

IMPERIAL COLLEGE CAVING CLUB

THE HOLLOW MOUNTAIN II - DRAFT ON DECEMBER 23, 2013

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Contents

2007 13

<i>Introduction</i>	13
<i>Expedition Findings</i>	13
<i>Plop Goes!</i>	13
<i>M1 & M6</i>	13
<i>U-Bend connected to Primadona</i>	14
<i>Razor cave survey</i>	14
<i>Primadona Smer0 pitch</i>	14
<i>Smashed Swede</i>	14
<i>Minor Caves</i>	14
<i>East Pole (S1)</i>	14
<i>Stag Cave</i>	15
<i>Moth Cave</i>	15
<i>Hawk Cave</i>	15
<i>Log Book Write Ups</i>	15
<i>Ping Pong Ball Bombe</i>	15
<i>B9 & Beyond!</i>	17
<i>Rik and Andy go to Plop (an abject Failure)</i>	20
<i>The Eventful Conquest of Plopzilla (nee. Plop)</i>	20
<i>Riggin' Captain Kangaroo</i>	21
<i>Pushin' Captain Kangaroo in 2007</i>	22
<i>Alex Pitcher Memorial Award Report</i>	23

2008 — Votla Gora 27

<i>Introduction</i>	27
<i>Exploration Diary</i>	27

<i>Exploration Summary</i>	31
<i>Across the mountains — an unexperienced way to reach Mig</i>	31
<i>The Slov magic (2008)</i>	33
<i>WATER!</i>	33
<i>Trying to climb into M2. Incompetence, bravery and no luck.</i>	35
<i>Raw Logbook Writeups</i>	36
<i>Day 4 - Tuesday - James KP (by handwriting)</i>	36
<i>Planika (Team JJ) - Jana</i>	37
<i>M2 - Dan & Clewin</i>	37
<i>Cpt Kangaroo: Jana, James (Huggett?), Tetley</i>	37
<i>24.7.07 Jana</i>	38
<i>25-07-08 - E1 - Jarv</i>	38
<i>25-7-08 Planika EchoRift</i>	38
<i>24/7 M2 Rigging Part 2 - Clewin</i>	39
<i>26/7 Fratnik & James: 3rd Rig of M2</i>	39
<i>26/7 Jarv & Clew Planika</i>	39
<i>26/7/08 - Vilinka Jama (AKA Tetley's mysterious lead). Tetley, Dan, Bozo & Janet (Guard).</i>	40
<i>26.07.08 - Andy & Jana M16 Plozilla End of NCB (Zebra)</i>	40
<i>28.07.08 Jana & Jarv Surface Work</i>	41
<i>30-07-08 Jana, Andy, Janet Surface Work</i>	41
<i>29.7.08 - Intravenus de Milo - a diatribe - Clewin</i>	41
<i>30/31-7-08 Kill 'em All, Jarv, Izi, Paul, James</i>	42
<i>29-7-08 Planika - hard ^{echo} rift push</i>	43
<i>Plozilla - Photo Trip Writeup - Jarv</i>	43
<i>Dangermouse - Izi, Paul, Jarv - by Jarv</i>	44
<i>Slop Kaboom</i>	44
<i>Dangermouse Continued - Martin, Tim, Paul, Jarv - 9th Aug - by Martin</i>	44
<i>Scrotty Bashing - Martin, Paul, Tim</i>	45
<i>Olympic Rift - Jarv & Tim - by Jarv - 12-8-08</i>	46
 <i>2009 — Brezzvezdna No:</i>	 47
<i>Summary</i>	47
<i>Expedition Proceedings</i>	47
<i>Climbs near Camp</i>	48
<i>Deep Push to Republika</i>	49
<i>October 2009</i>	49

<i>Achievements</i>	50
<i>The Great Loop Trip</i>	50
<i>TO BE CONTINUED</i>	53
<i>Outlook for 2010</i>	53
<i>Logistics</i>	54
<i>Zimmer streamway</i>	54
<i>First night train trip down Captain Kangaroo - Tim and Thara - written by Thara-torn Supasiti</i>	55
<i>14-15/08/09</i>	55
<i>Logbook Stories</i>	56
<i>Main (big red A4) logbook:</i>	56
<i>Metal Camp menu</i>	57
<i>Jana and Dan — 63h pushing underground</i>	57
 <i>2010 — Vodna Sled</i>	 61
<i>Expedition Overview</i>	61
<i>Expedition Findings</i>	61
<i>Leopard — 1.5 km of new passage</i>	62
<i>Wonderland</i>	63
<i>Prince Consort Road</i>	64
<i>The Palace of King Minos</i>	64
<i>Tolminska Korita</i>	65
<i>Sidewinder, Crack in Time</i>	65
<i>White Bishop, Stalemate</i>	66
<i>Roaring Floor Tease (Muddy Window off Happy Monday)</i>	66
<i>Deep Leads (Below BIG ROCK CANDY MOUNTAIN)</i>	66
<i>Insomnia - Republika Streamway</i>	66
<i>Balamory</i>	66
<i>Original Exploration Stories</i>	67
<i>Rerigging Vrtnarija</i>	67
<i>Pushing Insomnia</i>	67
<i>More Horror with Jan.</i>	68
<i>Happy days with Jan.</i>	69

<i>Balamory</i>	69
<i>M2 — Kavkna Jama</i>	71
<i>Exploration Outlook</i>	71
<i>Migovec's Long Term Prospects</i>	72
<i>Underground Logbook</i>	72
<i>Found in 'AggregateofMig2007-2010.doc' : Jarv Typed up?</i>	72
 <i>2011 — Izgubljeni Raj</i>	 75
<i>Introduction</i>	75
<i>Cave Discoveries</i>	76
<i>The Serpentine & Let na Drugi Svet</i>	76
<i>Insomnia</i>	77
<i>Kamikaze</i>	78
<i>Other Leads</i>	80
<i>Prospect for 2012</i>	80
<i>October M2 / Kavkna Jama</i>	81
<i>Contributed Stories</i>	81
<i>Attempted rigging of Big Rock alternative, 2011</i>	81
<i>Setting up camp: my first time in Vrtnarija!</i>	82
<i>Dream 2 and Penguins Egg</i>	83
<i>Finding Salvation</i>	86
<i>Winter Journey</i>	88
<i>Drink Your Own</i>	94
<i>M2 Super Action</i>	96
<i>Alex Pitcher Award - Jonathon Hardman</i>	100
 <i>2012 — Sledi Vetra</i>	 113
<i>Abstract</i>	113
<i>Introduction</i>	113
<i>Winter Action</i>	114
<i>Vrtnarija / M2 (Kavkna Jama)</i>	115
<i>Watership Down</i>	115
<i>Below 'Stuck in Paradise'</i>	115
<i>Lost Miles</i>	116
<i>Apollo & the Milky Way</i>	116

<i>The Throne Room</i>	117
<i>Other Leads</i>	118
<i>Xanadu</i>	118
<i>Yorkshire</i>	118
<i>Minotaur Rift</i>	119
<i>Stagger Lee</i>	119
<i>Surface Work</i>	120
<i>Contributed stories</i>	120
<i>2012 – Watership Down & Hot Pants</i>	120
<i>The Day After</i>	123
<i>Diving Dreams</i>	124
<i>2012 – Watership Up with Oli</i>	126
<i>Day 2</i>	126
<i>Prospect for 2013</i>	128
 <i>Epilogue</i>	 131
 <i>Appendix A — Expedition Logistics</i>	 133
<i>Three Years at X-Ray: Underground Camp Logistics</i>	133
<i>Cave Conditions</i>	133
<i>Sleeping Arrangements</i>	134
<i>Tent</i>	134
<i>Sleeping Bags</i>	134
<i>Roll Mats</i>	134
<i>Condensation</i>	135
<i>Cooking Arrangements</i>	135
<i>Food & Drink</i>	135
<i>Saving Fuel & other camp craft</i>	136
<i>Music & Entertainment</i>	136
<i>Ambience</i>	137
<i>Toiletry</i>	137

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

2007

Introduction

Absolutely stonking year, very lucky with the weather, lots of interesting developments. No accidents, no missed call outs and generally a very smoothly run, pleasant and safe expedition

Gardeners' World, Captain Kangaroo, pushed to within 28m of the lower M2 1980s JSPDT survey. There is a possibility that we are unknowingly connected (Slovs did not use PSSs in the 1970s except for a red paint splodge at the bottom of Silos), and a probability that a connection exists. This will be a major target for 2008, with the possibility mooted of rigging down M2.

Combined these would now be $11493\text{m} + 5229\text{m} = 16722\text{m} = 2\text{nd}$ longest in Slovenia

Expedition Findings

Plop Goes!

Andy and Rik pushed Plop (the tight squeeze) onto the magnificent Plopzilla pitch. A field of helictites festoon the pitch down onto an enormous boulder pile. One side of this chamber is unpushed, the other leads to a boulder choke, as yet unpushed. Plopzilla is 105m deep, penetrating from NCB to below Exhibition road. This makes it the second largest pitch in the system after Silos.

M1 & M6

Repushed + resurveyed. Still a lead (may need chemical persuasion) in a window off M1. Small extensions found in M6 - very pretty little bit of stream formed new cave, ended in draughting bedding plane dig.

New caves on western edge of plateau

"Planika" (named after the Edelweiss present on the wester plateau) and "Monatip", found below B9/M21 (on the western edge of the plateau, approx 100m north of Primadona) and the initial pushing trips conducted.

"Planika:" 166m long, 46m deep "Monatip:" 196m long, 28m deep

"Planika" is a high entrance (1801m) which leads directly to a 40m pitch to a snow plug. Climbing the snow gains another chamber

with a large entrance, and a rift leading off. A very tight pitch head at the end of rift leads to a 5m pitch which reconnects to a 20m long snow slope. Digging at the bottom of this snow slope gained another snow filled chamber, with 'phreatic' esque passage etched through the snow by the draught, and extremely drippy snow which I believe is certainly feeding a faithful stream, possibly the one that was found on Smer0 in Primadona, 200m below. To get to Planika, one must conduct a 30m abseil down a cliff, then traverse along the ledge. Extremely pretty - one gets a view across the whole of the Tolminka by day, or the lights of Italy all the way to Venice by night.

"Monatip" is directly below Planika (24m between bottom of snow plug and early passage), and has a very NCB-like character - possibly a dried river bed. It undulates along, heading into blank mountain

U-Bend connected to Primadona

Hard pushing by Sandeep and Alvin through the previously blown Enigma squeeze on the 40m U-bend pitch has led to a connection with the Druigi entrance to Primadona, gaining Prima an additional 57m of height, making a cave 644m deep. Beautiful survey accuracy - have a look on the .3d file!

Razor cave survey

Coordinated by Martin, we've started to survey Razor cave. 250m already in the book, its a very interesting clearly fault-driven cave, with easy access from the Razor hut.

Primadona Smer0 pitch

Initial rigging of the Smer0 pitch discovered in October 2006 was undertaken, bolting down to ~40m. Pitch is ongoing. Stream was followed upstream to a tight labyrinth.

Smashed Swede

Stefan's climb was bolt-traversed to by Rik + Paul, gaining a window that would appear to reconnect to Hardy Pitch. A second look wouldn't go amiss.

Minor Caves

East Pole (S1)

Further work was undertaken in East Pole: a number of promising new holes were investigated, including E1 - at ~25m deep pitch leading to too-tight windows that require opening up.

Stag Cave

A cave was found within 20m of the tents! A short pitch, rigged on naturals, lead to a spacious chamber that was unfortunately dead. However the presence of a large collection of bones (some crushed, but many in very good condition) that appears to have been from a stag made up for the disappointment!

Moth Cave

Heroic effort was expended in the Moth Cave dig: two extra chambers were gained, but unfortunately only lead to yet another too-tight squeeze requiring rock removal. Declared dead and derigged.

Hawk Cave

New (safe) method of gaining the cave was constructed by bolting an abseil from the cliff-head. Most leads off chamber were found to die, a bolt traverse was made across the pitch to find an aven where we hoped a parallel shaft may lie. Still to be revisited :- we ran out of time and rope, and so derigged.

Most of all, this expedition was an enormous training mission: we now have an extremely strong expedition team together once more, with great ties to the new JSPDT members.

I think that all the lags can feel extremely proud of the enormous cannon of information that has been passed on, the new members proud of the steep learning curve that they all conquered, and everyone proud of the Caves, little and big, deep and shallow that we've found this year.

Jarv

Log Book Write Ups

Ping Pong Ball Bombe

A Slovene super-action was in the making, the shepherd's huts stocked with drink and the young JSPDT bouncing down to -200m in Prima Dona to improve the rigging. The plan was to (mainly) investigate leads off Smer0/Smer1 in Primadona where on a JSPDT trip in Autumn 2006 (joined by Tetley & Jarv from IC) a large rift with an approx 40m pitch was found - most tellingly, with water visible at the bottom. Finding a constant stream this shallow in Mig was unheard of. Meanwhile, a smaller team would head to Bikini Carwash at the end of Exhibition Road in the main system and aid climb to see if the passage continued.

The more curious aspect of this mission was the Ping Pong Ball Bombe, a plan to take ping pong balls down Primadona & set fire to them. The noxious smell hopefully providing a connection. Alas, the SysMig team that was to detect with their noses, also contained the most hardened smokers who spent their time sniffing the air in

between dragging on filterless roll ups!

With mammoth organisation, Rik and Jarv were dispatched down via text message from the Bivi to Kal, meeting the Slovs and stealing some bread before crabbing across sideways to Prima. The boulder slope climb was awful as ever, but I took the opportunity to build a cairn on the edge of the cliff so that we could recognise this point from the plateau - to help unravel the mystery of the caves below B9 spotted by Jana & I from the plateau the Autumn before.

So we went down in a mammoth party: Rik, Jarv, Eric, Aliosha, Izzy, Silan, Zdenko & Emil

Zdenko led off with the young JSPDT. Emil was a new character to us - with a bald head framed by round lensed glasses and a fine handlebar moustache that dovetailed with his military demeanour, were it not for the Slovene language I could have easily assumed him to be an old-school English army Colonel. Bringing up the rear with Emil, we were slowed by his enormous tackle sac, stuffed full of bread and cheese I could only assume. About 150m in, standing on a traverse line above a pitch, I was handed a full mineral water bottle from the depths of this magic sack. "What is it?" I asked. "Mmm... made with fruits... and a kilo of Med (honey)... its dobra!". Ah, I thought, some marvellous mountain tea fortified with a shed load of honey - just perfect to give an energy boost and fight off the dehydration. I chugged it back. Tea it was not. Double distilled Zjganja with a kilo of honey dissolved in it it was.

Once at the pushing front we found we were rather limited with gear - just one bolt kit. Rik set to work with Izzy to get down the pitch. Zdenko and the Eric/Aliosha brotherhood set off for the end of Smer0 (passed where Smer1 reconnected to it) to look at the climb that currently ended the passage. Jana, Emil & myself traversed over the pitch (which was a truly frightening undertaking - walls over a metre apart with a 40m drop down) and went to look at where the water which trickled down the opposite side came from. From the pools of water we found a 2m climb into an old dry silted phreatic system leading left facing towards the end of Smer0, starting just before where Smer1 dropped down. This branched to a small chamber with avens, a too tight rift (from which, insanely enough, emanated sounds of Rik bolting) and a chamber with a larger, aid climbable, aven. Alas, with no spare rigging gear for the climb, and no survey instruments, there wasn't much more for us to do but go back to Rik.

Rik & co had made it down about 20m to a ledge where he put in a rebelay bolt. He reckoned he could see the floor a further 20m from there. He was rather put off by the avalanche of rocks that came down when people went over the crazy free traverse. The team that went to the end of Smer0 was already back, and getting cold waiting around with nothing to do we set off out in small groups. Rik finished the rebelay bolt and headed back up, as the guys he was with were getting cold.

In the end we didn't burn the Ping Pong Bombes, as Prima ap-

peared to be breathing 'out' in all the bits a draught was detectable.

As well as the spirits, Emil had another mineral water bottle filled with white wine, for the journey out. When he returned to the mountain hut well gone midnight he did not look particularly well. One can only assume he burnt through his hangover on the pitches out!

Primadona is I'm sure an absolutely amazing cave system, who's secrets have only been very partially unlocked. Unfortunately I fear it will require a heroic effort to make easier access (possibly by reactivating the abseil route, or finding a better abseil way down via B9/Planika/Monatip) to allow the dozens of small trips necessary to properly relearn the cave system, recapturing the knowledge lost with the retirement from caving of the 'middle-aged' JSPDT who mainly explored Primadona.

Jarvist Frost

B9 & Beyond!

Walking briefly over to B9 the day after the super-action, we could spot the cairn I left down near Primadona. Combined with one placed by Jana & I on the headland near U-Bend, suddenly the whole complicated 3D structure fell into place. Neither of the caves we could see from near B9 were Primadona, though the entrances looked similar - both were new caves in an area never visited!

The next day we were joined on the plateau by some of the young JSPDT. Jana & I went with Alijosha and Spela to B9, and explained the situation. The weather was awful - thick cloud everywhere. While the Slovs re-explored bits of B9 and checked to see if anything had changed after the earthquake (a pitch had disappeared off the original survey as a bit of the cave collapsed and turned into a boulder climb!), I placed two bolts for the descent down the cliff. This was really quite exhilarating - a gale swept over the edge of the plateau, the rock was soaked and slippery, and every now and then the thick clouds would part for a glimpse of Krn or the Tolminka valley a very long way away!

The next day Aliosja and Spela went down from the plateau, so Jana and I went back alone to B9 to rig down the cliff. The weather was much improved! Jana abseiled down first and went investigating the three cave entrances, while I came down behind and put in the rebelay bolts. The three entrances were very interesting - the main one contained an enormous aven which connected back up to the headland above u-bend (you could see the sky through the top), but was an enormously steep boulder slope with useless rock. The further entrance was a crawl in boulders that was only briefly pushed by Jana. The smallest, highest entrance was the most immediately interesting - a perfect metre by metre triangular arch which led directly to a deep pitch. A shimmer of white was just visible at the bottom. Bolts were placed for a traverse along a beautiful slab of limestone to save freeclimb on the steep bowl valley edged with a

cliff, and the main hang bolt + first rebelay was placed for the small-cave pitch, finishing our 100m rope. We decided to name this new cave 'Planika Jama', after the rare mountain flower that covers the sunkissed (& adder infested!) slopes around B9.

Rather confusingly, we could occasionally hear echo-y shouts bouncing around from below as we walked about the bowl valley, inevitably disturbing stones. We tried to be as careful as we could, but couldn't really understand what was going on - except for the fact that one of the voices sounded like Kos.

Once back on the plateau, Jana pieced together the situation by mobile - Alijosh and Spela had gone down to Kal, taken the ICCG rigging gear left in the third hut and went to the lower cave entrance pointed out to them the day before via an abseil down the cliff near Primadona where I had placed the cairn on the Ping Pong Ball Bombe action. Jana went down to Kal to discuss the situation that evening and came back up the next day rather upset. The new cave was to be called Monatip ('Fucking Idiot' in the local dialect).

The next day started with Goaty & Jarv surface surveying to B9. Jana and I then descended the cliff, surveying as we went. Again, within the cave, we used the efficient technique of the lightweight Jana abseiling down past rub-points, followed by Jarv bolting the rebelay behind while Jana explored the next bit. The pitch was perhaps the most beautiful entrance pitch on the mig plateau. From a bolt placed in the ceiling a hang dropped down past a fridge-sized boulder before swinging out to a rebelay (placed by using my walking boot heel 'skyhook'). From here one abseiled down an almost perfect brick wall, above an enormous snow plug, before swinging into a little dry streamway cascade to finish the last bolt to land on the snow plug, which contained a large metre wide 6m deep hole bored out of the ice by wind or water, and similar, more narrow, gaps on the edges of the plug. A small rift led off and immediately closed down. From the top of the snow plug Jana found a crawl way under a rock bridge to a climb up on ice on one side and rock on the other (the ice was a more reliable foothold!), to reach a snow-filled chamber which was daylight flooded and clearly below the slope of the large entrance. An ice traverse in this chamber (we named it Yorkshire Pudding, as it was a torus of snow with a dimpled center). From the far side of the Christmas pudding one could squeeze down between the rock and snow, attempt a climb past a stack of wedged boulders towards the aven, or walk down a snow-bottomed meander. The meander we named 'Acre Lane' after our London home. This meander suddenly regained a rock floor and led on to a tight rift which seemed to be a small pitch head. There were a lot of boulders strewn around. Here we PSS'ed and headed back.

The next day we were joined by Andreja & James H. Jana and Andreja bolted the backup bolt for this new traverse, while I gardened my way along the tight rift and then placed a bolt holding myself in place within the rift by breathing in until my ribs were wedged securely! This was perhaps the slowest bolt I've ever placed

as I was lying sideways with the arm holding the driver bent back behind my head, and the hammer cocked under my budy, while considering the 6m drop to the floor! It was with some relief that I took the rope through from the girls and rebelayed my way down.

Around the corner the cave got strange once more - from a rock balcony one is confronted with a chamber filled with a 45 degree slope of compacted snow. Exploring around this we found that the upper levels shut down, but seemed diggable (from the survey it appears that we were within a metre of the Yorkshire Pud - it must be the same snow slope), and there was a beautiful inlet which had formed some amazing ice-pearls. The obviously way on was down. The snow steepend and disappeared down at about 60 degrees with the rock roof not too far away. Careful traversing across the snow, I placed a bolt on the wall, and abseiled down on my back. The ceiling closed in and the rope began to rub, the walls shut down from both sides. At the bottom I faced the end of the snow, with a 50cm gap of boulders sitting there.

The next step was obvious as it was insane - digging at the bottom of a funnel with a lot of loose rubbish above. By picking up the boulders and rotating I found I could play tetris, the fitting pieces disappearing with a gravelly rush through the floor. There was a strong draft, what on earth was I digging towards? With a terrifying series of rock booms and human shouts almost directly above my head, I pushed myself into the corner of the snow shoot and hoped for the best. It turned out that the rift pitch head had been disrupted as someone passed rope through, collapsing a drystone wall and sending a few hundred kilos of rocks cascading down. Jana had just reached the rebelay bolt going up, narrowly avoiding being caught in the waterfall of limestone.

Once I stopped hyperventilating, and accepted that no further boulders were coming down, I carried on digging with bare (now bloodied hands) with ten minutes of frantic energy, a way was found. Originally I was digging alongside the snow, but as it opened up I found I could go straight down and way. A 5m climb on boulders took me down to the strangest chamber I have ever been in. Still attached to the rope, I stood on a metre wide ledge that ran alongside a wall of perfect white ice. The ice was wet - drips were everywhere. The ledge continued and narrowed, snaking alongside this berg. From the middle of the ledge I saw the strangest sight of my life - a phreatic crawlway windin down at 45 degrees through the ice, distinctly blowing, and with a similar rock ledge and wall visible on the other side. With no bolt kit and no camera, I headed out to my shaken compatriots. I was frozen, as my wellies and cuffs were now packed with snow, and everyone was a little shaken after the collapse.

Our last trip was a speedy survey, photo and derig, with Ben B and Emil. Jana went down the ice slope but didn't fancy the still unstable boulder climb, so we surveyed from this edge. The photo-gear was too much of an effort to get passed the tight rift-pitch.

Ben placed his first bolt as a safety traverse across the ice. After surveying back to above the rift pitch, we switched to photography documenting the cave as we derigged out with the rope and metal-work.

Emil and Ben headed back to the Bivi while Jana & I bolted down with the Planika rope to reach Monatip in order for him & Izzy to surface and cave survey the following day. Glorious weather, we sat watching the sun set behind Krn, with the Venetian bay visible beyond.

Jarvist

Rik and Andy go to Plop (an abject Failure)

(Rik's were written in van on way back across Europe, typed up by Jarv. Proofread by Rik (hardcopy) + corrections added by Jarv.)

The mission was simple – venture into Sys Mig, traverse the gaping holes on Level 2 to reach the ratty old rope for Faulty Towers and push into NCB. Once there we hoped to bottom the fabled ‘Plop’, a big pitch just off NCB, rumoured to be over 50m, strongly draughting and utterly jinxed!

Armed only with a vague description from a rather drunken Tetley the night before, we set off for M16 during a brief lull in the raging storm. Once down in the cave we quickly hopped up to NCB, reviewing the excellent tourist trip across the big stuff in the system.

When we got to NCB, we stumbled as Tetley had not mentioned the lairy traverse over a ~20m drop on tatty 13-year-old 9mm. We concluded that Plop was the pitch immediately below the rope from Torn T. This was the error which cost us the pitch. The bolts continued down the pitch and I had a sinking feeling as I reached the bottom of this pointless lead.

After this we inspected the rest of NCB going East, crossing the bad traverse with some care. Andy and I took it in turns to examine the side passages and one of the ones I inspected was, as in the legend of '95, a very windy squeeze, which could be depth tested by throwing rocks with some difficulty. I was sure this was it, but Andy had an earlier memory which led us to think that it might be Godzilla. Stones took around three or four seconds to drop!

We left with five hours to spare before callout, on the very cautious side, and left the tackle bags at NCB. Tomorrow we're going back, and this time Plop must be conquered!

Richard Venn

The Eventful Conquest of Plopzilla (nee. Plop)

After my first trip to NCB I was kept awake thinking about that three to four second drop known simply as ‘Plop’. By eleven the next morning I'd managed to convince Andy of the merit of a return visit. Since we'd left the necessary tools and rope for bolting a

monster pitch in NCB, we quickly shot down the M16 entrance series and up Faulty Towers into NCB.

Fairly terrified of getting stuck in the tight pitch head above that formidable drop, I took off most of my SRT kit, leaving just cows-tails and Croll. The squeeze was fairly easy and Andy passed through the bags as I put in a bolt to make a Y-hang.

Since Plop had already been attempted several times there were quite a few existing bolts. I made use of these on the way, stopping only to take down a couple of boost bars: a bit of Cadbury Courage. I felt oddly calm swinging about in the huge chamber. We had thrown more rocks from the top but the bottom was too far away to see. Even from the first rebelay I was having trouble speaking to Andy. Our words boomed around the huge pitch. Two rebelay down, I was standing on a gravel floor, shivering with the adrenaline. I'd been forced to put in a knot pass in the rope and reverse prussic past it. Two more bolts got us to the bottom of the pitch, by which point our nerves were totally shredded. Though the hang of the rope was very clean, a rope disappearing into empty blackness above can be really terrifying!

Though we were almost expecting to break into 'Level 3', an as-yet undiscovered horizontal passage at least three kilometres long, the pitch was completed choked with boulders at its lowest point. We scoured the nooks and crannies before pronouncing the bottom of Plop officially dead.

However, twenty metres back up the gravel slope, another boulder choke went down, an obvious lead for a return visit but by this stage we were too tired to push and survey a new cave passage. We left a going lead in boulders, along with an easy swing into a window halfway down the pitch.

Exit from the cave was difficult due to being tired and thirsty but we were in a jubilant mood after a seventy-six metre survey leg! Plop was the biggest pitch either of us had ever seen. As the first to bottom this monster, we renamed it 'Plopzilla'.

Analysing the survey data back at the bivi, it measured in at an impressive 105m of depth.

Richard Venn

Riggin' Captain Kangaroo

First trip was with Thara. Tet had already rigged down Pico (re-bolting it in the process), so we set off for that familiar window with a bolting hammer, a hundred metres of rope and a couple of cinnamon malt loaves. Had the same trouble finding Tet's single bolt as I'd had in 2005. However, instead of bottling it, I placed two new spitz, this time within sensible reach for easy rigging. A hundred metres of rope got us to Traverse Chamber, cursing and kicking the heavy bag all the way through Scrotty.

Sandeep was the next victim, this time we set off with a hundred and fifty metres of rope. We rigged down to Olympic Rift, stopping

on the way to chisel open an awkward squeeze. We left thirty metres of rope in a tacklesac at the start of Olympic Rift and did some re-bolting on the last two pitches. Also left three hangers and maillons, ten spits & cones, two karabiners, a chisel and two slings. At this stage the squeeze and huge black space the other side at the end of Olympic rift seemed like the best lead in Captain Kangaroo.

A bounce to Pico with James gave me the chance to do some more work on the entrance to Captain Kangaroo. I put in a tensioned traverse which removed the 'traditional' rub-point at the start of the take off.

Richard Venn

Pushin' Captain Kangaroo in 2007

I had hoped that keen cavers would rush into Captain Kangaroo to push the more shallow lead off Traverse Chamber, leaving me to go and smash open Olympic Rift to fame and great glory in whatever gaping chasm lay beyond the terminal squeeze. Unfortunately, Vom-Brown and the Deep turned back near Bonus Chamber, with 'visions of hell' muttered back at the bivvi from the first sign of mild scrotty-ness.

I collared young Ben in the bivvi over a generous swig or two of rum-spiked tea and we hatched a plan to crawl along a tight rift that I'd looked down with Jarv in 2005, but been unable to survey due to lack of tape. With survey pencils and instruments in tow, we slipped through the cave to the pushing front and stripped off SRT kits to pass more easily through the rift. This was somewhat tighter than I'd remembered and shredded my PVC oversuit.

We pushed as far as we dared survey, breaking out right at end into a large double chamber with several leads coming off. The most obvious of these was a climb down into what looked like walking passage.

Returning a few days later with Izzy from Tolmin, with a bag of rope and bolting kit, we pushed the passage another fifty metres or so. Some gardening of large rocks was required to pass a short section of rift but we were mostly in big passage, clambering down rather sharply over a series of climbs.

Eventually we reached a point where a big passage closed up to about one or two metres of very tight rift with a big (approx. two second) drop on the other side. This was passable but looked more than a little unpleasant without some serious work with a chisel.

We looked around the chamber a little more before discovering a tight sharp crawl which dog-legged before coming out in beautiful white rock at the top of a twenty metre pitch. Izzy belayed my full weight from within the crawl while I put in the two bolts. This allowed us to descend to the bottom of the pitch with a few metres of rope to spare. This is possibly not the same pitch we were throwing rocks down through the tight rift but obviously very close!

As we dropped the pitch there were windows on both sides look-

ing like they came from either other pitches or more rift-like development as well as two leads at the bottom. These were a small Captain Kangaroo-esque rift and ten or twenty metres more of the pitch. We left ~10m of rope, but took the tacklesac out.

This was a very exciting new section of passage. We named the contents of our push “Kill ’em All” after the first Metallica album. Upon inspection of our survey data, it became clear that we were exceedingly close to passage below Silos/Godzilla in M2 (less than thirty metres at closest approach).

caving:/photo_archive/slovenia/2008/survex%20-%202007%20data%20-%20m2%20vrtnarija%20closest%20approach.gif

Unfortunately, a month on Migovec was starting to catch up with me and though I wanted another trip in Gardeners’ World to push Olympic rift, I was completely exhausted with very sore knees. The leads we left in Kangaroo this year will be far too tantalising to sideline in favour of surface work in 2008. The prospect of a connection with the System seems very likely and next year we’re already planning a return to M2 to resurvey (our current data comes from a 1970s survey carried out with a home-built clinometer!) and to exhaust the deep leads.

Richard Venn

Alex Pitcher Memorial Award Report

~by Ben Banfield~

This summer I was a member of Imperial College Caving Club’s expedition to Tolminski Migovec in the Julian Alps in Slovenia. The club has been running the expedition for over a decade now and was looking forward to improving my caving skills and techniques as well as contributing to the knowledge about the caves under the Migovec plateau. The Alex Pitcher Memorial Fund kindly awarded me some money which helped me purchased my own helmet and helmet mounted light. Having my own helmet mounted light was essential to my participation in the expedition, as the club only owns FX3’s with batteries on a belt that are unsuitable for Migovec due to the batteries needing a mains. Below is a report of most of my caving activities during the expedition.

Wednesday 18th: (July)

After being suggested as a lead with a lot of potential and a good place for budding cave explorers, Tom Brown and myself set off for Moth Cave, in shorts, t-shirts, knee-pads and helmets for a look. Spent a few hours shifting boulders and scree 15m into the cave at the pushing front, before leaving. Has a gusting draught at the pushing front. Will return again with tools and proper clothing for a better look.

Thursday 19th:

Alvin joined Tom and myself today to continue pushing the lead in Moth Cave. After a few rotations of digging we had a badger sized hole and decided to stop for lunch. Afterwards more excavating

around the badger hole and scree slope occurred. Several animal bones were recovered from the scree. An ominous slab of rock sat at the top of the scree making progress tenuous. Further digging around the badger hole led to another badger sized tunnel off to the left of the original. After moving 45-50 bags of scree we called it a day. Out 8pm with plans to ask about explosives for further pushing.

Friday 20th:

A short look at Moth with t-shirts and shorts again with Martin to ask about explosives and other digging options. Moved the ominous boulder at the top of the scree to ease our minds about becoming crushed. The bottom of the scree slope was dug to more resemble a trench for easier access to the pushing front.

Sunday 22nd:

With the potential for leads and the fact that Moth lies on top of the System Migovec / Primadona connection area linking it into the main survey was a priority. Martin taught several of us the essentials of surveying while we surface surveyed to Moth entrance. Alvin and Thara continued digging while Martin, Tom and myself surveyed to the pushing front. 6 survey stations later we joined up with the digging team. Using various combinations of left and right-handers we made a lot of progress expanding the left hand badger hole and the trench. Breakthrough looking likely tomorrow.

Tuesday 24th:

After a day's break I rejoined the Moth pushing team. Sandeep had joined us and almost straight away he managed to squeeze through the tunnel (now named Badger Highway) and into a small chamber. Alvin and myself then made it through and throughout the afternoon work commenced on enlarging Badger Highway from the other end, to make it accessible to larger cavers. The chamber contained going leads. One, a long crawl/squeeze that needed enlarging had most potential.

In 3rd week of expedition:

After proving to be such a promising lead before the expedition and during the first two weeks, Moth cave needed the final push to see whether it goes or dies. The day prior the petrol drill joined us to try and enlarge Badger Highway to allow more people to reach the pushing front. Unfortunately the drill was more of a hindrance than a help, fuming the cave and not expanding the passage.

With no draught coming from the pushing front or even through Badger Highway any more, hopes for a breakthrough didn't look promising. Everyone else had plans for the next day, so armed with a survey kit and some bright red nail varnish, I took on the mission of completing the survey and exploring all available leads.

The squeeze through the tunnel looked more daunting than ever, but with the knowledge a call-out team would be along within a few hours, I pushed through. Minor digging allowed me further access along the main lead. Another small chamber with no going leads was found. The nail varnish came in useful to mark a permanent survey station. Taking all digging tools and the survey notes out, I

was back to camp well before my call-out and in time for a nice rest in the sun.

After a jolly into System Migovec earlier in the week in a large group, it was definitely time for me to go deep in a pair. What better way than to help Rik push Captain Kangaroo! With leads that had been looked at but not surveyed, interesting data collection in scrott was the order of the day. Down, down, down through the early Gardeners' World pitches and past some "interesting" rigging (greatly improved later in the expedition). Squiggling through the rifts in Scrotty until we reached Traverse Chamber. The first lead ended quickly in a pitch preceded by a tight squeeze past a spiney. With no rope and no hammer to help make the entrance more accessible let alone rigging, it was impossible for now. After surveying back to a fork, we pushed on.

What followed was a crash course in free climbing as taught by Rik. Plenty of top tips later, we made it past the fiddly squeeze where Rik and Jarvist turned back at the last exploration. Beyond was an open chamber. Rik climbed down and suddenly Captain Kangaroo became a whole lot more exciting. A pitch, two going rifts and horizontal walking passage. The climb was do-able, but really needed rigging, so we turned and surveyed back to Traverse Chamber. Out an hour early, we hurried back to camp for slop. As our survey data, excitement mounted. Our data was heading towards System Migovec for the mythical connection. The laptop was whipped out and data entered. Our survey came within 36m of the bottom M2 below Silos! A bit of rope and some further pushing and we'll be there. Roll on the survey legs!

I found the expedition an extremely enjoyable and fulfilling experience. I gained a lot of valuable caving experience. The exploration and discovery of new cave passage was very rewarding. Having my waist freed from wearing a battery belt, made caving in tight passageway and squeezes immeasurably easier. I would like to thank the Ghar Parau Foundation and the Alex Pitcher Memorial Fund for helping me on my first caving expedition.

Ben Banfield

2008 — Votla Gora

Introduction

The main focus of the Votla Gora 2008 Expedition to the Tolminski Migovec plateau, Western Slovenia, was the connection of Sistem Migovec (11493m - 5th longest in Slovenia) with Vrtnarija (5229m - 11th longest) to make the second longest cave in Slovenia (16722+m). Separation was 28m on the centre line with many going leads. This was not achieved, but 1.2km of cave passage was found and explored.

The part of Sistem Migovec that we were attempting to connect to was the bottom of M2, the original deep cave on Migovec pushed back in the early 1970s by the Slovenian JSPDT. Below the epic Tolminski Silos pitch (120m), the cave shut down into a series of small pitches with extremely tight rift, which had to be exploded open for passage. Exploration finished in the 1970s at yet another such rift.

2008 was also the first ICCS Slovenia expedition with a name - 'Votla Gora', meaning 'Hollow Mountain'. This was an idea, shamelessly copied from the recent OUCC Ario Caves expeditions, which instantly became a useful tradition.

Exploration Diary

During the first two weeks of expedition, the UK team rebolted and rerigged M2 via the original, more direct, entrance to the original pushing point. Once there the UK team attacked the rift with hammers and chisels, but the progress was slow. In the middle of the expedition an experienced Slovenian caver with access to explosives came on a trip at the same time as another team explored some of the near passage in Vrtnarija. This trip obliterated a large rock that was blocking the rift, but also collapsed the wall of the rift. Net distance gained - minus 50 cm! However, with another session of manual work the choss was cleared. Perhaps worryingly, the extremely loud explosion was not heard by the other party in Vrtnarija, though one must add that they were extensively 'gardening' large rocks down the 52m Dangermouse pitch!

Early exploration in Vrtnarija was concerned with extending the 'bottom' end of Captain Kangaroo. The first recce trip was over 12hrs in spite of no new rigging taking place, and concluded that

significant work was required just to improve the rigging and expand some of the more arduous squeezes. In particular there were three tight sections of rift in the ‘Mudslump’ extensions from 2007. As such, the first few trips down to this area of the cave consisted of two parties - an advanced one pushing the bottom end while the other progressed slowly ‘improving’ (in many cases instigating...) the SRT rigging. For one notable pitch, “Kill ’em All” which had been rigged for no apparent reason without a traverse line, the advanced party beckoned the clean-up group down to rig the pitch safely before they would ascend!

This after a section of acrobatic rift below Kill’Em All (p22), Dark Tranquility (p44) was discovered. The leads were very much ongoing - another pitch, and many windows. There were also entering avens. However, on inputting the survey data (we have a solar-powered laptop running Survex in our mountain top bivy), we discovered that we had dropped well below the bottom of M2 and therefore our current connection possibilities.

As such, attention shifted to higher leads to try and secure a connection in 2008. From the “Something Fishy” chamber a series of pitches were explored which included the impressive Dangermouse (p52). The leads at the bottom are rather dubious, but it makes an extremely pleasant 72m shaft series (Penfold, Dangermouse, Green Back, Gibleet Breakfast) which has a very valuable commodity on it indeed - a seemingly faithful stream enters halfway down Dangermouse and collects in a secluded 2m diameter plunge pool.

The Captain Kangaroo series is extraordinarily dry after Bonus Chamber (it is actual dust, not water vapour, that ruins flash photos in this part of the cave), and the water on Dangermouse is likely to be an important part of future underground camping plans for 2009.

From Kill’em All, a number of avens are noted. One of these was gained by a rather gung ho climb with uncertain belay to reach rift that led away from the pitch. On a future trip, the rigging was improved to an acceptable level and the rift was pushed to a squeeze. This soon gave in to hammer attack, and led on to a initially upsetting pitch head. There was clearly something big and echoing below, but the pitch head was initially a fair squeeze for an anorexic cat! Disturbingly, considering it was also our floor, the rock around the pitch head shattered easily and with a few hours of work produced something probably passable. The rotten nature of the rock was a concern when placing the belays, and gained this section of cave the name ‘Cheesecake’. A short 10 meter pitch dropped onto an epic rock bridge in a large chamber, with shafts disappearing down (perhaps combining below) on either side with multiple second free falls. A notable rift led off South (towards M2) from the far side of the chamber, but required a bolt traverse out to it. By survey, this rock bridge is 21 meters directly above Dark Tranquility (p44), so it is likely that at least one of the pitches connects.

Due to a shortage of gear, a trip was made down the ‘Olympic Rift’ arm of Captain Kangaroo to recover equipment and scavenge

rope from the (left rigged since 2007) pitches. The exploration end was a tight rift leading to a very large space, most likely a reconnection to the Space Odyssey / Concorde pitch in the main Vrtnarija shaft series. An unsuccessful attempt was made on the squeeze - it required expanding. The pitches were derigged and the rope removed to the bone dry Traverse Chamber for immediate use in 2009.

In this region a surface dig started and quickly broke into considerable passage with a large draft. This was pushed very actively for a number of trips, before an unfortunate connection being found into Jelly Chamber of Vrtnarija. As the explorers at the time commented "Well, at least its 800m deep now!". This Vilinska Jama entrance demonstrates the worth of spending time and effort on surface excavations, as well as pointing to the plausibility of checking all the small side passages in established systems.

Above the Vrtnarija/Vilinska valley is a limestone pavement that extends from beyond the entrance to M2. Here a surface cave, E1, was discovered in 2007 with a ~20m entrance pitch. During 2008 some stones were excavated to an extremely tight (sub human) sized pitch head blowing strongly. This will require chemical persuasion to pass, but due to the (now surface surveyed) location, is a cave of some interest for 2009. Strangely for a surface cave it has some well defined cave formation (large meander), which appears to have been saved from infill by an overhanging entrance and position next to the edge of the plateau.

On the mountain we were joined for a couple of weeks by the younger generation of the Slovenian JSPDT. The majority of their efforts were directed to a cave on the Western edge of the plateau, gained by a rather jaw-dropping abseil of 100m into the mile-deep Tolminka valley! This cave "Monatip", whose entrance was noted in 2006 and exploration begun in summer 2007, is very different in nature to the other mountain caves, being mostly horizontal with the entrance at 1730m appearing to be a dried stream way. Monatip was extended to a total surveyed length of 710m, before connecting into the Primadona / U-Bend system at -151m. The exit via the easy Primadona shaft system was welcome!

It is unclear whether Monatip will be revisited in the future. Some of the original enthusiasm for its exploration was it heading South-East into 'blank mountain', but unfortunately it quickly developed back towards the South-West and Primadona. However, it certainly indicates that Primadona itself is a very fertile area for further exploration.

Also on the Western Plateau is Planika Jama, discovered simultaneously with Monatip. Far more vertical in nature and partially choked with snow, this was pushed to an ice filled chamber with 'phreatic like' blow holes through the ice. Unfortunately this original chamber was not reached due to the shifting ice levels - lots of snow fell in the Winter before the expedition, but also a lot of rain in the spring. In Planika this appeared to have drilled a 1m diameter hole through the initial snow plug which gained an icy vadose develop-

ment which dropped via a short pitch to a tight blowing rift. Armed with only hammer and chisels, three cavers spent a full day smashing this rift to reach a tight squeeze into a further chamber. Exploration was left at this extremity. On another occasion, a window noticed near a rebelay ledge was pushed (again necessitating the expansion of tight rift) to gain a large chamber which actually went higher than the original entrance to the cave.

In Sistem Mig, a return was made to the pitch explored in 2007 named Plopzilla (P105). The objectives were to photograph the large pitch, investigate the extension boulder choke on one side of the pitch, and to derig the rope to NCB for use in future years looking at other possible shafts coming off this neglected area of the system. The boulder choke was climbed down through for tens of meters, halting when reaching a committing climb down through the ever unstable boulders. Once everyone present had confirmed that “it goes, but I’m not going there” they derigged. Unfortunately the long exposure film photographs taken with the aid of manually fired flashes on abseiling into the shaft were badly fogged, probably due to the camera not being so light tight after its many caving trips! A great pity, as the shaft had a beautiful fluted triangular-prism cross section.

NCB still holds interest for us, for though it was discovered in 1995 and provided the key for the discoveries of 1996 it has since been visited rarely (due to its long distance in time from the surface). A fair amount of surface prospecting has been concerned with investigating the clear valley located on the mountain top above which contains the small M15 and M17 caves. M17 was re-entered but found to be choked with ice. Small caves were found nearby initial digging has been started.

The weekend after the expedition van headed home, a small Slovene / English team went back down M2 armed with an enormous drill & battery. With 6 shot holes they blew their way through the rift, to the head of a short pitch.

This was returned to in October 2008, and dropped - all the new finds in M2 being surveyed at the same time. The new pushing front is another, almost impenetrable rift, and a climb up into a series of tight phreatic passage. The survey data indicates that M2 itself is trending away from Captain Kangaroo. During the expedition a major error was discovered in our survey data - namely that the wrong M2 entrance (there are two, separated by 25m horizontal) was connected into the surface survey. This caused a jump in the position of the bottom of M2, taking it further from Vrtnarija.

With the corrected data, our closest approach is now 23m between the large chamber found below Cheesecake and the confluence at the end of M2.

Exploration Summary

In summary, Migovec now has three major systems and over a dozen smaller caves in active exploration. The exploration in Vrtnarija was at the very end of our endurance limits - the minimal trip length to achieve anything was 15hrs. Our plans are to camp down there in 2009 in order to have far more man hours at the 'coal face' and to offer the psychological and physiological refuge of a camp in a location that, in spite of its relatively shallow depth, is truly a long way from a safe place.

The mountain is unique in having such complicated Alpine cave formation at various depths, and now constitutes 21.988km of passage beneath just a square kilometre of surface.

Everything newly explored was surveyed to BCRA Grade 4b, underground photography as part of documentation took place in Vrtnarija, E1, Plozilla (Sistem Mig) and Planika. We were limited by there being only one underground photographer on the expedition.

A new survey on an East-West projection has been drawn of M2 and Vrtnarija.

Jarvist Frost

Across the mountains — an unexperienced way to reach Mig

After two years with the ICCG, I finally made the decision to become a Migovecer. Having done some cave exploration in Hungary, my idea of such activities was spending endless hours of underground digging, in passages of at most a 40 cm high, half-filled with dirty cold water...

Numbers better characterise these circumstances than words: in 10 years' time, my Hungarian club made a steady progress of 400 m, the discovery of almost every new meter being heavily aided by the products of the HILTI company. Thus, I was eagerly awaiting the Mecca of alpine-style caving and cave exploration. First, I spent a couple of days at a Croatian-Hungarian caving expo, which had the double advantage of being located next to the wonderful Zrmanja river, and to the local pub.

But after this wellness-spa holiday, I felt the urge to start true caving, in the middle of the wilderness, on top of the unknown, mighty Migovec. So by hitch-hiking and a train journey, I arrived at Lake Bohinj to meet a friend and toss a day at the lake, after which I had the illuminating idea of walking across the mountains instead of taking public transportation to Tolmin and the going up from there.

According to my plans and my speed estimates, the trip could be made in a day's time if one started early, thus even saving time compared to the train journey! Thus, early in the morning, I started my ascent up to Dom na Komni. This path does endless hairpins up to the plateau, and no wonder, I soon realised that the progress

was much slower than anticipated. Inexperienced in the Migovec conditions, I packed up well: a complete cooking kit, various layers of clothing, and even some rope completed the filling of my backpack and a large tackle-sack, which altogether weighed about 30 kg's, not counting my secret meat stash weighing a couple of kilos (which became sort of a tradition since then), so I truly felt like a soldier of the first world war.

By the time I reached the hut, it was clear that the night will be spent by bivouacking (as the money possibly spent for the hut fees was rather spent on beer). So I made (or rather struggled) my way to the former military camp, and set up my sleeping bag in the bushes, my torn poncho being the only protection against rain - but why would it rain anyway in such a wonderful, starry night, without a single cloud being visible, and a wonderful weather forecast for the coming week?

Having fallen asleep with such positive thoughts, my dream was interrupted by a quite uncomfortable noise: thunder! The situation was not welcoming, and at this moment I was not quite sure anymore whether it was a good idea to liquidate my accommodation fees...

However, a speedy action was needed, and luckily, I discovered a small black hole next to the bushes. A cave! I imagined my first cave exploration on Mig a bit differently, but here it was - speedily, I managed to remove a couple of rocks blocking the entrance, and enlarged the hole so that it could fit at least my packs plus half of me, the other half covered by the torn poncho.

Of course, I hoped for a bit bigger, maybe down to -1000, but for the moment being, this was sufficient enough to survive the storm - which job it did at an agreeable level. It was neither dry nor comfortable, but at least it gave the feeling of some protection against the thunders, which hit the bushes around me in an alarming frequency. Finally, the rain stopped, and it was time to recover my possessions, and to start the remaining part of the journey.

This was a bit complicated by the mist that now covered everything - with about 10 m visibility, in the middle of the Northern plateau, with way too much load, and finally, on the wrong side of Kuk, it was definitely not prospecting the most jolly day hike. Somehow I managed to reach the saddle between Kuk and Skrbina, and from here, descended down to the Migovec plateau following my compass bearings.

The task now was to find the bivvy, the only information of which was a vaguely positioned red dot on my map (I didn't know about the magic string then...) So I wandered a bit up and down, and finally at the edge of total exhaustion, surrounded by fog, a figure appeared on a rock slab above me - a person with long hair, a long beard, barefoot and wearing a long tunic - it could be nobody else, than Jesus!

At that moment, I realised that I never really imagined Heaven, but if I did so by any means, the resulting scenery would definitely

differ this place. I also thought that it would be quite a hard task to collect all my sins, adding to the final effort of crawling up the slope ahead of me, by the time I meet Jesus... Anyway, I made it to him, and I gladly realised that the ghostly figure was a most real person: James Huggett! Thus, my adventurous trip across the mountains has ended, and soon I was welcomed by the other cavers, and had my first glimpse of the ever-welcoming Bivvy.

Gergely Ambrus

The Slov magic (2008)

Shortly after arriving to the plateau, I found myself getting ready for a trip. Not only a trip, in the ordinary sense, but a real Exploration Trip, with a goal none less than trying to remove the large boulder blocking the tight rift at the bottom of M2. I was chosen to be the lucky one who accompanies the Living Legend of Tolmin cavers. Soon I found myself holding a nice yellow tacklesack, with the instruction of “be gentle with it”. And this was not without reason. In the bag there was to be found an original memento of the great war, a product of the ever famous factory in Glasgow, dated to 1937. A well educated friend of mine pointed out later, that products bearing the name of a prestigious prize become highly unstable in a period of cca 50 years, but little of this reassuring fact had I known back then. Instead, I took the tacklesack happily and we started our vigilant journey towards the centre of the globe. It soon became evident that the only way for being faster than my master would be to use gravity directly, without the unnecessary complication given by ropes, re-belays and so on. The main obstruction was a nasty wedging squeeze somewhere, which proved to be even worse on the way out. Finally, we reached the bottom, set up our magical set, murmured a couple of magic spells, and then woops, the boulder evaporated as if it had never been there! Indeed, it does help in exploration to read Harry Potter after all. We started to chisel our way further, but the rift got even narrower after a couple of meters, so we had to give up and started prussiking up. Again, my companion was nowhere to be seen until I emerged completely exhausted at the bottom of Silos – where he waited half asleep, and noted that he is indeed quite cold. It was just the opposite for me. The rest of the trip continued in the same manner, and finally we emerged triumphantly at the surface. This was my first battle with Migovec, and so to say, I got completely addicted to the sweet smell of gunpowder.

Gergely Ambrus

WATER!

It was one of the last pushing trips on the expo. Once again, we decided to go down to the unpassable rift at the bottom of M2 in order to find the Connection. This time, for sure, it was going to

happen! Paul seemed to be as eager as I was, so we teamed up. At the same time, another party (Jarvist and Dan) was to go down to the “other side” of the rift, to hear our voices and then to shake hands, for sure. So we slowly worked our way down the many tight squeezes below Silos, and arrived at the – by then, familiar – small and cosy chamber. From here, the hammer and the chisel played the main role in our drama, or at least we thought so. It was not until a couple of hours later that we noticed that instead of the usual sound of water dripping into the pool, a steady, loud, constant noise is coming from the chamber. Squeezing back, we nervously looked at the stream of water dropping into the pool. Time to head out, as quick as possible! We threw some small flakes of the chocolate tinfoil to the stream in order to find it on the other side, hastily packed up, and started our way up, which turned out to be an ordeal. I wore a normal textile oversuit, which proved to be perfect for the cold water to directly run through, but Paul did not feel much better in his Meander either. The cave suddenly became like a wet Yorkshire cave, and soon we were completely soaked in the icy water. The flow became bigger and bigger, and our only hope was that from the top of Silos, the way should be dry, as we have never seen water there. Yet, once reaching the top, completely cold, exhausted, shivering, we had the worst sight in front of us: a 40 m high waterfall, the rope hopelessly dangling in the middle, with the majestic and frightening sound of water as it splashes at the rocks after its long freefall. At this point, there was no choice left: being as cold as we were, the survival bags would have been almost useless, and the water level seemed to rising, indicating that it is still raining on the surface, so did we decide to wait, it would have been at least half a day, resulting in hypothermia almost surely. We ate the last bits of chocolate we had, jumped, rubbed our arms to get some blood going, looked up into to dark, trying to estimate what is awaiting us. Neither of us was sure that we were going to make it. There was a ledge mid-way out of the water, so planned to go up there in one go, and the continue. Then, I clipped onto the rope. The jammers were in place, everything sorted out, feet in the footloop, bag on the back, rope as tight as possible. It was the moment to start. A wide swing took me directly in the middle of the water, and without thinking, I started prussiking as fast as I could. The force of the icy water seemed to be much stronger than my weak, half-frozen thighs, and it was hard to get any air, like being in the middle of a freezing icefall. I started swearing, knowing that I had to win. Seconds seemed minutes, and minutes hours, but finally I made it to the ledge. Paul could hardly hear the “rope free”, then he started up. I crossed my fingers and waited. The gigantic howling sound covered everything, the shouts of Paul went to thin air. Finally, he emerged with a frightened, completely pale face, blue lips, shivering, his hands are of almost no use at all. We hugged each other and jumped, trying to warm up. Then, the second half, just as bad as the first. When Paul showed up at the top, we smiled a bit: from here, we get out, even if we have to

duck all the way! It was still a good couple of hours until we made it to the surface, about 6 hours after the callout. We dragged back to camp in the pouring rain, woke up Tetley, drank a bit of booze, and went for a massive 15 hour sleep – which was quite well earned after all.

Gergely Ambrus

Trying to climb into M2. Incompetence, bravery and no luck.

Our main aim in 2008 was to discover the connection between M2 and Gardener's World, a feat which would heap honor on the shoulders of who discovered it. 2008 was my first year of caving in Slovenia and I was Very Keen. I dreamed of my shoulders baring the honor of the great discovery and did all I possibly could to be on the right trip at the right time. I took part in a few of the rigging trips down M2 and was amazed by alpine caving on Migovec: the huge huge pitches, the dry nature of the caving, could not wait for more "pushing". At the time, the bivi rumour machine had determined the most likely way to find the connection was to explore the area around Kill'Em'All in Cpt Kangaroo. This side branch of Vrtnarija had been pushed the previous year by Rik and was infamous: uncharacteristically tight and twatty, rigged sparsely and badly, a total nightmare.

My first pushing trip in Cpt Kangaroo was with Clewin. The deeper you get into Captain K the more ridiculous the rigging was, with plenty of dodgy climbs waiting to dislocate your shoulder or break your ankle. The cherry on the cake was at the time Kill'Em'all, the most insane piece of rigging I have ever been exposed to. The pitch head is at the end of a tight rift. The original rigging consisted of a Y-hang in the main shaft, roughly half a meter below the entrance rift. The only way to get on the rope was to clip in and drop on the rope, possibly with a forward roll. The only way to get out was to clip the Y-hang with long cows tails, stand on the knot, wedge yourself into the rift and unclip. In retrospect criminally dangerous and terrifying, but at the time I thought this must be "expedition rigging" and took it in my stride. On the way out we bumped into Jarv and Paul who had rerigged large sections of the cave making it safer, by the end of the year the cave was more or less sensible. On that day Clewin and I pushed the main lead down, rigged two small pitches. I had my first taste of caving exploration and I loved it. Game on!

The trip with Clewin had already brought the bottom of the cave too deep for the expected position of the closest point to M2. I had somehow developed a reputation as a 'climber' and decided to have a go at climbing into a side passage at the top of Kill'Em'All. This required an easy slabby climb halfway up the pitch. We added a bolt half way down the pitch from which Gergely belayed me. In order to protect the climb I had some very long 8 mm rawl bolts, a rock pecker and a bunch of slings. I had had tried out the rock pecker

on the surface, but found it much less easy to use whilst climbing, hammering away, the legs a bit weak with fear of falling, footholds feeling precarious in the big wellies, feeling I would knock myself off the wall... I bottled it, abandoned a very poor bolt, slung a sling around a spike and free climbed the short slab. A very easy climb (maybe Mod?) but nevertheless terrifying. I think that Gergely's singing helped a lot. At the time it felt like a great achievement. But it did not lead to the connection.

Climbing with a rock pecker was too scary. So next time Izi and I took an electric drill. It weighed a hell of a lot going through Captain K, but it would make climbing the traverse above Primula a walk in the park. Unfortunately once arrived, the drill would not work. Bogus. Plan B: put in a spit and belay me across. This also failed, due to the rock being very rotten. Plan C: a natural for the belay and then free climb. While Izi slung some boulders and backed up to the rope above, I scoped the climb. Doable. There is a sort of foothold halfway but it is total commitment – a long step. The traverse was on the limit of the delicate climbing that can be done in full caving gear, I reached the rift at the far end of the traverse, wedged myself in and hammered the fastest spit I have ever placed. Once secure, I considered the way on. The rift was going slightly up and was totally blocked. No way on. But another crap inducing climb, and another step to make me less Keen!

The highlight of that years caving for me was actually a trip in the bottom of Captain K with Izi. On that trip we discovered Dark Tranquillity. It was the first proper pitch I pushed and the buzz was incredible. I remember sitting at the top discussing with Izi how it would rigged. I was apprehensive of screwing up, but he made it clear he trusted me.

Somehow the expedition ends. I am not upset at not having found the Connection. I am glad that I had some fun pushing trips. I am grateful I did not get hurt, or hurt my caving partners. I am proud of having another person trusting me. I am now a lot less Keen, know a thing or two about bivi rumours. But it would take a few more broken drill carries to make me wizen up electrically!

James Kirkpatrick

Raw Logbook Writeups

Typed by Jarv, 23-26th Dec 2011.

Day 4 - Tuesday - James KP (by handwriting)

Andy & James KP: Set off at 1-ish to rerig Laurel. Got to the top of Laurel & found the ropes, but not maillons! Decided to walk back to bivvy & look for more. Having found none, we left for M2 to look for Clew & Dan & their stash of maillons. After a LONG search for M2, we reach M2 & start going thru loose meanders, constantly worried that we were going to shower Dan & Clew in rock fall. Eventually

we get the maillons, walked back to GW, finally rig laurel. The second rope on Laurel is slightly worn & could do with changing (15-20m rope needed).

Planika (Team JJ) - Jana

Rigged down the end of Rift and 1st Pitch in Planika. Pleasant surprise in the first chamber. The snow slope was quite melted next to the pitch wall, so we were able to go all the way down. We noticed way on and start smashing the ice wall. We felt the draft. We manage to get threw, but after few meter it's choked again with ice very close to wall. Back on the snow slope. On top we noticed that another melted way down formated. But need's bolting to get down. So we decided to continue the way. But not for long, because a lot of fresh snow blocked the way forward. After digging a bit threw it we decided that other route should be chosen for way on. We were very cold as well.

Back out, was still time, for me to chop and prepare some wood. Jarv walked down to Ravne to get some more stuff up.

M2 - Dan & Clewin

After the obligatory morning faff in the bivvy we started off for M2, then turned back after 20 metres to get spits and cones. Wandered over to the entrance which is a stones throw from M18. The lower entrance drops into a gorgeous daylight shaft with a snow plug in the bottom and vast amounts of scree.

We then followed the obvious way on, which rapidly gets less and less obvious, turning into awkward rift. There are a fair few bits of free climbing before we spotted a piton. Not wanting to trust a 30 year old rusting bit of metal, we put in a couple of dodgy bolts, but also rigged off the piton. It was a straight drop, we just used a few metres of rope instead of one of the ladders we had. At the bottom is ever squeezey and awkward rift ending in a ladder drop (another new bolt). While doing this, Andy & James appeared, begging for maillons. We had far too many anyway, so we sent them off happy. At the end of the ladder drop, more rift and free climbs. The last climb we rigged with ladder before taking it off again since it didn't seem to buy us anything. Here it opens out into a reasonable, i.e. more than 2m, pitch. We put in two more bolts and then ran into trouble on the third. Dan bludgeoned the spit teeth into a pukp and we spent about 10 minutes trying ingeneous ways to remove the duff spit from the driver. But we didn't want to do anything which would make it too difficult to remove if things went wrong. It was already 7:30 so we abandoned the mission. - Clewin

Cpt Kangaroo: Jana, James (Huggett?), Tetley

Easy down to Laurel. First rebelay under the boulder turned out to be too tight for our shorter members: add a long sling.

Down to Pico no problem, then to bonus chamber, scrotty would do with some mechanical enlarging. Down to traverse chamber. Left 20m of rope, 5x spit, maillon, hangers, cones. Rigged a free climb to mud slump (could be improved).

Jana: First trip for me down to Mud Slump. Lovely trip. It is actually not that scrotty - at least, not for me... :) Pico is an amazing pitch. Will definitely return down there!

24.7.07 Jana

Jana, Jarv → Planika

Went down and bolt in the first snow chamber to go down the new way, where the snow has melted. ~8m down in the snow tube hole. The way on was squizy and tight. A lot of draft coming up. We ran out of rope and bolts. it is still going. A bit tight. We surveyed on the way back → total: new 24m down. Still need to go back and check the first pushing front from the last year (where) snow (cold chamber).

- Tetley → Come down later on

We almost finish rigging when we heard: “Is the rope free?” It was Tetley - he finally come down Planika. He want to down and take a look of a new go-go way. We mentioned that it is tight - and he was like “ye, ye...” But he get stuck in the first rift down. And in that position he light up a cigarette and smoke it :) On the way out we derigged, to use the yellow rope to rig down Monatip.

25-07-08 - E1 - Jarv

Jana & Jarv returned to E1, to investigate the possibilities...

Jana pushed the small crawl - draft, went for a while.

We then moved attention to the deep deep crawl, abandoned last year as dead. It wasn't. But perhaps it should have been. We moved the most dangerous boulder loitering over the edge & set to work.

Dig dig dig...

6m long, ~60deg to T scree slope, terminating in Pitch (6-8m by rattle).

First few armfuls of rock were stacked, until we started chucking scree over the edge, boom boom boom Tidied back to bedrock — too tight — damn! Strange pitchhead, almost T-shaped: water slopping over the edge, but also a notch cut down (~10cm wide).

E1: We surf surveyed & tied into M2 - 40m above the end of goodybag, M16 Need a better name before it gets too big ‘Mountain Goat Cave’? Sounds good in Slovene, says Jana.

25-7-08 Planika EchoRift

Dropped new melted pitch. Safe rock awful rope rub. Meh. 1 bolt & down, comedy sling backup & pitch rope stretched across. Pushed to tight chest-wide rift; ice everywhere. Tight rift meandered to

pitchhead. Located natural hang while Jana fetched survey kit & rope. 1 dodgy thread & down. Long sling to stretch out rope (~8m). This proved troublesome on the way up. Dropped onto ice-floored chamber with semi-tight rift off it. 1.5m diam hole to small chamber 4m below. Even tighter rift in same dirn. from here. Surveyed out carefully.

Just the otherside of the chest squeeze, Tetley shouted down, having taken the hyper death slide across the snow. He tried the chest squeeze, got wedged & so cracked out his smoke kit & had a tab.

24/7 M2 Rigging Part 2 - Clewin

Dan & Clewin: Started where we left off — with 2 bolts placed at the top of the first real pitch. Dan finished off the last bolt and so we abseiled down. Using the rope from the pitch I climbed up from the bottom to see if there was a way on at a high level. There wasn't, but the aven looks promising, although would require a proper climbing trip. The bottom of the pitch leads to a 40m pitch. There was a 70s piton for backup and a spit at the pitchhead. We used the spit (not *too* rusty) and put a new spit to give a Y-hang. 30m down was a wide ledge with garbage from the 70s.

[Side track] Off the ledge was a small rift leading to a drop which we rigged with a ladder. Below that a dodgy free climb lead to a nice section of wide rift passage with a stream at the bottom and a red survey dot on the wall. This all closed up completely, so we derigged the ladder.

At the bottom of the 40m (Kletnikov Skropilnik) a tight rift of black rock lead to the next pitch. There were no pitchhead bolts so we left this for another trip. Clewin.

26/7 Fratrik & James: 3rd Rig of M2

Continued where we left: Andrej rigged M2: safely 1st rebelay on a giant (minibus sized) boulder of dubious stability. 2hrs + 5 rebelay later we were 20m from the bottom & out of spits. Damn! Return with 5+ bolts and finish the job some other day. Had a hell of a time getting out of the entrance rift...

26/7 Jarv & Clew Planika

Ill fated trip! The rerig slowed us down. Clew placed a Y-hang bolt - went a bit deep, no matter - "I have a cunning plan". Wedging a spare cone lightly into the spit, he protected the thread while cleaning around. Of course, it didn't come out again. Then he hit a super tight Alpine-butterfly just 1m shy of the rebelay. 20 mins of effort, to prussic up & have Jarv know it open. Then he lost his knife in a crevasse & spent 20 thoroughly cold minutes digging it out, while Jarv placed the backup bolt (nice white soft rock). Expanded the chest squeeze & finally reached the pushing front rather late.

Clew expanded the pre-pitch squeeze while Jarv rerigged & then attempted the higher, better rift.

Rift: Phreatic top slightly less than body crawl sized tube, less than chest width vadose. But transition zone is very friable. I got ~3m in, to see 2m rift chamber. Drafting *IN*. Chamber has fist sized boulders in it. Turns right.

GOING!!!* (* with instr. of destruction) Jarv

26/7/08 - Vilinksa Jama (AKA Tetley's mysterious lead). Tetley, Dan, Bozo & Janet (Guard).

Tetley led the way down past GW. Only grudgingly agreeing that blind folds would not be required. The entrance is an unwelcoming yet strangely inviting scree slope under a bedding plane, with a howling and glacial draft emerging from it.

We headed down, leaving Janet at the surface to see off any would-be unsupers of the joys within. The way on quickly opens up to a chamber with a snow plug then regresses just as quickly to a tight, boulder filled, rift. Tetley started chisseling away at a constriction. Dan took over while Tetley dug underneath, bypassing the squeeze entirely. More up & down around the boulders led to an impassably tight pitch head. Tetley & Dan made slow progress with chisels until Bozo arrived, having extracted our location from Janet. A few mighty blows later, the way on was clear (still tight though - will need more destruction).

Tetley rigged a ladder from a securely wedged boulder, and Dan clambered down into a boulder strewn chamber. Water was dripping from a crack in the ceiling, and the rift continued ahead. "Does it go?" shouted Tetley "Game on!" came the reply.

Bozo forged ahead, quickly finding another chamber, filled with a vast two way boulder slope. Up and over choked quickly. Down and under was precarious in the extreme, but Tetley's careful proress under the hanging death and down a short climb yielded the next pitch. A ~20m drop into a large fault controlled chamber. With no SRT kit or rope we made our exit, pausing briefly to discuss potential names. We settled on Vilinksa Jama (Veela cave) and returned to the Bivi for Tea & Medals.

DanG

26.07.08 - Andy & Jana M16 Plopzilla End of NCB (Zebra)

10 hour trip. Re-rigged the way down to Gladiators. Also re-rigg a small traverse just after club mig.

Jana had an epic piss on the ledge in the middle of Gladiators.

We check out Plop, but have not taken the rope out.

Checked the end of NCB. In Zebra, 2 ways on: * A small climb down (~6m) need to be smashed, remove boulders * Small, tight crawl cont. up Zebra

Have taken the Gladiator's old rope out. Amazing trip!

Jana

28.07.08 Jana & Jarv Surface Work

- 1) Went back to Valley 8 (next one to B9), you can see loads of cave entrances. Check out. But only one goes. You climb down under the boulder choke, turn right down to a small chamber. From here there are at least 2 ways on. They both need stones removed. All to be done very gently and carefully since so many boulders hang on top. Looking good to go.
- 2) Behind M19 have noticed a small cave entrance. A slope down to a chamber visible. Did not go down, since at that time I was alone. Put a cairn to mark an entrance.
- 3) East of M19 possibly next to M15? There is a big entrance. We climbed down and digged (a bit) 3 possible routes on. Quite drafty. On to the bottom way on(?) we noticed that someone might have used a hammer. You can feel a lot of cold draft. Digging, smashing, needed but it does look very good to go! [JCC GPS Waypoint 1851m N46.25311 E013.7610]
- 4) Loads of big (deep) entrances just behind the bivi. Almost of them have snow at the bottom. Rope needed to explore!
- 5) Re-discover the Royston Vasey (we believe?) re located. Look at Hollow Mountain page 147.
- 6) Re-discover, located a cave entrance with a red spot in front. It starts with a narrow pitch down. Next to red spot it is an old bolt as well. It is just further on on the right up from Royston Vasey, looking towards kuk. Worth going back down again. [We believe this is Dave Wilson's 1996 Dig]

Jana

30-07-08 Jana, Andy, Janet Surface Work

GPS'ed all the caves big holes behind bivy. Re-checked all the Ms (GPS: M1, M16, M18, M4, M15, M17, M19)
 GPS'ed new? entrances, starting with letter A, A1-A4.
 All A worth to go down and take a look. Bolting needed!

Jana

29.7.08 - Intravenus de Milo - a diatribe - Clewin

After plenty of trips down M2, it was time to push the other side of the mythical GW-M2 connection. James KP & I caved down to traverse chamber, past Captain Kangaroo. Originally I thought that the GW side would be more pleasant than M2, but then the repressed memories of Captain Kangaroo resurfaced as the passageway turned into a succession of horrible squeezes, horrible climbs and horrible pitchheads.

Traversing across Traverse Chamber and into Mud Slump, the cave quality declined somewhat, decaying into crumbling climbs and pitches which had been rigged off a dodgy natural, half way down. We pushed on, hoping to find a PSS with “Kill ’em All” written on it. Eventually we did. Relief was rapidly followed by shock and despair when James crawled around the corner and saw the Kill ’em All pitchhead. To paraphrase: This is by far and away, and without a shadow of a doubt the worst and most contemptible pitchhead you’ll ever see. He wasn’t far off. Schematically it looked something like this: (diagram) Coming up would certainly be a problem, but we were going to be exiting via M2 through the as-yet-undiscovered connection, so we didn’t consider that eventuality.

Compared with the unspeakable Mud Slump, the cave at the bottom of Kill ’em All pitch was actually quite nice. There was a climb down near the bottom of the pitch which we attempted, before the dawning realisation that rescue after a fall here would be pretty much impossible. So we rigged off a natural and dropped to the floor. I sat and smirked as James struggled to get even his helmet through the miniscule rift at the bottom. So that lead was dead. We derigged and turned our attention to the only other way on, the rift leading south from the bottom of the pitch. The rift zigzagged left then right and we climbed up into a round window on the right.

This lead to a small pitch. I belayed James down and he found a rift at the bottom leading to a pitch with a “5 second” drop. He then revised that down to 4 sec. I’d suggest 35m (maybe 2 sec). I put a bolt in and dropped down so we could survey out.

The Intravenus de Milo pitch looked really pretty, with horizontal blades of rock jutting out at various levels. By the time we had finished surveying, we were running short of time – 4 hours to our call out. The way out was fairly desparate, with me getting stuck on climbs and James stuck in squeezes. No one bit of cave was truly awful, but the combined effect of 3 solid hours of unrelenting scrot of the purest variety on the way out started to sap my will to live. Having grit in my wetsocks grinding away at my toes didn’t improve the experience. Still, got out with 2 mins to go before our callout.

Back in the Bivvy, superb slop and trifle for desert was really appreciated. Shockingly, despite my recounting tales of squallor, 4 people were eager to go down the next day. Such is the lure of exploration I guess.

Clewin

30/31-7-08 Kill ’em All, Jarv, Izi, Paul, James

The problem wasn’t so much the rigging was bad, as that there was no rigging at all. Jarv

(Large multi coloured Grade I of Mudslump - Kill’em)

James K’s first grade 1 survey: Dark Tranquillity Many curious avens on pitch.

Followed on from IV de Milo development. James KP

29-7-08 Planika - hard ^{echo} rift push

Jarv, Paul, Jana (written by Jarv)

Straight to echo rift & started hammering (no lump, only bolt hammer). 4hrs later w/ Bob Dylan blaring, after a few tries with oversuit I stripped to wet socks, furry & safety hat (acrylic). I got my feet into the chamber beyond up to my feet, but couldn't commit to not breathing as I pushed past.

(Diagram)

You know it's desperate when your wet socks freeze to the ground as you get ready.

Problem is the S-bend nature of the rift. And my refusal to go headfirst.

On way out, we derigged to first rebelay & climbed into scary rift: "Diggers of the U.G.". Loose boulders everywhere, above extension Meander which forms lowest rebelay. BUT, off to the left is a strongly blowing chamber through tight, but hammerable , rift.

Plopzilla - Photo Trip Writeup - Jarv

Andy's last trip; so it had to be Plop.

Set off with a Daren drum of gear, Paul in the lead & with Andy bringing up the rear (Ooh-err!) Took a few firefly digi shots coming up into hotline. Seems to be lots off the lower M16 ent. pitches - Lost City & etc. ? More photos on the newly SEXY gladiator's rigging, then shot off up Faulty Towers. Popped into NCB; Andy conned us into pissing down Silos:- "Don't piss in the main passage, climb down there but no further than the first bolt!"

Rerigged traverse in NCB (more photos!), then to the main game: Plop. We had a plan, I asbeiled down with gear & scrambled up a slope. Pitch head was 'interesting' [clip in cows, push through squeeze & swing out above 105m hoping cows were still in]. Rebelays were 'interesting' [so tight, one had to climb above belay to derig descender]. Knot change 'exciting' [knot a 'Rik Special', 9mm below super slippery] Gear down there 'intriguing' [explains where all the rope went - 90m 11mm, 90m 9mm & 1 tacklesac]

Tried our best on 2 attempts @ film exp, a few digis, then dived into the Boulder choke. Went down -30m or so, drips, went through a lot of very loose Boulders then into bigger stones, but with solid wall, lots of Boulders. Many drips, no stream hearable. Otherwise very similar to Jelly Chamber. Got as far as a loose committing climb into a large-ish chamber.

It goes, it really does. But I'm not going there. Stones rattled ~4s.

Climbed ridge to corner & found another entry to choke.

So we left & derigged. Rope Club Mig. Sped out once, gear stashed. 2hrs from bot. Fawltly Towers.

Dangermouse - Izi, Paul, Jarv - by Jarv

He's the greatest! He's Fantastic!
Wherever there is danger he'll be there!

Dangermouse

With a load of food & bolts, we shot down to Something Fishy & dived down the right crawl. Drafting, with deep sand floor (all spoiled!). Became rather tight after ~7m.

So we hit the pitch, belay off jammed boulder, soon with a bolt.

Paul & Izi set off to grab the 2nd bolt kit. Hopped down 2nd pitch (6m) and came to something seemingly identical. Rigged off obvious natural & dropped down to choosy shelf ~8m. Then I turned around. Small pitch it was not. Boulders banged for 6s+. Water could be heard a long way down, nothing visible [not even a drip!]. The way to the M2 confluence?

From -25m (limit), one could peer down past cascades into... blackness. Big chamber?

Left ~50m of 10mm at last bolt, PSS on sticking-out ledge + bolt kit. & 2nd bolt kit at head of Something Fishy.

Early exit ~1AM.

We blew trumpets every hour & listened every x 30minutes - nothing from the M2 crew.

Jarvist Frost

Slop Kaboom

- 1) Into a pressure cooker put some Tuna, soya mince, chilli paste, tomato puree, dried onion and water
- 2) Leave cooking and go to sunset spot, have a few glasses of wine
- 3) Let off some of the steam and take the pressure cooker off the heat
- 4) Slowly try to turn the handles - if it won't go de pressurise more
- 5) Get fed up with this depressurising process and then force open the cooker — KABOOM —
- 6) Slop is instantly served in the Bivi - dinner can be got from all the surfaces - tarps, rocks and the chef.

Safety Advice: * Listen to Janet's comment from last year log book * Lost the weight from the cooker * Do NOT try this at home / bivvy * Wash down the bivvy afterwards

Martin McGowan

Dangermouse Continued - Martin, Tim, Paul, Jarv - 9th Aug - by Martin

Despite being on several expeditions I have managed to always find somewhere else to go caving, but despite memories of Rik &

Marcin's exploration of CK I was lulled into going down to Dangermouse. On the way down CK it was noticeable that there is a certain lack of quality rigging - reminding me of the early Ben's Crap Lead rigging. Bonus chamber could do with a traverse line before you swing out over the pitch. The near two sections of the cave Scrotty and Even Scrottier again with a few hours of bashing and reshaping could change the passage to something nearer normal type passage.

At Dangermouse I headed down to Jarv's bolt and set about clearing the pitch. Several large boulders were pushed down to a large resounding boom and crack of shattering rocks. From the first bolt I continued the gardening to a large natural in a corner. Paul followed on down, and then Jarv. From the natural we descended via one bolt to a window. A small moment of disco leg occurred when a large chunk of the wall came off as I stood on it.

Paul came down to the window and took over the bolting. Eventually, after the first attempt broke the wall we had a bolt. I then sent / volunteered Paul to traverse over the pitch head to a possible rift / alcove. Unfortunately it turned out to be an alcove, so after a quick piss Paul returned, and went down the pitch to the bottom. He declared it dead & I followed as far as a ledge above, then Jarv went to the bottom for his compulsory photo op. Finally Tim joined us. While waiting on Jarv to finish his photography I started to throw stones down a small squeeze.

From beyond the squeeze a resounding boom could be heard. So quickly the rope was pulled up leaving Jarv and Paul stranded below and Tim went down. Unfortunately he faced the wrong way and could not turn his head to see down the pitch. Putting my stop on my cowstails I descended for a quick look. After the squeeze the cave opens out into a chamber.

So while Paul and Jarv surveyed out Tim placed his first bolt and rigged the descent. A first for CK we backed up the descent a figure of eight to a bolt and then an alpine butterfly onto a sling round a natural. All of this beautiful rigging was executed by Tim. So we made quick visit to the continuation and can confirm it is going somewhere.

Further Thoughts: We need a demolition team to visit Scrotty and hammer, beat it into shape.

Martin McGowan

Scrotty Bashing - Martin, Paul, Tim

After the last trip, it was quite clear that the passages in Captain Kangaroo needed some alterations. So over a few drinks and the fire I talked about the possible home improvements we could make. The idea of bashing the shite out of scrotty seemed to appeal to lots of people, no doubt motivated by the idea of getting something back on the annoying part of the cave.

So Paul, Tim & I set out armed with two hammers and chisels, as

well as some tatty rope for the climbs in the cave. We were quickly down at the start of Captain Kangaroo and we then set about bashing the passage. We took a cycling approach to the task with one person taking the head of the peleton with the large hammer, then the second person refining the passage with the smaller hammer and finally the third person 'resting' at the rear.

At Bonus chamber, Paul & I rigged a traverse line, so you no longer have to swing off the pitch whilst unprotected. On the same vein we made several improvements to the handlines. The only one pitch that we could not improve was the one that the the backup was below the main bolt. I had removed the backup with the idea that on the way out we could rebolt it with the kit left in Olympic Rift.

Anyway after redecorating scrotty we listened to Bob and then headed down for the kit left by Rik in 2007. We quickly descended the pitches below Traverse Chamber. It was quite clear from the offset that this was not the normal Rik Venn rigging. It was a delight to go down pitches with traverse lines, backups and other aspects of which would pass for standard rigging from Alpine Caving Techniques. Well down we went and it soon became clear that we were still in the Scrotty series according to PSS left by Clewin. At the bottom there was a rift going off - was this the Olympic Rift? After a few twists and turns it was quite clear that this rift was very tight and we were fed up with this shit. Paul had a quick look around the corner to check that the rift continued in the same shit manner and then we got the feck out of there.

Overall there is a new improve scrotty, but we have no idea where Rik's lead is from last year. Maybe looking at the survey will solve this problem.

Martin McGowan

Olympic Rift - Jarv & Tim - by Jarv - 12-8-08

From olympicrift.1, squeeze to pitch is SE, 5m+. Wet sounding pitch (Not Concorde?)

[Diagram of beyond Olympic Rift .1]

From last pitch, SW to aven (draft) + possibly over the top to pitch. From scrotty.37, W down tight rift to ???

Squeeze is: a) Tight b) Bedrock either side c) no room for chisel Bang ideally.

Jarvist Frost

2009 — Brezzvezdna No:

Summary

The 2009 Brezzvezdna No expedition was extremely successful, with 4 weeks spent in the field camping by special permission in the Triglav national park on Tolminski Migovec. A slideshow presentation was given at the end of the expedition in the Tolmin library by Andrej Fratnik (JSPDT) and Jarvist Frost (ICCC), translated to Slovene by Jana Carga (JSPDT/ICCC). Our findings were also presented as a lecture at the BCRA 2009 conference by Jarvist Frost.

In the Vrtnarija system (5.70km/802m at beginning of expo) we installed a camp at -254m in an until now torturous parallel shaft series (Captain Kangaroo). This was the major factor that enabled us to add 225m of depth to the Dark Tranquillity series, connecting two wings of Vrtnarija and creating a stunning 562m deep alpine exchange trip. In addition we performed three major climbs in the area of the camp in an attempt to connect Vrtnarija to Sistem Migovec (11.52km, 970m deep), pushed Tolminska Korita (below the main pitch series in Vrtnarija at -550m) a further -45 m, and pushed upstream above the Red Cow sump at -750m to discover an aven fed watershed and an active pitch series. We now have five major leads all at a depth greater than 500m.

In the M2 part of Sistem Migovec, progress was slower but an aided climb was made to a phreatic series that terminates in a drafting boulder pile, and now forms the closest approach between the two systems.

In all, we discovered 854 m of new passage in Vrtnarija (bringing the total polygon length to 6.58km) and 101 m in smaller caves and digs on the surface, bringing the total for Migovec to 22.9 km. An updated survey of Vrtnarija (in extended elevation) has been prepared, including transformation of all mountain survey data into grid north.

Expedition Proceedings

During the 2008 expedition a consider effort was spent exploring the Captain Kangaroo branch of Vrtnarija, with the sole aim of connection to the passage in Sistem Migovec. Our rate of exploration was limited by the length of time taken to get to the pushing front, with fifteen hour trips being the minimum to achieve much. The

obvious solution for 2009 was to setup a camp.

Thirty-two people-nights were spent at the two man underground camp, with two twelve hour shifts of hot-bedding. Exploration in this section (Captain Kangaroo, Vrtnarija) was split between looking at climbing leads in the hope of connecting to M2, and pushing the Dark Tranquillity series downwards. The majority of the climbing was done via bounce trips from the surface, and also as 'light days' for people on their way out from camp. All the deep pushing was done from the camp downwards. Total amount of caving was 98 people trips, including camping trips.

In 2008 we had left the developing pitch series at the bottom of 'Dark Tranquillity', as this level in Vrtnarija had now dropped below the known extent of M2; the main expedition aim in 2009 was to try and connect Vrtnarija to Sistem Migovec. Cave exploration progressed quickly and easily, with depth building at the rate at which pitches could be safely rigged, gardened and surveyed.

Within two weeks of the caving commencing we had bottomed Happy Monday (P81m), with the resulting survey data indicating an almost inevitable intersection with the horizontal development at -550m in Vrtnarija (Friendship Gallery). The next team down pushed through the terrifying boulder choke at the floor of the chamber ('Hanging Garden'), gained a well developed rift with phreatic crawlspace at the top, and pushed downwards until they found an old bolt just beyond a small confluence.

Plotting the data back on the mountain top it was clear that they had intersected 'Falls Road', a set of tight active rifts accessed just below Friendship gallery. The next trip into the cave went via the main pitch series and dropped a rope down from this 'Prima junction', intersecting the rigging left by the previous push. Strangely the 2001/2003 explorers had missed the lead towards 'Happy Monday', even though the end of the large rift forms one of the original rebelay bolts for the confluence pitch.

The last camping trip saw an epic list of 'must do this year' tasks, dropping into the newly discovered Tolminska Korita via the easily passed main pitch series, taking pictures of new discoveries and undocumented pitches along the way, recording the new discoveries from 'Fools road' back to 'Walk the Line', resting overnight at camp, then descending to the connection point once more to finish off the survey, investigate the 'Muddy Window' phreatic 10m above the floor of Happy Monday, and derig back to camp before resting again and then striking camp in the morning.

Climbs near Camp

'Metal Aven' (C+30m) still has places left to scale, but appears from the survey to reconnect to an earlier part in the fault (we believe) controlled cave development in this region.

'KETI' (C+23m) consisted of an extremely exposed climb (across a 65m pitch) to gain a rift jammed with unstable boulders which

were traversed to eventually realise a non-human sized connection to a low part of Metal Aven. We had hoped that this rift would trend South, towards M2, but instead almost immediately doubled-back on itself in a North-East direction.

‘Ride the Lightning’ (C+16m), a climb of the twin shaft to Kill ‘em All pitch, gained a small section of passage which ended at a pitch, estimated as being 30m deep. Lack of gear and time prevented its exploration, though the survey indicates it may be in the vicinity of the bottom of ‘Dangermouse’ (2009, P52m), and may yet hold the key to bypassing the immature and unpassably small rift which the Dangermouse water disappeared down.

Deep Push to Republika

A lightweight bounce-push was made to -734m to look at a major lead left at the end of the 2004 deep camping expedition. Due to a miscommunication during 2004, the upstream ‘tube tunnel’ sized passage was left unexplored until the last camping trip, everyone having assumed that ‘Cow’ died with a sump. This was pushed upstream over a few small cascades to reach a large watershed (Republika Palma de Cocco) with the water entering from a high aven, literally splitting on a triangular rock. It is hypothesised that this water could be coming from Tolminska Korita, 130m away in both vertical and horizontal directions. From the watershed, the new passage was followed downstream to a 13m pitch which was rigged with the tiny amount of gear that the party had with them. This took them to a large active rift development, with an unplumbed depth estimated at being in the region of 30m. With no more rigging gear, they surveyed out. The plan of this area is interesting, with the two streams describing a crescent, with the end of the rift in the new area being just 16m away from the previous sump, indicating that this sump is almost certainly perched and may feed onto the same pitch series.

This was an extremely happy discovery for this cave, as the maximum depth of -802m is believed to be some 200m above the shale-band controlled water-table, and an active pitch has the potential to punch through the sandy choked passage that otherwise dominate this area of horizontal development.

October 2009

A small JSPDT/ICCC team returned to M2 on a weekend in October. Chemical persuasion was used to open the terminal rift in the floor, leading to another small chamber. The phreatic passage further on from the 2008 climb was dug out and extended to a point estimated at 30m from the base of the pitch which marked the end of exploration in 2008. The wet pitches were derigged on the way out and the cave was left till summer 2010.

Achievements

Three major climbs around camp: * Metal Aven (C+30m) * KETI (C+23m) * Ride the Lightning (C+16m)

225m Depth added to Dark Tranquillity until Connection (-338m -> -563m) * Mirage Canyon (P28m) * Wet Hammer (P18m) * Two Minutes to Midnight (P43m) * I Walk the Line (C+6m/P15m) * A Pitch Named Sue (P17m) * Happy Monday (P81m) * Hanging Garden (P10m)

Tolminka Korita (below Zimmer) pushed for -45m: * Eggstravaganza (P10m) * Eggsplosive (P5m/P19m)

The Great Loop Trip

Dan and I are men that like missions. This is a polite way of saying that in our laziness, we suddenly arrive at the last minute and find that the only way to achieve the bare minimum of what we planned, is to pull an all nighter. Or several.

And so we had a plan. A photograph, camp, push, survey, derig plan. We zoomed down the main pitch series in Vrtnarija with a tackle sac each. I hadn't been below Pico since 2004, Dan had never gone past the CaptK window. I led with the camera, Dan followed with the flash unit. It was an interesting experience remembering the pitch series that I had glimpsed just once, five years previously. The rope was old, so very old. I made the mistake of looking for the label on Concorde while waiting for Dan to catch up. 'ICCC - 1998 - 90m'. Nice, old club rope that had been 'disposed' of by hiding underground in Slovenia.

In all honesty, it was all a bit of a mess. Piecemeal upgrades had taken place in 2007 and 2008, but already the 'new' rope was looking increasingly indistinguishable from the stuff that had been in situ since 2003. And of course, being us, we had no records of exactly what had been replaced.

It was quite a relief to get off at the foot of Zimmer (the shrunken rope and badly located original rebelay required some rather innovative gymnastics). Zimmer itself was an extremely impressive place for the first time visitor, it's a big chamber, and by far the larger volume of water comes in from the far side of the shaft. Where does the water come from? Nobody knows.

Seeing it for the first time, the simple existence of Leopard was amazing, you could see the same band of rock extending across the Zimmer shaft from the (freeclimable) window into Friendship Gallery. There was clearly excellent potential.

Similarly, we followed the obvious gaping corridor down Korita. This was in fact the obvious way on from the Zimmer chamber, quickly collecting the pitch water that flowed down between the boulders. Only two pitches were rigged, but they were really quite beautiful. Y-hangs in a narrow rift popped out into perfect bell-jar hangs next to picturesque splash pools. Such an amazing lead to

push next year.

Our photographs taken, we returned to Zimmer pulling up the ropes. James and Tim were planning to return on a bounce trip here to push the next pitch. Dan & I started down Friendship Gallery - impressive for it's horizontal nature in such an aggressively vertical system, but otherwise a rather muddy place. Camp X-Ray was made obvious by the inevitable presence of a roll of dubious plastic bags, and a rusty tin of fish. It was not the most pretty of Oxbowes, but the floor was fairly flat and the plinth of dry-stone walling was obviously big enough for a 4-man tent.

Directly after the site of the camp, there were some rather rubbish roped climbs. The muddy rock had been turned into slippery slopes by the passage of many cavers, but beyond the climbs was a beautiful crawlway half filled with a perfectly flat layer of silt. The crawl turned into a stoop and then a run down a slope to the obvious Prima Junction.

Our aim here was to tie in the survey. Finding the PSS at Prima Junction was a joke. We had read the description, but the cairn must have been kicked away many years ago. A few minutes were spent riffling through the boulders in case the PSS paper had escaped, but it was a dead loss.

So we guessed where we'd put the PSS, and threaded a survey down through the boulders, finding the rope that Dave had rigged. The rusty old bolt on the ledge was an obvious place to put a survey station in, but we also bounced down to the start of The Falls Road. Tim's crazed traverse on sling hung naturals took you across to the other side of this confluence, a smaller stream that quite possibly leads from underneath Friendship Gallery. And the way down looked pretty exciting too. We had been told that it ends at a narrowing, but certainly the start of the pitches were something that after having forced Captain Kangaroo to a successful conclusion would not turn us away.

Most strange of all, the way back into the bottom of Captain Kangaroo, Free Amalgamation was an obviously crawlway leading off from exactly where the Falls road explorers had stopped to bolt. I can only assume they were so obsessed with heading down that they never stopped to turn around and look at the massive rift disappearing off.

Dan and I zoomed along this beautiful bit of cave, soon coming out into a clambering rift that leads to the Hanging Garden. Why they didn't come here in 2003 I will never understand. This was a rather distressing place to be, three large blocks dangled from the ceiling. You could see that the largest was held up by the bedrock on the walls, but you could also see how this had been pulverised into shattered pebbles and the boulder slid into place. The thin rope led off up into the ceiling.

Following this, taking care to flick the rope away from the tiny stream and so keep it serviceable for people entering next year from below, a tiny bit of boulder choke finds you at the bottom of the

impressive Happy Monday.

What a pitch! It's truly massive. We measured it with the tape - a true twenty by twenty metres. We added PSS Zero on the obelisk like boulder in the centre of the chamber (the original PSS at the bottom of the thin 9mm disappearing into the ceiling was getting repeatedly kicked over). The walls just went up and up, a massive toblerone prism extending up into the blackness. Skidding around on the scree to get a good position to photograph Dan. The 9mm rope rising from the middle of this chamber and disappearing into blackness is simultaneously foreboding and alien.

The Muddy Window is enticing indeed, but how to reach it, a good ten metres off the ground? The length of the lower hang is so great that we reckon we can swing... Halfway up and with Dan pulling the rope tail in synchronisation, I fly backwards and forwards pinwheeling my legs to retain attitude. Dan stumbles and nearly breaks a leg granting me my delta-V. I fly in and nearly kiss the rock, abseil down another metre and with a final pull from Dan and then the terrifying build of rushing wind as I accelerate towards my destiny, I enter the window and abseil to the ground, landing in a boulder filled corridor.

I shout an OK to Dan and pull up the rope behind me, wrapping it around a few blocks. The corridor leads through a stoop and then to a chamber filled with heavy chocolate mud covered boulders. There is an extremely noticeable draught here. The mud is extremely odd, it's not obvious how it could have been carried by water. Earthquake driven liquefaction is Dan's best guess. The way on is obvious - from this chamber there's an easy climb up and to the right gaining a horizontal continuation.

I return to Dan, and have the bolting kit passed up. I start to put in a bolt but it's a challenging position and time is marching on. We give up and leave it for next year. Dan is swung into the window to have a look, and then we make haste for Metal Camp, after the necessary photo.

Dan prussics up with the camera flash, I blow my whistle when I think he should fire a flash. As well as the film camera balanced on the obelisk rock I'm lying flat on my back on the scree with my digital camera, trying to synchronise a long exposure with when he's firing the individual flashes flash. So peaceful to watch from below, the entire pitch seared with persistence of vision onto my retina. As he passes the rebelay, Dan disappears behind a flake that divides the top of the shaft into two bits (damn! not that there would have been anyway to predict this from below...). But still the flash illuminates from behind this flake, a truly enormous and humbling place to be.

Dan successfully up, I shake the sluggish blood from my extremities and shiver as I pack up the photo gear and prepare to climb. The pitch itself passes without incident, but 81m seems a little long to do with a single rebelay! The 10m horizontal swing onto 'Spe- lenium Gold' dyneema rope at the rebelay is a little bit too life affirming.

The trudge back to camp is rather soul sapping. I curse my camera equipment as I wrestle it, once more, through Kill 'em All. Sad times at camp to think that our little hovel, our little bolthole in the side of a pitch cascade, will soon be abandoned. Having made the connection and seen the pleasant environment at X-Ray, I doubt very much that this strange little side chamber will ever be occupied again. Dan smokes a last cigarette before sleep, the Jonny Cash playing softly on the radio.

The next day, stiff and tired, we head down once again. Our mission is to survey, then derig. The photo gear is left at camp, but still the trip feels rather arduous and not very rewarding.

The rope is pulled up all the pitches, and coiled somewhere suitable. Another quiet evening in camp and some needed rest.

The next morning we take the last few photos of camp as we slowly put it away, constructing our spoon garden in the nicely sculptured rock next to the stove. No longer will we have to do a 2m free climb in our socks to have a pee!

We put the tent away, or rather, it sort of falls apart in our hands to its constituent pieces. The bouncers arrive from above, and we fill their hands with tackle sacks of gear. A Daren drum of chocolate, left for future bounce trips, and we leave, slogging our tackle along the myriad rifts and crawls of the now overtly familiar Captain Kangaroo.

Pushing the sacks in front of me, and finally back to the Captain Kangaroo window overlooking Pico, I wonder when we will be back.

Nb: Though it was planned to rerig Captain Kangaroo for 'tourist' loop trips in 2010 and to reinvestigate the Ride the Lightning lead and other minor locations, apart from a few aborted pushing trips that made it to Traverse Chamber and a visit to Dark Tranquility to await the connection during the October 2010 super action, no one else has been back (and no one below the 2008 limit) as of Summer 2012.

TO BE CONTINUED Jarvist Moore Frost

Outlook for 2010

Five Major leads still going deep in Vrtnarija at the end of 2009 – two large phreatics separated by 120m and heading in opposite directions (Leopard -539m, Muddy Window -529m), two large active pitch series (Tolminska Korita -585m, Republika -737m) and the rather tight Fools/Falls Road (-577m).

In Captain Kangaroo we have the aforementioned Ride the Lightning pitch to drop, as well as a multitude of narrow rifts which require expansion to pass at -190 to -270m.

Logistics

Our logistics have been heavily optimised over the last ten years of returning to this same plateau. The main difficulty is in lifting (this year purely through manpower) our food and equipment from Tolminska Ravne (where we can drive to) at 912m to the bivouac in a shakehole under a rockbridge at 1860m ('The Bivi').

A further optimisation that we have carried out the last few years is in using the derig carries at the end of the previous year to bring up sufficient non-perishable foods (rice, pasta etc.) to eat during the first half of the expedition in the present year. This way, caving can start fully after just two or three carries per team member, rather than the more traditional 'week of carries' that characterised the old six-week expeditions!

A further refinement was leaving from London with the Minibus on Friday night. Though rather harsh on the drivers, this meant that we arrived in Tolmin on Saturday just in time for a well-earned proper meal and a full night of sleep before an alpine start. Up shortly after dawn, we had managed to acquire the necessary petrol for cooking and other locally bought fresh food.

Our drill batteries were charged on mains power down in the village and then carried up, but power for rechargeable lights, survey laptop, MP3 player & underground camp speakers were all provided for by a small photovoltaic tent placed next to a tent.

Zimmer streamway

James and Dave went for a quick bounce trip to look at the undescended pitch below Zimmer chamber, which started with a traverse in a rift part-filled with boulders.

Bolts for the traverse led to a point where a drop into a water could be seen. On bolting and descending this, the landing was in a shallow pool, with water coming from some way back in the rift, having been collected on the floor of Zimmer chamber after running through the boulders from both waterfalls.

The water then ran from the pool to cascade down a series of short drops in a clean-washed rift with a friable slabby roof/wall overhanging it, and eventually a point was reached with a drop too long to free-climb down, with the passage beyond bending to the left and seeming to carry on descending.

This certainly seemed like it had some potential, and was interesting in that (with the exception of Republica) it was the first decent-flow active streamway encountered at depth as part of a main route, rather than a streamway crossing the passage appearing from and going to nowhere accessible.

A pleasant little bounce trip with an interesting and attractive find.

James, Jana and Dave returned a couple of days later to push a little and take photographs, and while James and Jana got to

work, Dave went to drop a rope down to Falls Road from Friendship Gallery, since the Capt. K. crew had seemed likely to have reached there at a lower level a day or two before, and a rope would enable a through-trip. On descending, their anchors were found, showing that they actually had been where we had calculated.

Dave Wilson

*First night train trip down Captain Kangaroo - Tim and Thara
- written by Tharatorn Supasiti*

13-14/08/09

Tim and I descended down Captain Kangaroo for the second and the last time in this expo. Our two main objectives were to dislodge a boulder at the pitch head of Kill 'em all and to further push the bottom of Happy Monday as left by Jana and Dan previously. For the latter objective, we expected a connection with the main GW system as explored in early 00's from the most recent cave data.

Somehow we ended up on a night train, which is my first. We took off from the bivvi after sunset. While changing into our respective caving gears at GW entrance, we knew that those left at the bivvi were having fun with newly-acquired laser by a green beam that pierced through Migovec's night fog.

Upon arriving Metal Camp, we headed straight to complete the first objective. I crawled through a tight pitch head and at once I knew that I have arrived at Kill 'em All by the Y-hang that was set below the ledge. A haunted memory of my previous struggles to pass through this head in either ways, came flooding back. I could only take comfort in knowing that today would be the last time that anyone will ever have to experience this struggle between rock (+gravity) and man.

On the surface, during the previous days, there was a growing concern by numerous parties that had to pass through this head that the rock on which one of the two bolts that made up the Y-hang has developed a widening crack. It was only a matter of time until this boulder would dislodge unto unfortunate souls still half-way through the descent/ascent. So, it was Tim and I's job to secure this passage.

Since I am small to allow myself to swing a hammer at the head, I was assigned with the chiselling duty. After derigging the pitch, it didn't take too long with chisel in one hand and a lump hammer in the other to dislodge a table size boulder down the pitch. And it crashed with a loud thud that echoed through the chamber below.

A half an hour later, after Tim put a new bolt, we returned to the camp considering a job well-done.

Tharatorn Supasiti

14-15/08/09

The next night (or day by our standard), we continued Dan and Jana's lead down Happy Monday through a gap between loose rock

and its wall. Little did we know that we, indeed, were kept up there by pure friction on the cavern wall. A double hammer action quickly led us into a chamber below Happy Monday. I was the first to descend into the unknown chamber.

Upon looking towards the ceiling, I noticed three large boulders suspended mid-air that formed the roof of this chamber. And the only thing that prevent the roof from collapsing is the friction between boulders and the cavern wall. The name for this chamber is obviously “Hanging Garden” and I knew that I had to get out of here ASAP.

The way onward was obvious. We followed the rift to a 5m pitch that dropped into a flat white floor, where water flew through. A bit further down, having found a spitz on a wall, we realised that we had made a CONNECTION! (It wasn’t until the next trip that the survey was tied in. We couldn’t find a survey station.)

I went back up the same rift, while Tim attempted to rig a line across to a window opposite the rift we were in. After shivering in the cold for hours (it was 4am), my morale was at the lowest. And I begged Tim to survey and get out.

During surveying the new section, a loose fell from the pitch head and sliced through our tape. Luckily, that was near the end of our survey.

The journey back to the camp was arguably one of my most hallucinating experience I ever I encountered in the cave. Having been broken at 4am, my body refused to answer the call of duty to migrate towards bed. I didn’t remember how I got back to the camp, but got back we did. Exhausted, I resorted to ignore food and went straight to sleep, while Tim sorted out his bowel less than ten metres away. ...

We exited the cave by 4am.

After 55 hours of holding in, the shit pitch finally called me. . .

...

NB: I thought to myself then, never will I go on a night train again. This was broken in 2012. I only went on night train trips.

Tharatorn Supasiti

Logbook Stories

Main (big red A4) logbook:

05.08.09 JKP and IM Climbing Metal aven

We set off for a doss day and decided to climb the 4m aven on top of the tent at Metal camp. The aven leads to a roomy room (there is a lead off a side chamber). Izi climbed up to a bolder move at that point I scurried down and fetched rope for Izi. I secured a rope to a sling and I joined him. The next move looked fine. So I roped up (with the superstatic) and Izi belayed me to a few dubious flakes where the crux was! Crux! Exposed move 10m off the terrace secured by a superstatic rope and to vary dubious sling.

Anyways. . . . Another muddy chamber was reached pushed to the left to a narrow muddy squeeze (not really worth digging, I am HO) and a rift to the right which was pushed to a constriction (lead). Which could be easily bashed – probably the connection.

JKP

Metal Camp menu

Couscous, smash, fish and smash with tomatoes Smash, smash, smash, cheese and fish Couscous, fish, tomato, couscous and cheese.

Thara

Jana and Dan — 63h pushing underground

7–10th August 2009

We were suppose to be on a night train team following Tim and Thara. But after spending a day quite active (caving and a carry) we decided to go down in an early morning. Set an alarm for 5 AM and start caving at 6.30AM. Down in the camp we woke the day team Tim and Thara. After breakfast and a chat we swop the BEAST comf and go back to sleep. Thara and Tim continue pushing the lead, which is still going. They come back at 10 PM and woke us up. Our first time sleeping in a camp was quite broken. For the first 5,6 h we didn't really sleep. We also put extra extra comf in our sleeping bags – it was cold!

Tim and Thara pushed the cave for 2 pitches down: 10m and 34m. Afterwards there is a climb up a bolder choke where they stopped. So we went up, where on the other side was a pitch down. We spend two hours rigging and gardening. Basically they are rocks and bolders all around the pitch head. Going up and down was still dangerous – stones constantly falling down. Needed to be re-rigged. The way on then continue up and into another smaller bolder choke. Under there was a small pitch down. From there we first climb up the rock and end up above big black hole. We throw a stone down and we can hear that there wats a long way down – 4s! Fucking hell – that is like 80m pitch. Very excited we keep on throwing stones down. The echo at the bottom was amazing. We could also hear that there was a big slope at the bottom. From here the rigging down was not really good. So we looked for a alternative way into a pitch. Further down there is a rift, which you climb into it and it takes you straight to the pitch – beautiful place to bolt. Here we decided to survey from here back to the walk the line. Back in the camp after around 12h of caving.

Tim and Thara finish their caving in GW and went back out. Alone in the cave we had to set up an alarm. We were woken up by Tjasa, Izi and Erik, which were on a day trip to do some climbing in Primula. We re-start the alarm like 3 times and on the end end up 15h in bed! We finally got up at 5 AM and start caving at 7.30AM. We were excited, finally going down the big pitch and to see how

big it really is. We took two bolting kits to speed up. I spend time re-riggin, bolting and more gardening below. Walk the line and Dan went down to start bolting the big pitch. After 3 hours we were ready to descent. Dan offered me to go down first. I was ready to go and looking down was just a bit scary, plus not having practice in dealing with enormous pitches I thought would be better if Dan goes down first. He made another bolt approx half way down on a tiny ledge. When he come down he shouted – O, my god, it is really big! Quickly followed down, looking around on the way- Amazing! At the bottom we explored around and found the way on under the bolder choke. There is another approx 10m pitch on. We had some lunch and then was time to survey it. The bottom was impressive 20x20m. Cuz the tape was not long enough we had to mark the rope, using a zink-oxide tape twice on a way up. The length to the rigging spot was 75m+15m to the top. And there it was - a 90m pitch. Pleased with our mission we had to speed up to get out on time. Our call out was 10PM. We stopped in a Metal camp for hot chok and to pack the stuff to be taken out. We were out from the bottom in 6h. Back in the bivy at 9.45PM.

We had a great trip and it was first time for both of us to be underground for so long and to discover such a big pitch – which still does not have a name.

The next day, during the breakfast time we decides to name it: Happy Monday.

Jana

13/08/09

Izi, Dan , Jarv @E1

Took 27 caps. Used them all. A lot were double or bust, but still ~18 shot holes ~15cm deep, using only 1/3 of the 7.5 Ah SLA battery (24V with the Bosch). Blew a lot of rock.

Surveyed out, ~30 m deep.

14/08/09

Jarv, Gergely

Back with Gergely – two more caps some hammer & chisel action & we were through! Placed a rawl (stainless) for pitch.

New chamber is ~ 2x3 m with 4 m climb into prior discovered stuff.

Rubble on floor – dug for ~10'.

Got to bedrock.

No better nor worst than capped pitch, but not the stunning lead we were hoping for.

13-14/08/09

Thara and Tim

Fixed Kill'Em'All dislodged a large boulder down the pitch. New bolt was put in place.

14-15 Thara and Tim Continued down Dan's lead down one more pitch – double hammer action lead into a chamber clearly below
Happy Monday. Hanging death a size of whole chamber kept every-

thing from falling down. It's like anti-gravity room where rock just floats itself in the sky. Followed an obvious rift to a 5 m pitch into another chamber .flat floor with a lot water coming through just like Yorkshire caves .walked further downstream and found spitz – clear someone has been here before .back to chamber Tim treid to rig a traverse line across to another lead half finished before heading off

Thara was completely broken by the top of Happy Monday while Tim's bowel rumbled once again. Great find and survey.

Left: rope some bolting kit + tape +sling at the bottom of happy monday

hammer and chisle

at the top of kill'em all

PS: From final pitch, there is a traverse line to the right. It is not great as a proper traverse, but if you descent the main pitch, you can use the traverse line with a cows tail to reach the other side. There is a bolt to go down from there but it needs a backup. Once rigged it would be better to descend main rope then up the other one.

15-8-09 Jana, Gergely and Dave. Down to Zimmer + connection

The two goals of this trip were to find the rope that Tim and Thara rigged from Happy Monday plus survey and rig the rift below Zimmer. The connection is found at Falls Road. Climbing down at the rift of the connection of Falls road and friendship gallery a ~10m drop reaches a Y hang to the top of Free Amalgamation. The bottom of happy mondat is about 40 m away. Below Zimmer and active streamway is found with beautiful lakes and a high meander. Top muddy passage of meander is passable, but a drop down to the waterfalls would be better. Probably the largest active known streamway on the mountain at the moment, highly probably it leads somewhere unknown. Nice falls and waterfalls.

Super nice trip – show-cave area!

17-08-09

Neither of us had been further in the system than Hotline so there was a bit of stumbling around to reach NCB. Got to see some of the big cave system has, that I would not see in the uk. When we reached what we thought was the west end of NCB the only thing we could find that was possibly an undescended pitch described were two large holes further back that connected at the bottom. However, there were two holes at the bottom of that, one was descended one was not. While James froze I descended 20 m to find very little at all and we decided to head out. The way up was slightly marred when I sent a large bolder down where James had been standing moments before. Otherwise we got out in good time and slop was still lukewarm. We were told afterwards that NCB had a different west , so it is unclear where we went. FROM THE UG CAMP LOG BOOK

30/31 July 09, Andy and Jarv, The first one

Two heavy sacks from the surface, picked up 4 comf sacks at the Traverse chamber. Passed threw squeezes with the aid of the handl ?

Cord. 'Something fishy' was a bit of a campsiteb-only room for one pit. Dumped sacks and continued to look for greener pasteures..and refound here! Looked very nice at first – a few drips, flat, dry-ish mud. Moved rocks and set a tent – the place not looked so good, bit of a guagmire?. Found 1,5L of water in Something Fishy – drips provided about 5mL overnight.

SO Dangersmouse/drips on Kill em All way have to be the way forward....

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 camp came back with positive news, exploration based from camp (i.e. deep in Vrtnarija) quickly became the main focus of expedition

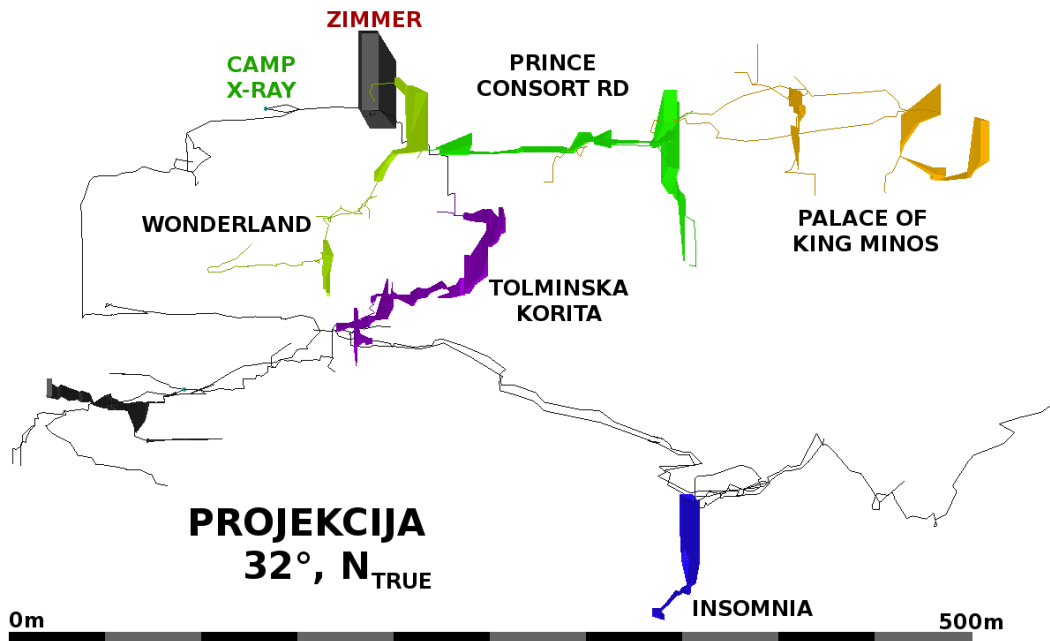


Figure 1: Colour coded diagram of new cave discovered & surveyed in 2010 in Vrtnarija.

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 Cheetah (P35m), because of the sense of having cheated death that it engenders on passing. There are several windows off Cheetah,

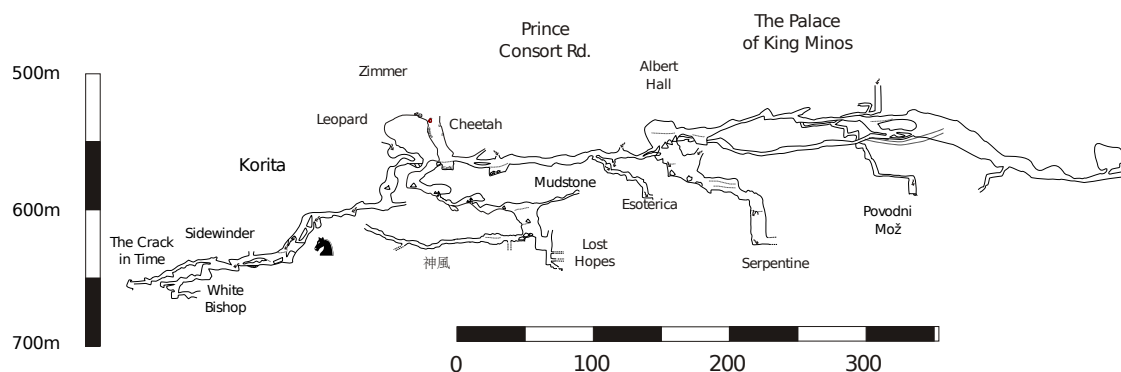


Figure 2: Extended elevation of new cave discovered in TOLMINSKA KORITA and PRINCE CONSORT during 2010 Expedition.

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 passage 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

Rerigging Vrtnarija

An early morning on expedition. . . I stumble my way down to the Bivi, late as ever, and set about fixing some coffee. It's a disturbing hive of activity. William and James KP are planning to rig as far as possible, replacing the rope below Pico with new and rebolting where necessary, Tetley is following them down and introducing the new cavers to Vrtnarija.

Excellent! Everything is in hand. Gergely suggests we follow up the rear with extra rope and rigging gear, preparing the ground for tomorrow's deep pushing. Looking forward to a nice, relaxing, afternoon trip, I don't bother to cram food into myself (I'm never that innately hungry in the mornings), and Gergely and I take the minimum of provisions.

It's nice to be back in Vrtnarija again, after a year, and even the stepping aside on the pitches to allow the vast quantities of cavers to pass is fine. Eventually we pass everyone else & get to Swing, and find William and James KP. They're both pretty pissed off, putting a new bolt in on Swing and rigging the blasted thing has sapped their energy.

So Gergely and I take over. I rerig Tesselator, coiling the old rope ready for recovery. The head of space odyssey receives an extra bolt and thus a Y-hang, originally I intend to remove the deviation entirely, but find that I've misjudged slightly and it's still required, just.

The traverse ledge halfway down space odyssey needs more work. Gergely comes down and we work on it together, me putting in more bolts and working new rope out along the traverse, whereas Gergely carefully walked out on the old traverse and rigged the pitch down to Concorde. We have a bit of confusion in the middle, as we also have to start a new rope. All sorted out, we have a spare 15m of traverse rope that we hide for future use in a cubby hole.

Leaving the bolting kit and rope for future riggers, we have a smooth exit. Rather deeper and more effort than I had been intending for this first day's trip, and I was certainly feeling the lack of food as I prussic'ed back up the entrance series, but successfully completed nonetheless. In their first day of caving the expedition had rerigged down to -300m!

Jarvist Moore Frost

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 near camp, but 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 bimbles 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 instruments¹. It sucks majorly. At least the passage gets a cool name: Esoterica. O, and no-one has pushed the pitch where we stopped! ²

James Kirkpatrick

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 (Clewins 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,

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

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

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 ≈ 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 ≈ 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 its 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 (It Will 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

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 squeezezy muddy inclination. I explain the situation, neither Fratnik 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, Fratnik 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 "It Will 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 Cadrg 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 cowtail I attached it to the rope above and removed the cowtail, 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.

2012 — Sledi Vetra

Abstract

Sledi Vetra 2012 was a clear success. 2703m of new cave passage was found, the majority of which below -600m, once again using Camp X-Ray at -550m as a base. The main discoveries in Vrtnarija include: the Watership Down series below Daydreamers, adding 12m of depth to the cave and taking it to -900m; about 1km of horizontal development below Stuck in Paradise (-700m); and the Apollo extensions leading off a bolt climb in the Queen's Bedchamber. The Apollo extensions also ended up connecting to Waterloo in System Migovec, giving us the long sought after connection and tying in ~15 years of exploration by ICCC on Migovec. System Migovec is now 25592m long, 973m deep and has the distinction of being the longest cave in Slovenia.

Introduction

Between 13th July and 19th August 2012, Imperial College Caving Club had twenty-six members participate in the Sledi Vetra (Follow the Wind) 2012 expedition to Tolminski Migovec, Slovenia.

There were two major aims for this expedition. One was the continued exploration of Vrtnarija, where considerable efforts in 2010 and 2011 had led to the discovery of 4.4km of mainly horizontal passage, all below 500 m in depth. The other was to connect Vrtnarija with Sistem Migovec (SysMig), which ICCC first started exploring in 1994, thus forming the longest cave system in Slovenia. At the start of the expedition, Vrtnarija was 11025 m long and 888 m deep, and the smallest separation between Kavkna Jama (M2 entrance in SysMig) and Vrtnarija was 4 m (30 m survey error).

In addition, an enduring desire to understand the caves of Migovec meant that surface work in Areas K, S and N (north of Kuk) was also a major consideration during the expedition.

A large and strong UK team, and a longer-than-usual expedition (five weeks instead of four) meant that we had sufficient manpower and time to achieve all expedition aims.

As in previous expeditions ('03, '10, '11), an underground camp (Camp X-Ray) was set up at -550 m in Vrtnarija to facilitate further exploration of the deep leads. Eighteen people from the UK and six Slovenes from the local JSPDT club spent nights at X-Ray for

a total of 90 people-nights. This included three first-year cavers, all of whom contributed significantly to exploration. All but one pushing trips were done on overnight camps, with almost all successful exploration occurring below 500m.

Three separate trips were made to Kavkna Jama in an attempt to forge the connection between SysMig and Vrtnarija. Though an acoustic connection was made when parties sent down Captain Kangaroo in Vrtnarija could hear the sound of drilling and hammering occurring in Kavkna Jama, the actual physical connection was elusive. Somewhat unexpectedly, the connection was instead made in a completely separate area of the cave when Dreams for the Soul, a phreatic passage off Queen's Bedchamber in Vrtnarija, dropped into Waterloo in SysMig (all at ~-600 m).

Aided by perfect weather for much of the expedition, surface work was carried out by cavers in between underground camps. Most of it was concentrated in Areas K and N. Two pitches were dropped in N9 (a.k.a. Kuk Pot), with the continuation visible but hampered by a lack of time. Entrances K2, K... were also re-visited. K2 remains the most promising, while digging went on in K19.

In all we discovered 2703 m of new cave passage taking Vrtnarija to 13728 m long and 900 m deep. Thanks to the connection, the combined System Migovec is now 25592 m long and 973m deep, with the deepest point being Watership Down in Vrtnarija, found during this year's expedition. This makes SysMig the longest cave system in Slovenia, displacing the famous Postojna Jama as the previous record holder at 20190m. Cave Discoveries

Our major cave finds this year are described as these separate developments within Tolminski Migovec:

Winter Action

In October 2011, a joint effort by ICCC and JSPDT was made to forge the connection. While the connection was ultimately unsuccessful, important survey work of recent years' efforts in Kavkna Jama clearly showed which part of Kavkna was closest to Vrtnarija. As a result, the focus of exploration shifted from the bottom of Kavkna to Wizard of Oz, a bolt climb at -350m that was pushed in 2009.

In the months between the October weekend and the start of the Sledi Vetra expedition, the JSPDT had multiple pushing trips at Wizard of Oz. The silted rift was dug through and widened to gain a fairly large, clean chamber with no obvious way on. A small passage about 3m from the floor was expanded into yet more narrow and muddy crawls, eventually ending in a smaller chamber. Once again, easy progress was hampered by an extremely tight crawl.

Vrtnarija / M2 (Kavkna Jama)

Three ‘connection’ trips were carried out during the expedition. On the first two attempts, simultaneous trips were run to Capt Kangaroo in Vrtnarija and Wizard of Oz in Kavkna. Unfortunately, progress past the tight crawl in Wizard of Oz proved elusive as expanding it was slow work. However, on both occasions teams in Vrtnarija were able to hear the sounds of the Kavkna team drilling and hammering.

On the final attempt, the 8m crawl in Wizard of Oz was passed. The passage enlarges into an immature rift but closes down almost immediately with silt and mud flakes, without any sort of draught. About midway through the crawl there seemed to be a very slight draught coming from a small hole in the floor, though any pushing here would require considerable effort spent digging.

Watership Down

Watership Down is the continuation of Winter Journey, a system of abandoned bedding planes at -888m in Vrtnarija. Two pushing trips were carried out to explore rabbit warren-like system of crawls and chambers. From the Winter Journey pushing front, a series of steeply inclined bedding planes covered with a thick inch layer of mud were passed to gain a beautiful, clear static sump. Opposite the sump a passage leads off into a tight rift which was not pushed to its end; it is most likely a dead inlet.

More interestingly, obvious traverses and windows above the sump were gained to find another crawl which ended above yet another static sump.

There are still undropped pitches and windows to be looked at in Watership Down, though it is unlikely more depth will be added.

A total of 140.96 m of passage was found in Watership Down, adding 12 m of depth to Vrtnarija.

Below ‘Stuck in Paradise’

At the end of the 2011 expedition, Stuck in Paradise (P69, -680 m) was dropped and two branches of extensive horizontal passage, Salvation and Lost Miles, were found below it. The possibility of more horizontal development at depth made the pushing of Salvation and Lost Miles a high priority. Salvation The squeeze left at the end of Salvation was hammered and dug through to gain a small chamber with a roaring draught (Brave New World). The way on down was blocked by a big boulder choke; instead, a carefully dug hole was followed upwards into sloping, crawling passage that enlarges to walking height. Eventually, the passage breaks into an active streamway, with the downstream passage taking the draught.

The downstream passage leads to an obvious phreatic continuation, which was blocked by a collapsed ceiling. This boulder choke

was eventually squeezed through after two trips to reach 70 m of fine sandy passage (Invictus). This ends in a wet pitch (~P20) that was left unpushed.

172.4 m of mostly horizontal passage was found in the Salvation extensions.

Lost Miles

At the end of the 2011 expedition, Lost Miles was left as a draughting boulder choke. This year, we managed to chisel and hammer our way through, immediately breaking out into a large chamber and storming passage (Atlantis). After about 100 m a junction was reached with three ways on: continuation of the passage ahead, a turning to the right, and a pitch through a hole in the floor.

The pitch was dropped, but leads almost immediately to a boulder choke that looks promising but needs work (Inglourious Bastard).

The passage the right leads to about 250 m of easy caving (Minestrone), with occasional bouts of stooping and crawling. It eventually ends in a small chamber, with the way on being a low crawl blocked by rubble, though there is a draught. However, a subsequent digging trip to get past the blockage was unsuccessful, and any further progress would require considerable effort.

The continuation of Atlantis led to more walking passage. Most exciting was the discovery of a gallery of speleothems, including a vast array of helictites, stalactites, stalagmites and columns. This is probably the most decorated bit of cave we have found on Migovec thus far - certainly the highest concentration of stal.

Atlantis eventually becomes blocked with boulders in a low-roofed passage. Straight on there is a tight squeeze through which the continuation of the passage is visible. This was unpushed. Instead, a squeeze under boulders on the right was passed to reach a small, dry muddy tube that popped into a small chamber. The way on is a 10m flat-out crawl, accompanied by the sound of water. The crawl emerges in a chamber at the bottom of a pitch, with a large waterfall entering from above. This was thus named Brezno Slapov (literally 'waterfall pitch').

A series of short cascades followed; exploration was eventually halted by the need for rope.

A total of 757.15 m of passage was found beyond Lost Miles.

Interestingly, these waterfall pitches found at the end of Brezno Slapov and Invictus are the first signs of water and active passage since Zimmer.

Apollo & the Milky Way

In 2011, an attempt at a bolt climb to gain a window in the Queen's Bedchamber was derailed by bands of thick, slippery mud preventing the successful installation of bolt belays. This year, armed with tent

pegs to hammer into the mud as temporary belays, three pushing trips were required to conquer the bolt climb (Apollo, P35).

At the top of the climb a muddy, downward-sloping passage leads to a short pitch which lands in a large chamber. The passage on the right leads to a dead end; the way on is through a short bedding crawl on the left.

The crawl quickly widens into a small chamber with two ways on. Straight ahead is easy but muddy caving, eventually leading to a pitch which we suspect drops back into the Queens Bedchamber. On the right is a long horizontal passage, mostly requiring easy crawling or stooping (Milky Way). At the end of this passage is a clean-washed chamber that joins a split-pitch midway. A high, wet aven drops into the chamber; the water then disappears under boulders. A way through the boulder floor is obvious and easy, leading to a pitch. On a subsequent trip this pitch was dropped but not surveyed.

Midway through Milky Way is a turning off to the left, heading south-west. This was pushed for about 70 m to a boulder choke that was easily passed. Following the draught for about 50 m, a 20 m high rift was eventually reached; this rift is most likely the continuation of the Minotaur/Guillotine rift in Vrtuarija.

From the rift, a horizontal, crystal-covered phreatic passage continues South-West, heading directly towards System Migovec. The phreatic seems to have multiple levels, as it was sometimes possible to see empty space between the boulders below.

A couple of climbs later, a ~30 m wet pitch was reached. A bigger dark space could be seen across the pitch, so a traverse line was rigged. After 3 m of traversing, a bolt placed by cavers in 1998 was found. Across the traverse lay a large chamber (~20 m wide) in the middle of which a PSS was found: Waterloo 13, 6/8/98/, JE/IMcK. On the last pushing day of the expedition, the connection to System Migovec was finally made! The passage was named Dreams for the Soul.

703.46 m of cave was found in the Apollo extensions.

The Throne Room

At the end of 2011 expedition there were two unpushed leads in the Throne Room: a pitch, and a window across it. The pitch (Why the face?) was dropped. The crawl below it leads immediately to a draughting pitch, which was also dropped but the passage below it quickly choked.

The traverse was bolted across to the window and up a steeply inclined, very loose boulder slope (Hot Pants). From the top of the traverse is a short climb up the slope and through a boulder choke to a fairly impressive chamber about 7 m high. A sandy tube goes from the edge of the chamber, blowing out; it is fairly committing and was left unpushed this expedition.

Two further trips were made to bolt climb up to the window in

the chamber and push the passage beyond. This climb reached a ledge in the chamber, which gained parallel passage trending downwards at 30 degrees and pushed for 70 m (Peep Show).

Returning to the ledge, the upwards continuation (Undercover Squirrel) was pushed for 70 m up a couple of free climbs. Exploration was halted as a modest bolt climb was required to progress.

The area in general is of interest due to its location in the far North-East of the known cave passage - it is possible that it may access more 'deep level' galleries such as were discovered 300 m to the West within the mountain in 2003 and 2004.

281.61 m of passage was found in the leads off The Throne Room.

Other Leads

Xanadu

Xanadu is a new and exciting lead found in 2012. It starts from a nondescript hole in the floor in Friendship Gallery, a mere 5 minutes from Camp X-Ray en route to Big Rock Candy Mountain. Surprisingly, no one explored it in the 9 years since we first camped at X-Ray!

The climb down through the hole immediately leads to an interesting rift with different levels. At the bottom (~30 m below Friendship Gallery) is an active stream. Upstream was pushed to a wet squeeze, downstream ended in a sump.

However, the most promising way on is midway down the rift, where it is possible to gain a muddy, wet tube. Through this tube the character of the cave changes completely, with dry, muddy passage (Euphrates) instead of the clean-washed white rock of before. At the end of the muddy passage is a strongly draughting pitch.

Initial attempts to descend the pitch proved unsuccessful due to the poor quality of rock. The pitch remains undescended and is an exciting lead for 2013.

86.69 m was found in Xanadu.

Yorkshire

Yorkshire is the continued exploration along a narrow rift above an active waterfall at the bottom of the Lower Pleasures series, which was explored in 2011.

Initial narrow rift gives way to a squeeze above 2 m hole, which is followed by another squeeze into a small chamber. Turning left from the chamber quickly led to tight constriction from which an active stream enters and exits to the right. Turning right led to more narrow rift, which drops into a small pool of water after 8m. A stream, which enters the pool from the left, was followed downstream for another 30 m before a dried mud junction was discovered at higher level.

The streamway continued further, but this was not surveyed.

The 2012 exploration of Yorkshire found 91.18 m of passage, most

of which gently sloped northward, in parallel to Highway 32, 35 m below.

Minotaur Rift

The squeeze left at the far end of Minotaur Rift in the 2010 expedition was pushed to difficult crawling passage, often awkward with loose, sharp rocks. The rift continues along the same fault line as in Minotaur rift. A series of boulder chokes make progress interesting, including one which involves squeezing past a sharp rock, precariously wedged above one's head (Guillotine).

Tired of Big Passages?
 Fed up with crystals?
 Enough of easy pushing?
 Brand new oversuit with no holes?
 Or; Just bored of life
 and want to try your luck?
 Then;
 Go To Push Guillotine!
 Guaranteed excitement
 Great adventure
 Excellent for adrenalin rush
 Join the club of survivors!
 Now with special rewards
 at the far end
 Good luck and don't forget your helmet!

Gergely

After Guillotine is a very tight and sharp flat out crawl, sloping slightly downwards. The passage eventually pops out into the larger chamber. On inspection it proved to be a very big open fault (Razor). Looking up, a higher level can be observed. The way on continues down a small pitch and a further two climbs down. Unfortunately, the rift at the end gets too narrow to follow.

174.41 m was added to Minotaur rift.

Stagger Lee

In 2011, a window off the side of Big Rock Candy Mountain was spotted. Stagger Lee is the continuation of this window located 17 m above the floor of Big Rock. A high traverse was set up from the second last hanger. It was followed by a 15 m abseil and another 5 m traverse through falling water to gain the window.

Following the right hand side of the wall led to a series of cascading drops (P35m) that ended on the floor of the twin shaft. Here, two streams combined into one active streamway beneath boulder-filled chamber.

The streamway continued for a further 14 m before dropping 10 m into a horizontal streamway which was later discovered to be the mouth of Soda Stream, killing interest in future exploration in this chamber. Nonetheless a side window heading in the general direction of Balamory was spotted 4m from the bottom.

A total of 145.01 m of passage was found in Stagger Lee, part of which was a resurvey of Soda Stream.

Surface Work

Aided by perfect weather for much of the expedition, surface work was carried out by cavers in between underground camps. Most of it was concentrated in Areas K and N. Two pitches were dropped in N9 (Kuk Pot), with the continuation visible but hampered by a lack of time.

Entrances K2, K6, K11, K22, K21, K23, K24, K25, and K26 were also revisited. K22, K24, K25 did not seem at all promising. Good progress was made digging K6. Of the remainder, K2 seems to have the most potential, though all need a lot of work before the cave goes.

Contributed stories

2012 – Watership Down & Hot Pants

The camp was set up and exploration was in full swing. The way out East already had its cohort of converts. For me there was one pushing front which had primacy above all others – namely the deepest point in the cave. Winter Journey, which I had explored with Jim and Fratrik last year, had a few niggling leads but nothing stellar. The silt deposits and depth indicated that a sump was not far away, but the inclined bedding heading North could continue for a very long time. With an interest in diving the sumps, I also had a distinct interest in the flooded sections.

Luckily Clare was easily suggested with the very bottom as a target. One concern was that the wet pitch series through Day Dreamers had been left rigged last year – we had anticipated further trips after our last one, but weather put paid to this. So we took a tackle sac of string to patch the pitches where necessary.

The one negative point was my little Canon ‘pocket camera’, hauled with nary a care in a Pelicase through all kinds of horrific caving locations over the previous six years had finally given up the ghost – and so we had no way to photographically record where we were visiting.

A smooth trip down to Red Cow was had, just enough of the route memorised from last year to make it smooth. We discussed the camping potential at Red Cow (very pleasant, I think) and despaired at the (lack of) quality in the rigging on the many little climbs and occasional pitches from the bottom of Big Rock. “On behalf of the entire 2003 & 2004 expedition I apologise” spoke Tetley on a previous trip with Clare.

I was interested in checking out the ‘downstream’ sump at Red Cow, which takes the majority of the water from the Republica chamber. So we followed a few cascades and reached a 3 metre drop

with a single bolt. I believe the survey starts around here, but it's difficult to say as this region is poorly PSS. We attached one of our ropes, I abseiled down managing to walk back in the chamber to avoid the waterfall. The lake at the bottom of this chamber was not in fact the sump, rather a metre wide phreatic tube led off for perhaps ten metres, finally reaching a bend where the roof continued dipping but the water stayed still and level, with pools of brown silt sitting in the otherwise pure white floor.

Derigged, we climbed up in the rift at the previous cascade, and found an obvious dry level. This was strange, as I knew this passage was not on the survey, but there were clear marks from cavers passing. Clare and I decided to give it a proper push. Soon we found ourselves discarding bits of SRT kit and harness. We made a good team, Clare wriggling off through the smallest of gaps while I continued to expand them to human size behind. A flat out squeeze over cobbles took a while to reengineer, and a ninety degree bend to stand up in a wriggle rift took a lot of hammering by Clare to make it passable. Alas, she found herself in a region, again, with obvious caver marks the far side of the tight stuff, and soon "I've been here before" as she found a Republica PSS. We had connected between the downstream Red Cow sump and the head of Insomnia pitch (climb back out across the pitch along the large ledges, before turning right into a chamber leading off), connecting the 'crescent' shown previously on the survey. This only further complicates our understanding of the hydrology here – was this the old route for the Red Cow water, did it join up at Insomnia to form that impressive pitch, before it found a way out through the present cascades and sump? Still, we had fifty-five metres of survey in the book, a good thirty of which were new, where many cavers must have stood but none decided to push. This also offers a tight, though not horrifically so, flood safe bypass for Republica. With further enlargement it could even become the through way.

So, after a couple of hours diversion, we continued to our main target – the bottom. Insomnia's rope was badly hung up, I had to reverse prussic about 20m directly through the water before I'd stretched enough slack to rig my descender and very very gently (checking the rope) descended & unhooked the rope from the crack it had been wedged in.

The wet ropes in Insomnia were found to be in good nick, and so we abandoned the rigging gear to speed our progress. Interestingly, the only place where the rope had been abraded was the natural tied off bit to help you avoid landing in the big pool. Here the rope had been dangling a natural 'L' shape, and being gently swung back and forwards by the draught had sliced through the sheath and most of the core where it touched the rock ridges on the floor.

Back at Winter Journey, we threw ourselves into the rift and soon reached the exploration end. I essentially pushed Clare into the rift taking the draught, and she started enlarging with the bolting hammer and squeezing away. Progress was pretty quick, but I was

captivated by the inclined bedding plane leading off. By myself, I hadn't dared climb down this last year. It didn't look so bad now, and Clare would definitely be able to follow me into this 'lobster pot' if that's what it turned out to be.

So I slithered down and away, a pretty long way down over dried silt, and reached a crawl way at the bottom. There was a gentle draught once more. I called Clare down, though she had nearly made it through her upward squeeze. We padded off through the rabbit warren like passage, dull thuds of our paws on the soft floor. "Watership Down" was the obvious name for this find – especially as I knew Clare liked the book. A branch to the right led upwards to a pitch into a chamber. Continuing ahead entered a slightly more confined space and a crawlway climbing back up the bedding to reach a T-junction. Here a large draught blew across, coming from a crawl / stoop leading down from the right. The way to the left soon turned into an inclined rift climb, steeper than other bits of bedding had seemed. But it was negotiatiable with care. The next climb looked rather more committing, the walls clearly belling out into a proper chamber, and what was that dark space down there?

I must admit exploration fever had rather got me at this point, as I climbed down without too much concern for the return journey. I was stunned by what I climbed down towards – a large, crystal clear, sump with a clear rock arch leading off into turquoise blue depths. The slight seriousness of our situation was rather underlined by Clare arriving, with a clatter and a woosh as she lost her footing and nearly, in that caving cliché, fell into the terminal sump.

We ignored the inclined cliff that was our only escape, and continued exploration. The main sump was beautiful, but a parallel route through the rocks led to a smaller, obviously connected, body of water. From below, a clear balcony was visible above the sump, and with a rope, would be a passable pendulum. Feeding into the sump was a dry inlet, which led away through a small crawlway. This we pushed until it started to get rather catchy and surveyed out, though further progress is certainly possible. Our survey down here complete, including a plastic PSS at sump level on the sandy beach, we had to tackle the climb. Clare went up first, after a few false starts and slithering back down, we found a working method utilising 'combined tactics', where I would bridge across the floor and ceiling and be stood on. Her safely up, I slipped back down again and was lowered the end of the survey tape to complete the measurements – 9.83m to safety.

There was nothing Clare could do to help as I slipped and struggled. The mud on the walls had been made slimy, the footholds were degenerating. I slowly slithered up the far end of the rift where it was narrow and I could bridge most effectively, but therefore had to deal with overhanging sections which I scaled, somehow, with the minimum of poise and grace. As we surveyed out Clare had to indicate the stations again and again, the buzzing in my head was dissolving memories as fast as they were forming.

Time was pressing on and we did not have time to look at the many leads left in the rabbit warrens. Instead we made a speedy exit, Clare taking the exploration bits and bobs, I choosing to pull up the ropes as there is never a guarantee of return at these extreme ends of the cave system.

Red Cow offered it's usual calming influence; the strange 'quiet corridor in an alien spaceship' feel to these horizontal sections was comforting where it had been disquieting. We sat there munching the food we had stashed on the way in, rehydrating even as our Meander oversuits steamed off their splashes from *Insomnia* and *Republica*. I thought dark thoughts about the riggers of both these pitches, in their different 'exploration rigging' ways my two most hated and, in my consideration, dangerous pitches of the cave. And there they were together, back to back, a gauntlet to be passed on the way to the depths, and a horrible back-of-mind barrier to the exit to safety.

The way back to camp passed smoothly. Back for tea and medals, talk of daring do and plans for a rather more sedate second day.

The Day After

Our plan for the second day was rather more constructivist in intent. Since exploring the Throne Room last year, no one had returned except to the large obvious windows which had formed 'Amazing Grace' and the way to the East. Clare and I knew there to be a potential traverse, and also a short pitch. This area is relatively close to Camp X-Ray and so would be a good place for less experienced teams to cut their teeth. So we packed up the Uneo drill and made our way along Kamikaze and the Red Baron traverse. The leads are as we remember them, and I quickly rig up the start of the traverse and place a bolt in the large boulder for abseil (with tackle sac rope protector) into the pit. Confirming it's a going lead with a pitch leading off, I come back up and get stuck into the main metal of the traverse.

[Nb: If it doesn't get written up elsewhere, Nico et al. Dropped this pitch, and a few more climbs and cascades before it degenerated – from the survey and form of the cave, it looks as if you're descending the immature vadose formation below the throne room boulder collapse.]

The first few bolts are just fine – swing and bolt, rejiggle the rigging and move outwards one metre. From my perch around the corner, I realise that this is rather more demanding than had been hoped – not a traverse over the pit and into a side passage, but a continuing climb traverse out of the end of the chamber. I keep at it, finding passable rock to bolt in the overhung ceiling, and somehow climbing backwards over stopped boulders and chunks of dried mud. I am not, as it were, enjoying myself at this point. The bolts aren't being tested as I pass, and I'm climbing a good few metres in height between placements, on semi static rope and without a belayer, just

judging the length of slack. Considerable quantities of footholds disappear bouncing down the slope, flying into the pit at the bottom. I explain this predicament to Clare. She replies with “Well, you don’t have any choice – we don’t have the dynamic rope with us and we’re not going back to camp.” Charmed.

Clare, shivering on a boulder while I sweated with outstretched drill, also has an idea for the survey name – Hot Pants. Why? “I have a plan, and it’s as hot as my pants...” - Lord Flashart

At the top I reach a little chamber with an obvious climb leading up through a boulder choke. The traverse rope is just long enough to belay as far as the top of the climb, but not to protect the way across. Feeling rather flushed and vertigous at the achievement (19.44m at 50 degrees says the survey, between here and the last traverse bolt) I finalise the rigging. Clare follows me on the rigged line, I watch it scratch at a particularly large pile of boulders which I didn’t dare disturb – derigging from the bottom and gardening back from the top would make a lot of sense long term.

We climbed up carefully through the boulder choke and were rewarded with a beautiful little chamber, about 12 x 4 m, with a high ceiling and an obvious balcony a good four metres off the floor. Out of gear, we looked at the crawlway heading NNW out of the chamber. This was taking a distinct draught, and was easy (though rather small) going with a white silt floor. Clare slithered over a little dam and wriggled off, coming back to state it was going but rather small. I couldn’t be bothered with such arduous squeezing at this stage, and expecting that this lead would be looked at first before bolt climbing plans, was happy to survey out.

Strangely, this crawl wasn’t again looked at – instead the teams who came after us hand bolt climbed to the balcony and beyond, gaining passage 7 metres above the chamber floor, which led to 73 m of gently descending passage to the NNE (Peepshow), terminating at a boulder choke, and then 78 m of gently ascending passage due North into blank mountain (Undercover Squirrel) terminating at a 4 m draughting climb into a chamber.

And that was the story of my first camping trip with Clare. I certainly felt rather pleased – we had gone after the lesser leads and multiplied them through our efforts. Finding the beautiful Watership Down sump was a joy, but the Hot Pants traverse climb was perhaps the most important work in terms of the exploration it enabled.

Jarvist Moore Frost

Diving Dreams

A few more carries and a visit to the fleshpots and Wifi of Tolmin, and I needed to decide what to do next. My big hope was diving, I had stuffed a barrel full of my cave diving gear and hidden my fully pumped 7 Litre cylinders in the back of the van. Now with such a clear and accessible (though very remote) sump, diving was a genuine possibility. At first I decided the logistics were simply impos-

sible, but there seemed to be a lot of people making positive noises about portering assistance, and so, deciding to commit, readied my gear at Ravne.

Some of the Slovenians had promised help in portering the gear to Kal, unfortunately the motorbike broke terminally while carrying the cylinders. Abandoned in the forest, they were carried the last zig zags by hand. My lead weights arrived in the Bivi almost as if by magic.

But every move closer to the pushing front had fewer and fewer volunteers. Offers of assistance are gladly made in the sunny cafes of Tolmin. Fundamentally when the choice is portage of diving gear at the expense of dry exploration, the choice of expedition members was clear.

Ideally the diving also required the setting up of a camp at Red Cow. I had prepared a lightweight two-man camp for this application, and had assumed that people would at least be interested in visiting the bottom of the cave or extending the leads further North in the deep levels. However, one can't really direct exploration in this way, and the majority of the expedition efforts went into the extensive horizontal levels found below Stuck in Paradise – only two trips went beyond Big Rock this summer, and I was on both of them.

I solo'd my way to X-Ray with a 7 Litre bottle and fin in a tackle-sac, and a weight belt of 8 kg of lead. This was actually found to be not too difficult, though frightening on the little down climbs!

Approaching the end of my three weeks on the mountain, I finally had to accept that the sumps were out of my reach. I was exhausted through my efforts, making myself sick through not enough rest.

My last mad plan involving hijacking the ever eager Oli and spending essentially three days portering gear to the dive site, diving, and abandoning cylinders for the winter, was replaced by a rather more sane plan to explore the bottom, and, sadly, drag my cylinder out from camp.

I pulled my shoulder really quite badly during this trip, which made my slow exit from X-Ray hauling steel arduous and painful. The situation on the surface wasn't much more pleasant. The Bivi talk was full of suspicion that I would abandon without carrying all the dive gear (and, indeed, my unused photographic gear) down. So there was nothing to do but swipe opiates from the first aid kits, ignore my grinding bones and do my carrying duty. I must admit it was with considerable sadness and little will to return that I finally struck my tent, squeezed the last few bits into my rucksack, ached down the mountain and boarded a bus out of Tolmin.

My 8 kg of diving Lead sits at X-Ray currently labelled with a simple note:- Jarv's Folly

Everything is clear in hindsight. I should never have started preparing to dive, instead put my efforts into dry exploration & bolt climbing of the deep levels and, potentially, readying the ground for a diving trip in future years. Still, we live and learn, and Ah, but

a man's reach should exceed his grasp, or what's a Heaven for?

Jarvist Moore Frost

2012 – Watership Up with Oli

Oli hadn't yet been on the serious pushing trip he was clearly capable of. Having abandoned diving plans, I went down with him on the standard two nighter. First stop, before bed, was the fabled Esoterica. This was quite an interesting place, being a streamway cutting through the Prince Consort Road horizontal level before the Albert Hall. The Serpentine stream at the Albert Hall almost certainly forms the development which goes all the way to Watership Down, there's every reason to believe this streamway may proceed similarly. However, tails of wet rift from the original explorers (James KP and Jan in 2010) have dissuaded a return. We found the climb down through the boulders, and arrived at the 10 m pitch (taking water from the little inlet in the left of Prince Consort Road) I'd previously stood at. We commenced bolting, taking turns.

While Oli was tapping away, I climbed over the rift pitch, down a 4 metre free climb and intersected a different stream. This stream came down (on the left) from an easily gained chamber, with vast quantity of beautiful haemetite on the shelves. The continuation (to the right & following the stream down) was obvious, and I can only assume that this is 'Esoterica' as pushed by James KP and Jan.

I related this to Oli back at the pitch head. We finished the backup bolt no problem, but horror of horrors, broke the driver placing the hang bolt. A few minutes experimenting with alternative natural rigging (all too dodge) and we accepted unhappy defeat. Should have brought a second driver. Should have brought the drill. I left a long and meandering note underlining the point that this pitch was not dropped, and the way to what I believe is Esoterica.

It's one of those strange quirks of expedition – we had what seemed to be two independent streamways, both going and barely an hour away from camp. Yet no one returned here either.

Having decided returning to camp for a replacement driver was too long a round trip, I took Oli on a tourist trip to Palace of King Minos. We admired both the formations, the unpleasant nature of 'Guillotine' and the admirable efforts in bolt climbing the Queen's Bed Chamber, and returned via the Oroborus alternative to the Albert Hall – odd passage formation indeed.

Day 2

We set off for the deep. I find Big Rock a rather unfriendly place. Though no one had been here since my previous trip (in 2011), I found a lot of the bolts disturbingly loose. Always a worry with rawl bolts; I also had dark thoughts of some kind of bolt loosening cave monster, which I imagined as some kind of spanner assisted sloth.

The way to Red Cow was almost second nature now – the third

time in two years. I pointed out the few bits I'd figured out about the route on the way, and dealt the stack of playing cards I had filled my Meander pocket with (arrows and 'Red Cow' or 'Big Rock' to waymark the two opposite destinations). At Red Cow, we repacked and left a Daren drum and food stash, then continued on down to the bottom with a single bag of bolting kit, rope and survey gear. Oli made short work of the sideways wriggles in Winter Journey, and with sanity rather than wanderlust on our side we set about rigging the steep muddy climbs which Clare & I had slithered down and had such trouble climbing. While I merrily tapped in the first bolt, Oli had a quick look at the 'upwind' route from the T-junction and came back shortly having wandered to the bottom of a climb he didn't fancy by himself.

At the main climb, I realised I'd rigged the scrappy ropes we'd brought in the wrong length order – Oli sorted this out behind me while I placed a Y-hang off the opposite walls. The depth of the dry silt was impressive – I chiseled off 5cm deep plates from both walls to find the rock.

Arriving at the sump with rather more poise and grace than last time, we noted that the plastic PSS at the shore edge had floated off into the sump – clearly the level had increased (at least minutely) at some point during the previous two weeks. I also threw a few rocks in the sump to try and gauge how deep it was (4m I estimate) and stomped in the shallows a bit to try and assess the visibility for diving potential (remarkably good, surprisingly no brown mud, the coarse sand settling very quickly). Wearing my wet socks, I was trying to psyche myself up into traversing along the right hand (sloping rock ledge) of the sump to try and assess whether it continued around the corner, or stopped with a rock wall.

Oli reckoned he could have a chance at the balcony, and prussic'd up the rope before swinging across. He left the rope pulled over, but having got together our survey instruments I grew bored of waiting for him to return, and flicked the rope off to follow.

The level gained, Watership Up, was really quite interesting – very difficult to tell how it formed, other than the obvious bedding plane bit and with strange (large!) echoes leading off from tight rifts. Following the natural route past puddles of Hematite and along a protracted flat out squeeze we came to a section of rift with a drop down onto a lake. This was a definite lake, as we could see both ends of the body of water, but otherwise looked very similar to the main sump. The pitchhead down from the rift would be narrow but certainly doable. We surveyed our way back, notably there was a collection of those strange spider-web like filaments covered with droplets in a cranny of the rock. Always a bit spooky when you come across them – no matter how much one reminds oneself that they must be some kind of slime mold or fungus, the image of a massive cave spider is hard to shake!

With time already surprisingly tight, and a long way to climb, we set off out, pulling all the ropes up with a bittersweet melancholy.

We had put the rigging effort in to further the next party, and effortlessly found passage, but there remained so many question marks, and no other parties intended to return down here this year.

Back at Redcow we toasted our mackerel with a splash of the meths recovered from ‘daydreamers’, and then had a warm Vitamin-ski (pusher’s delight). We filled up our Daren drum with water – measuring the Red Cow stream as 1L/s (by filling a 6L Daren drum in a timed 10s, capturing about 60% of the stream). This Daren, along with the ‘bivi liberated’ mess tin and blue 2L Sigg bottle (with perhaps 200ml of meths left) was left sitting in the sand of the main red cow passage. There was talk of bolt climbers making their way down this way to investigate ‘Strap on the Nitro’. This didn’t happen, and so those resources stand there currently, awaiting the 2013 developments.

The slog on home to X-Ray continued with little comment – other than I managed to pull a shoulder on the Memory Lane climbs. We also managed to flood the passage with smoke by leaving the fish tin to burn itself out (also burning the paint). Interestingly, and in contradiction to the original explorers memories, the cave draft took this in the direction of Big Rock, we found ourselves caving through this fug till at least Memory Lane.

The way out from X-Ray, with diving cylinder in tow, was slow indeed. I sent Oli off ahead, and laboured my way behind. Some of the Urinal series pitch heads were really quite acrobatic when dragging a third leg through!

Jarvist Moore Frost

Prospect for 2013

Despite the success of the 2012 expedition, it is clear that there remains a large amount of cave to be discovered in Vrtnarija and Migovec. In Vrtnarija, the obvious areas to focus our attention on include: the descent of the wet pitches at the end of Brezno Slapov and Invictus, pushing the rift at the end of Milky Way, further exploration of Xanadu and Lower Pleasures, various unpushed leads in Watership Down at the bottom, and a second bolt climb to a window at Queens Bedchamber that seems to be the continuation of the horizontal development found in Milk Way. Furthermore, as we now have the necessary know-how and equipment to bolt climb, there are various deep leads to revisit from the 2003 expedition such as Strap on the Nitro.

In some ways, we have the fortunate problem of almost being too successful in recent years, as the leads are now fairly spread out and getting further from camp each year. This year, it was common for pushing trips to Watership Down and Invictus/Atlantis to take upwards of 21 hours. Nonetheless, Camp X-Ray remains the most likely camp due to its central location and easy access to water – however, an additional lightweight 2 man camp nearer to the more remote locations is a strong possibility.

Thanks to the connection there are also old leads in the old Sys-Mig that are worth revisiting, especially around the Waterloo area.

In October 2012, on the annual ICCC/JSPDT winter action weekend, a breakthrough was made in Primadonna, another cave system on mountain. Due to its close proximity to the System, this will be the next big connection project in our bid to shed more light on the complex subterranean system under Migovec. Acknowledgements

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Epilogue

For our purposes, the story ends with the 2012 expedition. The two main systems on Migovec connected by a happenstance trip.

The exploration does not end here. Every year, Tolminski Migovec sees new generations cut their teeth on the exploration possible in the Hollow Mountain. New people and new techniques produce new discoveries. Predicting how the next five or ten years exploration will go is utterly impossible.

But whether it is ourselves (ICCC and the JSPDT) or peoples many hundred years hence, I'm sure someone will be interested in exploring the depths of this mountain, and I hope that this documentation, patchy, flawed and incomplete as it inevitably is, is of some assistance to your exploration.

Appendix A — Expedition Logistics

One aspect that is often missing from expedition writeups is the expedition logistics that enabled the exploration. For sure, this information will be the fastest in this publication to age. For though the cave endures, and the human experience is understandable from year to year, technical progress makes a mockery of our carefully considered preparations.

During the period 2007–2012 covered here, we saw the total domination of LED lights, displacing the previous carbide flames. Initially these were mainly powered by Alkaline Flatpacks (helmet mounted) which gave way to NiMh rechargeable packs as the brightness (and power input) increased, and the length of our trips extended.

Our cave was rigged for Alpine style SRT, on Nylon rope. The main pitch routes were rigged on 11 mm. Pushing was done on a mixture of 10 mm and 9 mm. Rope brands were selected for their toughness and ability to resist abrasion more than ease of knot tying. Most of the caves were rigged during this time on Mammut.

The majority of bolting was with hand-bolted Spitz (mostly to Petzl twist hangers), giving way in recent years to 8 mm stainless through bolts married with Raumer Stainless twist hangers. 7 mm long steel maillons are used almost invariably for rigging.

There was approximately a 50:50 split with people wearing plastic oversuits versus those of cordura. Most people caved with a normal fleece furry and thermals, some stripping off for the prussic out.

Jarvist Moore Frost

Three Years at X-Ray: Underground Camp Logistics

The Vodna Sled 2010 4-berth underground camp was extremely comfortable and provided an excellent base for extended deep cave exploration. As there seems to be little information written about setting up alpine caving camps, we describe in this document an overview of the equipments used, and resulting performance. This camp was used almost unaltered in 2011 and 2012, and we have included a few updates and tweaks gained during those expeditions.

Cave Conditions

Vrtnarija is a typical deep alpine cave system. The temperature measured at camp varies between 2 and 5 degrees centigrade. Camp

X-Ray has a fairly considerably draft which flows from the (wet) Zimmer pitch. We would estimate the relative humidity to be above 80%, and note that non-sealed paper becomes damp overnight.

Sleeping Arrangements

Tent

An extremely cheap 4-person single-layer dome tent was purchased from eBay. The tent fabric was washed at 60C in a large washing machine with an excess of detergent in order to remove the water repellent coating and thus reduce condensation. This appeared to have been entirely successful – no beading was apparent.

The tent notably increased temperature and comfort at camp. It was found impossible to close the doors fully due to the feet of anyone above about 1.6m poking out the foot of the tent, but having the bottom zip open was found to produce suitable airflow.

Sleeping Bags

Two of our berths were 1990s Buffalo bag fibre-pile liners, supplemented with 200g sqm polartec fleece liners (supplied a long long time ago as sponsorship in kind). Most campers also required the wearing of a full set of fleece thermals within these bags to remain suitably warm (Beast Sponsorship in 2009). It was also difficult to actually get within the multiple layers of sleeping bag, and one found oneself rather constrained once there.

By comparison, two of the beds were made out of Nitestar 450 synthetic bags, purchased for circa. 30 each. These were found to be warm enough on their own, though small girls in particular had a more comfortable night when wearing fleece pyjamas. A suggestion for future underground camps is to add synthetic silk (nylon) liners to further increase the warmth. The bags weigh 2kg each, but are extremely bulky. Packing the bags back in London, we were able to fit the sleeping bag and fleece pyjamas in one large oval tackle sac. For the derig, we only managed to pack the sleeping bag alone into the same large tackle sacks.

Nb: We replaced the Buffalo bags with Nitestars Sleeping bags in 2011. The later 2011 edition Nitestar 450s are entirely synthetic (no cotton in the liners) and thus almost the perfect underground camp sleeping bag. They feel noticeably less damp and sticky on the skin when you first get in them.

Roll Mats

We now use 'Nato 5 season' roll mats produced by Highlander / Outdoors value for circa. £10. They are long enough for the 2m tall folk.

Colour: Olive green Size: Open: 180 x 50 x 1cm, Rolled size: 50 x 15cm Weight: 300g

Superb compression recovery, Density: 25kg/CBM

Condensation

Condensation was minimum except for underneath the rollmats, as is common for camping in cold conditions, and a slight temporary damping of the top of the rollmat underneath the sleeping bag head. One thing that was avoided was the careless use of superfluous fleece camp clothes as a pillow – it was found that this material provided a wick for condensation.

Cooking Arrangements

Cooking at underground camp consisted of a Mini Trangia; recycled MSR aluminium windshield for the Trangia; Campingaz Micro Plus Gas Stove; ‘SunnCamp Trekker 5 Piece’ Aluminium nesting cook pots (17cm and 18cm sizes, including the 19cm lid / frying pan); clasping pot handle; 4 ‘lightmyfire’ nylon sporks. All this was packed into the largest 18cm saucepan and weighed circa ~1.5kg.

In general the trangia burner was used with the largest saucepan to cook the breakfast / supper meals and was found to be sufficient for 4 people. The medium saucepan was kept clean (ish) to be used to make hot drinks. The small trangia saucepan was used to make small drinks (for instance herbal tea / coffee when others were drinking black tea), and for particularly dietary requirements (vegan) or simply to hold cut up cheese / salami during preparation.

2011: The ‘Campingaz’ stove was replaced with a cheap ‘universal screw fitting’ then used with Primus Powergaz 4-season gas mix (we noticed we were ending up with a frozen slurry of unburnt gas in our normal summer mixes). This new gas setup is really quite powerful, perfect for a quick hot drinks. Usually drinks are made as soon as cavers return / wake, drunk while still undressing, with the food more slowly cooked on the Tranja.

Food & Drink

Fish, Cheese, Soup and Smash were the general, standard permutations.

However, there was also significant quantities of instant noodles (Sainsbury / ASDA own brand), CousCous (in particular the Ainsley Harriet branded flavoured variety) and even Risotto mixes. Other cooking ingredients included dried mushrooms and dried tomatoes, vegetable bouillon mix, miso soup mix and sesame seeds. Condiments included smoked paprika and black pepper which had been freshly ground on the surface and transported underground in a 35mm film canister.

‘White Powders’ and other such bulk ingredients were taken down in ultra-strong resealable plastic bags (100micron – bought from ‘thermalpaper’ a dedicated plastic bag ebay.co.uk reseller), with the contents written on in clear black marker pen.

Drinks, almost always warm or hot, were based on black tea (Yorkshire Tea), local herbal teas (in particular Sadni Chi), hot chocolate (Makro own brand) and Vitaminski (an effervescent flavoured vitamin drink actually called 'Cedevita').

Lunches were generally the standard caving snack food (chocolate bars, midget gems, peanuts – in particular honey roasted from Lidl), but also supplemented with oatcakes and bread with salami, cheese and fish.

Spirits were taken down in 500ml plastic bottles and used as a small nightcap by the majority of cavers. The rolling hot-bed camp meant that every 12 hours all underground cavers were physically present at camp, and therefore had their callouts reset on a rolling basis.

Saving Fuel & other camp craft

A considerable number of tricks and tips were taught by the seasoned expeditioners to save on fuel and increase enjoyment at underground camp. All simple, but useful, ideas.

- Smash doesn't need boiling water to make.
- Noodles require boiling water, but can be cooked in a small volume of water, then have cold water added along with Smash to thicken.
- Tea can be more efficiently made by boiling half the required volume, making strong tea, then mixing 50:50 with cold water to make an immediately consumable drink.

Music & Entertainment

Music was provided by a Sansa Clip+ MP3 player wired into a pair of folding travel speakers. The travel speakers could operate of 4 internal AAA batteries, but were found to be more powerful and longer lasting in the cold cave atmosphere when powered over USB wired directly into a battery pack of 4 AA Eneloop NiMh cells.

- Similarly, the MP3 player was recharged from a 2xAA NiMh —> USB 'emergency phone charger', but was found to be happy to charge off the unregulated eneloop battery pack as well.* 2011: We moved entirely to just using the 4AA Eneloops + PP3 clip / micro USB adapter to directly power both the speakers & recharge the Sansas.

As well as music (of various tastes!) audio comedy has been a mainstay of underground camp, particularly in the evenings before falling asleep. Blackadder, Father Ted, Dead Ringers, Little Britain, League of Gentleman, The Mighty Boosh and the Ascent of Rum Doodle have all proved popular over the years.

Ambience

Cheap tea-lights were taken down to camp and festooned on the cracked rock walls around the tent. A couple of stubby ‘church’ candles were also brought down (bought from ‘Tiger’), and were found to endure the cold atmosphere better than the tea lights (which tend to burn a hole through the core rather than burn all the wax). This was reassuring, particularly for first time campers, and offered reassurance and sufficient light to go for a pee.

2011: We added ‘AA battey’ powered white fairy lights. These were bought cheaply from dx.com, and were found to run (via resistor limiting) for an almost infinite time at a very low level, just enough to orientate oneself when waking at night. The most pleasant ones were ‘warm white’ which had a very candle-flame like glow, even with mostly depleted batteries.

Toiletry

Excrement was deposited directly into compostable corn-starch bags, of the size used as standard compost bin caddy’s and bought from a local Sainsburys. They were generally considered as ‘single use’ – except for when supplies ran rather low towards the end! These were then tied together, sealed in an additional non-biodegradable freezer bag and kept in a Daren drum. Standard rolls of toilet paper were taken down, but kept in a resealable plastic bag to prevent damping in the cave atmosphere. A alcohol based gel hand sanitiser was used for obvious reasons of hygiene.

Once suitably full, the Daren drum was portered out of the cave, and the biodegradable contents emptied into the latrine on the mountaintop.

Not entirely sure where this came from (clearly been written by me). Format appears to be Markdown, which implies it was destined for the Caving website???. I??ve added a few notes from 2011 and 2012 (it was written after 2010 evidently) and corrected a few typos. Publish & be damned, rather than have it sitting on my hard disk longer. ~Jarv

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