snatches your consciousness. My eyes open as I shiver, Jim is Penis-in-bottle again, his condensation filled survival bag lit from within, like some terrible angel.

Andrej wakes up and suggests we move on. Wearily we do. At the end of Dream, where the squeeze onto the pitch is, Jim has a desperate urge for a shit, and has just taken off his harness to get through the horizontal pitch head squeeze. "Oh God, wait until I'm up!", I plead as the column of water thunders past. I make it to the rebelay ledge as the chicken nuggets go flying over my shoulder.

Andrej ahead, I go up Insomnia. It could really do with a deviation, but with one hand spare you can hold onto flakes on the wall and do it yourself. I call rope free to Jim, and get a response. At the traverse I wait, clipped in. I fall asleep, and wake an indeterminate time later, and bellow to Jim. I think I wake him up as well, as soon the rope starts twitching as he comes up.

Republica is really quite wet on its natural hangs. Back at Red Cow, we have a brief rest. Already, we seem so much closer to home. Whereas below here, you are at the mercy of the weather and the water, this massive phreatic is a warm friendly place. It is certainly a fantastic base, psychologically, practically and logistically for a camp to explore the deep area.

The main hazards overcome (and the risk of flooding) we carefully pick our way back to Camp X-Ray. Above the hidden pitch in Leprechaun, we have another snooze. Awoken by a dream, I check my oversuit pocket - bonanza, just like in the dream, a chocolate bar! One bite each and it's a massive difference, but the very last we have. We are but machinery.

Onwards we go, just keep moving, slowly, so slowly. The climbs seem so difficult now, limbs so uncoordinated, brain so slow in seeing hand holds and thinking things through. Back at Big Rock. I check that Jim is happy to head back to camp himself, and head up, head home. Nice and warm now at least, I thread my way along Friendship Gallery and, eventually, so back to camp.

Hot tea, supper, warm fleece to wear and a beckoning bed. Jim does not appear, eventually a rather more refreshed Tetley is dispatched to find him, locating him staring down Prima Junction wondering if that's where he came from.

Tetley and Clare, now that Gergely, Izi, Jana, and to a lesser extent Dan and I have all put in the bolts to conquer Stuck in Paradise, head off to go and push the draughting crawlway at the bottom. This area sounds like a fantastic lead, and absolutely amazing that all this passage grew from a ludicrous find on a bouldery ledge halfway down a pitch.

Marzipan and Sleep. I'm awoken by noise, quietly spoken Slovene and the rustling of tinfoil. I awake again. The roar of the gas stove. It must be much later, but the song is the same again, the stereo is playing Blondie on loop. Nothing makes sense, my head too woolly

to understand, to wake up enough to comprehend.

Eventually Andrej wakes up properly and speaks to the disembodied voices. It's Samo, who's taken a nasty fall and split his knee. He's come to camp with Karin. They're cold, sitting on the edge of the tent in damp caving gear, wrapped in rustling survival bags.

A misunderstanding, in being concerned to let us sleep they were keeping us awake and torturing themselves! Andrej sorts them warm clothes, and frees his bed for the two. Instantly back to deep sleep. Andrej gets cold and crawls in between Jim and Samo, wrapped in all the spare fleece. I find myself pressed immobile between the tent and Jim's reassuring bulk, and hold this awareness for a second or two before I drop into deep sleep once more.

Jarvist Moore Frost

### *Drink Your Own*

Fratnik departs with Karin & a taped up Samo in our night. After a delightful lie in, Jim and I slowly get ready for caving, taking the opportunity to absorb hot calories from the stove and round after round of drinks. Wet wet wool socks. Jim is horrifically stiff, he's barely done any SRT in the last 7 years! We head off for Serpentine. It's Jim's first passage down Leopard and brief sight of the formations. I lug my photo gear along, and Jim indulges me as I try and record the formations in the Long Water, and take a couple of mineral samples and a piece of broken straw.

Back at the end of Rotten Row, the pitch doesn't look hopeful. If anything, it is wetter than every previous time I've been here.

Having just been to Republica, I can't help but try and interpret what I see in terms of it being the same passage. Dangling from the end of Dan's bolt traverse in the ceiling of the rift, I can look down into a chamber, large boulders and bedrock with the two streams crashing down in different locations. God, if only we'd had the sense to put some retro-reflector markings or something down there! Then we'd know for sure. Was I walking along there less than a day ago?

Jim is stiff and cold, and so rests in his survival bag in the quiet, dry, side chamber. I have no drill, and I'm not super hopeful in getting down. I rejig the rigging, turning a hastily placed drilled deviation into a rebelay and then attempt to rig a natural deviation to further swing along the rift and pass over the top of the inlets. Again and again it falls off, eventually I give up.

With a drill and sufficient bolts, you could just keep on going in the rift and reach the far, dry side. But no such luxury now. Spider-walking along the left wall, I reach the "Duffer's Drop" inlet and confirm that I can see the bolt in the floor. It might actually require fewer bolts to successfully rig from here.

The far side of this (left wall) inlet, I abseil down to a nodule of rock at the start of the dry bit of this rift, could I rig a rebelay? I'm getting wet now, ricocheting splashes from both inlets landing on me. The sling slips, again and again. I try a deviation. It falls off.

This is hopeless.

Defeated, I'm left dangling from my skyhook equipped cowstail and wonder what I should do. Nowt but to survey I guess. I tie a bunch of maillons to the end of the tape, and lower it down into the chamber below. It lands on a boulder, but gives me a reliable distance (15.10 m). How hilarious it would have been to have someone in Republica at that point, watching this fistful of metalwork being lowered from the Gods!

Retreat! Back up the rope and do my best to survey. Jim is looking utterly miserable, tired and cold.

We've a lot to do on the way back to camp, but there's no thinking involved so we just quietly get on with it. The bolting kit, pushing rope and photo kit all need to be returned, and we intend to derig the whole of Serpentine. To this end we have taken one of the massive tackle sacks (used to transport the sleeping bags down) from camp. Back at Longwater we already have two filled normal tackle bags, and start feeding rope into the monster.

It is a struggle up "Will it Rain". I wonder about its height, and whether it was miss-surveyed due to the Laser rangefinder catching the wall. Certainly it seems to have a hell of a lot of rope for a '35 m' pitch.

Massive bag stuffed with rope, I can barely prussic. Jim has led on out with the two normal sacks. Amazingly, he's waiting for me at the top of the pitch! Together we move the tackle bags along Serpentine. It is tough work, taking both of our strengths to wrestle the monster through some bits.

Back at The Albert Hall, we continue along the passage with our treasure. Jim moves forwards with the massive bag, I have the two more manageable ones.

Back at camp, we wake Eric and Tjasha, and soon find ourselves ensconced in the sleeping bags and drifting off to sleep once more.

Eric and Tjasha come back early from their pushing, have decided to just survey and then come back as the Let na Drugi Svet cascades were getting unpleasantly wet. With little chance of pleasant pushing, Jim and I decide to pack up and head out. Everything is fine till we get to Alchemy, when I realise we can hear the water tumbling down Space Odyssey. The cave is going into flood!

Swing is actually OK, if you self deviate. Similarly, Tera and Nova, though now terrifyingly noisy places (the water was splashing up to about 80-90% of the clean rock), were dry hangs.

Pico was something else entirely. There was heavy rain falling over the entire bottom of the pitch. Near the Tera entrance, there was a sheet of water falling, and perhaps most disturbingly, a stream is cascading down the rockface of Pico itself, intermingled with the rope on the last few rebelay.

Jim gave me a shout from near the top, and I dashed across the chamber avoiding the heavy water and sprinted up the rope. The scalloped ledge you pass on the left at about +25m was collecting a waterfall that came through a hole right up in in the high ceiling and

directing it down the lower hangs. It was pretty bad. By the time you got to the Captain Kangaroo branch, you were out of the worst of it, and just had to contend with a few drips.

Piston was similarly drenching, the stream coming over the lip so quickly that it bounced off the far wall and splattered down over the hang. Nearer the deviation, it was fine.

The others in the Urinal series were splashy, but not as bad. Laurel itself was wet for sure, but more in a sort of 'soft rain' way that didn't feel anywhere near as threatening.

The last few pitches were a definite struggle for Jim, so stiff he was just getting a few 10s of cm of height with each prussic step.

Back on the surface once more, a slow walk back to the Bivi over a wet, slippery, plateau for some food and needed rest.

This was a sleep deprived and rather unnecessarily sufferable trip, but nonetheless through grit & teamwork much was done, the deepest point since 1998 was explored to on Migovec, photos were taken of the deepest point of an Alpine cave, all leads were surveyed and the entirety of Serpentine was derigged to free rope, hangers and maillons for exploration in future years. Not only did we have our Penguins Egg, but we had brought it all back home.

Jarvist Moore Frost

## *M2 Super Action*

To climb Mont Blanc by the Grepon route is one thing, to survey M2, as Totter once said, is quite another.

W. E. Bowman, *The Ascent of Rum Doodle*

We fly into Trieste on Friday and drive to Tolmin. On the way in we admire the snow capped peaks with trepidation: would the weather allow us a trip this weekend? The forests on the slopes are turning red and golden. A sight to behold. Arriving at Tetley's, we notice all the shutters are drawn and the lights out. From the darkness Tetley emerges to open the door. He is suffering from Tolmin lassitude, a condition brought on by the flu, by having hiked 40 miles in Yorkshire the previous weekend with his school boys (and girls) and possibly by the lingering trauma of last year's super action. After some deliberating, Tetley decides that in his condition he would only slow us down and bravely decides not to bring his caving gear. His generous and selfless sacrifice will not easily be forgotten.

Shortly after repacking our equipment, Izi arrives and we drive off to Tolminske Ravne, the starting point for the trail to the Migovec Plateau. The trail is intimately familiar to anyone who has been on a summer expedition, but at night, in the Fall and with a dusting of snow it seemed strange. The crunch of the snow, boots on wet leaves, the bubbles of light bobbing in the dark, give it an eerie quality. After an hour or two we reach Kal, the mountain hut of the Caving Section of the Tolmin Alpine Club (JS-PDT). In the hut were Tolmin cavers Fratnik, Samo, Zdenko and Maver (pronounced

Mauw-er) and Grega from Nova Gorica. Packs are dropped, boots swapped for slippers, sit beside the stove, shake hands and greet everyone. Tradition dictates that the new guests are offered fruit tea to rehydrate after the hike and a shot of liquor for health. In this case the liquor is a particularly fine Jagermeister made by Maver's grandmother. As soon as we are settled in, Izi and Fratnik start preparing a large pot of pasta with tinned meat and tomato sauce. A vast pot is soon standing in the middle of table and we all tuck in. Rationally I know that we are eating from the pot to save washing up, but a part of me believes that it is also a testimonial to the spirit of sharing and the brotherhood of cavers. I am tempted to be polite and only eat my share, taking spoons of pasta in turn. Tetley turns to me, raises his eyebrows and says: Don't eat because you are hungry, eat because you want to get out of the cave tomorrow. I follow his advice and proceed to gorge myself. Soon more people start arriving: first the Cadrj people: Eric with Karin and Tjasa, then Dejan and Bozo with two cavers from Ljubljana Miha and Mojca (pronounced Moi-tz-a). More pasta is cooked, boxes of wine appear, spirits are high, here is the crme de la crme of cavers, Destiny weighs heavily on our shoulders, tomorrow the Connection will be found. I notice that Fratnik has stopped drinking wine and swapped to tea and take his lead. I do not want to be completely hungover tomorrow. At some point we leave the hut to test out Bozo's new petrol drill. It is huge how is he going to lug it through the cave I wonder? Soon enough I fold for bed, full of dreams of the glory that lies ahead.

The next day we wake up, have a summary breakfast of bread and pig fat and pack up. In the meanwhile animated discussions in Slovenian are determining the Plan for the day. Izi, Fratnik, Bozo, Dejan, Miha, Mojca, Jarv and I will go to M2, the rest will visit Primadona. Jarv and I have brought surveying equipment and our primary goal will be to measure the finds from the past few years. The rest of the team will travel to the bottom of the cave and continue the efforts to widen the terminal rift. The rest of the M2 team has packed and gone. Bozo is carrying the most terrifyingly large backpack I have ever seen. At the last minute Jarv and I realise we have not brought any food for caving and start scouring the hut looking for food. We managed to scavenge 6 Frutabellas (yoghurt-fruit bars), a 200 g piece of bread and a small (100g?) tin of tuna. In our minds we expect the surveying will not take that long. Tetley also accompanies us up to the cave entrance. Again walking up to Mig in the snow is a strange mix of familiar and new. The usual path zig zags across the dwarf pine, but in the snow it is possible to simply go straight up through or rather on top of the vegetation. From the ridge of the mountain we can finally admire the Plateau, it's covered in snow and a few hundred meters ahead of us is the rest of the team. We walk on, passing the rock arch that we cook, eat and live under during the summer. It is covered in a deep layer of snow, but still is a familiar and loved place. Reaching M2, we change into our caving gear, bid farewell to Tetley and start caving. It is 11.30

a.m. when we start caving, we had set off from Kal (the mountain hut) two hours earlier.

The entrance series of the cave has only two small pitches, the second of which is permanently rigged with an aluminium ladder. The cave is a long rift, constricted in a handful of places and certainly awkward if carrying heavy tackle. After half an hour we reach the main pitch series in the cave. First of all is Kletnik's shower, this pitch is a long hang in the drizzle. During a storm it can be very wet indeed, as Gergely and Paul discovered in 2008. After the shower, two more small pitches, some more rift passage and we reach Silos: a 100 m shaft discovered by the Tolmin cavers in the '70s. Fratnik replaces one of the bolts and we all pile on in. It is a truly awesome shaft, I have not been caving in a few months and admit that I get in a bit of a bind on one of the rebelay, the hand jammer has to come out of the bag I hope none has noticed. Later on Izi tells us that he has spied Fratnik using his cow's tails uncharacteristically cautious! At the bottom of Silos more rift and a selection of short pitches leads to the '70s bottom of the cave. Again there are quite a few section that could do with a little work with hammer and chisel, but nothing is too horrendous. We pass the site of the '70s camp. Some graffiti times the visit by the Tolmin cavers to 22-10-1977. Exactly 34 years ago some of the people I am caving with today were here. We reach the limit of the survey and stop for lunch. It is approximately 1.30 pm or so. Getting to the bottom of the cave has taken 2 hours and I feel in great spirits, not cold, not sweaty, looking forward to a tuna sandwich, a few hours of survey and out by sunset. We share out the bread and eat our tuna. After the Slovenian cavers are off, we sit in the Bothy bag that Jarv brought and have a little rest. Neither of us has taken any tea or coffee this morning, so we eat a Pro Plus to perk us up a little.

Soon Jarv and I start ascending the climb that Tim and Fratnik explored in '09 and start surveying, Jarv takes book and instruments while I operate the laser disto. A short climb and some meander leads to the pushing front: a silted up rift. I poke my head in and feel uncomfortable in the confined space. In my most reassuring voice I tell Jarv: This is just the passage for you Jarv! You might want to take your harness off. I then sit back and wait till Jarv wriggles his way into a small chamber along the rift. He widens the passage a little by removing some of the silt with the entrenching tool we found on site. We both get a good feeling from this section. It drafts strongly and looks exactly like the passage around Kill'em All. We have to think of a name for the passage. Impressed by Tim's effort in free climbing this, we settle on Wizard of Oz.

We return to the chamber where we had lunch and keep surveying down the main passage. The rift has been widened, but surveying it still quite a nuisance. We need to think of a new name, since the passage has been widened so successfully with chocolate, we settle for Kinder Surprise.

Eventually we reach the head of the large pitch that was discov-

ered last year. Here we meet the rest of the team, who are on the way out. The pitch head is reached by climbing over a blind pot and I am sitting on the edge of this pot, tied into the natural that forms the backup for the pitch. First out is Bozo. I help him with his tackle sack and my arm is almost wrenched out of its socket by the weight of it: petrol drills are really heavy. Bozo seems a little downcast, apparently the efforts to widen the rift at the pushing front have not been successful. It must be depressing to have to carry the equipment out if it has not been useful! After Bozo comes Fratik and Izi. Eventually Jarv and I descend the pitch, pass the last meander and reach the terminal chamber. There is not much of a draft here, but you can definitely hear an echo. We can see the marks from the drill. We settle on Echo Rift as a good name for this section of cave and start surveying back up the pitch. Eventually our survey reconnects with the end of Kinder Surprise and we have finished our task. It is now more or less midnight. We have been surveying for nine hours and it is time to get out. We have eaten all our Frutabella bars and are now ravenously hungry.

The exit from the cave was honestly quite miserable. We were both extremely low on energy, and despite taking another Pro Plus, I felt rather sluggish. I tried to conserve my energy as much as possible, knowing that many squeeze-climbs and crawl-traverses were waiting for me on the way out and that each of these would require explosive power. So we caved out, step after step, prussick stroke after prussick stroke. I stopped after most large pitches and most squeezes to gain my breath. I checked and rechecked my bag to see if a chocolate bar had sneaked in somehow. On top of Silos I sat down and closed my eyes. I did not fall into a deep sleep, but into a dream-like state, when I heard the noise of Jarv coming up behind me I was jolted back into the cave. We are pretty much out, I kept repeating to myself, and at least the squeezes get easier as you go further out. At 4.30 a.m. we were back into the entrance of M2. Luckily the weather was fine, no wind and good vis.

Jarv successfully (miraculously?) navigated us back to the hut. I simply put one foot in front of the other and fell over quite regularly. Finally at 6.30 a.m. we were in Kal, our mission was over. A nice plate of jota and some tea and to sleep. The hut was even more packed than the day before, people were taking turns for sleeping! It was nice to have some company for dinner and I think our hosts were impressed that we had been on such a long trip.

Next day we got back to town and entered the data into the survey. We had surveyed 245m of cave and added just over 100m to the depth of M2. We had walked for 4 hrs in the snow and caved for 17 hours. We ate approximately 1500 calories and consumed several thousand more. We moved at an average speed of 3 meters per minute. We learnt always to bring extra food. And then some more. The silted rift at the end of Wizard of Oz is about 4 meters horizontally (+/- 30) from a survey leg at the edge of Dark Tranquillity. The passage is heading straight for Captain Kangaroo. The enduring

question is: will it go?

James Kirkpatrick

*Alex Pitcher Award - Jonathon Hardman*

It had been less than a year since I had embarked on my first trip in a cave. I had emerged from OFD thrilled by but following a less enjoyable trip in Yorkshire that had knocked my confidence slightly I had been apprehensive to accept a place on the trip to Slovenia. After being convinced to come on another caving trip I found myself hooked and it was with a nervous excitement I looked forward to the expedition, unsure of what to expect.

After a week of final preparations -unfortunately I was absent for most of them- we loaded the university minibus full of crates of food and caving gear and left London on the 15th of July and, departing across the English channel, I watched the sun set over the white cliffs of Dover: it finally seemed like the expedition had begun.

Unfortunately, not all of the sights to be seen on the drive to Slovenia were so romantic. The van sped through Belgium and Luxembourg before the monotonous Autobahn provided an apt lesson in 'how to fall asleep in uncomfortable positions.' Despite the long journey time (roughly 24 hours), it didn't seem like all that long before we arrived in Slovenia where the scenery took a turn for the more dramatic. Upon crossing the border we were at once surrounded by dramatic mountains cut through by rivers of striking turquoise: our home for the next month.

Arriving in Tolmin- the local town and 'base of operations' if you will- we were greeted by three more members of the expedition and a sweet can of Lasko, the local beer, at the flat of James "Tetley" Hooper. Already dark we headed to the local pizzeria, an ICCC staple in Slovenia, and listened to the older members of the group exchange stories of various caving trips that had taken place within the mountain. I listened intently, filled with excitement and trepidation knowing that soon, I could be seeing the vast cavernous pitches that apparently dwarfed anything I had seen in the UK, the thoughts of which ensured I had a restless sleep that night.

The first task that was to be faced was the setting up of a camp on top of the mountain. The supplies that we had stocked the van up with before leaving London had to be carried up the mountain for use and the only viable way of doing this was by loading up our rucksacks and carrying the loads up ourselves. To make this a little easier, we drove an hour outside of Tolmin up some precarious mountain roads -special mention to the drivers who did an excellent job- to the small village of Tolminski Ravne. Here we were greeted by the family who had set up a deal with the expedition to allow us to use their barn to store our supplies in. The family were, like almost every Slovenian I met, very welcoming and greeted us with a strong coffee to waken us up for the carries and a shot of Jagenje, a spirit fermented from pears. With my body now trying to figure out



what the hell I had just drunk we unloaded the van and, for the first time loaded our rucksacks under the shadow of Migovec for the first carry.

The carries up took roughly three hours to (by the end of the expedition) two hours for myself and, as perverted as it may seem, I really enjoyed them. The first half of the carries were, to be honest, fairly uninspiring as the path ascended quite steeply through a forest towards the tree line. On hot days, this section seemed to drag on but once a few carries were out of the way and all the shortcuts learnt it was possible to briskly trudge through the steeper sections and enjoy the more level sections and the breaks they provided. Upon exiting the tree-line the passing hiker is greeted by three shepherd huts. This made a sensible halfway home from Ravne and was also a welcome drinks break. The next section of the hike was much more spectacular and enjoyable. A group of zig-zagging bends lead up to a path that then curves round the side of the mountain, negotiating a couple of quite tiring scree-slopes. Below the raw a river can be heard as it descends into the Tolmin valley whilst the mountain Krn - the site of a front in WW1- rears imposingly out of the other side of the valley. After negotiating round the back of Migovec the portal was eventually reached. Quite simply, this was the point that, upon crossing, lead into the Migovec Plateau: the site of our camp.

Stepping through the portal for the first time I was excited to finally see the Bivouac where we would set up camp, a site I had repeatedly read about in previous expeditions before joining the expedition. I would say that it immediately felt like home but, really, when I arrived it was just a fairly unassuming rock bridge that was yet to be set up as camp. After having a break and enlisting some help to setup the tent I would be sleeping in. I was given a guided tour of the plateau I headed down the mountain to embark on a second carry.

Returning to the Bivi it felt more like home with more people occupying it and with many more supplies laying strewn across it's floor. Already, however, it had begun to rain quite heavily on the plateau. The expedition sat for a while, as we ate our fondly named 'slop' (although it was anything but; we ate very well most of the time on the plateau) and exchanged stories and plans whilst warming ourselves up with whiskey. It wasn't long before I retired to the comfort of the tent I was staying in, nicknamed the Casino for it's large size that can accommodate card games. Upon finding sleep I was awakened at around 1 O'clock in the morning by the sound of thunder and heavy rain pounding the side of our tent. Feeling quite exposed being so high up on the mountain I lay still, wide-awake, listening to the thunder move closer and closer to our position. It wasn't too long before I heard the zip of our tent fly open as Kate- another fellow undergraduate- flew into the Casino. Having been convinced to pitch her tent on a stretch of ground that she would later find out was called lightening ridge she was

understandably nervous and so, came to ours for some comfort. It also became apparent that we had all been awake and, after some joking about the storm, I settled down and fell into a deep sleep.

Over the next few days we continued with the carries yet moral seemed to be rather low after the storm and the soaking of peoples equipment and tents that came with it (I learnt quickly it's never a smart idea to leave books in the porch of the tent overnight). Slowly and sombrely, the more experienced cavers began to move underground and rig the cave. It was prior to the rigging of camp that one of the older cavers offered to take me underground in Slovenia for the first time.

The caver in question was Tetley, somebody I had been caving with once before in the Mendips. The cave in question was Swildon's hole and, as such, he had no idea if I was any good at SRT and had to place a lot of faith in me not to do anything stupid. I, on the other hand, had a lot of trust in him knowing that he had a lot of caving experience having been on the expedition for around 10 year prior to that attending the Oxford expeditions in the Picos. He did, however, seem slightly mad but that only added to the sense of adventure.

The cave that we were to be surveying this year had once been known as 'Ben's Crap Lead' but was renamed to 'Vrtnarija' (meaning Gardener's World) when the cave went big upon the discovery of a 60m pitch named Pico. Since the initial years of discovery the cave had now reached a length of 8776m and a depth of 877m and had presented a number of exciting potential leads for the expedition. My trip was a much more pedestrian affair that was to take me to the top of a pitch named Tesselator, just over 200m down. To me this was no laughing matter. Prior to Slovenia I had acquired limited SRT experience to put it lightly. The three trips I had been on that contained SRT, moreover, had also not been very deep. Finally, I hadn't necessarily performed very well and wasn't very confident. In the grand scheme of things, the trip was merely a brief peak into the entrance series of the cave; for me it was already deeper than I had ever been containing more re-belays and deviations than I had seen throughout the whole year in the UK.

Descending down the first few pitches I felt fairly rusty as I bumbled through the cave yet, despite this, I felt at ease with my SRT, certain that I could make it up and down the rope safely, if not efficiently. Descending through the entrance series I had the opportunity to make a mess of my first attempt at putting a bolt in which gave me my first glimpse at the patience needed for expedition caving (even if it was only one bolt). Otherwise, the cave was fairly unassuming until I arrived at the first large(ish) pitch named Laurel. Descending first, Tetley told me to watch out for an annoying deviation and descended down the pitch. Soon after I heard him call out from the dark, "JOONNY!! I'VE GOT THE FEEAARR!" followed by his unmistakable giggle. Wondering what was down there I descended down the pitch passing the deviation with a small amount of

annoyance and reached the re-belay he was talking about. Walking out onto a rock bridge below me there was a large drop leading to a ledge about 30 m down. Head to the edge of the rock ledge, safely secured by my cowstails I clipped onto the rope with my descender, knees shaking and descended down to the ledge. I must have arrived at the bottom beaming. Despite the descent becoming 'just another pitch' by the end of the expedition it had given me my first taste of the large drops and exposure that made Slovenia so different from the UK- I was hooked.

The next set of pitches was known as the Urinal Series, much smaller in scale yet much more annoying due to their awkward pitch heads. Not being the most graceful of cave-goers I went for the questionable technique of pushing my way through the tighter pitches despite being warned about the sharp rock that is to be found in caves not worn down by generations of cavers (this would later come back to haunt me in the form of a torn oversuit).

Following the Urinal Series I arrived at my first big pitch. Before me the cave opened up into a seemingly bottomless hole. Tetley asked if I wanted to go any further and, excited at the thought of going further into the cave I eagerly agreed. The pitch itself was really quite nice the first time down. It was a nice amble down six re-belays- good practice for my SRT. At the bottom we decided to head down a few more pitches to the top of a pitch named Tesselator, the pitch head of which was supposedly quite tight and, not being a small guy, had me slightly nervous. Arriving at the top of the pitch I realised I had nothing to worry about and, as it had taken me awhile to get this far, we decided to turn back, especially as it was my first trip.

The journey out was more of a challenge. At this point, whilst my SRT was getting better, my prussiking hadn't been assessed yet and, frankly, it was fairly awful. Moving slowly up through Pico and awkwardly making my way out of the Urinal series we met up with another group of cavers on their way down to set up camp. It's generally always enjoyable to meet other cavers in a cave and this was probably an exception for the others as Tetley had early changed an awkward deviation into an awkward re-belay much to their contempt. They passed by quite grumpily much to our amusement, a feeling that may have been heightened by the miserable weather we had had on the surface. Arriving at the entrance of the cave after roughly 4 hours I was quite tired yet I felt much more confident in my SRT, even if I was yet to learn how to be efficient.

On the surface, a can of beer was exchanged and we made a plan to go to camp in the next couple of days. I spent the next day lazing around reading and partaking in another carry up the hill. The day after, we set up our gear and descended into the cave for me first trip to camp.

Already I felt much more at ease with the cave as I made much quicker progress to the bottom of Pico than I had done on the previous trip. In what felt like no time at all I arrived at the top of Tes-

selator and slipped through the narrow pitch-head with no trouble at all. Suddenly, my nerves became more apparent as the thought of descending deeper into the cave. Almost all the pitches from now on were roughly the same height as Pico, if not larger and in no time at all, I felt myself committing myself to a much greater depth to ascend from. Despite my nerves, I knew that I would be able to get out from where I was and we continued deeper and deeper down, as the maximum depth I had found myself in a cave ratcheted up as did the number of pitches: Tesselator, Space Odyssey, Concorde, Alchemy, Fisful of Tolars. Now, vertically I was very close to camp, I just had to pass through an awkward section of cave that followed an old fault line known as Pink and descend a couple of pitches. Despite being told that I may find Pink slightly awkward (I'm quite a broad person) I found it no problem going down compared to some of the tight sections I had experienced in the UK as was the case with most of Slovenia. Finally I was at the bottom of Zimmer, the final pitch before camp staring up at the seemingly never-ending blackness above me. Arriving at camp, we decided to undertake a tour of the horizontal section of cave we were in known as Friendship Gallery. Here, the caving was much more like the phreatic sections of cave I had experienced in Swildon's. It led to one of the largest pitches in Gardener's World, the wonderfully named Big Rock Candy Mountain. The entrance, however, was pretty unspectacular: just a man sized hole leading to a mud slope. Following this we decided to return to camp where a meal of fishy soupy cheesy smash and a long sleep waited.

The following day we woke up and got ready slowly to go to look at a lead that had been found the previous year. The weight of the surface was beginning to weigh on me but I was excited to see if we could discover some new cave. Heading back to Zimmer we descended down a pitch named Cheetah, a wonderful pitch with a welcoming mud slope at the beginning. Following instructions left from last year we made our way through some passages known as the Wonderland Series before arriving at what seem liked a ledge of boulders halfway down a pitch. Quite remarkably, a caver known as Dave had found a lead underneath this pile of boulders last year whilst waiting for another caver to rig a pitch. We were to explore this section of the cave. First, however, I had to get through my first truly awkward piece of cave in Slovenia. To get through to the section of cave he had found, Dave had descended through a narrow hole that to others may have been a fairly easy squeeze. To me, however, it was impassable and, arming myself with a hammer I began to chip away at the hole whilst Tetley had a look at the lead. Further down the passage he seemed excited at the prospect of a horizontal lead and returned to chip in with the hammering. It didn't take too long before I was through and walking into uncharted cave.

Rather unassuming to begin with, a section of cave with low roof seemed to following a bedding place before opening up into a

fairly expansive chamber. At the end of it was a 10m hole in the ground, on the other side of which there was what seemed to be another horizontal section of cave. I was ecstatic and couldn't quite get my head round being the first two people ever to step on this piece of the earth. We returned back to the beginning and surveyed the section of cave, naming it The Red Baron after the Blackadder episode we had watched the night before.

Before considering the traverse to the other side of the hole we decided to have a look at the lead that had been found the year before, Kamikaze, and to see if it continued. Kamikaze turned out to be an uncomfortable stretch of cave. It quickly degenerated from a crouch to a crawl up a bedding plane that was anything but enjoyable for me at this moment in time, especially as I was beginning to feel how exposed and isolated I was. With some persuasion we made it to the end of this stretch of cave and found some nice crystal pools. Unfortunately, it ended in a boulder choke, through which roaring water could be heard. Without explosives, however, the lead was dead.

Retracing our tracks I felt slightly more disheartened and didn't believe I was up to the task of crossing the traverse in Red Baron. I also hadn't had a drink since Zimmer and was beginning to feel drained. Tetley seemed to pick up on my lack of enthusiasm and we returned back to Camp. The trip up Cheetah proved to be especially tasking; I still hadn't got my head round good prussiking technique and I was quite thirsty and mentally exhausted by the time we got back to camp. Following some tea and medals at camp I felt much better yet we decided to call it a night.

We woke in the morning to the sound of roaring water, which seemed quite strange. Usually the sound of the water in Zimmer, one of the wetter pitches in the cave, cannot be heard clearly from camp. We went to investigate and found the drizzle of Zimmer had become a torrent of water. Clearly something was not right on the surface. By this point in the trip, physically I felt fine but mentally the journey to the top was getting to me. I made the decision to avoid leaving camp for the day so that I was certain I would make it the top the following day, the water at Zimmer permitting. Following this decision a day of dossing commenced. This did nothing to help my nerves as I let the journey up prey on my mind. Some bolt practice helped to take my mind off of the task at hand yet stories of waterlogged caves from Tetley did quite the opposite (as interesting as they were).

We were awoken at night by two cavers, Jarv and Clare, who looked very tired and muddy. They brought tales of apocalyptic weather on the surface that had lead to the conditions of Zimmer, there had even been snow on Migovec! By this point, the water was beginning to subside and we made plans to get up early and leave for the surface. I awoke feeling confident and after breakfast we made a bid for the surface. Having thought about my prussiking long and hard I found myself at the top of the 70 m Zimmer in what felt like no time at all feeling a lot more confident (admittedly, we had

decided I wasn't to carry a tackle bag out). Pink went by with ease and by the bottom of Concorde I felt happy and confident that I had had nothing to worry about.

The sunlight that greeted me at the entrance was blinding and I felt overjoyed to feel the cold breeze of the plateau blow on my face and to smell the sweetness of the air once again. I had spent roughly 72 hours underground and descended to a depth of roughly 700m but suddenly all the low points of the journey faded and away and I was filled with the euphoria of being above ground again. I couldn't wait to descend once again.

Arriving at the Bivi, everyone was huddled together seemingly battered by the recent weather conditions and moral seemed quite low. Some of the Slovenians had begun to arrive though, and it was especially great to meet Izi again who I had been down Swildon's hole with earlier in the year.

In addition to Gardener's World the other large cave on the plateau is Sistem Migovec, the cave that had originally the primary focus of the expedition. One of the classic trips within Sistem Mig was to bounce down to an area known as Bikini Carwash, a trip that takes in many great traverses and serves to highlight the striking difference between the two caves. After exiting Gardeners' World Tetley agree to take myself and a couple of other cavers on this trip. Despite working in a group of 4 cavers feeling quite odd to begin with, the trip was relaxed and it was inspiring to see what the generation of cavers before me had pushed, especially the traverses above blackness. The trip ended in colossal horizontal section of cave that was magnificent. I can't begin to imagine how the cavers must have felt upon first discovering it, especially after the relief of passing the tricky traverses that lay before it.

The journey out was again relaxed and gave me another opportunity to work on my SRT technique. One hiccup occurred at the final pitch head, however, when I decided to dive head first through a fairly small hole with my cowstails clipped in to the rope. Finding myself stuck, I decided to roll over so that I could dislodge myself. In doing so I managed to wrap my leg quite firmly in my cowstails. In such a moment it was quite difficult to remove from my thoughts "PANIC, YOU'RE GOING TO LOSE YOUR LEG" despite how foolish it may seem now. Nevertheless, untangling myself wasn't too much of a problem and I left the cave with my leg intact.

The next day I was slow to wake up and make my way to the Bivi. Two weeks into the expedition I had convinced myself that I would head down to Tolmin for a couple days of rest before returning to underground camp. Tetley had been due to head back underground that day with another caver named Dave but Dave hadn't been feeling very well and had opted to pull out of going underground. Tetley offered me Dave's place but I had no problem with declining. I made plans to go underground with Dave following a weekend in Tolmin and promptly headed to Ravne. From Ravne, I took a bike down the twists and turns to Tolmin before arriving in

the town. Now, when you live on top of a mountain with a group of cavers, not washing for a couple of weeks seems perfectly viable. As you become dirtier and smellier it's difficult to notice it as you only seem to compare yourself with everyone around you. Considering that they haven't washed either you seem perfectly at ease with your cleanliness. Upon entering Tolmin by myself however, it became apparent to me that I wasn't exactly clean as passing onlookers stared at me with mud still caked on my face since my previous trip underground. I arrived at Tetley's flat, where we stayed in Tolmin, and treated myself to one of the best showers I have ever had, watching the water draining from the shower turn a dark shade of brown with every shake of my hair.

Just as I was beginning to become tired of how quiet the flat was I saw a pair of figures striding across the front lawn to Tetley's flat. Not recognising either of them I went to greet them. One of them turned out to be the much spoken about Fratnik, the senior caver of the JSPDT and another man named Hugh who had been on a few of the earlier expeditions. Hugh had been close to Slovenia undertaking a pottery course and had decided to stop by. He also happened to have an inflatable raft with him and, after a few pints and some ice cream we decided to raft down the easier sections of the stunning river that is the Soca. The next day we waited to see if a couple of other cavers who we were expecting to come down the mountain would want to come rafting too but by lunchtime it seemed that they wouldn't be in Tolmin any time soon. We promptly drove further up the Soca and, in the midst of torrential rain, took to the river.

The journey was majestic as thunder clashed around us and rain piled into the deep turquoise river. As the rain began to let off, a thick mist rose from the river only heightening the sense that we were in a truly beautiful country. Despite kayaking down one of the quietest sections of the river we still came across a few rapids which, in our poorly balanced inflatable raft, posed the threat of us being flung into the freezing waters of the Soca. Thankfully, we avoided the water although the act of Hugh abandoning me to stand on a precarious rock as I floated down the rapids solo almost sunk our raft.

We returned to Tolmin elated by our journey to find one of the cavers we were expecting, Jan. So that I could avoid the bike up the twists and turns to Ravne, Jan gave me a lift up so that I could spend the night there and set off early. We were greeted by the once again hospitable family at Ravne who served us some fruit tea and cake before Jan and Hugh returned to Tolmin and I retired to the van to spend a night in relative comfort.

I was awoken by the sound of Hugh's voice joined by someone who sounded familiar. One of the caving freshers, Ari, had finally arrived in Slovenia to join us on top of the mountain. We set off with our bags loaded, the company providing a very welcome change from the now repetitive carries up the mountain. Up top, everyone seemed

to be in much better spirits as three sections of the mountain had begun to yield new cave. The Red Baron had lead to an extensive horizontal section of passage that ended in a pitch soon to be named 'Stuck In Paradise' due to it's extremely muddy nature. The other extensions below Cheetah that had lead to a group of wet pitches ending in Serpentine the year before were now being pushed down some more pitches that I believe were called 'It Will Rain' and, finally, the deepest section of the cave had now been pushed to an area known as Daydreamers adding the instant gratification of increasing the depth of the cave. The hard work of the various cavers on the mountain was finally paying off.

Even more determined to get underground now, I rather lazily set to work patching my suit together. On my previous excursion through the Pink series I had ripped it badly. It was now almost entirely missing a backside/ back, one of the arms had a rip as long as my forearm along it and the knees had large holes in them that threatened to widen. As we spent a sunny afternoon in the Bivi catching up, the covering of my suit began more and more to resemble patchwork yet it also meant I was almost ready to return to underground camp.

Unfortunately, the next day came and went as Dave still didn't feel entirely certain about his own physical state. Then, late in the afternoon of the following day, we finally headed down to camp. The trip down was over much more quickly than my previous journey to underground camp. Our 'mission' for this pushing trip was to investigate a hole in the side of big rock candy mountain that Dave had noticed the previous year. After a nights rest, we set off to do just that.

Lugging a drill and some rope to the other end of friendship gallery (the drill, to hopefully make rigging down this monster pitch an easier task. The plan was to rig a traverse across the mud slope that formed the beginning of the pitch to the other side then drop down from there. Hopefully, this would have then provided access to the hole much easier. In hindsight, it would have been best to have a look down the pitch first and ensure that we were going about this mission the best way possible but due to the size and the precarious nature of the pitch itself, we both seemed reluctant to do so.

Hear, I enjoyed an entirely different style of pushing to the style I experience with Tetley. Not being experience with a drill or with putting bolts in myself, it was down to Dave to lead the pitch, this required a tremendous amount of work from him and a large amount of patience from me. 3 to 4 hours of shivering in the strong draft above the pitch and the traverse had only extended about 10 metres horizontally and about 5 metres vertically owing itself to the weakness and unreliability of the rock. That, and it appeared that bolting on a mud slope was tricky. Upon this futile first attempt we decided to head to the bottom of Big Rock Candy Mountain to assess our situation. Before heading down on this trip I'd heard all manner of things about Big Rock Candy Mountain. To summarise, it wasn't



seen to be one of the nicer pitches in Slovenia and I'd been warned about a particular free hanging rebelay. I descended tensely at first humming the tune to Big Rock Candy Mountain to calm myself. It didn't take long before I started to enjoy the pitch and, aesthetically it remains my favourite one in Slovenia. The mud slope soon changed into a vertical pitch that descended into a large rift. Beyond this rift the whole cavern opened up spectacularly before the rope left the wall at an overhang and dropped into space. It was here that I came to face the rebelay that I had been warned about. Being free-hanging, it wouldn't have been particularly enjoyable without any added complications, especially with the drop below me. What made matters worse were the many ropes that had been attached to the rebelay, seemingly going off in different directions. Upon reattaching my descender, they helped to make unclipping my cowstails slightly more difficult than on a normal rebelay. It's at this point, the pace that I was humming Big Rock Candy Mountain at increased. Realised that I would have to use my hand jammer to help release my short cowstail I attached it to the rope above and removed the cowstail, feeling an immense relief. That is, until I noticed that all my weight was now on my hand jammer. Standing up in the length of rope above me I finally freed myself and began to descend down the remaining length of the pitch, quite shaken. It was from here we noticed that our initial attempt had been futile. The small hole that Dave had noticed previously turned out to be what looked like a separate chamber of comparable size to BRCM. Unfortunately, climbing over to it would have to wait for another team. Feeling defeated we returned to friendship gallery and had a look at one of the other leads that had been discovered out of curiosity. Unfortunately, we were unable to push any further cave. We rested, discussed our findings with other cavers and exited the cave the next day, this time taking a tackle bag. Whilst carrying the equipment out made sections such as Pink and the Urinal series more awkward, it helped to increase my confidence within the cave.

Myself and Dave exited the cave the day before there was to be a birthday party held for the current head of the JSPDT, Z. The next day, we deserted the plateau and made headway for the Shepherds Huts further down the mountain. Here, we were greeted warmly by a glass of jaganje, as is and served up some delicious Slovenian food. One of my favourite memories of Slovenia will be watching the sun set over Tolmin that night as I finally felt at home on the expedition and with caving. As the night continued, the night became more hazy as we all drank a large amount of red wine and watched what was a crazy yet hilarious birthday ceremony involving someone dressed up blessing Z. The wine eventually took its toll and somehow I found my way to sleep.

The following morning, I awoke feeling worse for wear missing one of my trouser legs (I still don't know what happened to it) and made plans to head back to the plateau. It was the final week and the expedition was finally coming to an end. Thoughts were turning

to the mammoth derig that awaited us in cave. Throughout the year just over 2km of cave had been found by the ICCC and JSPDT and I'm sure everyone on the mountain felt immensely proud. The cave was now at a depth of 888 m and a length of 11025 m. Now, however, camp had to be packed up and brought back to the surface whilst the rope from the pitches down to camp had to be taken down and all the hangers and mailons removed and brought to the surface. All the cavers available and able to help were to embark on a bounce trip down to camp to collect at least a tackle bag each. Throughout the day we all set off at different times for what was to be the last trip of the year.

Once again, descending was enjoyable, the trip down now feeling familiar and all the awkward pitches now being much more manageable. We arrived at the top of Zimmer in good time where myself and the person I was caving with, Kate, were to collect a tackle bag each and head back the way we came. Unfortunately, not all the bags were at Zimmer yet so I was elected to head to camp and carry a couple of tackle bags back up Zimmer. I made it down to camp to find a couple of furious cavers who couldn't understand why I was sent down to camp when I was a fresher. They also worked out that one of them would be carrying two tackle bags the whole way out of the cave, something not many people would envy. Nevertheless, we pressed on and I enjoyed my excursion down to camp: it gave me a last chance to say farewell for the year. The cave, however, seemed much wetter than usual and Zimmer, especially the middle third, was really quite unpleasant. As such, I felt quite cold upon making it to the top: it wasn't serious, just a minor inconvenience. Myself and Kate began to head out the cave at a steady pace. By the end of Pink, Kate was beginning to feel quite tired and I was beginning to feel cold.

A lot of the more experienced cavers find ways to keep themselves amused whilst waiting for people to head up the rope. On my first couple of trips with Tetley he took a book with him that he would read. Dave would constantly be analysing the geology of the cave and looking out for interesting pieces of cave (a hobby that led to him discovering Kamikaze, the most extensive lead of the year). To keep moral up, both of them would sing: Dave, quite sparingly, Tetly incessantly. So, in no way an experienced caver, I just sat in silence with my thoughts. Ascending this time however, Kate asked me to sing to help boost moral. I have no idea what she must have thought but all I know is that, to begin with, I can't sing very well and secondly, the only songs I could think of that day were excerpts from the Lion King soundtrack. I was glad when another caver, Clare, caught up with us and began singing herself.

At this point I was beginning to feel quite cold and disheartened myself so, to avoid becoming too uncomfortable and to also help avoid a potential traffic jam, I began to follow a Hungarian named Gergely out of the cave (as he sped along with two tackle sacks) and left Kate with the dulcet tones of Clare shouting 'You Are My

Sunshine.’ We emerged to a breezy rainy night at around 10 pm. The last caver out, Jarv, emerged with the hangers and maillons at around 3 O’clock in the morning, a herculean effort. And so, the last caving trip of Slovenia was over. We spent the next day beginning the carries of equipment down the hill, particularly caving gear. That night, we finished off the remainder of the alcohol and stayed up late, enjoying our last night in the Bivi next to a roaring fire, accompanied by an excellent meal cooked by Gergely.

The next day, the tents were packed up, the Bivi emptied and the rest of the supplies packed messily in the mini van and taken to Tolmin.

Once again taking the bike down to Tolmin, this time with another ICC member, Alex we took a different route to Tolmin. This proved to be much more spectacular providing us with an incredible view from a bridge known as the Devil’s Bridge that the JSPDT use for their SRT training. It left me certain of the knowledge that they must have a head for heights. Furthermore, we passed the cave that ‘apparently’ was the inspiration for Dante’s Inferno. However, it was decided that we had done enough caving for the trip and that lazing in the sun at Tolmin was more desirable than exploring a muddy show cave.

A final party was held on the last night by the JSPDT and I think we were all glad when we had a thoroughly relaxed night of wine and food. After saying our goodbyes, the minibus departed Tolmin for the last time, this time in the direction of the UK. It was with excitement and sadness that I saw the White Cliffs of Dover appear before me, marking the end of what had been one of the hardest and most rewarding experiences of my life.