

The Hollow Mountain

*Exploring the deep caves
of Tolminski Migovec, Slovenia
1974 – 2006*



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Cover design by Jarvist Frost, with help from innumerable ICC & JSPDT members. The panorama across the top is the view of the peaks from Tolminski Migovec, taken by Jarvist Frost in October 2006. The photograph on the back page was taken by Dave Wilson in 2004 near the termination of Gardeners' World cave. Line survey prepared using Survox.

Abstract

This report documents the cave exploration on the Migovec Plateau, near Tolmin in the Julian Alps, Slovenia between 1974 and 2006. Between 1974 and 1985 exploration was carried out by members of the Caving Section of the Tolmin alpine club (JSPDT) and 17 cave entrances were logged. There were two major finds in this period: firstly M2 (Kavkna Jama), a tight rift cave which was pushed to -350m between 1974 and 1978 and included the impressive 120m shaft 'Silos'; and secondly, M16, which was pushed to -547m between the years of 1982 and 1985 and included the huge chamber of Galactica.

These caves were ranked amongst the deepest caves in Yugoslavia (as it then was). After 1985, exploration stopped on the Migovec plateau until the Imperial College Caving Club (ICCC) started a series of summer expeditions working with the JSPDT from 1994 to 2006. Minor discoveries were made in 1994 including the discovery of M18 (Torn T-Shirt cave), pushed to a depth of 78m. 1995 saw M18 pushed through some tight rift into significant horizontal development (NCB passage) followed in 1996 by a major breakthrough when M18 was connected to M2 and M16 to create the Migovec System. This included some impressive horizontal passageway: Mig Country, Hotline, Level Two and Exhibition Road. In the following three years (1997-1999) the system was pushed to a depth of -970m (in three separate sumps) to a total length of 11.3 km. The System is now in the top 10 deepest and longest caves in Slovenia.

In 2000, following some surface digging, a new cave, named Gardeners' World (GW), or Vrtnarija in Slovene, was broken into through some tight squeezes and pushed down to a depth of -393m. 2001 saw GW pushed down to -550m with an impressive horizontal gallery 'Friendship Gallery' discovered at the end of the expedition. After a gap in 2002, 2003 saw GW pushed down a large pitch to an extensive amount of horizontal cave, taking the cave to a length of 3.5 km and a depth of 747m, which was further pushed to -800m and 4.5 km in 2004. In parallel with GW exploration, another cave was found by the JSPDT in the winter of 2000 named Primadona which has to date been pushed to a depth of 597m and length of 2.6km. 2005 and 2006 concentrated on surface exploration. In addition to the three major caves on the plateau, numerous smaller caves have been discovered and mapped. There remains many challenges for the future on Migovec; there are undoubtedly more deep caves and large passages under the plateau. The connection between the Migovec System and the other two major caves (Gardeners World and Primadona) remains to be found.

Jim Evans

Quote Unquote

"Exploration is the physical expression of the Intellectual Passion. And I tell you, if you have the desire for knowledge and the power to give it physical expression, go out and explore. If you are a brave man you will do nothing: if you are fearful you may do much, for none but cowards have need to prove their bravery. Some will tell you that you are mad, and nearly all will say, "What is the use?" For we are a nation of shopkeepers and no shopkeeper will look at research which does not promise him a financial return within a year. And so you will sledge nearly alone, but those with whom you sledge will not be shopkeepers: that is worth a good deal. If you march your Winter Journeys you will have your reward, so long as all you want is a penguin's egg."

Extract from Apsley Cherry Garrard's book, "The Worst Journey in the World," based on Scott's ill-fated polar adventures at the beginning of the 20th century.

"... And so you will cave nearly alone, but those with whom you cave will not be shopkeepers: that is worth a good deal. If you venture deep below Migovec you will have your reward, so long as all you desire is to illuminate the darkness within."

Iain McKenna, Migovec caver.

"A wise man can see more from the bottom of a well than a fool can from a mountain top." Anon.

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EDITORIAL

George Leigh Mallory famously retorted, "Because it's there." The main motivation behind the adventures in this journal is better summed up by "Because it might be there," or, if you're talking about solid rock, "Because it might not be there..."

Fortunately the discoveries under Migovec proved better than anyone dared hope thanks to a combination of true co-operation, persistence, optimism and luck. Just as importantly, deep friendships have been formed, a new generation of cavers has evolved to the highest level of the sport, no major injuries have (fortunately) occurred and great fun has been had.

Most books and reports on caving and mountaineering either aim to relate the facts of what was achieved or they aim to tell a story, to describe what it was like for one or several of the individuals involved. This publication aims for both, and thus what follows is a deliberate mix of surveys and silly cartoons, science and nonsense, tales of exploration and stories of curries and visits to the pit... I'm eternally grateful to everyone who has contributed (sometimes without realising it!) and hope that any errors or the lack of acknowledgement in places are forgiven.

Long may good caving, genuine exploration and great times continue and long may Imperial College Caving Club (ICCC) and the Jamarska Sekcija PD Tolmin (JSPDT) remain as fine caving clubs dedicated to the true spirit of speleology and adventure.

James "Tetley" Hooper

UREDNIK

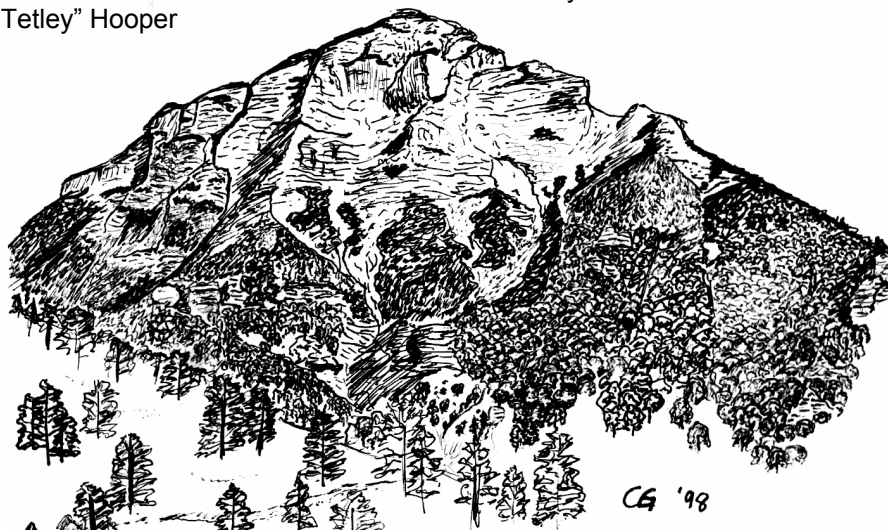
Georg Leigh Mallory je ob vprašanju »Zakaj« strumno odgovoril »Zato, ker je tam«. Glavna motivacija, ki se skriva v člankih tega poročila bi lažje strnili v besedah »Ker je mogoče tam« ali če govorimo o trdni skali »Ker mogoče ni tam...

Na srečo so raziskovanja v Migovecu potrdila obstoj podzemnega sistema jam in brezen, katerega si nihče ni upal zamišljati. Vse to je posledica kombinacije resničnega sodelovanja, vztrajnosti, optimizma in sreče. Ravno tako je pomembno, da se je razvilo resnično prijateljstvo, nova generacija jamarjev na najvišjem nivoju športa, ter da ni bilo nobenih hujših nesreč in da smo vsi udeleženi pri tem užili polno zadovoljstva.

Večina knjig in poročil o jamarstvu ali alpinizmu prikazuje opravljene dosežke, ali opisuje dogodivščine, z namenom da bi prikazala kako je bilo za sodelujoče. Ta publikacija skuša predstaviti oboje, tako da je vsebina premišljena mešanica načrtov, šal, znanosti in neumnosti, zgodb o raziskovanju, omakah in obiskih brezen... Sam sem nadvse hvaležen vsem, ki so kakorkoli (morda nezavedujoč se) prispevali k tem poročilu in upam da bodo oprostili slučajnim napakam.

Naj živi pravo jamarstvo, izvirno raziskovanje ter dobra volja. In naj še dolgo ICCC in JSPDT ostaneta kluba, ki se predajata pravemu duhu jamarstva in pustolovščin.

»Tetley«



Drawing of the South Face of Migovec by Clewin Griffith

Migovec Hall of Fame

Slovenians

Tadej Beguš
 Bratuž Brane
 Jana Čarga
 Andrej Constantini
 Leban Damijan
 Alfonz Fischione
 Andrej Fratnik
 Simon Gaberšček
 Mišo Gaberšček
 Andrej Gosar
 Kocič Ilijada
 Andželič Jure-Yeti
 Andrej Kenda
 Franc Malečkar
 Žetko Matjaž
 Vladi Mavri
 Kos Metod
 Gregor Pintar
 Marina Pintar
 Milan Podpečan
 Robert Rehar
 Božo Remškar
 Dejan Ristič
 Andrej Rutar
 Milko Rutar
 Srečko Ožek
 Jarc Stane
 Breška Stanko
 Rok Stopar
 Tomaž Tivadar
 Andrej Tomažinčič
 Rejec Zdenko
 Miran Zobec
 Lesjak Zoran



Andreja Fratnik, Iztok Možir, Aljoša Bončina, Erik Bončina, Uroš Tomažinčič, Samo Rutar, Špela Leban, and others...



Camping on Migovec 1978 (from left to right):
 Srečko Ožek, Bratuž Brane, Lesjak Zoran, Franc Malečkar, Andrej Rutar, Andrej Fratnik, Andrej Kenda, Vladi Mavri

Aliens

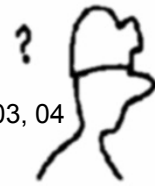
Thomas Ayles - 99, 00 (leader), 04
 Colm Carroll "Cumf Meister" - 96, 97, 98, 00, 03
 Janet Cotter - 96, 98, 03, 04, 05
 Bruce Drinkwater "Dr. Vodka" - 98, 99, 00
 Jim Evans - 94r (leader), 94 (leader), 95r (leader), 95, 96, 97, 98, 99, 00, 01, 03, 04
 Mark Evans - 94, 95 (leader), 96, 97, 98, 00, 01, 03, 04
 Jan Evetts "Jesus" - 97, 98 (leader), 99, 00, 03, 04
 Jarvist Frost "Jarv" - 04, 05, 06r
 Alva Gossan "Troll" - 95, 97, 99
 Clewin Griffith - 97, 98, 99, 00, 01, 03 (leader), 04 (leader), 05
 Pete Hambly - 95, 96, 03, 04
 James Hooper "Tetley" - 96, 97, 98, 99, 00, 01, 03, 04, 05, 06r
 Helen Jones - 00, 01, 04, 05
 Paul Huggins "Huggy" - 97, 98, 99
 Andrew Jurd "Shaggy" - 99, 00, 01 (leader), 03, 04, 05
 Pete Jurd - 00, 01, 03
 Rob Lea "Blob" - 94, 96, 97
 Martin M^cGowan - 98, 00, 01, 03, 04, 05
 Iain M^cKenna "Eebs" - 94, 95r, 96, 97, 98, 99, 01, 05
 Ben Ogborne - 98, (99 leader "in absentia"), 00, 01, 04
 Clive Orrock - 94, 98, 99
 Hugh Penney - 97, 98, 99, 00, 01, 04
 Mike Rogerson "Goaty" - 97, 99, 00, 04
 Jackie Wiersma /Evans- 94, 95, 96, 98, 01
 Dave Wilson - 96, 97, 98, 01, 03, 04, 05
 Tim Wright "Shed" - 96, 97, 98, 00, 03, 04, 05
 Sarah Wingrove "Scuz" - 94, 95, 96 (leader), 97, 98
 Richard Venn "Rik" - 03, 04, 05

Stu Adler - 94, 96
 Richard Anderson "Chard" - 94, 95r
 Andy Atkinson "Trousers" - 96
 Ed Austin - 99, 01
 Kathryn Atherton - 98
 Malcolm Barr - 94
 Flo Babolat - 97
 Paula Beeston - 01
 Tom Bending - 03
 Chris Birkhead - 94
 Helen Birkhead - 94
 Claire Bradley - 94
 Phil Brooks - 98
 Cecile Chabot - 98
 Tim Comer - 04
 Frank Cooke - 94
 Pippa Crosby - 04
 Brian Cullen - 03
 Pete Eland "CVPete" - 95, 96
 John Evans - 94
 Megan Evans - 01 (Age: 10 months)
 Pete Evans - 94, 95
 "Broken" Chris Franklin - 05
 Hilary Greaves - 00
 Moritz Günther - 03
 Fay Hartley - 99
 Tony Hayden "Tonx" - 94, 95
 Gavin Hayman - 94

Herman Hertz - 94
 Stefan Holmgren - 00
 Adrian Hooper - 01
 Henry Hunt-Grubbe - 99
 Ben Johnson - 00
 Joanna King - 05
 Marcin Kowalski - 05
 Harry Lock - 94r, 94
 Oliver Mann - 95, 97 (leader)
 Sandeep Mavadia - 05
 Gary McGhee - 04
 Dave Mountain "DM", - 94, 96
 Gerardo Ocaña-Fuentes - 05
 Ceri Owen - 01
 Martin Pattenden - 00
 Stephan Pier - 98
 Michael Playford "Mick" - 97
 Andy Radcliffe "Radders" - 94r, 94
 Chris Roberts "Sos" - 96
 James Roberts - 03
 Chris Rogers - 04, 05 (leader)
 Andy Sewell - 05
 Maria Simon - 94
 Milli Smythe - 96
 Jos Visconti - 95r, 95
 Paul Wilcox "Cox" - 95
 Anthony Woods "Pants" - 95, 97
 Ben Young - 99

'r' denotes a recce

Cartoons by Sarah Wingrove



Foreword

"You see the first notch on the right hand side of Migovec's face?" asked Zoran. "You must pass over there when going from Razor. Then you'll arrive at the plateau and you'll find us camping." Older members of JSPDT were already on Migovec on that sunny October day in 1974 when a group of youngsters set off to join them. Four of us headed off from Razor, where we'd been dropped off in my father's jeep, and started carrying heavy rucksacks containing equipment and supplies for three days.

We traversed across the face of Migovec as we'd been advised to take the mule track. Arriving at the Shepherds' huts (Kal), we missed the correct path and ended up following the lower path all the way to Kuk. Eventually we realised that we'd have to go straight up. So we climbed up onto the far side of the plateau and crossed the moon-like landscape to meet the others after a whole day of walking. But we survived and lived long enough to sit round the camp fire. The white light of the Milky Way, the wind whispering over the plateau, the moon calmly sailing between the clouds, the bright lights of prosperity that could be seen in the Italian plain... There are no real words to describe those nights on Migovec; exiting the caves exhausted, wet, muddy and yet satisfied, enjoying the scenery and the dry clothes and the warmth of the sleeping bags. There is definitely something enchanting in the air, otherwise we wouldn't have continued to visit that mountain in spite of the locals thinking that we were crazy, stupid and exploring a useless world.

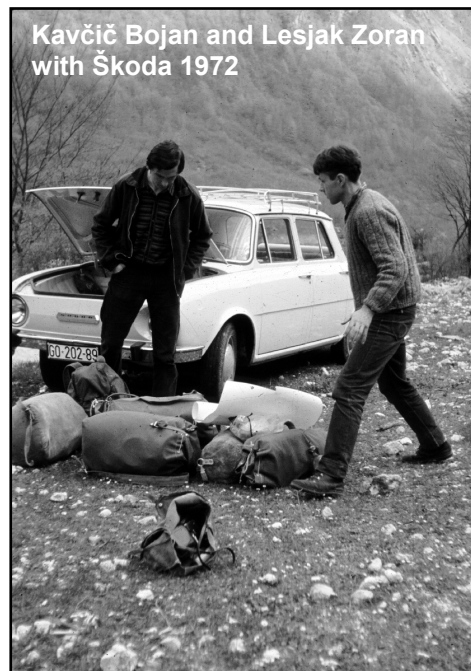
But the law of this world says that however strong you are, you'll find stronger. However beautiful you are, you'll find someone more beautiful. However crazy you are, you find those ever crazier. And so it was with the Imperial cavers. You really do need a fairly weird attitude to live for six weeks, in Stone Age conditions, on the top of a mountain. But collaboration with such people has proved to be very successful since the finds under Migovec are still going on and on.

Now I know what our initial problem was. We were aiming for the famous -1000m. This was our goal and our mistake! Our great Alpinist Nejc Zaplotnik said, "If you aim only for the top you are lost. But if you find the way that leads to your goals, you are saved and your life will have a meaning." On Migovec, we found a way that open hearted people can follow for generations.

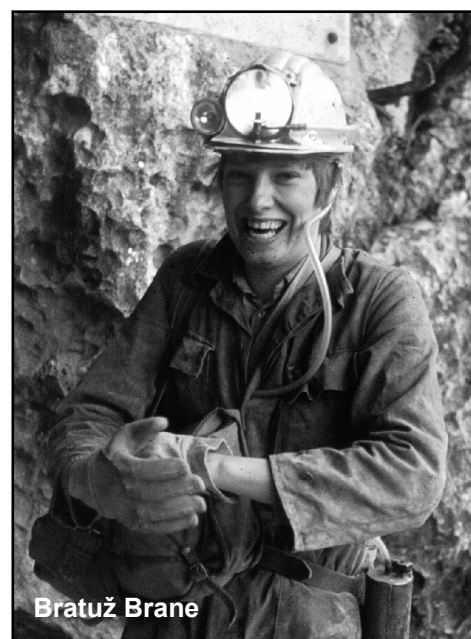
Andrej Fratnik



Ožek Srečko, Mauri Vladi and Andrej Fratnik on Migovec 1977



Kavčič Bojan and Lesjak Zoran with Škoda 1972



Bratuž Brane

Uvod

»Ali vidiš prvo koleno na desni strani Migovca?« je vprašal Zoran. Tja morate priti iz Razorja. Nato pridete na pode, kjer boste našli kamp. Starejši člani sekcije so že bili Migovcu, na ta sončen oktobrski dan daljnega 1974, in čakali na mladino, ki naj bi se jim pridružila. Tako smo štirje začeli naš pohod s težkimi nahrbtniki z opremo in potrebščinami za tri dni s planine Razor, do koder nas je pripeljal moj oče z jeepom.

Šli smo pod Migovcem do planine Kal, saj so nam priporočili da gremo po mulatijeri. Pa smo zgrešili mulatijero in šli naprej vse dokler se ni nad nami vzpenjal tolminski Kuk. Sprevideli smo da ne bomo prišli na vrh, če jo ne uberemo naravnost navzgor. Pa smo prišli na zadnjo stran platoja in potem po lunini pokrajini do kampa in ostalih po celodnevni hoji. Vendar smo preživeli in to dovolj dolgo, da smo se posedli okoli tabornega ognja pod mesečino, kjer so sence s pomočjo naše domišljije postajale žive, čeprav so bile čez dan samo rušje in skale. Bela svetloba Mlečne ceste, veter ki je zavijal čez Migovec, luna ki je mirno plavala med oblaki, bleščeče luči svetle bodočnosti v furlanski ravnini... Ni pravih besed, da bi lahko opisal te noči ko si prišel izčrpan, moker umazan toda zadovoljen iz jame in užival to čudovito okolico, posebej pa suha čista oblačila in spalno vrečo. Bilo je nekaj magičnega v zraku teh noči, sicer ne bi vedno znova hodili na to goro, kljub temu da so nas domačini imeli za norce, ki raziskujejo nekoristni svet.

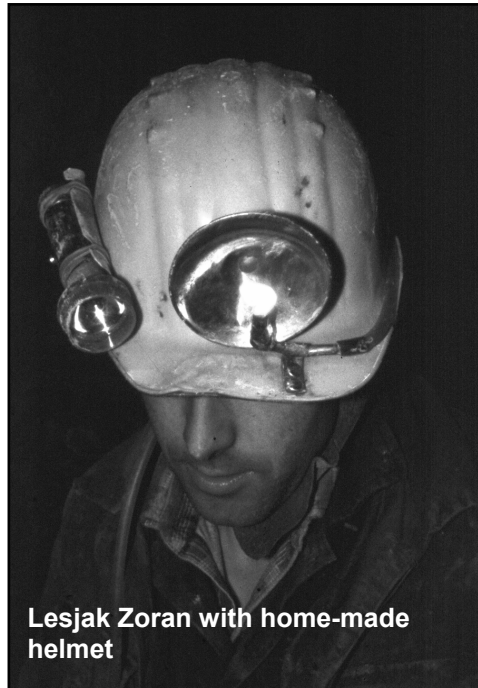
Toda zakon je na tem svetu, ki pravi: četudi si močan vedno boš našel nekoga, ki bo močnejši. Četudi si lep, vedno se bo našel lepši in četudi si zmešan se bo našel še večji norec. Ne samo eden, cel kup. Res moraš biti malo čuden, da šest tednov preživiš v kameni dobi na vrhu hriba. Toda sodelovanje med takimi ljudmi se je izkazalo za velik uspeh saj gre sistem Mig naprej brez konca.

Zdaj vidim, kaj je bilo narobe. Gnali smo se za slavno globino - 1000. To je bil cilj. Narobe! Naš veliki alpinist Nejc Zaplotnik je dejal, če skušaš doseči cilj si izgubljen, ko ga dosežeš, ostaneš prazen. Toda če najdeš pot med temi cilji si rešen in tvoje življenje bo imelo smisel. V Migovcu smo našli pot, kateri lahko sledijo generacije ljudi z odprtim srcem.

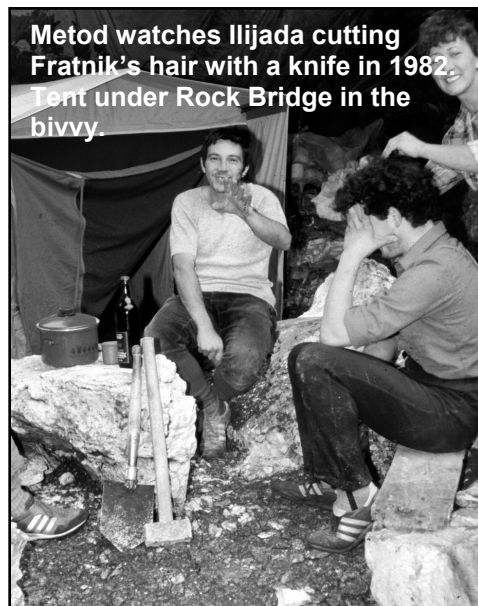
Andrej Fratnik



Migovec Plateau viewed from Tolminski Kuk (ME)



Lesjak Zoran with home-made helmet



Metod watches Ilijada cutting Fratnik's hair with a knife in 1982. Tent under Rock Bridge in the bivvy.

Early Exploration on Migovec by JSPDT (1974-1984)

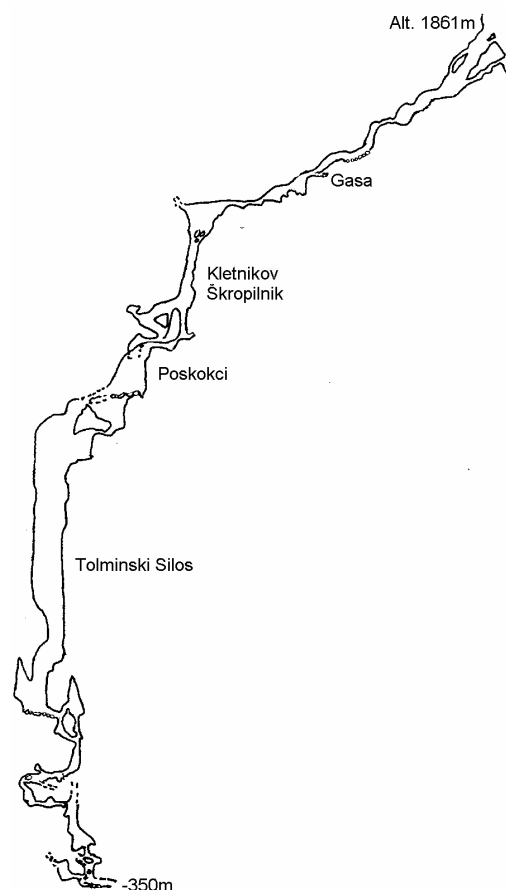
Exploration of the caves on Migovec by the JSPDT first started in 1974. The main members of the club who were responsible for this were Zoran Lesjak, Brane Bratuž, Stanko Breška and Fischione Alfonz. The following year, several other members joined and began taking part in the exploration trips. These included myself (Andrej Fratnik), Andrej Rutar, Andrej Kenda and later Andrej Tomažinčič, Dejan Ristič, Kos Metod, Jarc Stane, Kočič Ilijada and others.



Founder members of JSPDT

M2 Kavkna Jama

Tolminski Migovec, Slovenia
 Surveyed by JSPDT (pre 1994)
 Location 540504/512393
 Altitude 1861m



Initially, exploration centred around M2, named 'Kavkna Jama' meaning 'Jackdaw Cave' after the birds which used to roost in the entrance. The exploration of M2 was carried out between 1974 and 1978 using mostly SRT. We used a fairly standard 'frog rig,' but had to hand-make our own jammers and descenders and carbide lamps (weighing 3Kg without water or carbide!) Exploration of this cave would have been impossible using only ladders, which is what most of the other cavers of the day were using. In fact the bulk of cave exploration at that time was in the lowland Karst regions where caves are spacious and long rather than being tight and deep. When the big pitch, Tolminski Silos, was found, M2 became one of the deepest caves in Slovenia at that time.

M2 has two entrances, a large vertical hole and a small crawling passage below it. Usually the crawling entrance is used except for winter exploration where abseiling into the vertical entrance from an ice axe belay is necessary. There follows a large amount of very tight and sharp passage with several short ladder pitches. Silos is the main pitch in the cave; measuring about 100m deep, it's a very large impressive shaft.

Surprisingly the cave passage closes down immediately after Silos pitch and there are three extremely tight squeezes in quick succession. These squeezes are separated by small pitches making it necessary to remove and then replace your SRT equipment many times. To allow exploration beyond these squeezes, we started camping at the bottom of Silos.

One of these squeezes was enlarged using WWI explosives which had been 'rescued' from an unexploded mortar shell. The chemical (called 'Ekritzit' in German) has a distinctive odour and a very strong yellow colour which dyes everything that touches it. I remember squeezing through the newly enlarged passage whilst wearing my best white woollen thermals. If they existed today they would still have large yellow stains all over them. The termination of exploration in M2 was yet another tight and very sharp squeeze but the potential is still there!

During one exploration trip, I got so badly stuck in one of the squeezes that the others had to haul me out like a corpse by my feet. I also remember the trip when we started bolting down Silos. The first man had gone down halfway and run out of rope at a ledge so he swung onto it take a closer look. He shouted up for the next man to take care as the rope was too short but he evidently did not hear. The next man followed but as he was abseiling he felt the unknotted end of the rope slip through his fingers. But, instead of falling 60m to the bottom and certain death, he stopped dead. Unbelievably, the metal ring (which was lightly crimped to the end of the rope for marking) had stuck between the bobbins of his descender! He was not a happy man and I suspect he got off that rope in a hurry. From the top of the pitch all I could hear was the shouting and swearing...

Surveying in those days was done using an old and bulky army compass and a homemade clinometer. This consisted of a protractor and swinging arm with a weight on the bottom. Many of us still consider the new Suunto surveying equipment as no easier to use than these crude instruments!

Most of the exploration was done at weekends where we would walk up from Tolmin on Friday evening and go directly to the cave; my personal record for this walk was three hours. We usually wouldn't come out again until Sunday afternoon or evening. When we could get transport we usually chose to go to Razor and walk up the eastern side of Migovec as this is shorter than from Ravne. Neither the Razor nor Ravne roads had tarmac at that time.

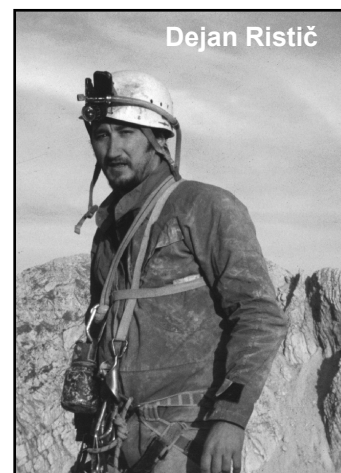


Camping on Migovec 1977
Kenda, Brane, Zoran, Srečko, Fratrik
Rutar, Vladi, Stanko

During the month of October in both 1976 and 1977 there was a period of stable weather so we made one week camps on Migovec mostly for the exploration of M2. At first we camped on the "English Grass" until a storm destroyed the tent. Then we used a bivvy which we nicknamed 'Pueblo' which isn't far from the entrance of M1. There was a good supply of water here but the constant dripping made it difficult to sleep. We later moved up to the new bivvy under the rock arch.



Camping on Migovec 1977



Dejan Ristič

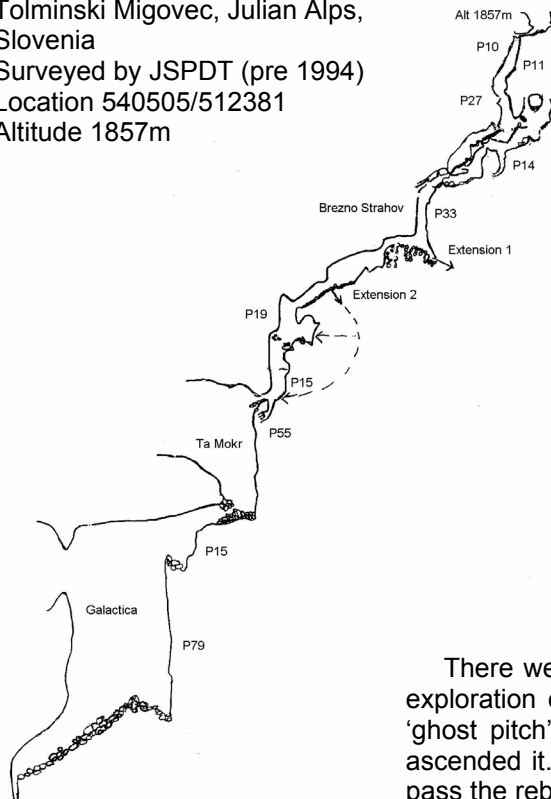
M16 Extended Elevation to Galactica Chamber

Tolminski Migovec, Julian Alps, Slovenia

Surveyed by JSPDT (pre 1994)

Location 540505/512381

Altitude 1857m



The next significant discovery on Migovec was M16 in 1982. This cave was originally pushed to -100m through a very tight entrance series. At the bottom of a series of pitches there is a blind chamber. After satisfying ourselves that the downward leads were impassable, one member spotted a possible continuation 5m above the floor. There was a promising looking flake and we spent several hours trying to lasso it. After we had all given up hope we decided to have one last try before going out and writing the cave off. Obviously this attempt was successful and the rest of the continuation was found.

In 1983 the entrance was enlarged with more WWI explosives. The cave was explored using modern Petzl SRT equipment and Bluewater rope which was given to us by the English caver Allan Richardson (South Wales CC).

There were several significant occurrences during the exploration of M16. The pitch 'Brezno Strahov' meaning 'ghost pitch' was named when a group of three cavers ascended it. Each caver in turn stood on a large flake to pass the rebelay. When the third man stood on the flake it slid down the pitch, coming to rest exactly where they had been standing.

Again, at -547m, M16 was one of the deepest caves in Slovenia and was unusual in that it was in the mountains not the lowland karst.

Exploration on Migovec halted in 1985. From then, we went back to concentrating on Mala Boka with better explosives.

Andrej Fratrik



Brane, Breška and Fishione

"Between 1985 and 1993, a French Team of cavers visited M16, resurveying part of the cave as they went. In 1989, a team of SWCC cavers, led by Roddy McLachlan, also visited Migovec. No major extensions were found by either of these teams, however."

James Hooper

A postcard from Fratnik: From Swinsto to Slovenia

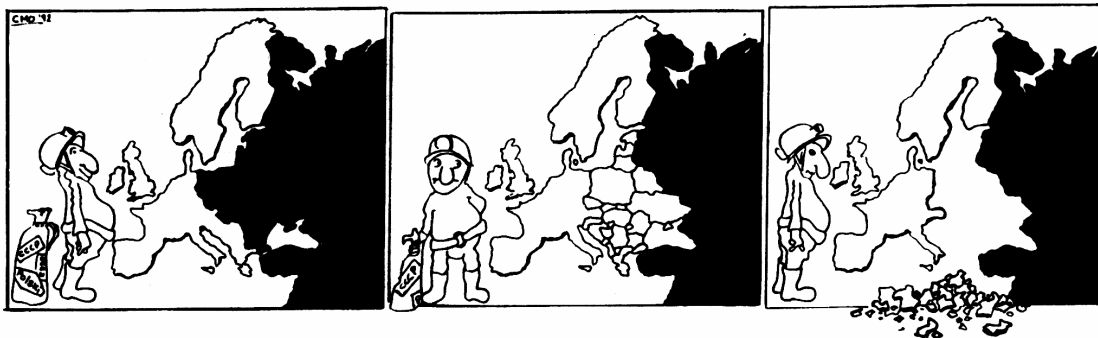
When Mark and I joined Imperial College Caving Club in October 1991, an eventful summer tour had just returned from Monte Canin, straddling the Italian and Slovenian border. The main objective of this trip had been to visit the deep caves on the Italian side of the border, in particular, the Gortani entrance to the Complesso Col Delle Erbe (-935m) and the Abbisso Modonutti-Savoia (-800m). Although members of the club had successfully bottomed these caves, the trips were not uneventful. Herman had fallen 8 metres into a sump at -892m and had taken 28 hours to struggle out - with one good arm, mild hypothermia and recurring double vision. Another close call occurred when a sudden thunderstorm caused a group to wait for 8 hours at -550m until the water levels on the pitches subsided. The caves were undoubtedly dangerous, born out by the fact that they all seemed to be named after dead Italian cavers.

During this tour, a number of people became interested in the exploration potential of the Slovenian side of the Julian Alps. Thus the last week of the trip was spent in (very) newly independent Slovenia, investigating the area and taking advantage of the favourable exchange rate. On paper the potential looked excellent. Monte Canin illustrated this perfectly. The Italian side of Canin had many caves over 600m in depth and had been explored for the previous twenty or so years. The Slovenian side (named Kanin), on the other hand, had only two: Črnelško brezno (-1198m) and Skalarjevo brezno (-911m). Italians and Slovenians had explored these very recently. Consequently, Pete Hambly, Alva Gosson and Harry Lock would always be very keen on Slovenia whenever the subject of planning an expedition came up at a club meeting or in the pub.

"While caving in Italy we started to hear stories of a land to the east of the Julian Alps. A land where the women were dark and mysterious the liquor strong, the food delicious and diverse, and above all, the exchange rate favourable. With such a description, Slovenia seemed a paradise compared with a rather bleak NE Italy, dominated by the terrible scars of ski routes. Before long, more and more of our time was spent sampling the touristy areas of this recently war-torn land."

Alva Gosson, 1991

We had just joined the club, though, and there were too many things to learn before we could think seriously about expeditions. The first trip that made me think, 'Wow, this caving is good' was the Simpson's - Swinsto exchange: still a great favourite today. We just couldn't get enough of the Yorkshire classics - King, Penyghent and our first rigging trip in Vespers among others. Our first real challenge came in the summer, however, when the club went on a tour to the Pierre Saint Martin in the Pyrenees. Deep caving, interesting route finding, some cowboy rigging (chest tapes round dubious looking flakes etc.) and my longest caving trip to date (20 hours) taught us much about deep alpine systems.



The following year, Mark was in Hong Kong and I spent the first term in Germany. However, we still got some good caving done and managed to recruit a few keen cavers. In particular, Iain McKenna, who Mark and I knew from our undergraduate years, and both Richard Anderson "Chard" and Richard Moon who I was sharing a flat with. In the summer we went to the Vercors and bottomed Antre des Damnés (-723m) and Scialet Trisou (-232m). As we were interested in finding out about underground camping, Mark, Iain and Richard Moon set up an underground bivvy in a relatively easy environment (Fumant). By all accounts they had a very uncomfortable night, learning that if you are going to camp, it must be well organised and comfortable, otherwise you might as well just keep going.

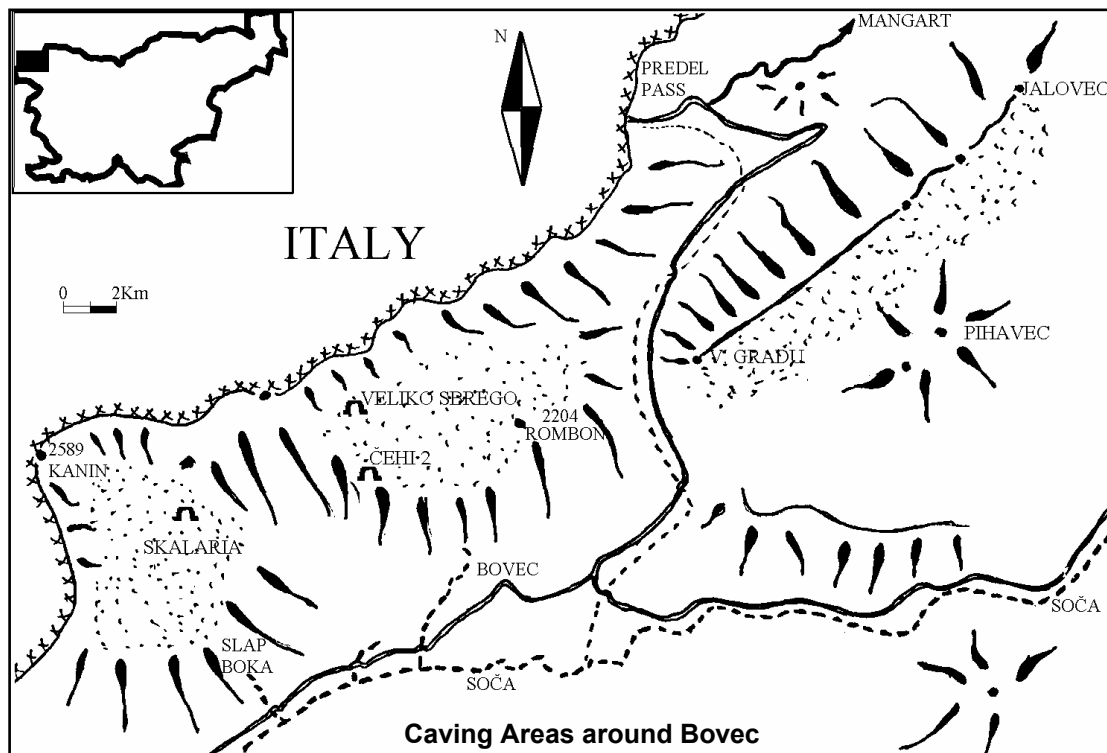
"This mighty massif (Monte Canin) sits astride the Italian and Yugoslav border to the NE of Udine. The barren and inhospitable plateau to be found at the 1700m - 2000m levels are considered some of the finest and most spectacular examples of lapies, dolines, shafts and fissures within Italy...all the deep systems are characterised by long, narrow meanders punctuated by cold well-watered shafts, and their exploration is therefore not easy."

The Underground Atlas,
Middleton and Waltham

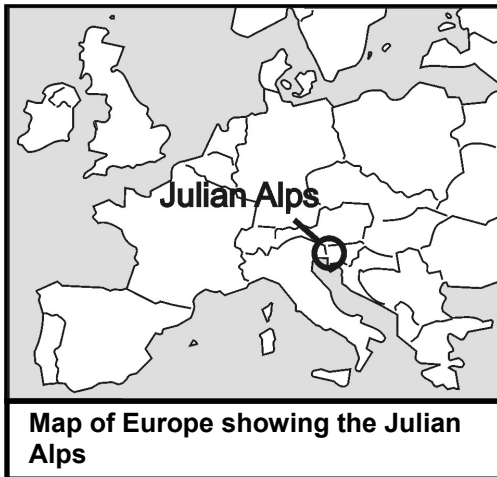
At the beginning of the 93-94 academic year, we were really beginning to get into the idea of organising a serious expedition and Slovenia was soon chosen as being the best option for a location. Mark, Harry and I began the task of literature research and writing to Slovenian and Italian cavers to try and gain permission to explore in an area. We were also very successful in gaining grants for the expedition and within a few months of putting proposals in we had £8000 pounds of sponsorship from various college sources. Gaining permission was proving to be somewhat more difficult. The letters we got back from Slovenians were often ambiguous or mistakenly indicated that they believed we wanted a paid guide to visit caves.

By the beginning of 1994, we still had no definite plan and so we decided to have a reconnaissance in May to try and meet people and organise something for the summer. I sent off letters to various people saying that we would be coming to Slovenia and would be interested in meeting them. In the end I got two responses, a letter from Gregor Pintar and a postcard from Andrej Fratik saying simply 'You are welcome'.

Jim Evans



The 1994 Reconnaissance: First Contact between IC³ and J.S.P.D.T.



After arriving in Slovenia and briefly visiting some non-caving friends, Harry, Andy and I went to see Gregor Pintar on a Sunday evening. His letters had been a little bit ambiguous so we weren't sure exactly what to expect. Gregor's first letter said:

"It is hard to explain the present situation and specially the spirit among Slovene cavers after some big and important discoveries of Italians on the Slovene part of Kanin mountains. So nobody has a real interest for further explorations where the authors are foreigners. You chose the only possible access to Kanin - to join a Slovene club."

After informing him of our plans for a recce, Gregor replied:

"Your reconnaissance trip at the end of May is a good idea and also of great help to me. I look forward to meeting you in Slovenija. Together with a pint of lager on the table we will find out all the details you require, including some more you are even not aware now."

So this sounded reasonably promising. After giving us generous portions of Slivovic (a local spirit) and producing bottles of beer, he proceeded to describe recent events on the Kanin Plateau.



Italian cavers from CGEB (Commissione Grotte "Eugenio Boegan") had been exploring near Rombon and had been allocated an area to work in. Their most recent discovery had been Čehi 2 (-1393m) a cave originally explored by Czech cavers (hence the name) and then extended significantly by the Italians. In 1992, Dejan Ristič (JSPDT) made a solo trip to the bottom of this cave. Slovenians from a Ljubljana club (Društvo za raziskovanje jam Ljubljana) together with Dejan, also had a smaller scale operation on the plateau in the form of a two week camp every August. They were pushing Vandima at a depth of -1100m, though they were hoping it would finish soon as only two people could reach the bottom of the cave and it was very dangerous when wet.

After long discussions with Gregor, it seemed that he was not sure if we could get permission to work with his club on Kanin: we would need to ask the people in the camp at the time. This didn't really seem to be a very concrete basis for organising an expedition but it was all we had at the time.

The following day we drove over to the Julian Alps to meet up with Andrej Fratnik from the JSPDT (the caving section of the Tolmin Alpine Club). During the day we looked at possible group accommodation before meeting Andrej Fratnik, Simon Gaberšček and Dejan Ristič.

JSPDT were also involved in the exploration on the Kanin plateau, their main project at the time being the resurgence cave to Kanin, Mala Boka, which they had already pushed to +400m, bolting up pitches as they went. Then they told us about Migovec, a nearby mountain they had worked on a few years before. They now lacked the manpower to work on it but believed it had potential and said we could explore there if we wanted. It looked promising and Simon agreed to take us up the hill later in the week.

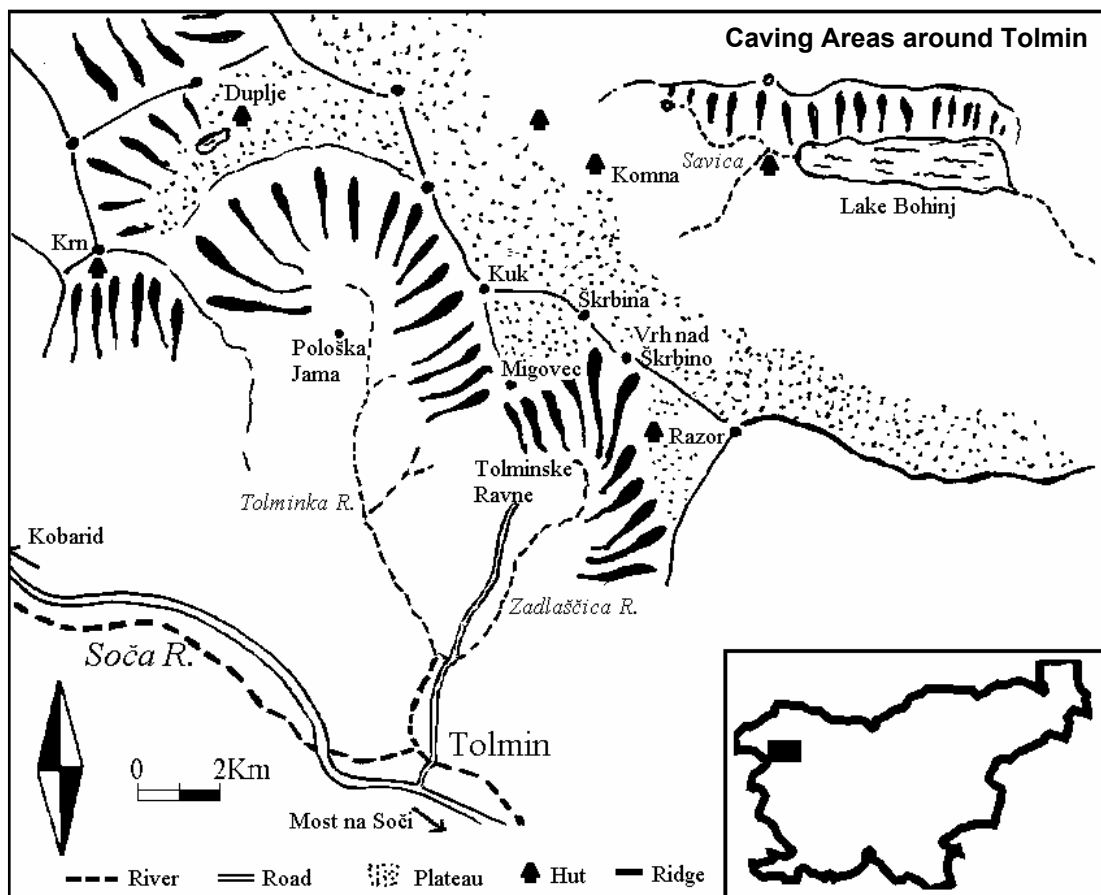
Over the following two days we walked up to the Skalaria hut, checking out the karst of the Kanin and Rombon Plateau. It looked very impressive, like a lunar landscape. We found the Veliko Sbrago entrance, rigged Italian style with a single plate and stopper knot at the top. (In 1996, this cave was pushed below -1000m by Andrej and cavers from CGEB.)

We arrived back at the car with dehydration, sunburn and blisters, with a sudden realisation of the slog it was going to be to carry caving and camping gear to the top of these mountains. The following day we checked out Mangart, further north. It had very impressive winding tunnels up the road which were built by the Italians during the Second World War. The resurgence marked on the map seemed to be fairly insignificant, a small river coming out of pebbles. As we climbed higher, we could see much evidence of surface drainage. The limestone appeared to be dolomitic, and we saw very little cave development as we walked to the summit.

We arose early on Friday morning to meet Simon, as previously planned, and drove up to the small hamlet of Tolminské Ravne, the nearest place to Migovec by road. My blisters were quite bad by this time and I struggled to keep up during the steep ascent. We were on the top of the mountain after about two and a half hours and Simon showed us two cave entrances: M1 and M16. Unfortunately we didn't pay that much attention at the time (dehydrated with only a can of Zlatorog beer to drink) and we ended up taking four days to find these caves again in the summer!

Migovec looked like it had real potential and we decided it would be a good location for an expedition. There was now a plan at last and we could hardly wait to return in a few months time.....

Jim Evans



The Migovec Plateau: The known situation in 1994

A brief note on the known Geology and Hydrology

The Migovec plateau, in the Triglav National Park, lies at an altitude of between 1800m and 2000m, between the peaks Tolminski Kuk (2085m) and Tolminski Migovec (1881m). It is formed of Upper Trias limestone. The plateau catchment is believed to resurge at the head and along the length of the Tolminka valley (300m), though some water may also resurges into the Zadlaščice at Tolminske Ravne (980m). Both of these rivers are tributaries to the stunningly beautiful Soča river, one of the major drains of the Julian Alps. (Incidentally, the Soča front claimed the lives of an estimated one million people during WWI and is described in Hemingway's "Farewell to Arms.") It is also possible that drainage from the plateau flows North East to the Slap Savica waterfall above Lake Bohinj. Before 1994, no sizeable underground rivers had been discovered so it had not been possible to do any further analysis on the hydrology of the area.

James Hooper

The known Caves on Migovec in 1993.

Cave	IAS Co-ordinates	Altitude (m)	Depth in 1993 (m)
M1	540502/512380	1858	-61
M2	540504/512393	1861	-350
M3	no information	no information	no information
M4	540498/512389	1864	no information
M5	no information	no information	no information
M6	540515/5123370	1854	-67
M7	540535/512329	1742	-20
M8	540533/512332	1735	-13
M9	540537/512332	1735	-19
M10	540495/512376	1870	-33
M11	540544/512389	no information	-6
M12	540523/512361	no information	-15
M13	540511/512413	no information	-15
M14	540496/512396	1867	-22
M15	540487/512395	1864	-58
M16	540505/512381	1857	-547
M17	540478/512397	1861	-50

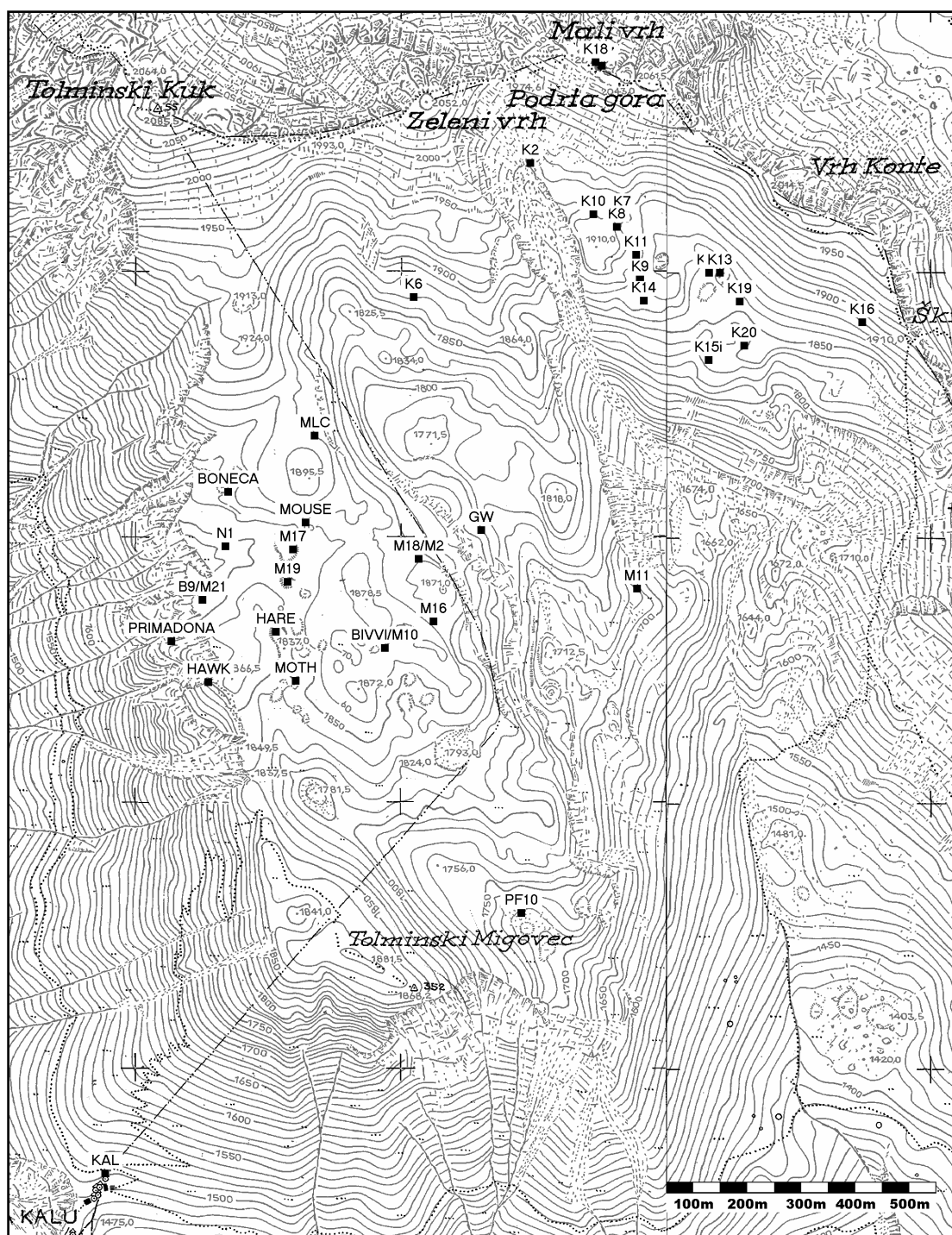
The above table shows the names and depths of the caves known on Migovec in 1993. Only a handful of the caves M1 to M15 are really worth noting and it is difficult to understand why holes such as M11 (6m deep!) were noted, as the plateau has many similar or deeper surface holes which were not then formally recognised. The main caves explored by JSPDT were M2 and M16 (see previous articles).

Accurate co-ordinates of these caves were not known in 1993 (and so, in 1994, a significant amount of time was spent located and re-marking the caves with spray paint).

The co-ordinates and altitudes (above sea level) given in the table are the result of several years of subsequent work by ICCG, using both GPS and accurate surface survey. These IAS co-ordinates match up with co-ordinates in other parts of Slovenia and are used throughout this report. The least significant digit is 10m, so 540535 and 540537 differ by 20m.

James Hooper and Clewin Griffith

Map of the Plateau



This map shows the plateau together with some of the main cave entrances found up to 2006.

Most of the locations are taken from GPS readings in 2006, some omitted for brevity.

PF10, M16, M18, M17 and M19 locations derived from surface survey.

Kal is also known by IC cavers as 'The Shepherds' Huts.'

1994

A Steep Learning Curve

"We have a habit in writing articles in scientific journals to make the work as finished as possible, to cover up all the tracks, to not worry about the blind alleys or describe how you had the wrong idea first, and so on. So there isn't any place to publish in a dignified manner, what you actually did in order to get to do the work."

Richard Feynman, American physicist, Nobel Lecture, 1966.



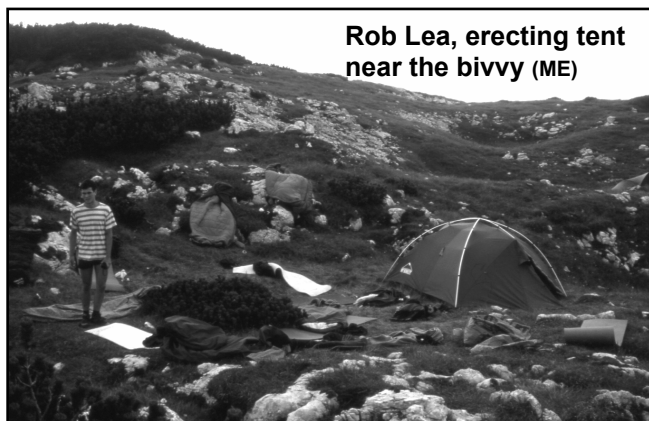
The view from Ravne: (from left to right)
The path through the woods, the peaks of
Tolminski Migovec and Škrbina (ME)

In a sense 1994 was a very steep learning curve for us. We managed to pack in as many mistakes as could be imagined into this expedition. Although some of the problems were inevitably due to settling in to a new area, many were as a result of our inexperience. In terms of pre-planning and fund raising, the expedition had been very successful. However, one of the big problems that the expedition had was trying to cater for a large variety of expectations.



The Bivvy (IM)

Although many people were interested in exploring, there were a significant number who were there for a holiday. The fact that we had a comfortable base camp in a house in Tolminske Ravne (rented from an "Old Git" at a cost of hundreds of pounds) didn't help - much more time was spent down the hill than in subsequent years. People only tended to stay at the bivvy on the Plateau for a few days at a time. This was partly a necessity due to our inefficient methods for food preparation and water collection.

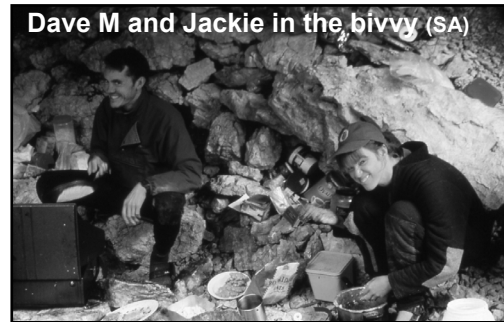


Rob Lea, erecting tent
near the bivvy (ME)

1994 was the only year (so far) where two union minibuses went out, one for the full six week period with the "hard core expedition" and the other for the middle three weeks of the expedition with many of the "summer tour people." In total, 23 members of ICCC made it out to Migovec. We were made to feel very welcome by Andrej Fratrik and Simon Gaberšček, who joined us at times on the mountain and negotiated limited permission for us to camp in the National Park.

Some of the older members of the club (including Pete Hambly and Tim Palmer) foresaw problems that might occur and, a few months before the expedition started, broke off to set up their own "rebel" expedition to Mangart with friends from North Wales Caving Club.

Food was a big problem, we bought everything in Tolmin and it tended to be either bulky and fresh or tinned (with the exception of dried Peak meals which are almost inedible). Additionally, the food didn't have a high enough fat content. There were people on the expedition who believed that fat was bad and that the most important thing was carbohydrates. Others believed that fat was essential and lively discussions would take place between these two points of view.



As a result, perhaps, of a relatively low fat diet there was a lot of lethargic and hungry people around as well as a lot more in between meals of chips or mash and margarine. Apart from having a low fat content the food was not appetizing enough – the traditional dinner we had adopted from previous tours was a homogenous slop of tomatoes and chick peas, the traditional breakfast was bread and jam. Water was also a big issue; the way we got water was from melting snow into water bags and also by carrying water up the hill. We had no barrels up top and so had very low capacity for water storage. All in all we weren't very well prepared but nonetheless, some exploration took place...

Jim Evans and Mark Evans

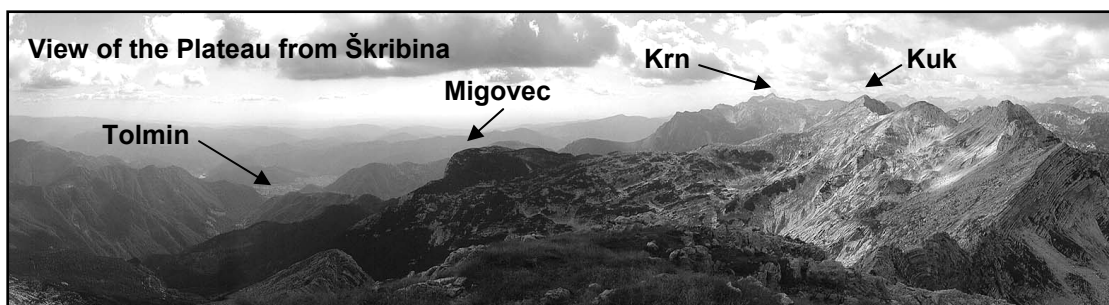
Diary Extracts '94

"Warm morning. Lay in the sun drying out till a brew was put on. Odd weather - really bizarre. Bivvy is in sun but cannot see more than a few hundred metres in any direction before hitting walls of thick, grey cloud. "

"Pete staggered into the barn in the small hours of the morning having walked all the way from Tolmin after his latest liason-dangereuse. I say walked - he says he ran most of the way convinced he was followed by wild boar, ghosts and moving rocks! - what's he been on??!!"

"Iain and Andy finally arrived at the bivvy. They had got halfway across the face of Migovec when it got too dark to see, so they spent an uncomfortable night huddled in a bush afraid of falling down the cliff."

"A thunder storm started as we reached the bottom of the mountain. We ran a little way, then stopped as the rumbling was prolonged and distant. Then, less than 100 yards away, lightning struck a tree. We removed our metal-framed rucksacks and pegged it across the flat meadow."

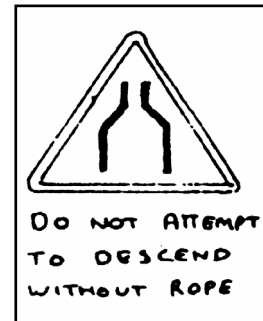


The Exploration of White Shiver Pot (M20)

Another blissfully sunny day. After a few fruitless hours of exploration, finding nothing but blocked shafts, Harry, Chris Birkhead, Jackie and I rested on the ridge near Škrbina. We admired the magnificent panorama, dreamed of discovering a truly huge cave, and relished the delights of the finest cherry flapjacks, washed down with a warm infusion of peat and twigs - leftover from using tacklebags for snow collecting. In the immediate foreground lay a shaded dry valley with several enticing holes.

The largest pothole was 15m across and appeared to drop down about 20m to a snow-plug. Harry began rigging the rope, taking care to avoid dislodging any of the abundant shattered rock, while I prepared to descend the monster. I soon began to abseil tentatively down, feeling a little drunk on the excitement. After fifteen metres, I encountered the temperature inversion layer and plunged into a pool of what seemed to be near-freezing air. At this point, the error of wearing T-shirt and shorts became apparent, but curiosity spurred me downwards. The last few feet were the worst, as the rope twanged on the loose rock wall above me, showering the snow below with fine shingle. Finally, the Eagle had landed and I made firm contact with the frozen surface of the snow plug.

To date, all the snow plugs that we had looked at had completely blocked the shafts and I didn't feel confident that this one would be any different. However in one corner, underneath an overhang, I spotted a hole leading down through the snow. The walls of this sub-shaft were made of solid, but very dirty ice. After some deliberation, I pressed against one grubby wall and descended slowly down the narrowing gap. To my horror, as the end of the rope approached, I noticed that there wasn't a knot in the end: hurriedly I tied one. At the very end of the rope, I found a small slot in the shaft and climbed in. This appeared to be going somewhere. Was it an air pocket in the ice or the start of something bigger?



"Capturing the Fear"
Descending into White
Shiver Pot (ME)

Excited talk filled the bivvy the following night when Harry and others returned with the news that they had pushed the cave down deeper, to -75m. Several bottles of Slovenian plonk later, Iain and I were grateful to the rest of the team as we somehow became the following day's exploration party.

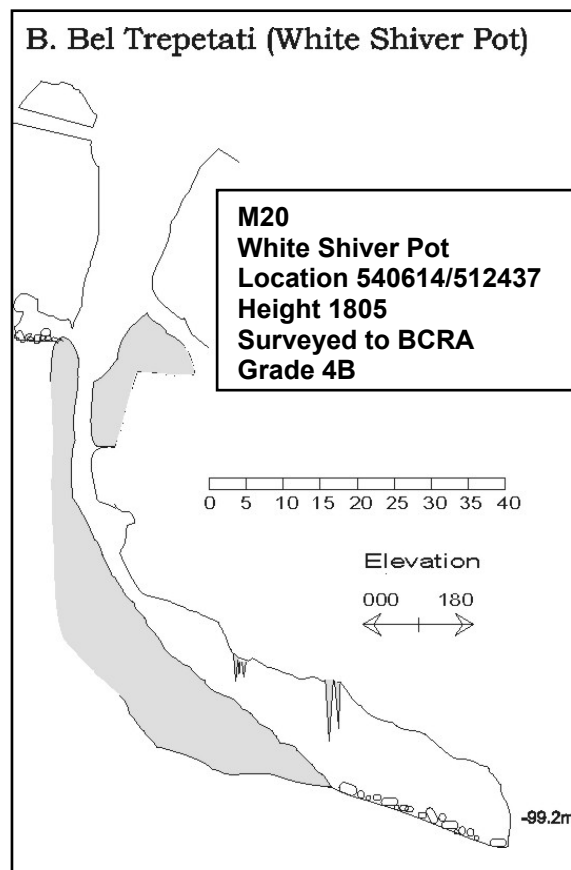
The next morning, after a massive photo session at the first rebelay, "capturing the fear," I joined Iain at the flat limestone wall, where Harry's footprints ended, 15m deeper than I'd been before. After gaining his bearings, Iain steadied himself and hammered in the first spit. Finally he was ready to insert the cone. "Bollocks! where are they?" The next 15 minutes were spent in sub-zero temperatures hunting for the cones which were wrapped up in white tape, a colour scheme which didn't aid their discovery. From then on the pitch became known as "Cones Hotline."

To our left was a high-roofed side chamber, 10m further down the slope. I tentatively abseiled down the icy, slippery rope to a boulder floor, wary of a huge, three metre long icicle poised precariously above my head. As I moved towards a possible way on, the floor suddenly collapsed and dropped about a foot. If my heart wasn't pounding already, it was now in danger of arrest! Beneath my feet, the gap opened out into an ominous abyss.... going where? This was a job for Mr Maniac.

Iain descended on his back and slid down the steep snow slope, passing under a huge inverted candelabrum of 3m long icicles, until he was enveloped by the void. Several minutes later came the cry, "Rope Free! It's bloody huge!!"

Mimicking Iain's technique, I slid down into a 60m wide chamber. Huge icicles decorated the roof and to one side, an ice waterfall clung to the wall. Every surface was enveloped by a thin layer of clear ice, which glistened when caught by our headlamp beams. Tiny ice crystals, sent aloft by our movements, created a sparkling mist to add to the mystery. But danger lurked everywhere in this stunning grotto, from the incredibly frost shattered walls to the precarious icicles which tapered towards their point of attachment.

In the ensuing couple of hours, we exhaustively searched every inch of wall, in the hope of finding a lead from the chamber but to no avail. The initial elation of discovery soured to disappointment. We consoled ourselves with another flapjack and regrettably headed out to inform the others.

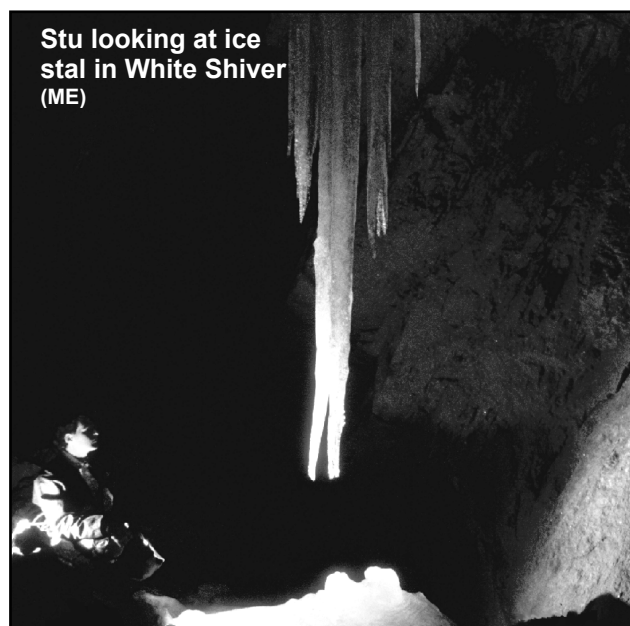


At the foot of the entrance pitch we encountered Malcolm, concerned by the looming dusk and only then realised that we had been gone over six hours. The gear was hastily packed and we set off together, to drown our sorrows over a bottle of vino around the camp fire. White Shiver pot (M20) had ended at a surveyed depth of 99.2m (though it's actually a tad over 100m if one counts a drop behind a cleaved rock).

Rob Lea

"Bingo! Rich, Gavin, Tony and I went prospecting and found a series of deep holes on the plateau near the bivvy.... Plan for an Alpine start the next day. We were especially happy because this find did not involve the 'old lags' who tend to dominate the scene whenever they can. This was virgin territory and it was ours!"

Stu Adler

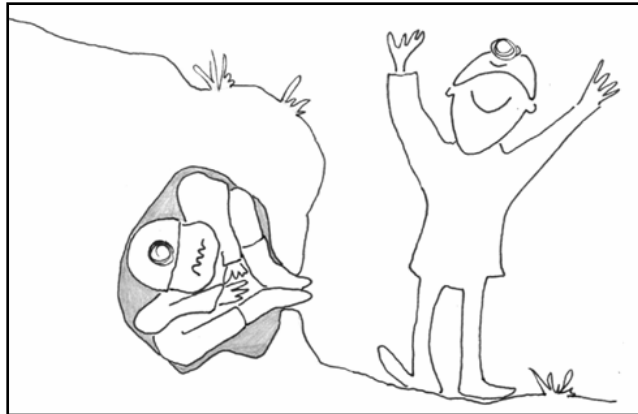


The Discovery of Torn T-Shirt Pot (M18)

Torn T-Shirt entrance was found one August afternoon when Clive, Malcolm and I were wandering around the eastern edge of the plateau:

"Here is a likely hole - I'll have a look in" said Malcolm. Ten minutes later he returned.

"Well the good news is that this cave is 350 metres deep..... and the bad news is that it's a second entrance to M2."



Disappointment – our hopes had been built up as he'd been gone for a while and then dashed on his return.

"Here's another likely looking hole," said Clive. "Jim, I believe it's your turn....."

I put the Petzl zoom on and cleared away some of the scree at the entrance, continuing head first into the cave. I got to a tube rift and continued to the head of a 6m climb. This looked promising but I didn't want to continue any further with just shorts and a T-Shirt. I headed out, ripping my T-Shirt in the process, to tell the others. We decided to use bits of my T-Shirt to mark the entrance and return as soon as we got a chance.

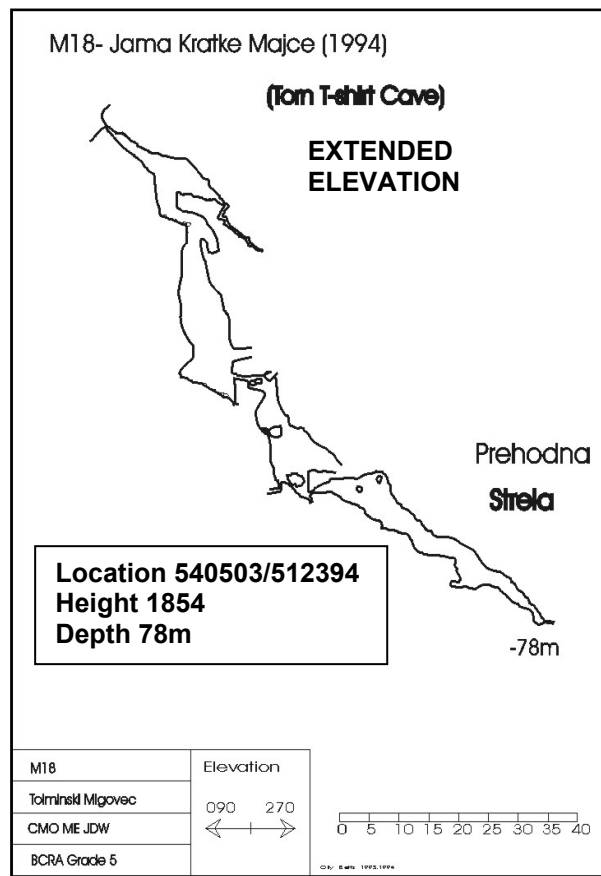
Several days later, I returned, this time with Rob and Iain. We free climbed the drop to the head of a moderately large (25m) pitch, hammering in two bolts for a Y hang.

"Nice Shaft - ROPE FREEcan't see any obvious ways on but you might as well come down." The others joined me and we began looking for possible ways on.

"Looks like there's something up this climb," said Iain, always keen to climb where possible.

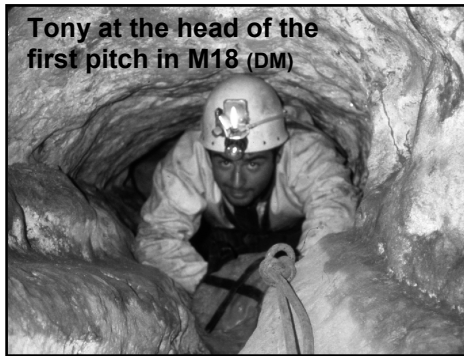
"It looks well loose - we'd better garden a bit," was Rob's response - gardening is Rob's favourite activity. He was right here though, it needed doing.

After a while, we proclaimed it safe and crawled through the passage to find a dodgy climb up (later to be rigged as a pitch). At the top, we found ourselves at the head of a short drop into a chamber. One trip later, with the same team armed with ladders and a drill, and we were in the chamber. Again, no obvious way on. But wait. What about this squeeze up into that rift?



"I'll give it a go," said I. With a bit of struggling I was through

"Looks good - you might as well follow me."



Only Rob took up my invitation and we headed down the rift (now known as Shreddies) for the first time – negotiating the awkward sections, climbs and squeezes in haste – eager in our discovery. The rift started to slope steeply down and we sensed that some sort of transition was coming. Then round the next corner....

"Where do we go here?" I said to Rob. "There doesn't seem to be an obvious way."

"I can't see one either - I'll just try the bottom of the rift."

We were unable to find a way on that day. Heading out, we heard booming noises in the rift, which turned out to be lightning accompanied by a violent rainstorm. Rivers started coming out all over the place. When we surfaced, we could see that there had been some concern for us as no-one knew what we'd found.

I became convinced that the cave must go and tried to persuade more people to have a go at the five hour trip to the end and back. Mark, Jackie and Clive went (and surveyed), but again, they didn't get any further; so unfortunately that was it for 1994.

There was some debate on what to call the cave, one possibility was "lightning hole" because of the storm, but that sounded a bit corny. Mark started to call it Jimsky Jammer to go with Harry's hole over the ridge (later renamed White Shiver Pot), but we decided that naming things after people was not exactly in the spirit of group exploration and as Clive had started calling it "the cave marked by the Torn T-Shirt," the name kind of stuck.

Jim Evans

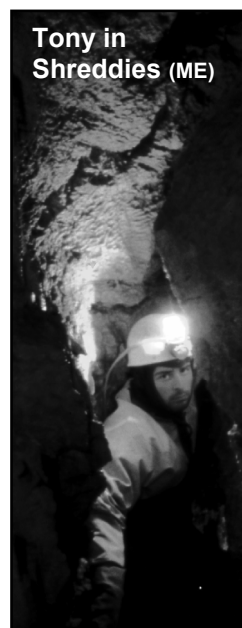
"Finally set off to complete survey of Torn T-Shirt. Surveying OK but a complete pain. Dave, having climbed to within half a metre of the bolt at the top of the pitch, dropped the tape and had to abseil down and climb all the way back up again. Did we laugh!?! Instruments very difficult to read - need a good light from the side.

In the rift, I tried to get my carbide to shine onto the compass but only succeeded in setting my hair alight. Last bit with station lengths of only 1 to 2 metres was very tedious. Out about 8.30. No rain but thick swirling mist - visibility only about 10m at the most. The pink string from M16 was very useful to find the way back to the bivvy."

"Late start all round. Eventually went down Torn T-Shirt to continue surveying down the rift at the bottom. Managed a few stations until, oh dear I got stuck in the squeeze, so passed survey gear through to Mark to continue. Actually I could've got through but surveying in a winding rift with Jackie was becoming hell so the squeeze provided excellent excuse to get out of it.

Back at the bivvy that evening, 2 bottles of wine were opened but between 8 it really only tempts and doesn't satisfy."

Clive Orrock



A change of tactics: Rigging M16

Three weeks of pitch bashing on the plateau hadn't brought much success. Our hopes for large, easy discoveries were slowly being crushed. We thus decided to rig M16 to give us the chance to do some deep caving. It was also feasible that there could be new areas to find inside the cave...

After taking a few days to find the entrance, (Harry and I had only seen it once during the winter), M16 was rigged over a number of trips, putting extra bolts in as we went. My first trip in the cave was with Mark. We continued the rigging from the top of Brezno Strahov, putting a bolt in at the top (I think this was the first bolt we'd ever put in). Mark headed down the pitch, which looked daunting with loose boulders everywhere; it started off with a steep boulder slope and then suddenly dropped off.

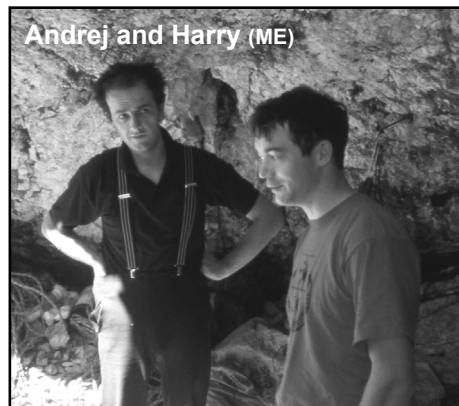
"I've found a rebelay bolt.... looks reasonable.... I'm going to rig it," Mark shouted up with a slightly nervous tone.

It obviously wasn't a brilliant bolt, I thought to myself. He was soon past it, however, and calling up the pitch to tell me there was one more free-hanging rebelay. After a short wait, I heard a relieved "Rope Free" and followed him down the pitch.

We carried on down the next small pitch, which led to a balcony onto a large chamber. After a short drop and a traverse over a hole, we were standing in its centre. From here, there seemed to be a lot of possibilities - we couldn't work out the way on. After some searching, we left the problem to the next group.

On the following trip, Harry and Rob took Andrej with them and therefore had no route finding problems. They rigged their way down Ta Mok and on to the vast Galactica chamber, the floor of which is over 350m below the entrance. Rob came back with stories of Andrej's economical rigging style and fast prussiking method...

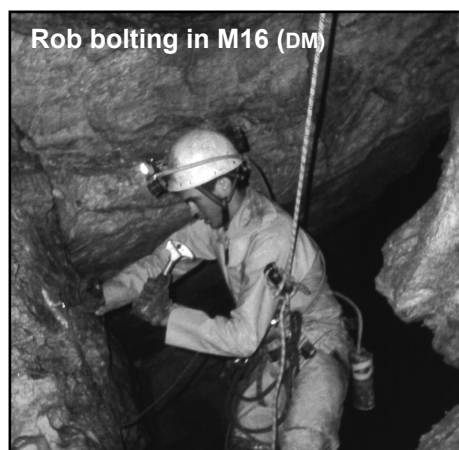
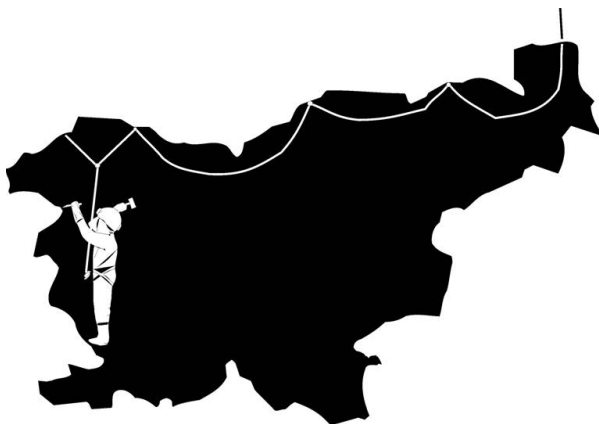
Jim Evans



Andrej and Harry (ME)

"Fratnik doesn't believe in clipping in - he peers over massive pitches with no cowstails - he only has one anyway. He prussiks one step per second and free climbed as much of the pitch as possible before ascending on the rope - 'Why you always use rope? Climbing is faster!'"

Rob Lea



Rob bolting in M16 (DM)

Nothing ventured, nothing gained: Below Brezno Strahov

On another trip into M16, Frank and I found a way on through the boulders in the chamber below Brezno Strahov. We soon reached a small, sharp rift which we followed for about 30m. Along the way we noticed small pieces of brown cotton in various places but were not sure what they were (finding out later that this was 'Topofil' used by a French surveying party a few years earlier). We soon reached a climb down into a chamber with a small inlet stream coming in. The way on looked tight, but after some faffing, Frank managed to squeeze through at the bottom of the rift. I followed him after a number of attempts at working out the best way to approach the constriction (forwards, backwards etc). Beyond the squeeze a difficult climb down led to the head of a pitch. We placed a couple of bolts and descended for ten metres or so. Another drop followed immediately. We hammered in two more bolts before leaving the cave. We were keen to tell the camp of our exciting, going lead.

On the following trip, we recruited Malcolm to come with us and set off with plenty of rope. Now familiar with the route, we wasted no time in arriving at the limit of our previous exploration and quickly dropped the pitch we had bolted. This led to a difficult looking climb. As soon as Malcolm saw a black hole at the bottom of the chamber below, however, he climbed down with great agility. Throwing rocks down this hole, it was obviously a long way to the bottom and looked very exciting.

"No need for any bolts here," said Malcolm, rigging his way onto a few dodgy naturals. We didn't question him. "I'll just go down a bit and see what the pitch looks like....I think I can see a ledge not far down." After a bit of a pause, Malcolm shouted back with the news - "There seems to be another rope on the opposite side of the pitch, it looks very familiar."

This was a disappointment; we had obviously found an obscure way to the top of Ta Mok. Our hopes for a new bit of cave were gone, though perhaps we could find another lead? We decided to have a closer look at the passage above. We climbed up a few pitches of the inlet. This got tighter and more difficult to climb until we eventually gave up. Heading back out of the rift, I noticed that it was possible to keep going ahead instead of climbing back up through the boulder choke. I went to investigate while the others waited, it carried on for a bit, and then it seemed to be opening up and then.....

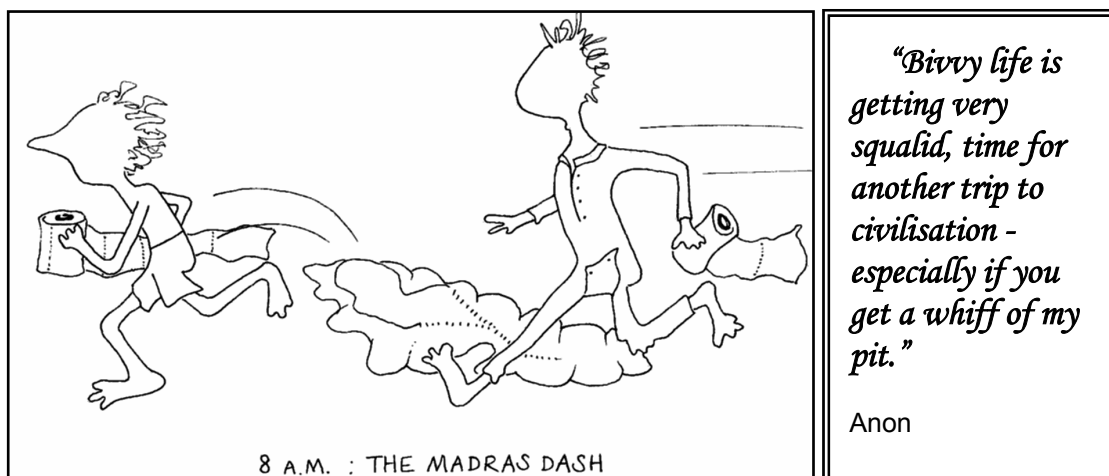
"Wow a big chamber.....oh..... shit!"

Malcolm was laughing.

"If I needed a concise summary of what you'd found that was perfect."

I had broken back into M16, between the chamber and Ta Mok. The whole area seemed to be a complex maze of interconnecting passages (and what we didn't know then was we hadn't seen the half of it).

Jim Evans



"Bivvy life is getting very squalid, time for another trip to civilisation - especially if you get a whiff of my pit."

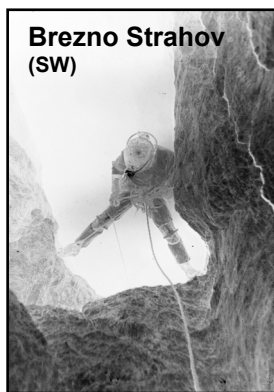
Anon

Tearing and Swearing: Small extensions in M16

One of my most memorable series of trips in 1994 was with Simon Gaberscek. Most trips into M16 were concentrating on the "business end" of the cave, Galactica. We'd gone for the opposite approach: starting from the top and working down. The first grotty rift we tried was at the bottom of the first pitch series! It went without much persuasion and gained us about 30m of steeply sloping rift passage which culminated in an impossibly tight bend. The only lead from here was a small window high up in the left wall. "Do you think that might go somewhere?" I said. "Yeahproably" said Simon, explaining that an almost identical lead had been the key to the last cave system that they had explored. An hour later we gave up, there was no way we were going to get up there without a bolting kit and rope. No one has been back since! On the next trip we decided instead to concentrate on leads a little further down the cave.



Simon (ME)



Brezno Strahov
(SW)

We found a 'promising' looking lead at the base of Brezno Strahov. A climb down through boulders led into a rift which went on for 10m or so before tightening considerably. There was a large carbide cross on the wall, "Looks like the limit of exploration!" I said. I was about to add a comment like, "No wonder, there's obviously bugger all left to find" when I noticed that Simon was already reversing purposefully into a crack in the floor. I knew that this was the beginning of a lengthy struggle.....rip....oof....tear..... some swearing (in Slovenian).....etc. About half an hour later, he seemed to have moved about a foot or so. He'd already lost most of the arse of his oversuit and I was wondering how long it would be before he drew blood! Very soon afterwards, the final sliver of material which had been hindering his progress came off and he was through.

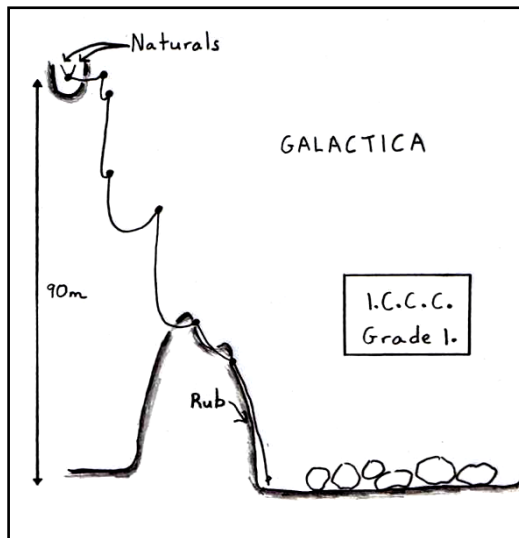
After some hammering with a stone to remove the really sharp bits, I followed him. "What happens if we can't get back?" I asked as I reached the crux point. "We'll worry about that later" came the reply. Well ask a stupid question, I thought. On the other side of the squeeze, we made our way down a steeply sloping, low, sharp rift passage. This was that real razor sharpness which is characteristic of all unexplored rifts on Migovec. After 10m or so we came to the head of a 5m pitch which Simon rigged with some difficulty. Below the pitch the rift continued, slightly larger for 20m until another pitch was reached. The pitch head looked awful, the passage cross-section looking like an inside-out porcupine. We unanimously decided to come back another day and headed out to find Jackie who we'd left at the foot of Brezno Strahov. We'd been gone for more than two and a half hours and she was totally frozen.

"Mark really had an epic in the cave when his light went out half way up Brezno Strahov and he couldn't shout loud enough for me to hear. Luckily he managed to get his spare going in the dark."

The next day I rigged "porcupine pitch" and it too turned out to be around 5m deep. Again the rift continued descending for 20m until we reached the dodgiest looking passage I have ever seen! Two car sized boulders were precariously wedged together across the passage. The scene looked like the closing stages of a massive Jenga game, and it was our turn to play... We decided to pass. The way on was either over or under the boulders, neither option was very tempting and after a good look round we satisfied ourselves that this was going to have to wait for another year.

Although these trips only gained us about 60m of passage, the lessons learned were vital. You have to work for every inch of new passage and look at the most unlikely leads. The two leads that we looked at were dead ends but there are plenty more. The next year we came prepared with hammers, chisels and crowbars and we weren't afraid to use them.

Bolting up in Galactica Chamber



The way Galactica chamber is drawn on the original JSPDT survey, there seems to be a passage high in the roof, leading off. As this is all we had in the UK, we decided that we should attempt to reach this passage and would therefore need a bolting platform. Rob's dad designed and built an excellent platform which was first tested slightly closer to home (illicitly bolting up the inside of the Queen's Tower in South Kensington).

Once we were in Galactica chamber, we couldn't see an obvious passage way, despite some fairly intense looking. I did manage to burn my hand quite badly though while trying to look at the roof. My carbide melted my glove which then stuck to my hand.

The closest thing that resembled a lead was about 20m above the lowest part of the chamber. Malcolm and I decided to have a go at reaching it and after some hairy climbing; Malcolm got himself up to a flake about 8m up.

"Looks a bit dodgy to carry on... I'm going to put a bolt in."

"Good idea."

I agreed wholeheartedly, I was getting a bit nervous watching him so precariously balanced. After hammering the bolt in, he then assessed the climb:

"I don't think this is free climbable - I think you'll need to use that platform."

I noticed he'd used the word 'you' and took the hint. I began to assemble the platform while Malcolm dropped back down. Once I'd prussiked up to the bolt and pulled up the platform, I began to install it. With all the gear you need for this kind of climbing, it's like another level up from rigging - it takes some time to get used to the procedure. Once I was standing on the platform, I began hammering a bolt in.

"Hey, this is quite comfortable when you get used to it."

"Good, but it won't be comfortable to lug out of the cave," was Malcolm's response.

A couple of bolts later and I was almost at the top. My hand was now quite painful from the burn and I needed a break. Once I had descended the pitch and the adrenaline of the climb had gone I realised that my hand was actually very painful and I would need to exit the cave to get it treated. We finally got out about 2.00am, cold wet and tired.

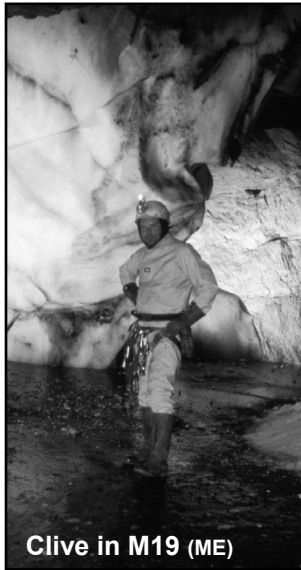
A few days later Andy and Iain, who had been doing a lot of climbing together, finished off the bolting but unfortunately they only found an alcove at the top. Later, Andrej told us that the passage leading off Galactica chamber can only be seen from the top of the pitch. We must have been looking in the wrong place, so it seems there is still a lead to be investigated here.

Jim Evans



Further Discoveries in 1994

M19 (Bullshit Pot) (Location 5405479/512394, Height 1856)



Clive in M19 (ME)

B.S. Cave is a tight extremely loose cave situated on the North of the plateau at the foot of Tolminski Kuk.

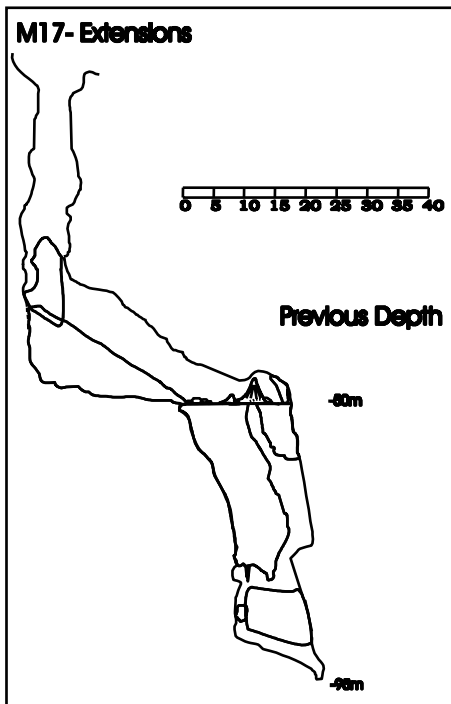
**“The draught was so strong it blew my carbide out!”
“Bullshit!”**

The entrance is a massive shakehole, 20m in diameter located 20m from M17. The shakehole is plugged with snow at a depth of -30m. Progress can be made by squeezing between the ice plug and rock wall and following the passage down. The cave was pushed to -75m at which point the walls became so unstable that further progress was impossible without shoring.

“Entered Bullshit pot to look for that elusive way on which produces the awesome draught in the place. None found and the draught’s not that strong - but certainly there.”

“Came to the conclusion that we’d come to the conclusion!”

M17 (Location 540478/512397, Height 1861)

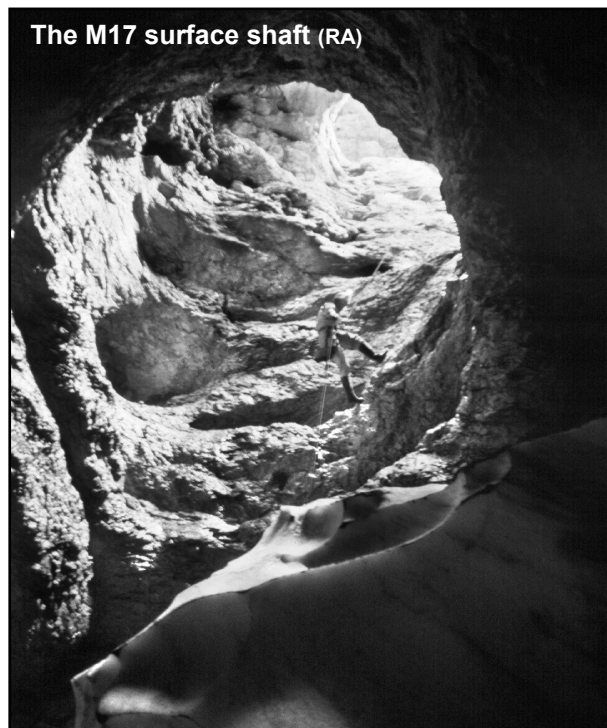


M17 (which lies close to M19) is a large surface shaft. A way down through the snow plug in this shaft leads to a large chamber with a 15m ice slope. Through a hole in the floor, a draughting 40m pitch was then pushed until it got too cold. The cave was thus left at depth of -95m.

Jim Evans



The big chamber in M17 (RA)



The M17 surface shaft (RA)

A Retrospective View of the '94 Expedition

As nothing significant was discovered in 1994, the theory that there was no more cave to find on Migovec was proposed by a number of cavers. With hindsight, this seems ridiculous but in fact it's a very common frame of mind to slip into. It's very similar to the idea that some have about science - i.e. "What's the point in working in science since everything has already been discovered?" Some of the proponents of the 'no more cave camp' have returned in years after big discoveries have been made and, if asked, would probably not remember the way they had thought in 1994. They would probably now have the attitude that it was inevitable that a huge amount of new cave would be discovered.

The expedition suffered from the lack of a clear plan of action. Partly this is inevitable in exploration (how can you plan for the unknown?) but there was no real focus of activity. Manpower was spread too thinly, with lots of prospecting on the surface being done while we were also rigging M16 with the intention of finding new passages. A lot of small advances were made which tended to stop at the first major obstacle.

In terms of cave actually discovered, the most significant finds in 1994 were probably Torn T-Shirt, White Shiver and Bullshit Pot. We managed to spectacularly miss some good leads. For example, many people looked up into the horizontal passage in M16 (later named Hotline) but no one actually bolted up the climb. This was partly because we were looking for leads going down. Another spectacular miss (again with hindsight) was Gardeners' World - we went as far as the first constriction but didn't make a serious attempt at passing it. Who knows what other good leads we missed that would yield to further work... We spent a lot of time looking at shafts and entrances over a wide area but never really gave any of them a serious push. Although the big shafts were generally choked, part of the reason we didn't make progress is because we were not equipped with the right tools. We were also, perhaps, in too much of a hurry to find new cave. In fact, there was an unhealthy competitive emphasis on speed in this trip. For example, people would talk about (and compete) on how fast they could get up the hill or get out from Galactica. We have since learned that this is completely incompatible with effective exploration which needs a gentle approach, allowing time to look around and explore possibilities.

By the time we left Migovec there were many who had no intention of ever returning due to a number of reasons - either because they thought we had exhausted the possibilities, or in some cases because they didn't think it was a good place for a holiday. But there were a few of us who were convinced that there was more to find and what was at fault was our approach. These few members became resolved to learn from our mistakes and return with some fresh ideas....

Jim Evans and Mark Evans

"The Imperial College Caving Club was founded in 1962, and ran its first trip abroad in 1966 - to the Trou de Glaz. The club continued to mature and more serious expeditions followed. It is good to see the tradition continuing with a new batch of students running the 1994 expedition to Slovenia. This was no holiday trip in warm Mediterranean caves; it was a serious and competent exploration of an alpine limestone plateau. The conditions could be described as "character building", and every member benefited from the experience. Long may Imperial College continue to support such worthwhile ventures."

All the best for 1995.

Dr. Tony Waltham (founder member of ICCC).



C.M.O.

The Blowing Holes Recce - Easter 95

The reason why... (Jim)

In 1994, whenever we saw Andrej, we would quiz him about the location of known caves and ask about the best places to look for new ones. I remember asking him about the plateau beyond the ridge in the North.

"There are no caves there."

"How do you know that for sure?" I inquired.

"Because when you look at the area from the ridge in winter, there are no holes blowing through the snow."

I became very interested in these 'Blowing Holes'. Apparently the Migovec plateau is covered by them in winter and that's why Andrej was so convinced of the cave potential. A plan was thus born to mount a winter reconnaissance to the area in February 1995, to find these blowing holes and log their position with a GPS or paint. We could then relocate them in the summer...

The reason why...(Iain)

The choice of accommodation at this time of year should have been simple: ten days in a chalet in one of the best ski areas in Europe. A complication arose, however, following a phone call from Jim one miserable January evening. His alternative accommodation was to return to the happy hunting ground of the previous summer's expedition to Slovenia "to look for blowing holes." Now, before this call I was of the understanding that only water-based mammals possessed blowing holes, but no, apparently limestone regions when blanketed with snow have them too. The feeling of duty which makes ICCC members great (and binds them together like hairs in a plughole) was overpowering. I could do little other than agree to a week of abject misery...

The Recce

We (Jim, Iain, Chard and Jos Visconti (a Frenchman)) arrived in Venice with one of the heaviest hand luggage payloads ever. The Fiat we hired was remarkable in that it swallowed all our kit *and still did 170kph*. We thus arrived in Tolmin pretty late, but still in time for a few generous measures of Žganje (Schnapps) at Andrej's house. As we caught up on the news, he told us about the considerable risk of avalanches in the area and the best route to get to the top of the mountain.



Iain, in full mountaineering gear, heading up Migovec

As the weather was poor, we first spent a day in Mala Boka, a resurgence cave being explored (by bolting up shafts) by the JSPDT. This cave has been dye connected to Skalaria cave (-911m) on the Kanin plateau - there is still a long way to go to connect them, but a connection would give a 2000m deep system. We only had a short trip in to the first sump as our caving gear was limited to a helmet and zoom but it was our first chance to have a look in the cave as the entrance is completely sumped in the summer due to the volume of snow melt coming off the mountain. We then tried, unsuccessfully, to obtain telemark or mountaineering skis to make the journey to the plateau easier.

Our only option was to go for it in mountaineering gear - Andrej seemed to think that it would be hard but possible. We drove up to Tolminske Ravne in the evening. As we went, we saw no evidence of snow until we actually arrived in Ravne. Here, there were only a few shallow patches of snow.

We spent the night in Slowko's barn (out of spite for the rough treatment we'd received the previous summer) and arose early the next morning to make our way up the hill. As we walked up the snow began to get deeper. At first a few inches, then a foot and then knee height. Moving was becoming difficult and we were getting tired. A bit further and the snow was chest height, for a section we had to crawl to prevent ourselves falling through (we really needed skis or snowshoes). As we gained in altitude the temperature also started to drop. This in fact saved us. The snow began to get harder and despite the fact that it was very deep, above 1300m we no longer sank.



Jim, heading up...

We arrived at the shepherd's huts after a six-hour slog (this takes about an hour in the summer) and we were pretty tired. The weather was turning bad so we decided to stay there for the night and head to the plateau early in the morning. Iain and Jim made a snow hole to sleep in, which turned out to be warmer than the huts. That evening, working out what we were going to eat, we realised that we had badly underestimated how much food we would need for the next two days. Food had to be rationed and we spent that day and the next somewhat cold and hungry.



Jim in a snow hole



The Plateau at last...

The following morning we got up at 4.00 am to try to get a full day's light. Everything was frozen including all our water and our boots so it took some time with a stove to prepare ourselves for the ascent. Fortunately, going up to the plateau was merely just a slog although there were one or two occasions where the ice axes and crampons were necessary. Once at the top we had half a mars bar each and set off to look for blowing holes. The plateau was beautiful with its snow covering. Very soon we came across a number of blowing holes which we were able to climb down and log. The GPS didn't seem to be working, though, so we ended up using just paint and compass triangulation to mark these entrances. We spent a good few hours up there that day and then decided that the best thing to do would be go down to the town, stock up with food, sort out the GPS and return the following day. Getting down from the top to Ravne was very easy - sliding on our bums it took us about an hour and a half.



Jim, Iain and Simon in the Shepherd's Hut

Once down in Tolmin, the first place on the agenda was the pizza bar. The following day, Jos spent some time calibrating the GPS and made sure it was working while we stocked up with plenty of food in preparation for the trip to the shepherd's huts that evening. This time the walk up to the huts was much easier as we already had our previous tracks to follow and the temperature was also slightly lower.

In the morning we had white out conditions. It was completely unsuitable for going up to the plateau so we spent the day around the hut. The temperature plummeted to “absolutely chanking” (Jim); “jolly nippy” (Chard); “feurking etc.” (Jos). Iain’s brain was numb so he didn’t say much. However, we all joined in when the singing began and made a fire in the middle of the floor which soon filled the hut with dense smoke. Chard wore his ski goggles for the first time.



Down a blowing hole,
Kuk in the background

The next day the skies were clear and we headed up early to the plateau to continue the work. In all 56 entrances were logged. Some of the draughts coming out of the holes were very strong and we were very hopeful for the summer. During one incident early on in the day we discovered the importance of roping together. “Feurking ‘ell” (the Frenchman’s English was progressing nicely) “we ‘ave lost Chard down a feurking great eaule.” Chard was, in fact, not lost as he had the GPS, but he was down a sizeable hole. Getting him out employed our rope for the first time.

A similar incident occurred when Jos and Jim were looking into M2 entrance. Suddenly, without warning, the snow collapsed and Jim would have fallen into the shaft if Jos hadn’t pulled him back suddenly. Returning to the Shepherd’s huts, Iain was becoming very quick at sliding down the hill, while the rest of us were cautious on the steeper sections, he slid down the whole lot, arriving at the shepherd’s hut from the top in six minutes.



Chard getting out
of the Cessna

Our last day was spent enjoying ourselves. Jim, Chard and Jos went flying over the plateau in a Cessna and Iain went skiing on Kanin. The Cessna pilot wouldn’t fly low enough to see any blowing holes but enjoyed aerobatics. Iain wouldn’t fly high enough on his skis for aerobatics, but saw some blowing holes. That night we took a slow boat through Venice before settling down at the airport. Early next morning we were met at Gatwick by Kathryn who had the dubious pleasure of driving us home. Considering none of us has washed for ten days, it was a brave thing to do.



One of 56 logged
blowing holes



The Bivvy in winter

With so many holes blowing through the snow, there surely must be a deep system under Migovec. Now, we just had to find our way into it in the summer...

Jim Evans and
Iain McKenna

Winter Recce photos by
Richard Anderson (Chard)
and Jos Visconti

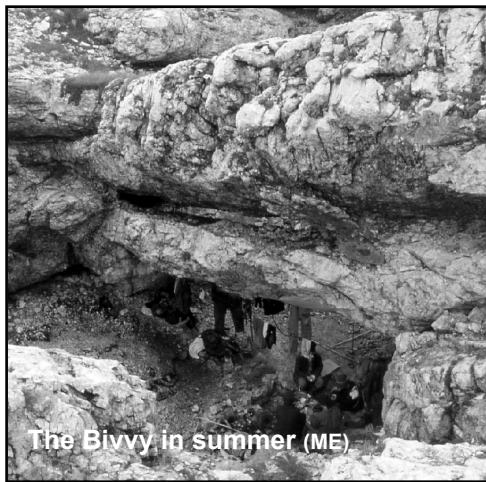
1995

Mistakes are the Portals of Discovery**



The Union Van
is packed again
(ME)

Following limited success on our expedition in 1994 and despite the evidence from the "Blowing Holes" recce, fewer cavers were prepared to spend another summer on Migovec. We, however, made our minds up after hearing Tim Guilford's talk on OUCC's exploration in Northern Spain at the BCRA conference. Talking to Clive Orrock after the lecture, we realised that it's only through perseverance and hard work that you find cave systems.



The Bivvy in summer (ME)

After further discussion, a much smaller group of die-hard optimists together with keen, unsuspecting freshers decided to commit themselves to another summer in Slovenia. This year, only eight people spent six weeks on the plateau, while five others spent between one and four weeks.

A big decision in 1995 was to dispense with a base camp at Ravne. If we could live on the mountain, far more effort could go into finding caves and we would save a considerable amount of money if we didn't have to pay for accommodation. At the time, this seemed like a very radical move and meant that a number of logistical factors had to be worked out.

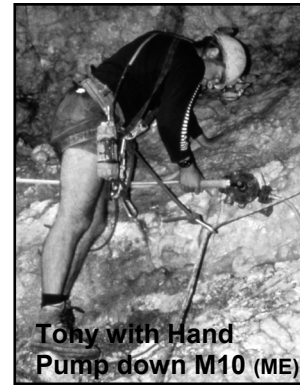


The Tractor with gear (ME)

Our first task was to get all our equipment and food up the hill as quickly as possible with minimal effort. The first possibility we looked into was a helicopter but this had two main problems associated with it: firstly at five hundred pounds per trip it was a little on the expensive side and secondly, as we were not officially supposed to camp in the National Park, we thought this would draw unnecessary attention to us. The method we eventually settled on was to get the local farmer to carry up our gear with a small tractor. He could only go about half way but this proved sufficient (and cheaper than a chopper at about £90 each way).

We had also rethought our food plans. During the previous year, Jim had joined members of the B.E.C. (Andy and Angie Cave) on one of their five day camps at the Restaurant in Daren Cilau. The system of dried food that they have developed over a number of years was copied almost perfectly. We realised that with dried food, bought in England, we could save weight and avoid the problem of food going off. We also thought much harder about specific recipes to cook, for example cream curries and tomato curries for dinner and Sos burgers, chapatti's and smash burgers for breakfast. As bread will not last six weeks, flour was taken up the mountain and used to make chapattis. In fact, the only non-dried foods we took were cheese, lard, chocolate and alcohol. We had learned that lard is good and discovered the usefulness of Daren Drums (airtight plastic containers for holding food). On the Daren camp, Jim also got a feel for what long-term exploration is really like - nothing comes easily and everything must be worked for.

Water was clearly vital and had led to much discussion. Collecting water on the 1994 expedition had been a long and time consuming affair (half a days work for three people every day) which consisted of someone abseiling down a shaft and filling bags with snow. These were then pulled to the surface and melted in the sun. This year we had essentially two ideas; the first was to take large barrels and tarpaulins up the hill to catch water when it rained and the second was to get a bilge pump to pump water from the bottom of M10 (a nearby snow shaft) in case it didn't rain. The barrels (some of which had been used by Phil Wickins, an IC Mountaineer, on a recent Himalayan expedition) were also useful for transporting all the food we bought in England on the roof of the van.



Tony with Hand Pump down M10 (ME)



Paul underneath the tarpaulins in the bivvy (ME)

Some of the things we tried turned out to be a waste of time. Although the pump was used a few times for water, we discovered that if there were enough big barrels on top, then when a big rainstorm comes along you can have enough water for weeks (this has become the standard solution to water). We bought a petrol generator for battery charging but it turned out to be too heavy and inefficient and was later sold to a local kebab merchant. Although the tractor did save us some time, it was of limited value because it couldn't get all the way to the Shepherd's huts. Part of the reason for getting a tractor was because we didn't want to leave anything in Ravne, but it turned out that the friendly Klobučar family were happy for us to leave gear in their barn. A GPS that we borrowed for marking caves was not as useful as simple paint and string marking techniques for relocating entrances. In terms of locating caves relative to each other, we found surface survey to be the more accurate than the GPS (ed: this was before selective availability was turned off in 2002).

Overall, however, the logistics were much better this year and this, combined with a "hard core" team with a firm plan led to a very successful summer on Migovec. We had a determination to put in whatever effort was required to find new cave and unlock the potential of Migovec. We'd come prepared with an armoury of digging tools (sledge hammers, mallets, chisels, crowbars etc) and weren't afraid to use them.

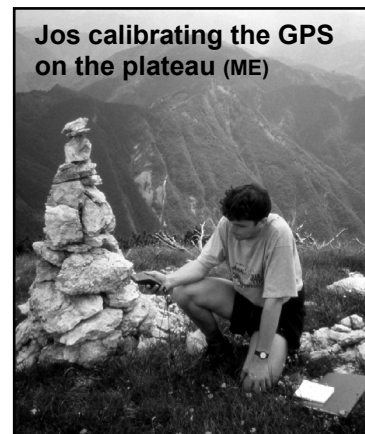
Jim Evans and Mark Evans

"People have a tendency to congregate round the caving stores, their faces taut and quietly eager for action."

** A quote from James Joyce

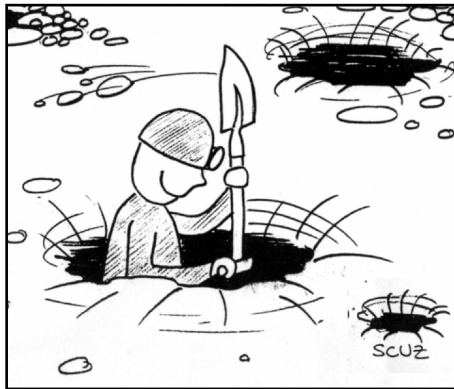


"Reservoir Cavers": Tony, Jackie, Oliver, CVPete, Pants, Scuz, Alva (ME)



Jos calibrating the GPS on the plateau (ME)

Small Caves: The search (for the Grail) continues



In the first week of the Slovenia '95 expedition, the plateau was systematically combed in its entirety for evidence of caves, largely re-doing work carried out in 1994. This was necessary since an accurate map showing the location of potential cave entrances had not been made and it was impossible to say which entrances had been pushed and exhausted of leads and which had not been explored at all. This also acted as a familiarisation exercise with the plateau landscape, since it is essential to be able to find the way back to the bivvy again in all weather conditions, particularly useful for those new to the plateau.

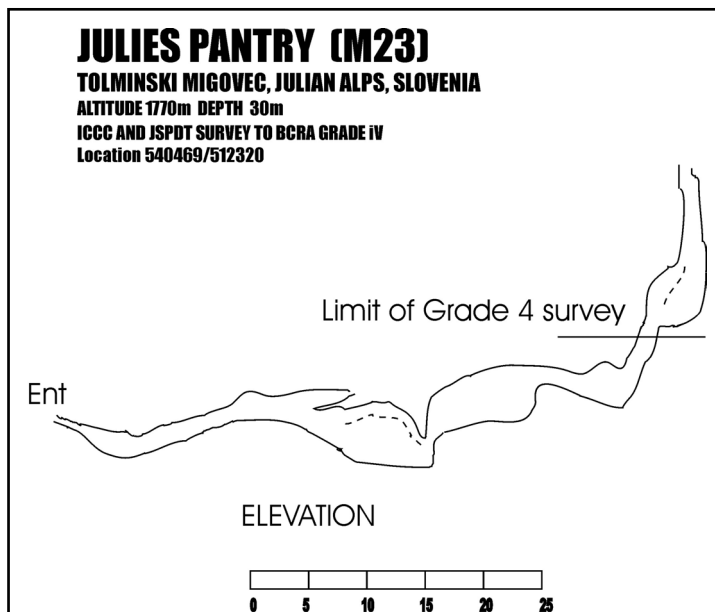
We attempted to relocate the 'blowing holes' found during the Winter Reconnaissance, some of which were marked with B numbers (e.g. B9, for blowing hole number 9). However, finding small splodges of paint in this limestone jungle was no easy task. The breathing holes that we did find turned out to be not much bigger than a fist.

Although we spent almost another week moving and splitting boulders, or chipping away at bedrock with hammers and chisels, the entrances kept choking with rubble. We seemed to be digging our own caves! To our great disappointment, all our digging efforts on the surface came to nothing.

In the meantime, there had been some success. Four caves on the edge of the mountain had started to show real promise. These discoveries are described below:

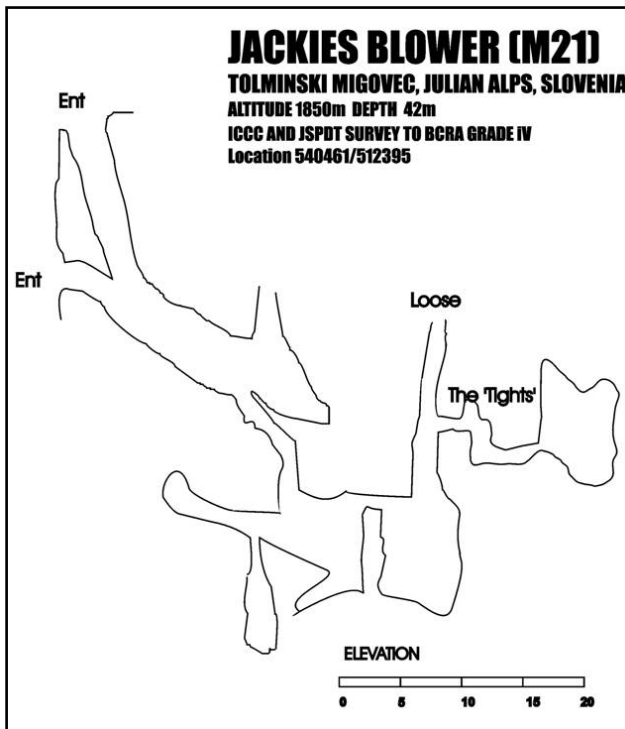
Julie's Pantry Cave (M23)

This cave was discovered at the top of a scree slope whilst looking for the Mule Path (up the steep Western side of the plateau). Anyone attempting to reach the cave from the top of the plateau will create a high risk of dislodging boulders onto others below. Julie's Cave has very strong draught blowing through its small entrance. A short low passage leads directly to a large open chamber. Around the corner to the left, a climb up over boulders and through a squeeze (which may be bypassed through another short awkward passage) drops into a second chamber with a loose climb on the opposite side. The cave terminates some distance into the small passage beyond.



*"Jos found
 some more
 blowing holes
 from the recce, but
 they were so small
 we just couldn't
 take them
 seriously.....
 worn out and
 feeling low, our
 spirits were raised
 by a splendid
 curry from Mark."*

Jackie's Blower (a.k.a. B9 or M21)



"I heard a call 'below' with an extreme urgency in the tone of voice and the next thing I saw was a sofa sized bolder bounce past – a near miss!!!!"

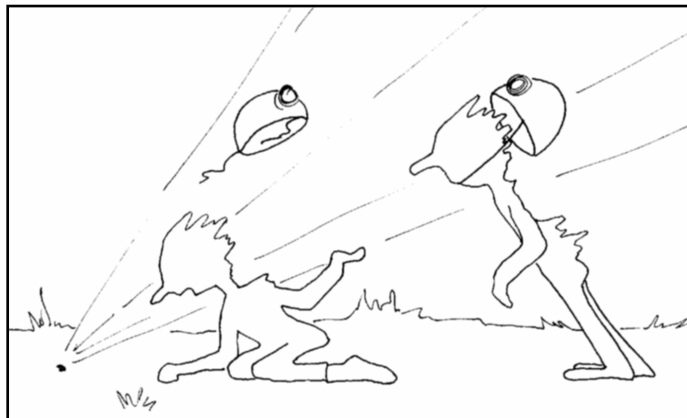
This 40m deep cave is located on the edge of the steep Western side of the plateau, about half way between the peaks of Migovec and Kuk.

At the back of the entrance chamber, a scree-covered slope (rigged) led immediately to a 10m pitch. Three large chambers led off from here. The first was entered by descending directly. Digging the sloping floor, we eventually reached the side of the cliff. Scree falling down the entrance pitch made it a hazardous place to rest! A second chamber was entered by bolting a dodgy traverse across the side of the shaft to a window about 6m above the chamber floor. Further traversing at this level (above the second chamber) for about 10m, followed by a climb upwards on loose rock, led to a narrow squeeze and a rift with a false floor. A series of several more tight squeezes (The 'Tights'), heading in the same direction, led to the final chamber, ten metres in diameter. The floor, here, is essentially a conical pile of scree, the apex of which lies below a climbable shaft heading towards the surface (deduced by the increasing amount of soil and insects as the cave is ascended).

M25 (Gulliver's Kipper Cave) (Location 540513/512310, Height 1730)

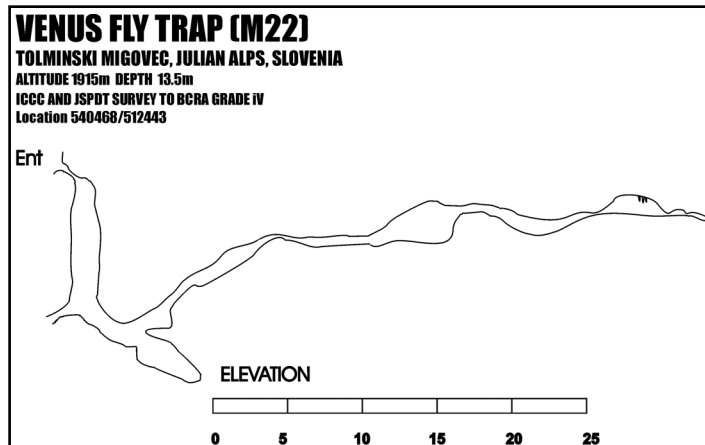
The entrance to Gulliver's Kipper is clearly visible high above the path between the Shepherd's huts and the plateau as it winds, almost horizontally, around the distinctive face of Migovec. Access is only by climbing up steep, scree-covered rock and is not for the faint-hearted! Although the cave itself is not dissimilar to others in character, it cannot be explained how a number of rotten wooden logs came to be found just inside the entrance. A small number of bones were also found, although there was no evidence of human activity.

The walk-in entrance led immediately to an open, 10m pitch over an airy chamber. We really thought we'd found something here but all passages leading away from the chamber at floor level were too tight or choked, and an enclosed high-level traverse at entrance level led only to the opposite side of the main chamber. This cave was not surveyed, effort going into significant digging elsewhere.

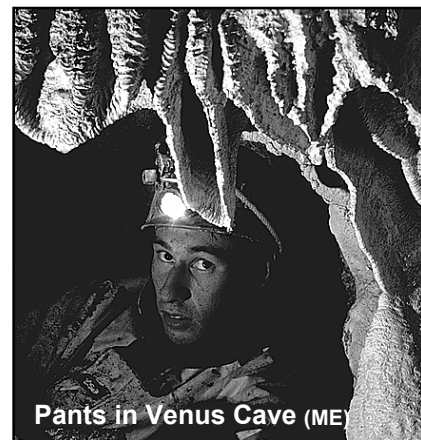
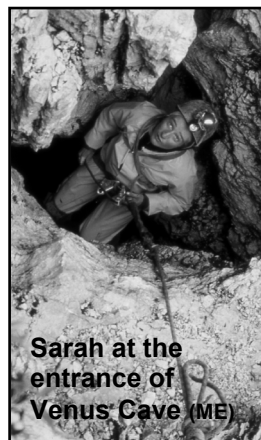


Venus Cave (M22)

The entrance is on the extreme Western edge of the plateau just before the land starts to slope up towards the peak of Kuk. When it was found, the entrance was merely an 8cm diameter hole and was sucking air in so strongly that flies were getting trapped, (hence the name). Half an hour's excavation at the surface with a spade revealed a narrow 10m rift pitch leading off into a series of low horizontal passages.



"Quite a nice cave! Small and muddy." Could this be the entrance to the Migovec System? We really thought so at the time. The passages were draughting but largely choked with rubble. A low crawl led to a small chamber with calcite formations, the first discovered on the Migovec plateau. Unfortunately, no way on was found, though the initial excitement was certainly memorable.



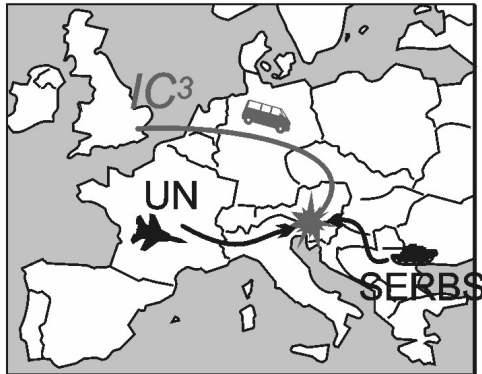
The beginning of the '95 expedition was characterised by events like these - high spirits as we thought we were into a system and then low spirits as the leads dried up.

Jim Evans



A short return to civilisation

IMPERIAL COLLEGE CAVING CLUB SUMMER OFFENSIVE



OPERATION MIGOVEC '94

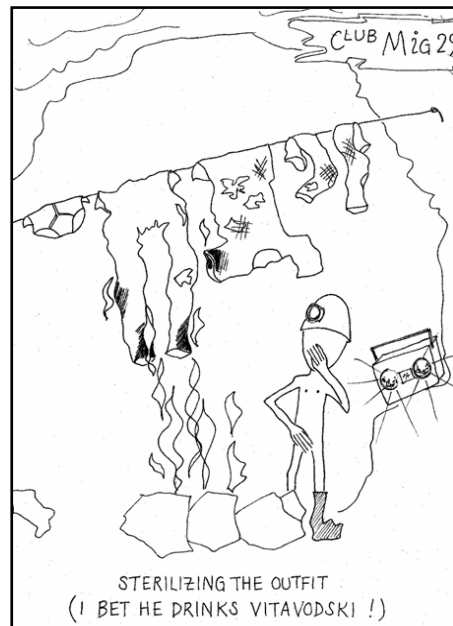
1994 Expedition T-Shirt

Time was passing quickly. The queue for the shit-pit in the morning was becoming a permanent feature, but turnover was quite quick. After three weeks of work on the mountain, three weeks on a diet of wholemeal chapattis and bean curry, and three weeks of loose stools, our caving clothing was in tatters. Unlike Yorkshire's caves which have been smoothed by centuries of water and decades of human bodies, these Slovenian caves were proving to be tight and sharp. Rips and tears were an inevitable consequence of this expedition's caving. Although our minds were strong and enthusiasm was high, our bodies were weak. A trek was made down the mountain to the river for a much needed wash. We then headed off for a weekend in Trieste to visit the nearest caving supplier, buy new oversuits and to find a whole load of babes on the beach.

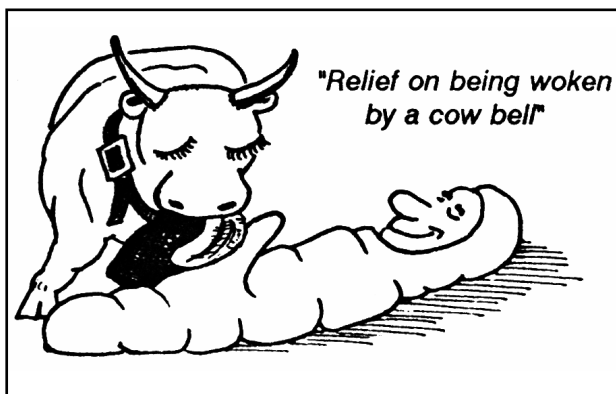
There was massive trouble getting back into Slovenia at Nova Gorica; we had no green card and couldn't afford the 200 quid they asked. So we drove to the next border crossing and here we were allowed through. The next day we heard that Croatia had attacked the Bosnian town of Knin. No wonder they didn't appreciate the 1994 expedition T-shirt at the border..... Simon Gaberšček (JSPDT) is in Tolmin waiting to get called up to fight at the front.

Back at the bivvy, tempers became slightly frayed with Alva Gossan's and Olly Mann's continual "philosifications." While the rest of us got down to stitching our tattered clothing to the sounds of a Kevin Bloody Wilson tape, Mark attempted to cremate Tonx (Tony Hayden) and himself with a Sigg bottle of petrol. Fortunately a TSA oversuit was the only casualty.

Sarah Wingrove



"Spent the night near the roadside at Tolminski Ravne. After getting very little sleep and getting cow pats blown up your nose all night, all hope of sleep was finally dashed when the cows herded round us at 7am."



PF10: The way down to the Soča?

Jim and Alva were looking for blowing holes in the southern valley of the plateau...

"Hey Jim.....come and have a look at this."

Jim went over to find Alva looking down at a pile of boulders. As he got closer, however, he could see, or rather feel, what Alva was talking about. It had a howling draught. This looked promising, although it would need some work.



Alva digging out the entrance of PF10 (ME)

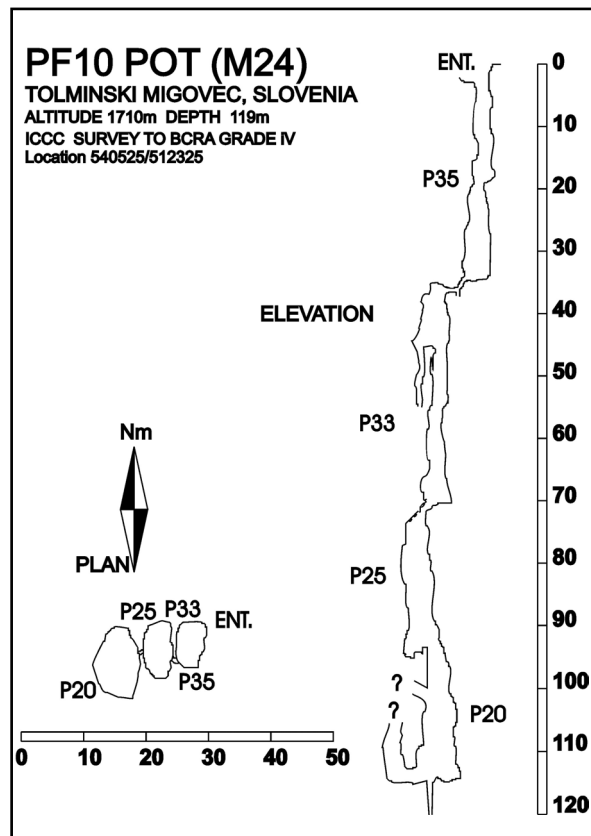
After returning from Trieste, Alva, Pants (Anthony Woods), Tonx and Olly set to work on this project, inventing new digging and boulder moving techniques as they went. After two days of hauling, a large shaft suddenly opened up below and PerFect 10 (PF10), named after a Kevin B Wilson song, became a going lead. Kicking the remaining rocks down the hole, Pants and Olly prepared to descend. Ten metres down, there was a large boulder precariously balanced between the sides of the shaft. Twenty metres down there was an ice plug. The boulder was hit repeatedly with a sledge hammer, crashing down just as the Park Warden arrived. The Warden took an interest in what we were doing, though he didn't seem too concerned that we had opened up a large hole in the plateau.

On the following trip, two hours were spent belly down on the ice clearing rocks. Eventually another pitch was found. Back on the surface, chants of "See you at the Soča" were regularly heard as the PF10 Posse argued with the Torn-T Tigers over which cave will go over the magic 1K first. Things were looking up.

Subsequent trips found a few more pitches. Each of these was blocked at the bottom. No problem, we had become demolition experts by this time. At the bottom of the fourth pitch, Alva and Tonx searched for a way on in a fairly large chamber. They found a small side chamber which was blind. But, through a boulder pile at the other end of the original chamber, there lay a possible way on. Down through the boulders, beyond a two metre flat-out crawl, there was a possible hole in the loose boulder floor. Unfortunately this lead was deemed too unstable to investigate safely.

PF10 was very cold and drippy, and, though there were possible leads, M18 was, by now, going "big time" and the end of the expedition was approaching. We decided to derig and concentrate our efforts elsewhere. So the light-hearted rivalry between fans of the two caves ended. Great fun and a thirst for exploration were certainly felt down this 119m deep pot.

Jim Evans and Tony Hayden



The assault continues: A return to Torn-T (M18)

No real depth - that was the problem three weeks into Slovenia '95. Surface prospecting had resulted in a few promising leads (Gulliver, Jackie's, Venus) but nothing that was our highway down to the Soča river. Time for a return to Torn T-shirt Cave. The trouble was, we'd all become rather used to scouting around on the surface in the sun, and occasionally doing a bit of caving, but nothing you really needed an oversuit for, and nothing where you might end up cold and tired. Even those of us who hadn't experienced Torn-T at first hand had heard enough about it from those on last year's expedition. We knew that 'cold and tired' was exactly what to expect.

So, when the excuses had run out, the first Torn-T trip of the expedition was a rather half-hearted affair. We went in, had a look round, and came back out. The only progress was to tick off a few leads near the first main chamber, and to "set the ball rolling." First impressions were not good. We came back cold and tired, some sooner than others: Jim, Jos and Tonx rushed out, dying for bowel relief from another splendid curry, and claimed their territory just outside the entrance.

26/7 First trip down Torn-T

*"For 'Evans sake
we've got to widen
that rift."*

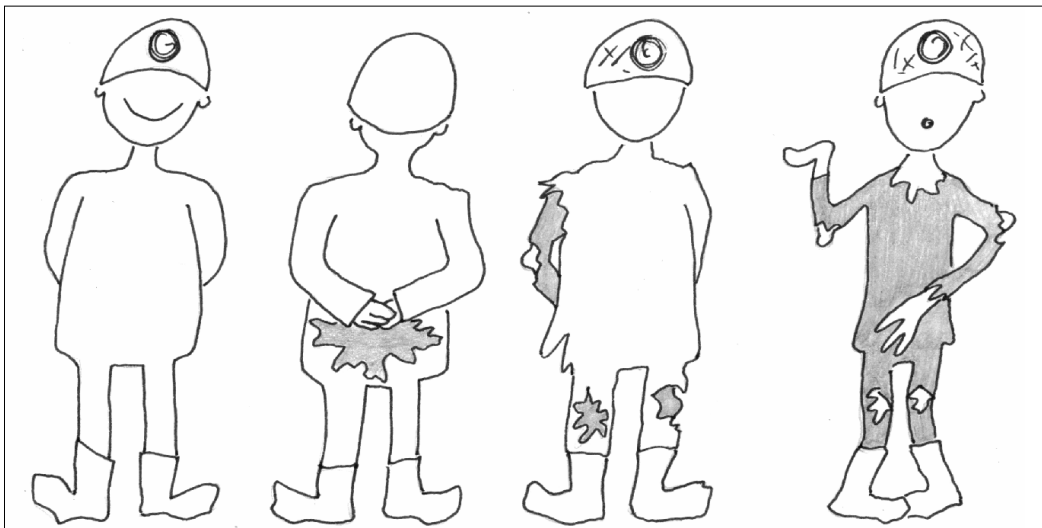
The next attempt was altogether more serious. The route through the rift had to be found again, with only a few markings on the wall to help the memories of those who had been there before. This was critical: by finding the best route, the time taken to get through the Shreddies Series fell from about two hours on the first attempt to under 40 minutes. The other objective at this stage was to check the rigging, left in situ over the winter.



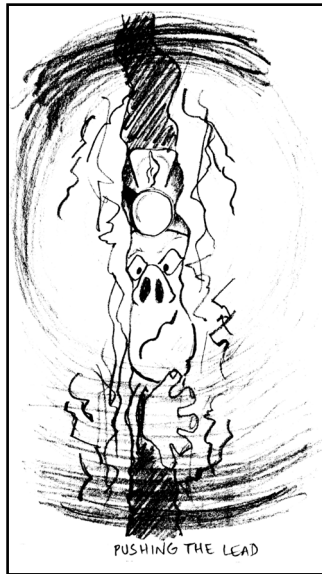
Iain in the
Torn-T
Entrance
series (SW)

The third trip started the real work, first re-rigging some abraded ropes, then pushing on to the limit of exploration at the bottom of the rift. A narrowing of the rift together with a tight corner and lowering ceiling, combined to make it impossible to pass. Just. Hammers, chisels and "The Spike" were on hand to widen the passage, but there was room only for one person to use them. The back-up team played Cave Twister to pass the time. Perhaps a metre was gained, but progress was barred by an obstinate lump in the floor. Increasing hunger forced a return to the surface for a curry. This trip introduced us to the 'shredding' qualities of the rift - from a team of six, three oversuits were written off.

Peter Eland



The Key breakthrough: Optimisqueeze



"It really does look like the end," was Pete Hambly's first impression at the end of the rift and who could blame him.

"It looks bloody tight," said CV Pete.

"Yes - I'll try and squeeze over the top," said Scuzzer, the smallest member of the group.

Scuzzer carried on high in the rift while CV Pete and I carried on hammering the beginning of the rift. After a while we could tell that her grunting was taking on a resigned tone.

"I'm coming back, this is getting tighter."

Once back, we discussed the possibilities - it looked like there was an alcove lower in the rift which it might be possible to squeeze into - but it looked very tight and didn't seem to lead anywhere. Anyway, we were grasping at straws and this was really the only option - it was either this or call it a day in Torn T-Shirt.

"OK, we'll hammer it a bit more and then I'll give it a go," said CV Pete.

After another ten minutes of hammering, CV reversed himself into the rift, guided himself to what looked like the widest section and started to push himself through the squeeze.

What followed was the usual series of grunts and straining associated with negotiating such places and then, after about ten minutes, it stopped.

"Are you through?"

"No I'm just having a rest - I'm getting there though - I hope this'll be worth it."

A further ten minutes of grunting and obscenities and then, "I'm through, hold on I'll just get my breath back ... it looks like there might be something round the corner."

There was a pause while he recovered from the effort.

"Yes there is another tight tube - leading down..... hold on, I'll just get some rocks to throw down, OK, here goes."

RATTLE.....RATTLE...BOOM.....BOOOM.....BOOOOM

"Jesus Christit goes.....yeeees..."

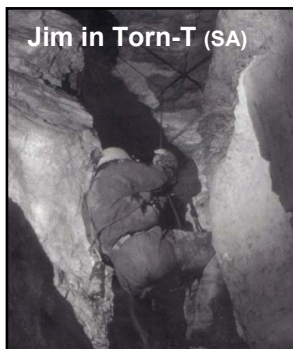
An ecstatic feeling went round the group.

The next squeeze, named Turtle's Head, needed a rope and was even tighter. However, although we only gained about 4 metres of grotty passage, this is probably my best memory from all my trips in Migovec. I think part of the reason is that it overcame a big barrier mentally and physically for us at the time - after that, all the other squeezes which we negotiated in Shreddies that year were almost a matter of course.

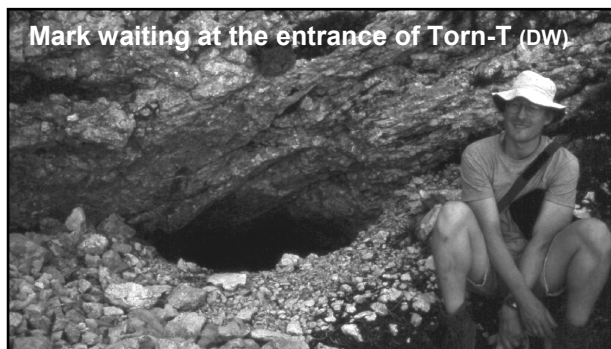
Jim Evans



Feet in Turtle's Head (ME)

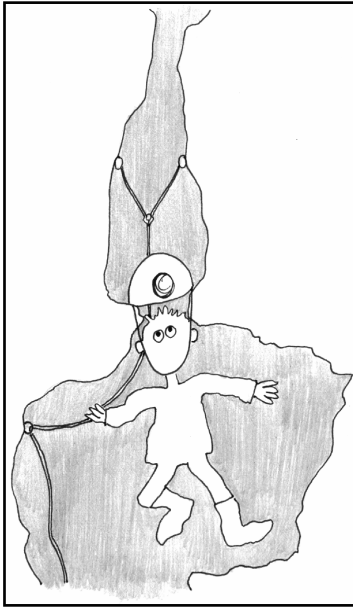


Jim in Torn-T (SA)



Mark waiting at the entrance of Torn-T (DW)

Pushing the limits: Shreddies Revenge (Torn-T)



Eventually, almost unbelievably, I was through Optimisqueeze and crouched in a small chamber, barely big enough to turn around in (the first priority: it's nice to know you can get out once you're in!). A look around revealed the way on - a letterbox opening into darkness (Turtle's Head Squeeze). As a stone was chucked in, the team erupted in shouts as the echoes and rumbling persisted for several seconds. First wild estimates put the depth of the pitch beyond at about 50m. After a little more widening we returned to the surface to tell the others the good news.

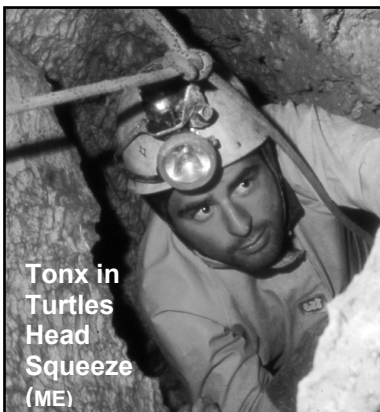
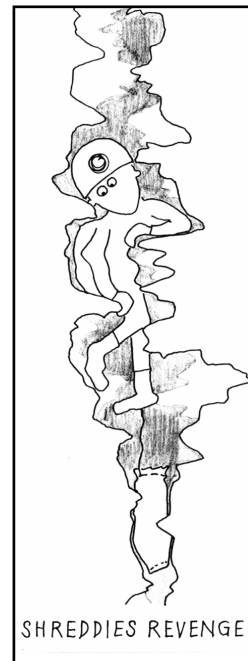
"Found a corker of a pitch beyond an awkward wriggle and returned to the bivvy jubilant.....MORE CAVE!"

Ropes, drill and bolting kit were carried down the next day as well as spare carbide and food for a long trip. From now on we also had to carry SRT kits through the rift, and this added to the strenuousness of the Torn-T experience. Further work widening 'Optimiski Squeeze' enabled Jim to pass through to rig a safety line for the next pitch.

With the line in, attempts to get through the opening showed quickly that it also needed attention from Hammer and Spike. Finally Oliver was through (a bit dodgy with no harness maybe but there was a ledge below the opening). He found a 5 metre free-climb to a chamber. The way on was a hole in the chamber floor. After everyone had had a look we went out with failing lights.

The next team down rigged about 30m of rope below 'Turtlehead Squeeze'. A chamber part way down the pitch was found, and in the other direction the rift gradually opened into a small, wet, flat-floored chamber, 'Fratnik's Treasure Trove'. A further rift passage led on and Haematite 'pearls' in drip pools were an additional bonus.

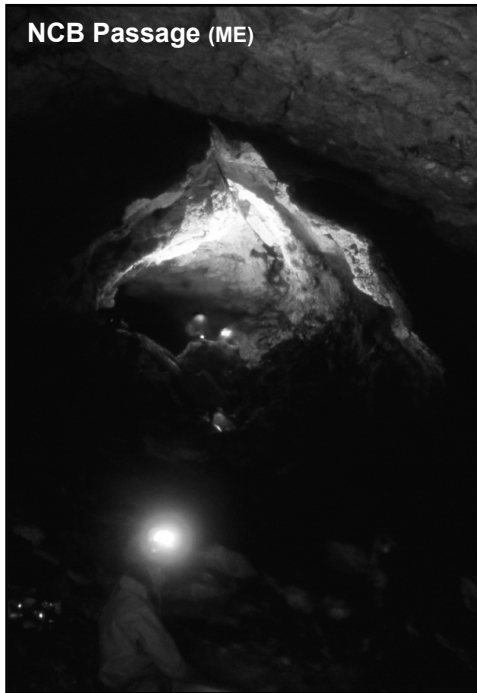
We returned to tackle this second rift, soon naming it 'Shreddie's Revenge' as Jim had left an easily-followed trail of threads from his brand spanking new oversuit. Sazza (never one to pass quietly through rifts) inched through OrSazmatron squeeze far enough to see a possible pitch opening in the floor. Another breakthrough! We were amazed by the echoes of our voices in the void beyond. However, the rift-widening process was slow and it was many hours of barbaric hammering later before everyone could get to the pitch head without needing surgery.



It took another trip to pass through this pitch head (Nutcracker). Wedged into the rift, unable to swing the hammer more than a few centimetres or even to turn my head, I spent over an hour putting in two bolts. Putting on my SRT kit while wedged precariously over the pitch, I eventually got down a 15m smooth-sided shaft that widened out to a large chamber. Yet another rift led off. After waiting in the cold for Saz to join me, I used a boulder as a natural to send the rope down a hole in the floor. After pausing to refill my carbide, I came out over a pitch so deep there was no bottom in sight. A chamber opposite also stretched off into darkness...

Peter Eland

The discovery of NCB: “Ad augusta per angusta”**



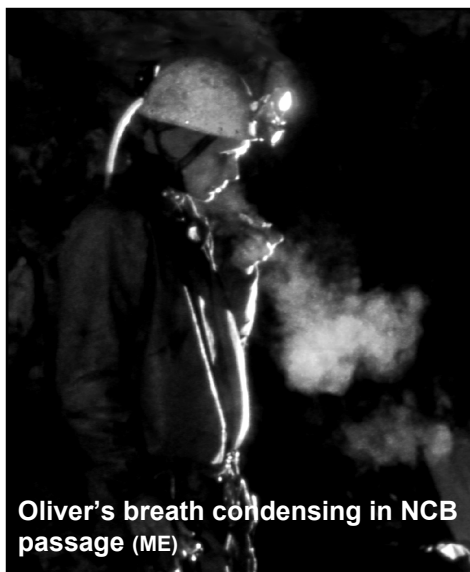
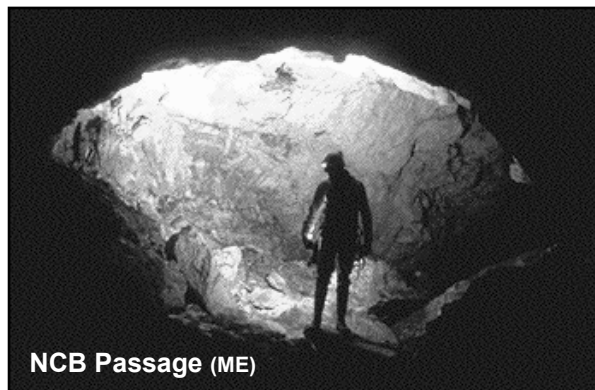
On the following trip, Mark guided me through the widest parts of the rift. I found that the easiest way to get through Nutcracker was to take my SRT kit off, squeeze through and then put it back on while straddling the pitch. Arriving at the bottom of this perfectly circular 15-metre pitch, I heard CV shout from beyond:

“It just keeps going - I think we have another 30 metre pitch here.”

Going through a tight little alcove, I came to the head of the pitch. After a while I heard “Rope Free,” from below and followed him down. Another dead end unfortunately, so we headed up the pitch looking at leads off the side. There seemed to be a large chamber/alcove at the top of the pitch. After a bit of swinging around I managed to get in.

“Hey..... this isn’t an Alcove at all, it seems to be a passage, with really black rocks, and wow..... shafts all over the place.”

At the bivvy, the news was greeted with great excitement. After all the hard work down Torn-T, we had now broken into something big and significant. We named the long horizontal passage NCB (National Coal Board). Now the leads were multiplying by the minute. A few trips later and we had crossed two traverses and had 250m of horizontal passage, but the many shafts that were distributed along its length seemed to be blind. We were beginning to run out of steam.



This was an appropriate time for a real break from the exploration and in some ways I think it what the expedition has been missing in recent years. We took a few days completely off visiting Trieste and Postojnja Jama. We had a real laugh (with the obligatory Alva nob shots in the train etc.) ate lots of pizza, drank beer and worked out what we should do next. After long discussions, we decided that a camp in NCB passage (at a depth of -120m) would be an effective way to explore the area and would also give people the experience of an underground camp.

Jim Evans

** “To great things via narrow ways.”
(A quote at the beginning of a chapter of ‘Ten Years under the Earth,’ by Norbert Casteret).

Touching the Void: Camping in Club Mig (NCB)

The first half of the '95 expedition had been hard, but the second half was proving to be harder. An underground camp, Club Mig, was set up in NCB passage, the most godforsaken place on earth. The air is very damp and there is a constant howling draft along the passage. On top of this, the series of rifts and squeezes between NCB and the surface are not for the faint hearted - there would be little hope of getting an injured caver out through the entrance series.

"Wooa, shhhhhit!" Thump! "Pants! are you OK?" I yelled back up the rift, "what happened?" "Phew, I'm OK, I think," Pants said in a very shaken voice. We were on our way down the rift at the beginning of a camping trip and Pants had lost his grip on one of the many dodgy freeclimbs. He fell about 3m, badly bruising his ribs and winding himself. "Do you want to carry on?" I asked, secretly hoping that he would want to go back because I'd had a bad feeling about this trip. To his immense credit he said, "We can't turn round now, we've got work to do!" Oliver was way ahead of us, oblivious to all this action.



We got to NCB passage in good time, dumped the tackle bags and had the obligatory brew. The plan for the trip was to drop as many of the pitches along the passage as possible and get a feel for which, if any, were going. We reached the camp in the early evening and so got to work straight away. The first pitch we bolted down was blind with a perfectly flat rubble floor. We surveyed back to the main passage and then returned to camp for tuna and mash. This was the first camping trip for all three of us in NCB and so we were all a little apprehensive about it.

The camp was far from ideal but it was the best we could manage under the circumstances. The floor of the passage is strewn with boulders so we had only cleared a number of small individual sleeping areas. While Pants prepared dinner, I tried to take some photos of the camp for the BCRA conference. By the time we had finished a few Fox's Biscuits promotion shots and taken general squalor snaps, we were starting to shiver uncontrollably (cave photography always seems to have that effect). "Jesus! This cave is bloody freezing!" said Pants. "We've noticed," came the reply. "I wonder where that f***ing draft's coming from?" Pants mumbled through his balaclava as he pulled the sleeping bag cord tight around his face.



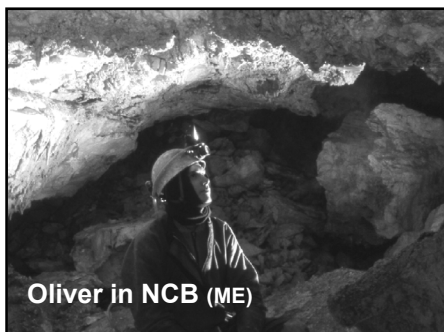
It was an uncomfortable night for me; I don't like camping underground at the best of times. I may have slept for an hour or so but not more. After a slow start in the morning we got back to work. Before returning to the eastern end of the passage we decided to head west to get an idea of what other leads there were. I took a few photos at the terminal boulder choke and we had a poke around for a way on, but it looked totally solid.

On the way back I noticed a small tube going off from the main passage heading south, near the drip where we collected water. It was up at roof height but we just managed to climb up to it. After about 15 minutes of crawling, we came to a small chamber. In the far corner there was a small circular hole into a black void! (I think that was Oliver's description, the name stuck).

Through the small hole, the darkness of 'The Void' was impenetrable. Even with the brightest light we had, all we could see was constant spray coming from higher up the shaft. Oliver eventually managed to locate some loose rocks to throw down the hole. We estimated that it was 40m deep. "Bollocks! We haven't even brought a rope," I said (we were only recceing after all and hadn't expected to get lucky).

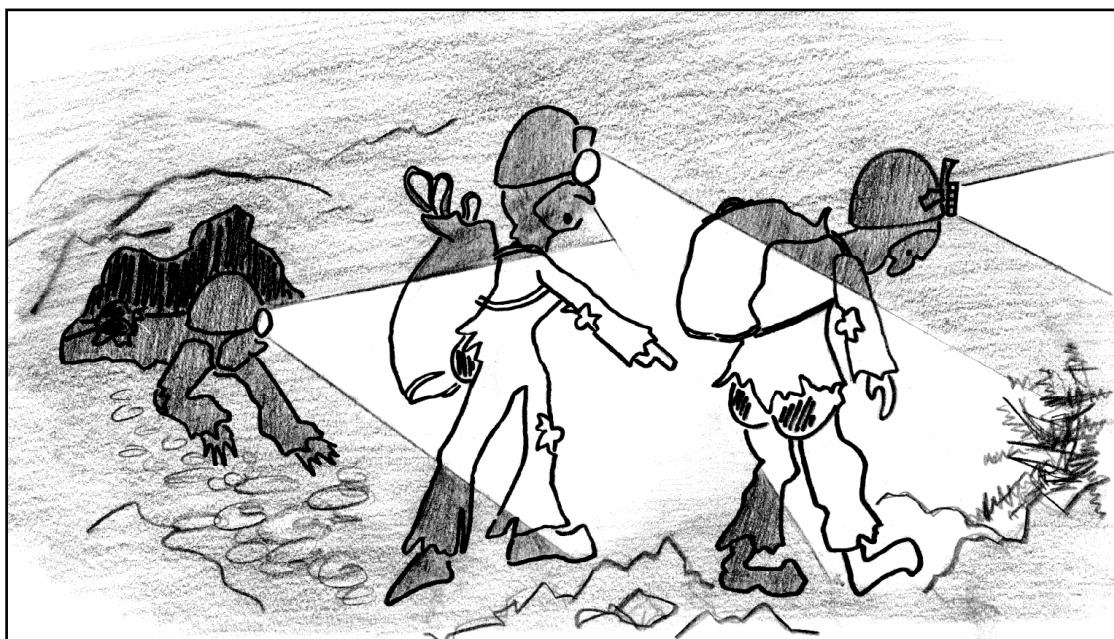
Back at the camp we sorted out the gear and decided to stick to our original plan. There was one further large shaft off NCB passage so we agreed to drop it and, if there was time, we would come back and look at The Void. We bolted down the next shaft along NCB passage to a large bouldery floor; it was a drop of only 20m or so. In one corner a small stream was running down the wall and then splashing down a hole in the floor.

Bingo! Maybe we've found a continuation we thought. We had the drill with us so I started bolting; Pants took over after the second bolt and finished the Y-hang. Placing the bolts we'd both got fairly soaked but the hang was dry and we descended excitedly. "Rope free! It's about 15m and quite big," Pants yelled from the bottom. Oliver and I followed hastily with the drill and rope. The bottom was a nice little chamber with a stream coming out of the wall and disappearing amongst the boulders but there was no way on. It had taken us several hours to come to this conclusion and none of us relished the prospect of surveying, especially as Pants and I were pretty wet and cold. We decided that, since the next group were due very soon and they would undoubtedly want to see this part of the cave, we would leave the surveying as a present for them. On expeditions since then we have realised the importance of surveying as you explore and not just being glory boys.



By the time we returned to Club Mig, Jim, Scuz and CVPete were just swinging across into NCB passage singing the 'Hi Ho' song from Snow White and the Seven Dwarfs. It's a great feeling to see the lights and hear the noises of other people. We sat down together and had a cup of tea, discussing what we had found; these post-mortem sessions are excellent for whipping up the enthusiasm of the fresh team...

Mark Evans



Behind a pile of Boulders: The discovery of Godzilla

Scuz, CVPete and I met the others in NCB passage.

"We've found an underground river," said Mark with a grin.

"And also if you climb along that tube," he said point vaguely at the wall, "after about ten minutes you get to a small hole looking out onto a Void."

This all sounded very exciting. We decided to look for this Void first, but after climbing up few different holes we didn't find it.

"Maybe he meant on the other side of the passage," said CV Pete. "I'll have a look at this pile of boulders down here."

"It looks like a bit of a slippery drop, I'd better get a rope... it's becoming a bit of a pitch, hold on I'll get some rocks to throw down"

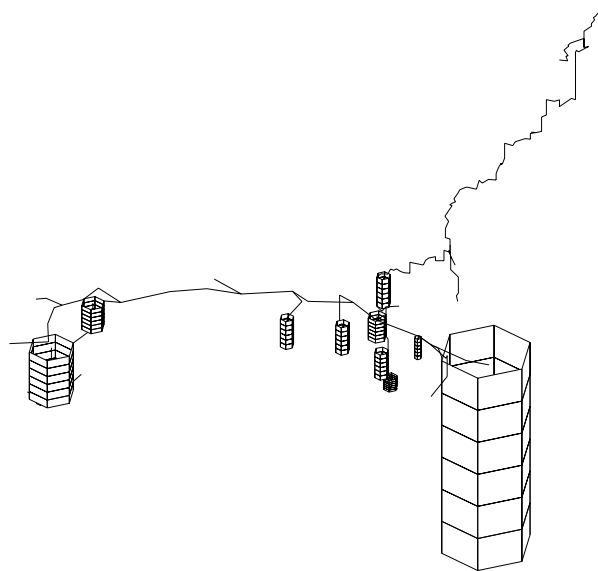
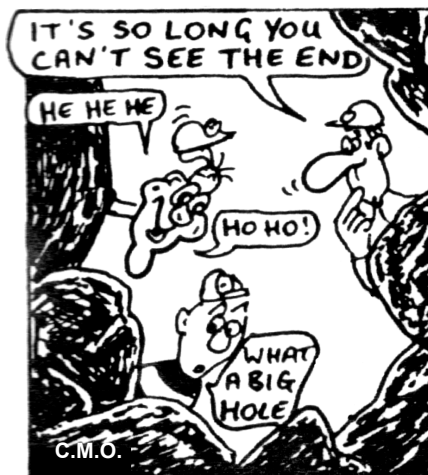
"Ok here goes"....."Distant BOOOM"

"Jeeeeeeesus Christ, that's a long way."

"Hold on I'll just time that....Ok.....1.....2.....3.....4... Boooooom."

"Bloody Hell..... that's over 4 seconds..... it must be over one hundred metres deep."

Jim Evans



Diary Extracts '95

18/7 Tony and Pants got up at the crack of dawn to meet the tractor that Mark and Jackie sorted out. Rest of group came down to help the carry up to the Shepherds' Huts

28/7 New shit pit installed considerably further from the bivvy. Someone keeps missing the pit. We suspect this to be Jim.

29/7 Weather really cold and wet again. The vita-vodka and vodka-soaked prunes went down a treat. The Chinese meal came up a treat!

30/7 Pete "no point in killing yourself" Evans solved the mouse problem by making it into a kebab.

8/8 Miserable day with low visibility and constant showers. PF10 deemed safe to enter and goes immediately to -30m with a snow-plugged chamber and more draught.

13/8 The 35m pitch in TT is bottomed and surveyed. Yet another blind shaft. Swing at top of pitch lands in massive horizontal passage (NCB). Water is becoming a problem: the barrel in M10 is not working properly.

Taming the beast: A partial descent of Godzilla



Jim and I had been waiting for what seemed like hours. CV had descended the pitch 'Godzilla' to see if our third length of rope, robbed from pitches elsewhere in NCB Passage and knotted to the end of the other two lengths, was touching the floor of this remarkable shaft. When he returned, a little breathless after prussiking about 60m on a freehang, he broke the news. Negative.

"Maybe another 15 to 20 metres," he reckoned.

Here, indeed, we had a scary monster! It was out of all proportion to ICC's two summers of vertical exploration on Migovec to date. But tomorrow we were packing up to go home... We did have one last rope of around 15 metres, cut from a vital traverse in NCB Passage, with which to bottom this clincher. There was bound to be another big pitch in its floor - a shaft like that just can't go nowhere. I was really excited.

"Hey boys! Who wants to rig this?" I said holding up the tatty bit of nylon.

CV was quick to reply. "I'm not doing that again."

Jim was already tucked up in his sleeping bag at Club Mig and the water for re-hydrating food was warming through. "I've done big pitches before," he said with a smirk.

"I can't believe it!" I shrieked making the whole cave shudder. "This is the biggest pitch we've found so far and you can't even be bothered to go down it!" Pause. "Well then, I'm going... back in 20 minutes!"

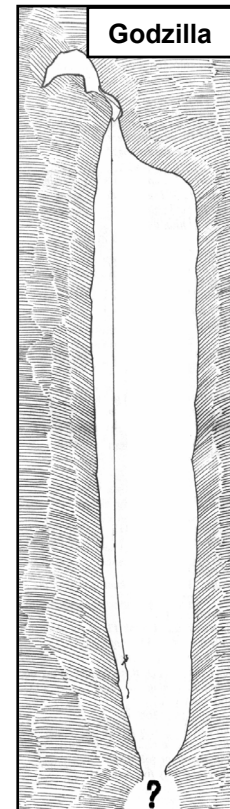
Men! I thought. With the rope at my side, I alone was determined to defeat this dinosaur. With difficulty I hauled up some slack, threaded my descender and steadily slid down the rope, mouth gaping at the magnificent smooth walls of the cylindrical shaft as I went. The top bolt faded out of sight and the first knot came into view. This must be solitude - suspended only from a ribbon of light stretching off into the dark unknown, no light but that from my carbide, no company but my own. Now I was at the first knot. I had a mental blank. How do I pass a knot?! I haven't done this for ages! I must have been there for 10 minutes or more trying to figure out what to do. Going back up was my favoured option. Finally I got it sussed, slid down, down, down to the next knot and repeated the procedure. I was sliding ever more slowly as the bounce in the rope was making me uneasy. The rope was trending towards the shaft wall and soon I had to push myself away from the wall with my feet as I went down.

The knot at the bottom of the third rope couldn't come too quickly. With my fourth and final rope securely tied onto the existing series, I dropped the free end then, with fingers crossed, I peered down into the void below. There seemed to be a ledge some distance down but the majority of the shaft was still as black as outer space. I forced a timid shout, "Ehh Ohh!" Breaking the peace was like swearing in church - the echo was addictive but a disapproving silence ensued. I gathered myself together and went back to business, descending to the very end of the rope. "Oh for Heavens Sake!" I was still dangling in thin air. I took a quick look around, noted that the ledge was still maybe another 15 to 20 metres down and started to ascend.

"There's a lot of rope bounce down here. Easy now, I think I can hear a grating noise. Don't look up... the rope's rubbing on the wall! This rope's seen better days - look at all those places where its deformed from being knotted too tightly too often. At last, a knot to pass! I can't prussik any more... No, tell me that isn't the bolt creaking. Creak. Please be gentle with me!"

Back in the safety of Club Mig, a full hour or so later, I had to confess. "That was the most frightening ordeal of my life!" - Godzilla, I'll be back.

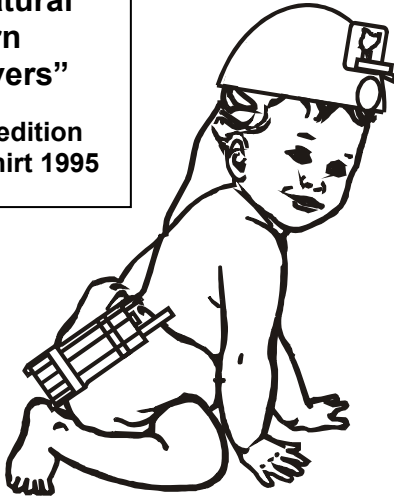
Sarah Wingrove



Planning Ahead: Dreaming of Greater Depth

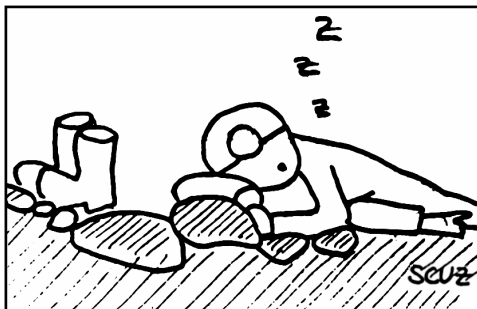
**"Natural
Born
Cavers"**

**Expedition
T-Shirt 1995**



Unfortunately, there was no more rope. The thrill of discovery and, for Saz and myself, the exhilaration of sheer terror, kept us talking late into the night, planning a return to Godzilla. When we woke up, we had morning shits in the BDH container, had breakfast (a mixture of Pasta-n-Sauce, sosmix and soup) and then lay around in sleeping bags playing I-spy...in the dark! At 4p.m., when Tony and Mark came down to help with the carry back to the surface, the ropes were pulled up from Godzilla and measured at 90m. This made Torn T-shirt 232m deep.

Leaving some equipment at Club Mig (thanks to Alva and Pants for taking out the shit BDH), we returned to the surface after over 52 hours underground. The news of our finds made a fitting finale to the summer's caving.



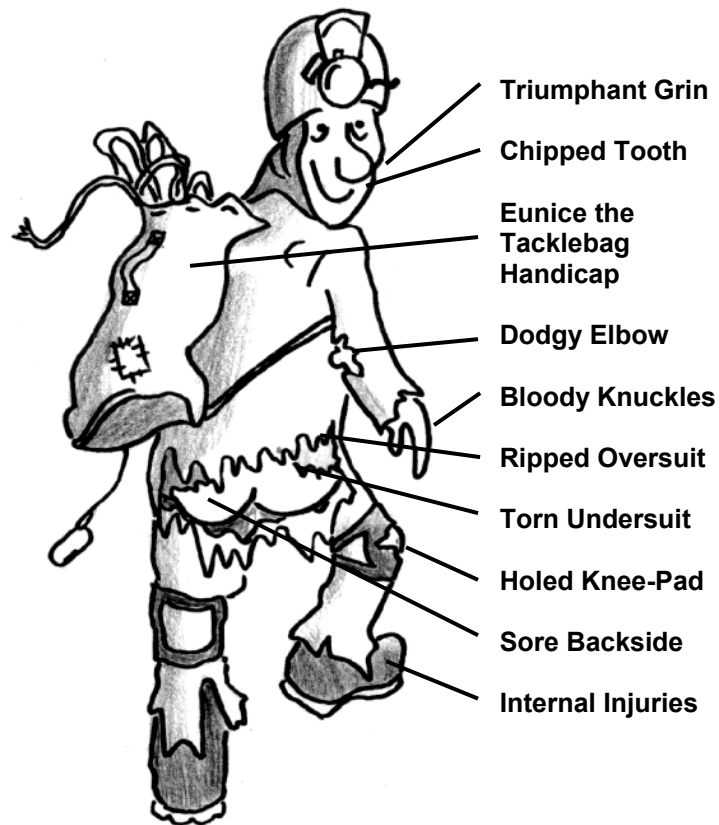
Everyone knew that the glory belonged to the whole team, who had worked so hard over the previous weeks to extend Torn-T and to make the discovery of Godzilla possible. Things looked very hopeful for 1996.

Peter Eland



1995 team photo: CVPete, Pants, Oliver, Jim, Mark, Scuz, Tony, Alva

Anatomy of a Torn T-Shirt Caver



Sarah Wingrove

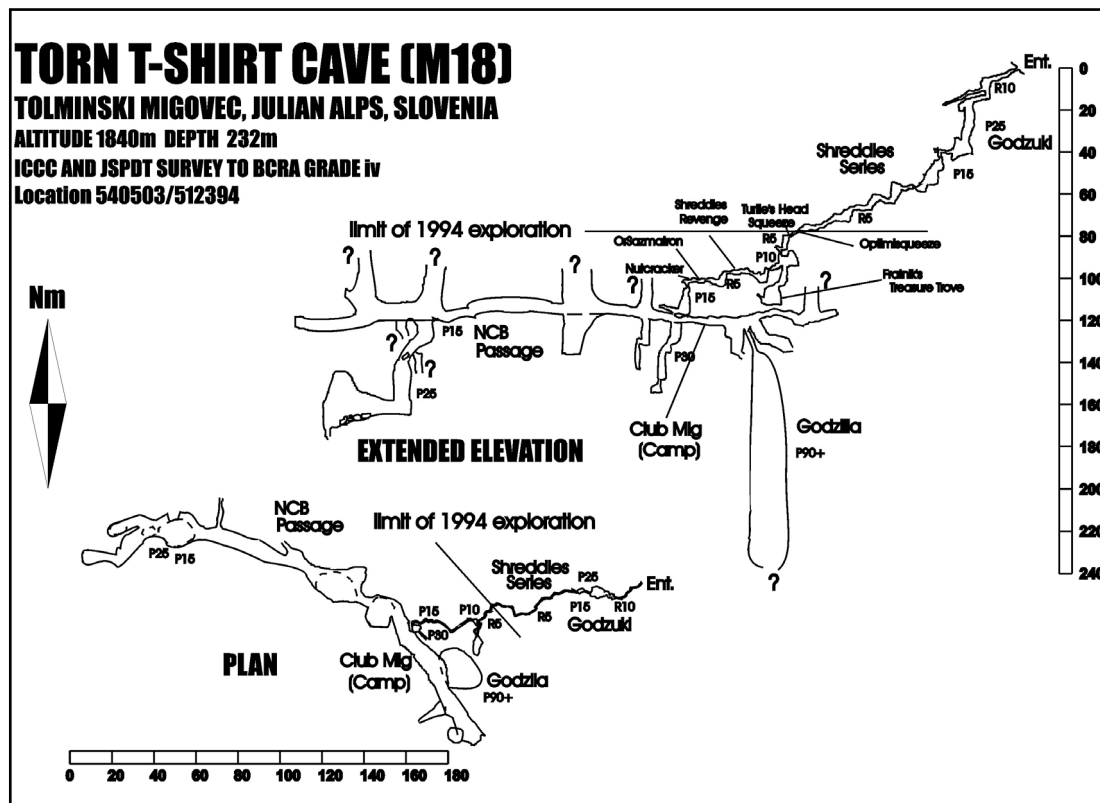
Further Diary Extracts '95

14/8 "Changed my socks for the first time in 18 days, I had grown rather attached to them."

19/8 Find a tantalising void in TT with a booming echo and sounds of water but it needs some attention with a chisel. More trips in PF10.

22/8 Many carries to the Shepherds' Huts for everyone. Frantically trying to get everything down the hill in time to meet the tractor.

23/8 Tractor arrives, perfect timing - £90 very well spent.



1996

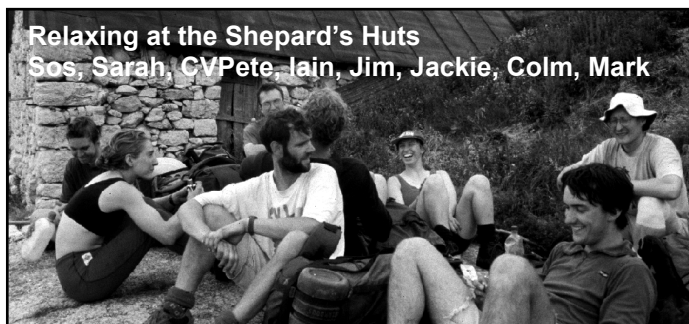
“The Black Label Year”

With significant discoveries made in 1995, leaving numerous, un-investigated shafts and passages, the prospects for the '96 expedition looked good from the outset. Surprisingly however, despite tales of 'voids with no walls' and 4.5 second drops, recruitment for the trip initially proved difficult. This was probably due, in part, to the horror stories of tight rifts and squeezes in the entrance series of Torn-T. However, our talks at the BCRA conference and articles in Caves and Caving were beginning to generate some interest amongst outside clubs. For example, after a drunken night at the Belfry, James Hooper (a.k.a. Tetley) fell for our bullshit (or at least he fell on the floor) and so defected from OUCC and the Picos to become an integral part of the expedition. Only five people spent the full six weeks on Migovec, while another 13 stayed for 1-4 weeks.

After the usual flurry of disorganisation in the week before the expedition (belying the fact that a lot of hard work was done, shopping at Makro, sorting out insurance, ferry tickets etc.), a mountain of equipment and food was eventually packed into barrels and seven cavers squeezed into a heavily overloaded transit van and headed off for the 24 hour non-stop drive to Slovenia. For the old hands, it was good to be back at Tolminske Ravne. By 1996, the inhabitants of this small hamlet were becoming accustomed to the sudden influx of English cavers during July and August and good relations have since blossomed.

This year we were unfortunately unable to persuade any of the farmers to use their tractor to carry our gear to the Shepard's Huts and so, after an attempt to hire mules and/or a pack of horses, we resigned ourselves to carrying all the equipment up on our backs - something we've done ever since and, though a pain and a slog, it at least gets you pretty fit pretty quickly. In 1996, water proved less difficult to obtain as the weather was unusually wet. Rain-water was collected on tarpaulins which fed into a large barrel. During dry spells an emergency supply was collected from an additional barrel under a melting snow plug. We also made some slight improvements to our 'pit' by adding a live bacteria treatment in order to break down the waste. An antiseptic hand wash cut down the amount of illness.

By 1996 we had an efficient system for water collection and food. Our method of battery charging was not worked out however and so we (and in particular Dave Wilson) put in a lot of time working out a system for charging a car battery with solar panels and then using this car battery to charge batteries for lights, the drill and also a laptop which we had decided to bring to input survey data at the bivvy. The computer more than proved its worth.



Relaxing at the Shepard's Huts
Sos, Sarah, CVPete, Iain, Jim, Jackie, Colm, Mark

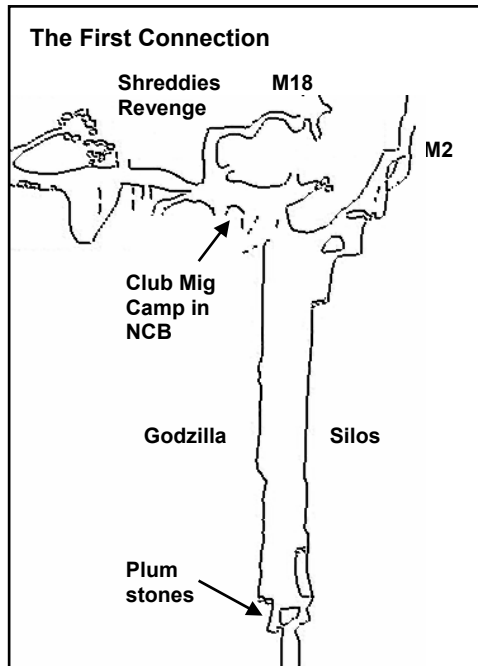
1996 was the first year in which we were successful in gaining funding and approval from the Royal Geographical Society. We put quite a bit of effort into the proposal and used Clive and Janet Cotter as our referees. This had the added advantage that Janet became more interested in the expedition and joined us in 96.

Due to a lack of enthusiasm for going in and out through Shreddies in Torn-T, and in a desire for greater efficiency, we came prepared for an underground camp in NCB. With a delivery of 42 free litres of Smirnoff Black Label Vodka (thanks to Alva's 'scrounging letter' (reprinted at the end of this journal)) and the discoveries that were to follow, 1996 was the year when we finally realised that Migovec was truly hollow...

Jim Evans and James Hooper

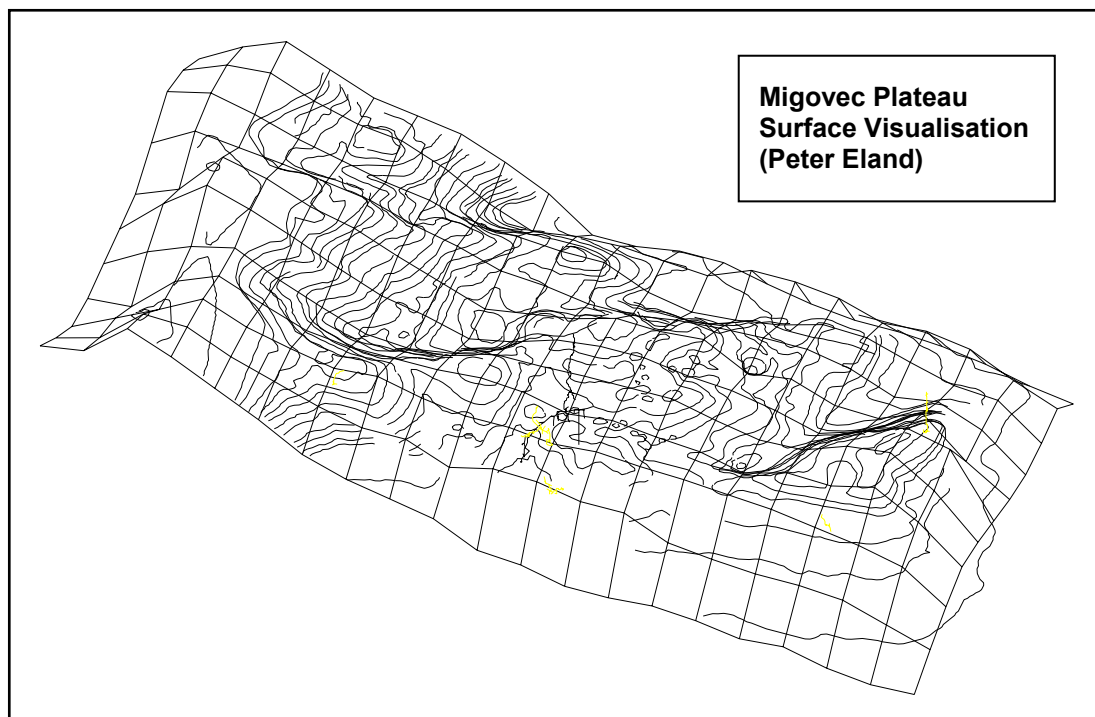
A Return to Godzilla, Plum Stones and the First Connection

It was three in the morning and I was dangling in blackness down Godzilla, the best lead from 1995. Far above, I heard the soothing sound of Andrej's recorder. Scuz was there too, ready, after a year, to finally reach the bottom of this huge pitch. I kept abseiling down, the bottom no-where in sight, the thin rope snaking out of the tacklebag. Then suddenly I hit the knot at the end. Jesus Christ.... In the warm sunshine of the surface, the idea of reaching the end of a 100m length of rope is something to hope for. Down here, alone at the cold, dark limit of exploration, I could only contemplate falling to my death. The bottom of the pitch was still out of view, the top a very long way above. I furiously hammered in a bolt to keep my thoughts from straying and shouted upwards, "Bring more rope!"



I always enjoy the sight of a small light slowly moving down a vast pitch, this time I was particularly glad to see a fellow human being. Tying on the rope that Andrej handed to me, I abseiled down to a shelf twenty or so metres below. "Rope free." When Andrej joined me on the ledge, I was both elated and relieved. He was visibly more sombre - he had been here before. Godzilla, it turned out, was the same pitch as Silos in M2. More incredibly he showed me two plum stone that he'd found on the ledge. As a young caver, twenty years earlier, on a formative caving trip down M2, Andrej had been on this very ledge and remembered eating a plum. Our deepest lead had been killed; the fact that we now had a system seemed a small consolation at the time. We shook hands, took a long look around and began the slow ascent to NCB wondering how much more there would be to find in our "system."

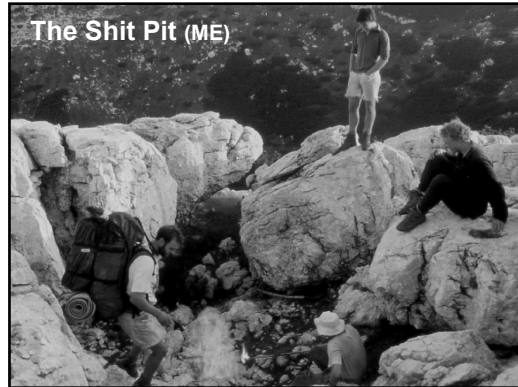
James Hooper



Trauma at the Pit

It was our first full day on top of Migovec. We'd been doing carries for quite a while, but we'd always stayed in the comfort of Tolmin. Pizza and beer have a lot to answer for. With the tents set up and the bivvy looking respectable, Jim was showing three expedition virgins (Tim, Sos and Colm) the plateau.

"That's M10 entrance where we get snow to melt for water, now come along and I'll show you where the shit pit is." We ambled past the tents, admiring the view of Migovec from the grassy ridge, before clambering down towards a small collection of boulders, with an old tent pole protruding from the top. "You put a flag up there to show that the pit is in use so no-one will walk in on you. The pit itself is just down here." We followed Jim down to the narrow slot, a horde of flies emerging as we approached. "It's not too bad now, but wait three or four weeks, there'll be flies everywhere".



We were just about to turn around and head back to camp when Jim continued: "and this is how you use the pit," whipped off his trousers and, without any warning, deposited a long, wet turd in the centre of the hole. Shocked and traumatised, mouths open with disbelief, we dashed for the safety of the bivvy, but it was too late. To this day that image still haunts the unfortunate trio.

Colm Carroll

Escape from Dodge City

This was to be my first underground camping trip and I was a little nervous. Especially as we'd be entering via the infamously tight 'Torn T-shirt' entrance series that I'd heard so much about since I joining IC³ the previous October. Luckily, I was with Iain and Jim, both hardened expedition veterans, so I felt in safe hands. We scraped ourselves and three tackle-bags down to NCB in about three hours, and I was left wondering what the fuss was all about (I was to find out later).

After a quick brew at Club Mig, the newly installed camp in NCB, we headed along to an unexplored lead from the previous year, a big carbide X marking the limit of exploration. A quick and elegant climb by Iain, and a messy belly shuffle by Jim and me, soon resulted in us entering virgin passage. We stormed along, constantly swapping leads, so we could all share in the excitement of being first. The tunnel we were in was a pleasant phreatic tube, slightly less than two metres in diameter. Stooping, we headed onward, our hearts racing. I spotted a slot running under the right hand wall, and dived in.

A scree slope took me into a 7m wide chamber with edges gradually sloping inward. I pushed on. Jim and Iain, however, were reluctant to continue exploring. In my enthusiasm, I had overlooked the many large boulders seemingly floating around the chamber's edges, only a thin band of soft mud holding them at bay. These boulders were loaded, ready to fire. Death hung above us and we quickly decided to flee before the going got tough. Naming the area Dodge City, we let wisdom overcome exuberance and slowly backed out of town. The lead remains unexplored to this day, waiting for those with nerves of steel, and a slight mental imbalance.



Colm Carroll

The descent of the Void

After zero hours sleep at the rocky and cold Club Mig, we needed a quick morale boost. The Void, a bottomless black pit discovered in '95 seemed a reasonably safe bet. Fortified by smash, cheese medallions, and copious quantities of tea with sugar and milk (or was it flour?), we climbed up into the tube heading off NCB. This passage ended at the promised shaft, a forbidding looking place, with the sound of the occasional drip giving it an eerie feeling. Jim quickly hammered in a safety bolt, and I, being the young blooded, fresh faced amateur, disappeared into no-mans land to place the second. Heart in mouth, I slowly inched outwards, feet first. 'Creak.' Shut up descender. The darkness lurking beyond the tight slot gave way to a shallow pitch. I rapidly drilled the hole, and hammered the spit home, but then ran out of courage. Scurrying for safety, I let the bold Iain descend 10m down to a large ledge. From here another 30m drop headed off, and we were all soon standing at the foot of the impressive shaft. A narrow downwards sloping rift continued, but it looked tight. The lateness of the hour and the daunting task of dragging exhausted bodies upwards through the tight entrance squeezes precluded this bit of pushing. We therefore left it for a more masochistic team.....

Colm Carroll

If at first you don't succeed...



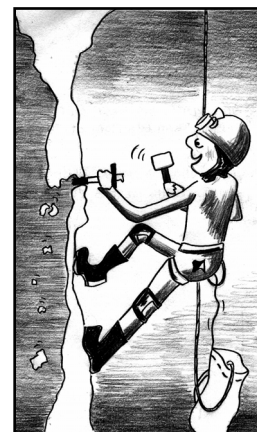
I woke up early in my small tent, rubbing my hands together, excited. In the biting cold air, that was more than made up for by the purple rise of the sun, I went to the toilet, fired up the temperamental Coleman petrol stove to make tea, and began stuffing large quantities of rope into a tacklebag. I triple checked to ensure that there were knots at both ends - the memory of being stopped by a knot 30m up from the bottom of Godzilla was still fresh in my mind. Now we had another lead that I was sure would break into a lower level of horizontal cave. I had bullshitted so much, I really did believe it. We WERE going down.

Eventually Scuz, Shed and I followed the carefully laid string to the entrance of Torn-T and began the three hours of cursing that accompanied a trip through Shreddies series. The tacklebags were rather endearingly labelled with female names and I continued several turbulent affairs with them: Kylie; Esmerelda; Rebecca (a favourite).

We were soon crawling down the tube that led to 'the Void' eager to see the latest discoveries. Arriving at the top of a pitch, we clipped onto the rope and abseiled down to the wet, dripping floor. We all took turns hammering the next tight pitch head until, with a rope in place, we dropped down a short distance to the base of a small chamber..... and no way on. No. This couldn't be. But there wasn't a possible continuation. Water trickled down a mouse sized hole in the floor. We sighed and started to ascend, derigging as we went.

I was the last up. Disappointed. More anxious than normal to find a way on. Nearing the top I thought I'd spotted one. The confined passage that we'd followed into the pitch (named Tradesman's Entrance) looked as though it might just continue on the other side of the shaft. "Hold on a minute," I shouted across to the others and tried to pendulum across. I finally grasped hold of a loose flake and heaved myself up into a draughting hole. Four metres in, there was a parallel pitch system. The mountain was truly hollow and ever since that moment I've half expected my bolts to go straight through the rock and break out into nothingness.

"Hello, hello, I've found something. Come across," I shouted, furiously hammering away. Disappointment quickly turned into a thirst for discovery as Scuz sang excerpts from her favourite operas and Shed slowly hammered in his first bolt.

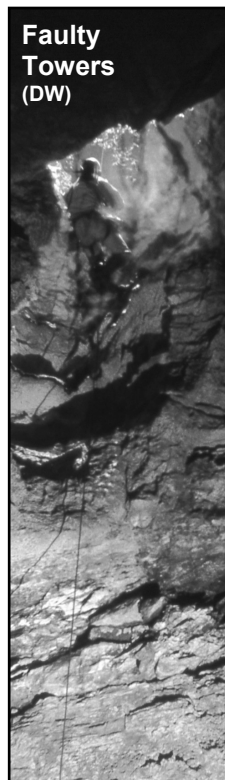


James Hooper

Going Down: The Discovery of Level 2

I'd been really looking forward to my first underground camp and now here I was, hammer in hand, enjoying my big moment. I placed my first bolt and continued rigging down three small pitches, named Faulty Towers, with helpful hints from Tetley and Scuz. The rope ran out at the top of another drop into blackness so we stood around and did the normal series of tests: shouting and then listening for the echo; throwing stones and counting the time they took to hit the floor; then standing in silence, holding our breath, listening for any sounds of a stream. The echo was heard, the rocks seemed to be falling for ever and we were sure we could hear the trickle of water...

We'd run out of rope though and, as it was late, we decided to head back to camp for a night at the draughty Club Mig. We were soon in our sleeping bags wondering what we would find the following day. The answer to that question was better than we imagined...

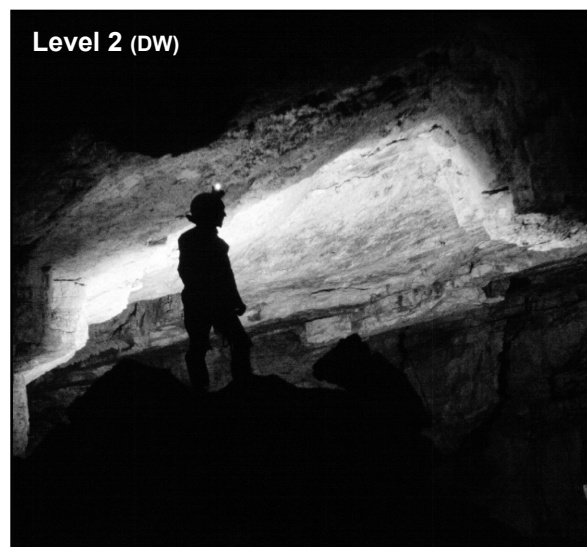
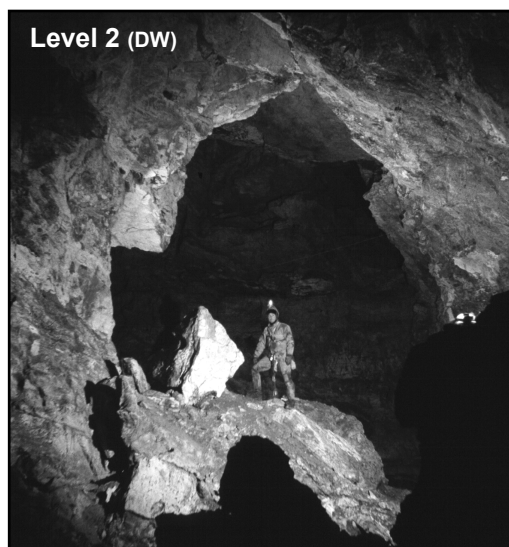


The following morning, after an hour or two of rerigging, a rope led down into blackness. I was given the task of placing the last bolt in, a rebelay just a little down from the pitch head. Five metres below this, the rope popped through a hole in the roof of a MASSIVE chamber - this was the next level we'd been dreaming about. "Rope free," I shouted to Scuz and Tetley, and then stood there, struck dumb by the awesome size and scale of the place as my light scanned the vast blackness. Tetley was barely able to contain himself as he abseiled down to join me. "Level Two," he cried out at full voice.

Two deep, adjacent pitches led further down, soon to be named Arian 5 and Divine Brown, but more importantly, a passage was found. We climbed up a pile of boulders and stomped down it to see what we would find. We were soon gazing over another seemingly bottomless pit. I commented that it was "big and going down," so we named it Titanic. Heading the other way from where we came in, the passage also continued to another large pitch, named Challenger. It looked, indeed, as though IC³ were going down...

We got back to camp and packed our kit, eager to tell the others what we had found. I was very lucky that my first real exploration trip and my first camping trip were so good. We had found a significant amount which completely changed the direction of the exploration of the cave.

Tim Wright



(A typical) Late morning in the Bivvy ('96)

"Who's going caving?" says Jim.

"Everyone," says everyone.

"Where's Shed?" asks Sos.

"Shed's dead baby," we all reply.

"What about Colm?"

"The Cumff Master?"

– He's in his tent getting the chapters in."

"No point in getting ready then"

"It's always possible that Simon will turn up," someone mentions sardonically.

"I say chaps, anyone for a cup of tea and a rich tea biscuit?" asks Iain, into his fifth hour of rolling out chapattis.

"Ahhh yeahhh," replies Jim scratching his balls.

"Wow!" Tetley exclaims excitedly "have a look at the computer for the latest survey."

"Oh shit, the power's gone."

"Actually I could do with a shit," says Jim and lumbers off into the low hanging mist.

Dave jumps frantically into action to sort out the charging electronics while a mouse scurries across the bivvy avoiding Jackie and the huge pile of dirty plates.

"Get the little fucker," declares Shed stumbling into the shakehole (as always keen to perfect his Pythonesque walk) and grabbing the dog-eared copy of The Acid House to whack the rodent.

"Smoke it out," says Tetley taking a burning branch from the fire with one hand and a packet of liquorice Rizlas in the other.

Mark sensibly hangs the food up away from the vermin.

Alva sets to work designing a sophisticated mouse trap.

"It's just up there."

It was indeed until Iain got involved and a short while later "just up there" had become a hideously dodgy traverse with Iain clinging on with shaking limbs.

"Shit" he says in a Scottish sort of way.

"I could do with another shit" grins Jim – having been back from the shit pit for at least three minutes.

A cry rings out across the plateau – "Aiiiiiiiiiiii Ohhhhhhhh."

"Aiiiiiiiiiiii Ohhhhhhhh," we shout back to Scuz and CV Pete exiting out of M10 with snow and water.

"Watcha," says Scuz a moment later with an enormous backpack on her back (she is on expedition – not on holiday - after all).

"So, who's going caving?"

"Everyone" says everyone.

"Ahh yeah" says Iain observing the backpack filled with snow.

"Vita Vodski Slush Puppies."

"Ahhh yeahh" we all reply.

Tetley



Diary Extracts '96

"Slept by the Soča for our first night in Tolmin. Woken up by JCB moving gravel at about 7:30 am. Pizza for breakfast. Jizza went into bank carrying rocket tube for Andrej!"

"Jim bribed cheese farmer in Ravne with vodka to use barn to keep stuff." (The beginning of a fantastic relation with the Skala family over the following years).

"Ten hour trip into Shreddies and back with bags for camp. Shed escorted out feeling ill. Couldn't recall why I came back for another six weeks of this hell" - Scuz

"Weather abysmal. Forced to spent night at Shepherd's Huts. Colm in the one sleeping bag, Jim, Iain and Sos under polystyrene blocks."

Hot-bedding: Playing the Traversing Game

The Intro

Night and day take on abstract definitions underground, whereas above the surface they are black and white, or vice versa. To push our system far beyond the tortuous Torn-T entrance series, we were going to have to spend days under the mountain. Before this landmark trip I can remember putting off going underground as long as possible... those last moments in daylight always seem more precious than ever, and even at four o'clock in the afternoon it seemed too early to descend to that most exclusive of residences – Club Mig. We were the Dream Team, and in order to utilise the underground camp as efficiently as possible, we were staggering the starts between exploration teams. The Night Train would take the express route later that evening, and only return to the camp when they had discovered what cave exploration was all about.

Iain McKenna

The Night Train - The discovery of Mig Country

I'm not sure, but I seem to remember waking up that morning with a hangover. Colm was never any good at getting up in the morning full stop. We had decided to try "hot-bedding" - a tactic I had used in the Picos - so as the day team of Sos, Jim and Iain left for the cave at around 4pm, Colm and I lounged around drinking tea until the moon rose. They were the Dream Team and we were the Night Train.



Passing the others in bed at Club Mig (our camp in NCB passage), we continued down to Level 2 and on to Titanic, a wide, tempting shaft. Unlike the good ship, however, we didn't go down. Instead a strong draught blew over the pitch and a small ledge seemed to draw us across, to traverse. We took turns bolting until the solid rock gave way to loose calcite. It was my turn. Colm shivered in a survival bag while I 'faffed', uncertain of the rock, scared of the forty metre drop to my right. It wasn't that far to the other side. I could see a sizeable way on beyond the pitch. "Come on Tetley, get a grip." I made my mind up. Gingerly tip-toeing on precarious footholds, leaning into the rock, I slowly, slowly edged my way across. My hand hold snapped off. My heart missed a beat, ignoring the fact that I was attached to a rope. I desperately clung on with my other hand. One final reach..... and I was there. I tied the rope off, investigated to make sure the passage went round the next corner, noted a significant inlet of water and hollered to Colm to get out the tape measure.

We surveyed over the Titanic and continued into the unknown for a dozen or so legs to a boulder choke. But there was still a strong draught. And this time there was a way on. We scrambled up an easy climb. And stopped. Holy Shit. What could we say? We didn't know what to say. I hurled a rock into the black space ahead. The noise said it all. 1,2,3 seconds, rattle, rattle, 6,7,8, crash, bang, thud. Shit it was big. What could we do? We didn't know what to do...

It was 7am. Involuntarily we yawned. The gentle hand of sleep was closing in on us. We placed a few bolts, decided on the name Mig Country and left for the relative comforts of underground camp. We slowly made it back to Club Mig drowning in tiredness and euphoria. There we hit the stereo to coax the Beatles into action, made some tea and woke the Dream Team up with hot breakfast and vivid tales of our finds. Crawling into two 'hot' sleeping bags each, we wished the others luck and promptly fell asleep - never dreaming for a second that they could be as lucky as us. But then our night was the Dream Team's day.

James Hooper

The Dream Team - The Spirit of Elvis

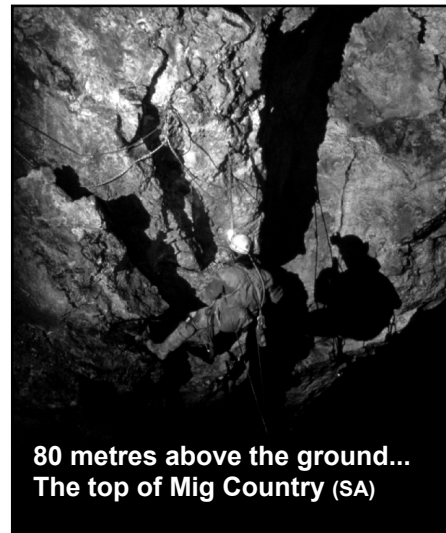
The night train finally arrived with a clatter of pans and mugs. We had heard its distant rumblings for some time and with it came the slow realisation of where we were and what we had to do next. I had long since decided to keep my head in the bag, and wait for the buffet car to arrive.

The hot-bedding technique we were using had some advantages and disadvantages. Before you were raised from your slumber proper, it was usual to receive a cup of steaming tea, and, if you were lucky, a share of a pan of smash with cheese medallions. Only when the returning party were stripped to their thermals would we finally tear ourselves from our muggy bags and start donning our stiff and unforgiving caving equipment.

Once ensconced in their bags, Colm and Tetley let us into a secret. They had discovered a pitch head and huge open shaft, which was clearly used in the ritual sacrifice of mere mortals to the cave gods. To discover this, they had completed an outrageous bolted traverse along a gradually diminishing ledge over a dark void before pulling over a lip and into a passage that led off to a climb. The pitch head was just there and it had been named Mig Country. We had to see this.

We were impressed, and it was exciting enough to have such a find on our hands... an undescended 70m shaft no less... but fate was to lead us away from temptation and the balcony of the Gods. To be honest, jealousy played its part as we were anxious to discover something as spectacular ourselves, and so we retraced our steps and traversed all the way to the other end of the Level 2 gallery.

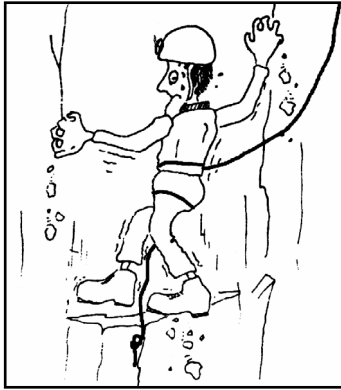
Here lay a monstrous traverse - Challenger. Without much talk we knew that it must be overcome. Time passed and Jim moved out on a slippery ledge, rope belayed to a flake. The rock was soft and yielding, more clay-like than we were used to, and to get his bolts in he had to dig deep. Sos and I chatted and kept warm under a space blanket, and joked to keep that anxiety at bay. Jim soon let us know that this was going to be no holiday.



Challenger was indeed a challenge to traverse. A few bolts down the line and we could see that the rock was so poor that it would be impossible to continue at this level, we would have to drop down and see if there was sound rock below.

I had taken over from Jim now, and descended five or so metres by belaying from another flake. We were still a long way from the overhanging section of the traverse and the plan was to bolt across the blank vertical wall using the limit of reach given by a long cow's tail. One bolt in and a shuffle to the left and yet again the rock was poor. A precarious balancing act had to be kept up to be able to hammer in the next spit. This was several notches beyond an uncomfortable stretch, and the rock was still useless. All the time I was thinking that this was like a tension traverse on an ice climb, but Wellington boots do not afford the same grip as crampons. Footholds on the wall were chipped with the bolting hammer, and furtive glances made towards the bolt and sling to my right.

Jim and Sos were getting cold and bored. I called to see if they wanted to take over. They could sense the slightly freaked tone of voice. I needed some water to drink. Jim needed some water for his carbide and so Sos went with him for a fill. Jim would take over when he got back. They were gone for fifteen minutes and missed my near demise and proudest moment all rolled into one.



Why I decided to carry on I will never know. The desire to get across this wall was so great – it was bursting out of my guts. Being alone in the darkness galvanised my thoughts. Unclipping the cow's tail to reach further was the option that was taken. My whole body was pressed to the rock as I pulled some slack through the descender. One or two moves and I had reached the limit of the slack. There were no more footholds and I felt like I was being swept away from safety like a man taken from a pier by a strong sea current. I reshuffled my feet and pulled yet more rope through my device. The next move was a heart stopper. The handhold on my right broke away, and with it was any chance of returning the way I had climbed.

The air was blue, and fortunately Jim and Sos could hear none of it. A battle of time had begun before grip strength diminished, and I had to hang by the remaining hold and use my teeth to pull through the seven or so metres of slack that was required if I was to climb across the overhang and reach safety. I was well aware that the bolt I would fall onto was poor, as was the flake above. The rope too was a static one and this was a factor 1 fall heading its way.

I just went for it. A few pieces of brittle rock snapped in my fingers but the boots gripped the jaggedy wall. I was so nearly there, leaning back doing the moves that are so easy on the climbing wall, when my left hand brought down a portable TV-sized boulder that knocked the welly from it's hold. I twisted and lunged and flew all at once and slapped for a mantelshelf ledge somewhere below my shoulder. We were across.

One bolt was in when the remainder of a bemused Dream Team arrived soon after. The gateway across Challenger was open, and to this day it remains a spectacular tension traverse, kept permanently rigged.

Iain M^cKenna

Caverns Measureless... The Discovery of Exhibition Road

Sos and I returned from Titanic to find that Iain was across the traverse, and finishing off a second bolt at the far end. After he'd placed the first bolt, Iain had decided, in a feat that brought bravery and insanity too close together, and in an absence of any rational thoughts of self-preservation, to just go for it, and climb the rest of the traverse. This was truly mad and the traverse gained the name 'Spirit of Elvis' as a result.



Once I was across, Iain said, "I had a quick look, it looks like a blind alcove....ah well, you win some you lose some."

"We'll have a good look once Sos is across, you never know...." I replied.

We waited for Sos to negotiate the traverse and then headed down the slope of the alcove.

"Hold on, what's that small hole in the corner?"

"That's not a small hole, it's quite a large hole."

We climbed down the passageway; it just seemed to carry on.

"What's down that slope? It seems to be getting bigger and steeper."

Walking past a few deep shafts and around huge boulders, the cave did indeed seem to be getting bigger, then round the next corner...

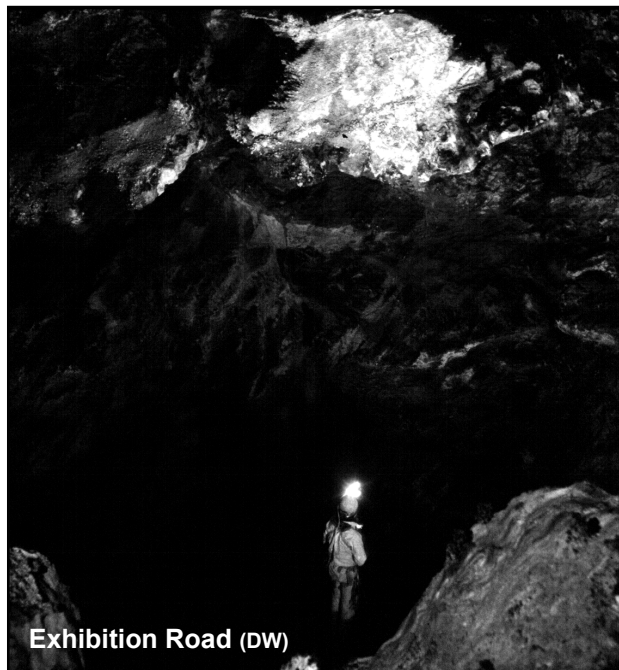
"Wow..... it's huge"

Jim Evans

Slaves to the System... Iain's narrative continues

We were speechless and overawed, and we had each realised a caver's fantasy. None of us could have dreamt about discovering such an impressive void in what had just become our hollow mountain. We had found 'Exhibition Road' and had gone deeper in the system than ever before. There was no shortage of shafts and small ways off to investigate along its length; enough to keep us busy for years to come.

Eventually it was our turn to head back to the camp and tell unbelieving ears about our exploits in the traversing game. We made the tea, smash and cheese medallions, stripped off and swapped places in the bags. We lay on the platform and watched as the Night Train moved off again with a clatter of equipment to chart the uncharted.



Exhibition Road (DW)

Iain McKenna

*"Alright my lads!!!
Number of leads
doubled since Slov '95
already. Alva's Swiss
cheese theory is incorrect
- Migovec is more like
small regions of cheese
in a hillside of holes!"*

Sarah Wingrove

The Outro

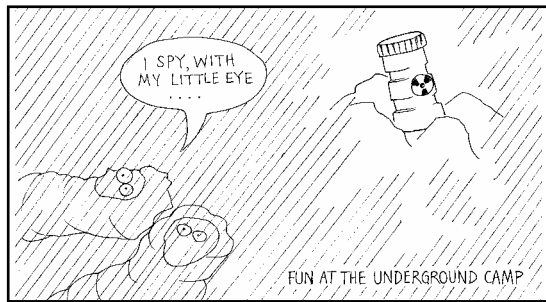
The vastness of our discoveries was difficult to comprehend as we watched the sun set over the Tolminka valley. The 42 litres of Black Label Smirnoff that Alva scrounged certainly helped as we readjusted our body clocks and our hopes for the hollow mountain.

James Hooper

The bottom of Exhibition Road (DW)



The Black Container



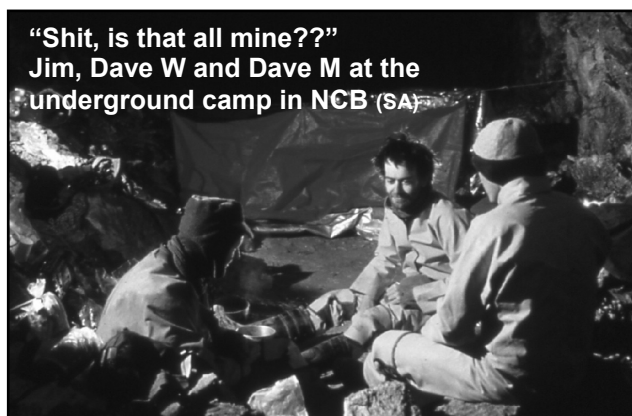
"What do you do with the shit?" is, for some strange reason, one of the first questions that's asked when the subject of camping underground is raised. With a combination of our camps being long, and the Slovenian caves being relatively dry, there was never any question about solid waste remaining in the cave. It all has to be taken out with us, inside our bowels or otherwise.

While setting up the camp in NCB, Tetley and Iain were dismayed, but by no means surprised, to hear the familiar exclamation, "Iain, Tetley - I just simply must have a shit." This is one of the two things that Jim takes great satisfaction in telling you, the other being that he has just had one. "Oh, come on, that's disgusting." We were down wind of Jim and though he was standing naked in a clear survival bag, the stench was horrendous. The hazard was sealed and left close to the camp to be deposited in the BDH container when it was brought in on the next trip.

Two trips and a high fibre diet later, I had no option but to use the BDH myself. The proximity of the toilet to camp means it is rather unpleasant for anyone to use, and even more unpleasant to those who have to witness someone else using it. And so I prepared the best I could by rolling down as much of my oversuit and undergarments as possible. Shuffling into position with three onlookers who were not really supplying helpful hints, I unscrewed the lid. It was hard to see properly, so I turned up the carbide flame on my helmet. The orange glow illuminated the laughing faces of the rest of the team. Perhaps they knew something I didn't.

The container was virtually full, and so I was faced with the even more unpleasant task of compressing the contents. What I didn't know was that some joker had put some nearly-spent carbide in the container. This had sat all night, gently fizzing in the warm moist atmosphere. As I pressed down on the shitty bags, the acetylene gas ignited. A huge mushroom shaped flame lit the whole chamber in a glorious orange sunburst. The accompanying bang wiped the smiles off the onlooker's faces. Thrown on my back from the force of the blast, I found myself uncomfortably close to a large pitch; my clothes still round my ankles. We were only in the second week of the expedition so there was still time for my eyebrows to grow back...

Iain M^cKenna



"The perfect antidote to a long caving trip beneath the Migovec plateau is a game of canasta in a three player tent. The normal 24 hour daily cycle has to be restored somehow, and lingering card games interspersed with fitful bouts of sleep in stuffy, safe surroundings seems to offer the perfect road to recovery."

"In order to lose your daily cycle it is necessary to spent at least two days at the underground camp, affectionately known as Club Mig. There, twelve hour bedding sessions and three hours of eating and coping with bodily functions are followed by twelve or so hours of exploration and three hours of coping with bodily functions. Sixty hours later it is possible to re-emerge from the entrance of Torn-T to embark on another canasta session in the tent - a process similar to the decompression period experienced by deep sea divers."

Iain M^cKenna

There must be some way out of here: Rock & Roll

The 1996 Expedition was three weeks old, and we were thrilled at the pace at which new discoveries were being made under the Migovec Plateau. As well as full time expedition members, there were welcome fresh arrivals to the camp, making the most of their holiday entitlement for the year. Rob had dropped in on his return from Turkey and was visibly disgusted with the state we were all in. Our new physical appearance had slowly crept upon all of us in the preceding weeks, and without any reference point to compare our filthy outward appearances with, we had just carried on living like pigs. He had with him a rucksack full of freshly laundered shirts and grollies, completely out of place in a hollow in the ground on the top of a mountain, and guarded them nervously in case any of us should want to investigate the ironed tucks and folds that enhanced their neat appearance. One or two days later, with still neat contents of rucksack carefully hidden in a secret location, Rob and I ventured underground.

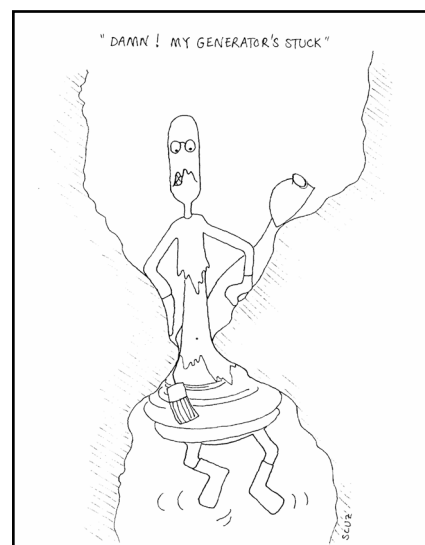
We ventured down to the Club Mig camp and, after devouring a pan of smash and cheese medallions, spent a familiar night in the draughty passage. The following morning, NCB was illuminated by Tetley and Andy 'Trousers' returning from the depths. To coax us out of the muggy warmth of our sleeping bags, they prepared a pan of tea (with cheese and smash floaters) to warm us from the inside, while enthusiastically chatting about the latest lead - a boulder choke at the foot of the 70m Mig Country Pitch.

Now, I hate boulder chokes. Previously I had been scared in Dodge City (off NCB), squeezing under muddy, caravan-sized lumps of limestone that had no visible means of support. I had no real desire for more. We were on our way to Level 2 and I was nervous. This soon manifested itself in a fairly typical (considering our diet), and inconvenient way. The race was on remove harness, chest harness, carbide generator, oversuit, undersuit, thermals and scants, whilst Rob ate as many chapattis with cheese and pickle as he could (let's just say that I needed the plastic bags that they were in). I need not mention the reason for him eating a Twix bar so soon after leaving camp, but the wrapper did come in handy.

Tetley and Trousers had done a good job of finding their way down through the choke and had marked the route with arrows. Just as well - the route went through some unlikely looking squeezes beneath precariously balanced blocks. You hardly dared breathe. One squeeze was obviously the bit that Tetley and Trousers had told us they had had to dig out. Dropping through this tube of loose rock onto a 3 metre climb gave a feeling of commitment. The choke was thirty metres deep vertically, and when it finally ended we were in a series of stepped pitches, the foot of each containing small pools of water.

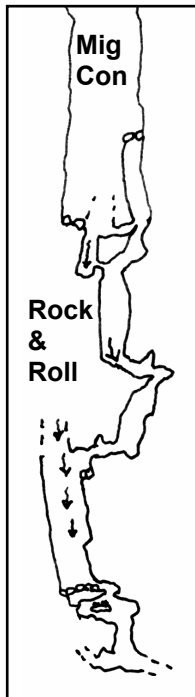
We rigged four of these before the torrent came. What had been rigged dry, was now under the full force of the water. We heard some rock movement above but thought little of it. We were cold, wet and worried that the situation would become worse. It soon did.

Back at the top of the ropes we'd just rigged, we could see a uniform ceiling of boulders, with rivulets streaming though the rocks everywhere like strings of pearls. Looking up was near impossible, and our carbide flames were continually dowsed. There was no danger of being flooded in but water was everywhere, the light was very dim and you couldn't escape the utter drenching we were receiving. After a good search, we realised we were having a great deal of difficulty locating the tube that Tetley and Trousers had dug.



"I'm sure it's up there, Nope, how about here - Nope."
This went on for what seemed like a long time. Finally we returned to where we had tried first.

With a slow dread it was time to accept our new predicament.
 "It's blocked - the tube is blocked. It was definitely up there..... "



Neither of us wanted to mention what was going on inside our heads. The tube was full of rock and we were cut off. There was little conversation because there was only one thing to do. Standing on Rob's shoulders, it was possible to jam up a little further to reach the main boulder that was blocking the exit tube. Trying to wedge and manhandle a portable TV sized rock overhead at the same time produced a result, albeit slightly out of control. The TV rock narrowly missed each of us but the accompanying smaller rocks didn't. The tube was clear - but only for a fraction of a second.

The second TV sized rock that took the place of its fallen comrade was more stubborn but eventually fell away between outstretched legs to the floor below. A lot of worried thrutching in the still unstable tube allowed us to escape to the chamber above. The way out yet again seemed unclear, there was just so much water falling through the boulders. Panic rose inside as thoughts leapt towards the belief that there had been another boulder movement, this time more serious. Relief flooded back when, as often happens when lost underground, all of a sudden a tiny piece of familiarity sparks the knock on effect that allows the recognition of the way on to fall into place. The further squeezes up through the boulders were made more difficult due to a combination of slippery mud and a fear of collapse, and it was literally a huge weight off our chests to escape to the vast open chamber at the foot of Mig Country.

Memories of the return to the camp are nonexistent - it was the kind of situation you find yourself in when your mind has been over-anxious; when relative safety is reached, you function in a kind of zombie-like autopilot mode. Tetley and Trousers mentioned the distant look in our eyes when we arrived back at NCB. We didn't stop for long, for the cold started to take its grip once more. There had been too much excitement for one trip, and although we'd probably used up all of our bad luck, I had a feeling we'd used up all of our good luck too.

Postscript:

In 1996, two more trips ventured through this boulder choke, christened Rock & Roll, each in much drier conditions. The water present on the incident above was the result of an afternoon's torrential downpour, during a lightning storm - the worst of the summer. It was also the first time anyone had got wet in this cave.

The next negotiation of the boulder choke was undertaken to retrieve the bolting kit that had been left in the evacuation. The tube was blocked again, but fortunately Colm and I were on the right side of it this time. I, however, managed to sustain a nasty finger crushing injury when moving the new collapse. Colm did the brave thing and retrieved the gear whilst I tried to cope with the pain. I was still groaning when he returned half an hour later.

I happened to be on the final venture to Rock & Roll too, partly to bury any fears that remained for me in this part of the cave. Jim, Mark and I quickly surveyed and de-rigged the new passage, and then went on to photograph a newly discovered hole in Exhibition Road named Bikini Carwash. The remaining tight pitches at the bottom of Rock and Roll shall have to wait until we run low on alternative options.

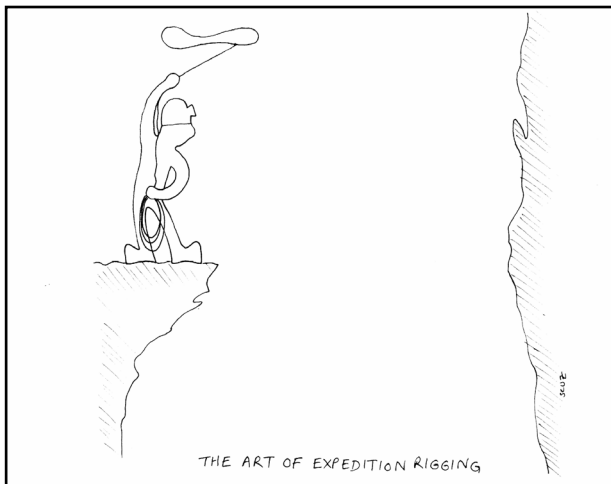
So why do they do it? Oliver Mann, from Imperial College, and leader of next year's expedition is convinced that it's worthwhile.

"It's a part of the world where no one has been before. And if no one's been there you don't know what you are likely to find," he says.

Extract from the Daily Telegraph supplement
 21st January 1997

“Go West Young Man”: The Second Connection

Rrring.....Rrring. “Hello”
 “Hi, Mark it's Jim.”
 “Jim! Excellent where are you?”
 “I'm in Tolmin, when are you coming out? We're finding shit-loads of cave!”
 “I'm flying to Ljubljana tomorrow, so I'll see you in a couple of days. What's going on, did you bottom Godzilla?”
 “Yeah, but it turned out to be Tolminski Silos in M2 as we had suspected!”
 “Bollocks! Ah well, at least we've got a cave system now.”
 “Yeah, but that's not all. The Void really went! We've found hundreds of metres of galleries and half a dozen pitches already. You won't believe it till you see it!”



I was kicking myself for missing the first two weeks of the expedition, but it had been unavoidable. A few days later when Jackie, CVPete, Millie and I arrived in Tolmin we wasted no time in getting up to the Bivvy. So much had been done already and the survey was already entered into the computer. Shed had scrounged a Hewlett Packard laptop which we were using on the mountain to immediately type in survey data and get an up-to-date image of the cave. “Holy Shit!”, I said as I saw the survey rotating majestically on the screen for the first time.

The new extensions dwarfed what we had discovered the previous year. Jim's idea of bringing out a laptop had paid dividends: survey data could be entered and checked the same day; any errors could be corrected on the next trip; we could get an accurate depth and length reading instantly; and, more importantly, we could see where the cave was going!

“What's that bit of cave there?” I asked pointing at an unconnected shaft series.

“Ah, that's the entrance series to M16,” said Tetley rubbing his hands together and grinning ear to ear. This was Tetley's first year on Migovec, but due to his previous experience in the Picos with OUCC he had taken on the role of keeping the survey notes in order. Unfortunately he was leaving the next morning to start a teaching job back in London.

“So the end of Level 2 is pretty close to M16,” I said.

“Yep, only 50m between them at most!” replied Tetley.

“That's why we started rigging and surveying it a couple of days ago. If we could make the connection.....” Jim didn't have to complete his sentence, we all new the implications of connecting the caves.

“That means we would never have to go through Torn T entrance rift again!” said Sos in a hopeful tone. This was the first expedition for Sos and in the last two weeks he'd become all too familiar with the razor sharp entrance series.

“Plans to meet underground usually fall through for a variety of reasons. Planning to meet through a passage that hadn't yet been discovered seemed a trifle optimistic!!”

There was a camping trip planned for that night. Iain, Scuzza and Colm (more commonly referred to as ‘the comfort master’) would be leaving in a few hours. We made a tentative plan: they would go to the end of Level 2 which was closest to M16 while we would try to look for likely connecting passages. In the event that we found something we could try to signal the other group. At the time, it all seemed pretty unlikely to say the least....

The next morning Sos, CVPete and I got ready for our trip. Sos was ready well before us - we hadn't been caving for a while so there was the inevitable faffing around. We packed a few ropes, bolting kit and a survey kit along with a few Rocky bars to keep us going. I was quite looking forward to this trip as I hadn't been into M16 for two years and remembered it as a good SRT cave (much more pleasant than the Torn T entrance).

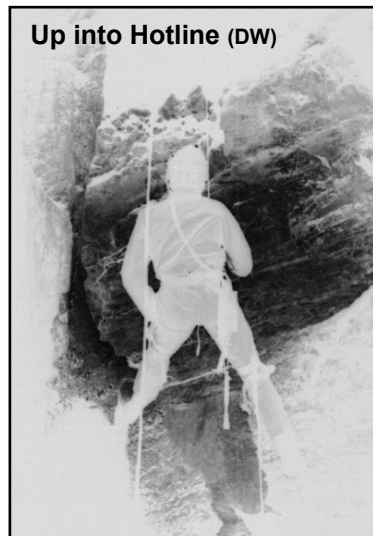
We were making good progress and were already at the bottom of Brezno Strahov, this is the one pitch in M16 which I don't feel comfortable on. Brezno Strahov means Ghost Shaft. Andrej Fratnik told us that it was so named because one of the Slovenian cavers was almost killed by a massive boulder which dislodged itself from the wall and fell down the pitch (missing him by inches). Immediately after BS is a short pitch into a boulder chamber. As I descended this pitch I could see the other two already sitting on a large cairn with a small piece of paper on it. That marked the last survey station.

As I was hanging there, I noticed that I had gone from being hot and sweaty to freezing cold in a matter of minutes. There was a howling draft of freezing cold air which I hadn't noticed before! The pitch was only 10m so I descended, but at the bottom the draft was gone.

"Hey lads! You'd better get back over here, there must be a passage up there somewhere!" I shouted, pointing back up the pitch.

We free-climbed up about half way and shone our lights up to the roof. The draft was unmistakable although we couldn't see the continuing passage.

"There must be something big up there to cause that much draft!" said CV starting to shiver. I took the bolting kit and climbed as high as I could. I was perched on a minute ledge about 8m off the ground. The bolt took a long time to place! Once the hanger was screwed in and I had clipped into it, I could lean back and get a good look.

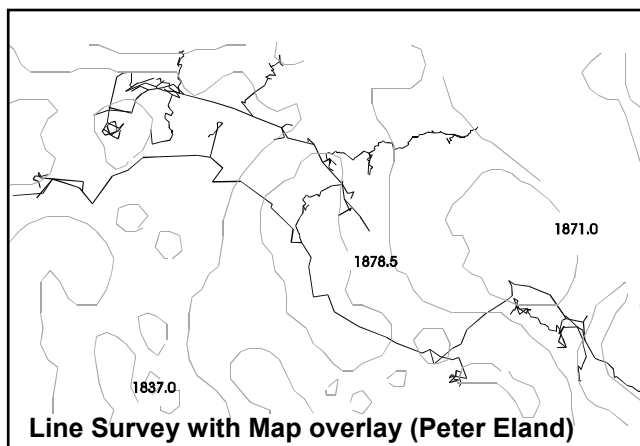


"There's definitely a passage up here, it's got boulders covered in black dust just like NCB!!" My voice was quivering as I spoke, partly from excitement and partly from the cold. Half an hour later we hadn't got any further. Both CV and I had tried to free-climb the rest but had got nowhere (this was our first trip of the expedition and we hadn't got back into free-climbing mode yet). So then it was Sos' turn, he danced up the climb as if he had wings on his boots!

"It's even colder up here, we should call it Hotline," he shouted down.

"What does it look like?" we asked apprehensively.

"It looks exactly like NCB passage, same size, same shape and it's covered in black dust. This has to be the connection!"

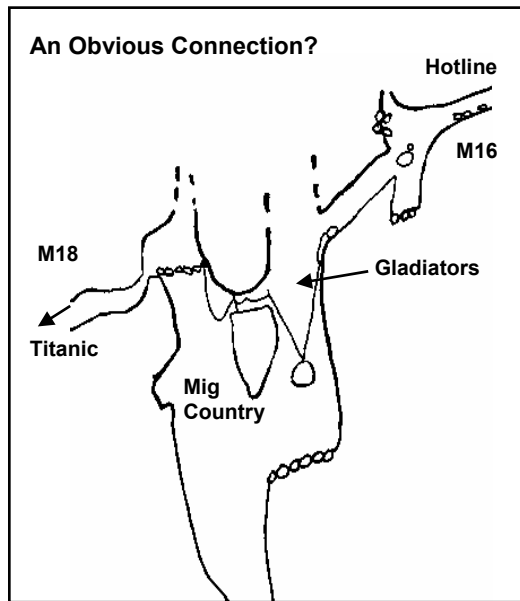


Sos rigged up a hurried belay and soon we were all standing in the passage. It was so cold that there were clouds of condensation like a thick mist billowing along the passage. We took out the survey kit and checked the direction of the passage.

"Bingo, It's East/West. We should go down to the West... towards Torn-T," said CV getting quite excited....

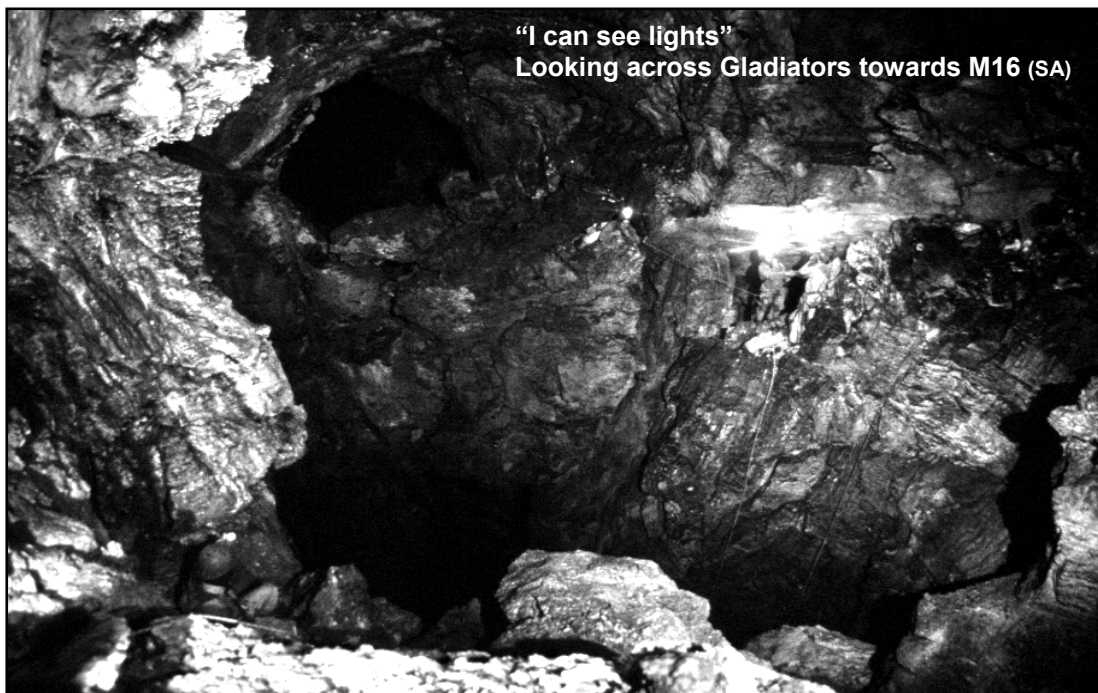
Mark Evans

A one way trip to the East End: The Connection story continues



It was a sunny day for a change on the Migovec Plateau and our enthusiasm to 'breeze' through the entrance series of Torn T-Shirt, analogous to wooden contortionists without painkillers, evoked mental trauma. After a full afternoon of eating, drinking tea and patching up the salvageable kit from the previous fight through Shreddies, Iain, Colm and I eventually grovelled through the small Torn-T entrance. Then the normal battle to get down to Club Mig camp ensued: squeeze, squeeze, grunt, wriggle, squeeze for about three tedious hours. The dubious plan was that we would reach the closest point with the M16 system at the same time as the M16 party did the same from the other side. We hoped, we prayed that this time it would be a one way trip; a connection with the spacious M16 entrance pitches would provide us with a much easier exit.

We reached Mig Country at the allocated time. "Well, here we are. Where are the others?" we joked. More importantly, "where do we go now?" we pondered. From where we stood the enormity of the airy Mig Country was directly before us. Below was a black space, the main pitch, rigged to 70 odd metres depth and perhaps 40 metres in diameter. Aloft of this pitch was a vast black aven. Along the wall to the right was a narrow ledge which petered out, requiring nerves of steel and some bolting agility to reach the wall opposite. With our lights it was too far to see clearly if there was any potential for a connection with M16 on the other side. On the left wall, Tetley and Andy Atkinson had rigged a new, short traverse with terrific exposure leading directly onto a lesser pitch dropping onto a slanting ledge below. While Iain and I tried to think of a plan, Colm took off left. He'd only been gone for a couple of minutes when we came up with a brainwave – let's shout! "Ehh Ohh!"



It was a remarkable bit of ingenuity for just a few seconds later we had a connection, a faint vocal connection, but nevertheless the link had been established. It bred hope, there was joy. Iain and I were plainly elated. We poured out a chorus of shouts until our counterparts got fed up with responding, or went hoarse. However, we still didn't know where they were. It was Colm who shortly exclaimed "I can see lights!" Iain and I got up like a shot and almost had to fight each other to get onto that traverse. We fired down the pitch, ran around the corner on the hanging ledge and were standing at Colm's side in a matter of seconds, overlooking another deep pitch. "So where are they Colm?" He pointed straight ahead to a black patch across on the far wall.

Looking closely you could see a pin-prick of light a long way down a passage. "Ehh Ohh!" The M16 group was now totally vocally ignoring us. We sat around getting cold while two or three more lights appeared, got very slowly larger and brighter and came gently bobbing towards us. It was a weird spectacle. At that time I could have believed in aliens as there were no voices and no bodies. The bodies didn't reveal themselves until they, too, were standing directly over the pitch.

Eventually we shouted out a conversation, something along the lines of:

"Hello, you took your time!"

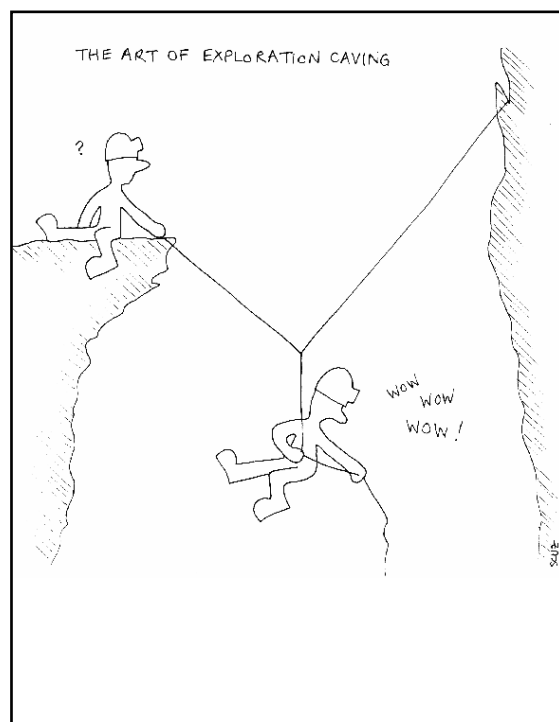
"Is there an easy way across here?"

"No!"

"We'll meet here again tomorrow. Let's say 3 o'clock"

It wasn't going to be an easy bit of rigging to cross the pit that separated us, so, for the time being, we went our separate ways, our team to camp at Club Mig. Unfortunately Iain bashed a finger whilst retrieving a bolting kit at the bottom of Mig Country and headed out of Torn T-Shirt the following morning. It wasn't until the following evening that Colm and I eventually shook hands with The Aliens and some very happy campers made a break for the surface through the guts of M16.

Sarah Wingrove



"The dramatic link from Mig Country to M16 made the System 547m deep, and was a just reward for all the work people had put into the venture over the past three years. The expedition had been a success because of the three most important ingredients for cave exploration: persistence, optimism and luck."

Iain McKenna

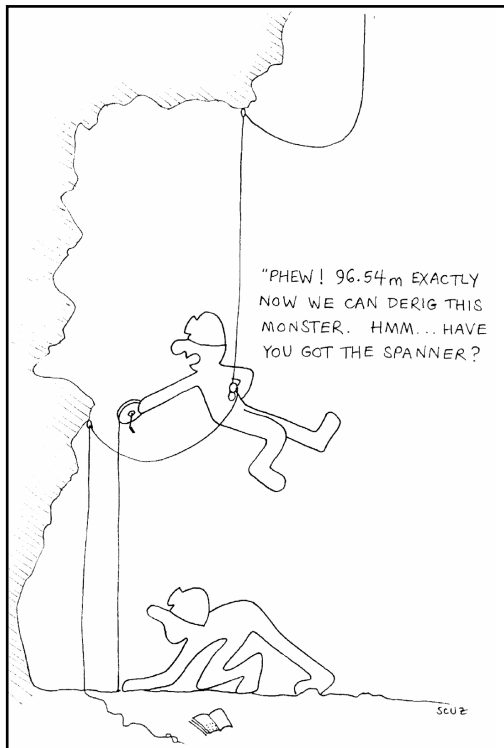
**On top of Kuk '96 (sw)
Shed, Sos, Colm, Scuz, Jim, Tetley, Iain**



Surveying Silos and the Discovery of Plop Pitch

CV and I liked to make our caving trips though Shreddies worthwhile. It was time to survey and derig the last of the leads in NCB Passage then to pack up the remains of Club Mig camp, derig Faulty Towers and finally Shreddies itself. The end of this year's expedition was looming and all the rope had to be taken out of the cave. Knowing that it was a mean trip but someone had to do it, and do it soon, CV and I gallantly volunteered for the challenge.

Armed with enough chocolate to fuel us until Christmas we sped down into Torn-T. By now we were all too familiar with every squeeze, wriggle and climb in Shreddies and knew instinctively where SRT kit, oversuits or helmets would inevitably get hung up. We took a break at Club Mig, the camp now derelict, finalised the day's plan, reminisced a bit about all the great camps we'd had there and basically delayed our unavoidable descent of Godzilla. This monster pitch had been rigged since the first caving trip on Migovec this summer but, discovering it to be one and the same pitch as Silos in M2 we had lost interest. It was going to be a pain to survey with a 30 metre tape as the first and second bolts were more than 60 metres apart but somehow we muddled through, came up with some feasible numbers and both stood at the bottom admiring the greatness of it all. CV totted up the survey lengths.



"96.54 metres. Phew! Now we can derig this monster. Hmm... Have you got the spanner?" He confessed that he'd taken it off his harness at Club Mig hoping that I'd pick it up. I had a flashback to the time when he and I had gone backpacking in the wilderness with rucksacks full of dehydrated food, our fresh sandwiches had been stolen by sheep and he'd forgotten to pack a lighter to fire up the Trangia. It was one of those days. It takes a while to prussik ninety odd metres... By the time CV had collected the spanner, slid it down to the first rebelay, I'd taken it down to the last rebelay and derigged back up to NCB Passage, time was already pressing on.

Over the past two summers CV and I had done some of our most memorable caving in Torn T-Shirt and now, as the time to be leaving drew near once again, it was saddening to be parting with this old friend. One last wander up and down NCB Passage where we'd explored so many times before was a trip down memory lane. But wait.... "CV! Has anyone looked through here?"

Tucked away in a corner beyond the first traverse there was an insignificant little tube, maybe 2 metres long, with a black hole at the end. It was draughting furiously. I awkwardly manoeuvred myself into the tube, took a rock and dropped it into the break. There was silence for an age then a single distant thud came echoing back through the opening.

"Whoooh! Yes!" we exclaimed. "Let's try that again. Ready? Timing? On the count of three..." Every time a free fall, an average of several drops was 3.56 seconds. Using the constant acceleration formula we established that the pitch beyond was quite a whopper!

However, before we could attempt any exploration it was paramount that we lower the Godzilla rope and the remaining bags of camping gear down into Level 2 where it would be picked up by another party and taken out via M16, then derig Faulty Towers back up to NCB. Fortunately this went smoothly with CV derigging the lot and in a couple of hours we were back at Club Mig having a snack.

Taking the ropes derigged from Faulty Towers we returned to our new found pitch and hurriedly rigged a couple of naturals on the near and far sides of the tube. We had kept the survey kit and bolting hammer with us so while CV solo surveyed to the tube from the nearest permanent survey station in NCB, I knocked away a few rotten protuberances then struggled on a descender to turn around in the constriction and pass through the hole. Relieved, some labour later, I plopped out over a sheer wall in what I thought at the time to be a vast rift. I took a look around, descended a bit, concluded that bolting this pitch was the only safe option to get down it and then pondered my tactics a while on how to best get back through the hole. Another 15 minutes of thrashing about and I was sweating madly back in NCB. It was sometime in the early hours now and the pair of us were weary. Taking a tacklebag each, we headed out. We both struggled desperately with the bags in Orsazmatron and by the time we'd wrestled our way up through Optimisqueeze we were utterly wrecked. Knowing that it was the bags or us we dropped the bags, strove our way slowly back to the surface and crashed out, exhausted, under an umbrella of pre-dawn stars.

The secrets of the cave system that Plop Pitch unlocks are still, to this day, unknown.

Sarah Wingrove

Conquering caves with computers

High technology is coming to the aid of cavers who need to make accurate surveys of complex 3-D cave systems miles away from civilisation.

Accurate surveys are needed not only for scientific interest but also in order to locate points at which caves could intersect — something that is very difficult to spot using cross-sectional paper maps.

A British team encountered the problem on an expedition to explore the complex cave systems of the Julian Alps in the corner of Slovenia, Italy and Austria.

They solved it by taking along a notebook computer, a solar cell to power it and a satellite positioning handset, explains Mark Evans, one of the organisers of the expeditions by Imperial College Caving Club in London and a postgraduate student in mechanical engineering at the college.

Although it is relatively close to major cities such as Trieste, the area being explored is accessible only on foot, so the expedition party had to carry every bit of equipment.

The computer, a Hewlett-Packard OmniGo 600CT, and

Notebook can provide key surveys for expeditions

the geographical positioning navigator system were no problem as they weighed only a few pounds.

The difficulty was supplying power for the notebook, which, in common with all such computers, can work only for a few hours without recharging.

The solution was to take a solar panel measuring half a metre square, which produced enough current to recharge the batteries between uses.

The survey parties returned each evening to their base camp 1,800 metres high in the Slovenian part of the mountains, with their data on lengths, inclines and directions of the various caverns and corridors.

These were entered into 3-D mapping software called SurvEx, developed by cavers at the University of Cambridge, to create a computer model of the cave system in three dimensions.

The model can be viewed from any angle, rotated and likely intersections zoomed in on. It is like holding a transparent plastic model in your hand.

One of the big time-wasters for cavers in the area is sorting out the entrances to the cave system from misleading blind caves.

"There are holes everywhere, at least every 10 metres," says Evans. "We needed a way of narrowing down the search."

This was done by sending out a reconnaissance expedition earlier last year while the snow was still on the ground.

Updrafts in a cave tend to blow away any snow covering the entrance, so that these so-called "blowing holes" can be easily spotted.

The party noted their position with a Trimble hand-held satellite navigation terminal so the summer expedition could find them easily, although they were covered with undergrowth.

A French member of the party, mathematician Josselin Visconti, studied the accuracy of the terminal and found it to be much better than the quoted plus-or-minus 20m.



Mark Evans with notebook on the Slovenia exhibition

"We did a few tests and found it was better than plus or minus 10m," says Evans. "A paper is being published in France on that research."

Evans hopes that the survey will unveil the depths of the Migovic cave system, but the ultimate motivation is the thrill of getting there first.

"When you have discovered

something that is new and nobody has been there before you get quite attached to it," he says. "We hope to get to the best bits first."

Samuel Taylor Coleridge wrote that Xanadu had caverns measureless to man. Using today's technology, they could be measured with ease.

CHRIS PARTRIDGE

Article in the Times (January 22nd 1997)

Further Diary Extracts '96

"Andrej gave us the key to his caving hut - this turned out to be his own heated warehouse at the old army barracks - spacious, clean and with hot showers!" (The end of bivvying by the Soča).

"On returning to the bivvy, there are rumours that Mig Country and Galactica are probably the same thing." (Without the survey who could know?)

"What happened to those happy summer days when everyone was fighting to go caving to cool off?"

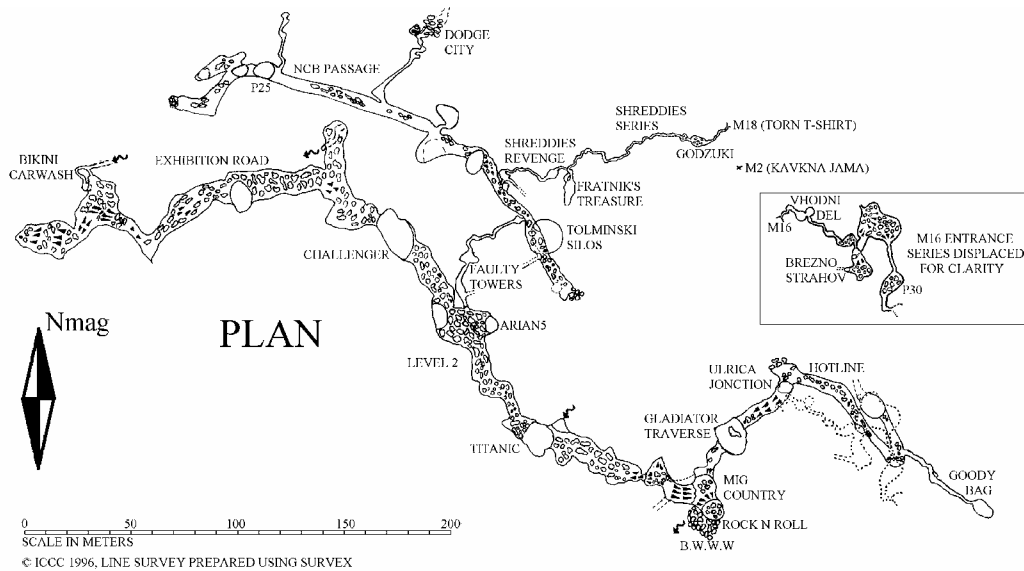
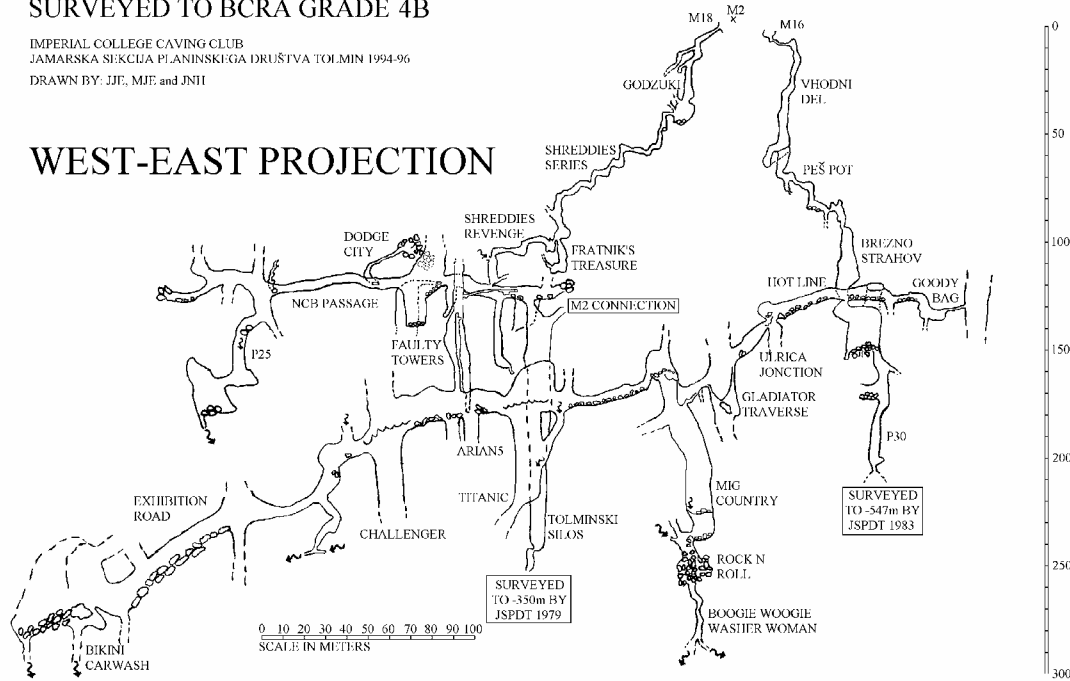
System Migovec Survey 1996

SISTEM MIGOVEC OBČINA TOLMIN, JULIJSKIH ALP, SLOVENIJA

ALTITUDE 1850m, SURVEYED DEPTH 281m (1996)
SURVEYED TO BCRA GRADE 4B

IMPERIAL COLLEGE CAVING CLUB
JAMARSKA SEKCIJA PLANINSKEGA DRUŠTVA TOLMIN 1994-96
DRAWN BY: JJE, MJE and JNH

WEST-EAST PROJECTION



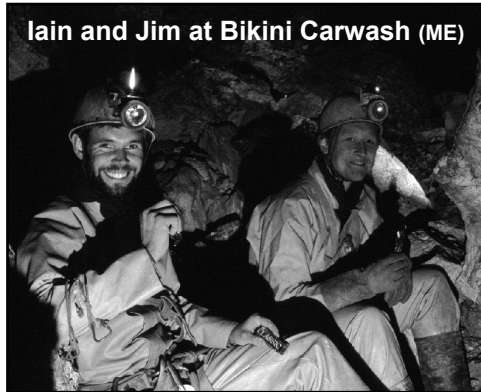
Sarah's Torn-T rigging guide

- 1st Pitch (20m rope)
- 2nd Pitch "Godzuki" (25m rope)
- 3rd Pitch (25m rope)
- 2 Ladder Climbs in Shreddies

- Turtle's Head (30m rope)
- Nutcracker-NCB (35m rope)

1997

Migovec Goes Deep



At the end of the 1996 expedition, the survey was left with question marks at every level. One of the promising leads, at the end of Exhibition Road, was Bikini Carwash, found by chance during a photography trip. This obscure rift, which quickly breaks out at the head of a pitch, was shown to Dejan Ristič. Over the following winter, Dejan and other Slovenian cavers, descended this 50 metre pitch, named XXX after the extra strong mints ("Are you tough enough to handle them?"). Below this they found Sajeta, a huge 90m shaft and, after further, small pitches, Pawoden, a 50m deep pot.

From the bottom of Pawoden, a gorgeous, active streamway cascades down a number of small pitches (Warriors for Mig) linked by beautiful meanders. Eventually they found a dry, sandy oxbow suitable for a camp. They didn't survey their finds, however, so the 1997 expedition started with great excitement, a rough hand-drawn sketch and a tale that Dejan's altimeter watch had indicated that the system was now about 600m deep.

The Slovenians, used to pushing deep caves at the weekend, favour a 40 hours, no sleep, (no problem!) approach. IC³ cavers, on the other hand, with a far greater range of ability and six weeks to spend on the mountain, arrived prepared for an underground camp. With knowledge of undescended shafts at -600m, we were keen to get down to business at the deep end of the cave. For the first few days of the expedition, dreams of awaiting discoveries were never far from our minds as we slogged up to the plateau with heavy rucksacks. While stopping to catch our breath, the faint roar of water resurging in the Tolminka valley could be heard a mile below. How deep was the cave? How much more was there left to find? Before long, tents were pitched, the bivvy was set up, carbide lamps were fettled... Another campaign was ready to begin....

Another objective in 1997 was to build further upon our good relations with JSPDT and to foster greater links with the local community. A well-received slide show was given by Mark and Andrej in Tolmin and we were interviewed on Slovenian national radio, discussing the latest developments under Migovec.

James Hooper and Jim Evans

Dear Jim,

Thank you very much for the copy of your expedition report. You seem to have had a good time. When are you going to start running out of caves?

*All the best.
Yours sincerely,
Sir Ronald Oxburgh*

Letter from Sir Ronald Oxburgh
KBE FRS
(Rector of Imperial College)
4th October 1996

We're in deep: Rigging down to -500m

The boys are back



My first trip of 1997 started off with Jan. Our intention was to rig the entrance series with 11mm rope (as it would be seeing a lot of traffic). With a 200m coil of brand new Marlow, in two tackle bags, we got tangled up at first until we started to lose some of it. Down the first two pitches, we found Mick heading up. He was in a party with Tetley and Oliver who were planning to start surveying the new pitches that the Slovenians had found (but not surveyed). They were not sure of their way because a dodgy traverse in the entrance series had not been rigged so they decided to wait for us to rig it before they carried on. Our rope made it to the bottom of Brezno Strahov and we used a bit of tat for the connection into Hotline. At this point, Tetley, Jan and I carried on to the bottom of Exhibition Road to dump gear and give Jan a chance to familiarise himself with the cave system.

Jim Evans

A first trip down M16

A group of us met up at Gladiator's traverse, taking a bloody long time to reach the other side. This was my first trip in the Migovec system and my first time with a 'borrowed' carbide helmet. Jim, Tetley and I (in blissful unawareness) decided to continue down to Bikini Carwash with bags of rope.

"So what's the rest like?"

Jim looks at Tetley who is grinning...

"Oh it's easy really! Only a few tricky bits here and there, nothing really."

So swinging out over a 70m abyss and trying to prussik with 200m of rope on your back is pretty standard. Titanic, well that's nothing. As for Spirit of Elvis...



Jan on the first pitch in M16 (Jackie Evans)

"Ah, this is fun," Tetley informs me giggling slightly. Hmm Tetley, you worry me sometimes. It's all worth it when you reach the other side, take your harness off and head down, down, down Exhibition Road, the most amazing passage with caravan-sized boulders. XXX was checked out and then we headed out leaving rope and bolts.

The return is slightly more enjoyable, fun even? M16 goes on and on seemingly. Finally we pop out at the top. It's 3 a.m. and Tetley passes me a cigar-type cigarette. Cheers Tetley you star. Two new records... My deepest cave and longest trip to date.

Jan Evetts (logbook entry 25th July 1997)

Logbook Extracts 1997

"Pre-exp curry at 12L. Eight of us got out of it with 60ft hedgehog."

"Alva is a Troll."

"Catapult excitement while packing the van (this was only just poss.) Pants goes wrong way down motorway in Germany.... Much patriotic singing, saluting and some flashing by Alva."

"My first camp trip, I was a little worried! The last camping trip in NCB was horrendous and I failed to get any sleep. By comparison the Hotel is 5..... once the music is on you almost forget that you are at -605m." - Mark*

XXX and the pitches beyond (Are you tough enough to handle them?)

Early one morning I had to get up to relieve a full bladder. Unfortunately Tetley heard me and stuck his head out of the door of his tent. With a stupid, really, really sick grin on his face he asked if I was ready to go back down the cave. Swear words, long and profound! It was only 6am. *"At least let me have a crap first,"* which I did before struggling into my cold damp furry suit which still smelt sickly of sweat.

By 6:30am we were in the bivvy heating up some water for tea and preparing heavy bags of rope to carry down the cave with us. Just then a fuzzy blonde mop of hair popped over the edge of the bivvy followed by a huge backpack. It was Sarah. She had flown into Ljubljana the day before and got as far as the Shepherd's Huts. No-one else was up yet so we suggested she come caving with us. It wasn't hard to twist her arm.

So down we went, not exactly bombing down as we were pretty weighed down by heavy bags again, but faster than Tetley and I had been the day before at any rate. When we got to the top of Sajeta, we set the camp stereo going as Tetley and I were going to survey on our way down and that was going to take some time. Just below the top, the crack I was abseiling in opened into a huge chamber with a waterfall going down one side. It had a fantastic echo and was utterly huge. In all there were five rebelay, which took a while to re-rig (replacing dodgy 'homemade' Slovenian hangers) and survey. Eventually I touched the bottom. My legs racked of pins and needles from sitting in the harness so long. Still, it was fun with Tetley hanging above me, joking and offering good advice, and the music blaring a long, long way overhead.

Across the chamber was a narrow crack in the floor, the way on. This pitch was also rigged off one bolt so Sarah stayed behind to tidy up the rigging. Tetley and I continued on surveying and carrying multiple bags, now including the two we had brought down the day before. The cave was now in a completely new phase: we were in an active streamway, fortunately not too big. The rock was brighter and cleaner than higher in the cave and the passage was newer. After more re-rigging - cutting the rope at one point to get off and replacing dodgy bits of 'tat' with new rope - we found ourselves at the top of a 30m drop. You had to abseil down at a ridiculous angle to a bolt placed far out on the wall. A real beauty of a drop...

A fair way along we arrived at the 45m pitch named Pawoden, with a real difficult start-off. It was a free-hanging pitch for most of its way, a bit wet and not that nice. (Later, Tetley put a bolt in from a bit of rock sticking out on the far wall. This kept you drier, but involved some fun aerobatics to get to and from. I don't know how he was ever able to swing out that far to put it in, most impressive!).

By this time we had been on the go for about 12 hours, and had done a lot of surveying. We had a chocolate bar (our only meal of the day), left our bags and slowly made our way out. We had been down to about -500m, again a very productive trip, but a long 17 hours on the go. The next day I did not go caving.

Michael Playford



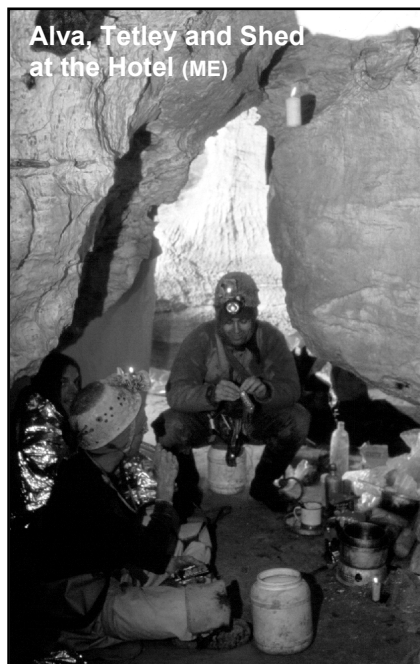
Michael Playford
in M16

"I forgot how much I missed this place - the squalor etc. but welcome the lack of mirrors and crass conversations... Bread and burgers for brekkie, I'm now building up to a toilet visit after one year of porcelain." - Iain McKenna

The first Imperial Camp at Hotel Tolminka

Oliver and I were on the first camping trip in 1997. Our plan was to re-rig and survey some of the streamway and set up the camp. At the bottom of Sajeta, a short series of rifts and pitches led us on to the head of Pawoden, a 45m metre shaft with a very nasty take off. Landing at the bottom of the pitch, I could see the names of Rok and Dejan scribed on the wall with carbide, the two Slovenians who got there the previous winter. Here, I met up with Alva and Tetley, who were waiting for us in an alcove by the pitch, with all the bags that had been dumped on the surveying trips. After fettling carbides and eating some food, Oliver arrived and we all headed down the rift with tacklebags to find the camping spot. It seemed a long time in coming and we kept debating on whether a few very unlikely spots were in fact the camp. None of them looked particularly pleasant though, so we carried on in the hope of finding something better. While we were negotiating this rift, we tried to think of a name for the camp, something that gave an impression of somewhere to hang out. We already had Club Mig up in NCB passage. Daren boasts a Café and a Restaurant.....so what to call this? Then suddenly Alva came up with it: "I Know.....Hotel Tolminka."

We were just beginning to wonder whether in fact one of the rock chambers we had dismissed half an hour back was in fact the camp when we arrived at a short wet pitch. Descending this, a traverse line took us round the side of a large wet pitch into a flat sandy alcove. In the centre of the alcove was an unopened can of Zlatarog beer (Dejan's favourite) - this was it then, we had arrived at Hotel Tolminka.



The next day Tetley and Alva set off to survey the 'Warriors for Mig' series (between Pawoden and the Hotel) while Oliver and I went to the fifty metre pitch beyond the camp to check out the rigging. It turned out that the pitch needed several extra bolts to avoid the spray. Oliver volunteered to do this, so I returned to pass the time at camp. As I waited, alone, I was suddenly overcome with the sense of isolation of the place. I switched on the tape recorder, it was a Beethoven tape I recognised from a previous camp and suddenly I felt far more at home. I had a chance to absorb the atmosphere of the Hotel. The passage was a narrow oxbow with a flat sandy floor and a roof that narrowed to a point. There were candles perched on any available ledge in order to try and give an overall lighting to the area; it had the effect of giving a kind of medieval atmosphere. Piles of bedding and dry furies lay strewn around the sandy floor in every corner and survival blankets were guyed up to try and reduce the draught. The constant noise of the waterfall going down Porcelain Pitch was almost soothing - although I'm sure it was playing havoc with my bladder control.

Alva had acquired a picture of a semi-clad German girl which was hanging from the ceiling - suitably entitled 'Regina' as it was next to a Union Flag that Mark had brought out in case we got to the K. Daren drums and bags of food were messily scattered around the meths stove. Another corner had a pile of ropes and hangers and a BDH full of carbide. Starting to shiver, I quickly put on a space blanket and lit the stove for a brew.

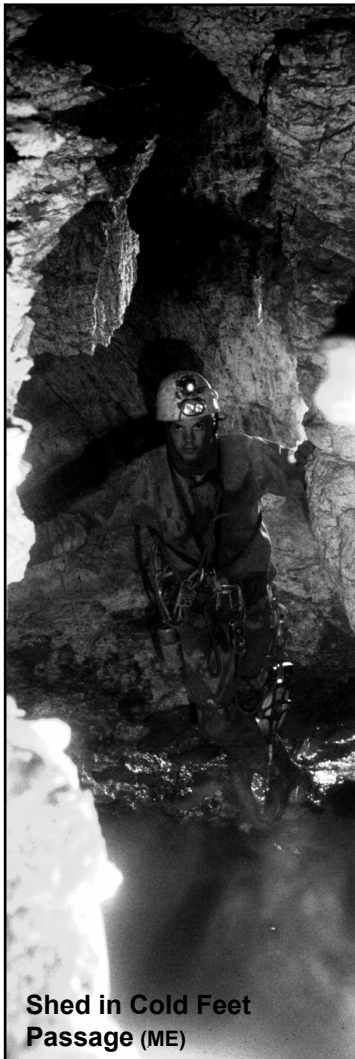
Oliver came back fretting that he had had some problem getting the bolt in because it was at such an angle. It had been well worth the effort, however, as it kept the pitch more or less dry. We then continued up stream, putting extra bolts in as we went, and caught up with Alva and Tetley just as they were finishing off their mammoth surveying trip. We headed out, putting one more bolt in at XXX and stopping for a brew at Bikini Carwash before exiting the cave.

Jim Evans

Cold Feet Passage

It was soon my turn to go back in with Sarah and Goaty (a.k.a. Michael Rogerson). Down to the Slovenian limit and beyond. Goatee had never been deeper than about -150m and though apprehensive, he was willing to give it a go. Beyond Pawoden, there were eight pitches and lots of great caving before we got to the Hotel.

The Hotel was the perfect underground camp - dry with no breeze, small and intimate. The sleeping bags were laid around the walls on sheets of plastic and covered with space blankets. A cooking stove and bags of food were sitting in a central location. Around the corner, out of sight and smell, was the toilet, composed of plastic bags to crap into and twist tops. (Unfortunately they had brought the wrong sized bags down. Have you ever tried crapping into a sandwich bag?)



Shed in Cold Feet Passage (ME)

After a late lunch of instant mash potatoes and a cup of tea, we set off to see what we could find. This was where it got strange. This offshoot passage led around the corner, past the dunny, to another streamway, running completely separately from the first. The 30m pitch before the camp remains undescended and could well be the way down to a kilometre depth, as could another dry passage branching off two pitches further up. (This passage, Wonderstuff, was later pushed by Oliver and Andrej for over 100m but then derigged to provide ropes for the bottom of the cave. Later it was pushed by the Slovenians to -937m).

Anyway, by going past the toilet and following the windy passage along, you get to the top of another 50 odd metre drop. The cave then enters a small, low passage angling down at a constant 30 degrees to the bedding plane. It's mostly tight, very wet and distinctly unpleasant. I was getting very bad vibes that it wasn't going to be worth following - it was just too awful. After a while, the passage became a belly crawl in the water (2° Celsius) and we decided that was enough for one day. We sent Sarah back to the big pitch below the camp to re-rig whilst Goatee and I surveyed back up. This took over an hour and was the worst surveying I have ever had to do. Moving slowly in those conditions, lying in the stream to get a compass bearing, is a guaranteed way to freeze, it was just awful.

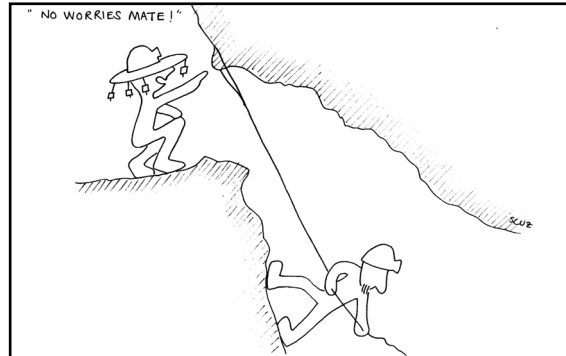
By the time we made it back to the big pitch, we had had enough. We met up with Sarah there, just as she spied an interesting hole. By clambering up to a ledge on the far side of the waterfall, we found ourselves in an old stream passage. The reason the passage we had just been surveying was so small and wet was because it was so new. If this was an old abandoned passage then it promised to be roomier, and more importantly....dry.

But we left it for the next day. As it was, it was about one o'clock in the morning by the time we got back to the camp. We stripped out of our wet caving gear, put on a layer of dry thermals and then sat in a circle around the stove making hot drinks and a meal of sorts. We had the tape player blaring to cheer us up, to drown out the waterfall behind us, and make us forget we were a very, very long way from the sun and safety. We also had a chocolate bar and a swig of vodka to try and send us to sleep. We were all exhausted, very cold and soon got into the sacks to sleep. Unfortunately, we had not worked out how best to wrap ourselves in the space blankets; the plastic sheets and sleeping bags on their own were not enough. As a result none of us slept very well, just lying there, cold, trying to recover as best we could.

In the end it was the person with the fullest bladder that had to get up first, and that happened to be me. So, after 10 hours in the sack, I started organising another meal for us, lumpy porridge with lots of sugar. Only when it was ready did the other two reluctantly get up. It took about 2 hours from when I first got up until we were all ready to go. It is very difficult to get yourself motivated under the circumstances and every job from crapping in a tiny plastic bag, to cleaning out and refilling your carbide lamp takes forever. Still it beats prussiking all the way to the surface to sleep and then having to turn around and come back in.

Eventually we were on our way with a fair haul of ropes and rigging gear to explore our dry way on – named Cold Feet Passage. It was everything we had hoped for. We sent Goatee on to the first pitch to try his hand at bolting (he had never done it before). Sarah and I stayed behind to tie in the survey from the previous day.

We linked up with Goatee just as he was finishing up, and a nice bolt it was too! (His next couple of bolts were not so crash hot, but as a wise old man once said to me “a bolt hanger will hide a multitude of sins”). Four or five more drops, a dodgy climb down and the cave levelled out a bit into a narrow serpentine shape which wound on for quite a way. Finally around a corner and through a hole was a short pitch, followed by a short pitch, followed by?....!



The cave had struck a fault line in the mountain and was now following it down at about 70° to the horizontal in a series of short drops. After a few of these we ran out of rope but could see the cave disappearing down the rift as far as our lights could shine. We were ecstatic, if only we had brought more rope down from the underground camp, we would have just kept at it until we dropped. We still had a lot of surveying to do, linking in our new bit of cave with the rest and that took ages. We did about 12 hours actual caving that day and again got back to the sleeping bags about midnight. It was a similar routine to the night before only we drank lots more vodka to try and help us sleep, sorted the bags out better, and were so much more exhausted that we all slept like logs.

The third day was the long haul out. Not something you look forward to enormously but something which has to be done just the same. You can't get a helicopter to pull you out from the bottom of a cave. Surprisingly, that day turned out to be one of the best caving days of my life. Just before leaving the camp, we played a song by The Stranglers called “Always the Sun”. It had just the right rhythm and was so optimistic that it played in my head the whole way up. It was one of those golden days where everything goes right, and you are relaxed and confident that everything is alright, where every movement is a sort of poetry, all in rhythm to your feelings and thought. My senses were heightened and I was just so enjoying myself despite the hard work and concentration, and the music in my head just sums up everything that is good in life.

We only had to take out one bag between us, which Sarah and I shared, containing our waste carbide and crap all securely wrapped up in a plastic drum. We were slow and steady; it took us about 6 hours to make it back to the sun. After seeing only darkness and grey colours for 3 days (it was a 57 hour trip) the contrast on emerging to the top of the mountain to see a beautiful sunset over Krn was just great.

Michael Playford

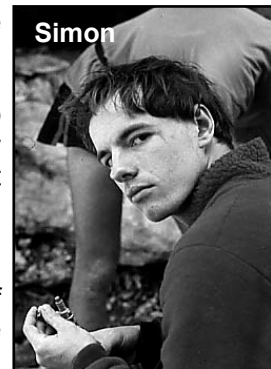


Good not Grand and Glory Boys



Dejan

Meanwhile, on the surface, we were unaware of the exciting progress down below. Four Slovenians, Andrej, Dejan, Milan and Simon, turned up in the evening intending to push the cave the next day. Milan was a new face to us; Simon told that he was the best caver in Slovenia. He spoke no English and his Slovenian had a more Russian hint to it. This, combined with his crew cut, large build and harsh feature made us all a bit wary of him. In fact we had no reason to be as he turned out to be very friendly.



Simon

The following morning, Andrej, Dejan, Milan and Oliver set off down the cave. Armed to the teeth with drills and explosives, they were intending to push the wet way below the Hotel and enlarge it with chemical persuasion (not knowing that the previous group had already found the Cold Feet bypass). Tetley and Simon slept during that day intending to go down in the evening. Colm and I planned to follow the next day.

On meeting the previous party in the cave, the plans of the Slovenians changed. Dejan and Milan, on a mammoth trip, pushed down Cold feet passage until they ran out of rope at around -850m. Meanwhile, Andrej and Oliver pushed the Wonderstuff pitch series above the camp. Using 9mm rope, they eventually reached the top of a pitch with the tantalising sound of water in the distance. Returning to the Hotel, they had to wait some time for the other group. Not caring about the availability of sleeping bags, Tetley and Simon had also turned up having heard the stories of Cold feet passage from Scuzzer et. al.

When Dejan and Milan returned to the Hotel, they grabbed a couple of hours sleep before heading out of the cave with Andrej. The remaining three, Oliver, Tetley and Simon were left with two possibilities. To carry on rigging down Wonderstuff or to push the deep end and possibly get to -1000m. Ever since I've known Simon, he has always been obsessed with the idea of a kilometre of depth. Indeed, we used to joke that the majority of his conversations with us consisted of the following spiel:

"Yes, of course.....
of course.....really.....really.....
.....to minus one thousand."

So I can imagine that at this point there was little option in his head of what to do. Wonderstuff was derigged (but not, unfortunately, surveyed) and the two hundred metres of 9mm rope was taken to push the end. A note was left in the camp:

*"We have taken the
rope and gone down to -
1000m. We will need beds
when we get back!"*

Putting off the Shits



(To the tune of Putting on the Ritz)

When we're underground and we've eaten
One too many very hot bean stews
And we can't face taking off our kit

Uhgg - Putting off the shits

Now I'm really hungry but if I eat now
I may have a disaster
There's a pot of porridge that's calling

Uhgg - Putting off the shits

If I think about it I may drop one
Which dick put this Cat's Steven's song on?

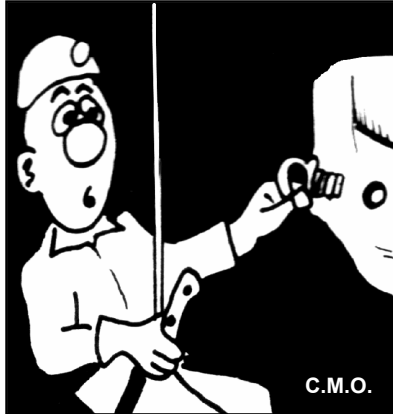
(Sing line of Cat Steven's -
I can't keep it in, got to let it out...)

We have developed a new technique
Juxtaposing the farts and the turds
Or to put in other words

Uhgg - Putting off the shits

(Composed at Hotel Tolminka 1997)

According to Oliver, Simon was like a man possessed as they headed down the steep sloping rift. Simon bolted madly while Tetley and Oliver followed on behind surveying. The cave was shooting down quickly. Excitement levels rose fast. Then suddenly, at -958m, the rift stopped. It was immediately apparent that there was no obvious way on here. Simon quickly became disappointed and pissed off and just wanted to head out of the cave. Solemnly, quietly, keeping their thoughts to themselves, they started to derig.



Meanwhile Colm and I had arrived at camp and found the note. We were excited at the prospect of the cave going deep, but at the same time we were a bit annoyed that there seemed to be a bid for glory seeking from the lads (and probably a bit disappointed that we were going to miss out on it). As we were ready to push at this point, we decided to head off and find them. There seemed to be a lot of short pitches and nice rift passageway. It wasn't difficult to see where the British rigging stopped and the Slovenian started because of the sudden economy of bolts! Also they use a kind of rawl bolt which is really quick with an electric drill (as the depth is not critical). The occasional piece of 8mm rope didn't escape our attention; we re-rigged this on our way up.

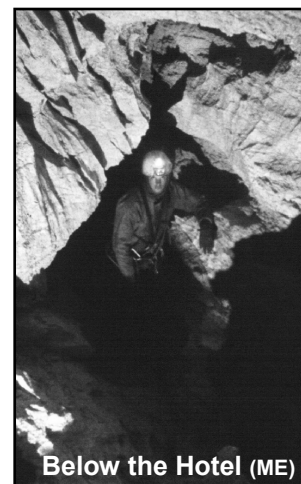
Below a few dry pitches, we could hear the distant rumbling of a stream. Soon the water joined us in a chamber area but quickly disappeared down a separate rift. After a further 100m of abseiling, we found the others derigging and listened as they related their tale of discovery and frustration. Simon was keen to call the area Good not Great, but back in England, Martin M^cGowan pointed out that Good not Grand was a more appropriate name. Tetley, Oliver and Simon headed back to the camp while Colm and I derigged the rest of the 200m length and took it up to the next obvious lead, the wet way, 100m further up the cave.

There was quite a bit of spray going down this rift, and the place was cold and draughty so we tried to avoid the water with careful rigging. At the same time, however, while one person was bolting, the other was getting cold under a space blanket. We negotiated the first pitch with some swinging and then placed the bolts for the next pitch. The lead looked promising, but it was by far the wettest thing I'd seen in the system and we had no idea how the area would respond in a violent thunderstorm on the surface, a major concern for future trips. We left the area at an undescended pitch and headed back to the Hotel. There, we found the other three sleeping soundly but using all the bedding. We woke them up and shared the gear around, unfortunately although there were five sleeping bags there were only four Karimats - so Simon and I ended up sharing one. A few hours later, Tetley and Simon prepared to leave the cave, but Oliver decided to sleep for an extra few hours. With hindsight this wasn't sensible, as he ended up exiting the cave alone and had bad nightmares about it the next night (no one else in his tent got any sleep).

After some sleep, Dave and Huggy arrived at the Hotel just as Colm and I were fettling our carbides back into action, while brewing a final cup of tea to the sound of music. Once we'd cheerfully exchanged news and filled the others in, we made a plan for the other two to push down the wet way while we surveyed the end of Cold Feet passage (it hadn't been surveyed properly) and caught them up. We named the bit we surveyed 'Glory boys' as a bit of a joke on the previous days exploits.

Once the surveying was finished, we headed back to camp and, as we felt reasonably fresh, we had a quick break and headed out of the cave. By the time we got to the entrance pitches we were completely knackered and moving slowly.

Jim Evans



Below the Hotel (ME)

The Bar of Bad Reputation



Nobody, it seems, really knows when or where the impromptu gatherings of all the young free souls at the River Soča will occur until just before they take place. We are lucky in that our Slovenian underworld contact - Simon - seems to have his finger on the pulse. At least once in every expedition we find ourselves at one of these clandestine sessions at an obscure location next to the River Soča, courtesy of his subtle directions.

Typically, we drop down from the bivvy to have a fortnightly wash in the stream near Ravne. Occasionally, if we are lucky and need some necessary urgent supplies from Tolmin, we take the bus down the twenty-six hairpin bends to the town and head straight for the pizza place. Necessary supplies can wait: pizza and beer come first.

"Hi Simon" we say, as he passes us in the pizza place, and then with hushed tones, "Is the Bar of Bad Reputation happening tonight?"

He furrows his brow, and looks shiftily from side to side. There is no one to overhear.

"Yea probly" he says.

Then again, he says "Yea probly" in response to almost every question we ask him.

"Turned up in Tolmin and joined the merry group (very merry in the bar of ill repute on Friday night). Spent Saturday at the Soča playing silly buggers..."

Hugh Penney

That's settled it then. We shall meet later when Simon has more of the details. We shall not be returning to the top of the mountain tonight, because we are going to be part of the Bar of Bad Reputation. We have learned through time, that this is a vital mid expedition event, to prove that we are relatively sane after all, compared to all the other revellers. Necessary urgent supplies will have to wait until tomorrow.

After being given the directions in return for a "Veliko Pivo", Simon either sculks off, or occasionally settles down in the back of the bus to accompany us to the secret location. We can always tell when we are approaching the Bar of Bad Reputation. There are lots of cars abandoned in strange places, and those that are seeking a place to be abandoned are usually being driven rather erratically.

It is only when we step out of the bus into the warm evening air that we can start to hear the beat of the distant music, and smell the aroma of the air. A dark walk through trees ensues, bumping into the occasional person or couple in the blackness, and then we are there. The silvery Soča river slips silently by - past bonfires on the pebble shore, whilst the beat gets stronger still. Hundreds of people are there, swinging from trees, or huddled in groups. Numerous huts sell bottled beer and we can tell that, with a combination of relief at surviving the caving and excitement at finding this place, it is going to be a messy night.



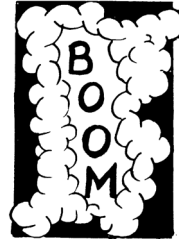
Nobody usually remembers much about what happens next. In the wee small hours, as we retrieve our sleeping bags, Tetley usually falls in the river. When we wake, the light reflecting off the river is blinding, and the location just a dry and dusty wood next to a loop in the river with picnic tables dotted around. Some people in Kayaks drift downstream and stare at the line of slumbering slug like shapes that are the bodies of those still in sleeping bags, despite the heat of the new day. It is time to go and shake off the shackles of alcohol consumption, because there are some necessary urgent supplies to buy, and much more caving to do.

Iain McKenna

A long way from a place of safety: The Rigging of FA999

We were travelling light, taking only one bag of rigging equipment down to the frontier of exploration. That makes for an enjoyable trip, Clewin's first ever below 200m. The cave was a dream: a series of clean fossil passages, pitches and dry rifts leading into a series of slanting pitches, rigged dry above a succession of clear gushing waterfalls in the deep active part of the Migovec system. Just magic. The rigging was neat and descent blissfully easy.

I was in the lead with Clewin and Mick following closely behind. Approaching the current end of the pitch sequence, I came across a stash of carbide and a bolting kit left on a ledge by the previous group. Opening the BDH container to check the contents I peered inside. There was a deafening bang and a ball of fire whizzed past my ears. This made me jump backwards and my companions a little concerned. However, as it was my eyebrows were unstirred and, after a round of jokes, we continued on down with the water. This junction was later named Kaboom!



It remained a thoroughly enjoyable bit of caving until we got to FA999. Beyond the last of the pitches we had been splashing merrily downwards in a winding stream passage for some distance. Suddenly the stream fell over a lip in the floor and went thundering into the darkness. This was the point where the previous group, (Dave and Huggy), had beat a retreat for the Hotel. There was already a badly placed bolt low down at the narrowest part of the pitch head and Mick and I had some disagreement as to whether we should rebolt it. I now concede, knowing that it was Huggy's first ever bolt, that rebolting was a concept worthy of some credit. However, it seemed to me, Dear Boy, a crumb extravagant at the time. Mick begrudgingly rigged it on our 9mm exploration rope and went down to drive in another bolt or two below, as best as possible out of the spray.

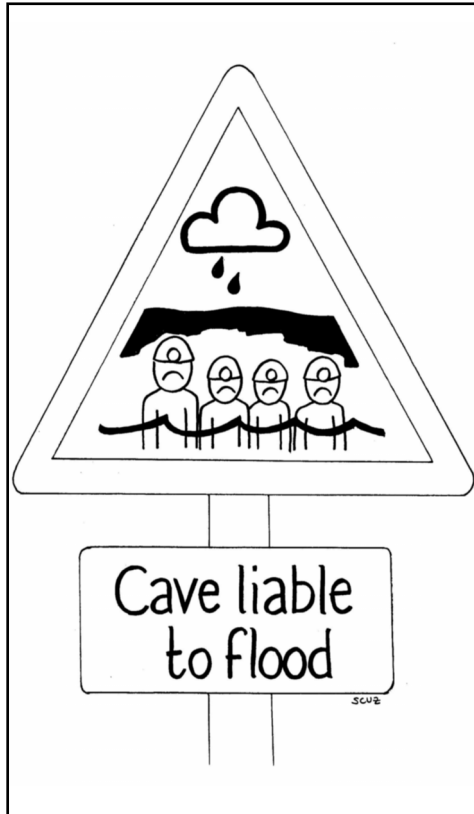
Clewin and I waited, and waited and got chilly, and waited and got grievously cold until I was sure that one or even two bolts just couldn't take that long to place, and then we waited an age more. There was nowhere comfortable to rest so we stood freezing in that draughty wet passage with the stream gushing over our Wellingtons trying to shiver as little as possible. Numbly impatient now, I periodically shouted down the pitch to try to get Mick to come back up but I couldn't understand through the din of the waterfall Mick's monosyllable replies. At least an hour later, I thought that I heard a "Rope Free!" Well, hurrah for that! Immediately Clewin went down, with me in hot pursuit.

Mick had put in three new bolts which took us down maybe 20 metres into the spray filled shaft of approximately 10 metres diameter. My ailing carbide was soon too drenched from spray to relight so I went onto my inferior electric backup. It was already too late when I realised that below, shivering, balanced in a tiny wet recess high in the shaft wall were Mick and Clewin, not best pleased for me to join them! The three of us huddled intimately in the niche for a few moments perilously attached to the same metre of 9mm rope all too aware of our plight. We needed a plan and we needed it quickly. Given that we were now around 920m below the cave entrance, it was far too serious a place for Clewin to practice his bolting skills. Instead, I passed the other two and descended below them. I hurriedly rigged a natural on a flake some distance across the pitch, (tricky without pulling the others off the ledge), and passed it so that they could now start to ascend to the pitch head. To rig the pitch as dry as possible I had to traverse again. Fortunately there were a number of prominent flakes at that height and, by traversing on my hands, I had soon rigged another sharp flake on the wall which positioned me most of the way across the shaft. Below this, right across on the furthest side of the pitch, I then awkwardly drove in a spit whilst partly dangling from my hooked up foot-loop to prevent me swinging away.



Shed heading down to FA999 (ME)

I was still cold and it was slow going. Mick was calling now but I couldn't make out his words. Finally, I rigged the bolt, descended a few metres to where another bolt was necessary to prevent rope wear and then started to climb. We weren't going to bottom this pitch today. I was already finding the first natural a little tricky to pass when my electric light suddenly dimmed and abruptly went out. This was not the time or the place for chronic light failure. The spray was raining down heavily and, with numb hands, I would have got hypothermia before I could have fumbled for my spare battery in my pocket and successfully changed it.



"Help!" I yelled as I tried to get my weight off my chest jammer. "I've got no light!"

There was a long pause before I got a reply from Mick. It sounded a bit like, "Scuz!...are...you... alright?"

"Heeelp!" I screamed again, "I've...got...no...light...and...I'm...about...to...die!"

Another pause. "Are...you...O.K.?"

This is an emergency, I thought, starting to freak. I've got to get out of here NOW. With an injection of adrenalin my chest jammer came free and I groped about for the next rope, clumsily passed the flake and anxiously tried to feel my way across the traverse, falling once or twice as my hands lost their grip and my feet slid away from below me. The next flake rebelay was also a trial of dexterity in the darkness and I passed this with a similar lack of speed, proficiency or style. But, once passed, I motored up that rope like there were rockets in my wellies, no turning back! I stopped briefly in the niche and managed to nurture a pathetic carbide flame before ascending to the top of the pitch.

Although it kept going out, the glow from Mick's carbide was soon sufficient to see the rebelay. The cold, cheesed-off Mick lent a helping hand as I struggled to get off the rope at the head of the pitch. We rejoined a shivery Clewin huddled up in a space blanket some distance above the crisis zone and, after fettling carbides, wasted no time in heading back to the Hotel. As we had all been chilled to the bone it took an age to warm through. Morale was desperately low and enthusiasm in total ruin.

Sarah Wingrove

"By the time I had hammered in the third bolt, I was exhausted. I had been hanging in my harness for well over an hour, my legs were a blazing pain of pins and needles from lack of circulation, my hands cramping from holding the bolt driver and hammering away with the hammer. I was soaking wet and freezing cold from the waterfall I shared the shaft with. The joys of expedition caving at -900m."

Michael Playford.

Cold to the bone: The bottom of FA999



Shed and I went down to continue rigging FA999. The name and Mick's warning were foolishly disregarded in our initial hopes for extensions at depth. The top of the pitch seemed fine though a lot of water cascaded down beneath our feet. Ten metres below everything changed as I passed under the flow of the water. My carbide light kept going out. I lost my breath due to the cold. Spray filled the pitch, circulating in the strong draught. "Shed, Shed," I kept shouting, "Are you O.K.?" I think this was more for my own sake - I didn't want to be left alone. I could barely hear his reply over the roar of the torrent and the chatter of my teeth. At the bottom I could hardly strike a hammer. To continue we'd need a bolt before passing under the full flow of the water and down a short drop. We were already soaked to the bone. Somehow, with shaking hands, Shed managed to light a cigarette. We both smoked half, in one drag each.

Eventually, after an eternity, I dashed under the water, getting caught up in my S.R.T. gear while doing so, and put a bolt one third of the way in before going down. Shed followed. Christ it was cold. The water roared down a small tube. I didn't care. I was hypothermic. Shed was too. In fact Shed was blue with cold. This was serious. I knew this was how people died. "O.K. Let's get out of here." Make sure you keep thinking about what you're doing. Forget the survey. Forget to derig. We must get out. We left slowly, shouting to each other to be careful. Fucking awful call 999.

[Note: the following day Mark and Shed took photos while Alva and I found and surveyed most of Rameses. Then Alva heroically derigged FA999. The following winter (when there is far less water as the surface is frozen), the Slovenians returned to Z112 (Slovene for FA999) and pushed down another 100m to Water Hope, a sump at -970m].

James Hooper

Hugh's Guide to Basic Slovenian (for Caving Expeditions)

Pronunciation:

'c' is always pronounced 'ts'

'j' is always pronounced 'y'

But č= ch, š= sh and ž=zh (like French 'je' or 'Dr Živago')

Useful phrases:

Could I have? - Ali bi lahko

('Ali' introduces question, 'bi' would, 'lahko' can (easily))

Hello - dober dan

Good evening - dober večer

Good morning - dobro jutro

Please - Prosim

I like your goat - Imam rad vašo kozo

Help! Shed has farted! - Pomač! Šed je prdel!

How much for the little girl?

- Koliko za malo punco?

Trust me! I'm a caver! - Verjemi! Sem jamar!

He's crazy! - Je lor! (pronounced yeah lor)

This is a hold-up! Give me all your cats!

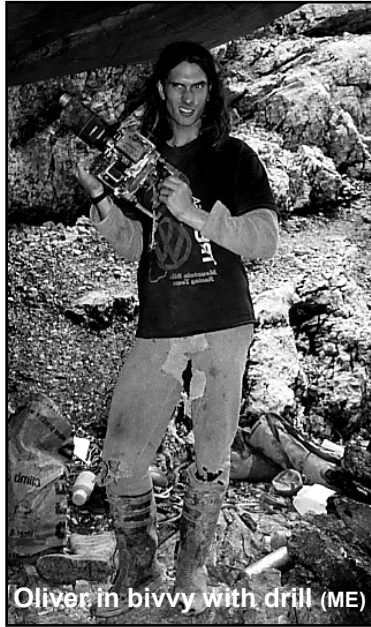
- To je rob! Dej mi vsi vašr mačke.



Hugh Penney (from logbook)

Rameses and Limestone Cowboys

On the FA999 de-rig trip, Alva and Tetley also discovered Rameses, a small crawl leading off higher up in Cold Feet passage. A small tight rift off to the side led to an aven with water coming in and a wet passage to the head of a pitch, this way looked promising and they surveyed their way back to the main cave.



Set to continue this work, the next camp was Goaty, me, Oliver and Clewin. Goaty and I set off first and headed down to the top of FA999 to haul the rope up to Rameses to enable pushing of this area. The plan was for Oliver and Clewin to push down the pitch at Rameses while Goaty and I explored upstream of the source of the river going down to FA999. Our trip was not helped by the fact that Goaty had a bit of a bowel problem and we had to stop on a number of occasions while he frantically removed his kit to fill a small plastic bag. We followed up stream which, after an initial boulder choke, quickly developed into a wide, steeply descending rift. Climbing upwards, we continued, surveying as we went, until eventually we were unable to climb further without the use of bolts. We called this area Teotihuacán which is the Mayan for 'The Place where Gods are Born'.

Meanwhile Oliver and Clewin had been pushing down two pitches and had ran out of rope. We met Clewin at the Rameses junction returning to retrieve some rope to carry on rigging down, he sounded very excited...

"Looks like we've found a 40m pitch it's really opening up."

We followed him down to take a look. After two pitches we got to the rift junction.

"Oliver is just down there, there are pitches going down everywhere but we have chosen the best one."

"Ok," I Said, "looks interesting, have you looked up in the other direction from the rift?"

"No we haven't had time - we're going down."

"Ok, we'll have a look at that while you are then," I responded.

After walking through a waterfall on the other side of the passage, the way on continued as a stooping sandy passage with pitches going down. It carried on for quite a long way and had a howling draught. We were getting quite excited at this discovery. It seemed strange to find such a long horizontal passage at this level. At the end we got to a short pitch - but the cave seemed to continue beyond. We decided to survey what we'd found as time was now getting on.

"This has to be called Paradox passage," said Goaty. I agreed. By the time we had finished, the other two had bolted down their pitch and we decided to join them. A spacious 40m drop led to another 'awkward to rig' pitch. The noise of thundering water could be heard beyond. We gave the surveying kit to the other two so they could survey 'Oliver and Clewin's stonker' (later renamed 'Limestone Cowboys'). Goaty and I weren't back at camp for more than an hour when the others turned up. They had had a light failure and decided to leave the surveying to another day (and another party as it turned out!).

On the final camp, a large group of us finished off the surveying and derigged. Four of us camped (Goaty, Alva, Clewin and me) and two people came down for a day trip (Mark and Oliver). As the camp was being dismantled, we kept the tape recorder running and listened, once again to the 'Last night of the Proms tape.' It was quite a surreal experience to be preparing to leave the damp and cold cave while having our spirits raised by 'Rule Britannia'.

Jim Evans

Higher Level Leads

In parallel with the exploration based at Hotel Tolminka, there was also a considerable amount of higher level activity (in the cave I mean, not just Alva's talk of philosophy). Over the last two years we had slowly become aware that we had to understand the cave in terms of a complex system rather than as a single stream/fault controlled pothole. With this in mind, an early priority was to rig Ta Mokr and survey the huge, important, Galactica chamber.

Titanic Pitch in Level 2 was named for the obvious reason that it was "going down." Ironically, it took a year before Clewin, Oliver and Colm descended this fine 30m pitch through the passing drips. This led immediately to a second 30m drop and then to a spectacular 80m free-hanging shaft, named Britannic. An excited Colm threw rock after rock down into the blackness.

After returning with more rope and descending this beast, an awkward rift led to a further 30m pitch. Surveying their way out, Clewin and Oliver once again had light failure (this pair were jinxed!) and limped their way to the surface to find a rescue party on their way in. Still, the White Star series (named after the company that built the fated ships) was surely a promising new lead for the following year.

On two trips with Tetley, Mick and Hugh, I returned to the area in M16 below Brezno Strahov which I looked at with Malcolm and Frank in 1994. In 1996, while looking for the connection between M16 and M18, Tetley and Andy 'Trousers' had also visited this area and found one or two passages leading off. As it seemed to be heading in the wrong direction they left it and it wasn't until a year later that we finally got round to revisiting the area. Andy had described the area as having lots of bat shit in it, so it was always referred to as 'Bat Shit Passage'.

On the first trip with Tetley, we surveyed our way to a large boulder choke chamber and explored leads off this. One of these was a climb up in the roof leading to a large passageway which looked like it was going on. When we arrived here, we shook hands, grinning, thinking we'd made a big discovery. Round the corner however, the passage ended almost immediately in a climb up, a little bit disappointing. We called this area 'Ridum Lawnmower' after a book we'd all been reading. Later Mark climbed this pitch and found another more difficult climb almost immediately.

A few days later with Hugh and Mick, we followed up one of the inlet rifts. Climbing up some tight pitches, we passed a flat-out squeeze to a pitch which seemed to drop into the rift. Hugh pushed this for a while; it seemed to be going back into the known cave although we never pushed it to the end - I think we ended up calling this Onion Bhaji inlet as we were barfing them up all day. There are no obvious ways on in this area and no bat shit has yet been found.

Elsewhere off Hotline, Alva and Clewin investigated the Goodybag lead that Mark and I had found the previous year. They descended the first pitch, which was about 25m to a second smaller pitch (Baddy bag) this ended in a flat floor and a very horrible looking crawl at the bottom (Body Bag).

The Pits

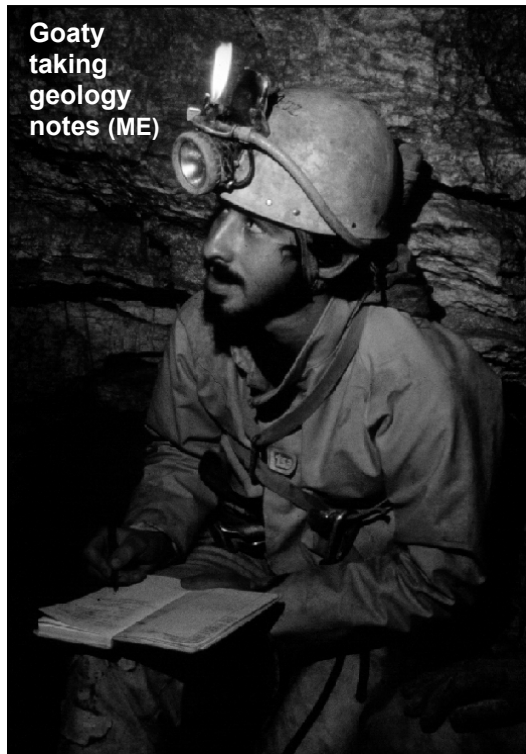
Once jammed in the crawl
We found no naturals at all
So with drill in hand
And easy bolting as planned
We began rigging Goody Bag "the small"

But things were not easy
The drill bit too weeny
And out on the pitch
Where the rocks were shit
Rigging became rather scary

From the bottom the way on
Was a meander going down
And we rigged from a rock
Which when gently struck
Resounded like a bell - with a dong

The two pitches from here
Were circular I swear
But what looked good from the top
From the bottom of the drop
Simply ended without flair.

Clewin Griffith and Alva Gossan
(logbook 02-08-1997)



Shed and Clewin dropped some of the large shafts off Exhibition Road. Gladiators traverse turned out to be part of the Mig Country pitch. Challenger turned out to be blind, although a passage half way down led to an alternative way into Exhibition Road.

My last trip in 1997 was with Alva, derigging and carrying out from Bikini Carwash. We decided to have a good look at Exhibition road on our way down. We got quite enthusiastic, trying all the various ways and soon managed to lose track of time. It was worth it however, as one of the last things we found was a small passage leading to a pitch, and a 2m stalagmite - a rare find on Migovec. At the bottom of the pitch, a passage was clearly visible, leading off away from the main direction of Exhibition road. This seemed to be another sound lead for 1998 to add to the collection. On exiting the cave we found the others had been a bit worried, as there was now no more caving kit on the mountain for them to come and look for us with!

The last four years have been a great adventure for everyone involved - and there are more leads now than ever – when Andrej said to me a few years ago ‘this mountain is hollow’ it seems he was right...

Jim Evans

Further Logbook Extracts 1997

*“Went down shaft near the connection, following the draught. Two pitches lead back in to M16. Named WOFT (waste of F***ing Time).” - Jim*



19,970 B.C.

“This story goes back to the 3rd century after the ‘Great Alliance.’ The three millennia of feuding between the Goat nations and the Trolls (referred to in the old folk story ‘The three Billy goats gruff’) precedes this era by c600 years during which the trolls climbed out of the river and re-established... The original feuding is still present but has been masked by Post-Modern Capitalist Mass Culture.” - Alva



1997 A.D.

“You find a blowing hole. Do you (a) pretend you saw nothing and go to the Soča? (go to 2), or (b) push (go to 3)” - Alva (the beginning of a ‘choose your own caving story’ entitled ‘Shag or be Shagged’).

“Tetley is a strange boy. He has done a lot of camping underground in his time but has a philosophy never to crap in a plastic bag. To see him emerge from underground after a multi-day trip, face contorted in agony, tearing off his gear in a desperate urge to relieve his bowels is really quite amusing.” - Michael Playford

The Lost World

Hotline was normally trooped through on the way down to the deep pushing front. It does have several interesting features, though, and bears many similarities to NCB passage in M18. They are both of similar size and of similar rock, covered in some kind of black deposit (the current theory is that it is some kind of soot). Hotline and NCB are roughly in the same line. They are both full of a very cold draft and are often foggy.

At the top end of Hotline, the passage seemed to continue on the other side of a large pitch (which dropped back into M16). As we'd discovered that in System Mig it was often best to traverse rather than go down – this seemed to be a good place to look for leads. Only one problem though – getting across 'The Trap'. The major technical problem was the quality of rock and the lack of belay points. The only possibility – resort to psychological belays – if you believe in them they don't fail (and if you don't believe in them cling on for dear life).

Facing the pitch, a narrow ledge was followed about halfway round on the left. The rope was 'attached' to several boulders on the floor of Hotline in order to get a 'reasonable' belay. I managed to convince Alva that this was the case anyway. From this point in, it was decidedly dodgy. Alva rigged some kind of knot onto some kind of spike and kept going. The ledge became almost non-existent before ascending a steep and slippery slope. Finally on the other side, Alva stopped and I worked my way around – trying not to use my cows-tails at all.

The passage was similar on the far side, although it climbs up at a steeper angle. We decided we would explore first, and survey out. The passage can be followed up gradually reducing in height to a series of low chambers. Several rifts joined the passage at various points, many of them ascended quite steeply. It was clear that we were not so far below the surface. Most of these passages when followed became too tight or were full of rock – they had collapsed. There was still quite a draft – but nothing like that present in Hotline.

We were about to turn back, when Alva discovered a crawl from the bottom of a small pit in the corner of the chamber. I had dejectedly started preparing the notepad for the survey out when all of a sudden, Alva re-appeared excitedly. I followed and we crawled for about 5 minutes. We could not believe our luck – it started to open up into a sizable passage. At this point we were so pleased we just ran along it shrieking with joy. We paid just enough attention to notice a large hole in the floor, and not fall down it. It had a rope round it on the right-hand side! Back down to earth with a bump but we could not help but see the funny side – we had rejoined the original passage. Having exhausted all the leads we surveyed what we had found and headed out for dinner.

Since Alva rigged in I got to derig – which was nice! When I was safely back on the other side of the horrific climb I contemplated the sad fact that no one would ever go there again. It would be stupid to cross such a traverse knowing there was nothing on the other side.

We left the cave for tea and cakes – and found Tetley and Mark huddled in the bivvy alone. It was freezing cold and very dark. Apparently there had been a bad storm and that lightning had struck metres from the entrance to the bivvy. There was somewhere more dodgy than that traverse after all! It was time to consider a 'doss' trip to Tolmin.

Tim Wright (AKA Shed)

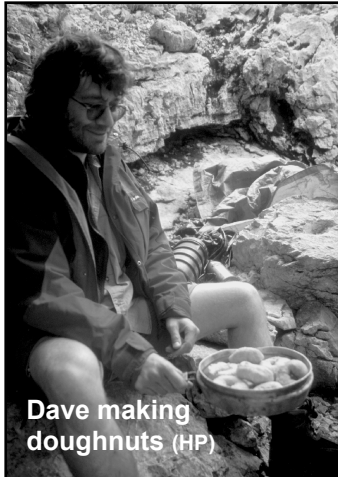


Relaxing outside, Andrej's building in the former barracks in Tolmin (DW)

Onion Bhajis and Deep-fried Mars Bars

Having finished surveying Bat's hit, Mike, Jim and I went to look at Ride-on Lawnmower, deciding not to climb it because we thought we'd like to give someone else the excitement. And if you believe that you'll believe anything.

We returned to the chamber and, after some furtling, headed off over a rift, traversing a couple of areas of loose rock. After 40m or so the rift ended but there was a way on through a flat-out bedding crawl that dropped 3m into a small streamway. We got down (funky!) and wriggled off along an attractive meandering stream for miles, into galleries decorated with beautiful crystals. Sorry, just my imagination running away with me: it ended at a 3m drop after about 30m.



Dave making doughnuts (HP)

The name "Onion Bhaji inlet" comes from the food that fuelled the exploration. We had lived almost exclusively off bhajis for two days. The expedition diet seemed to vary wildly from the relatively healthy to the frankly, deadly. Before I got there they had been deep-frying Mars bars!!! I think the Evans boys must have been behind this as it's a renowned Scottish delicacy. We also made a lot of doughnuts. (It must be understood that you really crave fat when doing lots of exercise, this was not greed!). The only trouble was that the doughnut dough kept growing until it started to look like the scene in Woody Allen's *Sleeper*, where he uses too much pudding mix. The first night we ate some, but by the next morning the dough had just filled the wok again, we were only just able to keep pace with it. In the end we managed to eat it all before the dough took over the whole camp, but it was a close run thing.

In all seriousness, appetising food and a good camp are of vital importance to the success of any expedition. It might sound frivolous to be deep-frying things up a mountain, and it involves some effort in carting the gear up there, but it is actually well worth the effort in terms of morale and, well, happiness!

A comfortable camp is also a pre-requisite to a successful long expedition. Obviously on a short recce you can't carry so much up the hill, but on a six week trip you can afford to make yourself comfortable. The effect of this is that when you are on your way back to camp after a hard trip, you are actually on your way home.

Frivolous activities are also a good way to pass the time (Can a sweepstake on the number of flies to get stuck on the flypaper be called frivolous?? By the way, if no-one wins the sweepstake there's a roll-over jackpot the next day). Other activities included "hunt the dormouse" as these endearing creatures were interpreting the rules of property rather too liberally vis-à-vis the food. Animal impressions are always a good standby when trapped up a mountain for weeks on end with unusual people - Alva and Shed both got quite good at doing marmot impersonations:



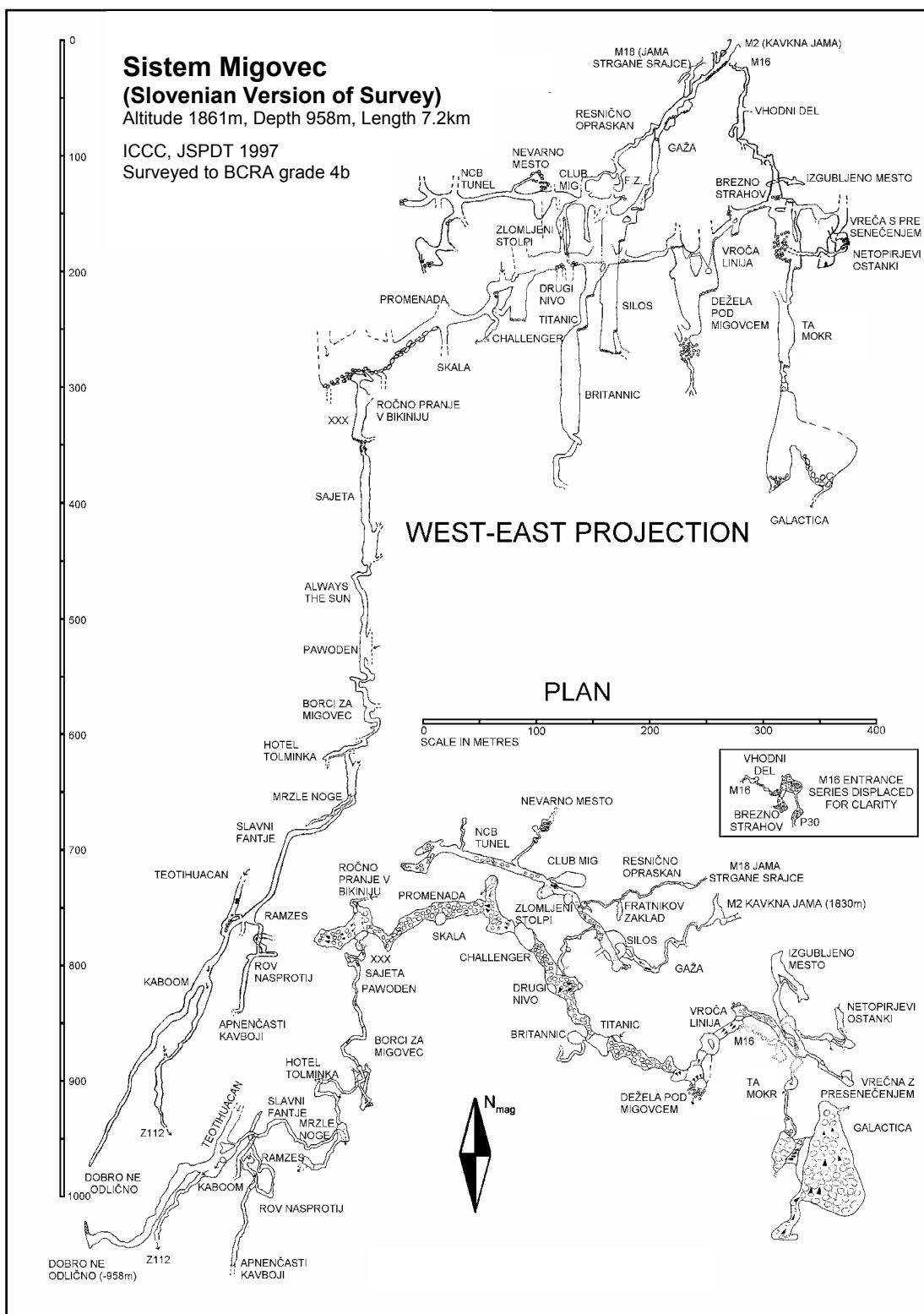
Shed and Alva playing "marmots" in the bivvy (HP)

Despite this foolery, I was sometimes amazed to hear the conversation round the camp go off into deep philosophical discussions about this or that, though it always lapsed back into the lowbrow pretty soon.

Perhaps we'll deep-fry the dormice next year....

Hugh Penney

System Migovec Survey 1997



1998

International Relations and Crates of Beer



It still remains the case that foreign cavers are not allowed to explore in Slovenia, except as part of a joint team with Slovenian cavers. Camping without permission is also forbidden in the Triglav National park. By 1998, we were very friendly with JSPDT members and, through Andrej, we had gained official permission to camp and cave on Migovec. Exploration on Mig continues to be a close collaboration between JSPDT and ICCC - every year joint trips have taken place and survey data, leads and numerous pints of beer continue to be shared.

What the locals in Tolmin make of the annual influx of smelly English cavers, heaven only knows... At Ravne, however, relations have blossomed over the years with the Klobučar family. Jackie, in particular, has helped them collect in the harvest and make cheese. Hugh, who first joined the expedition in 1997 and speaks fluent Slovenian, fills them on the latest news.

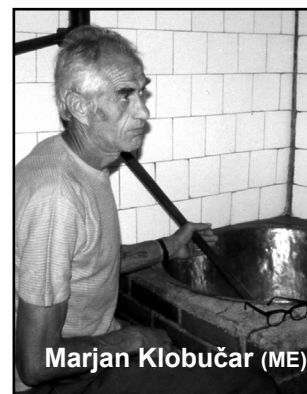
Within a week, we were back within our fondly loved cave, replacing ropes and adding bolts to create the 'trade routes' through to the actively explored deep end. One major change to the rigging was the use of a wire rope to give an initially fear-inducing 13m tension line over Gladiators traverse, previously negotiated by a guided abseil and prussik. Another improvement in 1998 was the creative sewing of scrounged (sponsored) Polartec polyester fleece which we turned into extra warm clothes and sleeping bag liners for use at underground camp.

Teething problems with our electronics were finally sorted out this year. Two Solarex solar panels (designed to be mounted on the deck of yachts and thus fairly caver/storm proof) were used to charge a 12V car battery. This in turn (via a constant current circuit) provided the power for a Bosch drill, flat cells for the caving lights, the soldering iron and the laptop computer (donated by Compaq). As an added safety precaution in case of a rescue (and a useful way to order more bolts) it was found possible to use a mobile 'phone near the bivvy.

As the following articles relate, the 1998 expedition was very successful and ended with the start of a fine tradition - an end of expedition party at Ravne. A pig was roasted, Andrej caught a Soča trout, salad was made, sausages were barbequed, and crates of beer were bought. A group of girl scouts joined in as we tried to learn traditional Slovenian dances and songs to the sound of the farmer's accordion. The farmer and JSPDT and ICCC cavers slowly got ever more intoxicated....

Looking up at the stars over Migovec, we all reflected on the many discoveries of the previous six weeks...

James Hooper



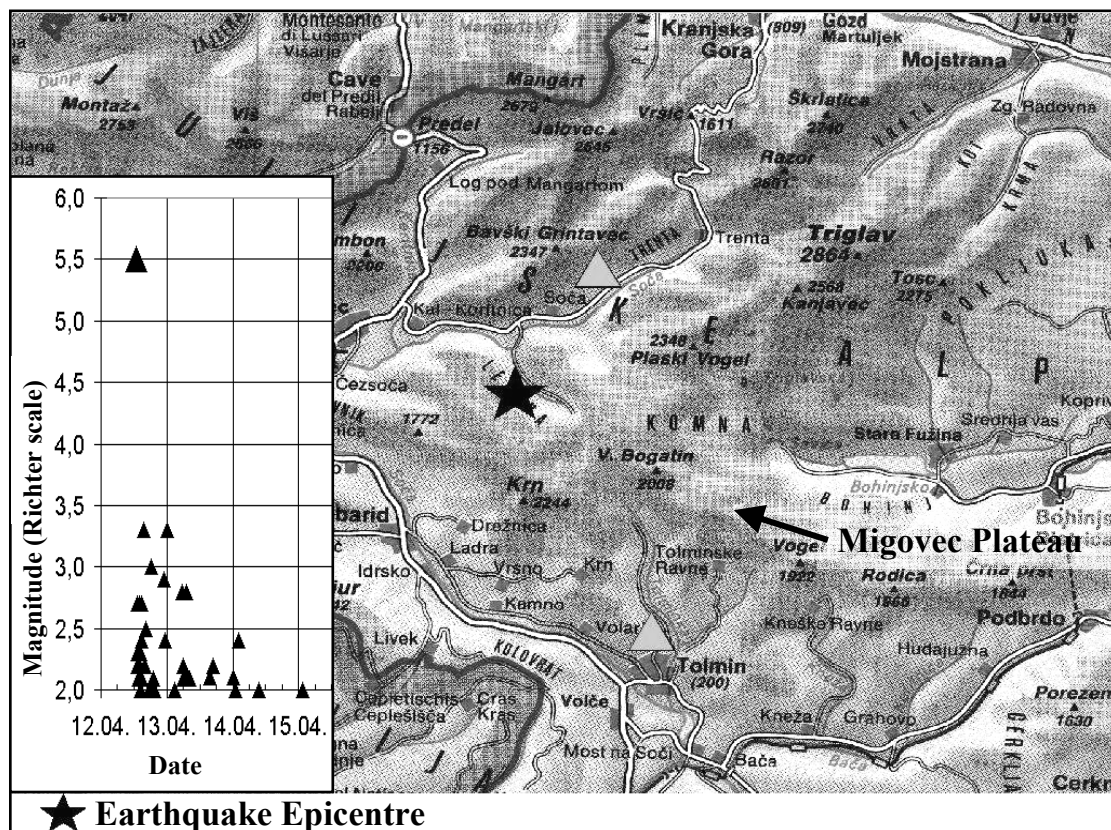
The Earthquake

On April 12th 1998 a major earthquake struck our part of Slovenia. The epicentre of the main shock (5.5 on the Richter scale) was only 11.5km North West of the plateau. Fortunately there were no fatalities or injuries but many buildings in the area were severely damaged or destroyed, especially in Bovec. Around the Tolminka valley a large chunk of Krn mountain sheared off and its shape was clearly different from a distance. In Tolminske Ravne, the ever friendly Klobučar family were forced to move out of their home and into a house nearby (that had been built by the electricity company when they constructed the hydroelectric plant). A local scout group spent the summer assisting the farmers and members of the 1997 expedition (especially Jackie) also helped out. The expedition benefited from the generosity and support of the Klobučars as we were allowed the use of their damaged house, complete with (smoking) wood stove, hot shower, flushing loo and seismometer, as our "base camp," a luxury compared to the barn we were accustomed to.

Migovec itself saw a few landslides that were clearly visible from a distance. Tolmin cavers visited the nearby Pološka Jama. They found significant collapses and movements within the cave and the location of the major resurgence was found to have moved! We therefore couldn't make any definite plans before arriving in Slovenia, as we didn't know if or how our system had changed. Additionally we were anxious that minor after-tremors, still frequently occurring as we were setting off for the Julian Alps, might cause a safety risk underground.

Once trips into the system had begun, it became clear that the earthquake had had no visible effect on the cave. After-tremors, three of which were felt on the surface during the '98 expedition, were not noticed underground. One story from the locals kept us on our toes however: The last comparable earthquake in the area happened in the early '70s and was in fact two large earthquakes four months apart. Consequently many Slovenians were expecting major tectonic activity to recur during the full moon in early August (in the middle of the expedition). Fortunately this never happened and to date there has been no repeat of the large earthquake felt in April 1998.

Jim Evans and James Hooper



A Classic Start to an Expedition

I was chatting to Tetley before his talk at the BCRA conference in 1997, when he asked what I was doing the following summer. I must admit I hadn't really given it much thought, probably go back to Ireland, do some caving, laze around. He then told me about the ICCC expedition to Slovenia. I had seen their stand and it looked interesting. So off to the lecture, this really sold it to me. The next stage was to get a place on the expedition. After several drinking sessions in Southside and leading a trip down Dan Yr Ogof, I was signed up.

IC³ takes a very relaxed view to expedition planning; one evening I turned up to find that in my absence I had been nominated the Medical Person. No matter. Over the coming months the expedition slowly took shape. Until the final few weeks when all of a sudden there was a flurry of organisation. Get the food, book the van, the ferry, first aid, sort the gear, have you written to?, No?, Do it! A frantic rush in the final hours saw a minibus (minus a few seats) packed with all our gear.

Finally we'd packed, left London and broken down. In bloody Sidcup!! The RAC came out and asked if we were going far. A bit of a stupid question! The van was packed to the gills with gear and there were several hundred-kilogram barrels on the roof. He decided to inspect the engine, so he jacked it up with 6 sleeping people and all the gear still in it. While the jack gave off ominous creaks and groans, he solved the problem.

On down to Dover, a quick romp around the duty free, and across Europe following a thin black line in a road atlas. The next problem was the green card, which could only be bought in Slovenia. We had no card so were forced to return to Italy to bivvy for the night, getting drunk on duty free. The next day we arrive at the border and found the duty free shop had just run out of green cards. So we turned around again and headed to another crossing, parked the van and walked across the border to buy the card: cash only, Tolars or DM...

Finally we arrived in Slovenia. We now just had to drive over Triglav (only the highest mountain in Slovenia) with an over-laden bus. As we went down the tight hairpins, the smell of burning brakes became overpowering and nauseating. Eventually we reached Bovec and saw the first serious effects of the earthquake. Streets of houses were held up by props, roofs had collapsed inwards and there were massive cracks up the sides of the buildings. What could have happened to the cave? Fortunately Tolmin showed very little damage and we soon headed up to Tolminske Ravne. Here we found the farmer's house had been condemned, so we could stay in it. Inside the local geologist had installed a seismometer. What twenty cavers tramping around the house was going to do to the readings only time would tell. Personally I pitched my tent outside as the area was still being affected by aftershocks.



**Earthquake
damage in Bovec**

The next day I was woken by a low rumble, the tent was shaking violently; was this an earthquake I thought as I tried to rouse myself from a semi-conscious state? A series of stroboscopic flashes and the tent was turned into a disco; ah it's a storm...., that's a relief. I made it to the house just as the deluge started. My tent was quickly surrounded by two rivers, and the road became a swollen torrent. Eventually, we realised that the storm was not going to abate. So we resigned ourselves to this fact and set up the hill with our supplies, our rucksacks acting like absorbent sponges. I punted along the meadow with my walking sticks, got half way up and decided to shelter in the Shepherd's Huts while Jim, Mark and Jackie headed up to the bivvy, battling the gusting wind of the gale to set up the rain barrels (to avoid having to collect snow for water). The rain pelted against the tin roof. I headed down and returned with another load to the hut. This was surely the wettest and most miserable start to an expedition ever.

Martin M^cGowan

First Time Up: Carry on Carrying



It was my first time in Slov, and I was out for two weeks. I had also just shattered a few bones in my heel after a drunken incident involving scaffolding. This all conspired to make the journey to Migovec really unpleasant. Shed, Colm and I arrived in Venice to a very hot day. We trundled our way over to Gorizia on an old slow train trying to stay as cool as possible in the immense heat. Using a combination of ignorance and stupidity we then blagged our way onto a bus and got to the border for free. By now, it was very hot and so we decided to walk to Nova Gorica, and more importantly, we took a 'short cut' recommended to us by a local idiot. My rucksack weighed around 30kg, the temperature was around 30°C and there was no shade in sight.

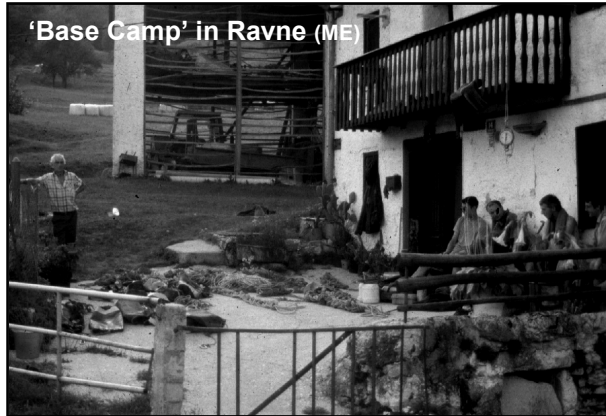
We set off up a winding road and soon I needed to stop and make a crutch from a nearby tree to help relieve the weight slightly off my foot. I slowly hobbled on. Obviously, due to careful planning, we had no water and an hour or so had passed since we set off. In the blazing sun, we were all starting to get headaches and feel the heat. We needed a drink Luckily, we spotted a fire hydrant by the side of the road - a man had just finished using it to wash his car. After some gentle tap turning, we drank and then continued to slog on to the delightful Nova Gorica. The town welcomed us warmly with its flashing enticing neon signs for delights such as casinos and "Live Girls".

An hour passed before the bus to Tolmin arrived. Shed was feeling rough and I couldn't walk (Colm was probably feeling comfortable somewhere, but I can't remember). We got on the bus, sitting at the back, and trundled off towards the relative security of Tolmin. Ten minutes passed and Shed piped up with "Does anyone have a bag, I'm going to be sick?" We began to search our luggage.... All of us had packed as light as possible and had no plastic bags near the top of our rucksacks. The searching got more frantic as Shed got whiter and whiter, he then began going green. Finally Colm found a bag - a previous home for his towel. Shed violently and suddenly wretched in the direction of the open bag top. His aim was good, right in the middle of the bag. Unfortunately, in our haste, the integrity of the bag had been overlooked. The half kilo of high velocity Shed vomit just skimmed the sides of the bag as it fell directly through the hole in the bottom of the bag onto the coach floor. It seemed like a lot of effort to produce a tube to aim the vomit. The rest of the journey was slow. The small number of locals on the bus were mostly sitting at the front. The stench of sick gradually increased as it slowly dribbled its way from the back to the front. We all anxiously monitored its progress down the aisle. Just as it reached the front, we arrived in Tolmin, and leapt out of the rear exit on the coach and ran (hobbled) away before we could be found out.



We soon arrived at Andrej's house in Tolmin and, before I knew it, a glass of the purest drink was thrust in front of me. Shed kindly refused, explaining his situation. This only resulted in a bottle of brown liquid with a root floating in it being brought out as a cure. This also contained something close to pure ethanol. Much to Shed's surprise, the drink seemed to actually help! After a quick tour around the garage (to see Andrej's hand grenade collection), we arrived at the factory in the barracks and collapsed until the morning.

By morning, the weather was hot and clear. Migovec was pointed out to me in the distance. Andrej very kindly gave us a lift to just over the Devil's Bridge, so we could walk from there. My foot by now was really hurting and walking on it was not a great idea. The only good point was that by walking uphill, the pain was less than going downhill - a slight advantage. Finally the path hit the main road up to Tolminske Ravne and the walking became a bit easier.



The slow, hot and painful slog continued until we finally reached Tolminske Ravne. We met up with the farmer and his wife and sat down in front of the incredibly shonky looking earthquake-condemned house. After some food, we visited the Zadlaščice, a nearby river. This was a lovely idyllic spot to have a beer and reduce the swelling of my foot in the ice cold water. We did, in fact, have a small competition as to who could keep their feet in the water the longest. Colm won with an impressive 13 seconds.

As the afternoon began, the inevitable walk up to Migovec got closer. In my state I was really not looking forward to it. With Mig towering about 1000m above us, we set off up into the woods. Apparently it was necessary to take the short cut - not sure if that was a good idea, but we did. The gradually thinning woods eventually broke out into a lovely meadow, a great relief to have a rest. Our progress was very slow - I was slowing the others down a lot - but we were in no rush as long as we arrived by the evening. The next rest and water stop was the shepherd's huts. Another very welcome and too short break quickly turned into the remaining thrash up the final few hundred meters. This was a particularly slow and painful section. Clouds were swirling around us. We were not too concerned about the weather, however, until a deep booming sound hit us. After a couple of seconds, we realised it was not thunder, but a large rock fall on Krn. After half a minute or so, the sound of individual boulder smashing down the mountain side could still be heard - this did not fill me with great confidence about the journey across the scree slope. Fortunately, this went without a hitch. Although the pain was beginning to get to me, the end was closing fast. After a final push up an impressively built-up section, we reached the ridge over to the plateau. My ideas about an easy walk over the plateau were then smashed into several thousand pieces. It's only flat if you round it down to the nearest 50m! As it turned out, this was one of the most painful sections. Progress was slower than I thought and sections of downhill were hurting my heel.

How to annoy a doctor:

- Get pissed.
- Climb 10ft up some scaffolding and jump off.
- Walk around for ten days on a buggered up foot.
- Visit a doctor.
- Get told not to walk for a week.
- Ignore doctor and travel to Slovenia.
- Climb up 6000ft mountain.

Ben Ogborne
(from Logbook)

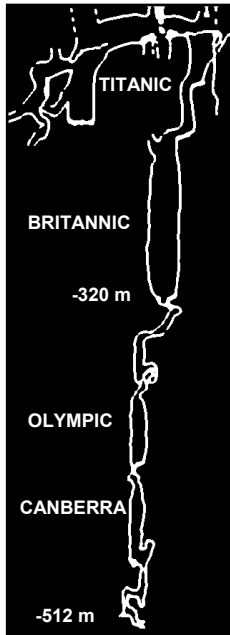
The final slope eventually yielded to the sight of tents and I seem to remember Jim sunning himself. That was my first trip up the mountain - it was also my worst ever. Shed and I set up the small two man tent and I settled down into two weeks of bivvy life.

Ben Ogborne



Plumbing the Depths: The White Star Series

Olympic and Canberra - they too went down



Beyond the tight rift at the bottom of Britannic (-320m), an exciting pitch series was left as an ongoing lead at the end of the '97 expedition. Near the start of the '98 trip, Phil and I returned, making a fast descent to the limit of exploration and bolting the next pitch 'Olympic' at somewhat less speed. Despite our belief that this pitch was near bottomless, it turned out to be a 40m freehang. Unfortunately the rift continuation was blocked at the bottom by two stubborn boulders so we had no choice but to turn round. Unable to keep up with Phil, I struggled out from Hotline alone, arriving at the bivvy at around midnight, totally shattered and dehydrated, unable to eat much food.

After a well-earned 'doss day,' Phil and I packed a heavy bag of digging kit (crowbar, hammers, chisels etc.) and set off before noon with big intentions to force a way on down. Arriving at the blocked vertical rift, and using the crow bar and chock stones, we eased one of the boulders over until it was tantalisingly balanced on one edge - leaving just enough room to squeeze through. I drove in a spit, rigged it and descended through slowly, descender on a cowstail. It was a goer! A decent pitch - bang, bang, splosh - followed almost immediately. With difficulty, I inched back through the squeeze and set about widening it with the hammer.

The next pitch 'Canberra' was 40m and took us close to the D-mark (-500m). We landed in a rocky chamber with yet more rifts continuing off. Alas we had no more rope so it was time to retreat, surveying as we went. Huggy had also joined us to 'geologise' and join in the short but hopeful discovery of a minor extension 'Winter Olympics' - three small chambers near the top of Olympic. Despite carrying a tacklebag, the way back was reasonably stress free and a good lead was left for the next team.

Sarah Wingrove

"Shed, Jan and I bomb down Britannic, take one look at the rift and got the hell out a.s.a.p. Jan bets me the most comfy spot in the tent that we'll be out by 9:45. Exit the cave at 10:05, making me the clear winner, though all the vodka ribena has disappeared by then. Very comfy night in tent."

Colm (of course....)

Logbook Extracts 1998

"First night at the bivvy notable for the five-minute bottle of Bailey's and a fine curry around the fire followed by a fine clear night under the stars."

"Rescue dump set up at Bikini Carwash with spare carbide, emergency food, batteries, first aid etc."

"A change in the weather but still no rain - desperately needed to replenish our water supplies. A team spent several hours yesterday rigging M10 and melting snow on tarpaulins."



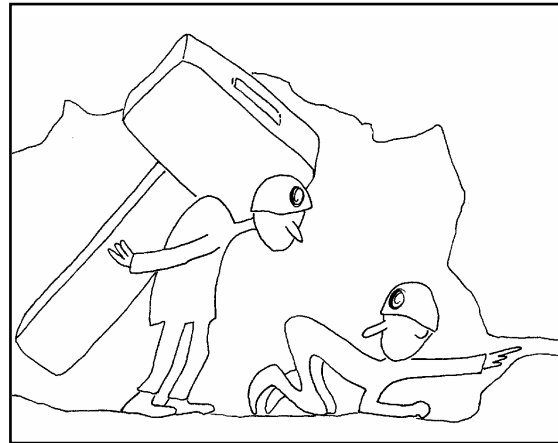
A desperate bid for greater depth



Depth in the afternoon was the plan. Clewin and I were armed with loads of rope, rigging kit, surveying kit and chapatti sandwiches - ready to push ever deeper into the hollow mountain. We were soon at the top of Titanic, ready for a big push down yet another of the system's pitch series. Britannic was awesome, the rift a pain and the squeeze before Canberra extremely frightening. "Rescue impossible from now on...."

More rift, memories of Torn-T, another hammered squeeze and a short drop brought us to a small 'two-person-sized chamber'. A six-inch wide crack was the only way on. We knew that if we could get past this and leave a possible lead, then we could exit without kit. If it was impassable, we would have to do the decent thing and start to derig. Clewin grabbed the hammer and chisel and started the attack.

Two hours later we were desperate. Arm strength was failing, midnight approaching, the crack remained impassable. We were both exhausted. "One last go, if I can just remove that nodule..." No avail. No way on... An epic derig began. Indeed, I'll never forget collapsing, knackered, in the rift below Britannic with an enormous, red tacklebag that seemed bigger than me at the time. We moved on up, slowly, carefully, surfacing shortly after sunrise. The White Star series was finally laid to rest.



James Hooper

Further Logbook Extracts 1998

"Tolmin session continued: shopping, pizza, ice-cream, Soča, last minute dash up the hill for an evening at the bivvy which turned out to be the best piss-up ever. The bivvy residents had been on top of Mig watching the sunset with a bottle, the Tolmin group arrived after having downed a litre and a half of very cheap red wine at the top of the mule track and I (Scuz) had been downing rum to try and catch up with the others. The result was an absolute riot without a sober head on the mountain. It was a fine prune curry too Martin!"

"Jackie, Cecile, Kathryn and I (Scuz) set off for a girl's trip down M17. We couldn't find any bolts so we rigged entirely on naturals (unless you count a tent-pole backup!). Tried to find a connection to NCB through the ice at the bottom but ended up cold and shivering so we beat a retreat. Out at sunset for a tasty chilli."

"Rescue team were kept awake 'til 3a.m. when Mark and Jim returned (safely) from a rigging/exploration trip in the Stal extensions (later renamed Poltergeist)"

"Another hot and sunny 'boil in the tent' morning which turned into another hot and sunny 'but who cares cos we're going caving' afternoon."



The Hotel reopens for business: Rigging down below -900m



Scuz in the M16 entrance
crawl (Jackie Evans)

Huggy and I set off for the first camping trip of the year. Jim and Tetley, looking nowhere near ready, told us they would follow shortly. We took a while putting in a few extra bolts on the way down to make the pitch heads safer and easier (including Huggy's 2nd and 3rd bolts ever) and arrived at the Hotel early evening with carbides beginning to play up. There was no sign of the other pair and, as they were bringing the bedding and spare carbide, we sat around for a long wait.

The Hotel was mouldy, the Trangia was furry, the sand grey, the karrimats wet and there was a huge mountain of spare carbide and litter on the shelf; but it was good to be back nonetheless. Then it got cold and we seriously considered going out. About three hours later we heard Jim and Tetley coming through the passage above with five tacklebags. Thank goodness for that! Despite a host of excuses, I spanked them both for being slack and set about making up the four beds and brewing some more tea. After a period of faffing, three of us snuggled up in our warm dry sleeping bags listening to 'Blackadder Goes Forth' while Huggy went to Pawoden to do some trendy geology, returning three hours later. The home-made Polartec furies, Polartec sleeping bag liners, Buffalo Bags and bivvy bags made for a sound night's sleep. The close vicinity of the piss BDH meant that there was no incentive to venture far away from the safety of our pits until the container was full to the brim.



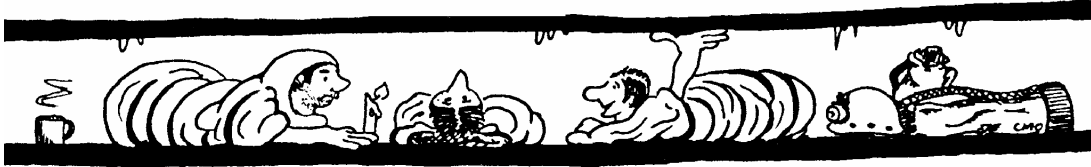
After the usual underground concoction of smash, soup and fish, the four of us got ready at about 2pm to go deep. Beyond a slightly awkward section of crawling to get to Rameses (go through the hole in the floor and then left), we rejoined water at the pitch into Paradox passage. From here, the Slovenians had rigged on down using 9mm over the last two months, so we followed their rope, sticking extra bolts in where necessary. (Limestone Cowboys, found in '97, is by far the biggest of the holes off Paradox, but is also the wettest and wasn't rigged). The next pitch was dry and led to another passage with a hole in the floor, this time rigged with 8mm shoelaces! Huggy and I continued down, rerigging as we went while Jim and Tetley followed on behind surveying. (Apparently the Slovenians had broken their only pencil while surveying out and so this section was totally unrecorded except for a grade one sketch made on the surface and Dejan's altimeter watch indicating a depth of minus 950m!)



There were several leads at all levels but we continued on the Slov route, named Antivox, which kept looping back under itself, following the fault deeper down. One section, rather unpleasantly, involved sliding down a narrow, very muddy tube and then wriggling through a small, low passage filled with clay-mud. Now completely covered in sticky mud the cave became active again - a really draughty, drippy place to be hanging around. The other pair really drew the short straw, I thought, as I imagined them surveying through this squalor, cursing that damned pencil!

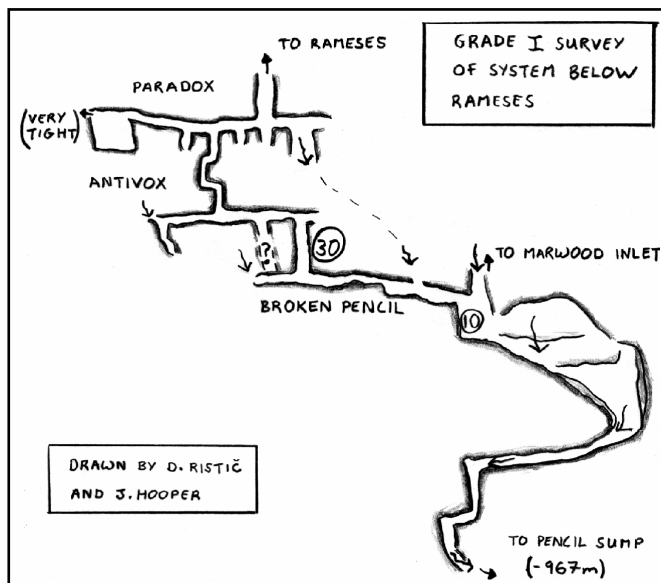
Several slippery, unprotected climbs were carefully negotiated to the ever increasing sound of rumbling water. Soon a large river, later called Marwood Inlet, came roaring in on the left before draining away down a hole in the fault plane.

Knowing we were about 900m below the surface, we decided to rig a line protecting the dodgy traverse over this drop. Huggy placed three bolts but it took him an age. By the time he had finished, Jim and Tetley had got dangerously cold and shouted that they were returning to the Hotel. I had sung every song I could think of twice and then sat in silence, in fading light, shivering and shouting every so often for Huggy to get a move on. Eventually, the traverse line was rigged to another pitch and we headed back to camp. We arrived at about 6am to find Tetley and Jim fast asleep (but apparently quite worried!).



The water was gushing down Porcelain pitch when we awoke at 10am. There had obviously been a downpour up top and the water was at least four times its normal volume. We had no option but to stay in bed, listen to another two episodes of Blackadder and doze off to sleep, rousing again mid afternoon. It took a lot of psyching up get back into caving clothes given that the gear was muddy and soaked through, we were still quite knackered and it was a hell of a way back to the surface, up, up, up all the way. We packed a tacklebag of rubbish each and checked out of the Hotel. Five hours later I was back at the surface in intermittent drizzle. The deserted bivvy was in a mess but I feasted over onion bhajis and chocolate angel delight scrapings before going to bed in my wet sleeping bag lying in pools of water in Hugh's leaking tent. At least the water situation at the bivvy had been resolved with all available receptacles filled with run off from the tarpaulin.

Sarah Wingrove



"Made an attempt to clean up the mess tins, but not with water, oh no! The custard from two days ago has now dried in the sun over a layer or two of curries and the only way to return to base metal is to scrape the tins with another hard metal object."

Sarah Wingrove

Safety First: Rigging the Wire

In 1998, we'd decided to concentrate on the deepest leads below Hotel Tolminka, so the underground camp was in constant use. Every trip had many tacklebags of rope or camping equipment. Gladiators traverse was infamously regarded as the most difficult and dangerous to cross while carrying a tackle bag (due to rub points). We had spent the previous Easter in France in the Dent de Crolles system where there were many tensioned traverses which were rigged with steel wire. Seeing how effective these were, we decided to rig the Gladiators traverse in the same way. It was hoped that people could cross much more quickly and easily with tackle bags and, in the event of a rescue, an injured caver could be much more easily evacuated from the cave.

All of the necessary materials were bought in Tolmin:

- 35m of 5mm galvanized steel wire
- 60m of 5mm cord
- 6 18mm rawl bolts
- 20 'U' bolts
- 1 Tensioning bar
- 1 18mm drill bit

"When buying the wire we asked the man in the shop how strong it was. He replied, 'I don't know but, don't worry, if it breaks you can return it and I've got some stronger stuff'. Suitably reassured, we bought it!"

A Petzl double pulley was brought out from London.

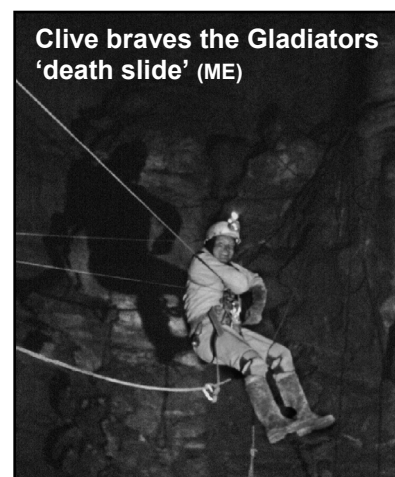
Iain and I took everything down to Hotline and rigged some cord across first. We were then able to work out the best locations for the belay points to get as horizontal a span as possible. Our plan was to drill 3 holes on each side, a process that took a number of hours as they were much larger and deeper than the normal spit holes. The rawl bolts were then inserted and tightened by inserting a bar into the eye holes that Simon's brother Mišo had welded onto the end of the bolts.

The wire was rigged as a Y-hang with a backup on each side. In both cases, the wire was not cut at any point but threaded through and clamped using the U bolts. This was done to improve the strength but also to avoid having to cut the wire with a hacksaw. Once the near side was rigged, Iain pulled the other end of the wire and the rest of the rigging material across on the cord. I crossed over by going down and up in the usual way.

Drilling the holes on the far side was much easier as there was a convenient ledge to stand on. Only the highest bolt required some climbing and reaching overhead. Once the bolts were tightened and the wire was threaded, we set the length of the wire section that spanned the pitch. It is crucial to leave some slack in the wire as there is very little stretch in the system, though a taut wire is much easier to cross. This can, however, produce very high tension in the wire and high loads on the belays. In the end we decided to leave plenty of slack and perhaps tighten it later if it proved to be difficult to cross.

By the time we'd finished we were freezing cold and covered in white limestone powder from drilling the holes. On the way out, neither of us was willing to go across the wire but we vowed to return the next day to fully proof test the system, the hot topic of discussion over dinner at the bivvy. Eventually we decided to hang a rope from the pulley in the middle of the span and load this rope with one or two cavers from the rope bridge below. This way, if the wire failed, we'd only fall a few feet (instead of up to 60m!). We had just cracked open a bottle of Vodka and started to pass it round when Huggy came down into the bivvy, returning from a camping trip at the Hotel. "Love the wire traverse" he said, "but it's a little difficult to get off on the near side".....

Mark Evans



One jammer short: A camping trip with an epic exit

The '98 expedition was really buzzing. A team of hotbedders were due out today. A group of Slovenians had set off with Huggy and Tetley to push the lower depths "to -1000" with all of the available rigging gear. Other teams were heading off to various locations to discover miles of new cave. Jan was hunting for his wetsocks... Our plan was to head down to the Hotel with Clewin and Kathryn but it was hard finding the motivation in the boiling sun. Eventually, after six hours of faff, we said our goodbyes to the others and headed off to M16.

We had the dubious privilege of being the first group to test the new wire 'death slide' traverse over Gladiators. I flew across the void, although the wire gave off ominous creaks and groans, and landed safely on the other side. Getting off the line involved a careful jiggling and balancing act to avoid slipping off the landing platform.



At XXX, I was just about to abseil when I noticed a serious fray in the rope. I quickly slapped on my cowtails and hand jammer (you can't be too safe) and got off the pitch. Luckily, someone had left 70m of rope at Bikini Carwash, so Kathryn nipped back and got it. A quick re-rig and we headed on down. At camp, we had some re-hydrated gloop, snuggled into layers of warm, dry Polartec and fell asleep listening to Blackadder: pure luxury.



At 7am, Huggy, Tetley and the Slovenians (the Glory Team) arrived to make us tea and breakfast. They had hit a siphon, Pencil Sump, at -967m, and were clearly disappointed that the cave had "ended." They also explored Marwood Inlet, which they related as a gorgeous stream passage with clear blue meanders ending in a 10m aven, requiring aid climbing. My team braced ourselves for the misery of putting on damp furies and allowed Tetley and Huggy to crawl into bed. The Slovenians set off out (they had to work the next day!). Clewin and Kathryn went down to investigate Marwood inlet and other deep leads. Meanwhile Jan and I headed down Wonderstuff, extended over the previous year by the Slovenians but not fully surveyed. We did an exciting traverse, using brute force and ignorance, over Porcelain Pitch with its unique Ammoniac smell. Straddling the remains of a rock arch, we abseiled down Earthquake Way, a series of interestingly rigged, large dry pitches. Snap gates, home-made hangers, no back ups and dodgy naturals were the standard for Slovenian rigging - their philosophy was to get down (and maybe out) as quickly as possible. We found several interesting leads, some of which have good potential, and noted them down for the future.

Back at the Hotel, we kipped before going out the next day. On the way out we investigated the Northern Line and abseiled into the Elephant's Graveyard. The graveyard is a boulder choked chamber with several leads, including a rift which ends in a pitch surrounded by hanging death. While Jan was bolting the pitch, I dug up into a chamber full of boulder breakdown but decided to leave it alone - I didn't fancy playing hide and seek in a pile of loose, car-sized blocks. Clewin and Kathryn surveyed a glutinous mud filled rift called Chocolate Moose. On the way out, we saw a pitch below where we came in. I declined to go down as there was a six inch crack in the main 'wall' and it was getting late.

Going out we bumped into Scuzzer, Stephan Pier, and Cecile Chabot and exchanged news. By the time we reached Sajeta we were slowing down. I was about half up the 85 metre pitch when I heard a whooshing sound and a cry of BELOW! Something bounced off the rock below me as I clung to the rope and made love to the rock. I cursed Clewin above me.



At home in the dark...
Brewing tea at the Hotel
(DW)

A minute later, Clewin shouted down something about a jammer and I took part in a strange version of Chinese Whispers....

"You want what? Where did you leave it?"

I wondered how you could leave your jammer behind; oh it must be his spare I thought. Eventually I reached the top and found out that Clewin had dropped his hand jammer down the pitch. Doh!!!

"Do you have a spare jammer?"....

"No."

"Do you have some spare cord?"...

"No."

"Oh!" I quickly found a loop of cord.

"Do you know how to use a French Prussik knot?"...

"No".....

"Ah!"



While I was giving a quick lesson on how to tie a prussik knot, Kathryn arrived, quickly followed by Jan. A rescue plan formed in my head and I gave Jesus 'The Good News' that he was to head out the cave as quickly as possible while the three of us slowly plodded up the Exhibition Road to the traverse. Jesus and Kathryn soon disappeared from sight, while Clewin and I tandem prussiked up the rope. Clewin prussiked for several minutes and then I did a few strokes and caught him up. At the changeovers I got nervous because if the prussik cord was dropped then I would have to do a mid-rope rescue and haul Clewin out, plus give him a good kicking later. Luckily it didn't come to that and about an hour later we reached the top. No more rope for some time. Phew!!

After a brew and some chocolate, the three of us clambered up Exhibition Road, while Jesus flew out of the cave to save us. Carrying our tacklebags helped us to warm up in this cold alpine prison. Mentally it took no time to reach Gladiators traverse, but I know, on reflection, that this wasn't true as we all struggled up the climbs. I climbed over to the zip line (death slide) and pulled myself across it. Everything was being done slowly as fatigue took its toll on the grey cells, or maybe it was just more difficult to go up the line. The plan had been for me to send my hand jammer back with the pulley so Clewin could get across.



I clipped on my jammer and yelled for Clewin to pull it across. The pulley moved about a foot and then stopped. Damn! The string to bring the pulley back had snapped. So I had to climb back down and struggled to retrieve the jammer. I was intensely aware that if I could not get it or if I dropped it down the void, then the two of us would be stuck in the cave. My intense nervous struggle finally paid off and I slowly slithered and stumbled up towards Hotline with my failing carbide.

As I continued on out, I kept imagining I heard someone. Tiredness, coldness and lack of food were taking their toll. I turned on my electric at the rebelay, as my carbide was next to useless, and slowly counted off each pitch, crawl, and climb. Every noise was amplified by my imagination, 'Ey Ho?' no, it was just pebbles falling, water dripping.

As I crawled through to Vhodni Del, I heard the scree being dislodged and hitting the chamber floor. I abseiled down and saw Iain whizzing down into the chamber on the other rope. He was illuminated in a halo of carbide, holding aloof a hand jammer like Arthur and Excalibur - our salvation. I slowly continued out, struggling on the awkward window at the top of the last pitch. Eventually I crashed in my tent at 3.00am

Martin M^cGowan

Repaid with Interest: The continuing Jammer Saga



It is worth remembering in life that bad fortune and good fortune usually balance themselves out in the long run. We had prepared for an emergency at some point in our expeditions over the years; not in such a manner that we had written down a lengthy procedure or anything so mundane as a flow chart showing responsibilities and actions, but we had discussed it over a bottle of vodka round the fire a few times. Often when retiring to the tent at night, we would linger for a second or two to look at the stars, and think how lucky it was to sleep under such a vast canopy, compared to the enclosed camp in the limestone 600 metres below us. Our ears would usually strain to hear anything that might be out of place, then, satisfied that all was quiet on the caving front, we would allow our heads to hit the proverbial pillow like a proverbial lead balloon.

And finally it came! A series of shouts at 3am. We were all glad to have mentally prepared so well for this eventuality. The straws were drawn and I pulled the short one, forcing me to put on my caving gear in a hurry. Jan delivered news - fortunately nobody was hurt.

Clewin had just scared himself silly at the top rebelay in Sajeta by allowing his hand hammer to become unattached and watched in horror as it fell almost ninety metres to the boulder strewn floor of the shaft below. Clewin, Kathryn and Martin were making their way out very slowly, and all they really needed was a replacement jammer, which was delivered to them with a smile in Hotline, at the foot of the entrance series.

The following afternoon Jim, Tetley, Colm and I ventured underground for a two day trip to survey and push a few new leads. On the way down we searched the boulders at the foot of Sajeta for Clewin's jammer, but gave up after a short while - it was a piece of equipment that couldn't be trusted anymore anyway, so we would leave it to its bouldery grave. Further down the cave, I can remember these leads we were pushing and surveying being not very pleasant and very cold. On the second day I could feel the onset of hypothermia in The Northern Line series. Quickly completing our tasks, we headed on out.

The journey out from camp was becoming quite routine, and soon we were starting to warm up and feel human again. On this occasion, however, in a small awkward pitch just below Sajeta, I became inexplicably jammed, and on wrenching free heard a crack and a tinkle of falling metal. Uh-oh. Checking the SRT kit in the boulder chamber at the foot of Sajeta, we quickly worked out what had given up the ghost. It was my hand jammer! It's days were over; it was now an ex-hand jammer.

The glove was on the other hand now. This was the location where Clewin had lost his jammer, and had needed the services of an intrepid caver to deliver a shiny new one in the middle of the night. Now that very same intrepid caver was in virtually the same predicament as Clewin had been in! We sat down and thought for a minute, until all four of us were sitting quietly. "But hang on," said Jim, "Clewin's jammer is down here somewhere".

It took ten or fifteen minutes of steadily less optimistic searching before we found it. It was a bit banged after it's ninety metre fall, but we were all grateful of it's resurrection. It supported Jim's ample mass by way of a test, and so with no further ado we headed on out. As a send off, before being retired to the caving stores in the sky, no jammer could have asked for a better final trip. We were in high spirits and couldn't help thinking that this was just repayment for the help that had been given three days earlier. A tale of good fortune long recounted around the camp fire, and like the vodka that is passed from person to person, will continue to leave a warm glow deep inside for a while yet.



Our Friends from England

On a fine sunny day in 1998, an Earthquake shook. The village of Tolminske Ravne was seriously damaged, including our house. As we ran out of our home, we heard rumbling sounds from above. A large rock slide on Migovec changed the face of the mountain.

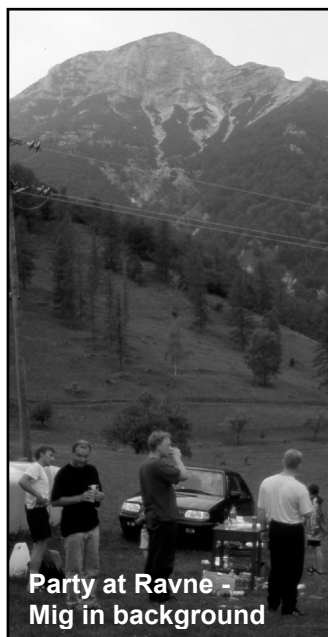


It is to this mountain that our English cavers come regularly each year. For the first two years we didn't have much contact with them as they initially stayed at the bar house in the village. They only came to us to buy cheese. In fact, the first Slovene words they learnt were 'cheese, thank you, good afternoon, hello...' Mostly we saw Jackie, smiling, sunburnt, coming through the door saying, "Good afternoon, cheese?" My mother nodded. Jackie added, "No problem."

In 1996, the cavers were camping on the grass nearby, where they keep their van. In the morning the cows going out to pasture were very surprised by these strange humans lying in their sleeping bags all over the place. They were so tired that even the cows smelling them couldn't wake them up.

These people were supposed to be cultivated since they came from England, but we soon realised this was not the case. Tired from walking, dirty, sweaty, hungry without real food to cook, they surpassed all our expectations... Over the following years, our friendship has deepened. They have become like a family that comes to stay every year for their holidays.

In the year of the earthquake, our family and other people from the village were staying in the new building nearby that was used for festivities. Therefore our house was empty, awaiting repairs. When the cavers came, we let them use it. I think they had a great time as they used the kitchen, bedrooms and, most of all, the bathroom with the toilet. When they came down from Migovec, they all queued up in front of the bathroom, waiting for the shower. They slept in the rooms, on the balcony, everywhere. One night, an after-tremor was felt. I was sleeping with my boyfriend in a tent behind the house, so when I felt the earthquake I opened the tent to run if necessary. But in the house the light turned on for a few seconds and then everything was quiet. The cavers were not afraid.



When they left at the end of the summer, they arranged a party for us all to celebrate. My father brought out his accordion and we were soon in a proper mood. We danced and sang and enjoyed ourselves. The food they prepared was excellent, but in particular I remember the perfect Slovene desert that Hugh had learned to prepare while on a course to improve his Slovenian in Ljubljana. This was wonderful and hopefully he'll also make this dish at his home in England.

I'd like to add that my family are very glad to know the English cavers. Hopefully they'll continue to visit us, perhaps with their families, or because of their need to explore Migovec. Until they came, we didn't know what we had nearby. I wish them a lot of luck and success with their expeditions in years to come.

Hopefully we'll remain in your good memories; we sure won't forget you.

Nada Klobučar (on behalf of all the Klobučar family)

There be Caves in them 'ills: Digging in the Valleys



Being a Mendip digger by nature (and with broken foot bones ruling me out from deep caving trips), I became interested in the potential of the valley between the east of the plateau and Škrbina. After all, all cave exploration starts from an entrance, however small....

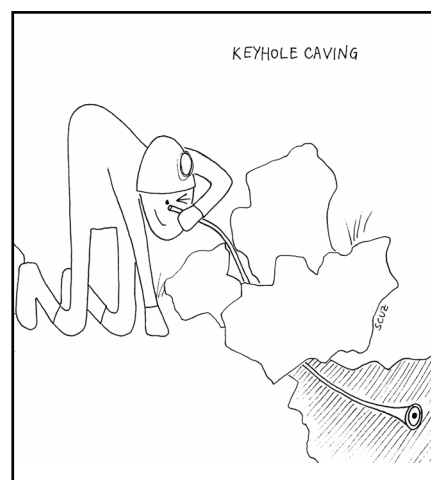
Mark and Jackie showed me the first site to grab my attention, an obvious rock arch halfway down the side of the valley. This cave had been known about for a while, but was low on the list of priorities due to discoveries in the main system. At the back of the entrance shelter, a short grovel through gravel dropped into a sizeable sloping passage ending in a boulder pile. To the side, a small passage beckoned. I squeezed through, in normal clothes, until it became too tight. The passage continued, however. Dark space seemed to lie beyond. Lying flat, listening to the unnerving beat of my heart, I could also discern a slight draught. I retreated back out to daylight - this needed full kit to proceed. A mental note of the lead was made, (though it was another two years before we returned to pass the squeeze and start the discovery of what became Gardeners' World cave). The entrance was initially known as "Ben's Crap Lead" - luckily a non-prophetic name!

Further down in the valley, I was shown a collection of caves around a large shakehole. These pumped out freezing cold air and, at roughly the same horizontal level as Level 2, were potentially lower entrances to the Migovec system. The first to receive any great attention became known as East Pole. This began with a triangular, descending passage lined with scree. A short distance in, the passage closed down slightly but possible continuations lay both ahead and to the left. I pursued the tight squeeze ahead and was soon rewarded with a very sharp, tight pitch head. A bolt was needed and this was to be my first. Lying flat on my stomach, bolting kit at arms length, I struggled for what must have been 40 minutes to finally get the bolt in. What I was going to do then I didn't know - the pitch was far too tight. Luckily, Tetley found another route - just in the nick of time.

Tetley's route involved a climb over a boulder into the roof of a small chamber with an unstable air. The obvious way on continued down to a small squeeze. Attacking this with a hammer, we soon broke through to a spacious pitch. A bold step over the pitch head led, via a sizeable passage and boulder slope, back to the bottom of the drop that I had 'bolted'. Tetley played in the choke at the end but disappointingly he didn't find a way on. We still had the main pitch though. This turned out to be about 10m deep and not quite vertical. With excitement rising, we continued on down a well-formed passage to an area of breakdown. A strong icy wind blows out of this choke, christened the IC Draft. Time for a game of 'incoming' - throwing rocks up at the loose boulders, shouting 'incoming' and then scurrying back before the roof collapses and buries you alive. Stupid, mad, but worryingly addictive. The large surface shakehole probably lies above this choke, while below we speculated that there must be a large shaft. Several digging trips returned to this promising lead but no breakthroughs were made.

Other caves around the shakehole were also investigated; the main ones of note were named T2 and the Hairdryer. T2 was broken into after a brief (but manic) spasm of digging and smashing. A tight, strongly drafting rift passage requires hammering to progress further, but "I'll be back." The Hairdryer was found to the side of an obvious cave entrance on the north side of the shakehole. The obvious cave is blocked, but by digging out a low bedding plane, the hairdryer was entered, a windy place. A slow shuffle into the bedding leads to a small, 8" hole. Beyond this restriction was black space, and the source of the very strong draft. The through-trip to the Soča still waits to be found. With luck and persistence who knows???

Ben Ogborne



Heading into Blank Mountain: The Northern Line

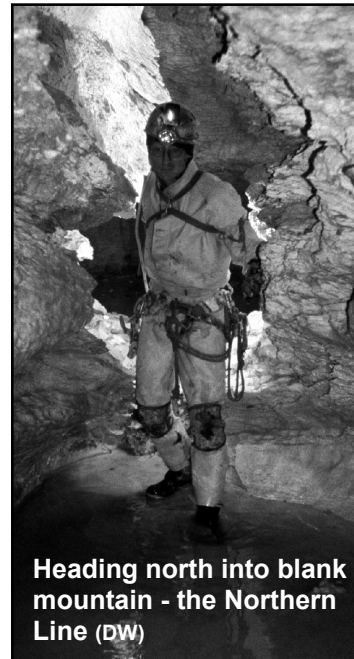
During the trips to set up the '98 underground camp, a siege operation involving the transportation of 12 tacklebags of equipment, an intersecting rift was discovered in the stream passage about 50m higher up than Hotel Tolminka.

"Look, a dry inlet.... let's follow it.... it seems to be sloping down.... I'll check the compass...., its heading North into blank mountain.... Wow, its going, it's going.... the mountain's hollow....."

The passage became know as 'the Northern Line' and soon broke through into a 25m pitch into the large Elephant chamber, with huge elephant-sized boulders.

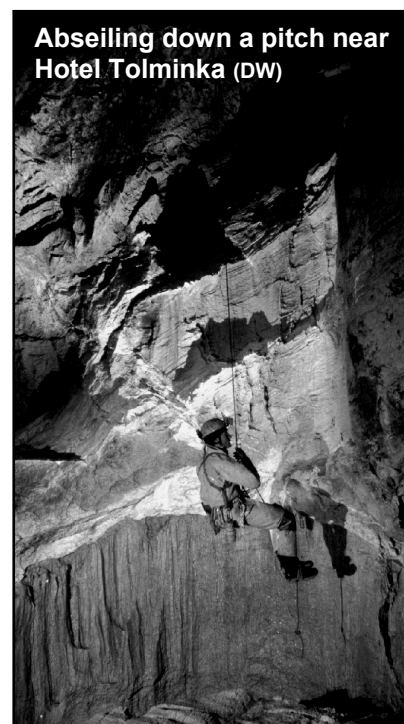
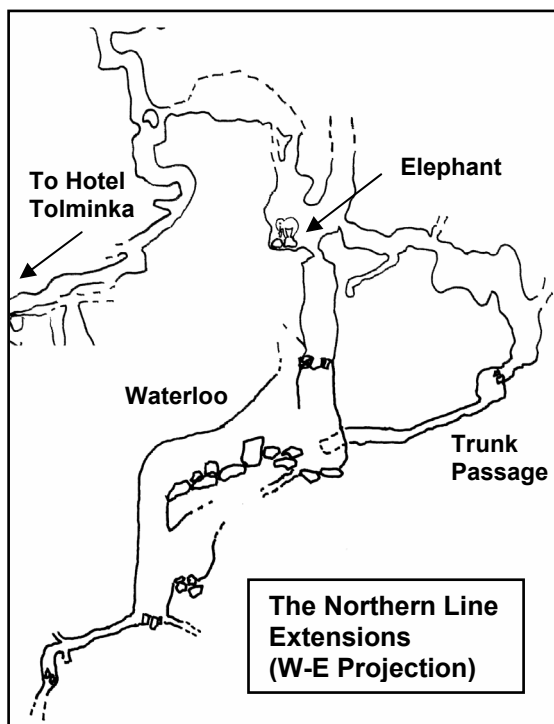
Investigating this chamber, a number of extensions were found. A small passage heading south east led to a short pitch. Here, Colm and Tetley became excited. A large, horizontal trunk passage led off into blackness and thoughts of discovering another 'Level 2' started to mount. "This could be another Level 2...." we thought. Unfortunately after 50m the route suddenly closed down. No draught was present and it didn't seem to be worth digging at the time.

A route through the boulders at the base of Elephant chamber led to a 30 m pitch "rigged off a big boulder resting on a little boulder." This was indeed frightening, the whole lot threatened to come crashing down with dire consequences - prussiking up you weren't sure whether to go slowly, carefully, minimising any shock or as quickly as possible to pass this forbidding obstacle. This was followed immediately by a 15m pitch into a "black void" - a huge chamber named Waterloo. Many possible ways led off this chamber but due to lack of time only a few were investigated. The pitch at the end was found to be 25m and led to a small and unpleasant crawling passage, which closed down after 20m.



Heading north into blank mountain - the Northern Line (DW)

James Hooper and Jim Evans



Abseiling down a pitch near Hotel Tolminka (DW)

Further Discoveries by the "Knights of Beit"***

While the deep level camping trips were taking place, a fair number of day trippers set off to extend the frontier higher up in the system. An obvious, previously undescended shaft, Waffles, and a small passageway which led to a large pitch (Poltergeist) were connected some 70m below Exhibition Road with no obvious ways on. A small hole in the chamber wall at the bottom of XXX led to a wet, parallel aven. Inlet rifts were also found at the bottom of Sajeta and Pawoden. Both were followed upstream until climbing became too difficult.

Finally, the black, breezy, phreatic NCB passage was revisited. The draughting passage at the east end was dug to no avail and a tantalising lead, Zebra passage, was found but not pushed in the west. Scuz returned to the now almost mythical Plop pitch with Kathryn. After hammering the tight pitch head for an hour and a half, with little improvement, Kathryn squeezed through to place in her first bolt. Scuz descended 40m and hammered in a second spit. The bottom of this huge pitch remained out of sight but as time was running out they beat a retreat to the bivvy, to find gourmet food, including samosas and soups, waiting for them.

James Hooper

Below FA999

The wet way down the original 'Glory Boys' route had been investigated in 1997 and pushed to a spray filled 30m pitch (FA999). Revisiting this area in the winter of '97/'98 (when the cave system is much drier) Dejan Ristic and friends, clad in wet suits, were able to continue exploration down a further 10m drop. This was followed by a sloping river passage, punctuated with deep pools (Water Hope), which led to a sump at -970m, currently the deepest part of the cave.

James Hooper

***Alternative nomenclature for IC³ cavers in '98, after Beit Quad in South Ken - a.k.a.: KnoBS

Yet More Logbook Extracts 1998

"I hate people who doss... - Let's put the kettle on." Tetley.

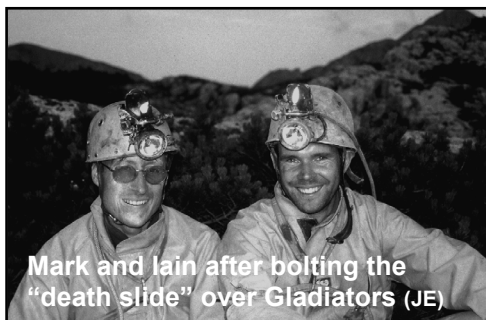
"...but then Clive had his badger..."

"The girl Scouts express keen interest when they hear Jim is going to be staying down for the day. Maybe he will rival Tetley and Jan as the love interest."

"Everyone down to Tolmin for a session. Seven of us leaving tomorrow, just under half the expedition. Odisej for food, the Soča until the mozzies started to bite, back to the barracks for a game of cards, another session in the Odisej and then down to the 'bar of bad reputation' until late..."



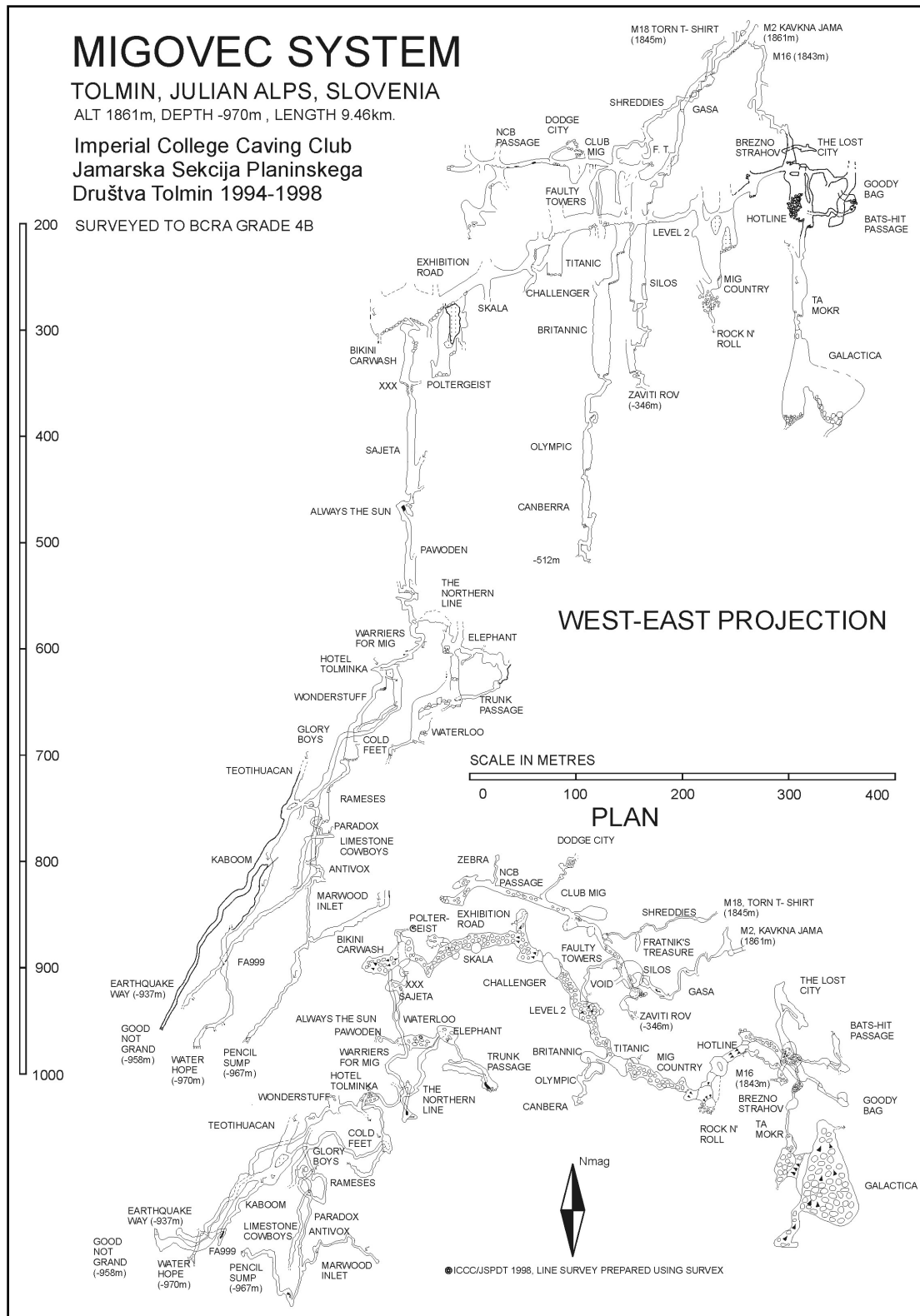
Dave on Spirit of Elvis, the traverse over Challenger (ME)



Mark and Iain after bolting the "death slide" over Gladiators (JE)

"Eventually the unavoidable task of derigging came. On our last trip, the hardcore cavers went in. It was a pleasure coming up Exhibition Road in a large group as you could look back to see a string of carbide pearls strung out along the majestic traverses contrasting with the absolute blackness of the pitches below." - Martin

System Migovec Survey 1998



1999

The Adventure continues...

In 1999, there was a much higher proportion of novices than in earlier years and, for various reasons, few seasoned expedition members made it out to Slovenia, especially in the first half of the expedition. Fortunately, as we'd decided to make full use of Hotel Tolminka while it was set up in the previous two expeditions, we'd left many unexplored shafts along the large horizontal passages of Level 2 and Exhibition Road. This year, we therefore decided to push these higher level leads in a bid, not for greater depth, but to try to achieve a greater understanding of the system as a whole. Everyone on the trip could also be fully involved in the pushing...

Though it may be obvious, it's worth stating that the first-timers on one expedition very often become seriously hard cavers who take a leading role in subsequent years (as has been demonstrated time and time again on Migovec). Team work, trust, effort, discomfort and a modicum of risk combined, once again, to make this another expedition where real exploration took place (unlike 'stunts', however impressive, like walking solo across Antarctica or getting up Everest in the fastest time). Imperial cavers stood where no one had been before and, by recording and surveying over 1.5km of cave passage, increased the knowledge we have of our planet.

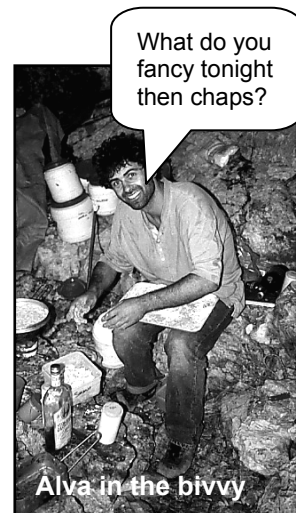
James Hooper and Clive Orrock

You live off that???

Bivvy

The following food items, stored in a wire cage (to keep them away from the mice), in white Daren drums, or in jars scattered around the Coleman petrol stove, give a good 'snapshot' of the foods that form the main staples of the expedition:

Smash, sos-mix, split peas, chick peas, dried mixed beans, dried veg., cheese sauce granules, dried egg, milk powder, split peas, butterscotch, creamed coconut, angel delight, popcorn, golden syrup, dried peas, pearl barley, tomato puree, cornmeal, porridge oats, dried onions, suet, lard, red lentils, split peas, pasta, chocolate, dried parsley, chilli powder, sage + onion stuffing, herbs and spices (vindaloo, oregano, coriander, mint, sage, madras curry, chives, basil, black pepper, madras curry, cinnamon), salt, baking powder, garlic powder, marmite, yeast, Lea and Perrins sauce, dried prunes, tomato puree, tea, herbal tea, coffee powder, spaghetti, brown rice, basmati rice, white bread flour, brown flour, chapatti flour, lime pickle, mango chutney, dried onions, angel delight mix, dried apricots, raisins, peanuts, popadoms, prawn crackers, vitaminski (powdered vitamin drink), large (cheap) blocks of cheese, jam, biscuits, cooking oil, soup powder, margarine, sugar, vodka (preferable Smirnoff Black Label), double rumski (80% alc. by volume with rum-flavouring).



Tolmin

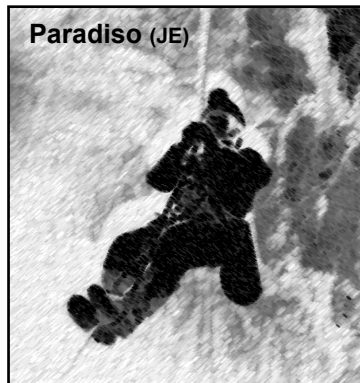
Down in the town, however, there's the 'Jedi-list' (the Slovenian for menu is Jedilni list):

Beer, pizza, beer, ice cream, hot chocolate, ham and eggs, beer, Wiener schnitzel, Krn platter, beer, cheap red wine at the 'bar of ill repute',..... (+57s for Tetley)

James Hooper

Paradiso: "The course is set for an uncharted sea"***

While sitting round the fire in the bivvy, the cry "It goes" came bellowing across the plateau. Another team had just returned victorious. Smiles broke out on peoples faces. Wild exaggerations return as we break open another bottle of vodka. We all knew we were going down once again...



Paradiso (JE)

Over the previous few weeks, the expedition had returned to Level 2 to thoroughly investigate the remaining leads. One of these was Arian5, an exposed, vertigo-inducing, 30m deep pot that was eventually rigged down to a boulder floor. From here, a window looked out onto a huge void. On closer inspection, however, an easier bypass to this exposed shaft was found. Climbing down through boulders at the point where the rope drops in from Faulty Towers, a friendly 15m pitch led directly to the head of the same void. Thank goodness we weren't pushing this via the Torn-T entrance series! The spur of the moment decision in 1996 to play the traverse game made these relatively stress-free day trips via M16.

The void was a 70m deep monster, named Paradiso after our favourite bar in Tolmin. According to which source you use, Dante reputedly lived in/visited a cave in the vicinity, which led to the inspiration for the Inferno. "Abandon hope, all ye who enter here...." I wonder what he would have made of us, seven hundred years later, casting stones down this deep abyss, counting seconds before the sound of "crash, rattle, boom..." ?

At the bottom of Paradiso, a nasty, constricted meander soon closed down. However, a climb up led to a spacious rift and the head of another pitch, 'the shaft of ill repute'. Sharp, protruding walls made the pitch difficult to rig. And then a river joined the shaft 30m down, making the obvious way on dangerous at worst and unpleasantly wet at best. Jim, Alva and Ben Young remained keen, however. A window was spotted. A swing led into a dry, parallel shaft. Fear and elation led to a frantic bolting session.

"I still can't see the bottom.... I'm just putting another rebelay in...."

Touchdown. It's always both a physical and emotional relief to stand once again on solid ground. Father Shed was indeed an awesome, spacious, 70m drop. Better still, a short section of tight rift broke through into a large horizontal passage. "Level 3, Level 3, it's going...." And then it closed down. Damn. But all was not lost. A small hole led to another 30m drop, named Bear Necessities after Huggy's sparse, scary, rigging. Another tantalising pitch followed, the sound of water could be heard. Alas, time was running out and so reluctantly we derigged, leaving the Paradiso series, at -420m, as a tantalising lead for the 2000 expedition.

James Hooper



Abandon Hope....
Paradiso Shaft (JE)

*** Dante Alighieri's claim for Paradiso, the last *cantica* of the Divine Comedy.

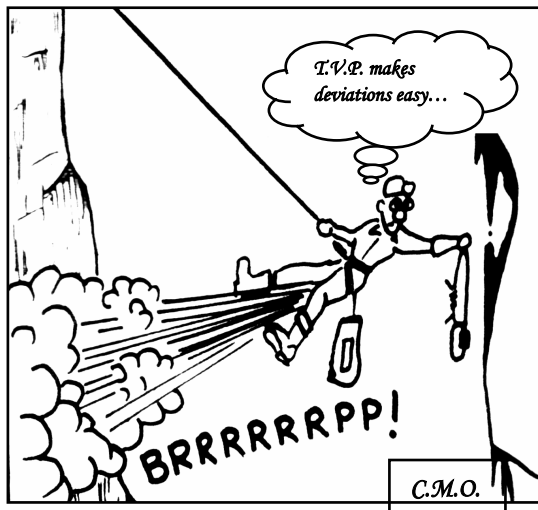
Obelix and Co.

'Nineteen': the average age of a soldier killed in 'nam. This was also my age on my first expedition to Slovenia. A few days earlier, Jim had taken Henry and me on the Grand Tour, shown us how to negotiate Gladiator's traverse and Spirit of Elvis. He'd then introduced the wonder that is Exhibition Road. Anyway, Jim had much more important things to do that day, probably involving the shit-pit, so it wasn't without a touch of the nerves that the two freshers were sent down to the bottom of Skalar (-300m) to see what they could find.

I remember my first bolt, a beautiful hang down Skalar. Scrappy (Henry's nickname, 'cause I'm Shaggy) pushed a tight and nasty crawl to a 15m pitch with a tight pitch head that I then rigged. Then there was this big black hole - 'Obelix'. We chucked a few rocks down and estimated the depth to be 1024m. More careful timing produced a slightly more realistic value of 80m. (Well, realistic to us. On arriving at the surface all claims were dismissed as exaggerations, but we showed them!) We then spent about an hour doing our first bit of surveying through the crawl. Only about 30m were added to the system, but it wasn't easy, especially as we hadn't done any before!

We returned a few days later after convincing Goaty that our lead was going somewhere. I was too scared to bolt out over the top of an 80m pitch and so, it emerged, was Goaty. I left the top of Obelix that day never to return.

Andy Jurd



Bolting Obelix

Near the end of the expedition, Jan bolted down the wide, cylindrical shaft of Obelix (spending ages carefully placing each bolt). As Shaggy predicted, the pitch did indeed turn out to be about 80m deep. At the bottom, a wide rift passage, with what looked like a pitch continuation, was left as a good lead for 2000.

James Hooper

Recipe Corner: Chapattis

Ingredients: plain wholemeal flour; pinch of salt; butter or margarine; water

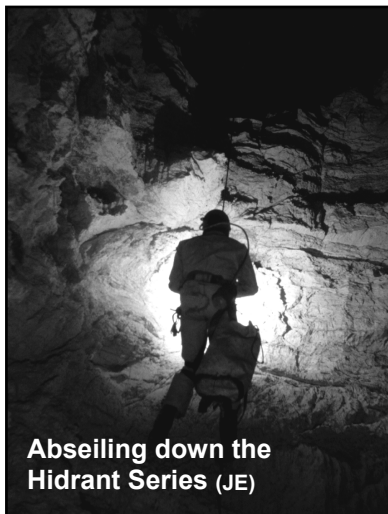
Stir flour and salt together in a bowl. Rub in butter until the mixture resembles fine bread crumbs. Add sufficient water and then mix into a stiff dough. Knead on a lightly floured surface (e.g. the top of any Daren Drum that doesn't contain powdered cow). Leave the dough to rest while you make tea, roll a cigarette, kill a mouse etc. Then divide dough into lumps and roll out each piece into 15cm diameter circles (6 inches is also acceptable). Light the stove and wait until flames die down to a reasonable height. Fry chapattis for approximately 3 minutes in a hot pan until lightly browned. (The use of a Le Creuset cast iron frying pan is highly recommended). Chapattis are ideally served with cheese and lime pickle though jam or marmite make decent alternatives. Advantages: good source of carbohydrate; excellent food to weight-carried-up-hill ratio; making a large batch is an acceptable way of putting off going caving. Making these is also the only known way of properly cleaning your hands on top of Mig.

James Hooper

Resurveying the Hidrant: Searching for missed leads

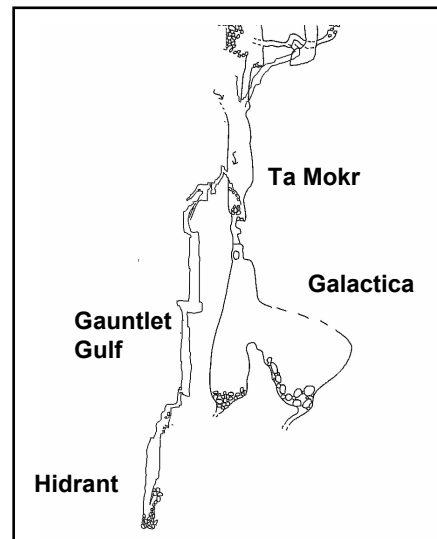
It's interesting how perceptions and attitudes have changed over the years. By 1999, a prevailing view was that re-rigging down to below -400m seemed like nothing. To a self confessed aficionado/fanatic of the system however, it was fascinating to abseil down into yet another of the cave's secrets, reconfirming once again that the mountain is truly hollow...

The Hidrant series was pushed by the Slovenians in the early eighties to a depth of -547m, and received its name (from Fratnik *et al.*) after a spout of water suddenly started flowing out of the wall in an otherwise dry section of cave. (There was a storm outside at the time). The series remained off our survey though - after a determined search we realised that the data and original drawings had disappeared over the years. We decided to fill in this blank, adding to our knowledge of how the known system fit together. There was also the hope that a Hotline-type lead remained to be found, ignored in a push for depth.



By the time I joined the expedition, most of the series was already rigged. Jim and I set off to survey and finish the job off. Now, for some reason, Ta Mokr has always scared the shit out of me and I was glad to finally shout "pitch free". I was less happy about the 50m scramble up loose boulders that followed. At the top, a short climb down followed by a traverse over a blind 5m pot led to the start of the Hidrant series. Beyond a small section of rift, two consecutive 10m drops broke out at the head of a fine 40m shaft into a chamber. Alas there was only one way on. In the corner of the chamber, a narrow fissure led straight to the 'Gauntlets Gulf' pitch head. This was initially narrow but ten metres down it opened up into a sizeable shaft. We searched for a way on at the bottom. Where were the rusty bolts? A short drop through boulders, followed by a small crawl, led to yet another pitch: more re-bolting was needed...

The pitch started with an awkward take-off of the sort that gives you a momentary "Is my harness done up properly?" panic. After passing over a steep boulder slope, the last 30m was pleasantly vertical. The bottom of the shaft was a steep and precarious boulder slope that had, for me, an eerie feeling about it. Perhaps because I knew that a long time ago someone had been here before. Perhaps it was because the whole series was unnervingly quiet with no draught or water. Perhaps it was just that sort of chamber. Now at a depth of about -450m, it felt very deep and a long way from the bivvy. In fact it seemed a long way from anywhere - it was hard to imagine that this was the same cave as NCB, the Hotel, FA999... We searched for leads and the way on but couldn't find anything. There seemed to be a possible continuation beneath the boulder floor but it looked far too dangerous and unstable to attempt.



"Jim, shall we start to derig and survey out?" "Yeah OK."

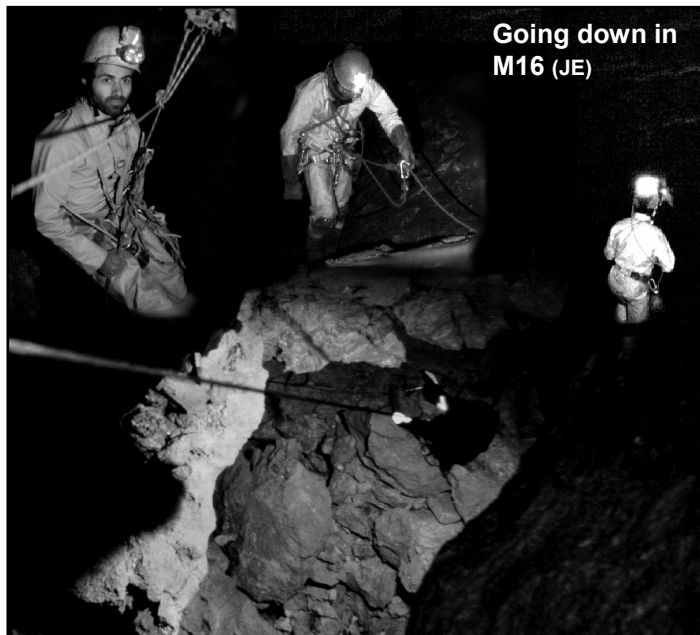
Speaking to JSPDT members afterwards, it seems that this was, indeed, the way on, leading eventually to two parallel shafts, 'The Shaft of Rotting Socialism' and 'The Shaft of Rotting Communism'. Perhaps these names were the reason we were unable to find any written records...

James Hooper

Fun and Games: Other leads in the system



Bolting up in M16 (JE)



Going down in M16 (JE)

With the persistence of a goat trying to get at an old wet-sock, Goaty and others explored and surveyed around 100m of twisting rift passage, named Spiny Norman, starting from the bottom of Brezno Strahov.

Zebra passage, a rift at the western end of NCB passage was pushed, by Jan and Tetley, through a constriction to a wide undescended pitch - Leky Pot. Light failure caused them to leave this lead and skulk out of M18 (like Gollum in the Lord of the Rings).

Finally, with great enthusiasm, aid climbing techniques were used by Jim and others to climb a 20m shaft, Ghengis Khan't, between Mig country and Titanic in Level 2. The head of the pitch led immediately to another 15m pitch further down with no obvious continuation. Climbing up from the initial pitch head led to a further aven that would require more bolt climbing to progress.

James Hooper

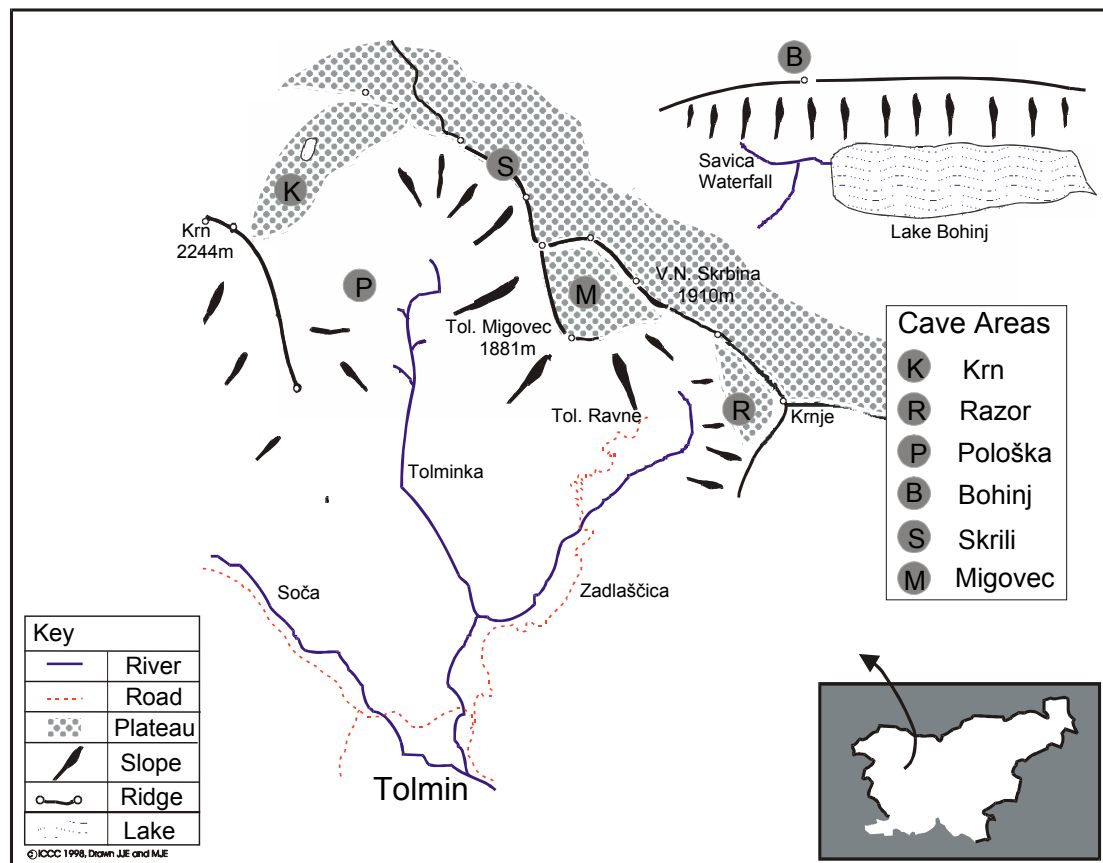


1999 group photo with the Red Van and the Klobučar Family (JE)

Dye Tracing: The mystery of the resurgence

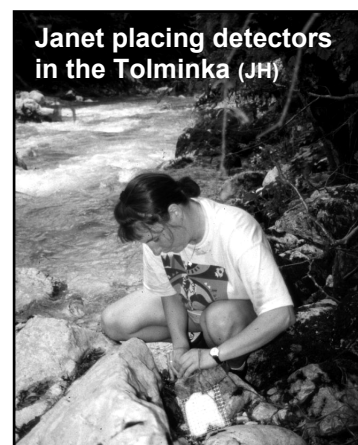
“Look at them, looking for caves, and look at them when they find water in the caves, what they are really looking for... is alcohol.” Groucho Marx

The three resurgences in the area are the Tolminka river, the Zadlaščica river, and the Savica. The first two have small multiple resurgences, the water seems to seep through a layer of gravel (Pološka Jama resurges half way along the Tolminka valley on the west side). Both the Tolminka and the Zadlaščica join the Soča river, which then flows into the Mediterranean. The Savica resurges from a cave 5.25km to the NE (alt 775m), pouring immediately into the valley below as the famous Savica waterfall, before flowing into the deep, glaciated Lake Bohinj. From here, the water flows out as one of the main tributaries of the Sava river, eventually joining the Danube and flowing into the Black Sea.



Schematic map showing the location of the rivers in relation to the Migovec Plateau.

Over the years, hours have been spent attempting to determine the resurgence(s) for the system. On each occasion, about 2 litres of optical brightener was released and detectors (cotton wool in chicken wire - nicknamed 'Zupons') were placed in various locations as detailed below. The advantages of optical brightener are that a positive result can be detected in the field (using a UV lamp) and that there is no possibility of turning any rivers bright green. (There are too many tales of this occurring by mistake in other areas of Europe and, though it always makes a good story, we were anxious to avoid jeopardising our position with the Slovenian authorities). Care was taken to avoid contamination. Although no conclusive results were obtained, for completeness, the following is a record of attempts made.



1996: Optical brightener placed at base of Ta Mokr. Detectors were placed in the Zadlaščica and Tolminka resurgences. Faintly positive results were obtained from some of the detectors in the Tolminka but not in Zadlaščica river. (No clear conclusion, contamination possible)

1998: Optical brightener placed at Marwood Inlet. Detectors were placed in the Zadlaščica and Tolminka resurgences. No positive results, after 3 days and after 4 weeks.

1999: Optical brightener placed at Bikini Carwash. Detectors were placed in the Zadlaščica, Tolminka and Savica resurgences. A faint positive connection was made with the Mala Savica resurgence, but not to the other two rivers. (Possibility of contamination - the Dom na Komni Refugio is located nearby).

2000: Another attempt was made but due to continuous rain all detectors were washed away!

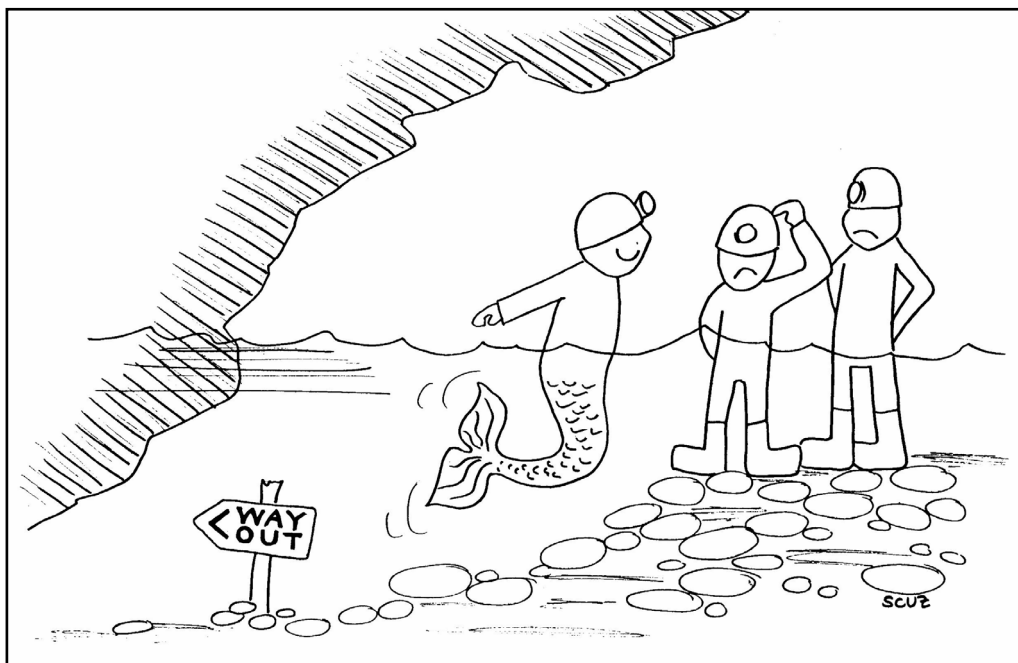
2001: Optical brightener placed at Hotel Tolminka. Detectors were placed in the Zadlaščica, Tolminka and Savica resurgences. A faint positive connection was made with the Mala Savica resurgence, but not to the other two rivers. (Again there's a possibility of contamination from the Dom na Komni Refugio).

To further complicate matters, it is of course possible that water in different parts of the cave (eg. Ta Mokr, Rock & Roll and Hotel Tolminka) resurge at different places. Further studies need to be done (possibly with coloured spores - perhaps as a joint project with Slovenian cavers).

In 1996, Janet took a large number of water samples from various locations in the cave and along the Zadlaščica and Tolminka. Tests were done on these samples, measuring their pH, conductivity and bicarbonate concentration. There was only a very small variability in these measurements and unfortunately nothing can be deduced from them.



James Hooper



X marks the Spot: The Survey Project

“All the most exciting charts and maps have places on them that are marked ‘Unexplored’.” Arthur Ransome, *Swallows and Amazons*, 1930

By 1996, the importance of an accurate and complete survey was apparent to all - being instrumental in finding the connection and making a cave system. It also became obvious that the survey itself was becoming a major project in its own right.

Above ground surface surveying was done to determine the locations of the entrances. As the plateau caves are in close proximity to each other, this was found to be more accurate than using a GPS system. Underground, an evolving network of permanent survey stations (PSSs) was established (pieces of paper with names and dates, or bolts or carbide marks on the wall) and an ethos of “surveying what you find and tying into each trip into a PSS” was instilled. A laptop computer at the bivvy (powered from a car battery which was charged by solar panels) allowed us to see the results of our efforts soon after the trip. Indeed, surely no expedition member will ever forget those mesmerising moments, sitting round the fire, drinking Vodka, watching the survey rotate on the screen.

Right from the start we used the Survox programme written by Olly Betts. Each survey trip had a name (e.g. Migcon) and a Survox file with the same name was set up. Each survey station was then prefixed by the file/trip name (eg. Migcon.4 was station 4 of the Migcon survey). The files also included information on who was on the trip, the date the trip occurred, location of Permanent Survey Stations (PSS) & other information. A system of PSS cairns was also instigated (with waterproof notes detailing date, persons on trip and specific identity) which enabled sections of new cave to be tied into the main survey many years later.

By “reading back” the data, we ensured that no transcribing errors occurred when typing the data in and the ability to see the line survey in the field allowed us to check for “blunders” such as mistaking a back leg for a forward leg. (In 1996, due to problems with the batteries, Survox was run in BASIC and there was only just enough time to watch the survey rotate before we ran out of power!). As the survey grew, the cave was divided up into areas in order to keep the files organised sensibly. A certain degree of organisation/dictatorship was also needed on each expedition to ensure the original notes were filed for later use.



The first benefit of the survey was as a tool for exploration. The ability to see a main line in the field aided exploration on several occasions, most notably when making the M16/M18 connection, and helped us to understand the system as it was explored.

Clearly the survey also serves as a permanent record of our discoveries following the dictum, “No exploration without documentation”. While thousands of people mourned the death of Princess Diana in 1997, soon after the expedition returned, a group of ICCC cavers were taking part in the annual survey weekend at the Evans’ house. Here, a full survey showing passage names & detail was drawn up each year.

Originally, we drew the passage detail by hand around the main line (printed from Survox), traced this, scanned it in to the computer and then added passage names. Soon, however, the survey grew too large for bitmaps (and extended elevations) and we changed to a vector system (and a West-East projection), importing the survox data into ‘CorelDRAW’ and then using a tablet to draw in the passage detail.



**Martin and Clewin
entering survey data (ME)**



'CorelDRAW' had the advantage of having different layers so we could have one layer with the main line, one layer with the passage detail and then different layers for the Slovenian and English versions of the survey produced each year.

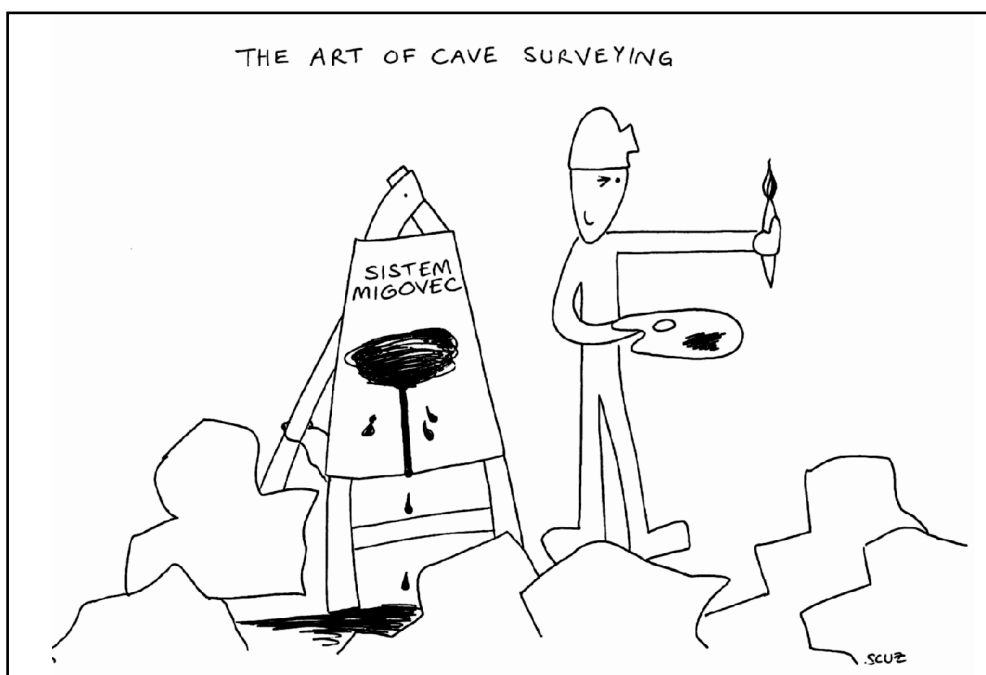
Of course, it is not true to say that the final drawn survey is an extremely accurate representation of the cave, complete with full passage detail. Although we always aimed for BCRA grade 5, the survey, undertaken by a large number of cavers over the years is not as accurate as could theoretically be achieved - but it's certainly good enough. Our biggest loop, through the tortuous M18, out via M16 and back along the surface had an error of 1.33% over its length of 745.54m, small enough for me at any rate!

Over the years, a large amount of time has also been spent resurveying parts of the cave that had been found by the Slovenians. M16 was completely resurveyed down to Galactica and the Hidrant. Fortunately we were able to obtain a large drawn up survey of M2 with each station marked on the map and so we regenerated this data without having to enter this area of the cave (reputed to be wet and tight.) The survey for each year thus shows our knowledge at the time, so for instance, although the Hidrant was found in the 1980s, it doesn't appear on the survey until 1999.

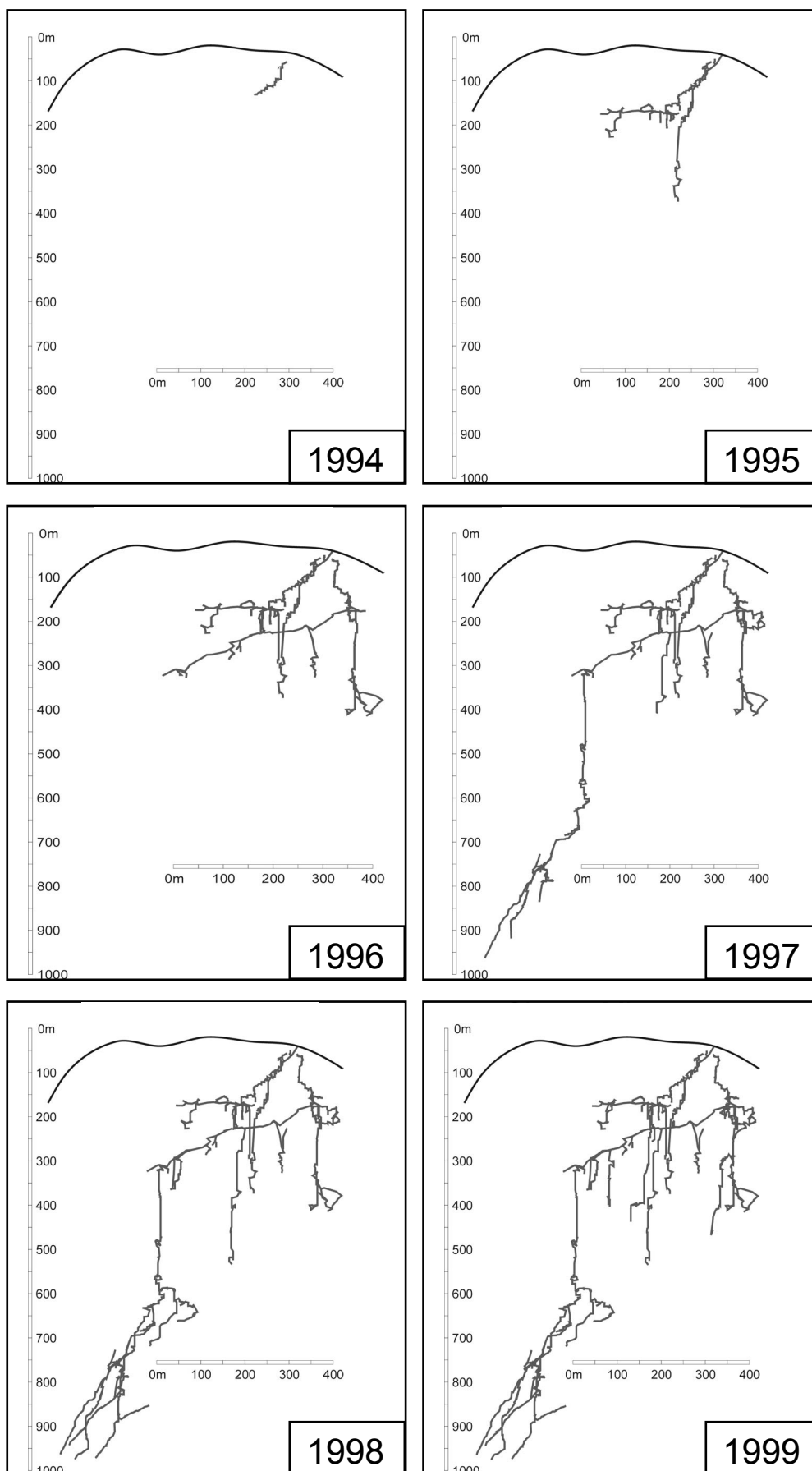


Finally, a few facts. By the end of the 2001 expedition, the system survey contained 1823 stations. The total length of the 1823 survey legs was 12956m, the total plan length was 7959m, the total vertical length was 7499m and the vertical range of the system was 967m. By 2002, system Migovec was both the sixth deepest and the third longest cave in Slovenia.

James Hooper



The Hollow Mountain: The Development of a Survey



They must invent not just explore...

On the top of Migovec,
underneath an old rock bridge,
sit potholers from I C 3
making plans and drinking tea.
It might appear they're lazing round,
delaying going underground.
But looks, you know can cause deception,
fertile thoughts deserve a mention.
To go where no-one's gone before
they must invent not just explore...

In ninety five, to save on weight,
they brought dried food to re-hydrate.
To obtain vital H₂O,
they placed some drums under the snow.
The plan was then to use a pump
(an idea surely hard to trump).
But, looking back, it's appalling
the time it took till a tarpaulin
was used to catch precipitation
avoiding the great irritation
of descending to the bottom
of M10 and pumping often.

Another cause of some frustration
was the lack of a location
good enough to find once more
the caves they found in ninety four.
And so a G.P.S. system
was early on employed by them
(though on the recce they weren't told
that batteries quickly fail when cold).
Mig was methodically criss-crossed
but how to avoid just getting lost?

String to the caves - quite good I say -
though underground it's so passé...
Yet down Torn-T, on every trip,
each wrong turn would cause a rip.
A further detour from the route
would quickly shred the over-suit.
Now after much deliberation
on how to change the situation,
a neat solution was conceded
a trail of blood was what was needed...

Foul smells were constantly emitted
from the pit where they all shitted,
and the place got even dire
as the dung piled that much higher.
And so they stopped throwing bog roll
down that fly-infested hole
and instead they burned it in
a stove made from a metal tin.
(To keep the germs under control
They then washed hands in strong Dettol).

Grinning with the satisfaction
of knowing bowels have been in action,
Clive looked around this well-trod cleft
to find, one day, no paper left.
And, by now, you'll understand
why there was nothing second-hand.
This, plus the smell of underarm,
quite rapidly caused much alarm.
"It's been a while, oh dear gosh,
I've been four weeks without a wash."
How did he clean his dirty arse?
By rolling naked in the grass...

In ninety six, a fine laptop
was obtained - but how to stop
Alva's great inventive brain
from writing a computer game
and using all the solar power
flattening batteries hour by hour?
By talking of philosophy,
unleashing days of sophistry...
Although this made them quite irate
at least they saw the cave rotate!

It's very tricky to believe
the next contraption to receive
their attention one year later
a super sonic bat detector.
"No more digs in scruffy holes -
that's for goat-men and for trolls.
We'll lie around and drink vodski
and then at night you all will see
the caves we find, too big for man."
This really was a cunning plan.
The bats, alas, but such is fate
just would not co-operate.
The cavers though they couldn't lose,
for they got drunk on all the booze.



Now For Something
Completely Different...

Fresher recruitment poster

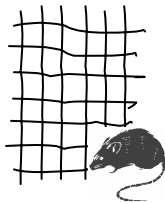
Now, of course, with all this drinking
they were certain to start thinking
"There must, there must, just be a way
to make it simpler to survey."
And so it was that Shed did glean
of a helmet-mounted-laser-beam.
No more compass, tape and clino,
one quick ZAP and hey, presto!!
But once again there was a snag
The helmet had a large price tag
And up on Mig they weren't assured
that the helmet was insured.



Underground communication
led to much deliberation
thus with great enthusiasm
they put a wire down the chasm
and carried down a radio
to Exhibition Road you know.
All in all a fine conception
despite a lack of clear reception

Another year they did decide
to put an end to stones that slide
at sonic speeds, quite obscene,
down the top of M16.
Some chicken wire was acquired
and then some action was required
to put in place the new stone traps
and stop rocks falling on their caps.

"But Halt!" - the thinkers did expound,
"that means going underground!"
This led, you see, to much discourse
on how to use the new resource.
Without much fuss (and like a sage)
Dave built a giant mouse-proof cage
and sometime later by the fire
Ben made a handy deep-fat fryer.



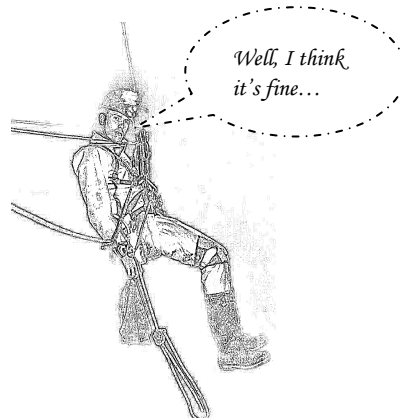
Not content with deep-fried cheese
Donuts and onion bhajis,
they used their intellectual might
to satisfy their appetite.
Clew' made fresh bread in the morn
and at night they munched popcorn
(if there was any left to scoff
a certain faction liked "Lid Off").

There were some errors too, of course
like chicken soup with chocolate sauce
and, for sure, far more dramatic
a Twix bar caked in battery acid!
Andy found a way to bake
gorgeous double-chocolate cake
And what went with this fine gâteau?
Ben brewed some wine - 'Chateau
Plateau.'

Ninety seven - at the Hotel
shivering, in darkness total,
it was too cold to get much sleep
(essential when you push down deep).
And so they thought, "Oh flipping heck
let's try and scrounge some Polatec."
This they did - they made warm clothes
and extra pits to aid repose.
So the camp became too warm
and lying in bed became the norm.
Slippers lined with trusty duck tape
made it harder to escape
the nasty, horrid, awful shock
of putting on your cold wet sock.

Now Gladiators was a pain,
you went on down then up again.
And so the cavers did converse
and planned a monster straight traverse
Down to Tolmin where some wires
were bought for a sum of Tolars
these, plus extras for the drill
and bolts and clamps went up the hill
then Mark (a doctored engineer)
went down Sys-Mig with all the gear.

He put in place a huge zip-line
declaring, "Well, I think it's fine,
but then again, perhaps it's best
to leave for someone else to test."
No-one really felt so brave
Till Huggy soloed out the cave.
He was, hurrah, in naive bliss
for the shop owner had said this -
"If it should break under the strain
you must, of course, return again."



In ninety nine, they were not bored
for they'd a camera to record
events up top and down below
and (in case you didn't know)
the cavers also ran the risk
of being taped on minidisc.
These efforts didn't come to much,
conceivably as life is such...
But opinions are divided
for recording coincided
with Jim's early disposition
to become a great musician
(his first "toot-toots" on the recorder
quickly led to mental trauma).

In June of the millennium
it chucked it down 'ad nauseam'
So they used their giant brains
to try to stop the monsoon rains.
First, a sun dance to the Gods
this led to hail - against all odds.
They then tried gastronomic art
to try to make the cavers fart
but generation of methane
soon proved, alas, to be in vain.
(Three days work to build an oven,
one bun later, it was trod on).

It was so tough just keeping warm
(as flames were doused by every storm)
that in order to stay drier
they then placed carbide on the fire...
An almighty detonation
Didn't change the situation
and so they dreamed (as things got dire)
of a dehumidifier...

Plans were drawn, page by page,
but they never reached the stage
where they were ready for defiance
of those trusty laws of science.
For while they thought, they drank rumski
(double rum and herbal tea)
and so, you see, they did forget
that all their clothes were soaking wet.
and thus (when truly, deeply pissed)
declared "the sun does not exist."

Now those with a mere arts degree
might say, "just learn from history
- you're better off to bolt by hand
leave power tools in dear England.
Underground they often fail
you carry them to no avail.
Drills like the mighty 'El Chorro'
will only ever cause you sorrow.
and there's far more satisfaction
using your own hammer action."
Now yes, perhaps all this is true
and 'wrist-action' is best for you
but why miss out on the great thrill
of stirring sauce with petrol drill?



Now years ago an old platform
was used to help Jim to perform
a dodgy climb up the cave wall
alas it hardly helped at all...
But know I'm told that coming soon
they're planning an aven balloon
No crazy bolting up the hole
it'll all be done remote control.

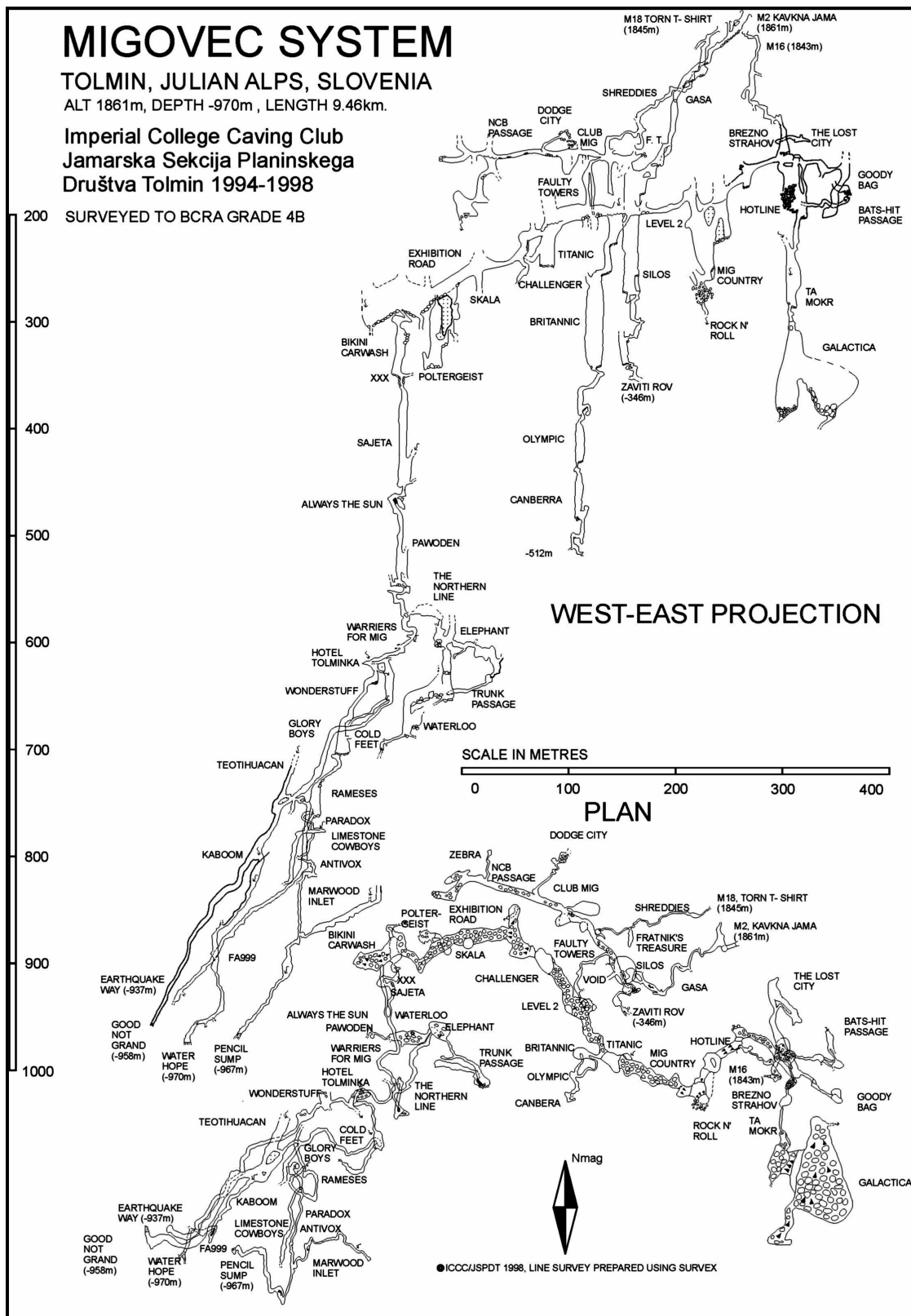
So if on top of Migovec,
underneath an old rock bridge,
in a depression you should see
those potholers from I C 3,
don't think that they're just lazing round,
delaying going underground.
To go where no-one's gone before
They must invent not just explore...

James Hooper

"Arriving in thick mist around lunchtime, the ascent had taken its toll. The bivvy had a ghostly feel to it, but still it felt like a sort of homecoming. Soon the fire was on the go, and some bread was freshly made by the time the missing inhabitants of this rocky moonscape appeared out of the gloom. The sun broke through, and I sat on the grass up top, and watched and greeted and surprised all the people I had given my ultimate trust to over the past number of years."

Iain McKenna (arriving at the bivvy days after having plaster removed from a broken leg)

System Migovec Survey 1999



2000

“The Year of the Rain”

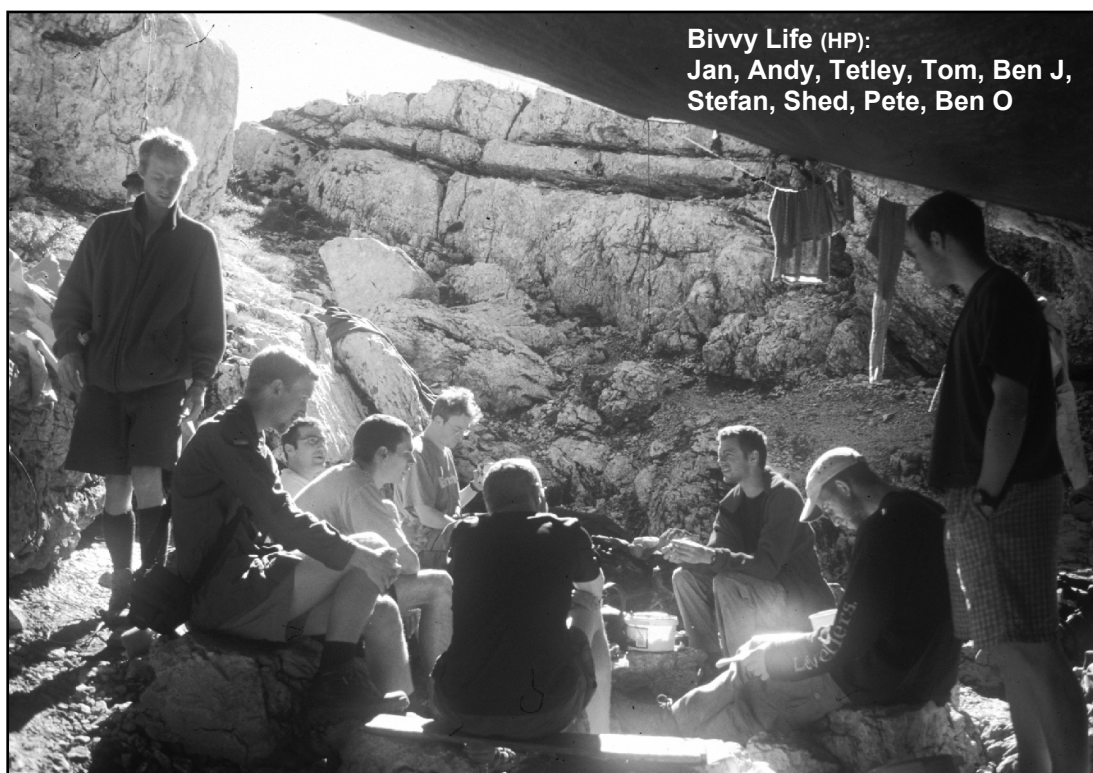
The format of the millennial expedition was pretty much the same as previous years but with several major changes. The main difference arose due to problems with hiring an Imperial College Union van. The majority of the team thus had to fly out (at some expense), while the equipment was slowly transported for the 999.9 miles from South Ken to Tolmin in Martin M^cGowan's Land Rover. In total, twenty people were on the mountain for between 2 and 6 weeks, with experience ranging, as usual, from first-year students to seasoned expedition cavers. Those cavers there at the start (having arrived by plane, train, or automobile), eventually met up in the Paradiso Bar in Tolmin - this wasn't the planned meeting point, it's just that everyone knew that the others would be there! News and stories were exchanged with JSPDT cavers and the best Slovenian beer (Laško) was drunk in its usual quantities.

This year there was a surfeit of new caves, rather than a surfeit of leads in the main system. To assist with all the pushing and surface work (and as transport space was at more of a premium), a greater amount of food was purchased locally, cured meats and bread proving particularly popular. A 'Little Dragon' (device to chemically heat the air breathed by a casualty) was bought for use in case of a rescue.

The first few days involved the usual setting up of the bivvy - rain-soaked carries of caving and camping equipment up the 1000m climb to the Plateau. We were soon pleased to see our water supply, electricity supply, tents, toilet, stove and (damp) stock of fire wood (lightning struck dwarf pine) all ready for another six weeks on Migovec.

What we didn't know as we slogged up in the drizzle was that the rain wouldn't really stop for the next five and a half weeks. We also didn't know, of course, of the huge, significant discoveries that were to be made despite the adverse conditions...

Ben Ogborne and James Hooper



Primadona: Another big piece of the puzzle

During the year before the 2000 expedition, JSPDT cavers began exploring a cave known as Primadona. The name is an elegant joke in the local Tolminski dialect of Slovene, being a pun on 'Pri Madoni' (near the Lady Madonna, a religious shrine near the entrance on the path to Krn) and the Italian 'Prima Donna' (first lady). The large entrance lies about 100m down the cliff on the west side of the plateau. How close was this new cave to the main system? Could another connection, providing easier access to the end of Exhibition Road, be on the cards? An early priority of the 2000 expedition was thus to tie the entrance into the surface survey and to survey the cave (the Slovenes hadn't yet begun this). Seven days into the expedition, Jan ventured into Migovec's newest cave (see inset).

Over the following few weeks of the expedition, Jan and Tetley set out to find a way to the entrance from the plateau, avoiding the frightening Slovene route (via the Shepard's Huts and up from the path towards Krn). After hours of treacherous climbing and scrambling on the steep cliff, (and discovering yet another promising cave entrance, U-Bend cave) they realised that the best option would be to rig a rope down from the edge of the plateau. This abseil, though not long, is very spacious, and exposed. A "standard" pitch underground becomes quite frightening when you can look down 1.4km into the Tolminka valley below.

The new route allowed the cave to be easily tied in to the surface survey and Jan, Tom and Tetley undertook several more survey trips in the cave. It was strange exiting from the cave in the middle of the night and to then be faced with more prussiking under the stars.

We eventually found that the cave was not heading towards the main system, and exciting finds elsewhere led to the decision to leave the exploration of Primadona to JSPDT. (The Slovenes had by now finished refurbishing one of the Shepherd's huts and were keen to use this as a base to continue year-round exploration of the cave).

James Hooper and Ben Ogborne

First impressions of Primadona

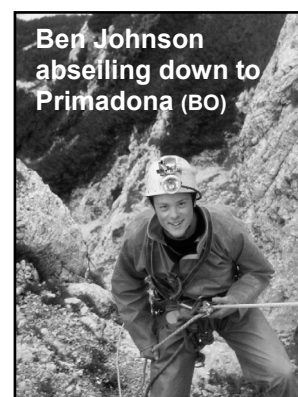
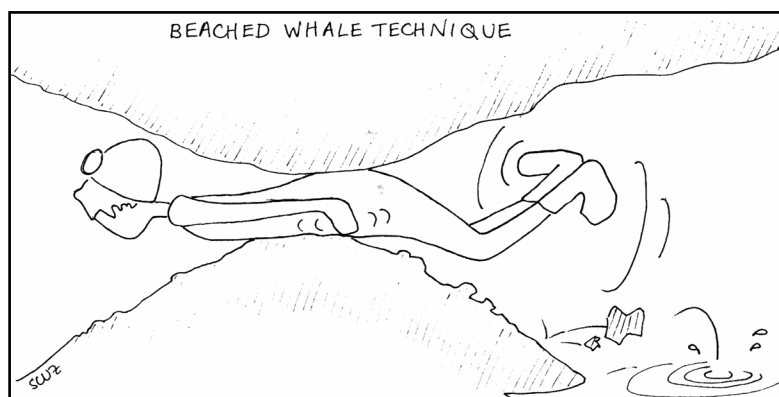
Jan, Tomaž, Tadej, Nickolai, Small bloke with girlfriend (Samo Cuder)

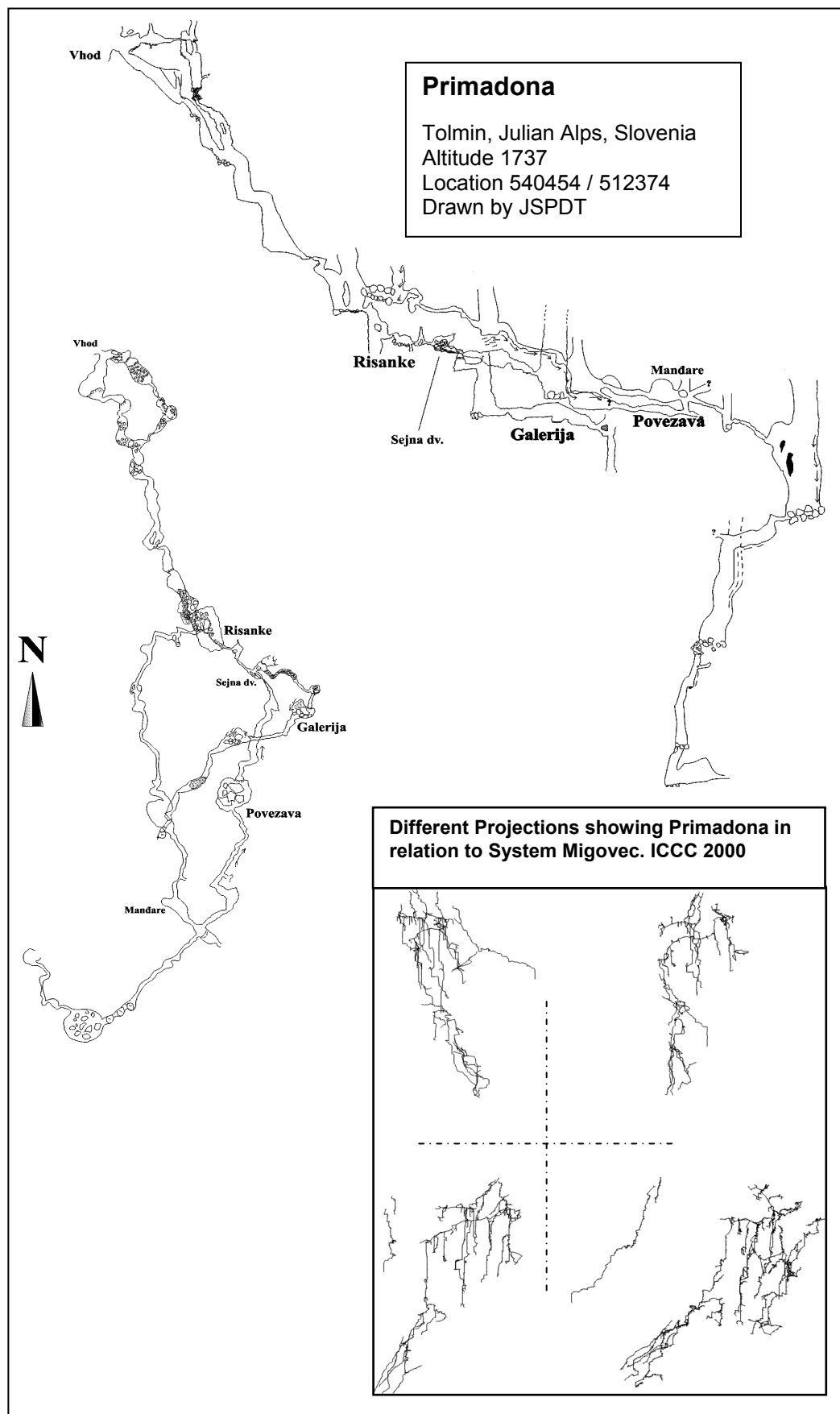
Primadona was an experience! 9:30pm - 10:30am. An evil combination of M16 and Torn-I except more loose boulders, dodgy rigging, evil tight sharp bits, big pitches and free climbs. The most dangerous part was getting to the entrance! 200m up a steep gully, a climb up two small cliffs and a traverse across a dodgy scree slope at the top.

An interesting cave, heading southeast from level with M17 and M19. It drops quickly to -150m (8 pitches) followed by rifts and climbs, more pitches and 'TTT' big pitch. I reached a depth of -250m, 4 hrs with tacklesbags. The others carried on to explore. Tomaž and I surveyed out. Gave up at 8am. I had severe diarrhoea at 5am (case of, get entire caving kit off in 10 secs. else buy a new one). May have been due to Tadej's spicy bean curry. Got out at 10:30am. Slid down gully on my arse, causing minor avalanche, I was unable to walk though.

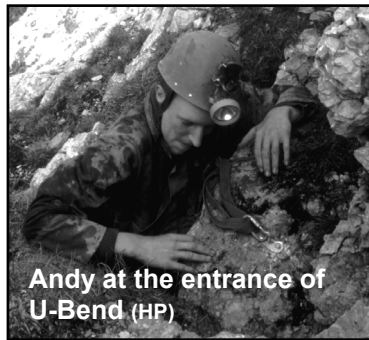
[Tadej is into promoting Mig and gave an interview on his mobile from Shepherd's huts to local radio about our trip!]

Jan Evetts (logbook 3-7-02)

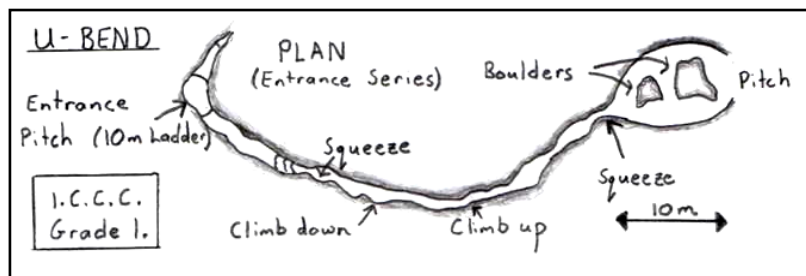


Primadona Survey 2000

U-Bend 571 (Location 540457/512375, Height 1795)

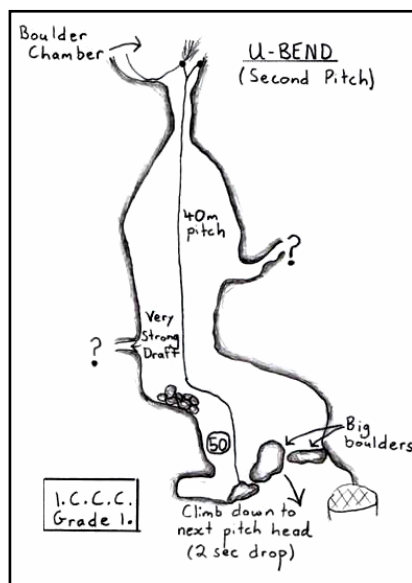


The entrance to this cave, reached by a very dodgy scramble down the cliff on the west of the plateau, was found by Tetley while looking for a way down to the entrance of Primadona. It was named U-bend as the location of the entrance lay below the U in "Club" on the drawn Migovec survey. A short ladder climb led to a slightly draughting rift with several squeezes that were eliminated "mindless vandalism style" by Clewin, Tom and a 5lb lump hammer. They turned round, due to light failure, at a constriction through which a stone was heard to rattle for quite a distance.



Beyond this squeeze, Hilary hammered her way to a chamber and the head of a pitch with a 2½ second stone rattle. In her words, "Unfortunately, as I hadn't expected to bolt, I had no kit and had to go out at this point. I would normally have gone to get the stuff and gone back down the cave to find millions of metres of pitches, but fortunately I had been talking to Hugh the day before and he taught me that it wasn't allowed to go caving twice in one day. Also, I had catastrophic light failure from having burnt my carbide tube while negotiating the squeeze, leaving me with only two batteries, two bulbs, a Maglite and two candles on top of my normal Oldham electric backup. T.B.C..."

Two days later, Hills relates her return trip with Martin Pattenden: "Initially thwarted by a total route finding incompetence on behalf of a nameless team member, we took quite a while finding first the cave and then the way through the rift. But no disaster, no matter how embarrassing, is permanent... An unstoppable team of one leftie and one normal person, we whacked one bolt in each dodgy wall before Martin went down the 50m rope to find a beautiful pitch. Stones fall for three seconds down the next pitch, still going!!"

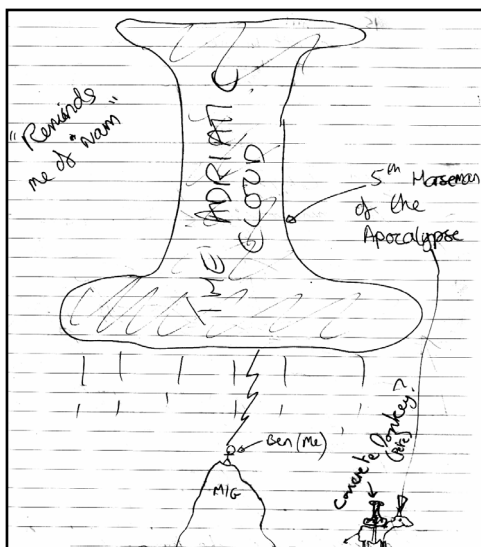


Near the end of the expedition, Jan and Andy descended this pitch (using a 30m rope) to find no obvious way on at the bottom. The spiky, strongly draughting rift off the big (40m) pitch was not pushed though it was thought to be easily pushable with a hammer and no SRT kit. This could be a link to Primadona, (and possibly, via horizontal passage to the main system - the mountain's hollow after all!).

James Hooper
and Ben Ogborne



And the rain came down...



Unusually this year, the expedition was extremely wet. It's normally difficult to get enough drinking water from rain, this year the barrels were overflowing, with no need for melting snow. The diabolical conditions led to a considerable number of landslides on the road to Ravne (where the Land Rover proved its worth). 'Up top,' however, things turned rather grim as demonstrated by the following entries in the logbook written during thunderstorms and while freezing in the bivvy:

Tom Ayles after we discovered that there were heat waves in the Mediterranean:

"This clearly proves the pleasure-pain principle: those who take siestas get sun, we get pissed on..."

Ben Ogborne with a typical logbook entry:

"Today it rained..."

Pete Jurd after too long on Migovec:

"Ugargugardgrudurgdrur. Ug Ugoolgoog... My lighter has just been slated and usurped. I feel for it, but life goes on... It makes a change from the eternal thoughts of cold and rain..."

Ben Ogborne again:

"Woke up and it was raining. In the hope of summoning an ironic sun god, I put on everything I owned. Within a minute it was not raining but snowing (only over us - the rest of the world was blue). I don't know how much longer I can take this... I'm going to the shit pit, I may be some time..."

Ben Johnson leaves his last will and testament:

"Should I survive the rain (unlikely).... I would like to leave everything to my imaginary friend George... My personal fortune (currently 2 Tolars) should be put in a trust fund to research the possibility of a Mig sized dehumidifier... Ah, my lizard is eating its way through my shoe..."

Ben O. continues:

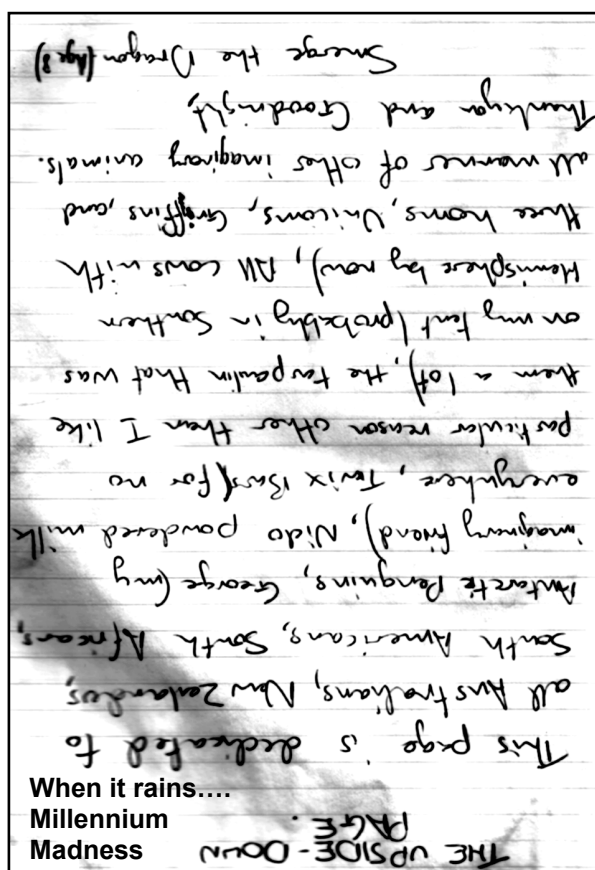
"Today Mig produced another nice feature - Wind. No sleep last night due to being vacuum packed in my tent's inner sheet. One of the drizzle shield's tarps has also left us for fresh pastures, somewhere near Skribina."

Things get ever more desperate:

"Winner of 1st international urine hurling competition: Tetley (0.5m)."

And finally, some positive thoughts:

"I like rain, I like being cold, I hate sun, TWP is my special friend, cancel my subscription to the fifth apocalypse."



Obelix: More leads off Level 2

Clewin and I wandered down the M16 entrance series, in a typically incompetent first trip manner, and pressed on to Exhibition Road, an area deemed to be unsafe due to Colm's B.O.S. (Bag of Shite), deposited the day before. We arrived at Skala to find the pitch rigged (from halfway down...) and approached the constricted crawl, Dogmatix, with a flurry of, *"I hate cave like this,"* and, *"You've got to respect 'em (Shaggy and Henry - Ed.) for pushing it but at the same time they should be shot,"* etc.

The pitch head of Asterix is without doubt the nastiest bit of cave I've encountered in Mig (though I'm going down Torn-T with Tetley tomorrow so...). It thoroughly deserves some bang. We found the Obelix pitch head rigged with an entirely pointless bolt (courtesy of Colm) so we re-rigged with a natural. I rigged down, somehow finding all of Jan's bolts from last year, getting soaked and freezing my tits off (a theme of the expedition).

Once down, we found two undescended pitches. Choosing the smaller of them, we bolted down to find clean washed chambers (with some mud formations). Three rifts led off: one too small; one could be hammered but showed no signs of opening or closing; and the last is a wet and sharp pseudo-rift dropping off fairly quickly. This wasn't pushed - it'll require some traverse and pitch rigging.

We surveyed out (52m, 14 legs) and started to leave. Two hours and a noodle stop saw us at Exhibition Road, another 3½ hours (completely shagged after Obelix/Asterix) to the bivvy, overall 15½ hours.

Tom Ayles (logbook 2000)

Postscript:

Martin and Jan later derigged Obelix, Asterix etc. Tom's lead went down to a rift which ended in a nice flowstone pool with no way on. The other pitch was undescended as Jan lost the driver and remains unexplored to this day.

Ode to a Bivvy Morn-ter-noon

*In the bivvy, it's one p.m.
I've been fester-ing since ten,
I've patched my kit,
I've had a shit,
And now I think, I'll start again.*

Anon



Jan near Asterix (JE)

Logbook Extracts 2000

"He's not good for much, but he's good for blowing." - Shed (about Tetley)

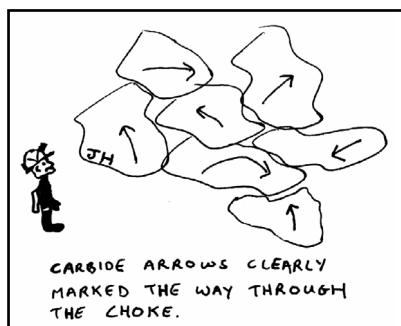
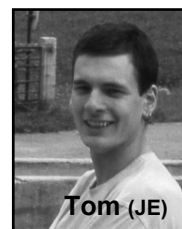
"I'm going to die of some horrific sausage injury." - Ben O

"I used to do things with dormice." - Ben 'A total misquote as usual' Ogborne

"It's not my belly that's stuck" - Hugh

A Return to Rock and Roll: "Worse than you can possibly imagine"

Mystery, intrigue and occasional foolhardiness go hand in hand with exploration and discovery. In the long months between expeditions, the mind wanders and obsessions develop and grow. And so it was that I become fixated on the destination of water in the east of Sys-Mig. When it rains, and surely during the spring melt, water surges down Titanic, the bottom of Mig Country and Ta Moka, before disappearing into the depths. "Where does it go?" I asked myself again and again. The only way to find out was to return to Rock and Roll, abandoned in 1996 after a series of accidents.



Shouting "Rock and Roll," Tom and I descended beneath the Gladiator's rock bridge to the window onto Mig Country. A short drop brought us to the start of the boulder choke. I had forgotten how loose and unstable this was - carbide arrows no longer pointed the best way though the moving blocks. Tom went ahead, slowly, slowly, trying not to touch anything...

Several pitches below the main choke, the sound of water was heard. Tom rigged down between two waterfalls to the previous limit of exploration.

"Tom, Tom," I shouted over the rumble of the cascades, "Does it go?"

"It's worse than you can possibly imagine," came the loud reply.

Worse than you can possibly imagine. After ten years of caving, I thought there couldn't be many more types of squalor, misery, danger and depravity left for me to experience. A wet bedding plane crawl? A possible route beneath hanging death? I switched my electric on (my carbide was sure to go out in the water) and abseiled down to join him. The stream disappeared down a two inch wide hole.



"Where's the lead then?"

"It's over there," replied Tom, pointing at a dry, one-foot wide vertical slot.

"What's the catch? It doesn't look too bad."

"Well," said Tom grinning, "Have a look."

"Arrh, for Evans' Sake." The slot was easily passable. All I had to do was squeeze down between four year old splodges of Jim's shit. Shit, it was worse than I could have possibly imagined. For Queen, country and ICC, I lowered myself down until my nose and eyes were millimetres from the largest lump of turd. Crawling around one of them was a centimetre long, albino insect. "Christ, Jim!" I lost the presence of mind to collect this possibly new species and continued down. Fortunately the smell had gone but I was still conscious of further excrement smearing itself down my oversuit. Still, perhaps this was the way on to that elusive missing streamway? No, a dead end. Damn.

Looking up a vertical, shit-covered slot knowing there's only one way out is the sort of experience that makes me reconsider the way I live my life...

A second slot was hammered and quickly broke through into a small series of interesting free climbs. Excitement quickly rose and then just as rapidly fell as these soon terminated with no ways on. Toilet Humour, the name of our finds, can be safely left forever. The mystery of the water and the memory of Jim's shit remain to haunt me.

James Hooper

Paradiso Series continues: Bolting Gloworm (in M16)

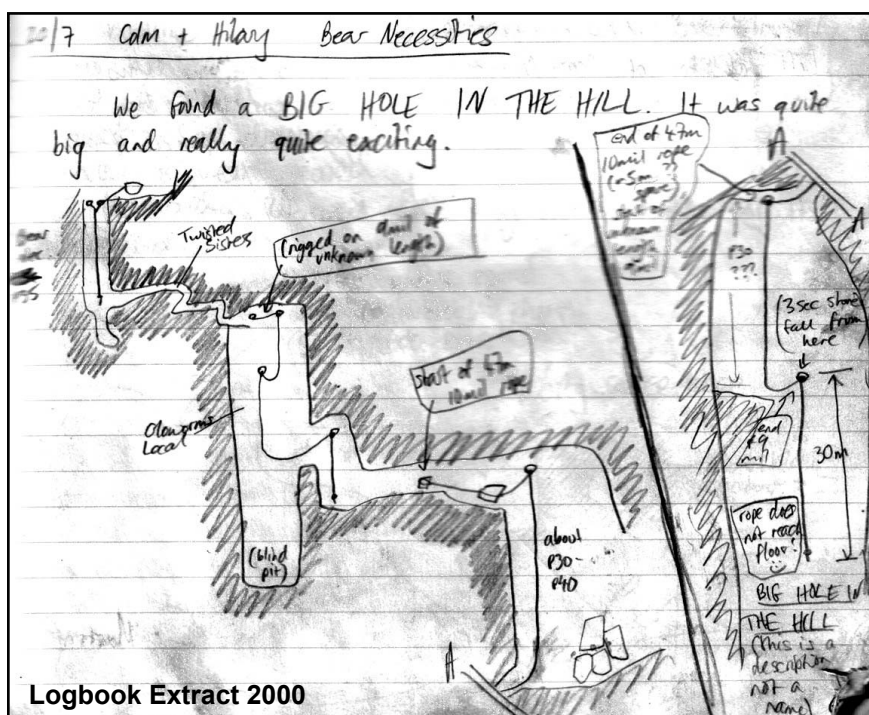
After frustrating amounts of 'faff' in the bivvy, I set off down M16 for Bear Necessities. I was equipped with two furies (many thanks to dossing brother) and many dangling bits of kit, tape measure, gloves, more gloves etc. The plan: to discover and survey. After a short time we met the first hurdle - Gladiator's traverse. I had never seen so many bits of rope on one pitch, ever! After several minutes, I managed to clip into the pulley and pulled myself out over the abyss. It is well known that I am not the greatest fan of traverses or big pitches so Titanic and Paradiso would have to be included in my all time 'horror cave'. Putting on my most macho grin I negotiated both with the minimum of effort or pain (mostly due to the much appreciated effect of gravity). Next was Purgatory, and then the real work began. We surveyed Bear Necessities (36m on very thin rope) to the start of the 'Twisted Sisters' rift section. By turning my head 180° and kneeing myself in the ear, surveying could continue. It was far too much like hard work so we said 'Bollocks' to it and went to explore. After crawling, squeezing and climbing we got to the pitch head that had been discovered on the previous trip. Out came the bolting kit and Hilary started on the first bolt. The rock crumbled so she started again. The rock crumbled again so she started again. The rock crumbled again so she started again...

A long time later, the first bolt was in and it was my turn. This was my second bolt ever and I was hanging over a bottomless pitch. Hilary was huddled in a survival bag, her carbide on knees. The orange light diffused around the walls of the cave as she crouched like some huge glow-worm. "It's a Friday night for God's sake!" we commented "we should be down the local pub." After more crumbling rock, the bolt was in and Hilary went down, put in a re-belay and returned. It was my turn to descend into the abyss. Forty metres down, I was still five metres from the bottom and out of rope. I could see the bottom. It was made of rock. So, quite predictably, were the walls. Surely I could have got the same effect on the entrance series? Off to one side there appeared to be a rift leading off and I could hear water falling from a height... I climbed back up.

We were tired but surveyed the rift, a process of several hours. Then up the big, wet pitches. At the top, I climbed into the survival bag and curled up.

Approximately 1,749,212,476 shivers later, I finally heard the dulcet tones of Hilary singing her way up the last pitch. The cold induced hallucinations faded as we struck out for the surface. Food and sleep awaited. I was quite knackered!

Pete Jurd



"Welcome to page... DOH! Well unfortunately someone cut it out with a hacksaw. So welcome to 'the page with no number that was cut by a hacksaw wielding, Nazi, Leftwing, Bolshevik, Trotskyite, and most of all very, very, very, very, very, very, bored GIT.' Thankyou" - Jan

Last one out, Switch off the Light: Hole in the Hill

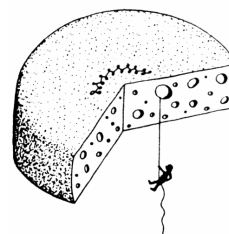
*"Gloworm's Local
is GOING, it's
GOING, it's
GOING..."*

*It's BIG, it's
EXCITING, it's
GOING. Someone
GO THERE."*

Hilary Greaves

Three weeks into the expedition, I followed Tetley down the now-familiar entrance series. For at least the fifth time - they all blur into one - I marvelled at the black-space-to-rock ratio in this incredible mountain. This place was made of holes, to the point where you started to suspect divine intervention as the most plausible account of how the mountain stayed up. My own initiation into expedition caving had been in the Picos de Europa with OUCC the previous summer, and I couldn't help drawing comparisons. In many respects, the format of the expeditions are similar - slogging up and down the mountain, sometimes in groups, sometimes alone, taking in the spectacular scenery, carrying caving gear, food, carbide and setting up camp at the top of the hill, close to the caves. But the black space had no Picos analogue.

In the Picos, the answer to "there's an undescended pitch" was self-evidently "let's drop it". Here, that would be a bit like following the left-hand-wall of a maze - systematic, but arbitrary. I'd readjusted my intuitions so that they no longer balked at passing myriad wide-open leads on the way to my almost equally arbitrary destination, but still I marvelled. Swiss cheese, eat your heart out, I thought, and still you won't be close...

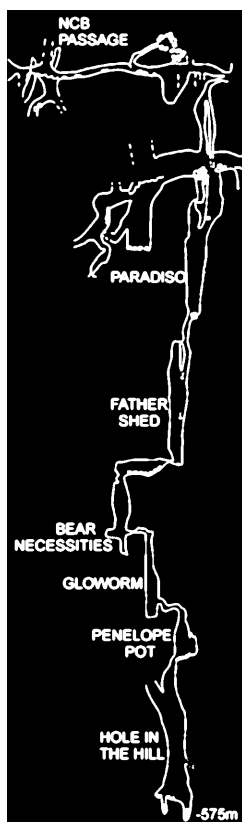


Soon we arrived at the current limit, found by Colm and myself and dubbed "The Hole in The Hill," pending inspiration for a decent name (always a mistake!). We'd left a half-rigged shaft, about fifteen metres in diameter, with a three-second stone fall from a ledge 20m down. The previous trip had ended in my favourite way - Out Of Rope. Tetley went down to carry on the rigging; I climbed once more into the orange survival bag, now perforated with carbide holes. Some unknown length of time later, he reappeared and we swapped roles. I rigged another rebelay or two and dropped to the floor. I was in a chamber, about 25m across. A rift leading off a few metres from where I stood was far too tight; a couple of boulder chokes looked just possible. My heart started to provisionally sink, but in any case there was enough here to occupy two people. "Rope free!"

Figuring it would be a bad idea for us both to get simultaneously stuck in different improbable boulder chokes 600m underground, Tetley took stock of the chamber, scouring the walls while I investigated the choke down on the left. After some twenty minutes I concluded there was no way on without digging, not enough draught to motivate digging, and we staked our hopes on another small lead Tetley had found on the opposite side of the chamber. It looked even more desperate than mine initially had, but needs must... Tetley inserted himself into the small horizontal space between boulders and started moving rocks; there wasn't space for me to be any use, and I had to content myself with waiting. It didn't sound like fun. Some time later he had cleared enough space to wriggle forward some more, round a corner, but the 'lead' was degenerating. Soon Tetley pronounced it dead and somehow extricated himself.

We surveyed the chamber and started back up the pitch. Twenty metres up, Tetley spotted a window in the near wall; still holding out some hope, I swung across to check it out. I scrabbled up a sand bank, wedged myself in a rift and belayed to a chock-stone. The rift was quite tight. I passed a downhill squeeze, slightly apprehensive about the return. Another squeeze followed. I shouted to Tetley to come back down and join me; I was going to be a while, and with a rescuer to help me back through the first squeeze, I'd have more confidence to push on further. Tetley started putting in a bolt on his side of the first squeeze (to hang a footloop to aid my return) and I went through the second squeeze, not as bad as the first.

The rift was hard going though. "It's looking fairly desperate," commented Tetley - a couple of times - after I'd spent a while failing to progress. In any case there wasn't much draught. My brain agreed, but some non-brain part of me was too stubborn to give up *quite* yet.



I threw a sling around a chock-stone, intending to pull up on it to gain the widest part of rift ahead, which wasn't very wide. Clatter. Silence. "I can't believe I did that." Tetley was staring down into the impenetrable rift beneath his feet, which now housed our only bolt kit. "I can't believe you didn't have it clipped to you," I joined in unnecessarily. Perhaps this was a good time to start conceding defeat. I made my way back and grinned nervously through the squeeze. We pioneered a surprisingly effective elbow-hook combined-tactic technique - by hooking arms at the elbows and bending and flexing them ever so slightly from their 90 degree positions, I gained enough upward assist to compensate for the total lack of footholds, and passed up through the squeeze with relative ease. Phew.

So that was that. We quickly returned to the base of the shaft just to double-check that the bolt kit was utterly unreachable (it was). Tetley headed up the shaft for the last time, and I stood on a rock. Most exploration cavers rave about the feeling of setting the first foot into a newly discovered passage, shining light where light has never shone before, laying the first eyes on passages that have lain undisturbed for millennia.... For my part, I find the feeling of being *last* still more special. Of course I couldn't be *certain* that no-one would ever stand here again, but it seemed pretty likely - a relatively insignificant side-series reaching down to a mere -600m in a system whose main route dropped to -970m - and in a way, the uncertainty itself made the feeling still more strange. It was 3 a.m. I stood on another rock, committing its outline and the orientation of my feet to memory for no particular reason, and we headed out to another beautiful Migovec morning.

Hilary Greaves

Bivi Life (written on a wet day on Mig)



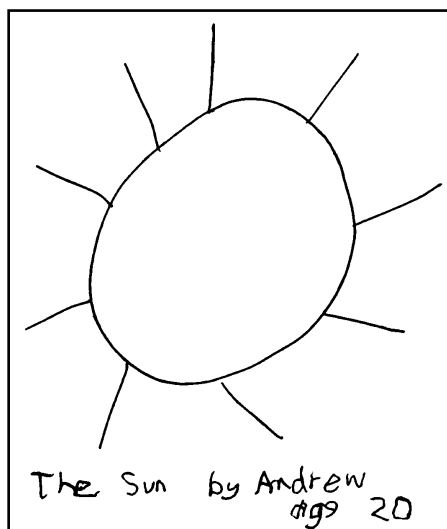
I am rudely awakened by the sound of hail on my tent
Sometimes it's just raining heavily
I really need a shit but instead...
I go down to the bivvy
for some deep fried stuff
I eat this with cheese and lime pickle too

ALL THE CAVERS, THOSE STUPID CAVERS...
THEY ALL GO HAND IN HAND,
NO-ONES GOING UNDERGROUND, BIVI LIFE

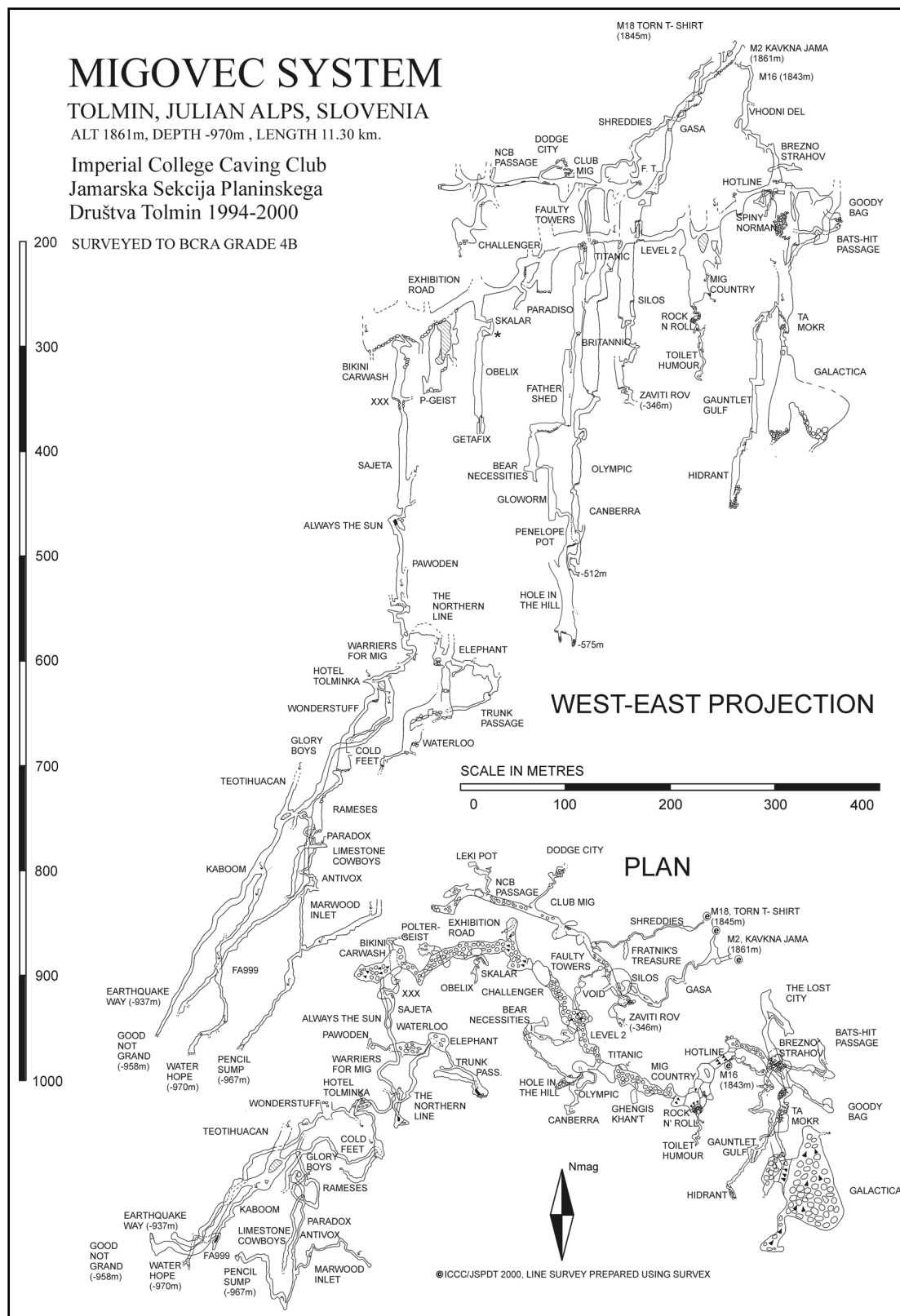
My tent is tearing but not too badly
While others are just floating away
I go down to the bivvy for a bit of conversation
and to catch up on my lard life
The shakeholes are filling up.... with rain (CHORUS)

Thinking of going down Gardeners' World
Where it appears there's a very big pitch
We threw some stones down, it was very good fun
But I prefer killing mice in the bivvy
Or fishing for pond life in my tent (CHORUS x2)

(Logbook 2000)



Imperial College Caving Club
Jamarska Sekcija Planinskega
Društva Tolmin 1994-2000



A New Beginning: Early Adventures down Gardeners' World



I was fresh on the mountain; a novice to expeditions and exploration. My one experience so far had been a pushing trip in the main system that had scared me silly and left me with a rational fear of big pitches, 9mm rope, harness rub and the cold. The antidote (or was that excuse?): surface exploration with Ben. The weather was fine and sunny, not a cloud in the sky. We set off over the plateau...

Two years previously, Jackie had shown Ben the entrance to a potential cave down the side of the plateau to the North East. This lead had been playing on his mind ever since. When we got there, the large, inviting entrance led down to a very small, uninviting tube in the right hand wall of a chamber. Following a slight draught, Ben inched his way through the tight, oesophagus-like tube to a small, body-sized chamber. "There's a pitch... Come on through." With rock pressing against all possible parts of my body, it took a while to follow him through the long, horizontal squeeze, named Oh-so-fag-arse ('oesophagus' being too difficult to spell reliably).

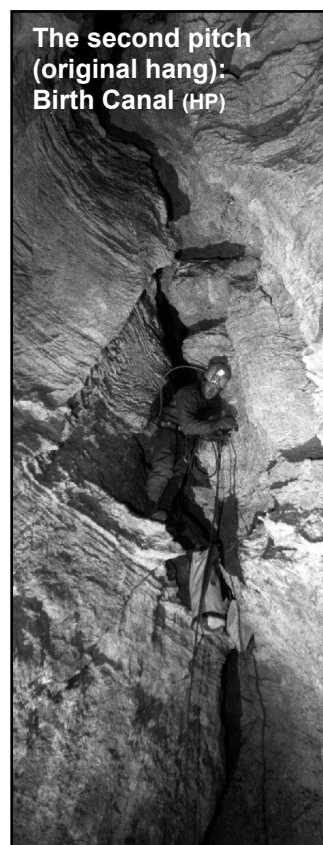
Ben placed a bolt that we backed up on a poorly positioned nodule. This was the kind of caving that I had been searching for - tight and exciting but never more than half an hour from a brew at the bivvy. With trepidation, I descended the small pitch. The rift led up and down, a breakthrough to another tight pitch head! I had never placed a bolt before but was eager to learn. It was slow; the chip, chip, chip at the hard limestone. Surely that small piece of metal could not hold all my weight? A tentative descent down 'Birth Canal' preceded the ultimate thrill. Four metres of rope had allowed me to emulate Neil Armstrong. I was the first man in a new place! We surveyed out and returned to the bivvy with the good news....



Wow! Genuine exploration! Ben had found this 'cave' in 1998 and knew it ended in a tight tube which, after about 15 metres, led to the top of a pitch. We returned to bolt it. Down we went and found another pitch which I bolted and descended into VIRGIN PASSAGE! It gets bigger but we needed more rope to continue. My hands are cut to shreds but we must return...

Pete Jurd (Logbook 2000)

Like saliva glands at the bivvy when it's discovered that a watermelon has been carried up the hill, my appetite for exploration had been whetted. The following day, as Ben had other plans, I persuaded Stefan to join me to push the exciting new lead. The next pitch had loads of really loose boulders at the top and so we named it Gardeners' World - this eventually became the name for the whole cave as Ben's Crap Lead, the cave's initial name, was soon to prove inappropriate. Two obvious holes quickly presented themselves and we named them Laurel and Hardy due to their contrasting dimensions.



**The second pitch
(original hang):
Birth Canal (HP)**

Hardy, a large gaping drop to the left was the clear continuation of the passage. Laurel was a much tighter pitch head within a small alcove to the right. Which one to push? A decision needed to be made...

At the time, Hardy, the fatter, 'obvious' lead seemed scary and large. Neither Stefan nor I had much bolting experience and the bottom was not in sight. In fact, I feared big pitches and had entirely irrational visions of the rope breaking. With thoughts of self preservation, I turned to Laurel. This thin pitch could, I felt, be easily bolted in relative safety. Looking down, a pool of water could be seen, the bottom I thought to myself.... Anyway, we assumed (incorrectly as it turned out) that both pitches would soon join up and I felt that this route would provide a more psychologically reassuring route down the cave. I started to insert the first bolt, and then disaster struck... (see following article).

In the excitement of the following few days, I almost, but not quite, forgot about the open pitch just waiting to be bolted to what was sure to be several hundred metres of storming horizontal passageway. I was careful not to play it up too much. I didn't want too much excitement to build, causing others to push the lead without me. After some sleep, I persuaded Helen to follow me back down to the pitch. She had done very little pushing and so accepted my wisdom of going down Laurel without question. We hammered in the remaining bolt-and-a-half and I descended slowly down.

This was the first pitch where I could genuinely say that I 'descended into the unknown' as the bottom was way out of sight. All the other pitches within the cave had been short and open enough to see the bottom from the top. As I squeezed through the top of the pitch I realised that it opened up beneath me into something horribly scary. The pool of water was no more than a small ledge. I dismounted on this ledge, feeling very much alone, and considered the problem while the adrenaline diffused away from my vital organs. The options:

- (a) Return back, leave the pitch unconquered and seek more experienced advice.
- (b) Overcome my fear of large holes and rig the pitch anyway to see what lay at the bottom.

After shouting up to Helen to get her to join me, we decided to attempt the second of the two options and fall back on the first if required. I dropped a few stones to determine the best place for a bolt and attempted to place a re-belay (this involved a heart-stopping lean over the drop and bolting at arms length). It was a classic problem - having taken my weight off the rope I was now scared of putting it back on. Precariously I tapped away like a timid woodpecker, swapping with Helen once in a while. Finally, I was able to descend again. It was a long, long way down, metres of rope passed through my hand as I inched down, hollering back up a running commentary about rock walls and blackness.



**Below the first ledge on
Laurel Pitch (HP)**

Eventually, the bottom came into view. And the next pitch. We rigged this one a little faster and finally made it to a large chamber floor. A look around revealed a large boulder which we were able to climb up on. A crack on the far side revealed a possible way on but further possibilities seemed limited. I hoped that this was not it. The consequences would have been a return to the massive pitches in the main system, something I did not want to contemplate. In desperation, we finally decided to climb under the massive, precariously balanced boulder. Thankfully, a scramble led to a further short pitch. The cave continued. We surveyed the chamber (named Jelly Chamber due to the wobbly nature of the floor) and then headed out to the calm relief of the surface.

I was now fully bitten with the exploration bug. I had the so-called 'thirst to be first,' a hunger to reach the bottom of the next pitch. Exploration is truly an addictive drug that compels you to return for more and more...



Over the next few days, I enthusiastically tried to persuade other people to join me. You would have thought this would be easy, what with a going lead within an hours caving of the surface. However, with miserable weather, and other ongoing projects in the main system and on the surface, it proved harder than expected to convince people to change into wet caving kit and to trek through the rain across the plateau. Despite this, however, every day someone joined me to bolt one or two short, new pitches. The cave kept going, deeper into the mountain, as a rift, with a small stream, draught, and a succession of small drops. Though we called it 'The Urinal Series,' it really is much nicer than the name suggests and was certainly exhilarating when seen for the first time. Each night, round the fire, a few more legs were added to the survey and I prayed that the morrow would not bring a choke or fissure too thin to follow.

Finally, after several days of this, Gardeners' World went big and everything changed. There was no longer a problem getting people down to push and I stopped being on every trip that went down. In a couple of days the cave went four times deeper than it had been in the previous two weeks. 'Ben's Crap Lead' was clearly the find of the expedition, descending down into yet another section of the hollow mountain...

Pete Jurd

How to talk bivvy style-lee

- *Yo bitch r u dissing my pitch?*
- *Excuse me young man, I think you may be mistaking my newly found vertical shaft with a lavatory.*
- *Forget you, you muddy funster.*
- *Go away you nasty brute, I find you most aesthetically displeasing.*
- *This rocks*
- *Fuck me, this is loose*
- *Let's fuck the rope out*
- *Shall we de-rig this?*
- *Shiteroodals*
- *Look at the five second drop on that!!*
- *Bivi*
- *A shallow rock depression, covered partially by an extremely unstable bridge of rock, within which live for six weeks of the year a group of the smelliest and dirtiest cavers known to man.*

(Logbook 2000)

The Rescue - 16th July 2000 - "A Farewell to Legs"

The Fall

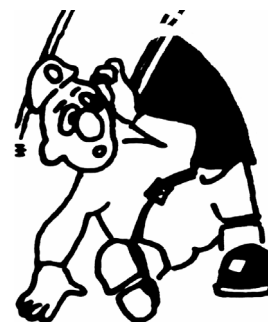


We were back in Gardeners' World to push the ongoing lead. Stefan and I descended a short, unstable pitch and found two larger pitches: Laurel and Hardy. I started to bolt Laurel, the thinner of the two pitch heads, and had almost finished when there was a horrendous crash behind me. I looked round just in time to see Stefan land with a crunch. "Below" he said, "Ah, I will be going out quite fast now. You will help me." He was unable to put any weight on one leg and felt it was broken. Off he went, needing very little help.

Back in the open, I struck off as fast as I could to get help from the bivvy. Stefan was kept warm with coats and bivvy-bags while Andrej and the rest of the Slovenians came up the hill with a stretcher. Between 12.30am and 6.30am, we all helped to carry him down, a major blister inducing experience. It was almost worth it though for the spectacular views of the moonlit valleys and the sunrise.

It transpired that, while I was bolting, Stefan had tried to climb up to an opening above the pitch. Both his hand-holds came away and he fell about 4 metres. Two very big boulders (large T.V. size) had fallen no more than 2 feet away from where I was sitting. The realisation of how close I had been to serious harm did not dawn on me for at least 24 hours.

Pete Jurd



The Rescue Mission

As it was my birthday, I thought it would be nice to have some food, get a good fire going and dream up some amusing ways to make vodka taste nice! Martin, Hugh and I had only just arrived in Slovenia and, in the late afternoon, we slogged up to the plateau for the first time. We put the tent up on something resembling flat ground and went for a wander, bumping into a few people here and there, collecting wood, or on their way back from some cave. The bivvy was the same as ever – shit everywhere but you knew where stuff was. I was just making a cup of tea when Pete walked down into the shakehole. "Happy Birthday Shed – oh yeah, Stefan's fallen and broken his leg!" Oh shit – I was never going to get pissed this evening!

Pete had just got back from Gardeners' World, having left Stefan by the cave entrance. We wasted no time. Helen (our trusty medical student), and was sent down to the cave entrance with medical supplies and warm clothing. Tetley and Martin, the most experienced cavers on the trip, were found and nominated as rescue coordinators.

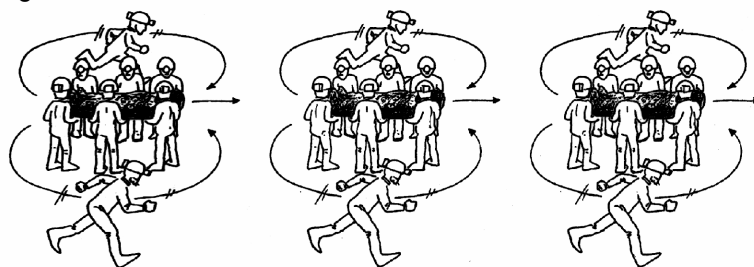
Fortunately, we quickly established that Stefan, now nicknamed "the Mashed Swede" was in a reasonable state. He was suffering from shock, and had broken his Tibia and Fibula, but was mentally alert – obviously very pissed off at what he had done. The outer from one of the tents was taken and used to provide Stefan with shelter. He was given painkillers and kept comfortable while we scurried to and fro. His boot and the lower part of his oversuit were cut off to take a look at the injury. It was going to be a long night. We used the mobile phone to chat to Andrej in Tolmin and come up with a plan. A group of JSPDT cavers would soon be joining us with a stretcher and we were going to carry Stefan down the mountain.

Tetley and Martin sat in the bivvy co-ordinating. "OK - Helen – keep Stefan company. Clewin start cooking – when the Slovenians arrive they will want something to eat – they are coming straight from work. Goaty lay some string down to the cave entrance to mark the way. Everyone else – sleep you are going to be up ALL night."

We had a couple of hours rest, waiting for the stretcher to arrive. All consumption of alcohol was banned (though I did have a little nip – it was my birthday after all). At about 12:20a.m., I was awoken by the cheery rabble of Andrej and his crew laughing in the bivvy. “OK, everyone up – into the bivvy for food and tea.” There was time for a quick cuppa and some hastily prepared curry flavoured slop before we set off.

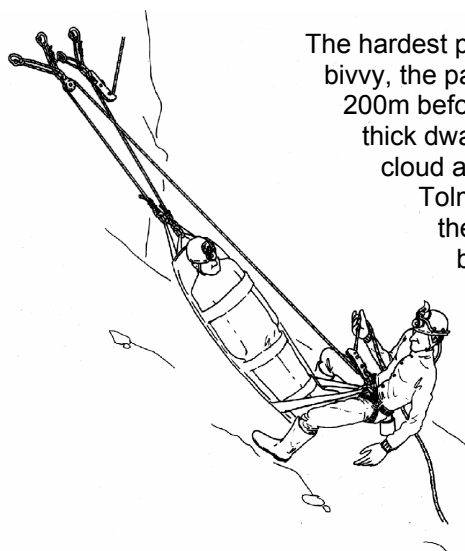
In true Mig style the mist was down. We were quite concerned that someone would wander off to find the cave entrance and not be seen again. Fortunately Goaty had ‘marked’ the way with string, throwing it across several large and very deep holes along the way. A rescue of the rescuers was somehow avoided.

Wearing head torches, sixteen of us wandered over in the eerie silence to find Stefan, Helen and Clewin. The tent was removed and Stefan was placed on the stretcher. The plan was for everyone to stand in two lines and pass the stretcher along. This way no one has to walk with it, having passed it on, we ran around (or more likely stumbled) to the front and did it again, and again...



That was the theory. In practice the terrain on the ‘plateau’ clearly demonstrated that it shouldn’t really be called a plateau. When there are steep boulder covered slopes, deep shake holes and the ground is anything but flat – carrying a stretcher became much harder. It took about 2 hours to get Stefan back to the bivvy – a journey that normally takes about 20 minutes. We hadn’t even started the hard bit yet!

We all stopped for a hot drink. Now that he was on his way down, Stefan seemed a little more relaxed and talked and joked from his stretcher. He (and indeed we) would have preferred a helicopter ride down the mountain but the visibility was a problem. At least this way had the personal touch and was going to be a damn sight more exciting.



The hardest part of the descent was going to follow. From the bivvy, the path to the valley descends a gentle slope for about 200m before a small ascent to the edge of the plateau through thick dwarf pines. From just below here we dropped out of the cloud and you could see the reflection of the moon in the Tolminka valley 1500 meters below. The path traverses the mountain, winding downwards along a narrow ledge blasted out during World War I. Parts of it are difficult when carrying just a rucksack – never mind an injured caver.

For the trickiest parts, a rope was rigged up and Stefan was lowered down. By this time everyone felt much better – all was going to plan. Andrej concerned himself with looking after Stefan; Hilary’s job was to look after the rescuers.

At 6am most of the Slovenians ran off since they had to get to work. We managed to get Stefan down to Ravne by 6:30. By this time the sun was up and we lay around in the grass getting some much deserved sleep. Well – not quite everyone – the epic journey needed to continue to the hospital....

Tim Wright

Nee Nar Nee Nar....

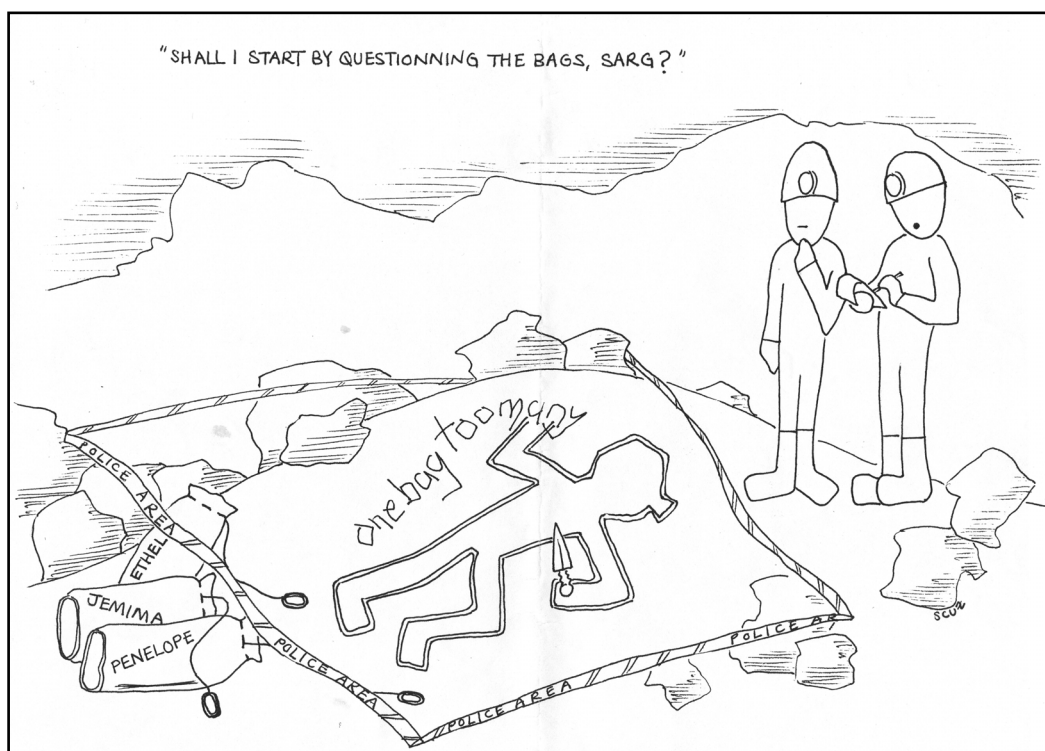
By the time we arrived with the stretcher at the ridge, several things were dawning on us all. Firstly, this was going to take a while, and secondly, someone was going to have to drive Stefan to hospital. Suddenly everyone was looking at me. I was thus delegated as ambulance driver. My mission profile was as follows: Go fast to Ravne, sleep until Stefan arrived, drive to Tolmin hospital and then on to the larger hospital in Nova Gorica. The only thing that I didn't like about this was the walk down the mountain at two in the morning - alone. As I sped off down the path, the grunts and other noises of the stretcher team were soon left behind. A very clear sky with a good moon helped my progress greatly; I didn't really need a torch for the first stages. From the ridge to the shepherds' huts, it was really very nice, and in other circumstances would have been quite enjoyable.

I wasn't looking forward to the next section - the woods. I skipped past the shepherds' huts and straight down into the trees - these are dark enough by day, but at this time of night, there was nothing apart from the light of my torch. As I walked (more of a fast sprint actually) down the path, the sounds of deer and other monsters kindly snapping twigs in the trees all helped to keep the pace up. Unfortunately, I have a very good sense of imagination, but I managed to escape from the pursuing pack of wolves and vampires and finally emerged in a very sweaty state at the bottom. Within minutes, I was asleep in my sleeping bag with my soggy clothes draped across a handy tractor (I had put extra thermals on for the stretcher carry!). After too short a sleep, Stefan arrived and we popped him into the back of the Landy and trundled carefully down to Tolmin and then on Nova Gorica. My short career as an ambulance driver was then over, we had delivered our cargo into the safe hands of the hospital. Additional disclaimer: Hugh, Martin, Tetley and I did absolutely not under any circumstances buy ourselves delicious fruity refreshing ice-creams with Stefan's money. Just to clear that up.

Ben Osborne

Postscript:

After two weeks in hospital, Stefan was taken to the airport and put on a flight back to Sweden - it took a further month for full recovery. 'Smashed Swede', the promising passage above the Laurel pitch-head, remains unexplored in 2006 - bad karma!



Size Matters: Pico Pot

The Discovery

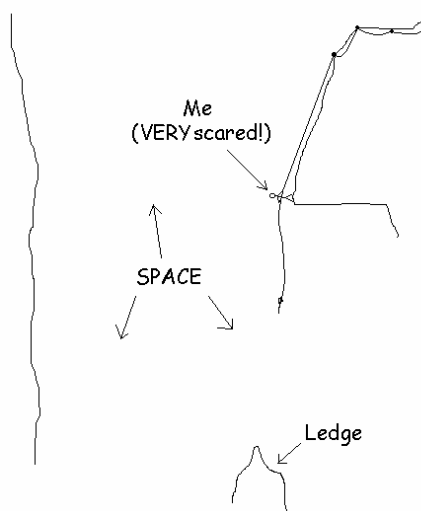
Ah! The day that Gardeners' world got very big indeed! We bolted the 3rd pitch in the urinal series and played paper, scissors, stone to see who would go down the pitch first. Andrew cheated so I went down first. The pitch opened up into a large, 20m long passage that stopped at a MASSIVE hole. Thrown stones fell for 3 seconds and then bounced. Just to make sure, we threw lots of them down. The echoing crashes of jubilation answered from the depths. It could be 80m deep! We couldn't see all the walls of the (20m x 30m?) void and so called it Pico Pot (in tribute to its small dimensions). Having dropped my survey book onto a precarious ledge (which I was not prepared to climb down to), we surveyed out using my glove to write on. Bolting down it is going to be fun: I may let others have the pleasure! Gardeners' World was now half a kilometre long and about 200m deep!

Pete Jurd

Going down

Martin and I went down to rig Pico. There had been a fair amount of rain and the bottom pitch had turned into an extremely unpleasant waterfall. We put in three bolts but at this point we were very cold and had bent the driver. A perfect excuse to give up. First, however, we descended down to the bottom of what turned out to be a bridge. We realised that what we had been standing on had been a false floor and that the pitch was even wider further down! We could see another ledge further down but no sign of the floor yet...

Pete Jurd



Bolting further down (Printed in Felix)



I like to be sure everything is in order before embarking on a task. Which is why I faffed around for half-an-hour making sure I had everything. Drill, check, battery, yep, extension cord, yes. Harness done up, good, descender, uhuh, jammers, maillons, spits, cones....etc. etc. Right. Now I am ready...hold on hammer and driver, and spare rigging tape, and some karabiners. Perfect. Why was I being so cautious? Or was I? Hold on where's my helmet...on my head, hmmm. Well to be honest I think I was stalling, and with good reason.

It all started 2 days earlier when Pete returned from Gardeners' World to say he'd discovered something big, B.I.G., big, definitely not slightly big. I eagerly volunteered to return with him to 'big', now named Pico Pot, to see if we could descend it the bottom. He described Pico Pot as being a 10m wide, circular shaft. Stones that were thrown down from the top didn't land for about 4 seconds. Pete had already traversed around the side of the shaft and descended down 10m where, abruptly, the walls of the shaft had disappeared. He found he was dangling below a rock bridge and there was no sign of the bottom, and it was here, that I found myself. I was about to descend into the unknown with all sorts of rigging paraphernalia dangling off me and getting in the way. The situation wasn't helped by the drill and battery, which weighed 5 kilos alone.

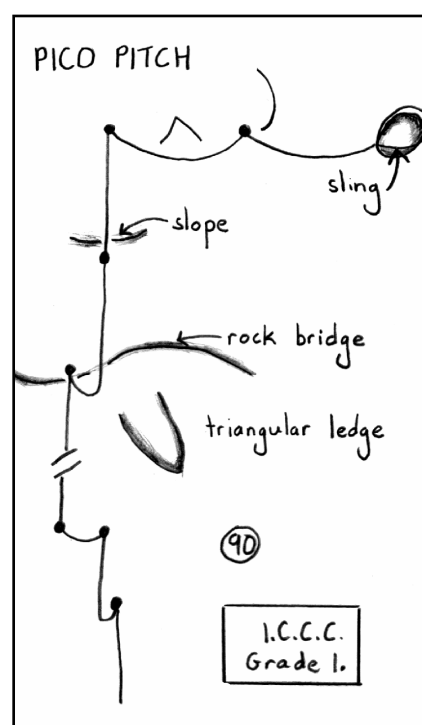


I looked around for a place to drill a hole, to make a belay. I knew where I wanted to put it, but, close inspection of the rock was worrying, it didn't look strong. I swung around looking for some more solid rock. Eventually I gave up and started drilling in the original spot. The grating thudding noise of the hammer action reverberated up and down the shaft as the drill dug in, it took a good minute to make a hole 12mm wide and 3cm deep, suitable for a bolt. When I was done, a maillon was attached to the bolt and my rope tied into the maillon. At which point I relaxed, it's always a relief to know there's one more fixture holding you up. My relief was short-lived, however. As I started to descend again, I looked up to check my new bolt and was shocked to see the rock had split directly beneath it! This scared me; I quickly had to prussik back up the rope, to get my weight off the bolt. Repeating the whole process again before I could safely descend. I put in another bolt about 15m further down and, from there, I finally descended to a ledge and stood-up. This let blood circulate in my legs - a relief after a good hour hanging in a harness. I drilled a final bolt to back myself up, then shouted up to Pete to come down. I gave him all the rigging stuff; I had lost my enthusiasm for doing any more and just wanted to sit down.

Unfortunately, the drill battery went flat almost straight away, and Pete had to finish the job by hand, with the hammer and driver. Luckily he was able to get to the bottom without putting any more bolts in. I felt a little annoyed as I saw his light disappearing off down a passage; he had got to the bottom first. If he came back to say the cave ended, which I half expected to happen, then, when I reached the bottom I would just have to go straight back up again, knowing that an exciting lead was no longer.

When I reached the floor of the shaft, I could see it was strewn with huge precariously balanced boulders; these varied between a reasonable car sized lump, to sofas and TV sized chunks. I immediately scrambled off in the direction Pete had gone, gripped with the excitement of discovering huge passage ways. Heading into a rift, I soon heard Pete on his way back towards me.

"Does it go?" I asked. "I think I can see a way on!" he replied excitedly. "And there's a howling draught." This increased our excitement, indicating the presence of a large chamber or a passage somewhere further into the cave. We followed the path of some water through a narrow rift. We were approximately 150m underground and it was interesting that the cave was so active at this relatively shallow depth. We stopped at the top of a waterfall, about 10ft high. Pete slung a bit of nylon rigging tape around a dubious looking lump of rock and we descended down, no problem. We continued following the streamway, the passage was high and narrow and meandered downwards. Then the streamway disappeared below us and we were looking down another large hole, perhaps 30m deep.



We had just one 25m length of rope and two bolts. In the excitement, we dropped one bolt and it fell down the pitch, which was unfortunate. We poked at the rock, which looked pretty solid, put a second bolt in and then looked in vain for some natural flake we could back-up our single bolt with. Failing to find anything, we had a brief discussion and decided it would be alright. But I volunteered Pete to go first - it was his bolt after all.



It wasn't until we both got to the bottom of the pitch (later named Swing as the main way on is now a dry swing half-way down) that we realised it was getting really wet; we could hardly hear each other speak over the noise of the water. When we had walked to the cave entrance in the morning, it had been beautiful sunshine, but we suddenly realised that there must have been a short sharp alpine storm on the surface, and the cave was now in flood. We were worried that we wouldn't get back up the big pitch, Pico Pot. We had no idea if the route we had bolted down happened to be a waterfall when the water levels rose. We decided it was time to go, yet despite our concerns, we surveyed the cave on our way out. I suppose we wanted to know just how deep we had gone.

We were lucky, Pico Pot was passable where we had bolted; the other side of the shaft was very wet. Enormously relieved and tired after the excitement of our discoveries and fears of flooding, we exited to a kaleidoscope of colours as the sun set over the Julian Alps. We headed back to camp for hot drinks and food. We were soon joined by other cavers, and that evening sat around a fire, drinking the local firewater – Žganje - and recounting our tales of discovery and daring to the others.

The following day, the survey data was entered into the laptop. This confirmed we had found 150m of mostly vertical passage. Gardeners' World was now 250m deep, 450m long and looking very exciting for future exploration.

Jan Evetts (This article was also printed in Felix, the Imperial College student newspaper)

Further Logbook Extracts 2000

"May your caves rotate in manners truly sublime" - Hilary

"Note for next year: Buy lots of cheese." - Andy

"I think I've had too much vitaminski - my piss has turned limed green." - Ben Johnson

"Ceri seemed nice but Pete wouldn't let us play with her." - Helen

"Tonight is my last night in the bivvy. I am extremely mellowed out and drunk, Pete has just thrown up! ICC is victorious. GOD SAVE THE QUEEN." - Jan

"Pete's vomit appears to consist mainly of beanz, I'm not sure why. Jesus Christ the fire is hot." - Jan

"Gladiators was OK on the way back except for getting off which made me re-write Homer's Iliad for 20 minutes while arguing with a carabiner (in the dark). The way out with a tacklebag and no light was also amusing and took ages. Beowulf was also re-written."

Ben Ogborne (Logbook 2000)

More people have been to the moon**: A Space Odyssey

Having taken a gentle trip down to Tessellator (so as not to overexert ourselves before pushing), we started our task of creating the sexiest rigged pitch known to man. This started with a particularly fine bolt from yours truly and a very fine deviation concocted by Tetley. This allowed us access to the top of Space Odyssey. After descending down what appeared to be a 20m pitch, we were presented with what was actually a ledge down into a much larger pitch. (Quote by Tetley, "Fuck Me!"). There was a window about 15m from the pitch head but we left it as the bottom of the pitch couldn't be seen!

We started bolting down, but soon realised that a direct route could become very wet. I therefore traversed out along a thin ledge with dubious safety precautions to establish a dry route. This combined with a fine Y-hang (very sexeee!) brought us down a further 27m to another large ledge beside an even larger hole (drop ~4-5 secs). After scraping our jaws from the floor, we had an impromptu party (which prematurely ended when we realised we didn't have enough rope (doh!)). We surveyed out, floating up most of the pitches due to an extreme state of elation.

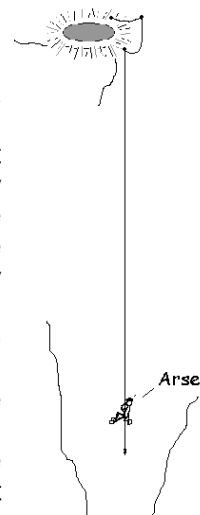
Ben Johnson

(**Twelve men have walked on the moon)

The cave goes ever on and on: Bolting Concorde



Having heard stories of 100m+ pitches, and with only a few pushing days left, I felt I had to get back down Gardeners' World. The alluring prospect of an 80m shaft enticed me. Jim loves his squeezes. He could hardly contain his glee when he saw one at the top of the Tessellator. Beyond the furthest extent of my last trip, the cave no longer seems to be active and appears old, very old. The rift went left and right but we went straight down. Then, suddenly, something horrible happened: The rope got thinner! At some point the rope had changed from 10mm (nice) to 9mm (only just visible to the naked eye when loaded). I was now abseiling on something significantly thinner than William Hague's hair and far more bouncy than Tigger. It was all worth it though, as the last rigged drop was spectacular.



We put in a couple of bolts at the top of the next pitch, Concorde. The second of these split the rock and a large sheet of rock went crashing down. This filled me with confidence so I went down to put in a re-belay. At -13.81 metres I ran out of bottle. Without large amounts of alcohol or a major equipment failure I wasn't going down any further. I put in a bolt and went back up. Jim, older and wiser than me, went down and bolted the rest of the pitch while I ate mars-bars and fish. This fine combination of foods should be more widely adopted by the catering industry as a whole.

Finally 'ROPE FREE' floated up to me from the depths and down I went to the strains of green-sleeves played on Jim's penny whistle. It was one of the most aesthetically and aurally perfect descents ever. The bottom of the pitch was a long way down, but dry. The floor was strangely flat and I wondered if the concrete engineers had beaten us to it. Probably. The way on was down a further pitch where we could hear the evil water waiting for us. Luckily we had run out of rope. Up was the obvious way out so we took it. 67m of shaft. A steady pace on the way out and back for food and sleep.

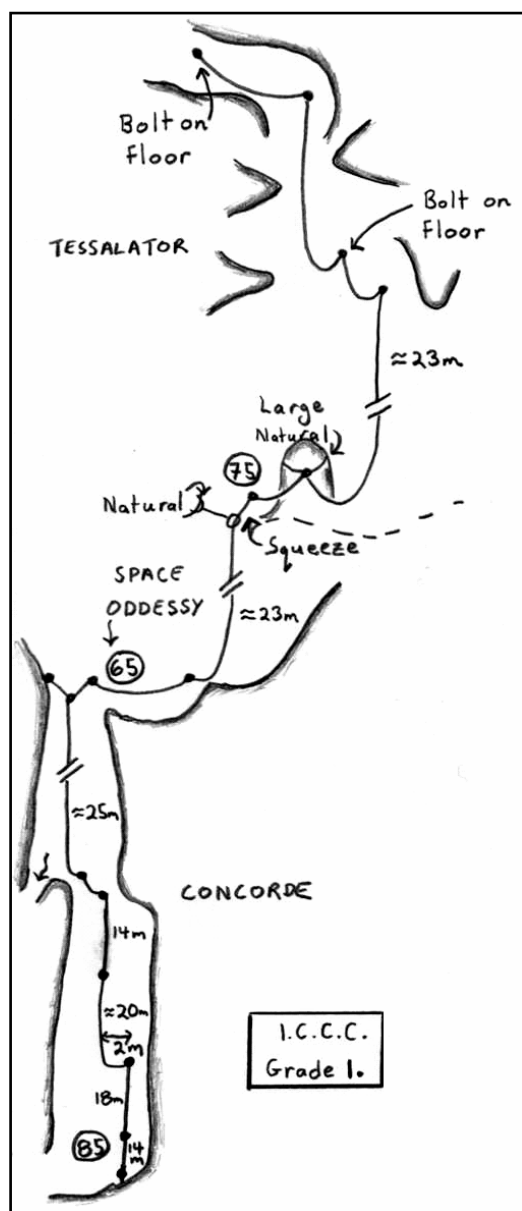
Pete Jurd

**Note by Ben Ogborne
(Aeronautical Engineer)
re: Concorde**

"It would in fact be possible to fit 2 Concorde's upright end to end in this pitch. A pilot near Paris recently attempted this."

Logbook 2000

The dreamers of the day are dangerous men: Alchemy and Beyond



It was probably the last opportunity for a pushing trip of 2000, Jim and Pete had just expertly bolted Concorde (67m) after the 125m pitch fiasco and the way on was wide open - a short pitch into a chamber, a bit of a squeeze perhaps, then stonking horizontal passage and glory. But I was happily dosing in the bivvy drinking tea, when Bruce of all people approached with a glint in his eye and suggested going caving. Prior to this, Bruce and Jim had made an abortive attempt on PLOP, combined with a Torn-T to M16 through trip. By all accounts it had been painful and I think Bruce now saw the opportunity for some decent pushing. It was a mean trick to play though, the sun was shining and I had a cup of tea in my hand, but then I remembered the glory and I was already in my furry.

On our way to the cave we'd decided to call any horizontal passage we found Zlatorog, as in the mythical goat. We also decided we didn't want to discover any big pitches!! But big pitches were not the first concern - there was rigging we were told needed to be 'adjusted', the backup bolt on Concorde had popped and the pitch before had a knot change from 12mm onto 9mm rope.

On first inspection of the pitch head, there was a perfect natural backup, but people who do the pitch now won't see it at the top. When we tapped it with the bolting hammer it seemed OK, but when we gave it a shove the whole TV - sized boulder tipped and went crashing down the pitch. After some discussion, we eventually sorted something out and set off down. At first we thought we were descending into a lake as the snooker-table-flat bottom of Alchemy was covered with three inches of water!

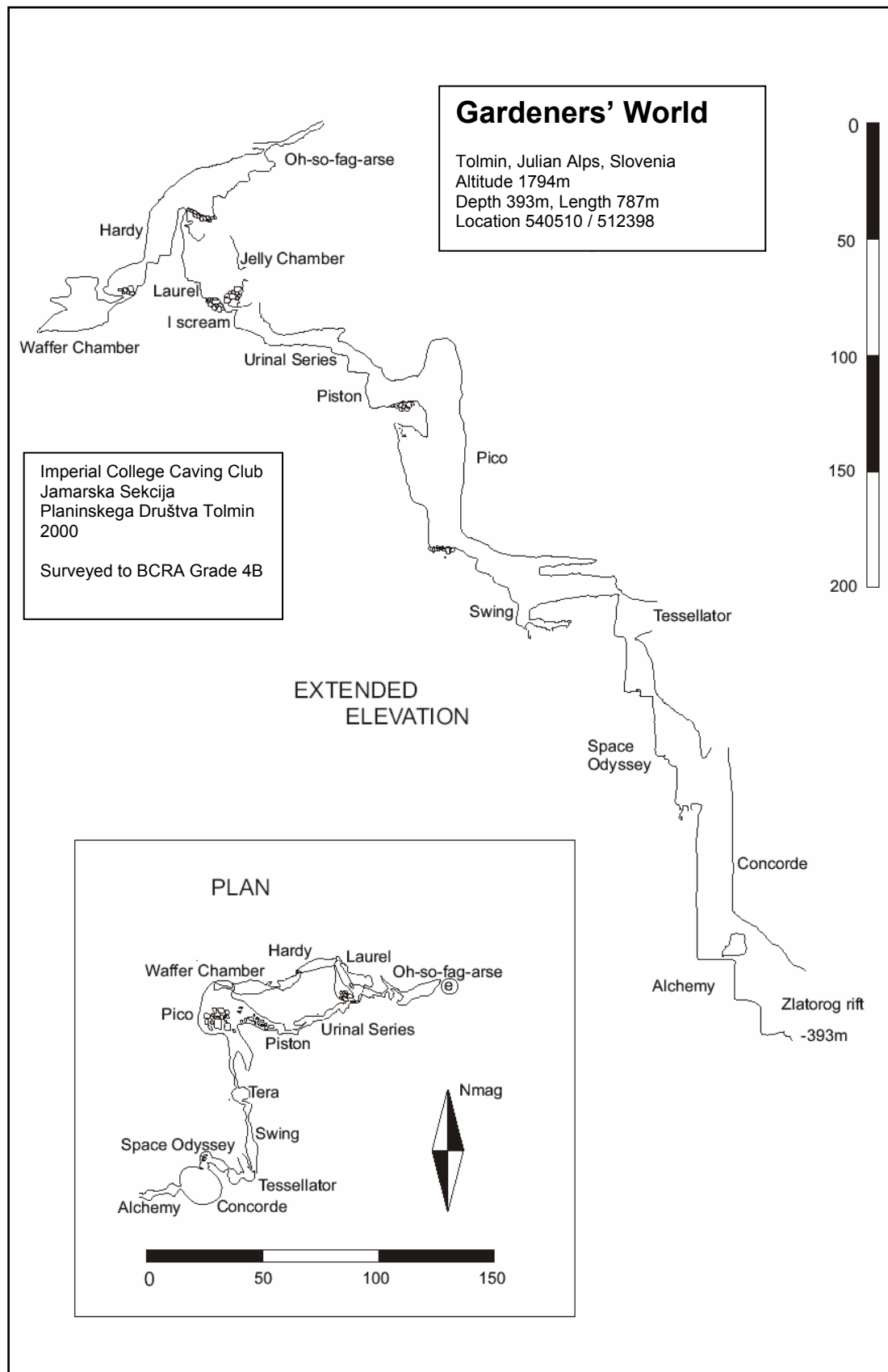
Bruce huddled over his carbide flame, brewing a tasty warm tin of mackerel, while I bolted. It looked as though he was involved in a spot of potion making and in fact he succeeded in turning base mackerel into a tasty fish-dish worthy of any 5* establishment. Traversing out, to avoid the water, I dropped to a ledge 2m down. From here a 15m pitch dropped to the bottom, the way on was obvious an exceptionally fossilised rift varying between 1m and 6m in width, disappearing horizontally away into the distance, Zlatorog rift. There was also a drop in the rift of 3-4 seconds... We descended the first section to a ledge but with just a small piece of tat could go no further, we surveyed and headed out.

At a depth of 393m, with such a wide open lead at the bottom, Gardeners' World was left as a fantastic lead for the following year.

Jan Evetts



Gardeners' World Survey 2000



2001

“The Year of the Sun”

Once again the usual, eclectic team of odd-ball characters and warped personalities (that are bound together, like cheese-filled smash burgers, by a sense of trust, friendship and common purpose) reunited for another expedition on Mig. As we discovered in 2000, when it rains on Migovec, it really does rain! Fortunately, 2001 proved to be a drier expedition, though that isn't to say that there weren't storms, patches of violent weather and a foreboding sense of dread that the weather could turn ever fouler. The equipment was transported in Martin's trusty old Land Rover and a creaky old trailer belonging to a defunct club that was acquired with a set of bolt cutters from outside Southside. While the Landy lumbered across Europe, most of the team flew out to take their place round the bivvy's stained, uneven rock-table that has become home.

When we weren't involved with dye-tracing and were able to drag ourselves away from frying food and playing with our new, mean petrol drill (named “El Chorro” after a scary traverse in Spain), the storming lead down the bottom of Gardeners' World received most of the attention this year. The cave went and ICCG and JSPDT went with it....

James Hooper

First night up top, First Storm of the Year

As we headed up the mountain we could see the storms clouds rolling in. Most of the group raced on ahead unencumbered by a load of caving kit and a tent. I slogged up the last zigzag to fading daylight, purple hammerhead clouds burning orange on the underside, occasional lightning dancing off the distance peak of Krn and thunder echoing round the Polog valley. At the top I was greeted by shouts from the rest of the team as they drank vodka while watching Thor's hammers flash across the sky. I pushed across the last obstacle of the so called 'plateau' - with its 300m diameter shakeholes it is anything but flat.

That night I shared a tent with Ben and Clewin, it was too late to pitch my own. Their ancient mountaineering tent was now being held together by duck tape in good ol' Blue Peter fashion. As the weather closed in over dinner we could see we were in for a rough night. Throughout the following hours of darkness, the tent rattled, shook and flapped around as if the only thing holding it to the ground was the ballast of three cavers and their gear. The front of the tent popped in and out of shape. Suddenly, in the middle of this battering, I heard a desperate voice crying in the wilderness outside. I gingerly stuck my head out into the gale, noticed a large rip in the front of the tent, and heard Adrian asking if there was any room in the tent.



“Is this an emergency?” I asked. A stunned Adi kneeled on the ground, head poking through the porch. “Sorry we have no room” was our response, especially as our tent seemed destined to fall apart some time in the night.

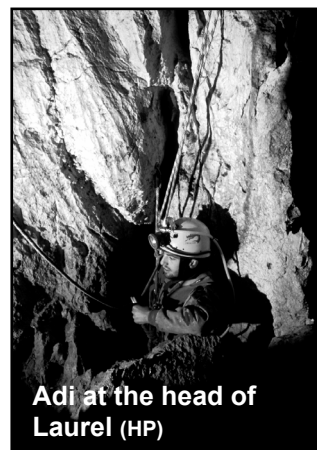
So Adi disappeared into the night, while we patched the rip in the porch with gaffer tape and battened down the hatches. The next morning, I pitched my tent on the only flat piece of ground left, unfortunately it was also the highest spot around; well lightning can't strike twice. Meanwhile poor Adi surveyed the collapsed, shredded remnants of his own tent. He therefore moved his gear into my tent - and so began the climbing double act of the expedition...

Martin M^cGowan

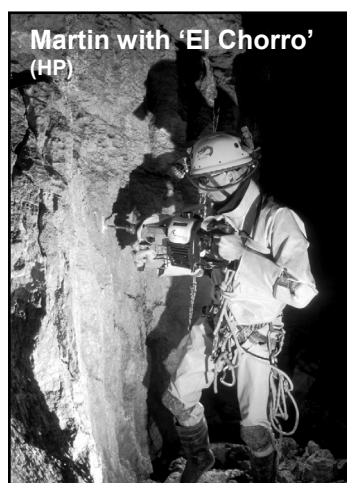
High Hopes: Climbs off Jelly Chamber

Jelly chamber, the chamber at the bottom of Laurel that was found in 2000, was always colder and draughtier than the rest of the cave. Leading off the chamber, we found two series of climbs going up, Judge Dredd series and the Hunger Series - named after the fact that was Adi's stomach was rumbling at the time. To get up these climbs we needed the petrol drill, but first there were one or two obstacles to overcome. The most important of these being a bottleneck of boulders at the top of Laurel - even the slim members of the team found it tight. A hit squad was sent in to remove the boulders...

Hugh, Ed, 'El Chorro' (the drill) and I gathered at the top of the pitch, while Adi, the smallest and fastest, was sent down to bring up the rope. For several minutes we struggled with slings, hammers and a crowbar to no avail. Then we thought of winching the boulders out. We had soon drilled two anchor points in one of the boulders and set up a Z-rig. Instantly it popped out. This released the genie from the bottle and the coffee-table sized boulders tumbled and rumbled down the 60m pitch. The memory that sticks most in my mind is the thought of being attached by my cow tails to the bolts, hanging over the enlarged pitch head and waving a hammer to hit the final wedged boulder, while Hugh took photographs. This was pure, insane destruction. When I re-rigged the rope, all I could find was a pile of fist size rocks - all that remained of several tons of boulders. Now the way was free to bring the drill on down.



Adi at the head of Laurel (HP)



Martin with 'El Chorro' (HP)

The Judge Dredd Series got the most attention. The main problem we had initially encountered was that the rock was so hard that the spit had lost most of its teeth by the time we were half way through placing the bolt. Hence the petrol drill. The first climb had a bolt placed about half way up to protect the lead climber. A bit of wide bridging then gained an old roof tube. This was shuffled along until you could squirm onto the ledge at the top of the pitch. From here, we followed the ledge over a scramble of boulders into the Hall of Justice - a chamber with two large projections in the roof, which looked like the scales of justice. A scramble over a convenient triangular shaped boulder gave us access to a rift heading towards the roof. This was the way on we needed, but there was one more obstacle. We had run out of spits at the bivvy. So we headed down to Ravne to fetch some through bolts, and enjoyed the pleasures of a trip into Tolmin.

Adrian and I had never used through bolts before, so we were a wee bit apprehensive about using these 8mm bits of metal (especially the shorter ones) and opted for the longest ones we could find. Finally we set off, overloaded with gear: drill, static rope, dynamic rope, bolting hammer, runners, extenders, camera, plates, search light, survey kit and of course a flask of hot chocolate. We jingled and jangled our way down the mountainside and into the cave. I lead climbed the traverse in the roof, bridging the gap to a wedged boulder, before placing a second bolt. Traversing over the gap that followed, I wedged myself in to place the third bolt and continued out to a ledge. Another bolt later, and it was possible to scramble onto the scales of justice, 15m above the floor. At this point I was getting a bit light headed, either from the exposure to the height or the petrol fumes, so I let Adi take over the lead. He chimneyed up onto a ledge and placed two bolts into the roof. The next step was a bold reach across to the rock but at this point the drill failed. So it was time for a few quick pictures and some hot chocolate, before leaving it all for another year as Adi was heading home the next day.

Martin M^cGowan

The GW story continues: A Fistful of Tolars



It took slightly longer than anticipated to re-rig the known cave. Seven or eight trips were needed to remove some of the unique 'expedition style' methods used the previous year: Y-hangs unriggerable by Man, extreme deviations and rigging directly through avoidable squeezes. Finally it was time for the pushing game to start again. The cave was rigged as far as the bottom of Alchemy and Clewin and I had a fairly uneventful trip down, save for a few of the normal pitch head problems. Below Alchemy, was Zlatorog Rift, named after the mythical Slovene goat. A cut-out from a Laško beer can, bearing the Zlatorog slogan, was carefully placed on a rock to mark the location. While I sorted out kit, Clewin ate some sweets that he found on a rock - best not to ask questions - they were just there! To the sound of his munching in the background, I then rigged the short 12m Zlatorog Rift, landing near the take off into the unknown. Clewin popped down after me and we were ready for the real caving.

I had a brief look over the edge. Although I thought I could clearly see the bottom about 10m down, there was the matter of a long stone fall that I didn't like the sound of. This was clearly a pitch for Clewin. As I shivered on a tackle bag, the first bolt went in. The rope from Zlatorog was attached to this and Clewin set off - after all, this was "a mere 10m" deep. Clewin came back up when he reached the bottom of the rope with no sight of the bottom of the pitch. My comfortable rope bag seat was no more. The next rope was tied on and off Clewin went again...

"It's a long way down"

"There's nowhere to put a bolt in"

Eventually I heard the cry "R o p e F r e e" and off I went.

The pitch was just off vertical. A vague deviation at the top helped slightly, but by the time I could see the bottom I had passed many rubpoints. A few metres further down I experienced what has become known as "The Gravity Anomaly". The rope had appeared to be hanging vertically, but then I suddenly swung to the right, into a more spacious and scary area. This pitch can smell fear! I was reassured later that it happened to everyone. After 45m, my feet touched the floor. The bouncy 9mm rope immediately took me back up another metre or so, then down again.

We had discovered 'A Fistful of Tolars,' and immediately nicknamed it 'Fist Full of Rubpoints'. The pitch landed in a large space. In one direction, the passage continued high and wide over a large pile of boulders. To the side was a small hole - far more alluring. We left the huge ongoing passage for a future trip (this became the start of the Pink series). I looked into the small hole in the floor and was reassured that this time the bottom was clearly visible about 10m down. We also, incorrectly as it turned out, assumed that it would connect up with the larger passage. We discussed what would be down there, and Clewin hopefully concluded that it would contain a nice streamway with Mars bar trees and beer lakes. A boulder back up and single bolt worked wonders and I was soon on my way down. About half way down, I shouted up that it looked like it was closing down.

A brief explore at the bottom of the rope soon revealed nothing less than a small streamway running off down a winding passage. The streamway was named Banzai Streamway; combining a topical TV programme with part of Ogof Daren Cilau. It was reminiscent of Top Sink in Easegill and was quite unusual with respect to the cave so far. It continued for a short distance and, beyond a tight squeeze, we found a short pitch. Knowing that we had to survey out, this was left undescended for another trip. We ditched the 200m of 9mm rope that we had carried down and headed on out, happy that we had added another 55m of depth and that there was plenty left for further exploration.

Ben Ogborne

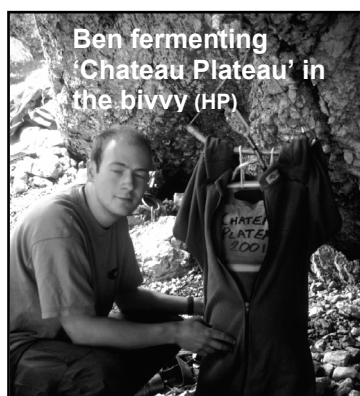
"Chateau Plateau 2001 - Appelation Controle"

Take one 1-week wine kit, 20kg of snow, two 10 litre water bags, 10kg of sugar, a bit of plastic tubing and a spare furry. Mix together according to basic instructions and leave for a week...

2001 was the year chosen for the first production of 'Chateau Plateau'. It was a good year, the sun shone favourably on the grape extract and a brisk northerly wind kept the pests off (or still in their tents at least). After some persuasion, the production run began with a morning of snow hauling from M10. This was necessary due to the unusually dry weather at the time - obviously it rained that evening!

Help me
I don't want
2 go caving
Ben aged 23½

The snow (with sugar and grape extract added) was carefully melted in two 10kg batches and poured into the water bags. A bit of impromptu pipe work completed the bubble trap arrangement and the yeast was added to begin the fermentation. The two bags hung side by side in the bivvy like some obscenely large blood transfusion. Once the yeast had begun its work, they were snugly wrapped in a furry and left to their own devices. The cold and rapidly fluctuating temperatures subdued the yeasts however and fermentation proceeded slower than planned. It took a good three weeks until bottling day finally arrived.



Bottling day was a jolly affair - many 2 litre plastic containers had been collected ready for filling and it was soon the moment for the first tasting. I sampled a mug full of the cloudy blood colour liquid - finest claret it wasn't - in fact it wasn't really worst plonk. Some adjustment was necessary. To combat the dryness it was found that a teaspoon of sugar in a 2 litre bottle solved the problem wonderfully. The residual fizziness was more of a problem however, but after a bit of trial and error, the bubbles were driven away by a mass bottle-shaking session. The sound of "shake, shake, fizz" filled the shake hole. Following these adjustments, Chateau Plateau was ready to drink and 'savour'.

One side effect of the shaking and sweetening process was that it was necessary to test each bottle several times for correct taste. So, by 11:30am, I was fast asleep on my back on the bivvy floor. Moments of disturbed, wine-fuelled sleep later, I awoke to a cracking hangover, but in a show of pure dedication I continued to bottle until the whole batch was safely contained. A couple of bottles were put away in the bivvy for future years and the remaining ones were taken down the hill to be 'enjoyed' at the party.

As for official tasting notes, Oz Clark was unavailable, but his stand in, the farmer at Ravne, simply commented "Prima!"

Ben Ogborne

"Excellent trip to Piston. On the way out Tetley found a bypass round the 1st pitch and Oh-so-fag-arse! Called it 'The Odd One Out.' Everyone was very happy (especially Hugh!)."

Adrian Hooper (Logbook 2001)



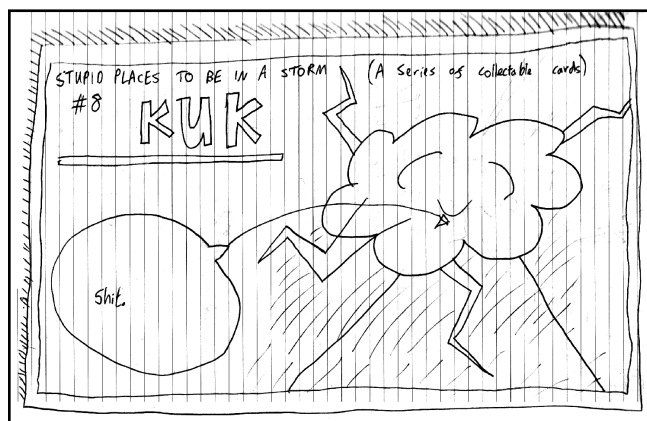
In thunder, lightening and in rain...

The North Face

As Andy and I ran for the bivvy, lightening danced all around. The way back was a stroboscopic run in blue white light. At the bivvy, Pete was doing a mean impression of Clint Eastwood with a gristled beard and poncho while Dave whistled up some food. The rain pounded on the tarpaulins and overflowed into the barrels. The rest of the team had retreated to the tents. That night I realised why North Face tents are worth their weight in gold, as it stood up against the battering of gusts coming over the ridge...

Martin M^cGowan

Cooked on Kuk



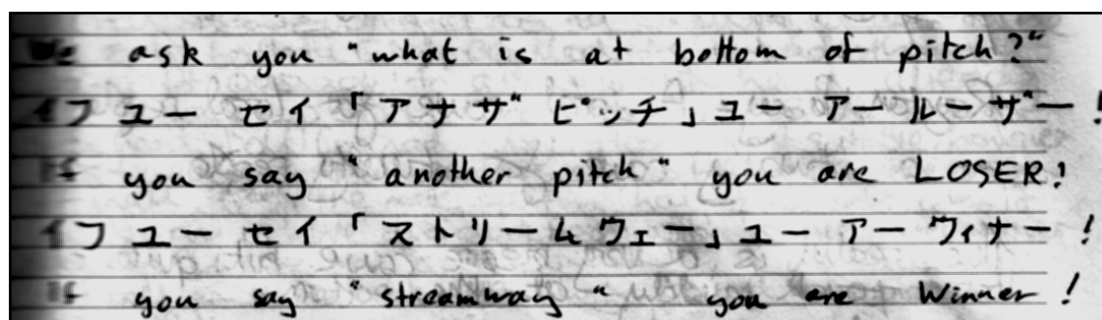
The Force 10 and the Four-Four...

On the day of the storm, we sat at the sunset spot watching lightning over Krn, but the weather seemed fine on Mig. Later, as we gathered round the fire in the bivvy, it started to rain so we retreated to our tents. I was sharing Hugh's Vango Force 10 which we had moved onto a small ridge the day before to prevent the grass dying underneath. In the wind and the rain it was quite noisy but I wasn't too concerned - just slightly worried about the tent's metal poles. I have never been scared of thunder and lightning but began to get nervous as loud bangs and crashes seemed to come closer. Then there was an enormous bang that felt like an explosion in my head. Both Hugh and I screamed. All my hair was standing on end and Hugh felt a shock through his chest. We were too scared to do anything but quiver and hope that thermarests are insulating...

The storm seemed to be moving away but then another near miss sent us running for lower ground. Taking shelter in the Four-Four with Clewin and Ben was an interesting experience - the zips on the doors had given up the ghost so it was very windy inside! Luckily my down sleeping bag kept me nice and cosy but no-one got much sleep. The next morning we found loads of melted dwarf pine due to the lightning strikes, including one no more than five metres from our tent. I have been healthily scared of storms ever since.

Helen Jones

Wise words from Clewin...



Pink, Skynet, Zimmer: Slowly, slowly, it goes, it goes...

The sun rose, a day drifted by... collecting wood, mending oversuits, making chocolate cake on the MSR stove etc ... the sun set. A thermos flask of rum and herbal tea was passed round the fire. Conversation moved from politics to claptrap. All was as it should be. Underground, too, things were going well. Gardeners' World was rigged, new survey data had been gathered and two new leads were waiting to be pushed in the morning. The thermos flask was naturally refilled...



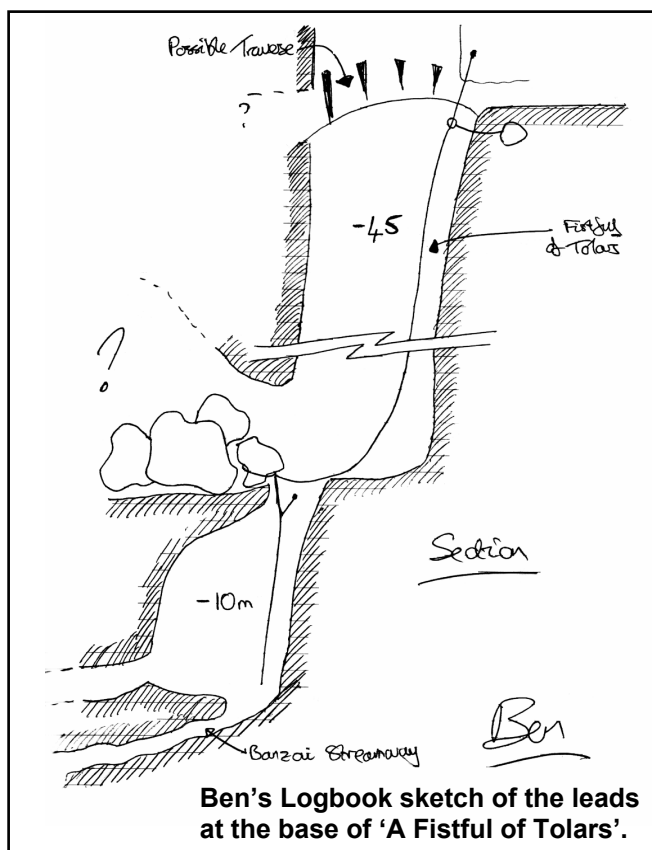
Dave heading off to Gardeners' World (HP)

The following morning, groups of people, in various stages of recovery, staggered out of their tents, queued for the pit and then headed down to the bivvy in search of food. Burgers, reconstituted from Sos-mix and the previous night's curry, were fried. And somehow, amongst all this, it had been decided that Dave and I were to be the next team to probe the cave's hidden depths. Eventually, we wandered off across the plateau, enjoying the fact that there was already loads of rope at the pushing front so we had little to carry.

Carbides were coaxed into action and we headed on down. Like most caves pushed on expedition, movement through Gardeners' World became easier and more enjoyable on each successive trip. This time, I slipped effortlessly through the entrance series enjoying the familiarity of the cave. Rock and memories felt intrinsically intertwined, a feeling that seemed particularly strong when passing bolts that I'd placed in the past. The pitches seemed to flow by and, after a spurt of hammering in a few additional bolts and tidying up some rigging, we were ready to push forward into the future.

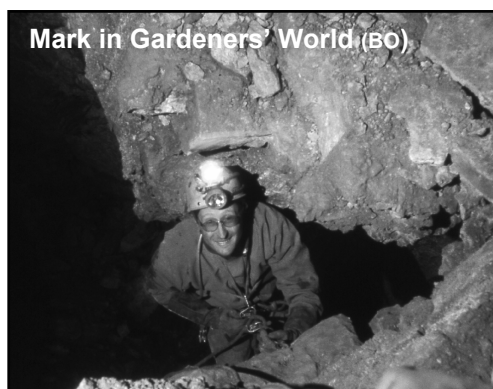
Ben and Clewin had left the cave with two possible ways on. At the bottom of A Fistful of Tolars, a large black space beckoned to the right. The other lead was a small drop down into a rift, rigged with about 10m of rope. We descended this hole and followed the thin, interesting Banzai streamway to a tight pitch head, the limit of exploration.

Well, here was a small gap into an uninspiring cavity and ten minutes previously we had been staring into a large, unexplored black void that seemed to go off horizontally, possibly the start of a wide open passage? Here we were following water, admittedly, but the Banzai streamway seemed pretty immature and there was little draught. After looking, without success, for leads higher up in the Banzai rift, we decided to return to the base of A Fistful of Tolars and investigate the large black void.



We headed off into the blackness, along a 5m wide passage lined with unstable boulders, going slowly, savouring the joy of discovery, taking turns to lead the way. It didn't last very long though, as we were soon stopped by a pitch. But more space could be seen on the other side. Using a combination of naturals and bolts, this small drop was quickly rigged and we abseiled on down, landing on a pile of white and pink boulders. Yes, they were definitely pink - believed to be the result of the strain of the fault plane. Scrambling up the other side, the passage continued, smaller than before, and we followed it to another drop. Time had been marching on, and we now realised that it was getting quite late. We decided, therefore, to survey our finds and head on out. Cheers, Dave, for a grand days caving....

I returned several days later, this time with Andy. In the meantime, Clewin and Dave had pushed a succession of small pitches and Andy and I did the same, taking Gardeners' World below 500m. I was becoming less enamoured with this section of cave, however. The pitches and passages in between were becoming more and more awkward, irritating, 'thrutchy', 'twatty' etc. Perhaps it was because it was new, but it seemed to take more effort to get from -450m to -500m than it did to get to -450m in the first place. Yes it was exciting, but it wasn't the large, awe-inspiring type of exciting that we'd got used to higher up in the cave. The draught seemed to be increasing though, and after a slight squeeze, the floor in the small passage suddenly gave way. We dropped stones and they whizzed down for several seconds. We shouted out and were rewarded with the resonance of a big cavity. Cramped in a small space, just large enough for two people with tacklebags, we knew we were above something large, a big chamber with the sound of water. Naming our finds Skynet, we left the bags and headed out to sleep, content with what we had found.



Fresh out on expedition and eager to go caving, Jim, Mark and Iain formed the next team. In true Migovec fashion, they didn't leave the bivvy until mid afternoon and so it was late by the time they got down to Skynet. Two bolts were placed at the top of the pitch to form a Y-hang and Iain descended to a ledge half-way down the pitch. Leaving the tacklebags there, team Zimmer (frame), as they called both themselves and the pitch, then headed out to report that there was indeed, a big chamber waiting for its first footprints....

James Hooper

"Why, why, why go Caving?"

(To the tune of Delilah....)



Why, why, why go caving?
We could die, die, die, while caving...

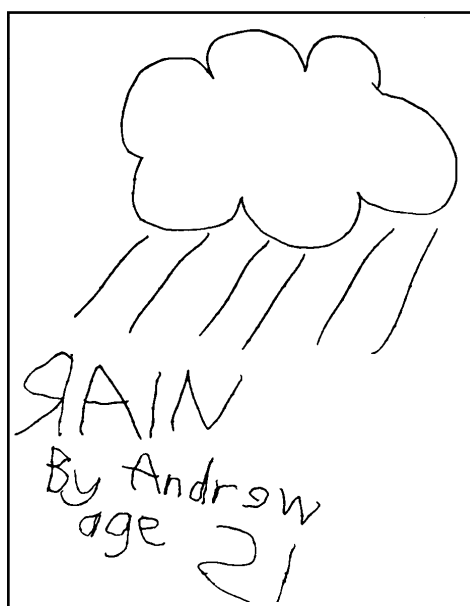
During the night my tent came down in a storm,
I want to stay in the bivvy and keep myself warm.

Why, why, why go caving?
We could die, die, die, while caving...

Went down a pitch, nearly got hit by a boulder,
We sat at the bottom getting colder and colder.

etc.

(Logbook 2001)

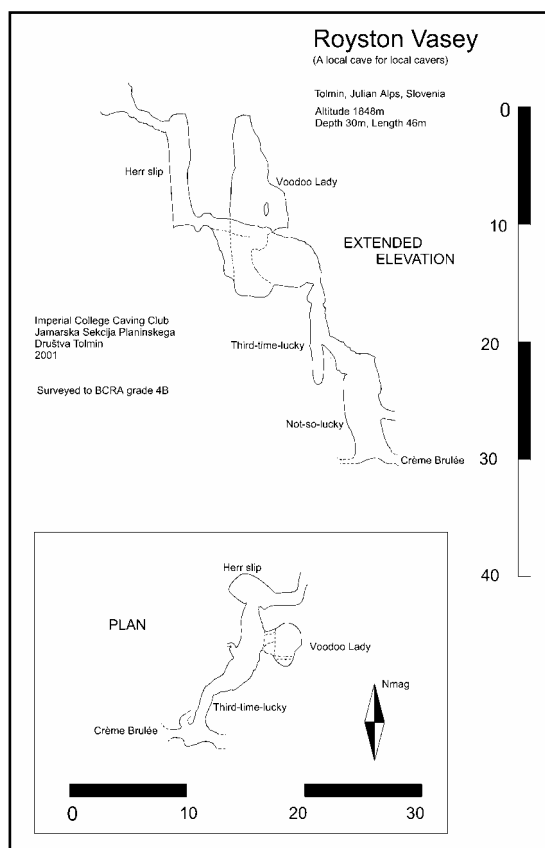


Small Caves: Sometime in the afternoon...

Royston Vasey - A local cave for local cavers (a.k.a. A twatty cave for twatty cavers)

Periodically, a fever grips the expedition, speculation becomes rife and a large part of the team becomes gripped with a fascination for a particular lead. The rush of enthusiasm for Royston Vasey illustrates this perfectly...

One afternoon, a small entrance was found in a notably round, 8m deep shakehole. This depression is almost adjacent to the bivvy and is next to the shakehole used for 'Ben's death slide of certain doom and probable destruction' that only Jan and its creator ever enjoyed. A sharp rift climb near to the eastern edge dropped into a small chamber. From here, a draughting hole in the corner was noticed. An echo and drop could also be heard beyond the too tight opening.



Drawn survey of Royston Vasey
Location: 540489/512379

After relating this news in the evening, great interest was aroused. Probably because it was only about 25 metres from the bivvy! The cave was named Royston Vasey - "A local cave for local cavers." It didn't take long for someone to mention that as the bivvy is situated roughly above Titanic pitch in the main system, this latest lead clearly had the potential to drop straight into Level 2. "Remember the enthusiasm for Torn-T? This could be another 'Ben's Crap Lead'" There's nothing like booze and a fire to kindle a fervent desire to know more...

The attraction proved too much for Dave, and after waking up at 5am the following morning, he took a hammer for a walk and was at a pitch head by about 7am. The pitch turned out to drop into a complicated series of small climbs winding up at a narrow rift. After a concerted effort by Pete and others, a further set of intricately connected passageways and tunnels were found. Unfortunately all of these quickly choked. Further trips to push the limits resulted in a small amount of extra passage and some draughting gravel, but no easy way on. The draught is encouraging and compensates for the abundance of mud.

Combined with its proximity to the bivvy, this cave could be an interesting dig that may yet yield to the ways of the crowbar and reveal further cave. It's certainly well worth another visit. The cave was surveyed and due to an excess of available names, every last rock was christened. Hopefully these names can be re-assigned to the future extensions or held in reserve for the next exciting project that fires the imagination.

Ben Ogborne and James Hooper



This really is a very bizarre cave but quite nice. It's a touch muddy at the bottom. Me and Ed went down. Cave twists about loads and arrives at the top of 2nd pitch. Really nasty pitch head. Finally we thrutched down to the bottom. There are shed loads of very small possible leads. Some draughting. We dug around a bit and then came out covered in mud. We finished off the surveying on the way out.

Ben Ogborne (from logbook)

The East Pole Area

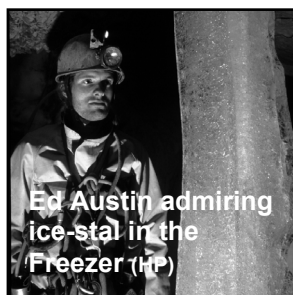
The strongly draughting entrances in the valley between the plateau and Škrbina continued to receive considerable interest. The entrances here are at roughly the same altitude as Hotline in the main system and are thought to have great potential. It's just a matter of making a breakthrough...

James Hooper



Tetley squeezing feet first into a draughting surface dig (DW)

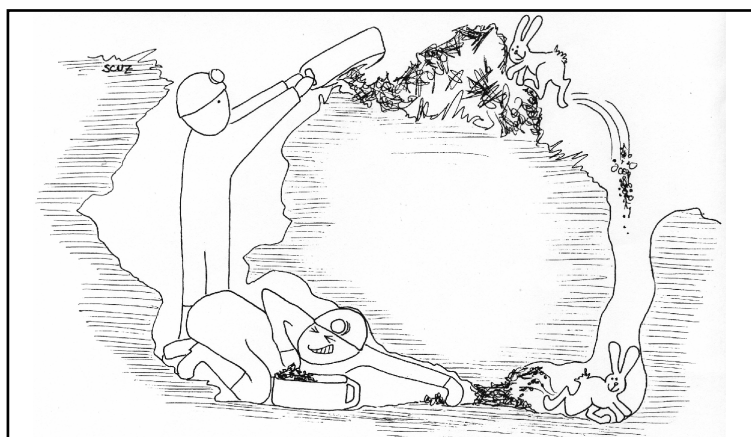
The Freezer - Location: 5404512/512402, Height 1780



Ed Austin admiring ice-stal in the Freezer (HP)

The Freezer was found about 100m North-East up the valley from the Gardeners' World entrance (though its altitude is 14m lower). An exciting climb down in a shakehole (or alternatively a bedding plane crawl) leads to a snow slope that descends down for about 15m, requiring a rope that can be anchored around an obvious natural thread. This led to a very cold and draughty chamber, decorated with a large ice-stalagmite. A dodgy boulder choke at the end of the chamber was left unpushed.

Ben Ogborne and James Hooper



Ed in the Freezer (HP)

Logbook Extracts 2001

"I am sitting in a Landy, Martin is in a lesbo show in Nova Garica. Finally a good stone throwing hippy pishup had arrived. Ja, Ben ist totally pissed aber ein guten celebration für mehen birthday hast arrived, nein?! Slovenia is the wettest place in the world by definition. Dave ist ein gute bloke für Landrover zu driven wahn sehr renning." - Ben O.

"Toss me over A Suitable Boy," - Tetley (asking for his book by Vikram Seth to be passed to him).

"Arse. Generator in stove has decided to develop a leak and is pissing petrol all over me. Have to leave it cooking because my cake will be ruined otherwise." Andy J

"You can go back to Irish politics but don't go back to fructose!!!" - Martin M

"There's something big out there." - Martin after coming out of the Hall of Justice

The Gallery of Anglo-Slovene Friendship

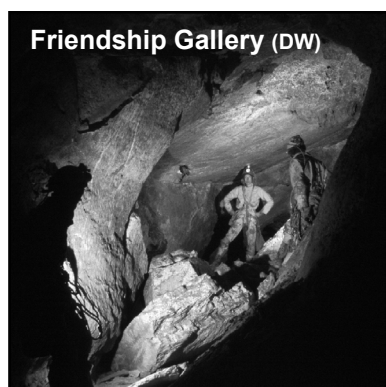
To cool ourselves down, we ordered ice creams to go with our beers in the Bar Paradiso. At some point we then ambled along to the Soča, trying to cram in the weeks of sun bathing that's normally associated with a summer in Europe into a hot, lazy afternoon. I was clean, stuffed full of pizza and could feel the warmth of the sun beat down on my body. Indeed, life was good; the contrast with the preceding days on Migovec made me really appreciate this blissful interlude as I stretched out and settled down for a siesta.

My head felt heavy as I turned around to see Tomaž arrive on his bike. The combination of heat and beer had made me feel drowsy. We exchanged news with our Slovene friend and urged him to come and join us at the bivvy for some decent caving. After hearing our tales of a large undescended pitch down Gardeners' World, he became enthusiastic and we arranged to meet the following morning. We eventually dragged ourselves away from the Soča's serene banks and headed back to Ravne for the slog up the hill.

The following morning, the sun was shining on Mig. An auspicious beginning. By the time I'd dragged myself out of my tent and made smash burgers for breakfast, Tomaž had walked up from Ravne. The two of us changed into caving gear, packed a tacklebag and followed the trusty string to the entrance of Gardeners' World. The lethargy of the day before had vanished. This was a trip with a mission - I was sure a large pitch series awaited us. We were underground well before midday. Two hours later we were at Concorde and things were looking good. "Rope free," I hollered. "OK" came the reply. We were caving together but at our own pace, "Rope Free", "Ok." On and on, down and down...

We were soon at the head of Zimmer, the place where Andy and I had turned round several days earlier. Clipping in to the newly added Y-hang, I abseiled down to a ledge to find three tacklebags and the end of the rope. Fifteen metres below, I could see the floor of a chamber. Surely another pitch would lead on, I thought. "Rope free," I shouted. Once Tomaž joined me on the ledge, I hammered in a quick bolt (keen as ever to show the Slovenes the advantages of hand drilling) and headed down.

I landed on a stable pile of boulders and looked round, shedding the first light on the chamber walls, searching for a way on. To the right, two metres up from the chamber floor, a black hole beckoned. "Rope free." While I waited for Tomaž, I walked round the rest of the chamber. A boulder slope headed down, under a drip. A rift on the wall opposite the pitch seemed to lead off. But it was the black alcove that gripped my imagination.



Climbing into it, we soon realised it was, in fact, a horizontal passage. We grinned at each other, shook hands and headed off to explore. It was covered in dry mud and draughting. We took turns going first, swapping every ten metres or so. Then, after about 70 metres, it seemed to close down. Damn, I thought. Looking round behind me, however, Tomaž had climbed over a boulder and was heading off into the unknown. The passage doubled back on itself and kept going. I took out my compass and discovered we were heading South East, into a totally blank area of the mountain. The gallery, kept going on and on, and I went with, overdosing on the pleasure of discovery, following a single track of footsteps.

The warm glow of Tomaž' carbide illuminated the passage, and I slowed down, enjoying the dancing shadows on the pristine walls. He had stopped and waited for me at a T-junction, which we named Prima Junction. The draught and horizontal passage continued to the right. To the left there was a climb down. Again we shook hands and grinned inanely. We decided to survey our finds and then head off to explore some more.

"10.53 metres," "20.16 metres", "15.33 metres" etc. It took a while before the full realisation of our finds began to sink in. And we hadn't finished yet!

We munched some food, left our SRT kits and then set off for more. Rubbing my hands together, almost quaking with excitement, we stormed on and on down cave. Normally exploration either happens so quickly that you hardly have time to think before you hit the next obstacle, or, so slowly that the romantic notion of being the first team to explore a shaft is lost while you shiver for ages under a survival bag. Now, as we pressed on, we were rewarded round every corner. How long had the passage been here, unseen and unknown? How long had water flowed along the floor? In places, it looked as though a stream had cut down. Perhaps we were standing somewhere above an active river???



Friendship Gallery (DW)



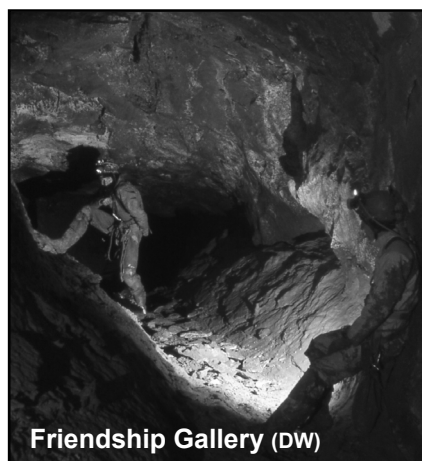
The Jurd Brothers in Friendship Gallery (DW)

Eventually, the passage came to an end; a boulder choke blocked further progress. Surely, it couldn't just end? I poked around, but then realised we'd lost the draught. Heading back the way we came, we then spotted hole on the right. The draught was back and once more we'd found a continuation. A slippery climb led down to further passage, smaller, windier and going. We shouted profusely, in English and Slovene, and moved off once yet again. The passage narrowed to a tube, by now the draught was so strong it kept blowing our carbides out. A pitch head lay ahead. And the sound of water. Throwing stones, we decided the pitch was probably about forty metres deep, and all the ingredients were there for more major finds, depth potential, draught, stream, dry fossil passage...

Surveying was a pleasure - four hundred or so metres in forty or so legs, including Zimmer. We decided to name the passage, 'The Gallery of Anglo-Slovene Friendship,' further cementing years of joint JSPDT/IC³ caving on Migovec.

We left Zimmer at about midnight and headed off up the pitches. I think we were both still full of adrenaline because, by about 3am we were at the top of Pico. We sat down and decided to wait for a while; I wanted to get out for dawn as it's much nicer than getting out in the dark. When we reached the entrance, the sky was beginning to turn pink. Breathing the sweet air of the surface, we sat and watched a glorious start to a new day. Still on an unbelievable high, we then left for the bivvy, keen to relate our discoveries to the rest of the team. Yet again, we all had something to celebrate. I could feel another day of drinking beer and sunning by the Soča coming on.

James Hooper



Friendship Gallery (DW)

Pivo... to pa je začasna rešitev
Beer... now there's a temporary solution

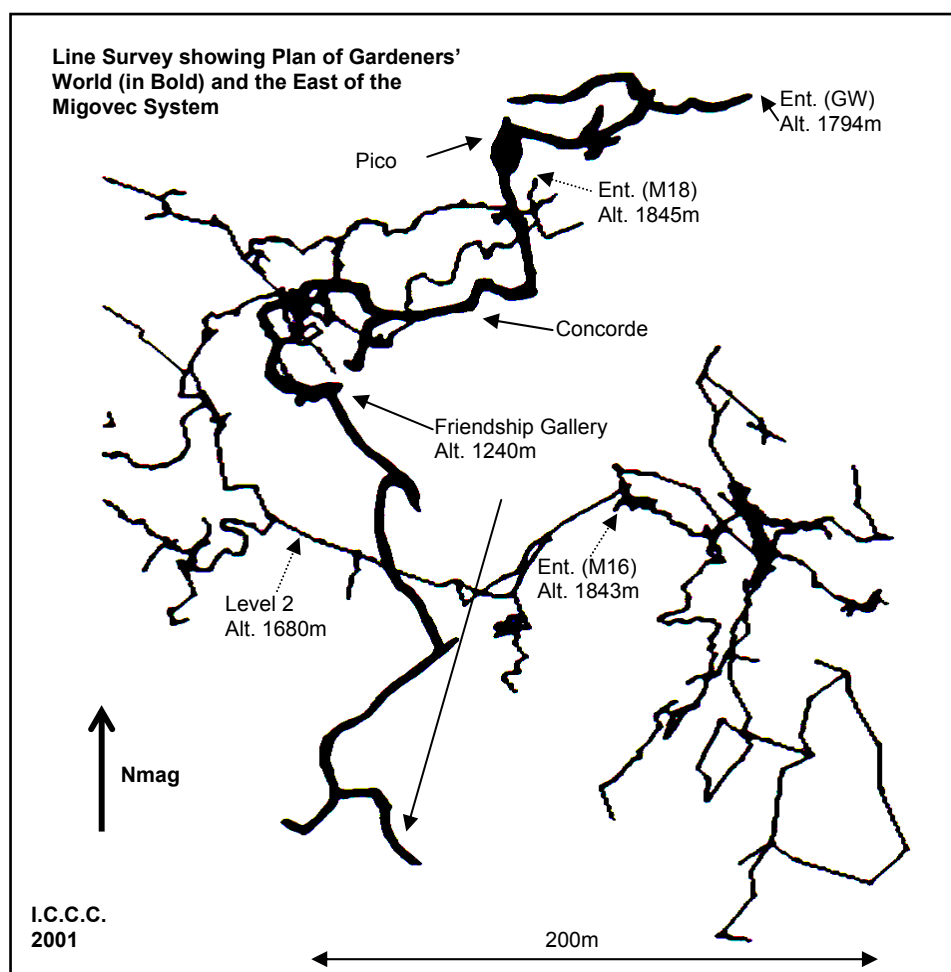
(Logbook 2001)

The Hotel and Back

The day started in the usual fashion, on the Komna Plain, with Hugh trying to avoid caving under the pretence of 'Dye Tracing'. After some deep fried stuff at one of the Doms (Refugios) and a brisk jog for 4 hours over Kuk, we were in time for our second breakfast at the bivvy. It was then that Tetley suggested that I join him dumping some dye in the streamway near Hotel Tolminka. The endorphins were pumping and before I had time to think it through, there I was, at Bikini Carwash, as far as I'd ever been in the system. Bloody Hell, I hate pushing, sitting around getting cold, putting shit bolts in, getting more cold, watching others put even shitter bolts in, and finally getting a bit chilly. Then it's usually only about 8 hours out (if, that is, you rudely skip the 'getting-cold-while-surveying' part of the experience).

This trip was good though, no titting around, just straight down, down, down (and a bit of up and across at Mig-Country and so on). Only a few 50m pitches on 6+ year old rope to go, oh and Sajeta, my 80m nemesis. I suffer a bit of the old vertigo, but my fear threshold has increased by about 20m for each year I've been caving. By this, my third expedition, I'd just about mastered Pico-Pot (60m), but I'd been dreading Sajeta. To be honest, I don't remember much on either the way up or down, I just remembered the cunningly placed chocolate wrapper at the top saying, 'Crime Fighter's first Rule: Stay Cool!'. Tetley was reassuring anyway (and went first!). The Hotel is actually a bit scabby, with mould everywhere. We didn't hang about - just dumped the dye and turned round. Tetley provided an interesting history of the route, and pointed things out. I feel he became a touch nostalgic every time he looked at the details of each PSS. I hit 'The Wall' about 100m from the surface, about 11 hours into the non-stop bounce trip to -600; I really shouldn't have done that carry in the morning... At least I didn't have a tackle bag.

Andy Jurd



“The Size of the Cave” by the Wonder Cavers

(to the tune of ‘The Size of a Cow’
by the Wonderstuff)

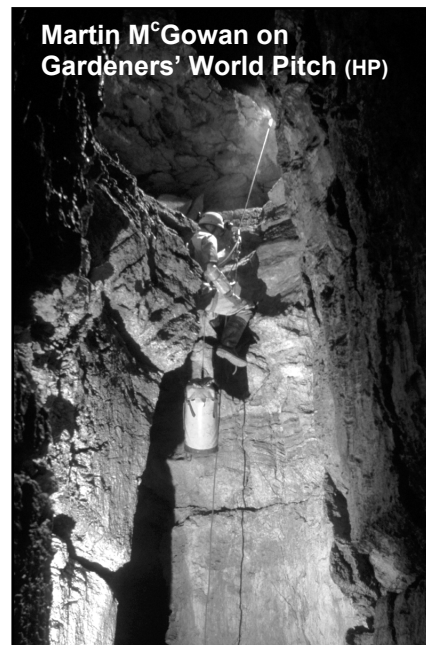


Don't you think it's funny
That's nothing what it seems
When you're down at the bivvy,
We all like to think that life is a drink
And were hoping that it tastes like rum-ski,

CHORUS:

You know that we've been drunk
A thousand times
But these will be the best caves of our life,
Life, it's not what we thought it was,
Bang, blast, will our carbide last,
We're running out of rope really, really fast,
We said, oh wow, we're so brave,
We're building up our hopes on the size of the cave,
Oh - oh - ohh - oh - oh,
The size of the cave.

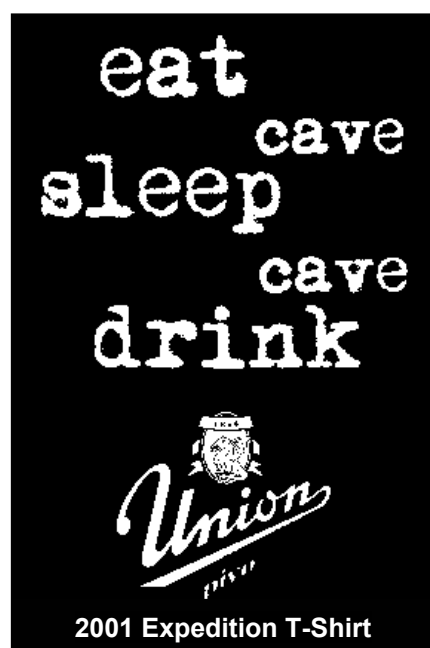
(Logbook 2001)



Further Logbook Extracts 2001

“Each lemming can only have one action. Semtex destroys 9 squares around lemming. For each lemming, test square and change action appropriately” - Andy J

“Bit of a nostalgic trip for Tetley - following PSSs from M16 to the Hotel (to place optical brightener in stream). Apparently either Tetley or Jim have surveyed the vast majority of way. 5th anniversary of Exhibition Road survey trip for Tetley. What were you doing 5 years ago? (Went across Gladiator's to scare myself shitless to put myself in the mood for Sajeta).” - Andy J

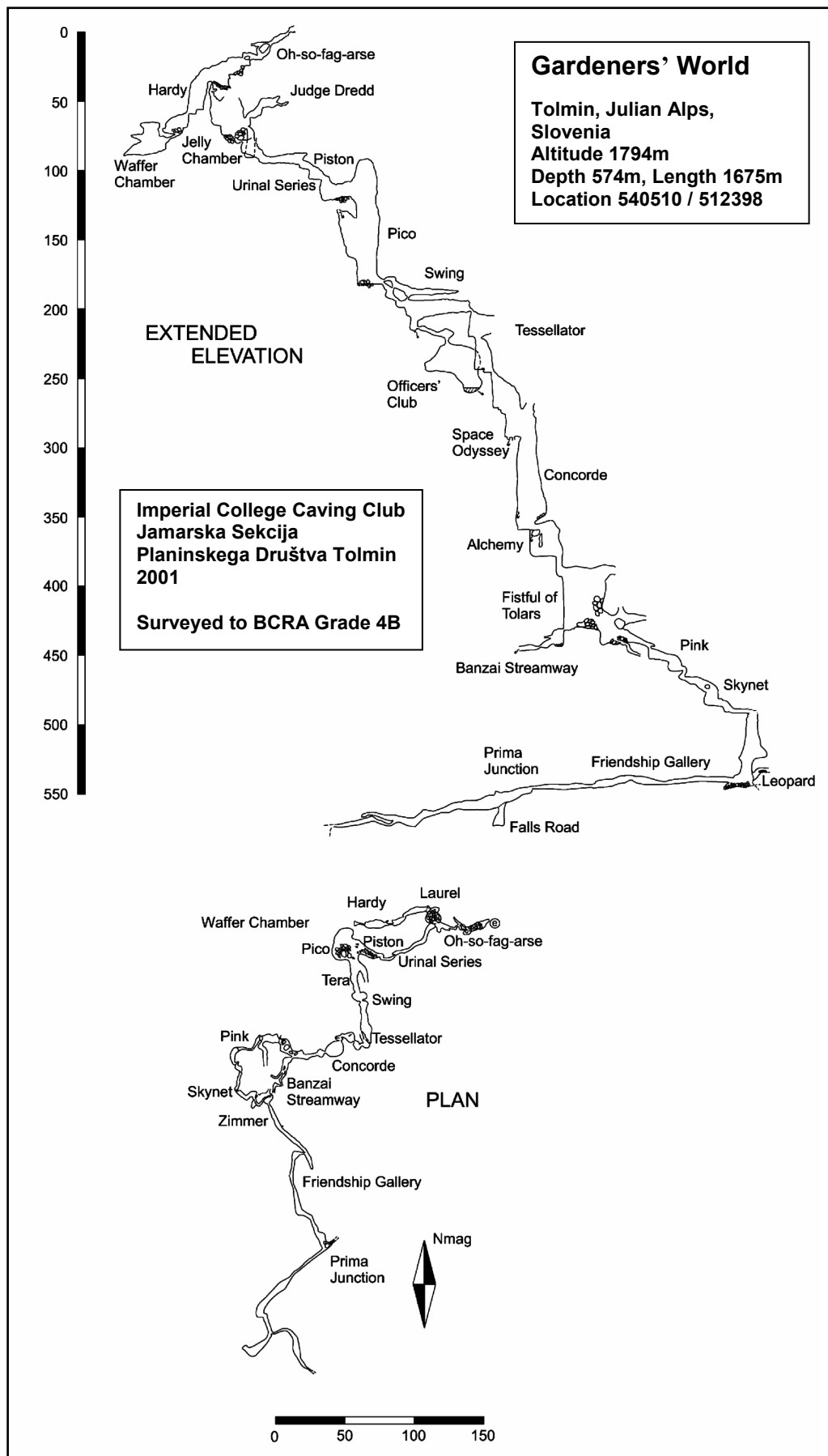


Ben and the Art of Speleogenesis: A ten year plan

“Within 10 years of continued expedition, the Migovec system will be the longest in Slovenia at 20Km. It may have reached slightly more than 1km deep but nothing that significant. Gardeners World will be linked in via Northern Line. Expedition Road will continue, M17 will join link with the west of NCB. Primadona will remain separate however. Several other entrances will be linked in too. Some of the world's hardest through trips will be in the system. A secret elf mars bar factory will be found at -990m. The Evans family will receive knighthoods for starting the expedition in the first place!”

Ben Ogborne

Gardeners' World Survey 2001



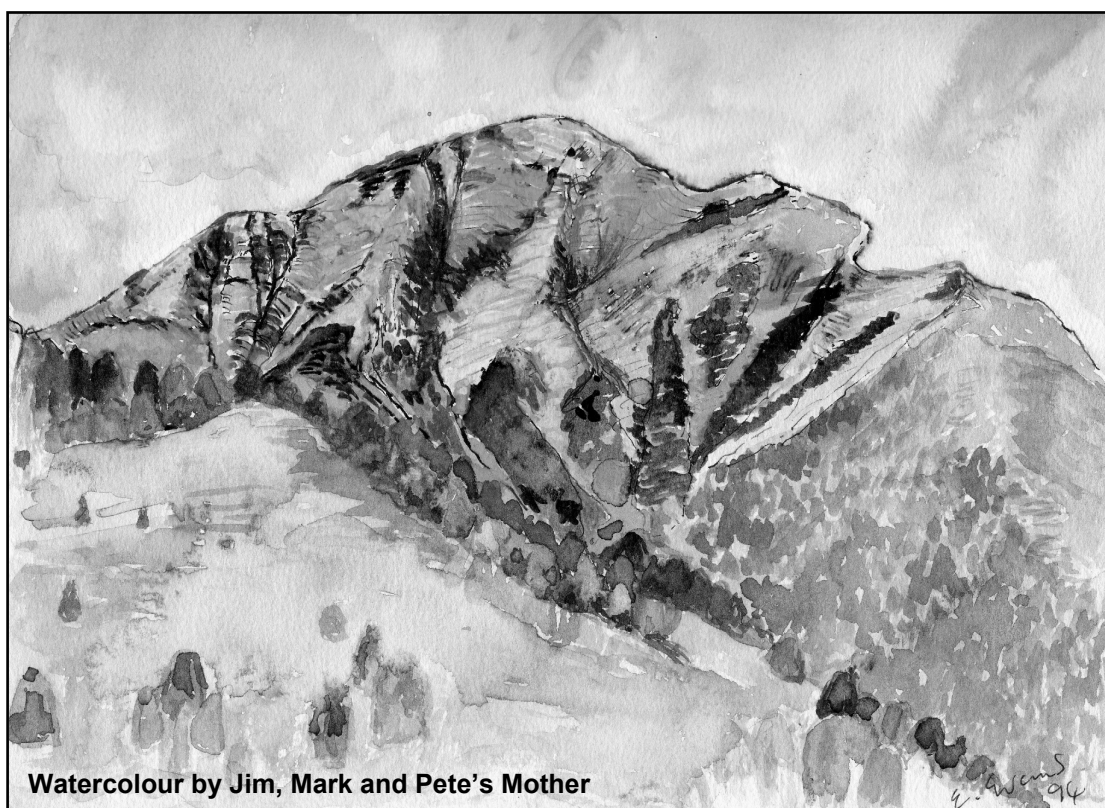
2002

No expedition - but Migovec remains

“Again, he felt a crude ecstasy. He could not have given the reason, but the mountain tormented him, beckoned him, held an answer to something he wanted. It was so pure, so austere.” Norman Mailer

In 2002, for various reasons, many ICCC cavers were unable to commit themselves to another summer on Migovec. By default, therefore, there was no expedition. The mountain and its caves, of course, remained.

James Hooper



An e-mail from Tolmin

Hello!

What a pity? that your ICCC did not come to Migovec this year. I beg you and all the other cavers do me this service that next year you will come to Migovec. Your work on Migovec mean to me a lot. I can not describe.

In Primadona we have two or three actions through this summer. For the end I am asking you for next year please try to come on Migovec.

Tomaž (24-09-2002)

2003

"Despite the gap of two years, bivvy life and the rules of 'comf' came flowing back, like a collective unconscious memory." **Martin McGowan**

By the time the summer of 2003 came around, an expedition was eagerly anticipated. Jim and Mark were out early to set up the bivvy and collect water. A high-top hire van was stuffed with all the necessary gear and the guitar of the new fresher, Rik. Going out as an innocent first year, he was soon indoctrinated into the ways of the club and found himself at the -600m pushing front from the very beginning. The Bivvy had a new musical dimension with him present; songs and classical guitar around the campfire became the standard way to while away an evening.

The discovery of Friendship Gallery two years previously and the sheer scale of the cave necessitated camping once more. 'Camp X-Ray,' at the beginning of Friendship Gallery, was the chosen location, with a snug two-bed camp built upon the crumbly sand. So arid was this fossilised passage that a hung up furry would partially dry overnight. In general, the method used was a one-night camp, pushing on day one while still fresh from abseiling the epic pitch-series, leaving the second day for a slow and steady exit.

In 2001, the rope had been left in the cave, stowed above the pitches in dry locations, making the initial rigging to the pushing front very quick. This tied in with the new philosophy of four-week expeditions that Clewin had decided upon to avoid spreading the manpower too thin. The weather was also, by all accounts, fantastic. Though Clewin kept his new down jacket on hand (bought after the horrors of 2000), the sun shone on and on.

Jarvist Frost

Andy, Shed, Tetley and Martin relaxing at the 'Sunset Spot'



"My original plan was this: Go surfing with a bloke called Liam for 3 weeks in Devon, get straight on the train back to London and then hop in the Migovec-bound van. Little did I know, innocent as I was then, what adventure, mystery and squalid-ness lay ahead..."

The start of "The Tale of Rik's Voyage to Tolmin," an unfinished 6 page logbook epic

The Zen of Mig 2003

Clewin Griffith (Expedition leader 2003) writes at the start of the expedition logbook:

Deep is better than shallow
Horizontal is better than vertical
Surveyed is better than pushed
Caving is better than carrying
Carrying is better than lounging around
Camping trips are better than epic trips
Union/Laško* is better than Laško/Union*
 *delete as appropriate

Deeper is better than shallow.....



A few bolts more: Rerigging Gardeners' World

I wanted to get caving as soon as possible, partly to get some momentum going, and partly to start collecting caving points which I could trade for days off later on. I headed for GW under the rumble of thunder and patter of rain that signalled the start of a veritable drenching. The thunder was still audible from Birth Canal pitch. I thought I might be kept relatively dry underground but it wasn't to be. Laurel, which is normally a bit drippy, turned into a shower of ice-cold water so I was glad to get down to the relative dryness of the Urinal series. To warm myself up, I decided to put in a bolt on the first pitch of the series. ERROR.

I hammered the rock first and it seemed pretty solid so I started tapping away. The bolt went in fairly slowly; I rigged the Y-hang and descended. Just as I was reaching the floor, there was a twang and a falling of rocks, one of which bounced off my shoulder blade. My presence was clearly not wanted by the cave god so I made a swift exit. The rock which had contained my new bolt was no longer there.

Clewin Griffith

Old Lagisms (A Lexicon of Bivvy Vernacular)

Powdered Cow	Dried milk powder
Vitaminski	Powdered vitamin sugary fizzy drink
TVP	Rank Soya meat substitute
Double Rumski	Double strength Slovenian rum flavoured alcohol (75% by volume)
Vodski	Vodka
Slop	(Cooked) Food
Shed	Dangerous wild beast found on Slovenian mountains, occasionally found looting nearby villages
Sunset	Cane up
2 nd Aid	Pills for hypochondriacs
Old Lag	Experienced member of ICCC aged 25+
Schonky	Blanket adjective used to describe anything dodgy, dangerous, loose or frightening, especially in caves
Twatty	Adjective used to describe sections of cave which are tight, annoying, unnecessarily awkward or unimpressive
Faff	To laze, to waste time or take part in pointless labour
Eyy-Oh	All purpose non-descript salutation
Blighty	Britain
Comf	Noun used to describe comfortable materials to sit or lie on, in particular, it describes chopped up bits of carrymat to sit on in the bivvy
Semtex	The cheapest cheese money can buy; on which the expedition lives
The Orb	The Sun
Clag	What clouds look like from the inside when enveloping the mountain
Blue cloud	Patch of blue sky on a day of unrelenting clag

Rik Venn

Only Five Bags Each: The setting up of Camp X-Ray



Everything went like clockwork as Colm and I made our way down to 'A Fistful of Tolars'. Then we saw the mountain of tacklebags waiting for us - merely five each. This wasn't a serious problem on the next few pitches as we rigged the rope and then zipped the bags down the line. The bags caused a major struggle through 'Pink' with its thin rifts and squeezes but eventually we made it down to Friendship Gallery. When I arrived, Colm was busy flattening a pile of rock and mud into a platform for us to sleep on and, in what seemed like no time, we were encased in fleece and buffalo bags. Dreams of unexplored passage helped ease the discomfort of our rocky perch.

At about 10am the following morning, we heard the jingling and jangling of the SRT kits of the two Slovenian cavers, Robert and Božo. They were impressed by the camp, even more so when we turned on the tunes (admirable selection by Tetley). Eventually we headed down to Falls Road at which point the Slovenians set off for the end of the gallery. There was an excellent bonhomie atmosphere as both teams wished each other success. Once down the Falls Road, we quickly reached the known end and extended it into a very tight rift. The Lower Falls Road is thus a No Go area controlled by the Inter Rift Army and needs lots of Semtex to progress.

Martin McGowan

Bring on the Drill

...suddenly the horizontal tunnel became a deep pitch - muddy and full of stones. Unpleasant indeed for anchoring the rope, we were very glad indeed that we had with us our old friend Mr. Bosch! In a short time we had rigged the upper part of the pitch. While I drilled the last traverse bolt I heard a familiar noise of 'bling fling kleng...' - my sky hook! Some English cavers later found it while surveying and christened the pitch in its honour. They brought it out and it still waits for me with Frantik in Tolmin.

Finally rigged, I started my descent, arriving all too soon at the knotted end of the rope. Below I saw a canyon with an underground river flowing past. A cavers nightmare - if only I had more rope! A lot of strong words were heard on that pitch.

Bogomir 'Božo' Remškar

The Big Rock Candy Mountain

Camping underground ranks among the most unnerving experiences of my life. Surrounded by small candles and lulled to sleep by the Blackadder soundtrack on the camp stereo, we gradually drifted off. Without a watch it's impossible to know how much time passes underground so when Clewin and I awoke it could have just as easily been six hours later or sixteen. All I knew was that when I woke up and opened my eyes the surroundings went from black to pitch black. We switched on a light, had some breakfast and sugary tea and set off to reach the bottom of the Really Big Pitch that had been half descended by Robert and Božo.

The pitch, named 'Big Rock Candy Mountain' after the traditional American folk song on Tetley's compilation album, was later found to be around eighty metres deep and I can't describe the feeling as my feet touched the floor. We went on to discover around 200 metres of an underground stream, turning back only when running low on time. We finally made the surface at around five in the morning, starving and absolutely shattered.

Rik Venn

In at the deep end: An introduction to 'Camp X-ray'

The phrase "dropped in at the deep end" seemed particularly appropriate to me as Tetley and I kitted up at the bivvy. We were the third team to check-in to 'Camp X-ray' and I was fairly nervous. Earlier in the week I'd made a load-carrying 'bounce' trip down to Fistful of Tolars, my first trip into Gardeners' World and my first below 200m. This time it was getting even more serious....my first camping trip....my first pushing trip....my first trip below 450m. Still, this was the reason I'd jumped at the chance to come out to Slovenia - it was a brilliant opportunity for me to experience true alpine expedition caving. Before leaving the UK, I'd read a draft report on the current status of exploration in Gardeners' World and so the cave had already adopted a form of familiarity with me. This, I was to discover, is dangerous, as what the report can never actually convey is the utter enormity of the system. My previous trip had already forced me to think on a much grander scale than that which I was used to. The big pitches are awe-inspiring in size and truly a sphincter clenching experience to descend. Needless to say, I was a much more humble caver when preparing to commence this camping trip.

At about noon, Tetley and I bid our adieu to the sun and lowered ourselves into the entrance series. I had a few moments of rising panic on the first rebays at the top of Pico, but the God-fearing hymns 'sung' by the Reverend Tetley from above helped me on my way down. After passing 'A Fistful of Tolars', I was now descending into new territory, the "Pink Series." I was struck, once again, by how isolated you are in a deep cave like this. There's only you, your partner and the surrounding rock to keep you company. Unlike mountain climbing, there is no easy escape and there is no method of communication with the outside world. Sometimes it was hard to keep these thoughts from praying on my mind.

Why Pink?

The pitches leading down through "Pink" are interesting from a geological viewpoint. The pink rock that lends the pitch series its name might well be a fault breccia. A fault breccia is formed by the grinding action of two rock masses against each other during a movement along a fault. The breccia in the Pink chamber consists of sharp angular pieces of white Triassic limestone embedded in an orangey-pink matrix. This was very much like the brecciated rock I found on the surface along the line of a thrust fault; leading me to speculate that this section of the cave was exploiting a similar fault.

James Roberts

We eventually descended Zimmer and followed the muddy gallery at the bottom to Camp X-ray. I was unsure what to expect, and was very pleasantly surprised. The sleeping area had been covered with blue tarpaulin to protect it from the draught, and a cooking area was set up next to it with a stereo directly behind. Apart from offering welcome 'creature comforts' such as a hot cup of tea and a bowl of warm soup, the camp was also a psychological haven that helped to drum out my growing sense of isolation. Tetley demonstrated the effect that the stereo has in raising morale by turning it off. As the silence encroached back into camp, so did the barely repressed fears that had been increasingly been nagging me since -400m. We quickly turned the tape player back on.



Eventually, we left the camp and headed off down Friendship Gallery in search of Clewin and Rik, the previous tenants of Camp X-ray. We passed the series of hand-lines they'd installed the previous day over particularly slippery areas of the passage and Tetley reflected on how not so very long ago it had been pristine and unscarred. We suspected that the others had descended a large pitch at the end of the gallery that been partially rigged by a couple of Slovenian cavers the previous night. Eventually we rounded a corner near the end of the passage and found a particularly knackered-looking Clewin sitting between some boulders waiting for Rik to come up the pitch.

After the usual greetings, the more important discussions regarding what lay at the bottom of the pitch ensued. It turned out that the pitch was pretty hairy, and some of the earlier rigging could be improved. However, at the bottom there was at least 200m of storming streamway ending in a short pitch. Even more excitingly, it looked as if a continuation might be going off in the direction of M16.....therefore a possible link!! Our spirits were fairly high at this point, though mine was soon dampened by the news that Rik had accidentally left the tape measure behind....therefore no surveying had been done of this new-ground. It looked like our trip was thus to be a "surveying" trip. My spirits dropped further when Rik appeared over the pitch-head as white as a sheet with eyes out on stalks. It looked to me like that pitch might be very hairy indeed!

After bidding farewell to Clewin and Rik, Tetley began to descend the pitch. Soon the call "rope-free" was heard and I began to lower myself over the side. A very muddy start on 9mm rope over a large "mud-supported" slab of limestone soon got me sweating. Then Tetley bid me "go-back", as he wanted to re-bolt a rather frightening looking re-belay. Curled in a ball for warmth at the strongly draughting pitch-head passage, Tetley called out for me to start singing loudly, as he was about to do something scary. Obliging I started out with my best "Jerusalem" and continued with various other extracts extending from Neil Diamond to Monty Python. I thought he'd finished with the "scary-bit" and so was now singing purely for my own amusement. Suddenly there was a cry "Sing loudly....now's the scary bit!", followed by a sound that sounded distinctly like someone falling down a pitch and a cry of "Oh Fuuuuuuuck!".

Silence.... More silence... followed by a flurry of equally unpleasant and alarming thoughts from me.

"Don't worry....I'm OK!"From the depths came Tetley's voice and an audible sigh of relief from me. It turned out he'd freed the dodgy Slovenian bolt by hanging on a ledge and falling/swinging out on the rope over an 80m drop. Rather him than me! After a further twenty minutes of faffing and bolting from Tetley, I was free to descend. My nerves were still jangling from thinking I'd heard Tetley's recent demise. Quite frankly, for me, it was a horrible pitch. Mud, loose boulders, precipitous drops, 9mm rope and free-hanging rebelay at -600m. I was very glad when my feet hit solid ground.

After a quick break at the bottom we headed off to investigate the streamway. Our first choice was to follow the active streamway, but this soon tightened up and became impassable. We realised there must have been something else that had got Clewin and Rik so excited, so wriggled back the way we'd come and found a fossil streamway above the active one. This one was much more like it, commodious by comparison, with a beautiful oxbow containing a smooth sandy floor which had been untouched for thousands of years. We reached the small pitch at the end of the streamway and a quick look down revealed a 15m drop with the passage continuing into what appeared to be a larger chamber. It was quite exciting to think that my light was only the third to have ever illuminated this place. We decided to survey back from here.



Initially it was quite good fun, and as a geologist I was used to taking compass and clino measurements. However the passage was long and sinuous....and therefore took ages to survey. It was getting later and later, and we were getting colder and colder. **Eventually, after thirty two survey legs, we found ourselves at the bottom of 'Big Rock Candy Mountain.'** It was now about 2.30am! With a strange set of emotions I began to ascend the pitch. I was knackered and relieved to be heading back to camp; but I was also pretty nervous....

Eventually, utterly traumatised, I crawled into Friendship Gallery. The pitch had scared the heck out of me....and I really wasn't sure if I wanted a repeat performance the next day. Back at camp, Tetley began to cook up some food. Blackadder was put on to the camp radio and, after a swig of Limoncello, my nerves began to stop jingle-jangling around. In temperatures barely above freezing we stripped off our clothes (oh the pain) and then donned layer after layer of dry clothing and wriggled into two sleeping bags (oh the pleasure). Even after all this, sleep eluded me for hours. I suspect it was due to the strangeness of trying to relax 550m below the surface, though having a loudly snoring Tetley beside me might have had something to do with it!

Even when camping on the surface, getting out of your sleeping bag is a painful procedure; getting out of the dry warmth and putting on freezing cold and wet caving outfits demands hours of mental preparation and hot tea! Fortunately Tetley had already rustled up an excellent sausage and smash breakfast, and a not so excellent tea/cheese/mud concoction to drink. Despite the fact that I'd strained my arm, and despite my fear of descending Big Rock Candy Mountain again, I'd just about convinced myself that I did want to return to the bottom when we heard a rumbling and banging down the passageway. It was Colm and Brian....the next party. I was, to coin a phrase, "as happy as a Frenchman who'd just invented self-removing trousers" as it meant that they could carry on exploring and we could begin the long ascent out.

We took it slowly but surely, stopping for Tetley to add in a few extra bolts while I swigged back some pain-killers for my arms. It's strange how your perception of "deep" changes the deeper you go. On my first trip I found that when I was at the top of Pico (as deep as a good-sized Yorkshire cave) I felt as though I was almost out. Now, it was at the top of Concorde that I felt that I was nearly there.

We exited the cave at around midnight, 7hrs after leaving for the surface. As usual it was a relief to be out into the open world again. However, on the trek back to the tents the wind was blowing a real gale and there was rain in the air. I couldn't help thinking it was probably more pleasant down at Camp X-ray.

James Roberts

Logbook Extracts 2003

"The cave is like a disco." - Robert Rehar

"The bivvy is like a restaurant." - Božo Remškar

"It swells up a bit when I get hot." - Pete Jurd

"Brian, Spread your legs." - Jan

"Played buckaroo with a passed out Tetley." - Everyone who hadn't passed out.

"My shit smells lovely," - Shed

"We were dissuaded from a 3am start." - Jan

"There are two views with respect to making popcorn - lid on and lid off."

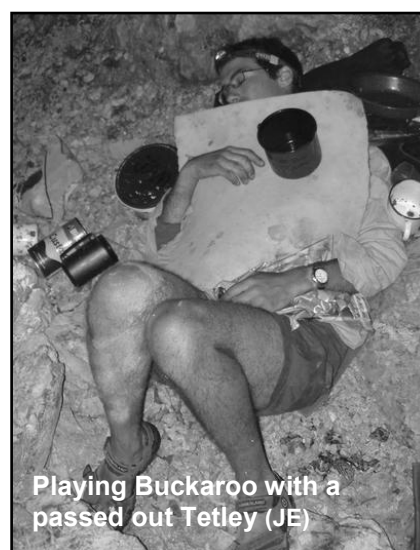
Rik: *"How old are you?"*

Rik: *"And you're the same age as Goaty?"*

Rik: *"Jesus Christ, I thought he was like 40."*

James: *"26"*

James: *"Yeah"*

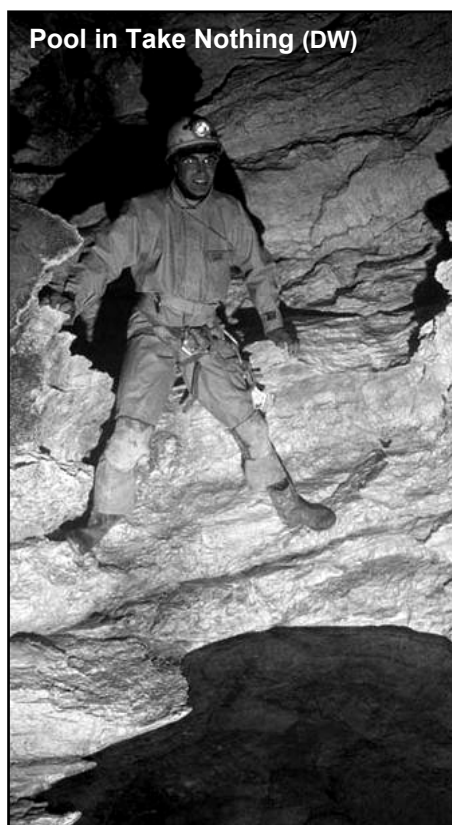


Playing Buckaroo with a passed out Tetley (JE)

The Luck of the Irish: The deep leads multiply

I got woken up at 6:30 am by Martin worrying about Clewin and Rik. I was sure they were just having lighting or fatigue problems, but nonetheless I dragged myself to the bivvy half asleep and prepared a sandwich. I was slowly getting my gear together when they arrived, knackered, after a ten hour exit, so I went back to bed.

Eventually, Brian and I headed underground at about midday and reached the camp at about three, just as Tetley and James were getting up. After a quick hot chocolate and exchange of news we said goodbye to the others and headed off to 'Big Rock'. I wallowed in mud at the top before reaching the vertical bit with a nasty free-hanging rebelay. At the bottom, we stayed high in the fossil rift, the stream gushing beneath us. At the end of the rift, the limit of exploration, we climbed down into a chamber, later named Playboy Junction, using a sling round a small spike for the last section of the climb.



Pool in Take Nothing (DW)

Brian had already run off and I followed him, going straight on, to a pitch into a chamber. The chamber went down at a familiar angle - the same angle as at the bottom of Sys Mig! However, Brian found a slot that led to another pitch. We bolted this and entered a chamber. At the bottom, a standing-room phreatic tube led off, the start of the Leprechaun series. The passage soon forked, so Brian went right and I went left. Brian's route soon got a bit tight so he joined me via another tube and we pushed onwards, and entered a high canyon passage. This continued for about 70m before entering a chamber with an eight metre pitch. We left the lead and surveyed back.

At Playboy Junction, Brian disappeared down another passage and I followed him down a series of climbs, later named Take Nothing, along a stunning fossil passage with crystal clear pools. Soon we could hear the low rumble of a streamway. It sounded huge. Round a few more bends the stream arrived on the left and plunged down into a pool. A strong draught, a big stream, the expedition had a storming lead. Contented, we climbed up and headed back to camp, surveying Big Rock Candy Mountain on the way up.

Colm Carroll

Camp X-Ray Logbook Extracts 2003

"Cleanliness is next to Godliness."

"A poem: Enjoy your stay, at Camp X-Ray."

"Tetley's Top Tips:

- *Don't push leads and then leave others to survey - you'll only feel guilty!*
- *Don't do silly climbs and break a leg etc - you'll suffer if you do!*
- *Don't shit underground - it's a load of crap!*
- *As well as leaving PSSs all over the place - leave notes to explain what's where and what's been surveyed.*
- *Be paranoid about keeping dry clothes and pits completely dry!*
- *Make notes as to what's needed at camp and as to what gear is where."*

"Tetley's not so wise words: 'Wibble, Penguin, wibble, wibble, wibble...."

Slovene Lessons: Time off in Tolmin

Two weeks had flown by. First the carries, then settling into bivvy life, and finally magnificent gallery passage being discovered by the furlong. We were in benevolent mood. The perfect excuse for a celebratory session in Tolmin.

We romped down the hill, seeming to float past the shepherds' huts all the way to Ravne. The van trundled down the zig-zags, a brief stop at the hydro to decontaminate ourselves, and on to the Odisej for some well earned fodder. What followed can only be described as carnage.

We ordered 'food.' Food arrived, loaded on a tray. The poor waiter never stood a chance. Ravenous cavers had staked out the kitchen door, ready to pounce. No sooner had the waiter appeared, than he was virtually mugged, his tray being emptied of goodies in mere milliseconds. Pizza, Shnitzel, Salata. Laško followed Union, and Union followed Laško. Andrej arrived, followed shortly by Simon, their eyes growing wide at the tales of our ever expanding system. Soon the sun gave way, and the moon rose. The gentle tinkle of music danced up from the river. Time to hit the Sotočje, the confluence of the Tolminka and Soča rivers.

The jovial atmosphere heightened as we drew near. The whole of young Tolmin was there, partying, laughing, soaking up another summer night. It was time to try our language skills on the locals – the only problem being that 'Veliko Pivo' doesn't get you very far with the fairer sex. Our strategy changed. We were to play the eager foreigners, looking for someone to teach us the language. A trio of local girls obliged, just returned home from university in Ljubljana for the summer. "Klitoris" – "Hello". Hmmm, not convinced we're going to get very far here.

The rest of the night drifted away in a cloud of Union, and we were soon magically transported back to the van, parked in the supermarket car-park. A warm night with clear skies, we all collapsed on the grass outside the van.

6AM... Tolmin's ever tolerant police moved us on. I found a spot in the van to continue my slumber – on top of the gear stick. Soon it was time to shake off hangovers, fill up on kava (coffee) and sladoled (ice cream) and reset the brain to 'bivvy' mode for another two weeks on the hill.

Colm Carroll

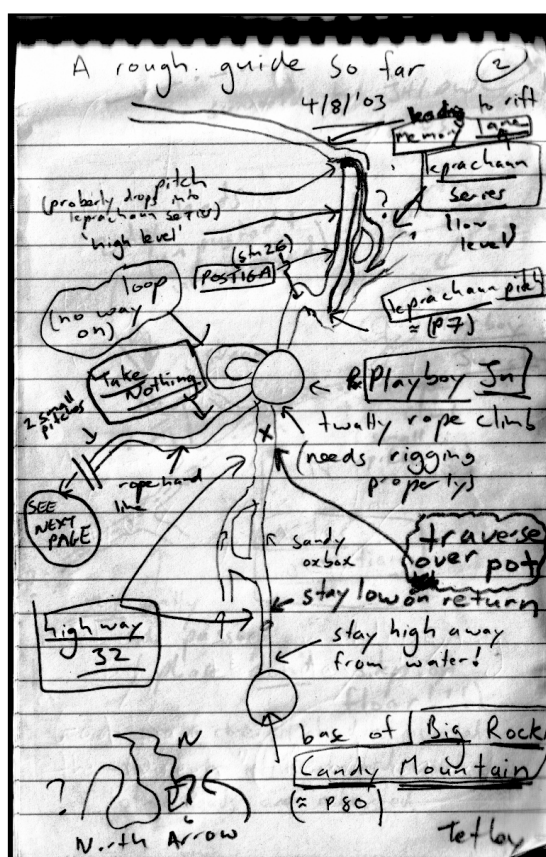


Sotočje by day (JE)

The smooth, steady all-electric crew

Inspired by the tales of gorgeous passageways at the bottom of the cave, some of which had even been surveyed(!), Tetley and I set off on a Sunday morning for a nicely paced trip down to Camp X-ray. A quick soup break was followed by a wander down Friendship Gallery to Big Rock. The descent down this creatively rigged 80m pitch on 9mm rope wasn't entirely helped by a stretched short cowstail, thanks to some serious boulder-dragging work in Yorkshire a fortnight before, but lower down it proved to be a rather pretty shaft. A wander along to the end Highway 32 followed, past an intriguing pool and classic phreatic oxbow in what is mainly a rift passage.

With an excited Tetley chatting away, we first set off to look at the recently found Leprechaun series, standing-room phreatic tubes followed by a rift section with tall avens. This tall passage exuded the stillness of a Victorian library - it didn't feel like anything had happened here for an awfully long time. However, even as the second pair of people to see this place, there was still rather a detached tourist feeling, and so once we'd reached the unrigged pitch we turned around.



Back at the junction, we headed off down the other dry passage that Colm and Brian had found, following their footprints in the thin layer of sand at the start of the passage, but rapidly losing their trail. At the first free-climb, the footprints stopped. A flat unmarked brown mud floor could be seen at the bottom of the climb. Unsure if they had gone some other way, I climbed down, jumping the last couple of feet and sinking ankle-deep into the white sand that underlay the millimetre-thick skin of brown. Feeling a little guilty, I kept to one side of the passage and tried not to make too much mess, but each step scattered piles of white dust across the once uniform brown floor. The story was the same at the next climb, where the footsteps of the previous two were reacquired - they had evidently traversed over the top of the climbs. Following the trail down, we came to a short drop. Peering down with our electric lights we could see a pool of water at the bottom - and no footprints or signs that the others had been there. At last, we thought, the limit of exploration. We quickly agreed that we should survey back to Highway 32 and then return for some pushing action.

At the gear dump, we sat down for a break, and realised we needed decent names. Even the time-honoured tactic of using cave features for names, (as in Pink) seemed to fail us. As a displacement activity, I climbed up to poke around in the short phreatic loop passage opposite the pitch, and found a flat piece of rock that to me resembled a hand giving a victory sign. I passed it to Tetley, who reckoned it looked more like a rabbit's head, so we propped it up in the sand next to the PSS, and agreed that we'd call the place Playboy Junction. Tetley suggested 'Take Nothing' for the cascades, inspired by the US caving conservation motto - 'take nothing but photographs, leave nothing but footprints'. We were certainly doing both!

Refreshed, we set off for the unknown. We returned to rig the climbs, excited by the sound of water in the distance. At the bottom, beyond a lovely static pool, we soon arrived at an active stream passage that crossed the fossil route. Crossing over the water, the dry passage divided. Our joy quickly became disgruntlement. We saw footprints in the sandy floor.

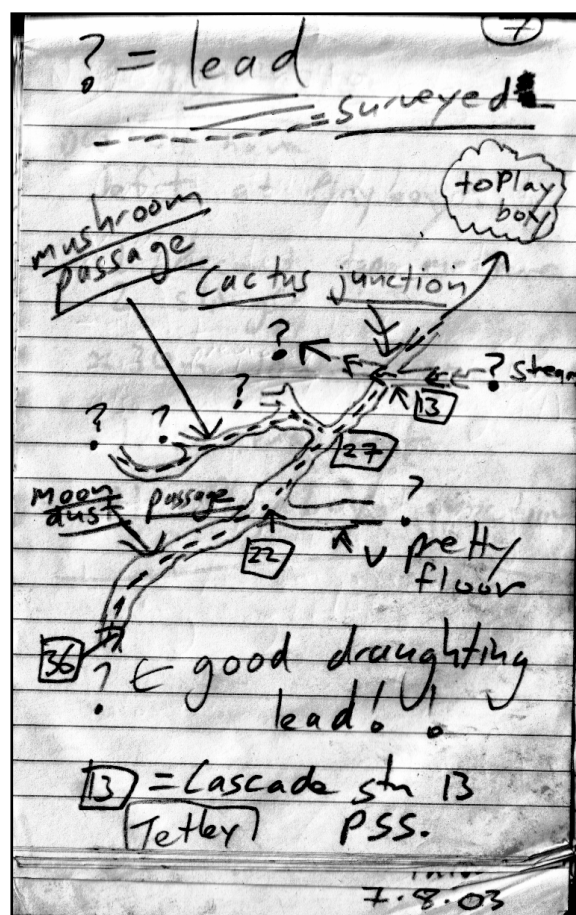
The thrill of original exploration, the highlight of any expedition, gave way to annoyance. With hindsight, I suppose, it brings home how much it really means to be the first person to shine light on a new part of the planet. Surveying for an earlier team is nothing like the same, even if we were only the third and fourth people to set foot on this part of the cave. As a small consolation prize, at least we, as the surveyors, could name the cave, so in a fit of originality, we named the spot 'Cactus Junction' after a piece of rock that we found which looked somewhat like a cactus plant. The main dry route (which we named Moondust passage) carried on, initially in a wide bedding plane with a deep-rippled white sand floor, becoming more rift like later on, with all horizontal surfaces dusted in white.

On our way back, we noticed yet another junction with a fossil inlet which turned out to be quite exquisite - a canyon cut into the dip of a sloping bedding passage, small cascades with pools of pure white sand, and seemingly even thicker white dusting on other surfaces than the main passageway. Delicately moving upwards, we reached a point where the flat sand floors gave way to something with a surface rather like popcorn covered in white sauce. Cautiously traversing to avoid any floor contact, we carried on a little further to where the passage narrowed and levelled out a little - still ongoing, but rather delicate. Carefully returning to the main passage we decided that this inlet should be left undisturbed if at all possible. (It remained untouched for only a year - in 2004 it was pushed and named Greed).

Both elated and somewhat subdued by the experience, we returned to Cactus Junction, surveyed the first part of Moondust, and took a few photographs. After midnight we returned to camp - cooked and brewed up to Blackadder. The air near camp was quite dry - my thermals were fine to sleep in after sitting around for a bit.

The next day we surveyed the side passage on the right at Cactus Junction (our first bit of exploration), taking the higher (left) branch at the first fork (called Mushroom Passage after some rock/mud formations). It is a varied small passage with mainly dry sand and mud floor, but occasional little pools, and what looks like a small oxbow at the start that actually turned out to be yet another lead, but after about 60m of cautious progress we turned around and surveyed out.

When we'd surveyed back to the first junction, we realised that the straight-on/down (right) branch would probably have been a better bet than Mushroom, but at that point we heard Brian and Martin in the main passage and went back to swap information.



When they'd gone off to continue pushing Leprechaun, we finished the Mushroom survey, then completed the rest of Moondust, even managing to get as far as a section that Colm and Brian hadn't waded through, and took more pictures - including Tetley's first cave photograph, though unfortunately he only had me as a subject! Back to camp for 8pm: Soup and Smash and then off for a nice steady trip out. Although the warming glow of carbide lights was missed, it was certainly less faff just caving on electric. We reached the surface at 2:30am feeling quite fresh to an extremely warm night and a welcome cold beer - thanks Tetley!

Dave Wilson

The Crock of Gold: Digging at Depth

My second trip into Gardeners' World was with Brian Cullen, and we planned to continue the pushing of the large horizontal passage that he had previously found with Colm. As I slithered down the mud slopes of Big Rock Candy Mountain, one could not help be impressed by the placement of the bolts. I imagined the Slovenians swinging like apes to be able to get the bolts in the roof and not the mud. After this humungous pitch, I was glad to be on solid ground instead of playing around on slimy muddy rope like a greased monkey. At the end of Leprechauns' Way there was a short drop, which was soon passed by an aerobatic display of free climbing, holding the rope in between your teeth and trying to tie knots with the free hand. The passage continued with crystals twinkling in the walls like gaudy Christmas decorations, and false floors across the passage way for you to limbo under. The floor was crystalline sand that glittered until it was desecrated by the marauding boots of the cavers. Ah, so much for leaving only footprints.

We wandered down the passage going 'ooh' and 'ah' like a pair of moronic, awe struck tourists looking at the formations in a show cave. Thinking 'that flake looks like Iceland', 'that looks like...?' Reality soon intervened as we reached a pitch, so we ambled back to start the survey. When we reached the pitch for the second time we started to bolt it to overcome the insidious cold. After losing all the teeth on two spits we finally got a third spit into the rock. Now running low on spits and freezing cold, I looked for an alternative way down the pitch without placing another bolt. So a traverse was found over the semi-bolted pitch-head to an adjacent hole which allowed a rig around several flakes.

At this point exploration was reaching boiling point, I abseiled down the slope knocking off the odd bit of loose crud. It must go on I thought, despite the sign that we heading into a flat bottomed chamber with no obvious exit. Within seconds of getting off the rope I was standing at the end of the cave. It was a miserable slot about 75 cm wide and 5 cm high which the wind blasted out of - an old siphon full of deposit. Brian came down and also cursed and ranted at the gods. Then a moment of inspirational genius from Brian which lifted us from this morose gloom.



"Why don't we dig out the sand?"

I was a sceptical at first of achieving any success, probably after too many years of hearing people going on about how dig X, Y, or Z was going to break into the "Master System". Anyway, exploration fever soon gripped us both as we manically dug out the sand with our descenders. Soon there was a space big enough to squeeze my legs into the hole and then I pushed the sand to the sides with my feet. Squirming in on my front I dug more sand out, and had to be pulled out by Brian as I had partially covered the entrance hole with my spoil. Then came a moment of panic as we realised that we'd just buried our SRT kits in our haste to expand the hole. Once we had recovered our means of escape, we progressed at a steady pace until I just slipped through to the other side and then enlarged the exit for Brian. The passage started as a low crawl, but soon enlarged to walking size, but more importantly we reached a junction. This cave wasn't dead it was going and going, we had hit the crock of gold that was at the end of the rainbow pitch.

Now we did a bit of a naughty thing, I suppose we have a bit of a devil in us, but we ran up the new passage to see how it went, and it eventually reached a storming rift over 20m high. A little bit more surveying then back to camp and dreams of measuring yet more "caverns measureless to man".

The next day we set off down Friendship Gallery to finish our survey and continue pushing, but soon found that Brian's 'Petzl Stop' catch would not open. The only way to thread the rope through the Stop would have been to take the Stop off the karabiner and hold it unattached while you threaded it. The thoughts of dropping a descender down a pitch stopped us from going any further. The idea of down-prussiking down Big Rock was very unappealing.

So our little epic seemed all to be over and we headed out to thoughts of drinking vodka around the Bivvy fire and tell stories of gargantuan passages storming off into the blackness of the empty mountain. As I ambled up Zimmer pitch I heard Brian calling out. Something in his tone as the message echoed round the vastness of pitch made me sit up and listen - could it be?

'The rope is what?'

'Frayyyed through the sheath!' reverberated Brian's response.

Ever so gingerly I changed onto the frayed section of rope, singing loudly to block out all stupid death-obsessed thoughts, and continued to prussik, ensuring that I kept the rope well clear of the wall to prevent further damage. Near the very top of the pitch I finally came across the damaged section. The rope had half the sheath missing. I transferred my ascenders over the damage before whipping out my knife and cutting the rope. At the top, I pulled up the stump of rope and tied it off to prevent anyone plunging down the pitch. Well that had buggered the next team down.

The drama was over, the expedition continued finding passages. I, on the other hand, got a badly infected finger and had to have it cut open to release the pus and so I never got back underground.

Martin McGowan



Hanging by a thread

"The rope's frayed," came a muffled cry from above. "What?" I shouted back, not wishing to believe what I thought I'd heard. I stopped prussiking and looked up the thin line of rope towards the dim glow of Dave's light above. We were hanging on by a thread, in the small hours of the morning, three quarters of the way up Big Rock Candy Mountain. It was almost too horrific to contemplate, the fear of the rope, the thin line to safety, being severed. "But it never happens," I told myself. But I knew this wasn't true. It can, and does happen - just very rarely. The flood of thoughts was overpowering and there was nothing I could do. A week earlier James had had a similar experience when I'd derigged the badly rigged Slovenian rebelay. But then, at least, I knew I was alright. Did Dave? What was going on up there? Forty metres above the floor, swinging in near darkness, I started to lose faith and ponder the precariousness of our position.

"Rope Free," Dave cried from above. I continued on up, unsure of the situation. I was wary, but trusted that Dave wouldn't have said "Free" unless it was safe. I passed the next few rebelay and continued up the muddy rope to the top.

"What was that you shouted at that rebelay?" I asked, relieved to be standing on solid ground.

"Sorry, I thought the rope had frayed but it was just covered in mud," Dave replied.

Two days later, back on the surface, I asked Brian and Martin how they got on. It was then that I'd heard about Brian's experience on Zimmer. Ten metres from the top he looked up and saw that the rope was caught on some rock. As gently as possible he prussiked up to the top. Only when he was above the rub point did he examine the rope to find that it had rubbed through the sheath and had started at the core. Hearing this, I plunged into my own thoughts, and, although I'm not superstitious, I reached out and touched the nearest piece of wood I could find.

James 'Tetley' Hooper

Shed and Jan Take Nothing

I remember sitting outside GW, the cool air blowing out of the entrance, that bit of nervousness before a long trip underground and the realisation that the outside world is actually quite nice. We probably started in the afternoon confident we would make camp in good time and do some pushing. I'm not sure why we were confident of this, maybe because everyone said it was pretty easy. For the first few minutes I was uneasy, still getting used to the cave and still close enough to the surface to do a u-turn and be back at the bivvy by a warm fire and people. I was over cautious on the pitches; on Pico I let Shed go two or three rebelayes ahead and then he had to wait at the bottom. This was his first time in this cave.

After a considerable time we were at the top of Fistful of Tolars, the limit of the exploration in 2000, and, I reminisced, a place that Bruce and I had discovered on my last trip in GW. Shouts now echoed up the pitch, Martin was trying to communicate something and we waited for him to come up to inform us of Brian's incident on Zimmer. I must admit, not being familiar with Zimmer I assumed a certain amount of exaggeration, perhaps to protect a stonking lead. At the time Brian seemed perfectly composed.

After an even more considerable time, and the joys of Pink, we reached a dark gash in the floor we assumed was Zimmer and one of the sights in all my caving experience that really made me shudder - a flick of the rope, a suitable notch in the rock and a nice big free-hang was an unhealthy combination. Fifty metres of bouncing by Brian on the end of the rope had done enough to completely remove the sheath and to start cutting through the core. What had gone through Brian's mind when he saw it, I can only guess.

Shed had been ahead of me and as we discussed, at length, our tactics for rigging a knot change, I made it clear that I'm a strong believer in first come first served. So he re-rigged the pitch head with 10m of rope we'd salvaged earlier and descended. I was impressed with the speed in which the job was done and it was an remarkably exposed bit of temporary rigging too, 3m from the nearest wall and 50m up. Touching down at the bottom of Zimmer for the first time I felt a real excitement. This is why I came caving to Slovenia, this clean washed shaft seemed to have sliced through the mountain leaving two muddy, disembodied, holes. We may have descended 500m but now it seemed we had come to the entrance of a new cave, just asking to be explored. So it was we made our way into Camp X-ray a record eight hours after entering GW.

The next day sparked to life in the light of a carbide flame. With the stereo on, we started the task of making tea and something resembling breakfast. Having studied Tetley's copious notes we chose to have a look at Take Nothing, leaving instructions for the next party so they could find us. Friendship Gallery and the top of Big Rock were muddy on a par with OFD in Wales. Making our way to Playboy Junction, we then turned left down the dry stream way of Take Nothing. Following a draught, this nice bit of cave crosses a stream and continues promisingly, following footprints we passed a PSS, then a hand written note informing us we were 10m from the final survey station, and finally...

'You have reached the final PSS, from here on is virgin passage. Yours to the Soča! Tetley.'

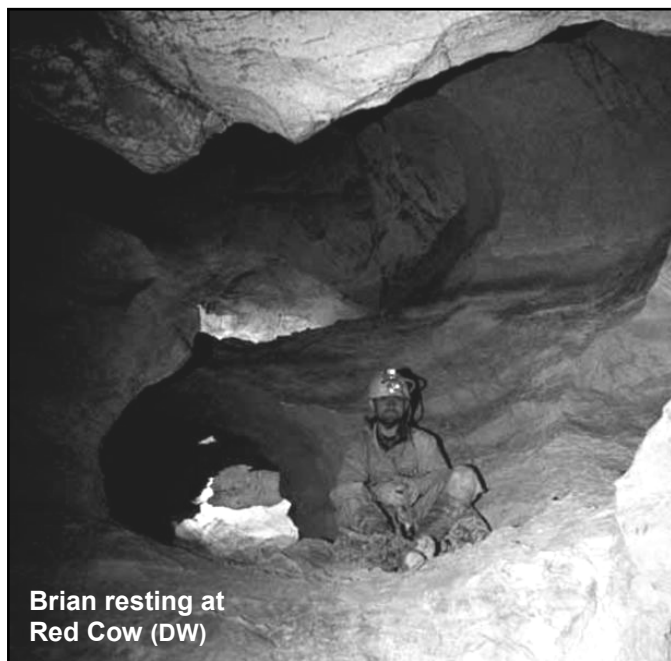
With little further need of encouragement we took our first steps of discovery, with the stunning finds in other parts of the system surely now it was our turn for glory. Abruptly our nice passage changed into an awkward bedding angled at 45 degrees; Double Think was our name for it. We climbed up and down still following the draught into a low passage and a short pitch and that was it. The place didn't feel promising and the next trip subsequently bottomed it and found a dead end. Presumably some digging might take it somewhere, but I remember being pretty disappointed. On our way out we met Rik and Pete Jurd, who had thankfully re-rigged Zimmer. Soon enough we were back in the outside world and to that fire and friendly faces.

Jan Evetts

Back for more

I really wanted another trip to the bottom to push and photograph. After a degree of persuasion, Brian agreed to join me and before long we were down at the working face at the end of Leprechaun. Beyond the point that I'd got to with Tetley, the passage definitely improved in both variety and cosmetics - larger phreatic tubes, more white sand on the floor, interesting climbs and short pitches.

Like in Take Nothing, the character of the cave here was completely different from both the tight entrance series and large chain of deep pitches found in 2000, and the more awkward rift/short pitch character of 2001. Additionally, it also seemed quite different to anything in the main Migovec system.



Brian resting at
Red Cow (DW)

The first pushing task was to rig down a small sloping pitch after the ascent up a long rift. Since the rock here was much too decayed for spits, the only secure belay was a very large boulder a short way back down the rift. The rope rubbed on several edges between belay and pitch, but even with 9mm rope, the rock was destroyed more than the rope. Just on from the pitch bottom, there was a dubious overhanging 4m climb down beyond a couple of small holes in the floor. The only useable natural belay was a large thread, too badly placed to be any use for the climb itself, but directly above a body-sized hole. After abseiling through this tight gap, the main passage could be regained via a short crawl.

A little distance further, the passage dropped about five metres and turned a right-angle into another phreatic tube, with the corner itself being swirled out and slightly overhanging in what seemed to be a common style for major changes of direction. Another natural belay, somewhat less solid than the previous two, was sufficient for a descent, with the route carrying on past a few more corners and climbs down to a junction at a shallow pit with a crawl off to the right and a climb up leftwards to the base of a sloping aven. The cave just continued, north into blank mountain. We were thrilled with our discoveries.

We returned to Brian and Martin's final PSS, and surveyed up to the junction at the pit, including a nice leg in the ascending rift that we had to split because the 30m tape wasn't long enough! After a short sleep at camp, we had a steady-paced trip out; a few pitch-head photos at the top of Space Odyssey and Tessellator temporarily blinded Brian in the process.

Dave Wilson

The First Law of Bivvy-Dynamics

All edible matter tends towards smash burgers.

All non-edible matter tends towards ash.

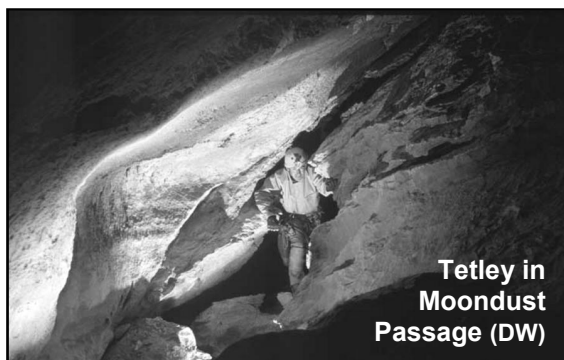
Jan Evetts

Footprints on the shores of the unknown

Pete Jurd and I are both men who like missions and the plan we'd formulated while sitting round the fire was certainly a mission, with a grand aim and a fixed time frame. We'd agreed to derig camp X-Ray, dragging all the bags through the Pink Series in time to meet a group of six cavers at the base of Fistful of Tolars at noon the following day. To derig in a day.... It was feasible, we thought, but only just. That was what we had to do. What we wanted to do, in addition to this, was find and survey lots of new cave, and leave a good lead for 2004....

I woke at 7 o'clock in the morning, rubbing my hands together. I was already wearing my furry and keen to get going, barely containing my excitement. I was soon out in the cold, fresh air, and woke up Pete who seemed as keen as I was. Down in the bivvy, with no-one to tell me off, I lighted the stove in my "I've no patience for warming this thing up gently" kind of way, got a two foot high flame going and made a quick brew and reheated some of the previous night's slop. We were on a mission. At 8:15 am, we left the bivvy, crossing the plateau as the rest of the cavers slumbered in their tents. By 9am we were underground. It was all going to plan.

We moved freely down the cave, knowing the tricks and tactics for each rebelay. Our only contact were the cries of "Rope Free", "OK". Every so often I'd break into song, or pause, briefly, to enjoy the illumination of Pete's light, three or four rebelays below me. I was expedition fit, fresh after a good night's sleep, abseiling down big pitches in a fantastic cave. There aren't many things better than this, I thought. I was so enjoying myself that I almost forgot one of the few things that is. Our mission, to find new passage. "Rope, free." "O.K." Time for a quick time check as I abseiled down Zimmer. "It's just gone noon. Time for a quick brew and chocolate stop before heading down Big Rock." We had 24 hours until our rendezvous with the rest of the derig party.



Tetley in
Moondust
Passage (DW)

As we walked, slipped and slid along Friendship Gallery, Pete and I reflected on how the passing of cavers had altered forever a formerly pleasant and pristine passage. At least the sides of the passage had kept their clean mud floors. We were soon at the top of Big Rock, a large pitch down to -660m, that for me marks the psychological point at which, for this cave at least, I start to feel as though I'm a very long way from the surface. "Rope Free" "OK".

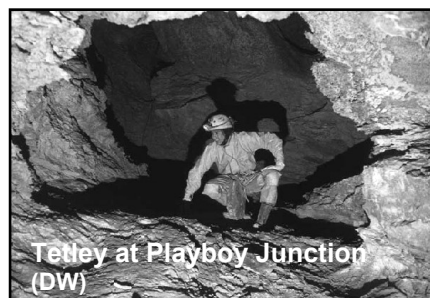
Half-way along Highway32, we stopped to drink as much of the icy cold water as we could. The stream disappears here, reappearing at Cactus junction. As we were heading down the Leprechaun series, however, this would be our last drink of water for hours, unless we made a detour to visit the stream at Red Cow. "Right, let's pace ourselves for the next section," I said. After the joys of pitch after pitch, the way on was now very much like caving in Wales - climbing, crawling, small drops, boulder hopping along dry passages. Beyond the false floors at Red Cow Roundabout, marked with a piece of survey paper that tells you where you are, the passage then headed up slope for 150 metres, before heading down again to the base of a climb. This aven, named Strap on the Nitro a year later, was to be a place where I'd spend a long time contemplating death.... However, I didn't know that then. "Look's like a good lead up there," I said to Pete, "and from Dave's description we must be near the pushing front..."

"Right, the footprints stop here, let's find the permanent survey station." Irritatingly, it took us a while to locate the PSS, necessary to tie in the survey. Quite a few words were muttered, once again, cursing the fact that yet again people (most of whom happened to be Irish) hadn't followed the simple, golden rules of exploration, namely "Survey what you find and leave lots of clearly marked PSSs." My ranting certainly helped my bolting as I hammered in two bolts in quick succession. "Right Pete, let's go..." After a short drop, we were standing, once again, on the shores of the unknown.

Each step, on virgin ground, is a pleasure to take, an experience that never loses its magic even after years of caving and thousands of metres of new cave. The roof was closing down quickly but the strong draught led us on. Pete was ahead of me, crawling now, round a corner. "It get's big again, come on, come on." We shook hands, knowing that our mission was going to plan. I'm sure the grin on Pete's face was similar to my own. Ahead of us the passage widened. A small climb up was needed, however. "After you Pete – be careful...."

Pete was soon up the climb and fixing a rope for me to use as a handline. The passage was a good eight metres wide and descending upwards at about thirty degrees. What about No More Potatoes?" said Pete. "What???" I replied.... My earlier suggestions for a name for our finds had been way too xenophobic. Pete's suggestion was excellent and quickly agreed upon.

Time was marching on. The camp was a long way away and we needed a good night's sleep before the derig. We stopped in the middle of the passage, and built a big PSS cairn before surveying back. We also left three notes. One saying, "Pushing front 100 metres ahead." Another saying, "Ten metres to go to the start of the unknown." On paper by the cairn I wrote, "It's up to you now... Good Luck team 2004." I wondered who would be the next people down to this deep place.



Tetley at Playboy Junction
(DW)

Once the survey was complete, we headed back to Big Rock, resting briefly at Playboy Junction to cool down and eat some more food. Pete then headed straight back to camp to cook dinner, while I took a while derigging the big pitch, making a mental note that we would have to replace the nine millimetre rope with reassuring 11mm rope in eleven months time. By midnight we were in bed, stuffed full of smash and fish. I was so knackered that I only heard about half of "Riders on a Storm" on the tape player before I was fast asleep.

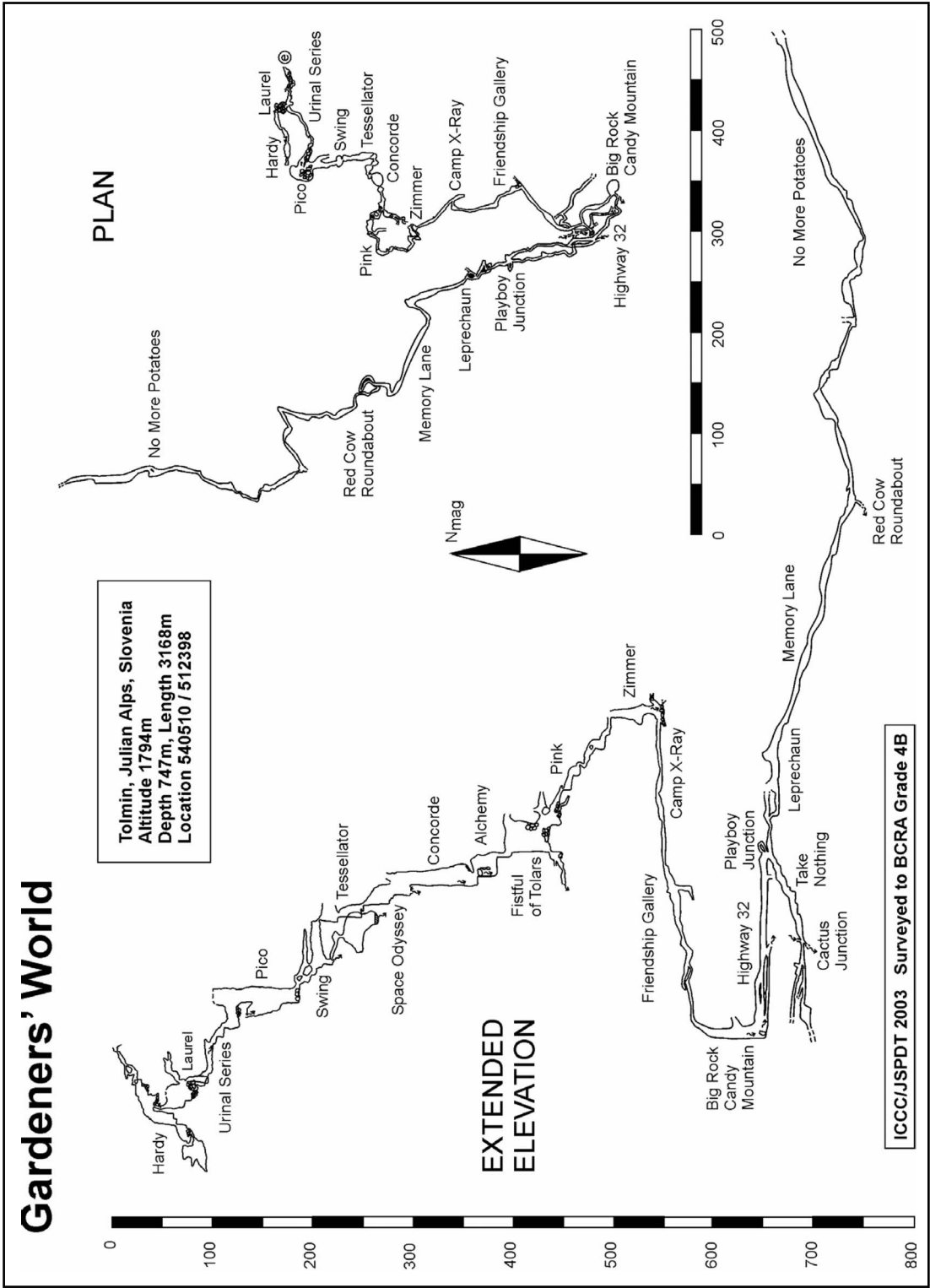
I only really have two memories from the following day. The first was the struggle Pete and I had with seven tacklebags through the Pink series. The bags had taken ages to pack and we'd left what we could at camp. The sound and then sight of six cavers ready to take the damn things away must have been greatly welcomed. My second memory is of dawn the following day. Slowly, slowly, I'd made my way up the pitches, derigging the rope and greasing the bolts as I went, keeping my eye on the time - I hate getting out at 3am. The sight of the warm sun rising over Škribina, together with the sweet smell of the fresh air, made it all worth it as I thought to myself, "I love it when a plan comes together."

James Hooper



Coffee at Ravne (from left to right):
Nada, Slavica, Marjan, Tetley, Andy, Martin, Rik, Janet, Tom Bending, Shed (JE)

Gardeners' World Survey 2003



2004

“Ah, but a man’s reach should exceed his grasp, or what’s a Heaven for?”

Robert Browning, *Andrea del Sarto*.

Throughout the year, as ICCC bounced around the country on weekend trips, there had been a constant murmur in the back of the van. No matter how deep or large or scary or otherwise impressive to my fresher eyes, whatever we did in the UK paled in comparison to the mythical Slovenia. Single pitches the depth of whole Yorkshire caves, wire traverses over gaping black holes, free hanging pitches still not bottomed after every spare bit of rope was chained together... As the Old Lags of the club approached their terminal pints at our Tuesday pub meets, their eyes became glassy as ridiculous names tumbled out. Gardeners’ World; Gladiator’s Traverse; Concorde; Bats Hit. An absolute right of passage for members of the club; most cavers that went on expedition had stayed with the club - even the Evans brothers, who had started the exploration a decade previously, were still around. While other London University caving clubs had gently disintegrated in the new Millennium, ICCC was going strong, cemented together by friendships formed pushing at the deep end.

With a good lead in open passageway deep in Gardeners’ World, a strong team, including Chris Rogers and Pippa Crosby (with several years of OUCC caving experience in the Picos), had been assembled with a plan to camp below Big Rock Candy Mountain. The talk was not about whether we’d find any cave, but rather how much would be discovered beneath the plateau.

But enough lofty thoughts of trampling along virgin passageway; I had struggled my way across Europe with a backpack weighed down with photo gear, slept overnight in St Mark’s square, Venice, and then somehow, after much confuddlement, managed to make it to Tolmin. The heat was oppressive, I stumbled from the comfort of the air-conditioned bus into the café adjacent to the station - I recognised one thing on the menu - Cappuccino, and so sat sipping in the scorching shade. My mobile didn’t seem to like Slovenia - I had no real idea where I was - and absolutely no grasp of the language. The most helpful thing relayed on the mailing list in the months before was how to say, “My hovercraft is full of eels”. Increasingly nervous, I wondered how on earth I would find the cavers, and whether I was even in the right ‘Tolmin’. My fistful of Tolars would not last many days.

Then across the shimmering tarmac came a familiar clown-haired figure, bimbbling along with a girl and a mischievous glint in his eye.

“Rik! You’re the first person I’ve spoken to in days!”

“Heya Jarv, comin’ up the hill then?”

Jarvist Frost

Tetley loaded and ready to go (JMF)



A Non-Caver's Musings on Bivvy Life

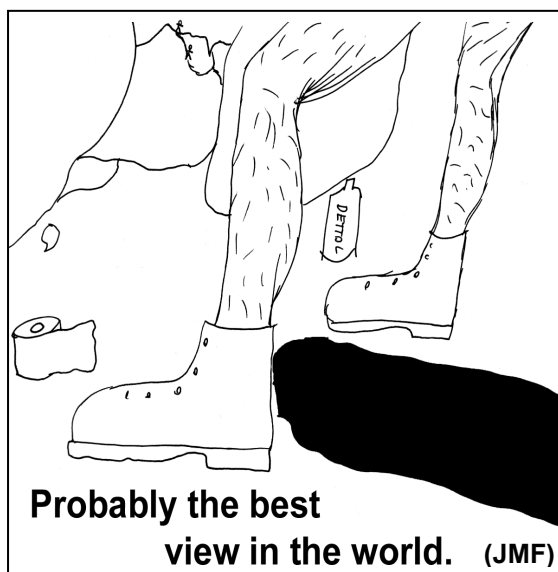
Nothing quite prepares you as a non-caver for going on 'holiday' and being thrust back into the stone age. I say 'non-caver' but Bivvy life is about caving – living in one – or at least eating in it. For a Forty-something there are some particular features that are likely to test your limits...

The water barrels that are running low because it hasn't rained on top of the mountain for a week, and the only option is to go on a snow-hole patrol, where the trick is to scrape the dirty black scum off the top and collect the grey snow underneath. Suffice it to say that the result is not Evian. Washing up becomes out of the question, which leads to the next test... eating with a dirty Billy-can and cutlery etc. An obsession with using your own implements rapidly kicks in... unless you're the average Twenty-something Imperial student and don't care, it's all part of the 'fun' of the, err, 'sharing experience'. (This of course increases the obsession.)

Then there's what you're eating. Textured Vegetable Protein is dog food. It's official. Never before have I been so grateful to eat Smash or dried pasta or anything else. TVP is tasteless cack and leads to the sort of gratuitous uber-flatulence that puts baked bean consumption in the shade. This leads inexorably to one of the biggest tests of all - A VISIT TO THE SHIT PIT.

What image does this conjure in your mind? Not nice, huh? A tad gross perchance? Not a little unsavoury perhaps? Well, you'd be right. There are certain dos and don'ts with shit pit etiquette.

- Do wait until you really need to go because you won't want to hang around.
- Don't go after dark, even with a torch.
- Don't go when it's raining.
- Don't go after drinking alcohol or when under the influence.
- Do wait until you're fully awake and alert.
- Don't allow yourself to be distracted by low-flying paragliders or mountain walkers who mistake the path to the shit pit for an ordinary path.
- Don't worry about the swarm of blue-bottles in and around the pit... they don't bite.
- Do make sure that you take up a comfortable and balanced squatting position astride the pit.



All of the above are important because failure to adhere to them can result in the worst happening... falling in the pit. The consequences are not nice and could prove problematic in the context of a water shortage.

There is the good side to Bivvy life – the camaraderie, the singsongs round the fire, the passing round of double-strength rum-ski, the, err, camaraderie. But best of all is the plentiful supply of COMF material, which is particularly important for the ageing posteriors and creaking limbs of the old lag.

All in all Bivvy life is AN EXPERIENCE, but whether it's one you'll want to repeat is open to question. (The shock to the system can end relationships, so think twice before going with a partner.) What isn't open to question, however, is that there really is only one way to find out...

Gary McGhee

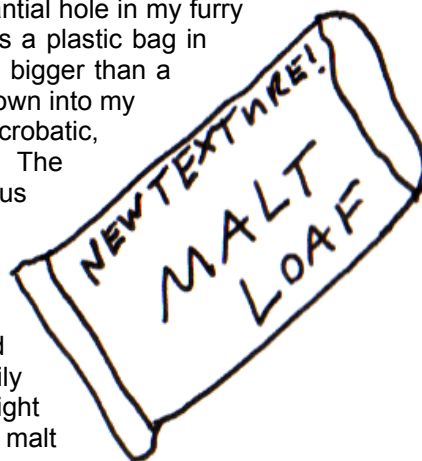
Can't keep it in, gotta get it out: A rigging trip with a difference

My first trip of the expedition, after the arduous week of carries, was with Andy Jurd. Our mission was simple – a simple tackle-bag payload was to be deposited at around -350m before the inevitable return to daylight, with some pitch-rigging if our wills permitted. It was my first caving trip in several months and whilst neither SRT nor squeezing presented any major obstacles to progress through the cave, after reaching the deepest rigged point and passing Clewin and Tom (at least I think it was those two), it became painfully apparent that I had forgotten a crucial aspect of standard expedition caving practice – that essential pre-cave dump!

As Andy, my original caving mentor from my first year Princes' Garden rope training, asked if I wanted to try rigging the next pitch, a groaning in my stomach and a hefty guff signalled that a monster turd was on its way. I almost felt like that chubby boy at the back of the class as he demands 'Siiiiir.... I need the toilet'. But this would be no stern telling off. Now six years older and with the smiling face of Mr Smith the Geography master replaced by the lean sneer of a Jurd, I didn't even have to ask. I knew that the only way out for this evidently enormous shit was up that rope.

I started to prussik, and to poor Andy's misfortune, "juxtaposed" as hard as I possibly could the whole way up each pitch. The unusual prussik action has a knack of pulling open the buttocks of the caver then clenching them back together. I knew that a slip at the wrong moment could lead to disaster in my then snowy-white thermals. All was well until Tessellator pitch head. For those not well acquainted with Gardeners' World, this involves some contortion. A treacherous rock nodule pressed into my stomach, pushing the turtle's ugly head out to leer threateningly at my undergarments. I quickly re-clenched but by the bottom of Pico, covered in sweat and almost exploding, I realised that I simply couldn't make it out of the cave in time.

There was no pause for thought as the shits of my life flashed before my eyes. The situation was already so urgent that I was compelled to tear off my SRT kit and oversuit as fast as I could and rip the already substantial hole in my furry past the top of my arse crack. Luckily for me there was a plastic bag in the breast pocket of my oversuit, even if it wasn't much bigger than a crisp packet. I shuffled the thermal long-johns as far down into my furry as I could and finally performed a Houdini-esque, acrobatic, blind, standing delivery with no margin for error. The collateral damage was minimal, and were it that one of us had brought some toilet roll, the problems would have stopped there. As I regarded the look of horror on Andy's face as he emerged from the blackness to confront my squatting torso desperately clutching the plastic bag like my father's ashes, I realised that I had breached my mentor's trust the very moment I greedily helped myself to that second helping of TVP the night before. All that he could offer me was his empty plastic malt loaf wrapper. I promptly spread the doppelgangers all over my arse cheeks with the shiny wipe, pulled up my thermals over the mess, sighed and wearily put on my oversuit and SRT harness to exit the cave.



An hour later I trudged back behind Andy with my heavy head hunched over my bruised heart, with the stinking object of my self disgust pointed vacantly out behind me. He stopped at the top of the bivvy with the air of a man too weary to take the belt to his dog and injured me more with his words than with a thousand blows. 'Not down here,' he hissed. I loped off to the shit-pit to cover my thermals in Dettol and sponge my arse clean with toilet roll and more disinfectant.

Richard Venn

So much for Friendship: Rigging the Camp

Dave Wilson: I shot ahead to rig Zimmer, intending to add an extra bolt below the pitch-head. Opening the bag stashed there last year, I expected to find the start of the traverse line, but instead found myself with just the Y-hang. No matter, I thought, the rift is tight enough that there's no real risk of falling, so I'll get started on the bolting, then add the traverse line later when the others arrive with more rope.

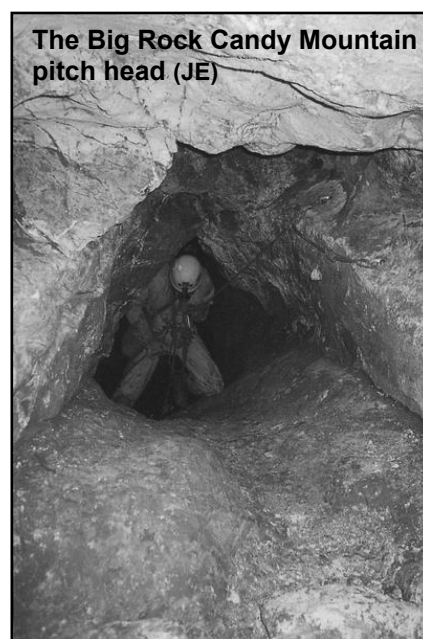
Sitting safely on the good ledge on the left side of the rift, with my feet on the other side, I made the mistake of bending forwards to have a quick look down the rift. This year I was using my first production-model Mig134, and had the spot beam set on full power. From the brief glance I took, I'm not sure whether it was the pitch bottom I could see, or just the rebelay ledge 30m down, but whatever it was, it was certainly very well-lit, and a very long way down. Suddenly with the fear of God weighing down on me I sat back upright and froze for a few seconds with thumping heartbeat, before accepting my fate and starting the hammering.

Chris Rogers: After the excitement of an afternoon spent wrestling with the delightful Hailey (a rather fat and unhelpful tackle-sack), it was a relief when we got to Friendship Gallery. This was the site of last year's camp, so there was sure to be a bit of munch and a chance to sit down. I didn't expect the camp to bite back though – I tapped the roof with my helmet, dislodging a chunk of rock onto my hand. A stream of blood and curses followed. Still able to move my fingers, albeit with pain and difficulty, we pressed on.

Dave: I wasn't really feeling in the mood for more rigging, so it was decided that Pip would rig Big Rock Candy Mountain, and the rest of us would ferry the bags along Friendship Gallery. Once in the last horizontal section before our planned campsite everyone was tiring - it seemed to take an age to get the first few bags to the phreatic oxbow. Finally arriving at Cactus Junction, we set up the 4-bed camp and were in bed within an hour, Tetley & Rik soon passing by on their Night-Train trip.

The fridge thermometer we had taken down showed a nice steady air temperature of one degree centigrade above freezing. Lovely.

Chris: After the Night-Train passed through, the others quickly fell asleep again. For me, it was strange to go back to absolute darkness after such a short period of electric day. I couldn't quite tell if I was asleep or awake. I thought my eyes were shut but I didn't really know. And so it went for hour after hour.



The Big Rock Candy Mountain pitch head (JE)

Dave: The next day, Chris's hand injury ruled him out of caving, so Pip, Tom and I set off for the end of No More Potatoes. A pleasant trip through the sandy passages led us to Tetley's final note from 2003: "Good luck team 2004."

Almost immediately afterwards the passage changed to boulders, the results of an enormous roof-fall. The destroyed nature of the passage, coupled with thoughts of our general underground diet, led us to christen the passage 'Smash'. With many routes along the sloping rift, it was useful to have three people, leaving one to recce the route on while the others surveyed. A reasonable trip back to camp followed, though the lack of accessible water anywhere on the route did mean we arrived back extremely thirsty. A whole day was set aside for the ascent, breaking out just before sunset.

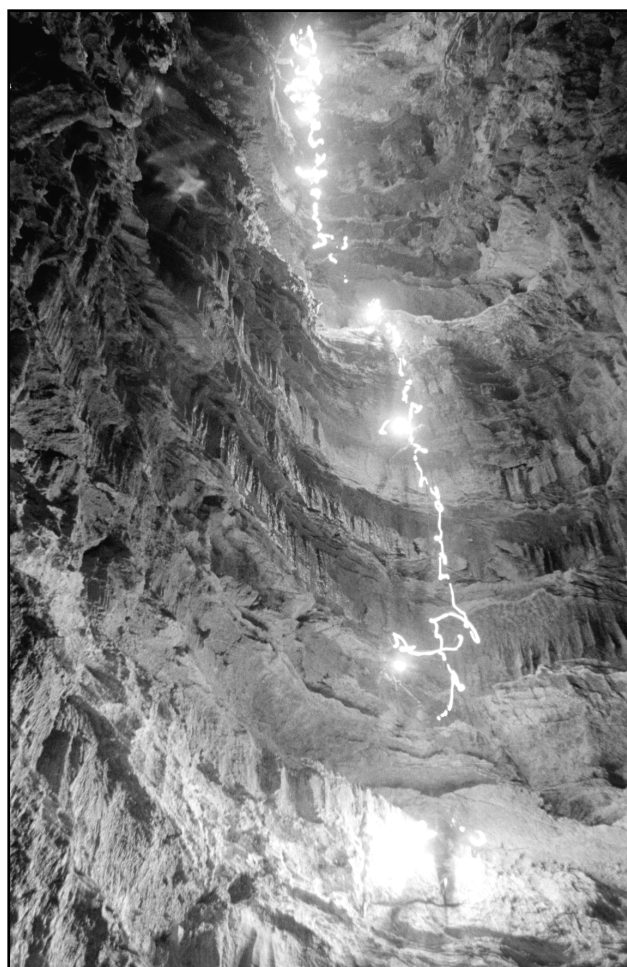
All in all, an excellent trip, though the journey to set up camp had been a bit of an epic - a little over 2 hours to Zimmer, but another 10 to get to 'The Fridge', as the new camp was christened.

A Day in the Life of a Fresher on Mig: Photographing Concorde

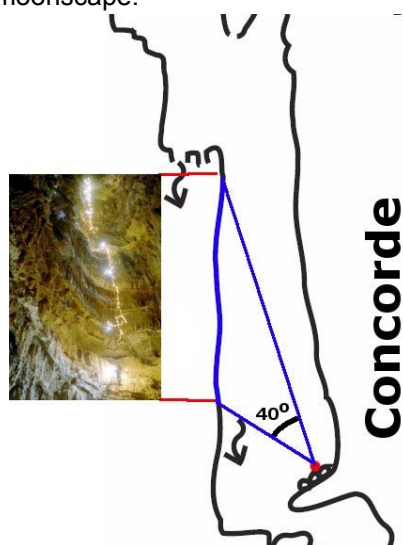
Nine months after I first went underground with ICCC, I unclipped from the rope at the bottom of Concorde pitch in Gardeners' World. The white of the floor was breathtaking, polished smooth by the annual flow of snow melt. I was perhaps the twentieth person to stand here and see the colours, the shapes and the sheer scale of this enormous stone cathedral, every last facet of it formed by water and gravity.

Connecting me to the world above, and leading ever deeper, were hundreds of lengths of rope secured by literally hammering into the rock face, years of effort by students from ICCC and the Slovenians of JSPDT.

I could just see the faint orange light of my caving buddy 70m above me; I built a cairn of rocks as a substitute for a tripod, and balanced my old Soviet camera at an angle I hoped would cover the whole pitch. Dousing my light & opening the shutter, I shouted 'Rope Free!', replied from a long way above by a blurred echo of 'OK!'.



I sat absolutely still (so as not to nudge the camera) in the perfect darkness for 15 minutes and watched the impossibly small orange dot above me float down as gently as a feather, with the lightning blue flash burning an image into my retina every minute or two. I don't think I've ever felt quite so peaceful; quietly biding my time sitting a shelf of rock surrounded by moonscape.



After packing the camera, and eating some chocolate; we readied for the ascent – 400m of rope to climb, nearly five times the height of the Queens Tower. Over eight hours of solid climbing later, I finally flopped out of the cave and sniffed at the strange Ozone smell of the vegetation, gazing up at the star-framed silhouettes of the mountains across the valley.

Clewin, who had been diligently waiting at the bottom of pitches as I climbed in case I struck difficulty (not once grumbling as he read 120 pages of his paperback sitting in the cold), joined me after a few short minutes. We stumbled back to the Bivvy following the string as it snaked around the many hazards on the plateau. I was so utterly exhausted that I had to be helped out of my caving kit, but was soon warmed by the fire and refreshed with mugs of hot chocolate and plates of chilli.

Strap on the Nitro: Aven Climbing at -800m

Hollywood tells us that in a position of great stress and/or danger an individual will find superhuman strength and courage, discover an inner self, becoming a through-and-through action hero. **This is, of course, utter bollocks.** The reality is that most people will fill their pants and freeze up. This is not a tale of heroism, but one of bad judgement leading to a tight spot up Nitro Aven with a twenty metre bounce to the hard stuff below and nothing but mud to hug for comfort.

From the 'ground', the prospect seemed simple enough. During the course of a fairly typical GW camping trip, Tetley and I had sighted a large and interesting aven that could be gained via a scramble up an incline. Said slope was at about 45 degrees to the horizontal, with the first part being clean rock with a couple of twatty but passable ridges. I had eyeballed a route starting midway along the base of the slope and curving round to where it joined the right-hand cave wall. From that point, it looked to be simple work to edge up a muddy bit in the corner to a position from where I could penetrate the aven with a spotlight.

After a customary exchange of '**Strap on the Nitro**' with Tetley (a line, you may recall, from that classic Hollywood climbing movie 'Vertical Limit'), I began the ascent. Going up was easy enough, and I followed the route I had planned until I had covered the bare rock, made it onto the mud, and had only a final section to climb to make it to my vantage point. However, this last section was a little more committing than I like to do without rope and my position started to feel a touch on the high side. I opted to head down but as I shifted position I realised that going down could be more difficult than anticipated.

The fear came, in a purity reserved for Really Bad Moments that have an air of finality about them. Logic and reason - good friends in times of danger - abandoned me, all remaining thoughts tending towards imminent death. I edged towards something more solid to grasp and wait while the adrenalin subsided. As I sat, hardly breathing lest it trigger a slide, and using all my energy to stay absolutely still, my situation suddenly seemed very bleak. I was some distance up this slope: the first 5 or 10 metres below me was a smooth mud face, perfect for allowing me to gather some speed before dropping off a ledge, rolling a little way more, dropping off another, and then bouncing to a rest against a pile of uncomfortable-looking boulders. It wouldn't be pretty: at best, I could hope to break a limb; at worst, I needn't have to worry about the prussik out.

Tetley had followed me some of the way up, and at this point was having a crisis of his own reversing one of the climbs lower down.

'Tetley... I'm not happy'. The words had passed in the other direction a few years earlier during an episode in M18. 'Nah, me neither,' came the reply.

We needed a plan. As it stood, we were each in positions that felt dangerous to be in and yet unsafe to leave. Being wiser than I, Tetley had brought a length of rope up with him. At a point between us, above him and below me, was a nodule of rock; the only thing that came close to a belay on this featureless incline. We settled on this as our salvation, and edged towards it.

The rope was heaved up to me, and very gingerly (I was still by no means feeling secure in my position) I made it fast to the prominence. As I clipped into the loop I had just made, I relaxed a little more. Tetley began to descend while I glared at the less than bomb-proof belay. **The nodule proved to be multi-purpose: before I left the Aven of Death, we surveyed a leg from the scariest PSS in Mig to the floor below (17m).**

Once safely back down to earth, a few liquorice roll-ups were consumed as a general sense of euphoria (or perhaps just intense relief?) at not being dead or maimed began to replace the fear inside me. Not wishing to be selfish, we decided to leave the rope in place so that someone else could explore the untold caverns above Nitro Aven at a future date. I don't think it will be either one of us.

Tom Ayles

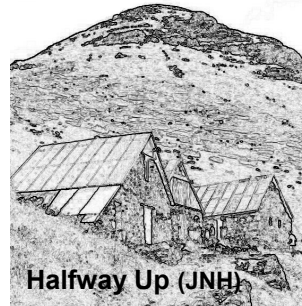
The Migovec March



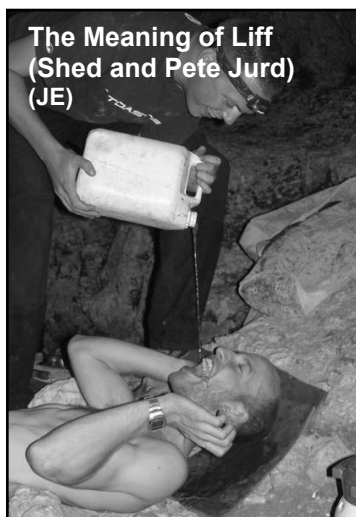
A young boy works all day and night to help his mother's farm,
but his heart was filled with want to leave and go afar,
now a lonely traveller, he packs his spotted handkerchief,
with bread and jam, his warmest clothes, some tasty salted beef,
he leaves his crying mother, and as he starts,
to put one foot down then the next, it breaks her precious heart...

*and it's up, up, up, up, up the hill he goes,
he's on his way to Migovec, it's arduous and slow,
but it's left foot, right foot, up the hill he goes,
searching for the meaning, of life is all he knows.*

He passed by a barn dance, all frivolous and gay,
and as he strutted through the door a girl lay down upon the
hay,
said come with me my new friend, and lie a little while,
I'm sure you'll find it pleasant, t'will surely make you smile,
he said alas I cannot, I must complete my quest,
some other time I'll experience love, and then he left,



then it's up up up...



He walked maybe ten miles or more, was passing by a ditch,
and from that dyke did come the sound of gurgling and sick,
he pushed his head right over, inside there was a bum,
who sucked upon a bottle, of finest Cuban rum,
he said d'you have the meaning, of life that I so seek?
the hobo said come drink my friend, I start to feel quite weak,
the traveller said I do not think, therein lies higher truth,
and with those words he left the tramp to finish off his booze,

and it's up, up, up...

Half way up he came upon a wandering holy priest,
who called him over, said d'you know what really lies beneath?
For if you want to truly know, just read my little book,
the traveller he sat right down and gave it a quick look,
but he cried I think that I have found a crucial failing,
surely I must take your word for this amazing tale,
the priest said yes, of course my boy, you must have rock hard faith,
the traveller said I can't believe and quickened up his pace.

and it's up, up, up, up...

As he neared the top he smelt a fruity, smoky smell,
three hippies they were skinning up, they called him over with a yell,
said look we've found the meaning, of life that you so seek,
come and sit beside us, and smoke for just one week,
he said I can't, I have no week, but give me three hard hits,
he felt nothing but sleepy, and dazed and rather sick,
he cried you lie! I find nothing, in this your pungent weed
and with those words he wandered off they called him back he paid no heed,

and it's up, up, up...

When he finally reached the top, of that mighty mountain,
all there was, was a great rift, a hole to which he jumped right in,
and in the cave's black darkness, a rumbling voice did call,
I'm God and I did hear your spirited and eager call,
and the meaning that you sought so hard, was lying in the hay,
was drunk or stoned or faithful, and take your pick you may,
so the traveller he sat down there, to think hard in the gloom,
he thought of what he wanted, decided to go back home.



*and it's down, down, down, down, down the hill he goes,
to reap and toil at honest soil, at long last happy with his home...*

Richard 'Rik' Venn

Miles Underground: More horizontal extensions at depth

Pippa:

In an incredible feat of underground efficiency, Clewin and I actually managed to get to the pushing front in 'Smash' by lunchtime. Clew poked his nose up the dodgy climb and confirmed what Tom, Dave and myself had suspected - it was well dodgy, and would have to wait until we found a fresher to throw at it. We also noticed a rock the size of a large wardrobe that appeared to be held onto the ceiling by a thin, book-sized, layer of mud. Clew offered to jump on it for me, but I declined on the basis that it might fall on top of the pitch and so kill the lead. And me.

Having ruled out the climb, we started rigging the other lead, a small pitch. The pitch-head turned out to be a little tighter than I thought so I stuck my stop on my short cows tail and slid through, hoping and praying that the rocks on the other side were stable. Too excited to worry about rigging properly, I dropped down onto the sloping floor strewn with boulders and rubble. The way on wasn't instantly obvious, but the draught was so strong that it had to go... I potted gingerly down to the bottom of the slope and stuck my head round the biggest boulder. The way on!! A short climb led down into another rubble filled chamber.

'Clew-in! It goes! Come on down!'

No response. After a few minutes, I decided I should really keep exploring, just to keep warm. Down another little climb, the cave opened out into a flatter, more stable-looking, rift. Still no sound from Clewin except for something that sounded like faint, muffled, grunting. Should I turn back or go on? I went on. About thirty metres later my sense of guilt kicked in and I headed back to the pitch.

'Clew-in! Are you OK?'

'Yes. Can you come up?'

Hmm. I didn't really want to go back up the pitch as my rigging was shocking and I didn't fancy going back through the squeeze. Still, I could see his point. Better to find out how easy it was to get out of sooner rather than later.

Clewin Continues:

Once Pip had disappeared from sight, all I had to do was slide through the pitch head and hammer in a bolt on the other side. I didn't get very far. Although I was sure I could squeeze through the gap somehow, getting back might have been more of an issue. Being stuck at the top of a pitch with no one above me didn't seem like a particularly good idea. So I waited for Pip to come back through the squeeze, which she did with ease. After some words of encouragement, I took off most of my SRT metalwork and slid through the gap with my suicide-rig descender attached to my short cows-tail. "Come on," said Pippa, "it goes." And go it did.... The passage became larger, and we followed the draught for about two hundred metres until stopped by a small pitch. We were a long way from safety and Miles Underground was decided upon as an appropriate name for our finds, especially as we'd both enjoyed Miles Davis' jazz tape back at underground camp.

Pippa Crosby & Clewin Griffith

On the surface, a lonesome fresher braves a Thunderstorm...

Bivvi Logbook 2nd August 2004 9pm:

Jim, Mark and Dave have left for a night-train camping trip down Gardeners' World, leaving me utterly alone on the plateau. The lightning has not yet struck, but the thunder is already booming off Kuk. If I get struck down, or engulfed by the Coleman's, I leave all my worldly possessions to the bivvy mice and my spiritual ones to the ghost of Brezno Strahov.

Jarvist Frost

A Long Weekend Underground: Extracts from the Fridge Logbook

30.07.2004 (Tom Ayles)

We departed for -700m at some ungodly hour of the day, it must have been before midday. This was not my idea; our Slovene comrades needed to bounce to the Fridge and return before the eve is out. Our descent was rapid, bobbins clearly outperforming Petzl stops (or to put it another way, a triumph of experience over, er, me). The mysteriously named Slovenian 'Z' left us at Pico while we continued to the Fridge to disturb the slumbering giants (Rik and Andy), although we made up for this by plying them with smash and cheese (no soup or fish or noodles this time). Andrej politely declined this manna from heaven and departed.

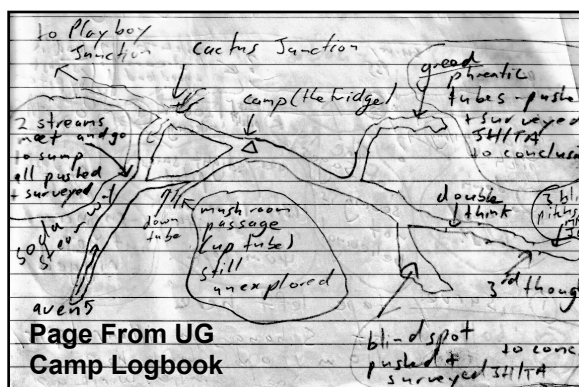
Tetley and I went to push the passage beyond camp, determined to succeed where others had failed. Our first attempt ended with an eyeful of grit. I was forced to retreat to camp to treat myself with an eyebath improvised from a tea-light. Once the boulder had been removed from my eye, we returned to continue our quest to find the destination of the draught. Following the previously explored way on led to an area full of mud, grit and breakdown. There is some kind of potential below a pitch, which we may return to drop later. Before returning to camp, we opted to push a lead I had sighted earlier on the way in - apparently where the old stream cuts down to the right through a moderately sized eyehole. Intrepid, I continued to squeeze along a narrow 45 degree inclined bedding plane rift thing, dropping down a few feet to gain larger passage. We bashed along this exciting lead [named Blind Spot] until we were halted by a pitch too long to climb. Vowing to return the following day with more gear, we surveyed back in time for tea and medals.

31.07.2004 19:45 (Tetley)

Our exciting lead died. We both suddenly hit a serious energy low so returned to camp for smashy, cheesy, fishy slop. Now we face the opposite problem. Our stomachs are so full they hurt, we can't even move. The camp is quiet as Rik and Andy are slumbering in the pits. There's only the sound of the stream.

01.08.2004 02:00 - Greed (Tom)

Having killed our lead, we thought we'd kill another. Once the killing starts, it's hard to stop... After eating a near-fatal dose of fishy cheesy smash, we embarked to push "Greed", a dry cascade on the left beyond camp. The passage continues upwards and shrinks to a constriction. I hate squeezes. Beyond this, some smallish tube like stuff leading to the base of a pitch. A rift enters this aven, while beneath very small and twatty passage 'continues'. Surveyed out, 120m.



03.08.2004 00:05? (Tom) Time has taken on an abstract quality - I believe its time to leave...

03.08.2004 00:25 (Tetley)

Well its now (apparently) Tuesday and we left the surface on Friday (I think!). A hell of a weekend - does the sun still exist? Its been a great trip so far but daylight (and 2 cans of Laško at the surface) are definitely calling. The tape player is playing up - my tape died on 'The boys are back in town.'* - but in good ol' British we managed to save this tape! **

Later Footnotes by Tom:

* 00:48 The tape player has gone postal - it just ate "Last night of the Proms"

** Until the player killed it good n proper.

Camping with Dave and Mark and getting raw feet....

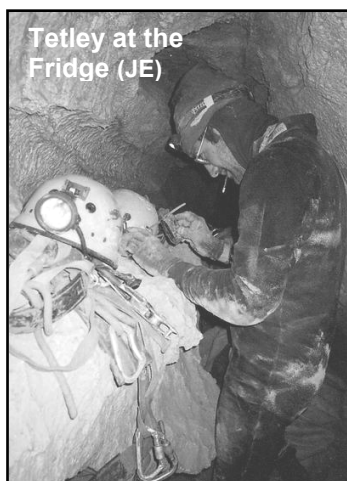
After arriving in Tolmin and going straight to Andrej's place, we chatted to his wife, Mercedes. Andrej was not back yet from a caving trip on Migovec. When he returned, we had the obligatory sampling of his home made spirits while he updated us on what had been happening underground. We slept that night in Andrej's old house above his old shop where we had first met with Andrej, Dejan and Simon in an all too formal meeting 10 years before.

The next morning we headed straight for the pizzeria where we planned to have a lazy morning and wait for Jan and Goaty who were due to turn up that day. The view of Migovec from Tolmin looked very inviting and we were both keen to be there. By about midday we were seriously pizza'ed out and starting to wonder where the hell the lads were. We could be festering for hours or days waiting for them. Jan may have completely forgotten about the expedition altogether, Goaty could have been delayed by some spectacular act of incompetence. We decided that our best option was to take all our gear and walk up to the bivvy that afternoon.

Of course its not possible to pass through Ravne without spending some time chatting with the farmers. Luckily Nada was there so we could communicate more effectively than the rudimentary level that our very limited Slovenian allowed. Their last unmarried daughter had been married in the last year and they showed us some photographs of the ceremonies, one of the traditional ceremonies seemed to involve the brother of the bride dressing up as a woman and trying to solicit the affection of the future groom, I'm not sure how widespread this tradition is but they had obviously had much fun.

Once on top of the mountain, we spent a few days chatting and playing chess - acclimatising and getting ready for a underground camping trip - it sounded like the trail for the connection to System Mig had gone impassibly wet.

Before long it was our turn to head on down to camp. After an impressive journey through Gardeners' World, Dave, Mark and I arrived at the 'Fridge' to find ourselves faced with a full house. Goaty and Jan had just returned and were about to bed down, Tetley and Tom were having breakfast in bed as preparation for leaving the cave. With no bed space immediately available for us, we decided to push a few possible leads around camp. Pushing along a section of Mushroom Passage, we found an awkward route down to the already explored 'Soda Stream' (discovered by Rik and Tetley a week earlier.

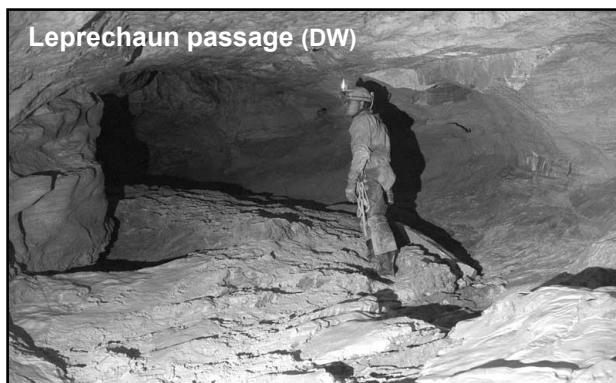


Back at camp, Goaty and Jan were fast asleep and the others long gone. We had a quick brew and soup before executing our next plan - to attack the inlet between cactus and playboy junction. It looked almost climbable and with the aid of combined tactics we soon had Dave up the short pitch, and, after he rigged a rope that we threw him, we followed him up. Just beyond the head of the pitch, a pool of water in the passageway had an odd looking pile of strange black stones which looked a bit like the remains of a pile of burnt rice. After a few meters of passageway there was a further short pitch up. We soon climbed up and rigged this and it led up to a chamber with the way on a further pitch up going back on the original passageway. After some time we concluded that it was not possible without aid climbing or a ladder. We left a bit of tat on the first pitch in case anyone wanted to revisit the area.

Finally that night we looked at a small passage off Leprechaun passage which Andy had found. After some crawling passage and passing the bag through one section, we arrived at a spacious rift dropping into a pitch of about 15m with a stream below. We eagerly unpacked the spits but had difficulty getting anything in so Dave did a temporary rig around a few naturals and descended the pitch. We waited eagerly for news of what he had found...

'Looks good... hold on a minute... Shit... I've found a surveying station placed yesterday by Tetley and Tom..... What the hell were they doing here?'

We had connected to an area Tetley and Tom had called 'Greed' the day before, which didn't make sense to Dave as he didn't think they had been in this area. Dave left a surveying station called 'Envy' next to it and we surveyed our way out from the pitch.



Leprechaun passage (DW)

Once we returned to camp, I concentrated on working out why my feet were so sore. Stripping my wellies and socks off, I saw that the tops of my feet were red raw. I had worn a set of borrowed wet socks for the trip and now realised the mistake I'd made – all the sweat and grit had irritated the top of my feet. I had completely forgotten that walking socks are much better for Migovec. I poured water over my feet to sooth them. Luckily for me Dave had a spare pair of walking socks and after dressing my feet from the first aid kit, I put on his socks and we all got into the warm camp gear ready for bed.



Passage near Colarado Sump (DW)

We made a dinner out of a mixture of all the different items that were present at camp: smash; soup; tuna; cheese. We then topped it off with Jellies and chocolate bars. After hours of dozing in and out of consciousness we heard the sound of Jan and Goaty returning as we prepared our breakfast of homogenous slop. They had been to the far end of the cave, beyond Miles Underground, and reported that they'd found what was possibly a terminal sump. This they christened 'Colarado,' after the beetle which had caused the Irish potato famine. It was our mission to try and find a way on.

The trip to the far end involved some classic 'Welsh' caving - large walking passages, flat out sandy squeezes, climbs and big phreatic tubes. I was impressed by the cave itself, and by the good pushing that had been done to find all this passage, it just kept going and going. Once we'd squeezed our way through the pitch in Smash, the cave opened up yet again, into large walking passage with a bouldery floor and a good draught. After the short drop where Clewin and Pippa turned round, 200m of horizontal passage then ended at a high aven named 'To Infinity and Beyond'. A slope down to the left, however, led to a very different passage with a more rounded cross section and a clean washed floor containing very small streams of water. After about 30 metres of this, there was a beautiful, deep and very terminal looking sump. While Dave and Mark took some photos, I took my wellies and socks off and soothed my feet in the pools. We looked around for the possible sump bypass to know avail. To Infinity and Beyond, would need serious bolting and no obvious lead could be seen. The draught just seemed to disappear. We spent some time investigating other possibilities with no success and so turned round, disappointed and headed back to camp. After a short kip to refresh, we headed for the surface.

Jim Evans

Surface Work

Hare Cave - Observations on Exploring a Passage that's Just too Small

By GPS: **N 46°15'06" E 013°45'36"** (WGS84) Altitude: **1824m** 207m 277° True from M10

Spotted during the 2003 expedition, the shakehole was an almost perfectly semi-spherical bowl. No features of Postcard cave (entered by an adjacent shakehole to the East) were visible, but a large horizontal bedding plane could be obviously seen on the south side. It was guarded by a large hare (quite possibly with big sharp pointy teeth). I made a decision not to disturb the animal and did nothing more than casually glance into the slot during 2003. Situated above a possible joining point for Primadona, Gardeners' World and System Migovec, this had to be worth another look!

The entrance slot led down a thin scree slope into a more roomy chamber. A hole in the roof let light in and various small bore phreatic tubes wriggled across the ceiling. A few thin rifts also led into impenetrable muddy uninviting places. At floor level, boulders seemed to be choking the top of a possible rift, so a desperate dig option there. Ahead, a narrow rift could be ducked under into another 2m high and 2m round chamber. A significant draught issued from the floor, but in true Migovec style this was through a pile of rock. In the roof, the winding phreatic tubes caught my eye; it was unusual to see such features so near the surface.

One of the 'larger' ones led off away from the entrance and a low passage led underneath it. Although a mere 20cm diameter, I could see that it increased in size beyond the first couple of meters, and may even be passable. There was no way to hammer through the first section, but a passage beneath did connect via a very narrow rift. So the plan formed, hammer a route up from below and into the passage above. Caverns measureless to man (unless equipped with a micrometer) no doubt lay beyond. Also a strangely masochistic mantra of mine stuck in my head 'if you have to work at it, you will be rewarded'.

A few hours of hammering by myself and Jarvist later, it still appeared very tight, but looked passable and led on to an intriguing right-angled corner. Head first was out of the question as that simply led back to the too tight tube and there was definitely nowhere to turn around. So feet first it was. Starting with a hand stand, I slotted my feet into the rift about one metre above my head and into the tube above. With Jarvist guiding my feet down the too tight section, I slowly pushed up with my arms and eventually passed into the passage above. I hoped it would be easier in return. Anyway, the obstacle was passed, the rush of exploration was there, off I went or more accurately off I thrutched. Wiggle, wiggle, push etc.

About five metres of phreatic tube lay ahead and it was a pretty snug fit, to put it mildly. A very narrow rift that was only a few centimetres wide dropped down below. I got to the corner that I had seen in the distance. The tube turned through ninety degrees to the right, I could not, however, get around the corner due to obscuring rock ribs. I had been halted. I could see the passage continue for another meter before another right angle turned the passage to the original direction. A good draught was obvious.



Although halted by time and rock, hammering would do the trick and I couldn't help thinking that it looked just a little bit too much like Oh-so-fag-arse, the squeeze that led to all the discoveries in Gardeners' World, to be left alone.....

Ben Ogborne

Storm Cave

I suggested that we go look at a cave that Brian Cullen and I had discovered last year when racing up the hill from Razor to escape an incoming storm. This fit in with other bivvy faffer's idea of a stroll around the plateau, so off we set - dumping kit at the entrance to GW on the way. Storm cave is located on the disused path in the valley between Tolminski Migovec and Vrh Nad Škrbino. Altitude around 1650m.

Pip went in as we had carried the kit down, the entrance is a rift which widens out into a shaft, which is then blocked by snow. On the other side of the little valley is a depression with snow in it, with a draughting hole in the snow plug. (Bit unstable though.... - Pip) So get shovels and shades and start digging, as there is plenty of potential in this area. Last year there was no snow in the valley, so maybe next year we'll come back to an open cave!

Martin McGowan



My Little Cave [Janet's] N 46°15'18.8" E 013°45'44.3" (WGS84)

Small airy passage in side of shake hole near path to Kuk, approx. same altitude as bivvy. Another entrance to Gardeners' World?

This time we got to the entrance and headed down the tube. I was in t-shirt and shorts; so after finding an awkward looking squeeze I asked Mark to have a go. After ten minutes of hammering there was a bit of progress, so I ambled off to get my kit from Gardeners' World.

When back Mark was through the squeeze. I tugged on my kit and followed him down. Below the squeeze was a good size chamber, choked at the bottom. A low crawl led off back towards the main shakehole, into another large chamber. A climb down in the floor didn't go, and we thought maybe the cave was dead.

We paused to find the draught. There was a choked rocky floor in the first chamber which we thought might take the draught. Climbing up above the hole, a small tube was seen to drop into another chamber, looking bigger than the first, and sucking a cold draught. The tube was totally friable, and after ten minutes of bashing we were through! But our SRT kits were still on the surface and the drop on the far side looked sketchy. We decided to leave it for another day.

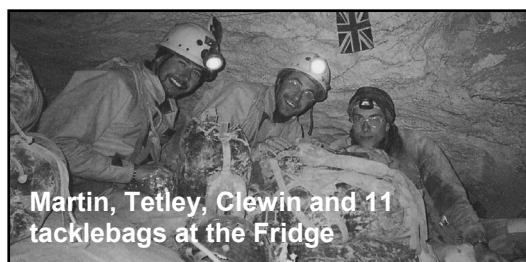
Location is a hundred metres or so North-East of the M19 shakehole, on the south-side of the big GW valley. Entrance is in the NE of the shakehole, a big overhanging entrance a couple of metres high with a climb down. A small triangular tube is visible in one corner.

Drop through the rift at the end of the entrance rift. The way on is at the far right end of the rift. We found it easiest looking towards Kuk [out the cave]. This lead is Very Good!

Janet Cotter

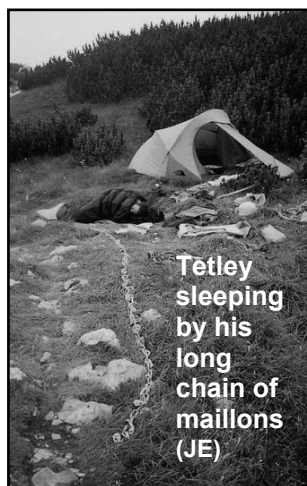
The Derig to end all Derigs

Martin McGowan: The basic plan was for Clewin and Tetley to sleep overnight, then be joined by two others to derig the camp. The other lucky cavers would only have to go down to Friendship Gallery, pick up a bag or two then zoom off for the surface. Meanwhile Janet and Jarvist would man the Bivvy and greet returning cavers with tea and fresh nosh.



Well - best laid plans! Clewin and Tetley woke up very late and soon discovered there was more at camp than hoped for - 11 bags between the initial four cavers. So now each of us were encumbered by two large tackle bags, making all the small climbs, squeezes and rift a major obstacle. The worst bit was that your arm strength to lift the bags was drained away from you, despite regular eating the cold slowly infused into your body. By the time I reached Pico I had made the decision that it either the bags or me that were getting out. I was so slow prussiking out that Clewin was letting me get up 4 or 5 rebelay before starting on the rope, yet he was still catching me up. Every step had to be thought out and a mental count kept of how to prussic, slowly double check every action as this is the time that tired people make fatal mistakes. Eventually I reached the top of Piston and the twatty Urinal series, I dumped the bags knowing I could manage myself out of the tight awkward pitch head of the series, but not the bags. Mentally and physically a great weight had been lifted off my shoulders, and I was free. Once I got out I staggered back to the bivvy with Jan, here we met with a culinary delight of real food, not any of that dehydrated TVP muck, and wine! It must be said that I was so tired that anything would have been great and finally the sweet comfort of your sleeping bag.

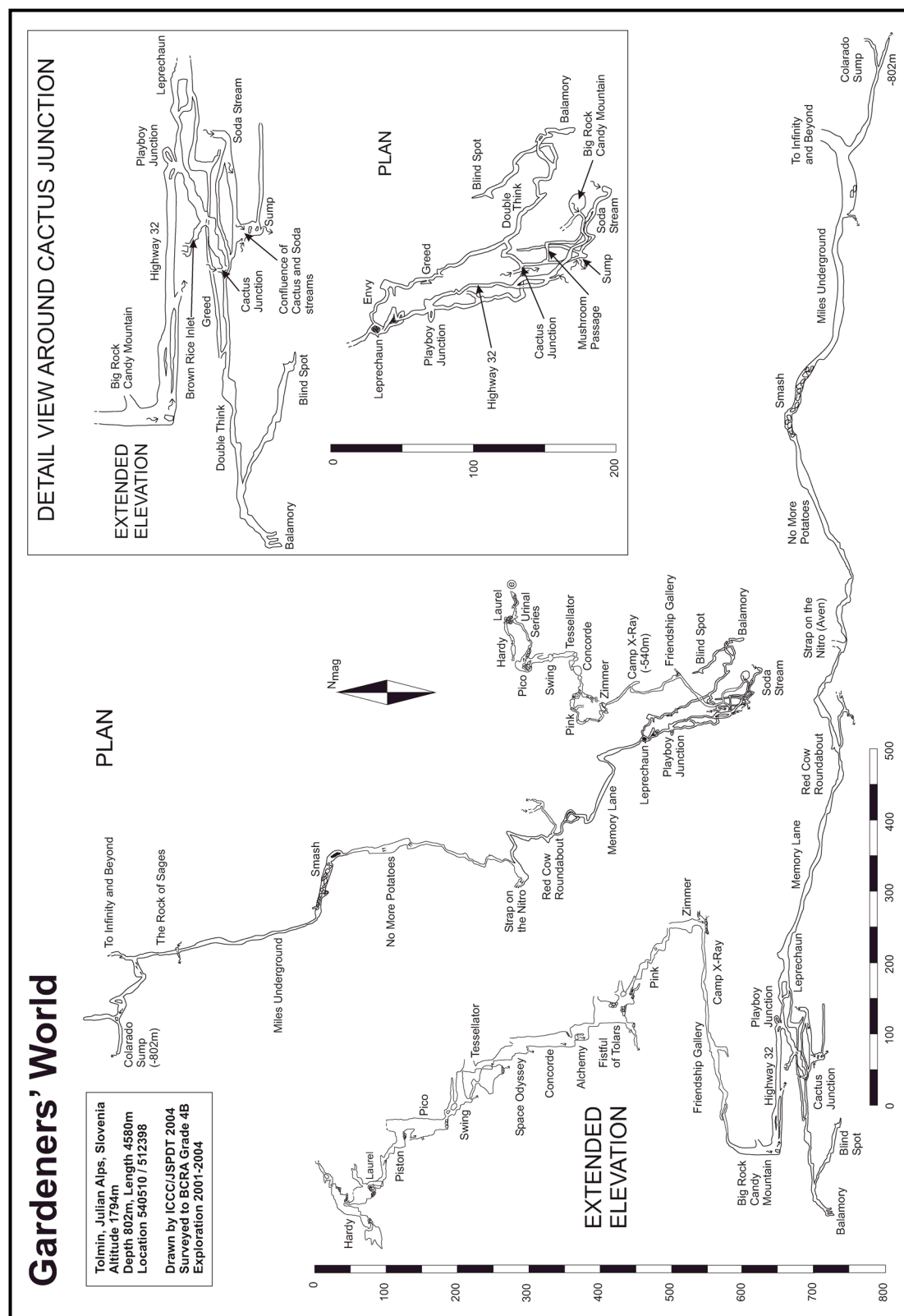
Jarvist Frost: After slaving away over all afternoon over a hot stove (a fresher's work is never done!) the cavers slowly appeared in dribs and drabs. They looked pretty damn shagged, struggling out of their oversuits to sit down and gobble the rather extravagant feast. I didn't even try to wait up for Tetley; last reports said he was singing merrily to himself as he wielded a spanner at minus 600m, expected back at dawn.



I was woken by an all too familiar Irish voice "Grrr, grr grrr, Derig, grrr grrr grrr with Hugh." Martin clearly had other plans for my lie-in time. Crawling uncooperatively out of my beautifully snug sleeping bag, I stumbled past the corpse-like legs of Tetley projecting from his tent, alongside a chain of about 100 maillons. The derig was incomplete; it looked as if it was up to Hugh and myself to finally put the cave to bed. Equipped with Vaseline and a pencil (to protect the Spits from rusting), Hugh and I flung ourselves down the entrance pitches and soon found ourselves standing at the head of Piston. Dragging an abandoned tacklebag, we steadily derigged, metalwork attached to belts, Spits smeared with Vaseline and the ropes left coiled above the pitch-heads. In no time at all, we were at the surface. Six months ago, bouncing to -120 and dragging kilos of metal back up with me would have been a serious endeavour, now it was merely a pleasant stroll between breakfast and lunch.

Getting changed at the entrance - it was far too hot an afternoon to walk across the plateau in caving gear - I looked back at the nonchalant entrance to Gardeners' World. An inconspicuous hole, under a little rock bridge like many others in the valley; yet uncountable hours have been volunteered to unravel its mysteries. There's no way you could pay people to do what we do. We endure the lightning strikes, atrocious dried food, the soul-curdling horror of the shit pit - and that's before we get underground and tackle the dangers of exploration caving, the remoteness, the depth and the sometimes horrifying instability of the cave itself. Yet this is what we enjoy - to have a life so far removed from our regular nine to five work, to leave the first ever footprints in a new cavern. Roll on Migovec 2005.

2004 Gardeners' World Survey



2005

In 2004, the underground camp in Gardeners' World led to an enormous amount of horizontal extensions at a depth of around -800m. However a feeling that the deep leads were slowly shutting down motivated a concerted effort to find new cave entrances, and think once more about the myriad of unexplored leads in the shallow sections of Gardeners' World, System Migovec and other smaller caves such as U-Bend.

Everyone that made it up to the Bivvy, from fresher to Auld Old Lag, found something new on the plateau. A new series of cave entrances were designated the K-series for Kuk, though in truth the majority of them were actually found on a newly explored miniature plateau below Podriagora. The intention of this systematic exploration was to find the 'missing' cave systems of Migovec. The huge drainage basin must drain somewhere and the underground streams found so far cannot account for all the water that must find its way down beneath the plateau. The folded nature of the limestone is very clear from the cave surveys, with independent pitch series dropping down at 80 degrees from the horizontal, with horizontal developments then being made on a North-South plane of the rock. Although none of the leads discovered this year led to a rush to hundreds of metres below the surface, there are many fruitful digging possibilities left, and we now have an entire section of the plateau that has been carefully and comprehensively investigated. The high altitude of the new Podriagora plateau also offers greater depth potential - and the possibility of reaching the magic '1000m' mark in a mountain which has sumps at between 900 and 1000m above sea level.

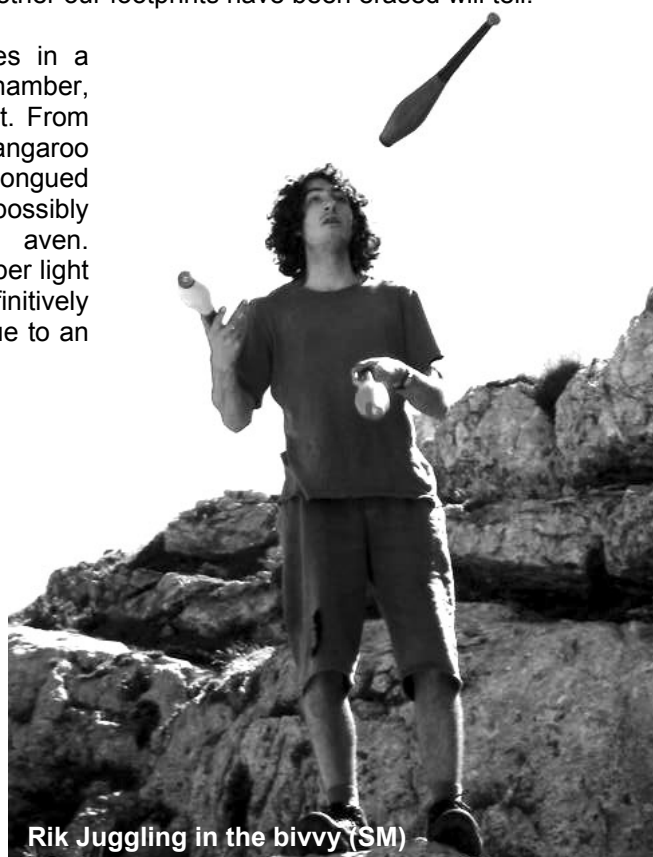
Exploration at moderate depth was still taking place in GW, with the 'Captain Kangaroo' extensions being made through the Pico window reached by Tetley on the derig in 2004. This area of the cave was very unlike the rest of the GW and System Migovec caves - being a fairly immature (and therefore tight in places) vadose rift, but entirely missing a stream with only occasional static pools of water. Large beds of dried mud were found in various locations. The jury is still out on whether it is an ancient section of the cave that formed before the main Pico water drain existed, or whether it becomes active every year with snow melt. Only a return in later years to see whether our footprints have been erased will tell.

The explored passage terminates in a thin rift, beyond which lies a large chamber, with an enormous echo and draught. From the survey, it is most likely that Kangaroo links into the enormous fork-tongued Concorde - Space Odyssey pitch, possibly entering into the unexplored aven. Unfortunately, the very last trip, a super light weight camping trip intended to definitively connect the surveys, was aborted due to an accident.

In a more curious development, a perched sump was found in a side passage half-way down Kangaroo, which along with a section of tight rift started to wind its way North towards System Migovec.

As with every year spent trying to unravel the mysteries of the caves of Migovec, we have generated as many questions as we have answered.

Jarvist Frost



Rik Juggling in the bivvy (SM)

Captain Kangaroo

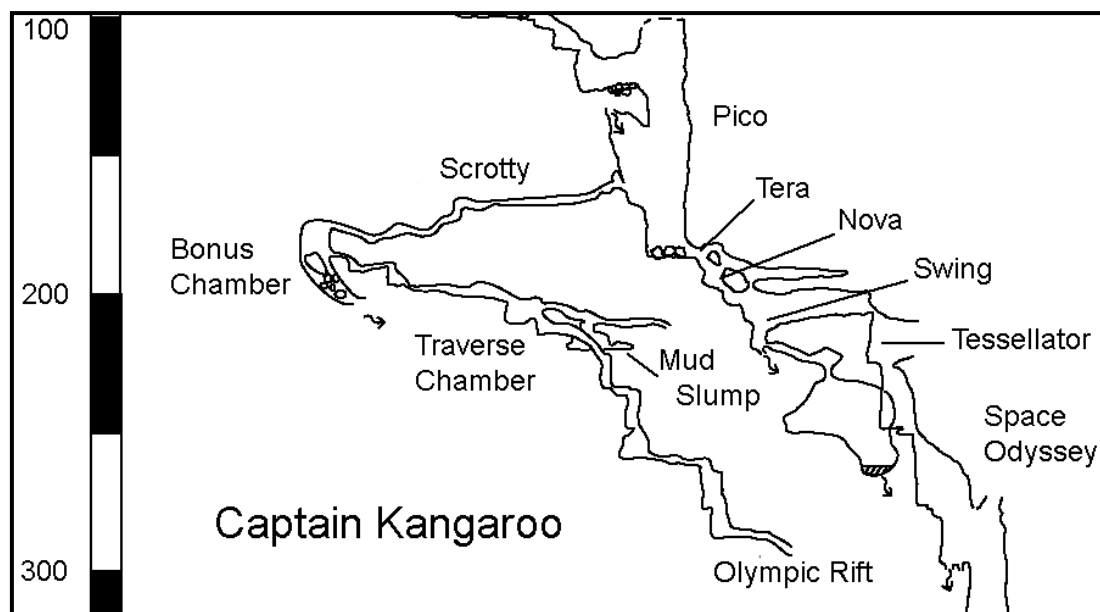
At one point during last years expedition, Tetley had spotted a window half-way down Pico in Gardeners' World. While Jarv and Clewin took photos of Concorde, he had set off on a solo bolting mission to reach this potential lead. In the months that followed, I'd repeatedly heard how he'd traversed right after the second rebelay, the one by the rock bridge, and, a few bolts later stood on a ledge. A dry rift, a metre or so wide led off, but the act of unclipping himself from the rope, while alone, half-way down Pico, had so unnerved him that he couldn't say much more other than that it was a Very Good Lead, that he'd named Captain Kangaroo.

Out on expedition again, I was keen to get pushing straightaway and soon teamed up with Marcin Kowalski, a Polish caver who had caved with us in England, during the previous year. Our first trip, to rig from the entrance to the lead, was cut short by the lack of a rope for the last hang down Laurel, but we were soon back with 100 metres of blue Lanex rope, and looking for this 'fabled' window down Pico. After swinging around on the rope for ages, I ended up bottling it, and passed the bolting kit to Marcin, who had already been nicknamed "The Machine". Once the rope was in place, we admired the view from the ledge and set off into the unknown.

It was indeed a Very Good Lead, for about five metres. Sixty metres of twatty, rifty passage, suitable only for amateur contortionists and enthusiastic cavers then followed and we quickly settled on the name Scrotty. We didn't kill the rift, though, it clearly continued but by the time the surveying was done it was definitely time to return to the surface.

My next trip was an epic. After much faffing, Marcin and I finally entered the cave at 4pm. Perhaps it was the thought of that rift - I hate small passages at the best of times and when the rock is sharp and the way on unclear, it was hard to get motivated. "Why have fun caving when you could go underground with a suicidally insane Polish cave diver?" I thought to myself. "Come on Rik....." Marcin said once again. At least I hadn't got ferociously pissed the night before...

Eventually we broke into a chamber, named Bonus chamber, only to discover another spikey rift leading off. After loads of bolts and a few small drops, we eventually turned round as the night had passed. My oversuit was shredded and I wasn't sure how glad I was that the rift continued. We returned to the bivvy at 7:30 am. I tried to sleep all day but got a sun-burnt face. Eventually, however, thoughts of new passages and possible connections to the System to started weighing on our minds.

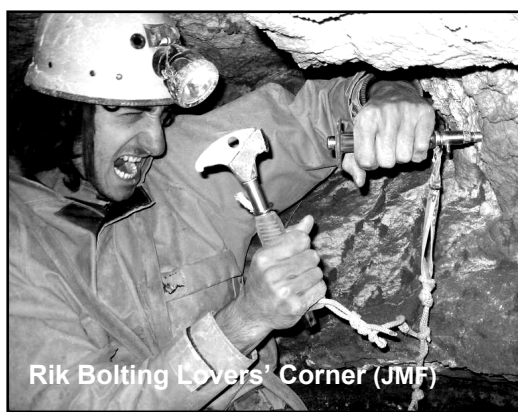


Extended Elevation of the Captain Kangaroo Extensions in Gardeners' World (2005)

Several days later I was back underground again with the Machine. We took the express route through the horrid scrot, Marcin thankfully carrying the tacklebag. We got to the pushing front quite quickly, in about two hours, and then slipped easily through the acrobatic squeeze at the limit of exploration. Marcin left me to put in the second bolt for the undescended pitch that followed. I dropped the first hang, then put in a bolt at a convenient ledge leaving Marcin to investigate a parallel pitch which eventually rejoined the first. We then spent hours bashing through 'Olympic Rift', named after the acrobatic moves required to pass it. At the end was a non-passable squeeze with an obviously massive black space behind it. There was a two second echo but no way through without a chisel. After surveying, we left the cave after 14 ½ hours. I spent the next day absolutely fucked and yet, once again, I soon started thinking about returning for more...

My final trip was with Jarv. We headed down with the intention of pushing the unexplored side passage off 'Traverse Chamber'. The rift quickly dropped into a small chamber, down a free-climb. After that, there were two potential leads. One was an excessively twatty rift. The other was a slightly less twatty rift, leading to a small pitch.

I bashed the awkward pitch-head open with brute force and a shower of sparks from the quartz in the rock. I then put in a bolt while Jarv curled up in the perfect armchair rock ledge in 'Lovers' Corner'. Jarv placed the rest of the Y-hang and dropped the pitch, a short 8-metres, past a ledge that formed a continuation of the rift, before touching down in a pleasant little chamber. The floor was covered with dried dinner-plates of mud curling up at the edges, with an obvious (but completely dry) waterfall at one end of the chamber, and a crawl-space leading off.



Rik Bolting Lovers' Corner (JMF)



Rik in Mud Slump (JMF)

It didn't take long to realise that there was no way on except for digging through the mud. We left 'Mud Slump', then followed the lead from the ledge. I bashed and squeezed down about 15m of the tightest rift seen so far in Captain Kangaroo but Jarv was cold and eager to head out. I emerged, flustered but not totally panicked despite my distinct claustrophobic tendencies. Unfortunately, we had no survey tape, as Marcin had hidden it somewhere along the long road to traverse chamber, but by Jarv's hand-compass and guessing distances, the rift twists away to the right away from the rest of Kangaroo.

We started our exit from the cave with only one tacklebag at a sane hour in the evening. This felt deeply wrong, but as we stopped at Tetley's classic Captain Kangaroo window seat overlooking Pico Pitch to munch luxury cheese and bread and cheese, I realised that less than two hours from the cave exit I felt fairly fresh and was still enjoying the trip. I vowed never again to go on an epic 15 hour slog unless I REALLY wanted to. At the entrance I realised that caving the next day was even on the cards. Thank-you Mr Frost, my best trip of the expedition.

Rik Venn

Pushin' Captain Kangaroo (to the tune of 'Flowers on the Wall')



It's good to see you're finally goin' pushin' underground,
I'm sick of seein' you down in the bivvy bummin' 'round.
You've finally patched your oversuit's enormous gapin'
rip,
You know you'd better stop usin' your arse for extra grip.

(Chorus)

*There ain't no hangers on the wall,
and this rift is rather small,
that don't bother me at all,
but I just wish I weren't so tall.
Smokin' pseudo-spliffs and pushin' Captain... Kangaroo,
Now don't tell me... I've nothin' to do.*

Some people say it's tight and scrotty but they've never been.
It's really the most beautiful passage I've ever seen.
So come on, won't you follow the blue Lanex off Pico,
Go right at the rub point 'cos it's guaranteed to go.

(Chorus)

There ain't no hangers on the wall...

Go digging at the boulder chokes and bolting in the
rock,
We're sure of the connection, sure as ten feet long's
my great big nose,
A parallel shaft series would be mighty fine indeed,
But don't go pushing too far north, it's headed for
Space Odyssey!

(Chorus)

There ain't no hangers on the wall...



Rik Venn

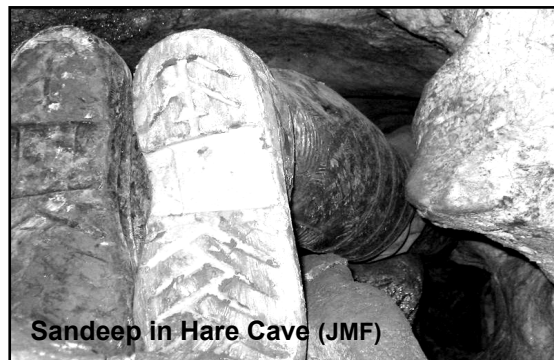
The Death of a Hare

Jarv escorted Sandeep and I to Hare cave, found in 2004, in the hopes that we could wriggle round the tiny corner at the end and discover storming delights beyond. I followed Jarv's advice and carried out an acrobatic handstand manoeuvre to enter the torpedo tube, and then squirmed my way to the end. Making the turn felt like too much commitment, especially as I didn't know whether I could get back down the first section!

As soon as I was clear however, Sandeep managed to wiggle directly through the tiny 'Torpedo Tubes' and shot straight around the corner. He reported, that once around, the phreatic tightened to nothing on both branches, with a bit of loose scree.

The boulder floor was still draughting though... Bring on the JCBs.

Joanna King



Sandeep in Hare Cave (JMF)

Alone: A solo push in U-Bend

I'd originally planned to go down U-bend with Sandeep, but he was so unnerved (or frustrated) by my amazing five hour faff effort that he bottled out at the point where we reached the first rope only to hear my cries of "C***, F***! I've forgotten my sodding SRT kit! Oh Jesus, where the f*** is it?" I suppose my bad language may impair my future effectiveness as the club's social secretary... Oh well. I went back to the bivvy, nicked Jarv's SRT kit and then returned to the entrance, alone. After dropping the first pitch, I realised that although I had rope, a bolting kit, spits and cones, I had neglected the hangers and maillons.

Oh well. I ripped off my SRT kit and plunged into the rift. I'm quite claustrophobic and I was solo caving, but I told myself not to be a big Jessie and surprised myself by slipping easily DOWN a horrid, nasty, squeezing, blowing rift. I plodded on and, after about two minutes, I found the bolts. In my usual forgetful style, I looked back to see two identical sides of a fork in the chamber. Unfortunately, my notoriously poor sense of direction had kicked in once again. I started down the right fork, traversed across a large gap above a potential ankle re-breaking drop. I traversed up, got lost, didn't panic, then went back to try the other fork. Three hours later, I was lost. Millions of blowing SQUEEZES flashed before my hungry eyes – I was FUCKING LOST!!

Jesus. I waited about another ten minutes getting cold before I decided the only way to get my head out of this heavily draughting rat-size rift was to take off my helmet. I slid back down to the floor sweating and panting. This was ridiculous, I couldn't have been more than twenty metres from the surface, but I was seriously starting to worry if I'd ever find the way out. Paranoid fantasies began to fill my lonely head. I tried singing to keep myself company but the notes rattled hollowly around in the wobbly boulder choke. Nothing would shift the disturbing thought that my disorientated struggling in the choke had pushed a huge, unmovable rock over the entrance to the squeeze. After I thought I'd tried every possible one of maybe six draughting routes through the rift, I crawled into a small hole to die.

There, I had a flash of hope. I saw a shredded rubber glove on the floor of one of the routes from the chamber, and followed a trail of shredded bits of over-suit through the rift and found my way out. Ahh, an epic trip at minus twenty metres. Unfortunately I left some bits of Jarv's SRT kit in the cave, necessitating a return trip sometime in the future. Maybe tomorrow, or maybe I'll just design and make a new type of re-usable teabag.

Rik Venn

Logbook Extracts 2005

"Bad driving is better than good walking."
- Simon, the local taxi driver

"Ummm, your leg looks very hot." - Sandeep to Tetley

"I pissed on my cuddly toys when I was two."
- Jo King

"Somebody write something...."

"Something."

"Do you own a Down Jacket?"
Yes 15 points, no 0 points."
- The start of the 'Comf league table.'



Rik and Shed at Sunset (SM)

He Squeezes to Conquer: Another stab at U-Bend

Everyone, from lag to fresher agreed that U-bend was a serious contender for development. So close horizontally to Primadona it was much higher, nearly on the plateau itself, and offered the prospect of simultaneously providing a far more pleasant entrance while adding greater depth to the fledgling system. A connection into the main Sys Mig was anticipated via Exhibition Road. And yet, an anti-exploration curse seemed to hang over U-Bend during 2005 - carbide generators were dropped, hand jammers misplaced, spitz mislaid, people suddenly betrayed by their guts. In the end, the most productive trip of many attempts to explore the cave was the derig.

Our intention was to have one last stab at pushing the strongly draughting rift opening from the 40m shaft, before retrieving the rope and putting the cave to bed for the summer. Chris gave the Z-bend a try but decided that this was a job for my more 'refined' frame. With full rock contact I tried the squeeze, getting far enough to see around the corner and into continuing passage but no further.

An hour of bashing later with hammer and chisel and I was in up to my waist. With no SRT kit, I believe I could have managed it. Time was ticking on though, the Spitz-greasing Vaseline that we were carrying was required for Gardeners' World and so we reluctantly headed out, leaving the conquest of this cave for yet another day.

Sandeep Mavadia



Fools, Hardy and Danger

Suffering under oppressive grey weather, Chris Franklin (aka 'Broken Chris') and I were kick-started into our plan to cross 'Hardy' in GW and climb into the rift viewable on the far side. The old bolts for the pitch were discovered, and gave us a rigging head-start. With many bolts placed, we made it across and were presented with a fair view up a short climb into a clearly passable rift.

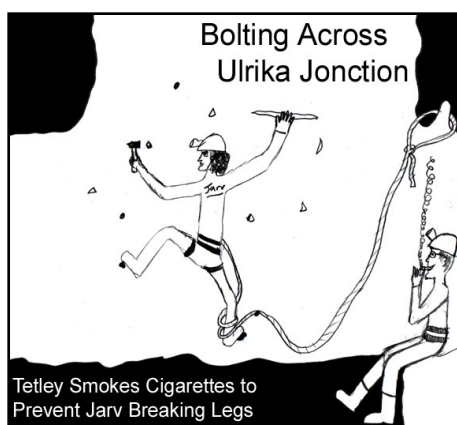
So we decided to return the next day to make the climb. Chris was given the role of belaying me and instructed on how to use a Munter Hitch. A bold step round the corner and then a classic chimney up onto a platform, where a natural gave a safe point. The rift does indeed continue, but requires several rebelay. Potential for the brave....

Martin McGowan

The Only Way is Up: Bolting Ulrika Junction

Tetley rubbed his hands together gleefully in the bivvy – here we go again! The plan was to explore an Aven at -150m in the main system, the hope was to find a horizontal passage that connected to the never-exhaustively-explored NCB passage. Long legs were a necessity for this yet-to-be-pushed traverse and climb. With a choice between the petite Jo and myself, I was deemed the suitable donor.

I chased Tetley down the M16 entrance pitches, meeting up briefly just before Brezno Strahov. Looking down, I saw an odd sheep-sized white cloud just next to the pitch head. Flicking on my spot beam as Tetley recounted a decade of anecdotes, it remained in the bright light. Forcing myself to break the gaze, when I glanced back a minute later it had disappeared. As ghost sightings go, it was certainly a rather tenuous observation – but still!



We zipped down and up into Hotline, meandered along the blackened passage to arrive at our climb. The traverse looked eminently do-able, with a drop of around four metres into the bottom of a pit. Our only problem was the complete absence of any suitable belay. Tetley took the rope back into Hotline passage and wrapped it around a boulder, but I doubt it would have done much more than make sure I smeared my face along the rock-face on my way to breaking my legs! Better not fall then... Putting in the bolt was fairly shonky – both arms outstretched with just a knee and tenuous foothold to keep one pressed against the rock. Shifting forwards to blow out the dust was horrendous.

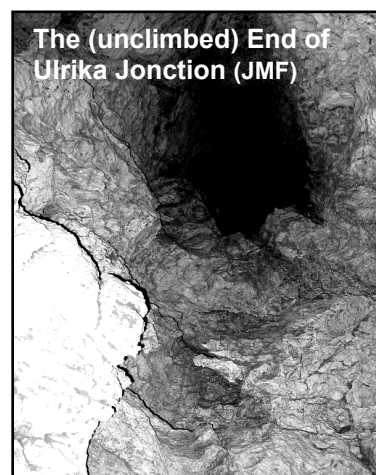
"If only I had a long, flexible, straw!" I remarked rhetorically to the cave.

"Ah," replied Tetley pausing for a dramatic drag of his cigarette, "I just happen to have one of those in the pocket of my oversuit."

With gaudy green plastic tube coiled around my neck, and an ineffectual belay hanging slack from my waist the bolt slid in smoothly. A hanger was quickly attached to the bolt and a rebelay formed, the rest of the traverse was then smoothly passed.

Finding myself at the foot of a little aven, the rope was attached and Tetley skipped over. Looking up, there was a choice between a four metre and a six metre route. With Tetley belaying from a sling placed over a natural at head-height, the shorter climb was attempted. Easy footholds, and a bit of classic 'beached whale' to flop over the top. Looking back across the pitch, it was clear that the 6m climb disappeared into tiny inlets – not something that I would have liked to abort and down climb!

From my new vantage point, a too-tight crawly passage disappeared off to the side - the only way was up! A dirty few metres later, and we were sitting above the main pitch, a drop of about ten metres. The air was still and warm – a far cry from the conditions below in Hotline passage and rather indicative that we were in a blind aven.



A further traverse could be attempted across and above the full pitch – fully exposed and with few belay possibilities. From where we stood, we could see over the edge of a continuing slope (see photo) into a small bit of crawling passage that in all probability would shut down to mouse-hole inlets. And yet, I still wonder what could lie just over that limestone slope...

Jarvist Frost

AREA K: A 'Shaft Bashing' Summary

K1 AKA "Goat Shelter": An Obvious 'classic cave' on the flank of Kuk, a rift bursts out in higher entrance. No lead.

K2: From the ridge we could see an obvious triangular entrance which was too tempting to leave. We wandered over to find a triangular 1mx1m entrance dropping into a 3mx3mx3m chamber with a big draught and choked tube leading off into the mountain.

"Easy digging! Massive draught!"

This cave was dug by Chris and Jarv for about two hours each. Rik did a further half-day of digging. Much rock was removed, slowly descending into the blocked rift. It would also be possible to start digging under the (solid rock) lip of the entrance, likely to rejoin the rift further down. The cave is still 'alive' but progress is very slow and the rock friable. It would benefit from another year of freeze-thaw, especially now the deeper rock is exposed.



K3: 30m shaft on top of Green Dome (Zeleni vrh). Believed bottomed in the early 90s.

K4: Entrance towards the east of the north face of Kuk. Chris and Jo climbed down onto the scree and then up into the entrance. Was found to be merely a window, with light filtering in from above.

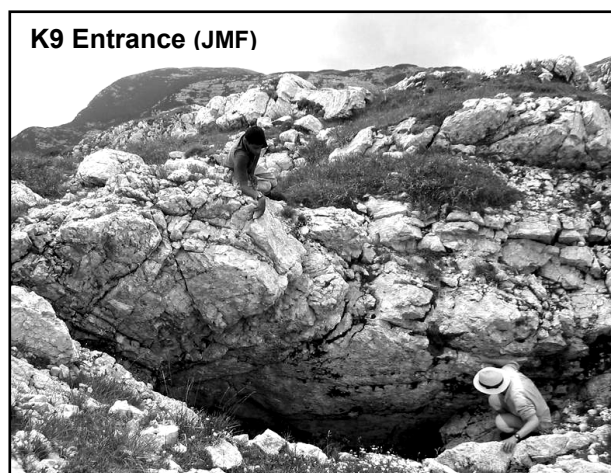
K5: Entrance on west-end of north Kuk cliff face. Abseiled down to by Chris with bolt placed just off path to Krn, backed up to VW-camper sized van nearby. Reblay 20m down on sloping ledge – dodgy half-inserted bolt! Chris arrived at entrance and explored – small horizontal development with light filtering in from windows above. Loose boulders bouncing down most of the way. Chris continued on abseil down to scree floor – had to free climb after end of 90m rope!

K6 AKA "Torn Scrotum": On the way back to camp from 'Green Dome' we saw a small tube going along the bedding plane. Jarv crawled along it for 6m to a widening with mud floor. Not much draught but still wide open. Needs elbow pads and Kevlar underwear.

K7: Up on grassy plateau east of K2. Clamber 5m over boulders into obvious entrance to get to a boulder choke. Small draught. A dig. Dodgy clamber.

K8: West facing overhang, scree slope into boulder choked 3mx1m chamber.

K9: Obvious triangle hole topped shaft under a rock bridge. Bolted by Dave and Sandeep, with through-bolts forming a traverse from the left, to a Spit on the right then down via a deviation around the natural to a reblay 2m below the lip of the shaft. Straight drop to minus 15m. Big window on pitch can be swung into, which is a smaller parallel shaft dropping into same chamber. From the bottom of a small chamber, a tight rift leads off to the east and almost immediately dies. To the west is a larger chamber that forms the start of an extensive bolder choke.



There is a floor level way through to the straight west, which enters further boulder choke ending at a draughting dig-able collection of rubble. Lots of hanging death above. Alternatively, one can walk up the large slope to the south of the chamber, and then traverse to the west to enter the boulder choke at a higher level. The chamber that you enter is a twin shaft that appears to go most of the way to the surface, but has no obvious entry. Above the west termination of the boulder choke is the bottom of a climbable pitch. However, the climb was rather exposed – and it was concluded that it was likely that it would shut down to sub-human sized inlets. However, Jarv occasionally wakes up wondering what was over that limestone lip...

"Found a caving Salamander on the way out, christened him Sammy and played with him for a bit. Took photos and made a Godzilla horror flick." - Jarv

"Only one SRT kit, so Jarv sunbathed and picked daisies to toss down the pitch while GI Jo dived down the hole."



Sammy in K9 (JMF)



Jarv in K10 (CR)

K10 AKA "Torn Testicle": A 50x30cm wide vertical hole filled with vertical limestone razor blades. 3m deep, just enough room to swivel around in. Stones rattle when pushed to the north. Would be easy enough to de-razor with hammer. Would need to lift boulders out from bottom before attempting to crawl underneath. It was plumbed with an inserted leg. Probably excessive effort.

K11: A fantastic looking scree climb into chamber in NE end of massive shakehole. Cold-draught. In right of chamber, boulder choke – serious digging possibilities.

K12 AKA 'Victoria Coach Station':

A large ~10m wide triangular entrance leads down over massive boulders and large snow slope into ~40m wide perfect-dome of a chamber. Choked at floor level, but draughty holes visible in sides of chamber at higher levels. Main push was in the North-East wall, where a bedding lane crawl led upwards at roof height. Choked with ice and boulders – enormous outward flowing freezing draught. Progress good, but unpleasant – best technique was to use crow-bar to scoop ice and boulders towards you down the slope before slithering out the slot and pulling them into the main chamber. A little unpleasant!



Rik in K12 Entrance (JMF)

"K-Plop: My natural cave-discovery ability guided me to a promising looking hole in the ground, just short of the K12 entrance. I peered down the gloomy depths and noticed blackness at the bottom - I called Jarv over to investigate this exciting new lead." - Jo

Dragged back from the beauty of Victoria Coach Station [K12], I dived down Jo's grotto, admiring the fine jellified Chamois diarrhoea formations on the 3m free climb down. Below the enormous boulder choke, I eagerly advanced on the obvious gaping black hole. I name it 'plop-pitch' for its beautiful sound upon tossing pebbles into it. A going lead it was not; a pile of excrement it was." - Jarv

K13 AKA 'Pedestrian Subway / Arrivals Hall':

Rift in hill directly above + to the north of the K12 entrance hole. A grotty and loose sloping crawl which leads to a free-climb turning into a 4m pitch. This drops you into a small chamber (Length:Width:Height 5:3:8m), with many boulders. Possible dig at floor level to South East. Large gash in floor makes you realise that you are right up in the domed roof of K12!

3 Bolts Placed:

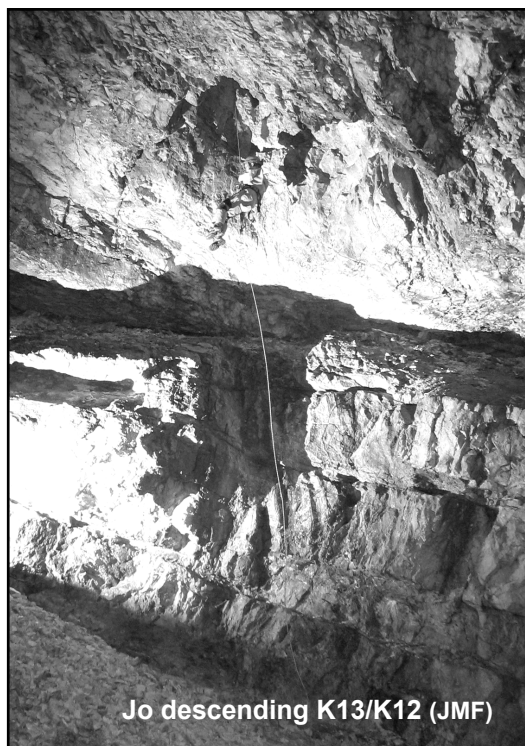
#1 at end of crawl, safety for free-climb and backup

#2 4m pitch bolt, on west wall

#3 Bolt at floor level of gash in floor. Possibly attached to a mere boulder – abseil with caution!

"K13->K12: Jo's Suicidal Photo Shoot

On from K-Plop Shit-Cave, Jo suited up and inserted herself into the upwards crawl of K12. Not much progress without crowbar, certainly continues for another five metres in a similar vein. Blowing very hard!



Jo descending K13/K12 (JMF)

Somehow convinced, Jo was persuaded up to K13 in a sweaty Meander and wriggled herself into a harness. Jarv zipped back to K12 to place flash-slaves. Jo had a quick look at the small chamber – suggests no way on. Inspected from a number of angles, the rebelay was clearly a mere boulder wedged across the drop - not part of the bedrock! However, with the combined force of Jarv's pleading voice and a natural disinclination to Prussik out K13, Jo zipped down the spectacular abseil into the main K12 chamber, getting flashed as she went. Photo good, fear of God on Jo's face captures the moment!"

K14: A shallow rift approximately fifty metres south of K9 which goes into a small chamber. A small lead goes left, though this is probably not worth pushing as its likely to break back onto the surface...

K15i (the Rik-Venn imaginary series): A big outward blowing, very cold cave. Goes in ten metres heading south and down, then a diggable choke, below a mini-cooper sized boulder with many cracks and no visible means of support. One hour digging gained one metre. Needs crowbar to clean boulder floor. Drips on roof like GW!

K16 / The Escalator: Located just below the path near Skrbina. A series of holes just on the edge of a break in the bedding plane. Returning back up the scree slope within the cave was like running the wrong way up an escalator - hence the name! Obvious alcoves. Small drop into scree. Uphill to rift, which goes further up along bedding plane to close down. Strong draught. Possible hammer. Downhill steep scree to ice plug. To right through scrotty little hole, full with scree.

K17: In a shakehole on the top of Podriagora. Climb down three metres into a long 5x5m boulder filled chamber. In East end of chamber, a small squeeze can be seen with enlargement beyond. Easy digging, but very loose and scary.

K18: Round the corner from K17 a rift disappears into a hole. 5m pitch to boulder floor - needs rope to avoid scary hanging death.

K19 (Coach-Crash Dig):

"Found entrance in pile of boulders in middle of boulder field, a rift dropping down a few metres, then running down gravel pile into the hill, and seemingly opening out. Noted distinctive split boulder a little up-slope from entrance. Encouraged by sight of obvious bedrock rift walls under superficial layer of rocks.

After some initial digging, entrance rift was wide and clear enough to climb down, but collection of loose rocks around top made some gardening necessary. Was left with one final rock to move that was threatening to fall into the rift. Janet started taking pictures. Tried to move rock with tape, slightly concerned that the larger rock I was standing on was not entirely stable.

I heard a little tinkling of pebbles from behind me - strange, since I hadn't done any digging there.

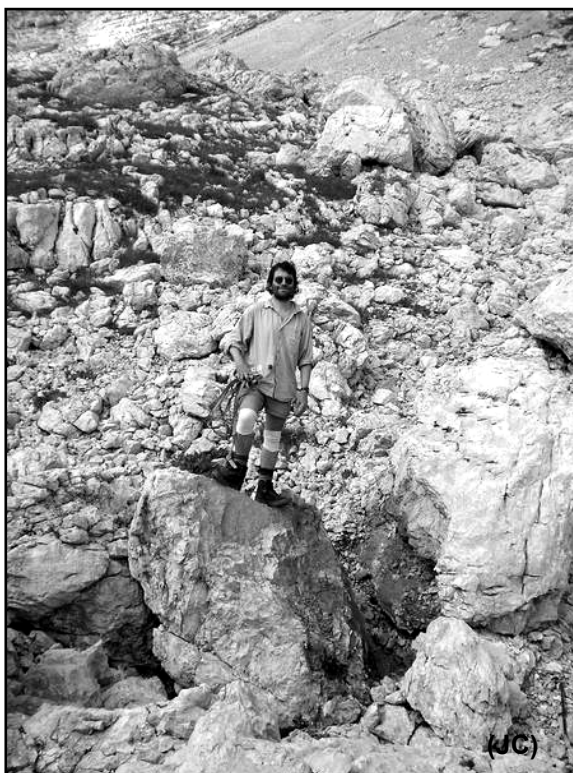
Couldn't get rock clear - too heavy and nowhere stable to leave it near hole, so had to drop it down rift, even though it was going to jam. Slight movement of rock underfoot as it dropped...

Heard more tinkling of pebbles from behind, then all-too-familiar deeper rumble and varied screams. Sprung nimbly back to safer ground in time to see sizeable Henry settling noisily into new position.

It landed right where I was previously standing seconds before, and where I had been lying down a few minutes earlier whilst jinking boulders down the rift with a crowbar: Actually, if anything, the rock has stabilised the surface somewhat - the thing its left side is leaning on is now definitely going nowhere, and it's still possible to access the rift by going under it, but it was decided to leave an attempt at cracking the boulder wedged down the rift for another year. Probably rather better with caps, and the actual extent of bedrock under the surface cover isn't entirely clear. A 4ft rock bar (or even a longer piece of scaffolding) would be nice, if someone could be persuaded to carry one up there." - Dave Wilson



**Dave, digging K19.
Before and After shots...**



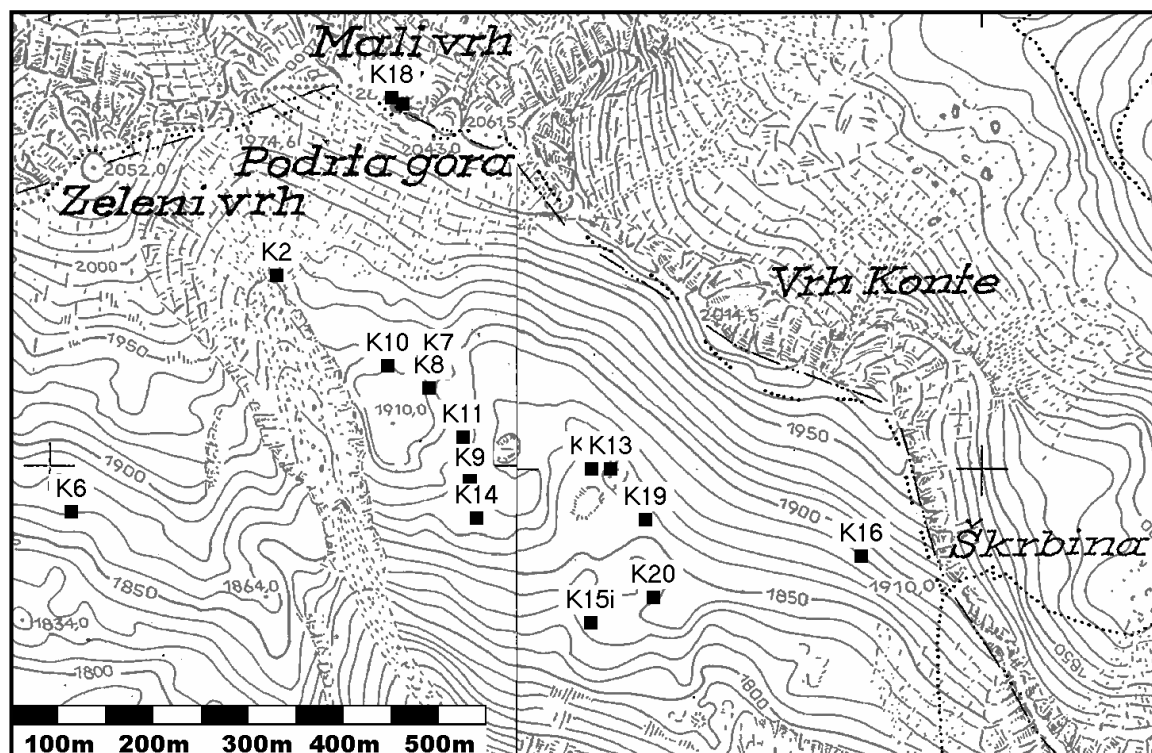
K20 / K-Moss: Near K15i. Small mossy-hole, could be dug with easy rock. Small draught. A little digging carried out.

K-Series GPS Coordinates (Lat/Long) WGS84 Datum

Name	Altitude	N	o			"	E	o		"
1	?	?					?			
2	1888	N	46	15	35.5		E	013	45	58.0
3	?	?					?			
4	?	?					?			
5	?	?					?			
6	1875	N	46	15	27.2		E	013	45	47.8
7	1899	N	46	15	32.4		E	013	46	06.2
8	1910	N	46	15	31.7		E	013	46	05.7
9	1872	N	46	15	28.5		E	013	46	07.8
10	1892	N	46	15	32.4		E	013	46	03.6
11	1878	N	46	15	30.0		E	013	46	07.4
12	1851	N	46	15	28.9		E	013	46	13.9
13	1870	N	46	15	28.9		E	013	46	14.9
14	1885	N	46	15	27.2		E	013	46	08.1
15	1835	N	46	15	23.9		E	013	46	13.9
16	1900	N	46	15	26.1		E	013	46	27.5
17	2035	N	46	15	41.5		E	013	46	04.2
18	2030	N	46	15	41.7		E	013	46	03.7
19	1859	N	46	15	27.2		E	013	46	16.7
20	1842	N	46	15	24.5		E	013	46	17.1

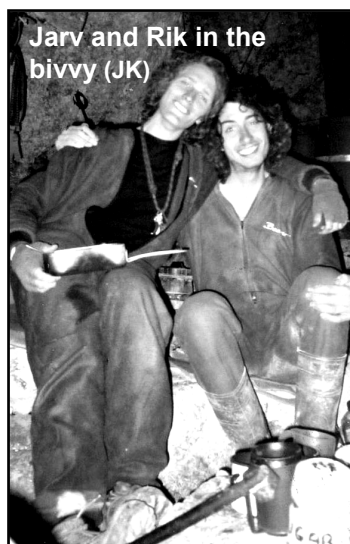
A Map of Area K

(K1,K4,K5 are located further West below Kuk, K3 is on top of Zeleni vrh)



So Long Migovec!

Talk had shifted from pushing to derigging - time to put Gardeners' World to rest for another year. The last week was the coldest we'd ever seen on the Migovec plateau during summer time, our tents covered with glistening drops of frozen dew as we clambered out of the bivvy to bed. One amazing night the visibility was simply unbelievable – the decadent lights of Capitalist Italy showing the line of the coast from the Trieste bay down to the Venice lagoon.



One last germ of an idea was gradually infecting some of us with weaker minds. Tetley was finally back on caving form, after having been laid low by a series of illnesses that left him with dodgy balance and an entirely understandable wish to avoid overly strenuous activity. Although he'd discovered the window-entrance to Captain Kangaroo from Pico in 2004, he hadn't actually been through it and was keen to have a look at our latest discoveries.

To confirm the hypothesized connection with Concorde would require a significant amount of effort – a two-man team to bash through the last bit of unpleasant rift, and someone to rig down the normal pitch series and await on a ledge for the expected connection. Lovers' Pitch needed a proper push down the winding rift, particularly as it was heading away from the rest of the GW pitches. Mud Slump required some attempt at digging to see whether we would resurface in more passage - and this entire area required proper surveying.

The plan, as it gradually came to be, was to organise a super light-weight underground camp at a mere -220m, allowing a far more pleasant push of the end of Kangaroo. With four cavers underground for 48hrs, we hoped to finally solve the mysteries, one way or another. An ideal spot had been located, on the soft dried-mud floor of Traverse chamber, with water carried from the perched pool in Bonus-chamber, just a short prussik and wander away.

After endless bantering, a sudden wave of activity took over in the bivvy. A free-standing geodesic tent that had long been missing its fly-sheet was readied for underground action, fleece was squashed into plastic bags and packed, a Tranja and a diet of fishy-cheesy-smash was prepped for enjoyment. All in all, our four person team (Jarv, Jo, Tetley and Rik) had seven tacklebags split between them. In a break between afternoon showers, we scampered across the plateau and were soon zipping down the familiar entrance pitches.

Then it happened. Sauntering through the awkward Urinal series, I was brought up short by an almighty crash coming from a pitch or two behind me.

"Jo – are you OK?" I shouted slowly over the echo.

"I'm alright!" came the thankful reply.

Jo had come undone on 'I-Scream', the short but not too nice six metre pitch below Laurel. The main floor of the chamber is a good few metres below a nasty sloping ledge that sits directly on the abseil path. Descending with your eye on what appears to be the ground, it's all too easy to find yourself landing a bit sooner than expected with a jolt to the wellies. Burdened with twin tackle sacks, Jo caught some particularly bad luck. Instead of landing on her feet, she landed, with full force on her forearm, on one of the jutting vertical columns of eroded limestone.

Tetley, who had given us students a head start, soon arrived, whipped out his first-aid kit and demonstrated his ample nursing skills. Jo had a deep impact cut, where her flesh had burst open in a neat T-shape, gently weeping goopy blood. After arriving from below burdened with tackle sacks, Rik practiced his reassuring bedside manner (perfect for leading Fresher trips) exclaiming "Fucking hell Jo, that looks atrocious!"

Despite her protests, we decided that Jo shouldn't be allowed to go underground camping, and must instead visit a hospital. Tetley offered to take Jo out, then return to join us at camp, but there wasn't much enthusiasm. The whole event was a bit of a shock, the cave suddenly felt rather hostile.

Injured at -100m, with a mostly-disabled and possibly fractured arm, this would generally be a time to call the Cave Rescue in the UK. Here, of course, it was not so simple. Was the casualty capable of getting out by herself? Would we be forced to organise a hauling party? Of course, this being Jo, she happily ambled up the pitches, scorning any offers of assistance. Its always a bit embarrassing when you have difficulty keeping up with the casualty!

Once back at the bivvy, only three hours after having left it with stuffed sacks, Martin disinfected the wound and dressed it with more aplomb that we managed underground. Dave Wilson did sterling work as Taxi driver extraordinaire, arriving at the plateau just in time to admire the sunset, turn around, descend, and drive to a hospital in Italy.



Jo, with an injured arm (SM)

The following day, after hearing by mobile phone that Jo was alright and that nothing was broken, Rik and I returned to Captain Kangaroo to drag the rope and metalwork out. As we carefully poked Vaseline into the Spitz, one couldn't help feeling a slight sense of disappointment. After having failed to discover the parallel shaft series we were hoping for, Kangaroo was looking like a very minor side chain. Quite enough by itself to get into 'Selected Caves' if it were in the UK, out here it was merely a shallow and immature distraction from the developments that lay just a short way away. Still, some leads remain and its definitely worth a revisit at some point in the future.

Returning to the surface after our little afternoon jolly, we met Tetley on his way down – passing through the night to -350m, de-rigging the main pitch series as he surfaced. The expedition caving ended, as these things tend to do, with a string of fragmented memories. Clambering past the petrified moth in the entrance of Gardeners' World for the last time, getting changed on the ideally-placed patch of grass once outside, while being towered over by the peak of Škribina.

The clag descended for the remaining few days. Rik and I did the last carry of the year, bringing down the last few items to be taken back to Blighty. Our friendly bivvy, such a welcome sight when returning over the plateau, was just another misty shake hole. The fire dug out, the rain-collecting tarps removed, the barrels and Daren drums stashed away under the overhang. Just a ring of boulders that would make suspiciously good seats and two black salamanders mating messily on a rock.

Down at Ravne for dusk, the van had long escaped to Tolmin, leaving us with two single-person lifeboats - the bikes 'Benson' and 'Hedges'. Bought at a ridiculously low price from Ebay by Tetley, it was an even chance whether they would make it down the hill without rattling to pieces.

Wearing our Mig-lights, we set off down the hairpins for sunny Tolmin, racing the thunderstorm. Probably my most dangerous, and certainly the most exhilarating, event of my summer. Rik chased a badger off the road and, after brushing against a bit of bush when taking the hairpin a bit too quick, I looked down to see something that appeared to be a giant cricket affixed to my shin. With our brakes steaming, we shot out from under the rain-cloud as we made the final approach on the flesh-pots. Its always sunny in Tolmin, even at night! Finally arriving at the Paradiso, we went in with wild eyes to find the cavers and order our terminal Laško.

Jarvist Frost

Operation Enigma: A Lightweight return to U-Bend



Tetley at Kal, in cloud (JMF)

Such was the lead, and so horrified were we that we had failed to successfully push it in the summer, that a crack team (Jo, Jarv, Rik, Tetley, Janet and Sandeep) flew out in October 2005 for operation 'Enigma', bouncing up from Kal (the Shepherd's huts) with our Slovenian friend Mr Bang.

The weather was absolutely atrocious, the visibility low to the point of making it difficult to find the entrance in the first place! The chemical persuasion, however, using original bang from the Nobel factory, was a rip-roaring success (in spite of drill battery issues), but there wasn't time to allow the cyanide to dissipate and try the squeeze.

The following day saw Jarv and Rik return without caving kit to retrieve the entrance ropes, struggling across a plateau that was simultaneously enjoying gale-force winds while being in the centre of a dense freezing cloud. Climbing down the loose scree to the entrance, with the 1000m plunge into the valley below all too clear in the mind's eye, this was truly an unfriendly place.

U-Bend is just 7m from part of the second (Drugi) entrance to Primadona and would add 50m of height if it connects as well as improving the ease of access to Primadona from the plateau. And there's always the possibility of finding a parallel shaft system! The Petrol drill will be brought out in 2007 to assist such explosive projects...

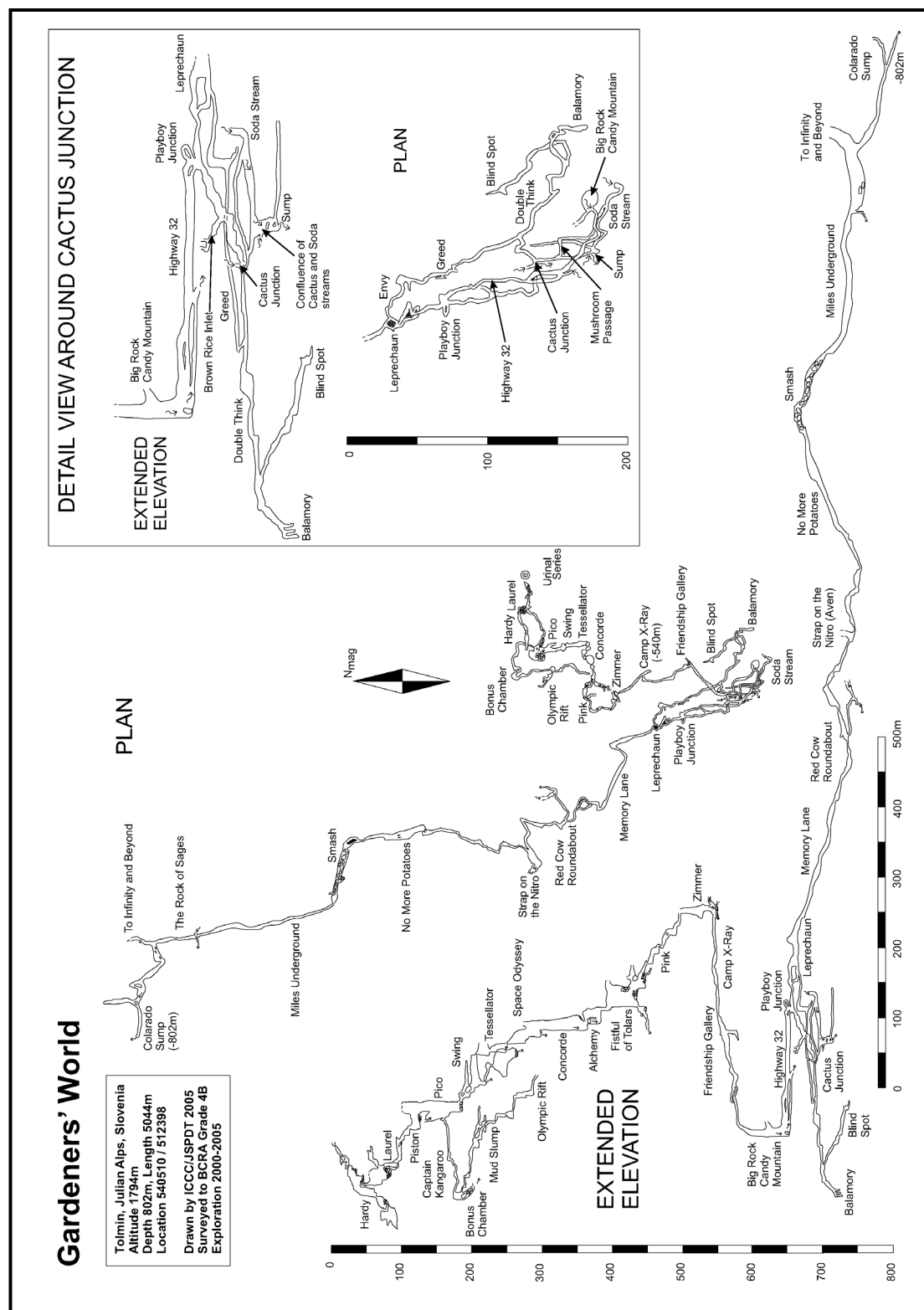
The weather cleared for a few hours around midnight on one of the days, allowing Jarv to take the below photo of Mig and Kal by the light of the nearly-full moon on a half-minute exposure, camera balanced on a dry-stone wall due to lack of Tripod.

Jarvist Frost



Kal & Migovec by Moonlight (JMF)

Gardeners' World Survey 2005



2006

“It is not the beginning but the continuing of the same until it be thoroughly finished that yieldeth the true glory.” Sir Francis Drake

Unfortunately, there was no club expedition in summer 2006. Wedding bells were tolling for some while others had non-caving plans. Tetley and I, for instance, went for a jaunt round the Atlantic in a stupidly small 26 foot sailboat. But as Autumn came around, Migovec weighed heavily on my mind. With my summer travels at an end, it was with little surprise that I found myself booking solo flights.

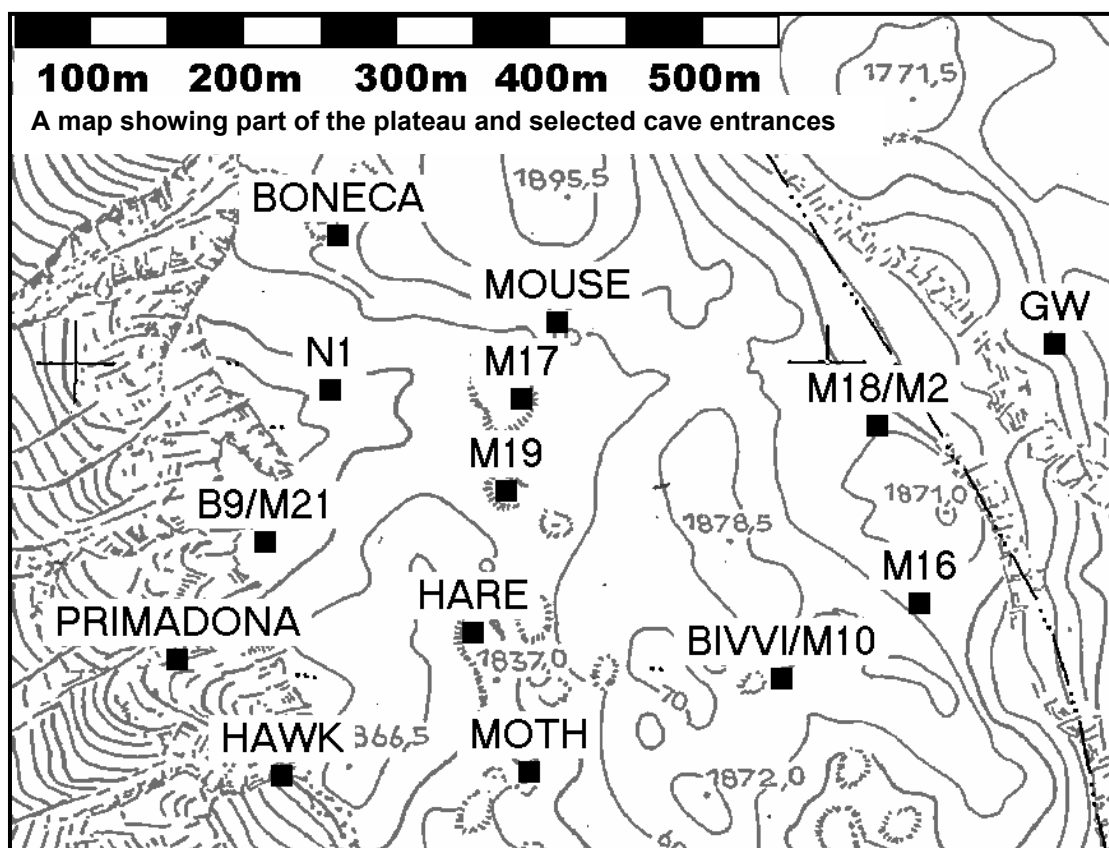
To lay the groundwork for the 2007 expedition, a vast quantity of surface work needed to be completed in a systematic fashion; an ideal job for just one person with a lot of time, rather than consuming days on end when the mountain-top bivvy was running at great man-power expense. This was also an ideal opportunity to strengthen ties with the JSPDT, continue the editing of this report and to polish the survey!



**Sunset Above the Clouds,
Jana looking towards
Grusnica (JMF/JC)**

So I found myself once again in stores, packing the usual equipment. Tetley used some of his ever plentiful holiday to join me for a ten day stretch.

Jarvist Frost



On a technical note: GPS on Migovec

The Slovenian national **Datum** does not come pre-programmed into GPS handsets or navigational software - at Migovec's longitude, an difference of about 150m is found compared to WGS84. It is **D48**, with a Bessel (1841) Spheroid:

DX	+682.0m
DY	-203.0m
DZ	+480.0m
DA	+740.8m
DF	+0.10037484

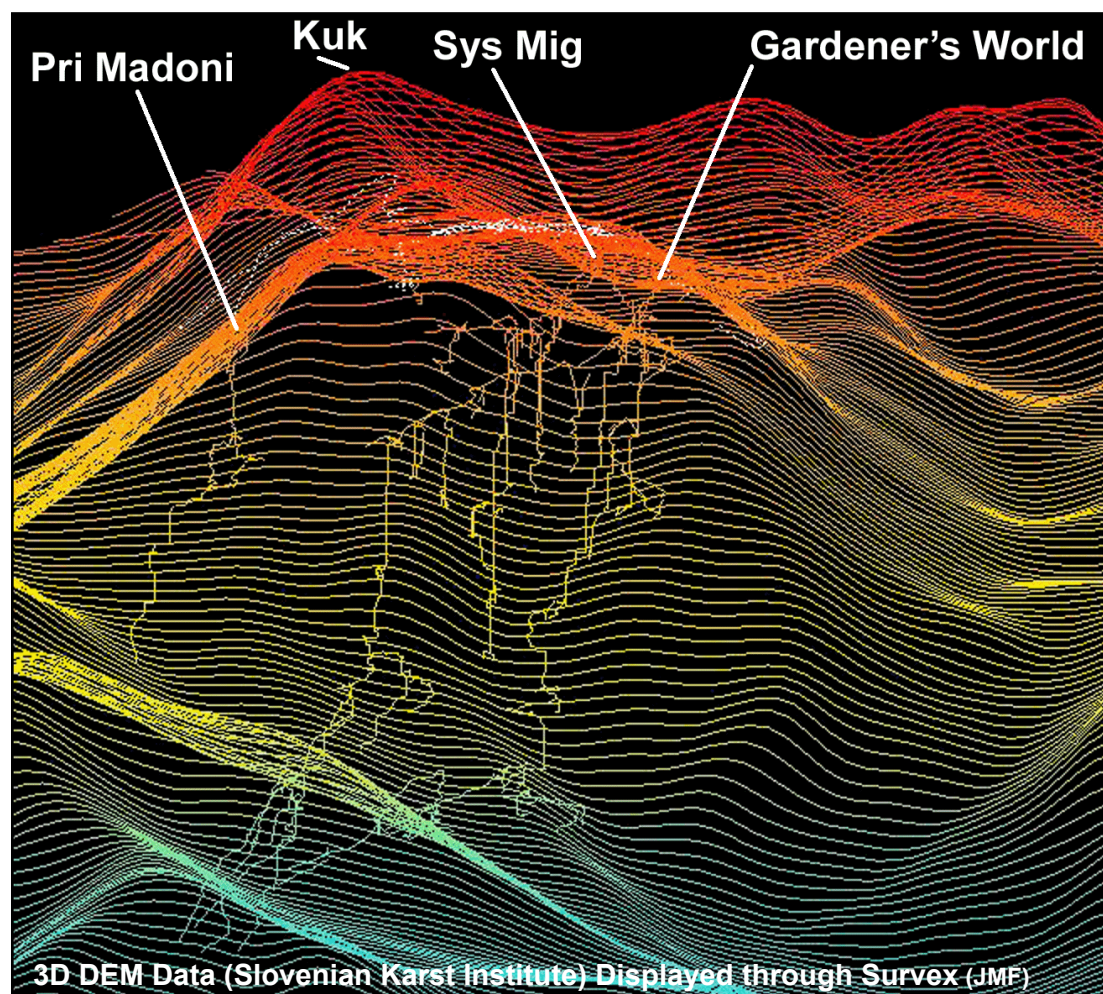
Garmin GPS units use WGS84 internally (and for transfer via serial cable), and translate on the fly depending what mode the device is in, meaning that waypoints taken while the device is running under differing Datums are consistent with each other.

The Slovenian **grid** (Gauß-Krüger) is really a conformal transversal cylindrical projection. It can be approximated with a UTM (Universal Transverse Mercator) of the following specification:

Longitude Origin	E 015°00.0'
Scale	+0.9996
False Easting	+5'500'000.0m
False Northing	+0.0m

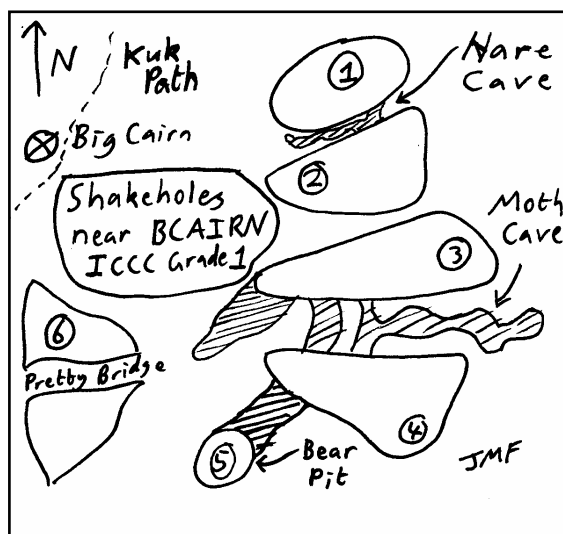
The Scale Factor is quoted as +0.9999 on a number of websites, yet is officially +0.9990. Zdenko of the JSPDT reports that +0.9996 gives more accurate behaviour for the Tolmin region of Slovenia. As of December 2006, there was still some uncertainty about the exact specification for this grid.

Jarvist Frost



Moths and Hares Make Strange Bedfellows Indeed: More shaft-bashing

Our alpine start didn't quite work out as intended; a late lunch at the pizzeria was followed by for one last tea drinking session at Andrej's. Tetley and I then drove up to Razor, in our small hire car, walked to Kal as the sun was setting, built an open fire in the third hut and cooked food before bedding down for the night. The following day we headed up to the plateau, keen to get back to what Tetley calls "Our Mountain Kingdom." Once there, we headed straight for the interesting collection of shakeholes around Hare Cave. There is obvious cave development in all of them (Hare, Keyhole and Postcard cave are all within 50m). With all the snow melted, this was the obvious target for a recce.

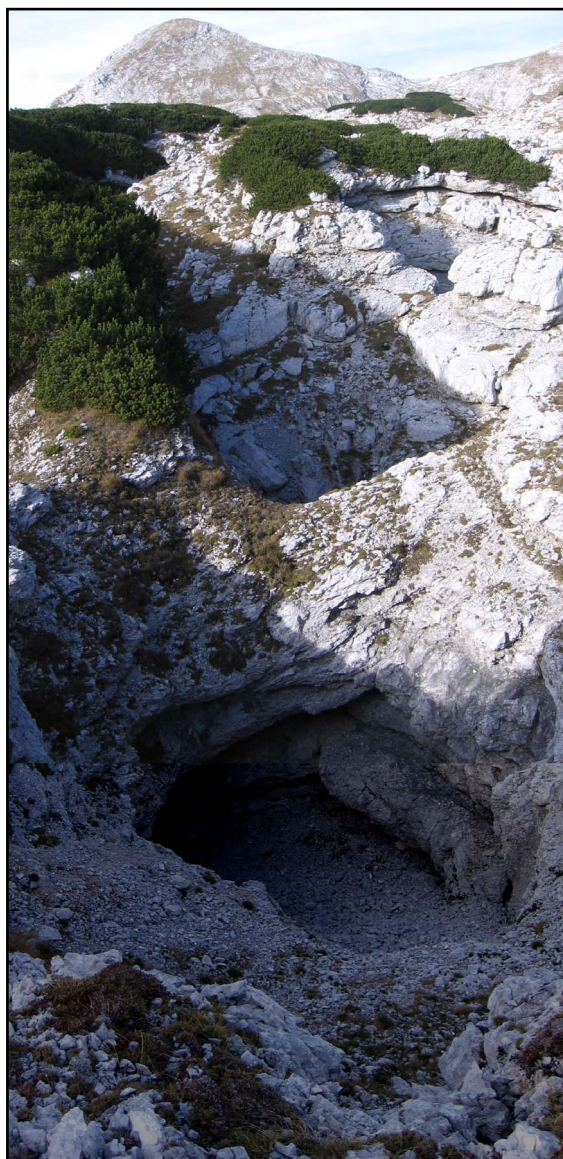


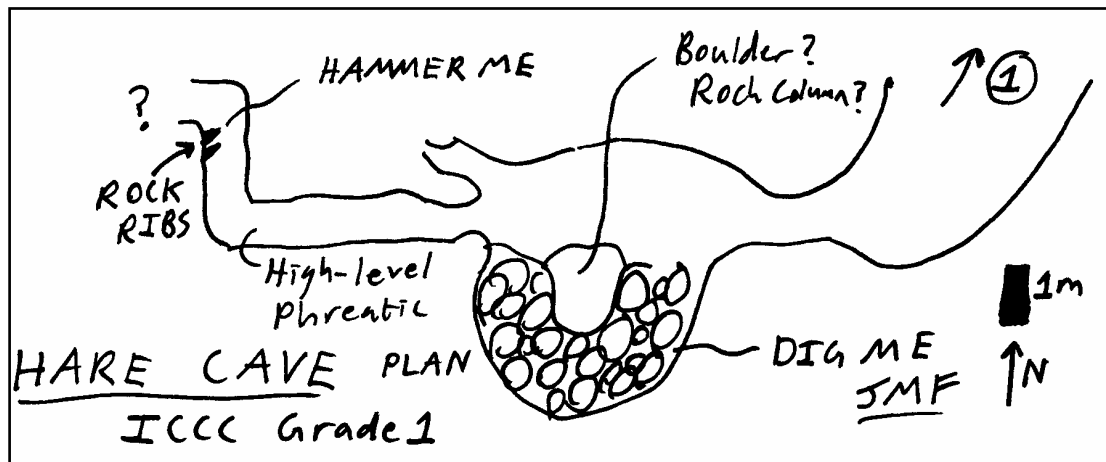
Our first 'attack' was **Hare Cave**. We both wriggled to the first corner in the phreatic tube for an inspection. This lead is still a worthwhile hammer, but feels as though it might just return to the surface. While we took turns in the squeeze, the other was digging down in a boulder pile. This is very much draughting, but a large 'boulder' hindering progress in the centre of chamber may well be part of the stream sculpted bedrock. It needs a few more hours of serious digging to ascertain whether it goes or not.

Later, Tetley noticed an obvious entrance in the North of the shakehole to the South of Hare Ridge (this shakehole was full of snow in summer 2004). This body-sized two metre crawl, led to a small low chamber. Light came in from the Northerly shakehole. It clearly connects with Hare, but not via a human-sized route.

We then started a systematic search of the nearby shake-holes, all of which show clear potential for caves.

The photo-mosaic to the right was composed from south of hole #4, the hare-cave ridge (crowned with dwarf pine) can be seen at the top right, while the moth-cave ridge lies in the fore-ground. These shakeholes contain a far amount of snow in the summer! The camera was pointing almost due north, Kuk can be seen in the background. The 'Big Cairn' on the Mig-Kuk path is almost due west of the Hare cave ridge.



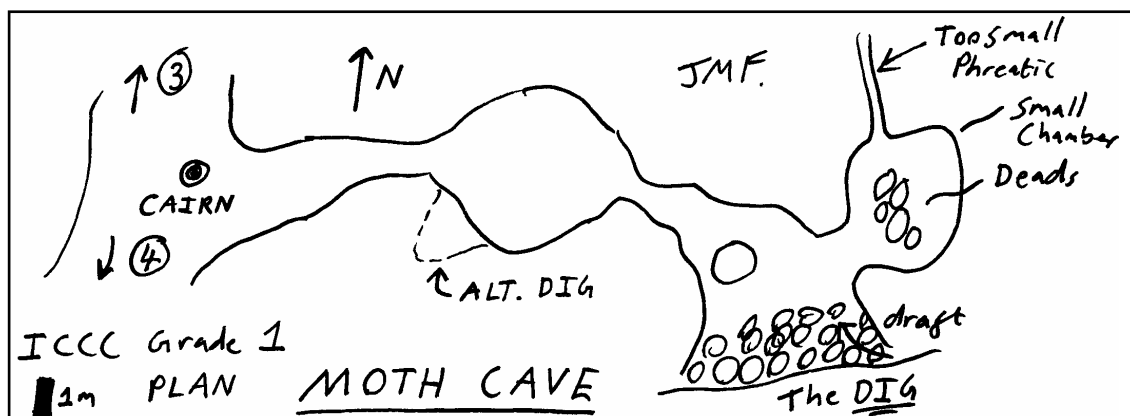


Moth Cave:

Slovenija Datum: LatLong N46.252219 E013.764609, UTM 5404788.2/5122292.6, Alt: 1831m

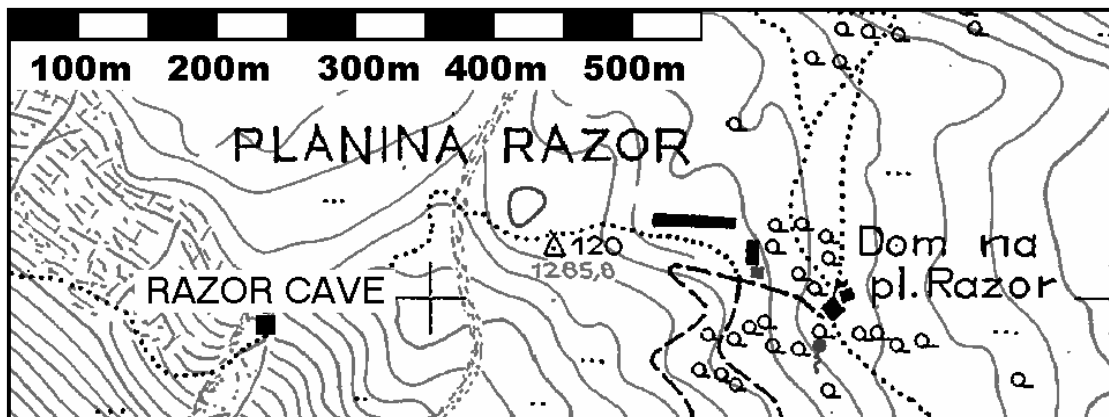
This cave is located between two shakeholes, and one can access it via low-level windows from either side. It might require digging through snow in the summer. The cave goes DOWN and to the east, straight into solid rock. A few small chambers leads to the pushing front - a pile of draughting boulders (the draught seems to be coming from the east) below a very stable 45 degree solid ceiling. Easy, and extremely quick, digging. There is a drip-formed chamber for storing spoil just to the East, the majority of the choss is a mixture of gravel and small boulders, but Jarv and Tet were stopped after an hour of effort by a boulder that needed smashing apart with a hammer. An absolutely stonking lead, in the all but mythical 'Primadona / SysMig' connection area, situated almost directly above Hotel Tolminka and within ten minutes walk of tea at the bivvy! A bucket, a hammer and a sound system will make this essential project an enjoyable part of the summer 2007 expo.

Jarvist Frost



Razor Cave

Slovenija Datum: (LatLong N46.236071 E013.792441) (UTM 5406906 / 5120466) Alt: 1230m



This cave is located on the Razor - Ravne Forest path, just to the East of the short section of Via Ferrata steel handline (350m from the Razor hut). A short climb up into right-angled section of the cliff gets you to the ample entrance.



Formations in roof (JMF)

The short entrance climb, by a large painted 'JSPDT', leads to a pleasant chamber with a large boulder sitting in the moonbeam of illumination coming in the entrance. The way on is an obvious (clearly dug) crawl, into a series of chambers which follow a fault line NW into the mountain. A ten metre or so freeclimb down with easy handholds is eventually reached in a thin bit of rift. The way on from the bottom is to apparently climb up over the overhang at the opposite end of the rift - though some kind of belay or hand-line is necessary! The active way follows a small stream down and off to the left. A small gour-pool is forming in a body-sized side chamber, fed by a drip from above.



Rift beyond freeclimb (JMF)

This cave, that has been known about for decades, has the possibility for future development. There is apparently between 200 and 2000 metres of passageway depending on who in the JSPDT you talk to! The original exploration was driven by an attempt to reach the waterfall that could be heard near the entrance. This sound turned out to be merely the rustling of the wind!

Jarvist Frost



Tetley in a chamber near the entrance (JMF)

A return to Primadona

With perfect timing, Tetley and Jarv were both out in Slovenia for the first major Primadona push by JSPDT members in three years. The aim of the trip was twofold - to train up some new Slovenian cavers to Migovec standard, and to push a climb in the north-heading gallery named Smer0, that was hoped to provide the mythical mystical link into the main system.

The following article was originally published in 'Felix' the student newspaper of Imperial College):

I awake at 1500m, in a hut on the slope of mountain Migovec in Slovenia, to the sight of a cup of coffee being waved in my general direction. ICCC has been exploring the deep caves of this mountain in conjunction with the local club for over a decade. The main cave system is over eleven kilometres long, and nearly a thousand metres deep. Our hope for today was to enter a more recently discovered cave - 'Primadona', and explore in the direction of this main system - barely a hundred metres away. Combined, these caves would be the longest cave in Slovenia that can be explored without diving equipment.



Tetley on the Entrance Slope (JMF)

Setting off for the peak high above, we are accompanied along the steep path by the roar of a river in the deep valley to our side, the stark peaks of the next mountain range jutting purposefully from the white cloud that rolled below our feet. At the cave entrance we check and stow all our gear carefully, one forgotten item would spell a premature and disappointing end to the trip.

The entrance is an enormous slope of permanent snow, a fast toboggan-ride in a plastic oversuit! A quick crawl and a wander along a passageway, to reach the first rope. Down we shoot, zipping through the inky blackness. Kept company by the click of the karabiners onto rope, and the clunk of the boulders beneath the feet, forever chasing the headlight in front, the calls of 'Rope Free!' and 'OK!' merging into soporific mumbles over the echo. Today I am in luck - the Slovenian at the front of our advance party sings bass in a choir. Soon the chambers are resounding to his sonorous renditions, Slovenian folk songs interspersed with Leonard Cohen.

Abseiling down through a chimney between the rock, the walls suddenly disappear. Looking down far below, I can see pinpricks of light - the headlamps of the rest of the party waiting for me. I reach a reattachment point in the rope, where I need to take my abseil device off one section of rope and reattach it beyond the rock anchor. Before I joined the caving club, the very idea of doing such a manoeuvre would have filled me with dread. The drop is not just enough to guarantee a certain death, but would allow plenty of time for contemplation before hitting the rock. However, I now know that I am safe in my harness and am perfectly at ease, my actions totally automatic as I attach multiple safety cords, transfer my weight over and tested my descending device before taking out the last safety.

Free once more, with absolutely no effort I gently drift down. Abseiling down into this bell jar I am left dangling in free space; the thin white line of the rope disappearing beyond my light's illumination above. The knit of the rope sheath started me gently spinning - I don't even have to turn my head to watch the chamber go by, to see the waterfall across the way develop from a drippy purr into an almighty roar.

An energetic scramble up a slope of boulders got me to my companions, sitting on insulating coils of rope in a side chamber away from the damp and the draught of the falling water. Cravings for chocolate and nicotine were indulged by the various cavers, ice-cold drinking water collected from a nearby rock pool. How deep were we now? Still very shallow - not much more than two hundred metres. So, only deeper than 'Canary Wharf' is high!

We then undulate along scrambling over enormous house-sized chunks of limestone, ducking through rock archways and stomping along tube-tunnel-sized passageways. At the limit of exploration, we unpack and prepare to climb. Hours of work are spent gaining a precious ten metres of height through the roof of the corridor. Finally up, we had entered the unknown.

A little chamber with a clamber up into a crawlspace. No one has ever seen this passage, and we have no idea where it goes. This bit of cave was very old indeed, having formed when this part of the mountain was below the water table, before the kilometre-deep valleys formed on either side. As the last of the water drained out, it left behind amazing formations in the rock and the mud, some of which, inevitably, were illuminated, admired and then crushed underfoot.



Andrej placing the bolt (JMF)

Some rather acrobatic manoeuvres later, and the passage starts getting much bigger. Drawn on by the sound of a waterfall, we clamber down increasingly large climbs onto an enormous rock shelf. The main drop was too far for the short rope that we have, though looking carefully over the edge, one can see a little underground river running past far below. Placing rock-anchors on the very end of the ledge and bouncing sideways as we abseil down, one could reach a false floor just within the length of our rope.

Safely down, we walk around the corner to be confronted with a clear sign that someone had been here before - a neat cairn of rocks placed on a boulder in the middle of the passageway, marking the location of a survey station. But in which cave are we now? We had certainly travelled a sufficient distance to reach the main system, but the path had so many twists that we have no way of telling our overall direction. Exciting stuff indeed!

We split up and scramble around, looking for another station - hopefully one with a little note on waterproof paper stating which part of the survey it was - and therefore which cave. This part of the cave was an absolute rabbit warren, with extinct waterfalls and passageways criss-crossing and spiralling around each other. Like some Escher drawing, you can step across a chasm and look down to see another member of the team crawling along sideways below you, while another caver traversed along high above.

Time was passing, and it was many hours of effort to reach the surface. Half the team started surveying the way back, slowly taking point-to-point compass, clinometer and distance measurements for feeding into a computer once back to the nearby town. The rest of us continue to explore. Climbing down with the other English caver [Tetley], we found a route which doubles back under the way that we have come, shuffling along an increasingly wide gorge. Looking down is terrifying indeed - the roaring river being very far below, but the climbing was easy, along wide mantelpieces of limestone. Back in a corridor-like passage we explore with dawning realisation - to be suddenly confronted with the sight of our original rope disappearing into the ceiling! This bit of cave simply reconnects to itself in a loop.



So we had failed to make the big breakthrough, on that trip at least. But no one has ever been down to that underground river - all it requires is more rope and more time. We finish the survey, tidy up the ropes and start back towards the surface, saying goodbye to the dangling bats as we go. Climbing vertically into the heavens, I am having the workout of my life, in the most awesome surroundings. Finally at the entrance, we scramble up the snow slope towards the stars beyond after eleven hours underground.

Back at the hut, a flood of warmth and pine smoke flows from the door into the icy night. You can always squeeze another caver around a table; bowls of hot soup and hunks of bread magically appear, followed by cake and a wee dram here and there. Sitting around me are the faces that go along with the motes of light in the dark, people who I had barely met when going underground now seem like old friends, united by the joy of cooperative exploration and the shared experience underground.

The chatter runs late into the night - where next to explore? And what was the cave going to do next? Where did that underground river run to? And where does it come from?

The discovery of a streamway in Smer0 gallery was extremely exciting, and is a first priority for the next exploratory trip in Primadona. The end of Smer0, an aven, is located barely 100m below the surface and is only three valleys north of the entrance. Above this point there are a number of newly found surface caves. Finding such an entrance to the far end of Primadona would provide an excellent method of attacking the 'connection' leads.

I am sure that a caving geologist would be able to tell us some very interesting things about the formation of Primadona - the change of limestone from the dirty shattered rock which forms the pitch series, into the beautiful (and extremely reminiscent of SysMig) smooth walls of the Smer0 passage is extremely striking.

Jarvist Frost

The Primadona Survey: A note

Although a main-line survey exists for Primadona (the Slovenians use Surverx and ICCC and JSPDT share all data), a fully drawn up survey has not been made since 2000. In my opinion, some areas need to be resurveyed. A lack of permanent survey stations will make this a fairly hard task, however. As well as the Smer0 gallery, heading towards the system, the bottom of the cave, at a depth of about -600m, is also a going lead. It has proved to hard to find out more information about this pushing front, however, as the original Slovenian explorers haven't returned there for six years and memories have faded.

James Hooper

Exploring the Western Valleys of the Plateau

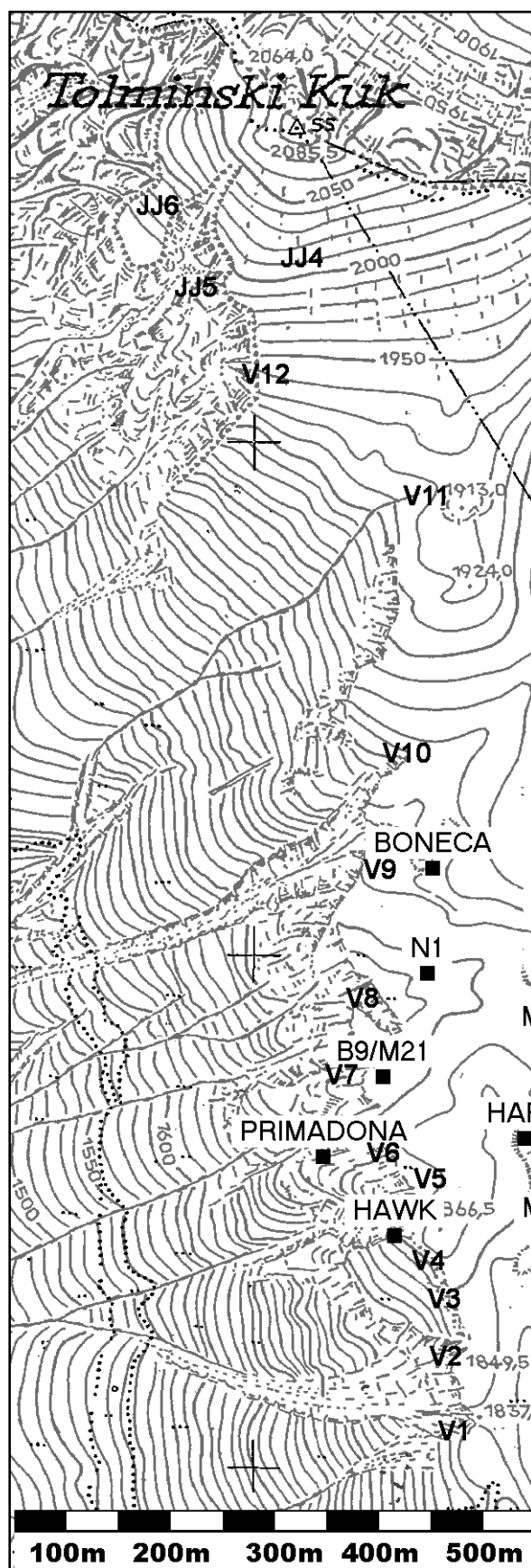
The weather in Tolmin was grim, and after a cadged lift, Ravne was not much better. It all changed at 1400m though; suddenly the peak of Migovec leered at us through the cloud, and Jana and I broke out into startling sunshine. The clouds rolled gently below our feet, we sat in shorts on Grusnica as the sun gently dipped. An auspicious start to an extremely productive long weekend of surface exploration.

'Up Top' once again, our plan was to meticulously examine the western edge of the plateau; GPS, camera and notebook at the ready. Vast quantities of surface pushing has been done during the main summer expeditions, but the difficulties in coordination and information being lost over the years meant that a comprehensive examination was felt to be a good idea.

The western valleys were numbered (and the majority GPS'ed) starting at where the mule-track reaches the Plateau (Gateway to Mig), and progressing north towards Kuk. The location of the GPS waypoints is printed on a reproduction of government 1:10000 scale maps. Some plateau features can be clearly seen on the maps, whereas other as-large locations are simply non-existent. Defining individual valleys was rather difficult; hanging valleys, double-headed valleys and all but indefinable limestones dominate the western edge of the plateau. At first glance, these valleys look impenetrable, cliff edges, unstable scree, and a 1.4km tumble to the valley below if you misstep. In reality, if you take your time, and look carefully for a route - most are free-climbable.

And so we explored, finding caves everywhere we looked - the mountain is hollow after all. The first big shock came when exploring around B9, a cave that had been explored and then ignored back in the mid 90s. After Jana Climbed down the cliff below the entrance ledge (to continue a comprehensive series of 'located' photos), a rather startling question came floating back:

"Why are there two Primadonas down there?"



I joined her down there, and soon saw the difficulty - you could clearly see Primadona, the dwarf pine, the traverse, the scree slope, the large overhanging entrance. But then, about a hundred metres further up the valley, you could see another, almost identical entrance.

From this vantage point, you could also see the cliff from which the surface abseil between U-Bend and Primadona was carried out in 2000. The higher entrance was isolated from the lower by an obvious cliff, separated from us by another cliff, and protected from viewing in almost any other location on the plateau by the long headland that extended from the north of the B9 valley.



After all the other valleys were accounted for, we headed back to the shepherd's huts in the gathering gloom. We had one last valley to tick off (V5) that Jana demanded we look at. I wasn't particularly cooperative in the fading light. Dreaming of the fire in the hut, I raced down ahead. A through cave - leading onto an impossible freeclimb down a cliff. Nothing. But Jana was already off, and up, the side of the valley. Just what was that? Scrambling up - the most amazing cave sat before us, with a wonderful rock bridge and green moss hanging around. Thrown stones soon 'banged' back as they fell to the bottom; it wasn't deep - perhaps 10-30m, but it was large, no matter which way we threw - they fell to the bottom.

Speaking to Andrej Fratnik later, our description sounded like a cave he had found with another Andrej back in the 70s, before either Jana or myself had been born. Climbing up from below, they had gone through a through-cave, and come to an entrance - though they didn't remember the rock bridge. With no rope, they could only peer down the drop to the snow covering on the floor below. They called it 'Hawk Cave', after the bird of prey they startled upon finding it.

Descriptions of the Valleys on the Western Edge of the plateau

V1: A short valley leading to cliff.

V2: Valley hidden behind deep dwarf pine; too steep to free climb. A rock spar extends west from the north headland of the valley, on which Slovenian walkers can be seen picnicking! There is a very noticeable cave entrance on the flank of this spar, viewable from V3.

V3/V4: Two shallow valleys. Valleys V1-V4 would be most productively explored from below; leave the mule track where it turns right past some earthquake scree, and follow a 'sort of path' to halfway along the rock spar of V2.

V5/JJ3: The valley of JJ3(a.k.a. Hawk Cave). This steep valley drops down to shallow bowl. The through-cave on right hand side leads to cliff face. On left, a climb up the cliff leads to the Hawk Cave entrance, sheltering below the rock bridge. The headland between V4 and V5 should be looked at for alternative ways into, or alternative caves near Hawk Cave.

V6/U-Bend: U-bend is a considerable distance down this tiny hanging valley, which is an easy freeclimb between dwarf pine and a precipice to the north, and a cliff to the south. From U-bend, a rock bridge can be seen to the South-West. The bolted way down to Primadona is believed to extend past U-bend and then abseil down a cliff-face.

V7/B9: This valley is hidden by a considerable belt of dwarf pine. B9 (a.k.a Jackie's Blower and M21) is noted in red point on the start of a series of large through caves that lead to an isolated ledge, before continuing into B9 proper. The cave appears to have changed significantly since the mid 90s - possibly due to earthquake damage. What was described by a pitch is now an easy free-climb (using a large boulder that may or may not have been part of the roof!), and there's a new chamber that reconnects to the cliff face accessible via a sinuous piece of rift. Climbing down from the ledge (CARE!), one can reach a lower edge on the cliff face, from where one can see (requiring a bit of a dangle) the two Primadona-like entrances below, as well as the U-Bend cliff face from which the Primadona abseil was made in 2000.

V8/JJ1: A very large and broken valley, but with many caves, most of which are on the South Face, as one traverses round towards Mig. 1st cave in valley itself, through cave choked with gravel / boulders. 2nd is around the first corner, traversing around to the south - two cairns placed. Further crazy (and very exposed) traverse only carried out by Jana lead to small chamber with a blowing aven and a wet crawl onwards, cairn on traverse. Rope advised for further exploration! A very large cracked boulder (two story house size) leans over the northern edge of the valley, and is very noticeable - should it still be there next year!

V9/JJ2 (Pella's Feathers): Lots of caves on south-side of this fairly stable valley. First one was a tight blowing hole, but which requires the use of a hammer for initial exploration. Further down one comes to 'Pella's Feathers Cave', an obvious triangular crawl way, which was found with a pile of orange-tipped black feathers in front of it. Jana (the smallest!) explored, getting 10m into this body-sized tube. Heads down, and round - before reaching a branch. Going left reaches an early dead-end, whereas the right way is soon blocked by a large boulder - which will need destruction somehow before further exploration.



From this point on, the prospect for cave development seems to reduce enormously. Hitherto all the bedding planes appear to slope down and to the south-east. From here on, after a period of confusion, all the planes seem to go up and to the east or north-east. As such, the caves that are found are invariable heading 'upstream' and into the mountain, the downstream track having been eroded to form the Tolminka valley.

V10: A very broken valley, near bone-cave.

V11: A large broken valley below Kuk; there is evidence of surface rivers further down. No obvious caves.

V12: A tiny hanging valley on Kuk face, above large section of limestone pavement. Extremely windy; clouds forming vertically around it.

JJ4 Cave: A window on side of Kuk. An eight metre long phreatic tube with 1-1.5m diameter, shuts down to too-small aven. Would make a great campsite, with an epic view across to Krn - nicknamed 'The Dining Room' as we ate lunch here. Cairned in entrance with PSS note. Alt: 1970m

JJ5 Cave: Further down valley. A rift entrance leads to a small chamber. A crawl right, amongst death from above, leads to a further chamber, which shuts down to nothing. A desperate dig! Alt: 1946m

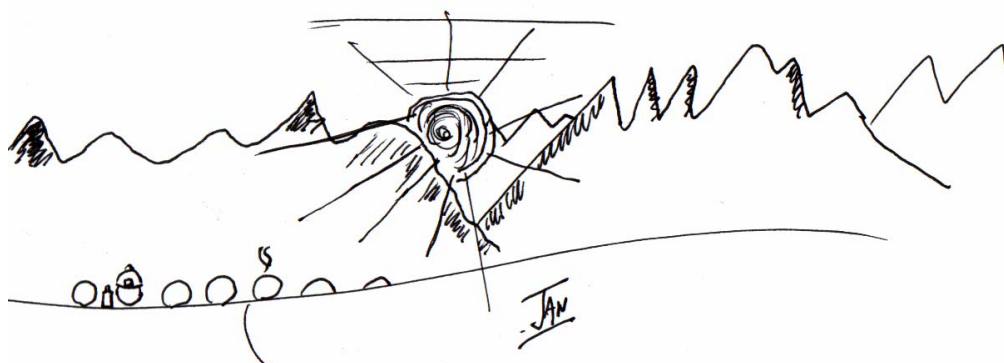


JJ6 Waypoint: Not a cave - but on the flank of Kuk where many cave entrances visible across the way. Most accessible from path beyond Kuk, climb up via peak and follow footpath till you reach a 'Giants Causeway' section of enormous boulders.

Jarvist Frost

GPS positions (decimalised longitude/latitude) of places described above. Slovenija datum.

JJ1,	46.25332,	013.76233,	V8
JJ2,	46.25476,	013.76299,	V9
JJ3BAD,	46.25135,	013.76296,	Entrance (bad fix)
JJ3STAT,	46.25176,	013.76335,	V5 Start of JJ3 Valley
JJ4	46.25985,	013.76137,	The Dining Room
JJ5,	46.25969,	013.76028,	
JJ6	46.26041,	013.76001,	Caves on top of Kuk
BONECA,	46.25459,	013.76341,	Bone Cave
UBEND,	46.25200,	013.76240,	Entrance itself (bad fix)
USTART,	46.25255,	013.76305,	Start of U-Bend valley
V1,	46.24978,	013.76423,	
V3,	46.25076,	013.76390,	
V7,	46.25292,	013.76301,	
V10,	46.25568,	013.76319,	
V11,	46.25769,	013.76291,	
V12,	46.25888,	013.76102,	
PRIMADONA,	46.25203,	013.76204,	Position derived by Zdenko



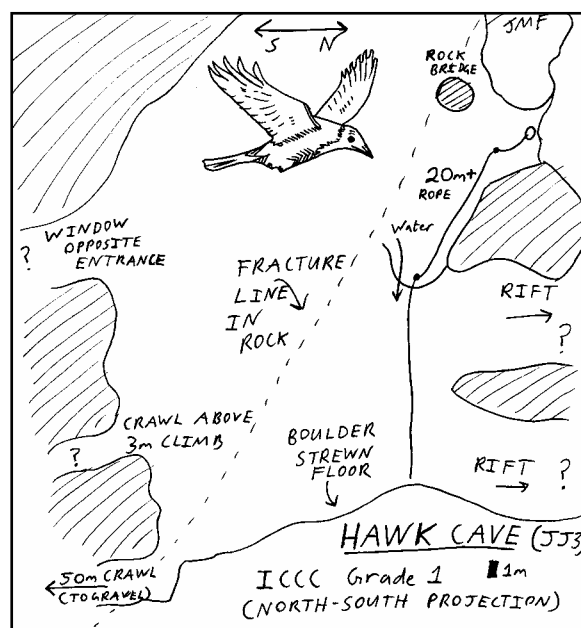
JJ3 a.k.a. Hawk Cave a.k.a. The Lost Cave

Up to Ravne with Goran and Zdenko of the JSPDT, Jana and myself were soon laden down with pieces of chimney for the continual upgrade of the JSPDT hut at Kal - 'Satellite TV next year!'. Fratrik joined us after dusk, while the boys built a new staircase and Jana rustled up a delectable combination of steaks (for the meat eaters) and pasta with sauce, eaten out of the communal bowl as usual.

The heavy rain started at bedtime, midnight. I was lulled to sleep by the drumming on the roof competing with Andrej singing snatches of Leonard Cohen songs between snores. I slept in late due to incessant rain, to find the hut entirely rearranged - everything on the right side (including stairs) were now on the left and vice versa! Truly confusing. After innumerable cups of chai and coffee, and a mountain of bread, three determined cavers headed for the top (in between rainstorms).

We arrived directly at JJ3 cave, following the GPS through the 5m visibility clag. Fratrik confirmed that this was his 'Hawk Cave' found in the 1970s with the other Andrej, though such a name now competes with 'The Lost Cave' for obvious reasons! Climbing up the cliff to the beautiful entrance below the rock bridge, no hawks were present but a pair of blackbirds took off and flew INTO the cave, heading roughly SE to where a window from the entrance shaft is visible.

Bolting was interrupted by both of the Slovenians requiring shits - bloody meat eaters! Soaked, frozen and distinctly unmotivated, we wiggled into our SRT kits and abseiled down, a lovely rebelay ledge at about -8m producing a free-hang alongside a small waterfall to the floor. The overall drop was about 20m deep.



From the bottom of the chamber (a cone of rubble as usual, but not too much choss), a rift can be entered at a number of heights to the North. This seems to be sloping uphill, and is almost certain to break out on the cliff face, though such investigations might yield an easier entrance. There is an obvious fault line crack running roughly E-W, taking one to the obvious way on in the SE corner of the chamber. There are crawls at multiple heights; Fratrik found a low one that entered 50m of passage heading south-ish to an easily-shifted gravel blockage, draughting strongly. A 3m climb arrives at a body-sized draughting crawl in which stones rattle for a considerable distance, but wasn't pushed due to lack of an oversuit on my part.

After twenty minutes or so, we derigged out into the gathering gloom, pausing briefly to pack kit before sprinting down off the mountain and back to Kal to get the fire stoked - we were dissuaded from a GPS waypointing mission to Mig. After packing in the Polenta with cheese for supper, we played international eye-spy before bed. Lying in bed, I dreamed of our excellent new lead that needs to be looked at again.

Jarvist Frost



The Longest Caves in Slovenia*

Cave	Length	Depth	Area
1 Postojnska jama (sistem) (1)	20 570	115	Pivška kotlina
2 Predjama (sistem) (2)	13 092	143	Pivška kotlina
3 Kačna jama	12 750	280	Divaški kras
4 Črnelško brezno	11 450	1 241	Rombonski podi
5 Sistem Migovec / Mig (3)	11 300	970	zaledje Tolminke
6 Pološka jama	10 800	704	zaledje Tolminke
7 Križna jama	8 273	32	Loško polje
8 Sistem Mala Boka - BC4 (4)	8 168	1 319	Bovška kotlina
9 Karlovice (sistem) (5)	8 057	12	Cerkniško polje
10 Planinska jama	6 656	65	Planinsko polje
11 Vodna jama v Lozi	6 538	75	Slavinski ravnik
12 Dimnice	6 020	134	Matarsko podolje
13 Brezno pri gamsovi glavici	6 000	817	Bohinjske planine
14 Škocjanske jame (sistem)	5 800	250	Divaški kras
15 Čehi 2	5 291	1 502	Rombonski podi
16 Najdena jama	5 110	121	Planinsko polje
17 Vrtnarija (Gardeners' World)	5 044	802	zaledje Tolminke
18 Skalarjevo brezno	4 765	911	Kaninski podi
19 Zelške jame	4 742	45	Rakov Škocjan
20 Podpeška jama	4 390	20	Dobropolje
21 Logarček	4 334	120	Planinsko polje
22 Velika ledena jama v Paradani	4 090	650	Tmovski gozd
23 Prvi sistem Moličke planine	3 827	1 135	Dleskovška planota
24 Podstenska jama	3 376	60	Mala gora (Ribnica)
25 Gašpinova jama	3 375	103	Logaški ravnik
26 Drugi sistem Moličke planine	3 224	533	Dleskovška planota
27 Tkalca jama	2 885	71	Rakov Škocjan
28 Beško-Ocizeljski sistem	2 780	150	Podgorski kras (Črni Kal)
29 Hotiško-Slivarski sistem	2 644	180	Matarsko podolje
30 Primadona	2 605	597	zaledje Tolminke

*as of November 2006

Notes

- 1 - includes also Otoška jama, Magdalena jama, Pivka jama and Črna jama
- 2 - includes also Požiralnik Lokve and Jama v Grapi
- 3 - includes M16, Kavkna jama (M2) and Jama strgane srajce (Torn T-shirt cave)
- 4 - includes Mala Boka and BC4
- 5 - includes Velika Karlovica and Mala Karlovica

This table, together with the one on the following page, provides a good summary of our major discoveries on the Migovec plateau to date. Only 150m separates the System from both Primadona and from Vrtnarija (Gardeners' World). These two connections would make the system the longest cave in Slovenia and would be particularly notable as such long systems are relatively rare in similar Alpine Karst. It would also, hopefully, lead the authorities at the world famous Postojna Show Cave to reprint all their guidebooks!

James Hooper



The Deepest Caves in Slovenia*

Cave	Depth	Length	Area
1 Čehi 2	1 502	5 291	Rombonski podi
2 Sistem Mala Boka - BC4 (4)	1 319	8 168	Bovška kotlina
3 Črnelško brezno (sistem) (6)	1 241	11 450	Rombonski podi
4 Vandima	1 182	2 500	Rombonski podi
5 Prvi sistem Moličke planine (7)	1 135	3 827	Dleskovška planota
6 Renejevo brezno	1 071	1 700	Kaninski podi
7 Sistem Migovec / Mig (3)	970	11 300	zaledje Tolminke
8 Skalarjevo brezno	911	4 765	Kaninski podi
9 Brezno pod velbom	910	1 565	Kaninski podi
10 Brezno pri gamsovi glavici	817	6 000	Bohinjske planine
11 Vrtnarija (Gardeners' World)	802	5 044	zaledje Tolminke
12 Bela griža 1	795	1 652	Trnovski gozd
13 Pološka jama	704	10 800	zaledje Tolminke
14 Velika ledena jama v Paradani	650	4 090	Trnovski gozd
15 C 11 (Možnica)	644	1 074	zaledje Koritnice
16 Vrtiglavica	643	643	Kaninski podi
17 Brezno Hudi Vršič	620	737	Rombonski podi
18 Primadona	597	2 605	zaledje Tolminke

*as of November 2006

Notes

3 - includes M16, Kavkna jama (M2) and Jama strgane srajce (Torn T-shirt cave)

4 - includes Mala Boka and BC4

6 - includes also J4 (6052)

7 - includes Zadnikovo brezno and Ledena devica

Useful Slovene Vocabulary

brda - hills	planota - plateau
brezno, brezen - shaft	podj - high plateau
čelada - helmet	podolje - lowlands
desonder - descender	pogorje - mountains
dolina, doline - valley	polje - polje
dvorana - chamber	ponikve - sinkhole
"fraj štrik" - rope free	ponor - sinkhole
gora - mountain	popkovina - cowstail
gozd - forest	ravnik - plain
grapa - gorge	reka - river
jama, jame - cave	sistem - cave system
kamen - stone	skala - rock, cliff
karabin/vponka - karabiner	slap - waterfall
kotlina - basin	šotor - tent
kras - karst	spalna vreča - sleeping bag
mala - small	velika - big
na pomoč - help!	vhodi - entrance
obronki - hillsides	vrvi/ štrik - rope
planina - mountain pasture	žimar - jammer

Appendix: Geology and Speleogenesis

Introduction

The following report on the geology of Migovec was written by Dr. Paul Huggins of ICCG, who spent the summers of 1997, 1998 and 1999 in the area. Paul, together with another Imperial College geologist Mike Rogerson, undertook the fieldwork both above and below ground. It has been updated to include some discussion on Gardeners' World cave.

1 Migovec Geomorphology

The Migovec 'plateau' is an undulating area of some 750m by 750m extending from the south of the mountain peak Tolminski Kuk (2085m) to the high point Tolminski Migovec (1868m) (Figure 1 map and Figure 2 photo). The plateau has an overall slope to the east and is surrounded by cliffs and craggy, steep, usually scree covered, slopes to the south and west. Bounding the plateau are the rivers Tolminka, to the west, and Zadlaščica, to the east, both of which drain and converge to the south towards the town of Tolmin.

Bare karstified limestone dominates the plateau with sparse grass and scrubby trees on sheltered slopes and in depressions (Figure 2). Soil development is limited to areas of vegetation and is peaty in nature. There are no preserved non-carbonate rock based soils, pre-soil or glacial material. Frost shattered limestone debris is abundant in karstic depressions and blocks the majority of cave entrances either at the surface or a little way down. Such blocked shafts often contain permanent snow piles or plugs.

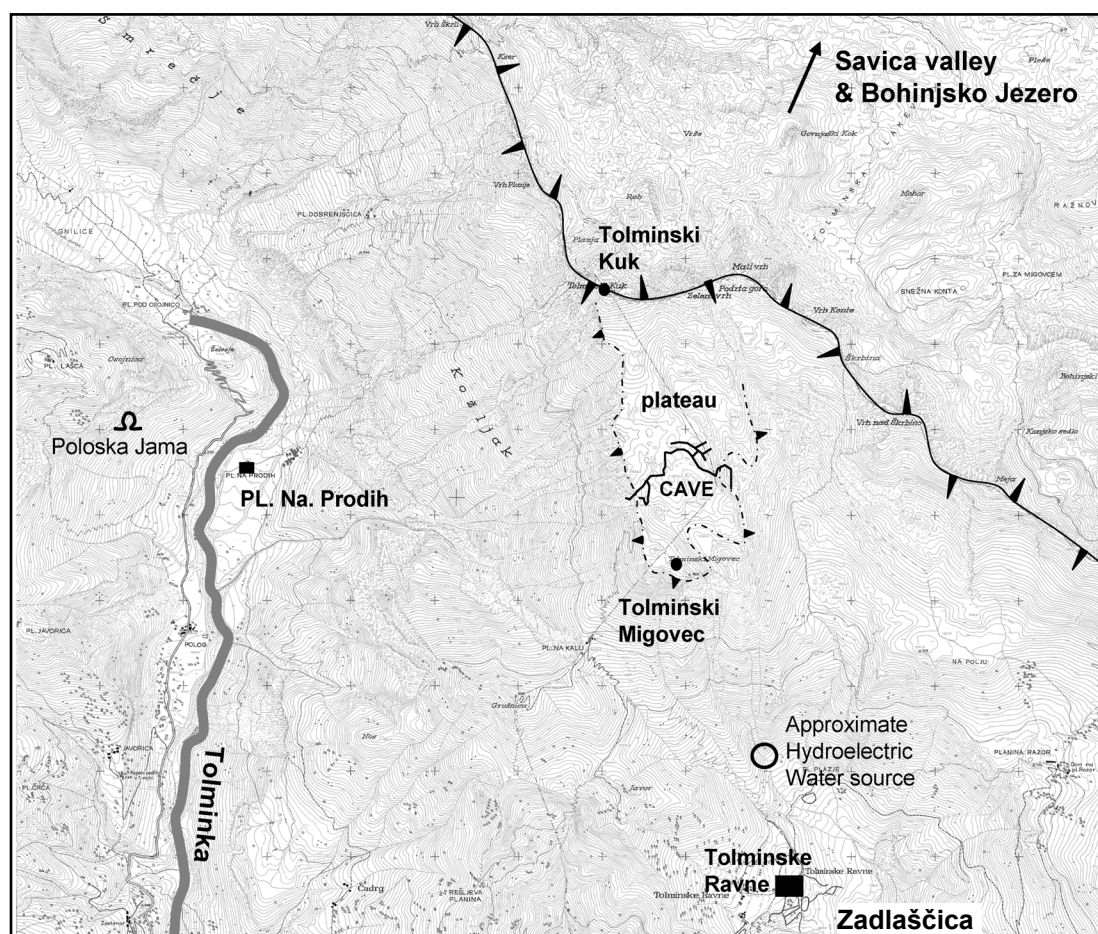


Figure 1: Topological map of the Migovec plateau area

Tolminski Kuk is one peak along a long high NW-SE mountain ridge (Figure 1 map). This ridge is part of the western frontal ranges of the high Julian Alps, running from the Italian-Austrian border, south into the Croatian Dinarides. The line linking the hills Rodica in the east, through Tolminski Migovec to Krn in the west, crossing two mountain ridges, marks the western front of the high Julian Alps and the Slatna overthrust of thick Triassic limestone. To the north-east are the main limestone ranges, while to the south-west are the lower lying mountains of the Tolmin Pre-alps of younger mixed lithology rocks. To the north of the ridge is an east-west valley, with the town of Bohinj's Bistrica and the lake Bohinj's Jezero at an altitude of ca. 530m.

Around the sides of the Tolminka valley is a line of discontinuous but extensive high cliffs (Figure 3). The tops of these cliffs change height down the valley, from ca. 1200m at the head of the valley, ca. 1000m west of Migovec plateau, to ca. 800m at the village of Polog. There is also some evidence for terracing of the valley sides along the lower valley where it opens out towards the south around the village of Čadrg. Above the cliffs, the slopes are covered with thick preserved deposits of well cemented limestone talus breccias. No analysis of glacial deposits or features has been made. It is possible that the top of the cliffs marks an old valley floor level which has subsequently been eroded by the river. It is not known whether the river downcutting is related to tectonic episodes of uplift and tilting, or periods of glacial action.

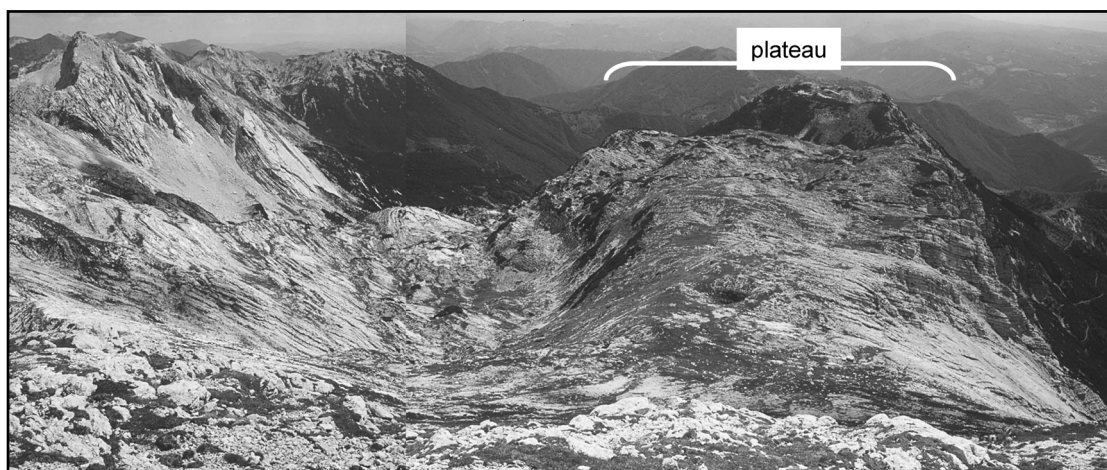


Figure 2: Photo of the Migovec plateau from the side of the mountain Tolminski Kuk, looking to the south. The mountain peak to the left is Vrh nad Škribino. The Tolminka valley is to the right of the photo and the middle cirque leads down to the Zadlaščica valley.

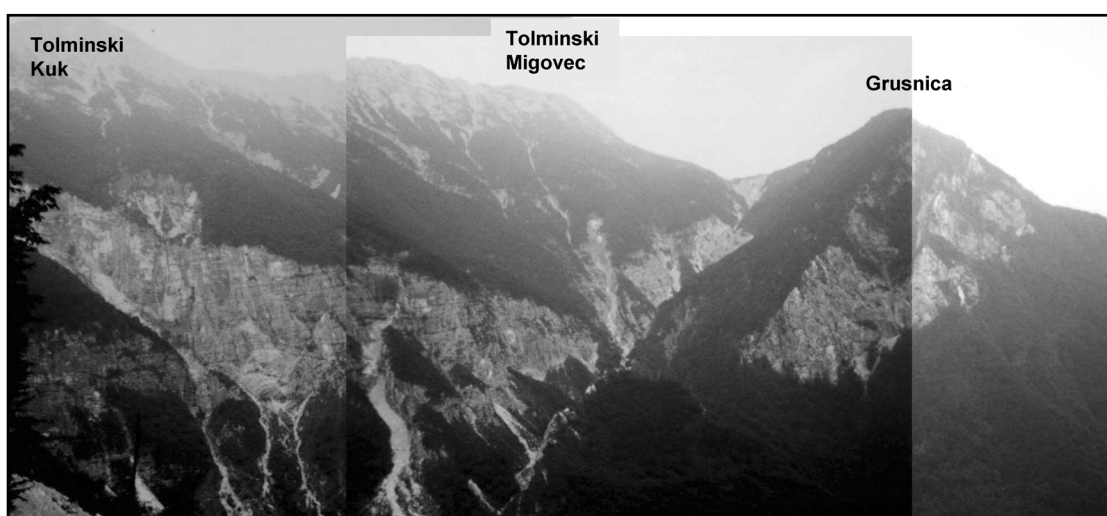


Figure 3: View of the western side of the Migovec plateau and the western side of the Tolminka valley. This photo was taken from the entrance of Pološka Jama cave on the eastern side of the Tolminka valley.

2 Geology of Migovec

The regional geological description is based upon field observations placed in the context of the geological map of the area (Buser 1987). A sheet description report/memoir is apparently available, however, only a photocopy of the map with no guide has been obtained. A geological trail through the Julian Alps, including a section passing up from Tolmin to Tolminske Ravne, is marked on the topographic map, and presumably a guide is available for this trail, though probably only in Slovene. Again, a copy of this guide was not obtained.

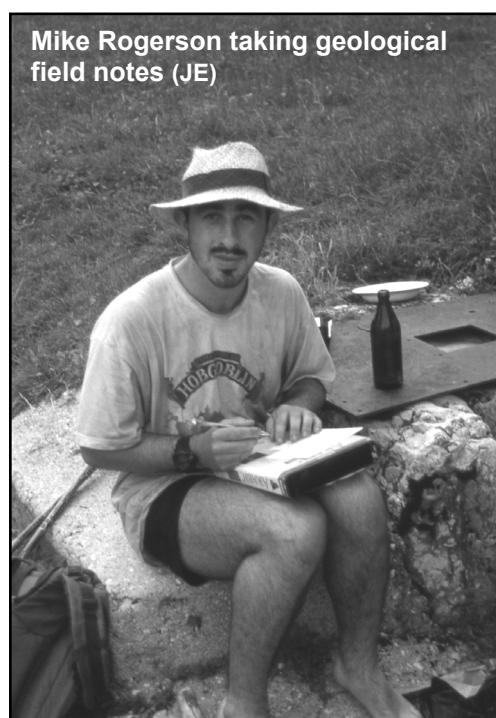
The geological strata of the Julian Alps in the Tolmin area comprise a thick sequence of Triassic carbonates, mostly nearly pure, thin-medium bedded limestones and dolomites, overlain by a Jurassic and Cretaceous section of limestones and shales (Figures 4 & 5). The Jurassic and Cretaceous limestones are usually thinly bedded, marly and interbedded with shales and do not reach large thicknesses. The Cretaceous strata are exposed in the left (east) bank of the Tolminka valley, beneath the peak of Grusnica (1570m) just to the south west of Migovec, and along the road from Tolmin to Tolminske Ravne. The Triassic carbonates are well exposed areally on the Migovec plateau and in section in the upper slopes and cliffs around the Tolminka valley.

A major thrust complex, the Slatna overthrust, comprising a couple of discrete thrust faults emplaces the Triassic carbonates on top of the Cretaceous shales (Figure 4 map & 6 & 7 cross-sections). The thrusts dip to the north-north-east and transported the Triassic carbonates to the south. Many NW-SE to NNW-SSE trending, steeply dipping faults cut the thrust sheet and offset the thrusts. Offsets taken from the geological map and field (underground) observations indicate that at least some of the faults appear to have a normal offset.

It is this thrust sheet of thick carbonate rocks that forms the high peaks of the Julian Alps, including Migovec and Tolminski Kuk and contains the large vertically developed 'alpine' style cave systems, while the Cretaceous shales beneath the thrust form the regional aquiclude controlling the water table. However, the presence of dolomites could locally control the water table, being largely impervious to extensive solution and cave development. Major dolomite layers and their control on speleogenesis within carbonate thrust massifs has been described for the Kanin massif by Casagrande et al (1999).

From the geological map (Buser 1987) several facies of carbonate are marked but without a legend or translated guide it has not been possible to determine what these facies are and whether they distinguish limestone from dolomite. The Triassic carbonates, as exposed on the Plateau, are well bedded, with ca. 0.5 – 1m alternating layers of more or less weathering resistant carbonate (Figures 2 & 3), though there is little obvious facies difference to distinguish the layers. With the provisional level of geological mapping undertaken, it was not possible in the field, either surface or subsurface, to differentiate between limestone and dolomite units.

In addition to the major mapped faults, the rock is intensely cut by smaller faults and fractures (Figure 9 – photo of faults). A large fold can be mapped on the plateau (Figure 8 – plateau geological map) which itself contains a range of smaller scale, 10 – 100m open folds with axes in a number of orientations (Figure 10 – photo of fold).



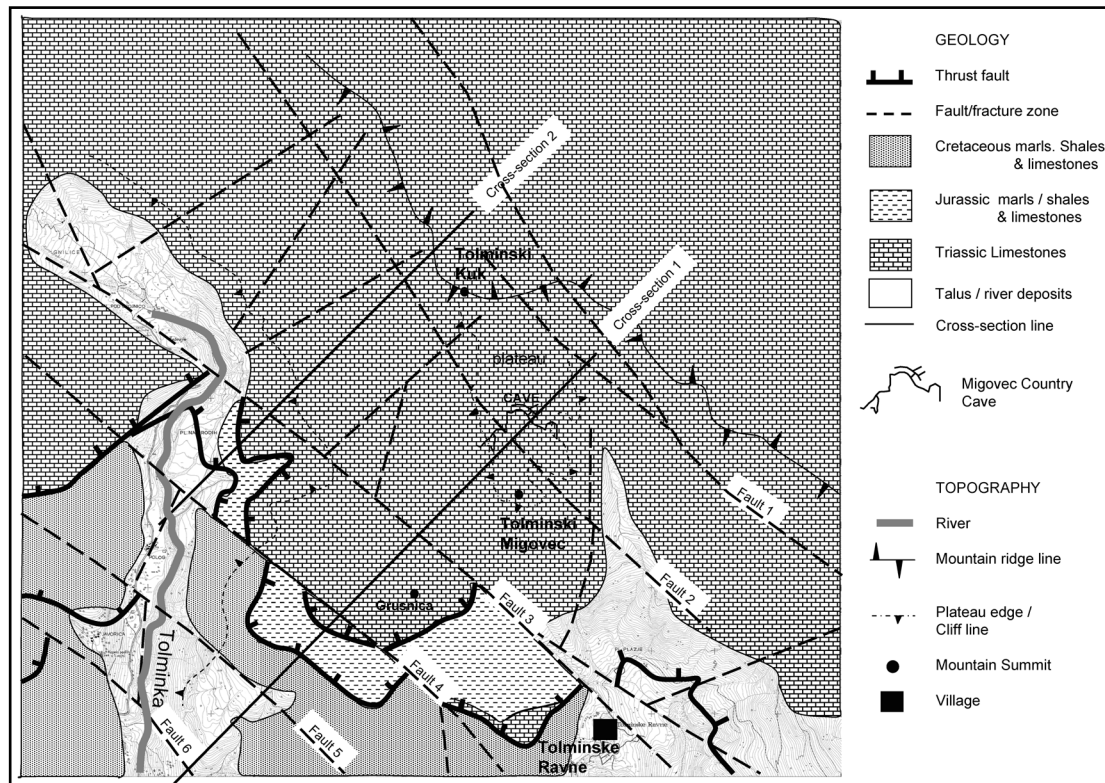


Figure 4: Geological map of the Tolminka – Migovec area, based on the Slovenian Geological Survey map

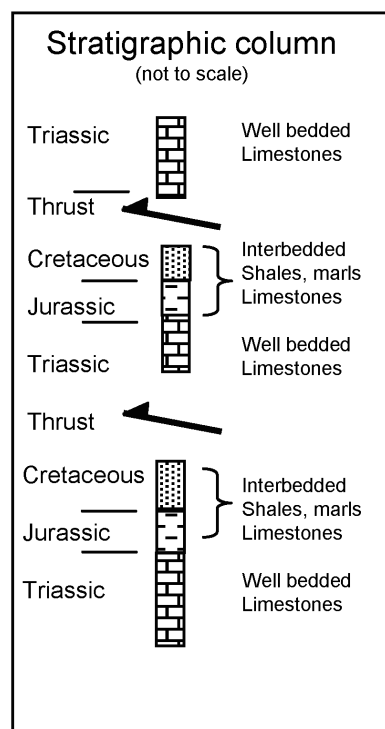


Figure 5:
Stratigraphic column
for the Tolmin area

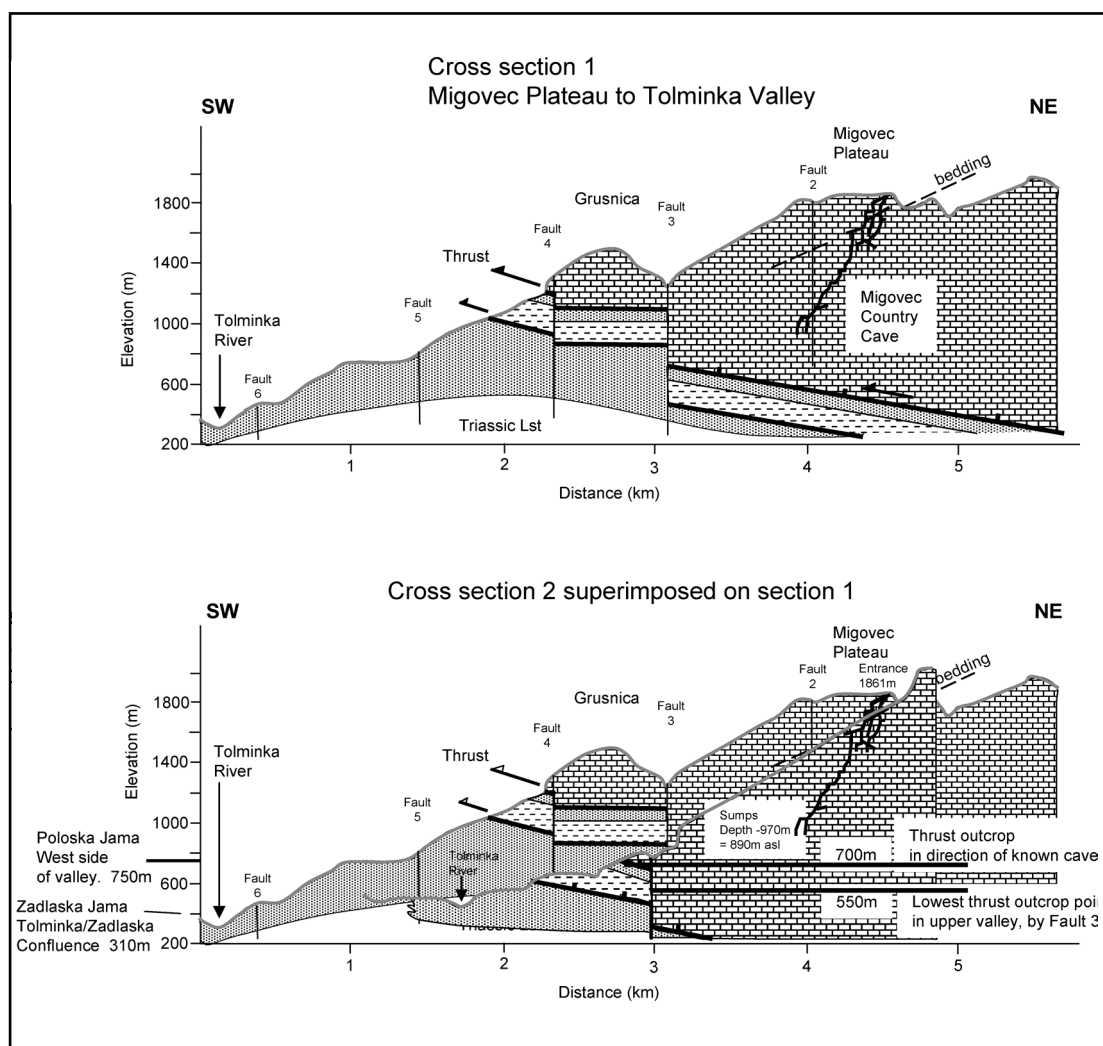


Figure 6: Geological cross-section 1. Location of section shown on geological map (figure 4)

Figure 7 (also above): Geological cross-sections 1 and 2, superimposed. Location of sections shown on geological map (figure 4). Cave entrance elevations and horizontally projected water table levels are shown.



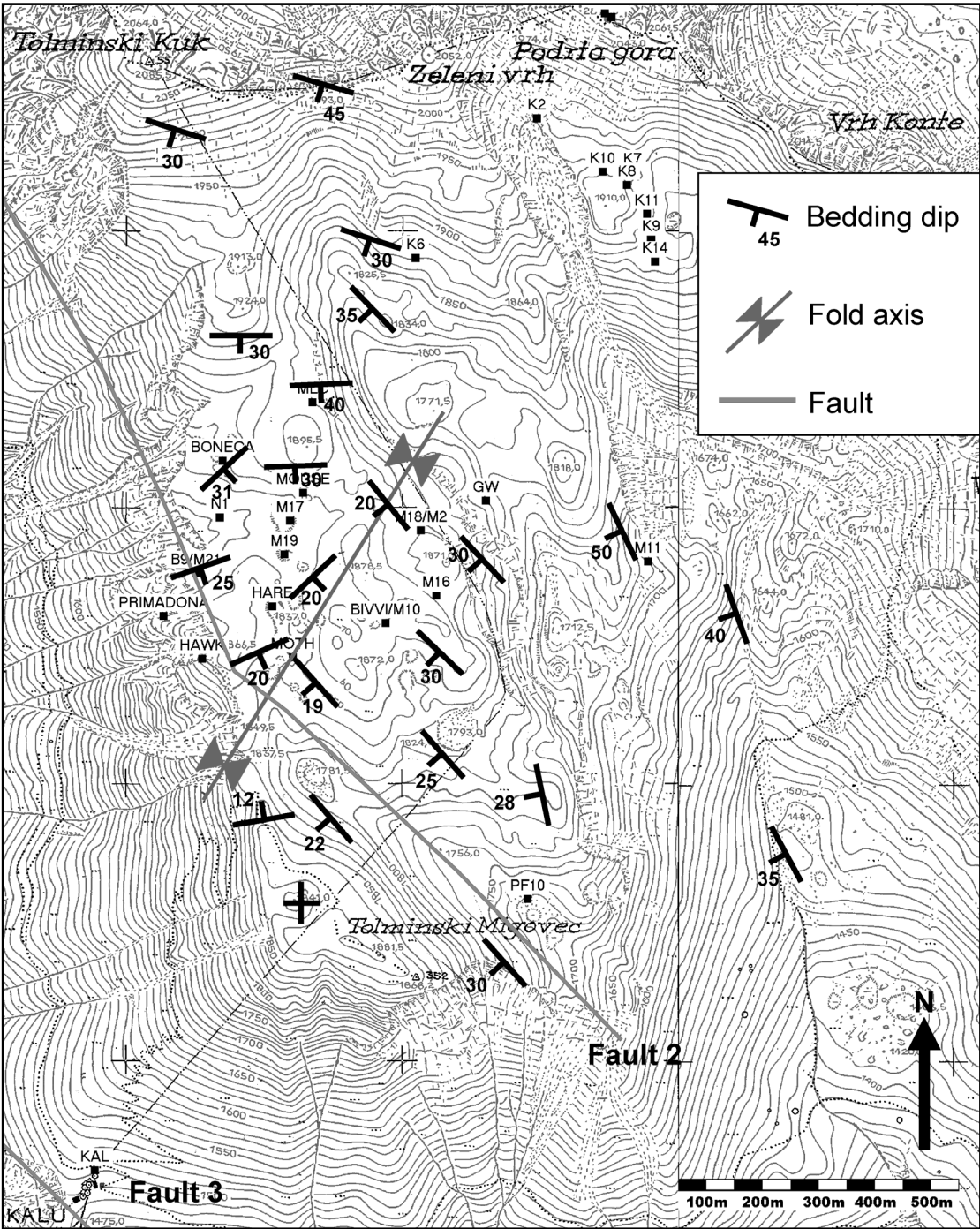


Figure 8: Geological map of the Migovec plateau showing fault lines, bedding orientation and major fold axis.



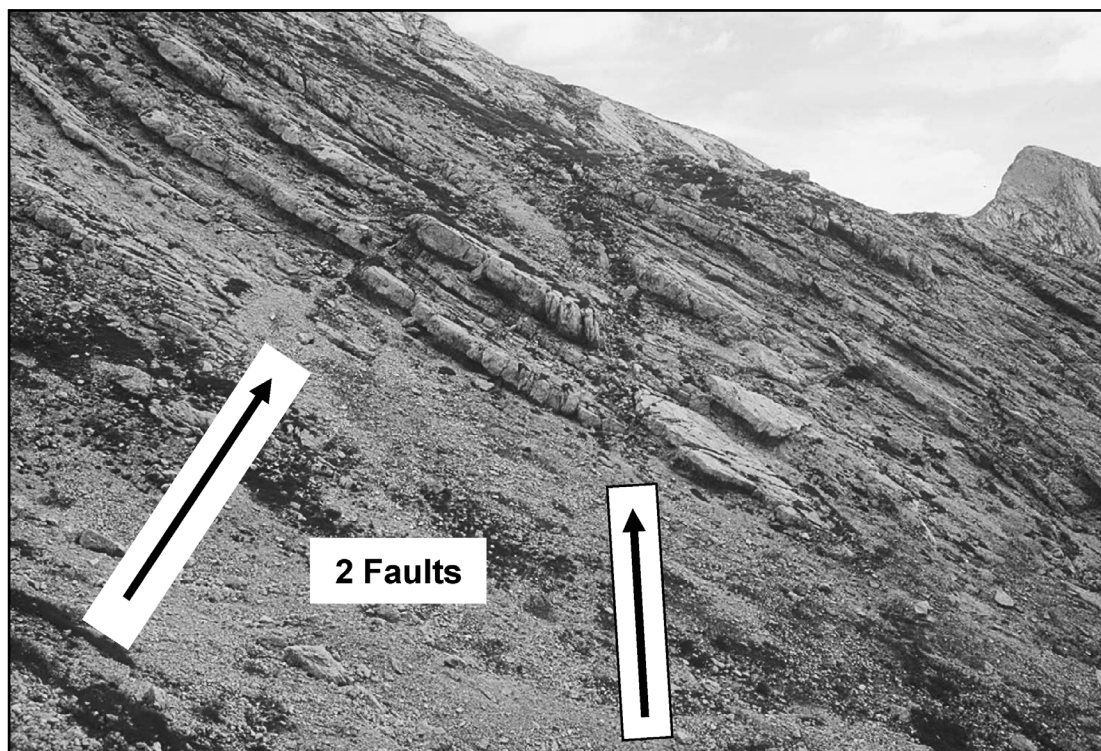


Figure 9: Two small faults in well bedded Triassic limestone on the flank of Tolminski Kuk above the Migovec plateau.

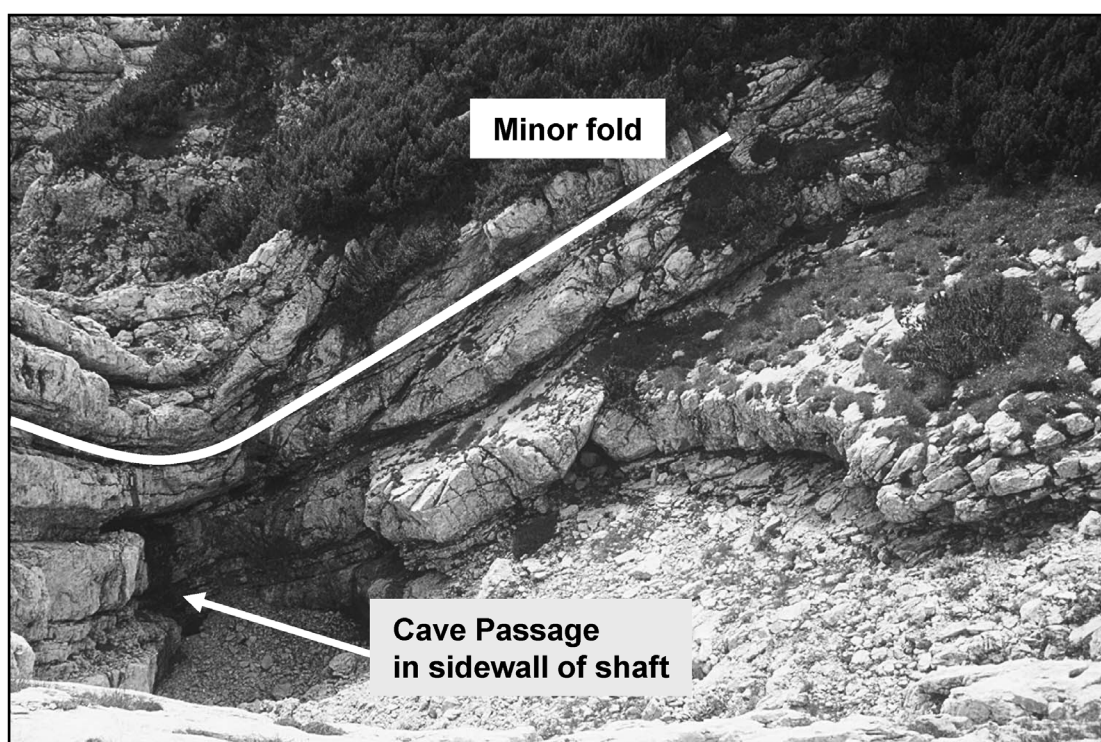


Figure 10: Minor fold in well bedded Triassic limestone on the Migovec plateau. A small cave passage has formed in the axis of the fold exposed in the side of a small shaft. Both the passage and shaft are debris filled.

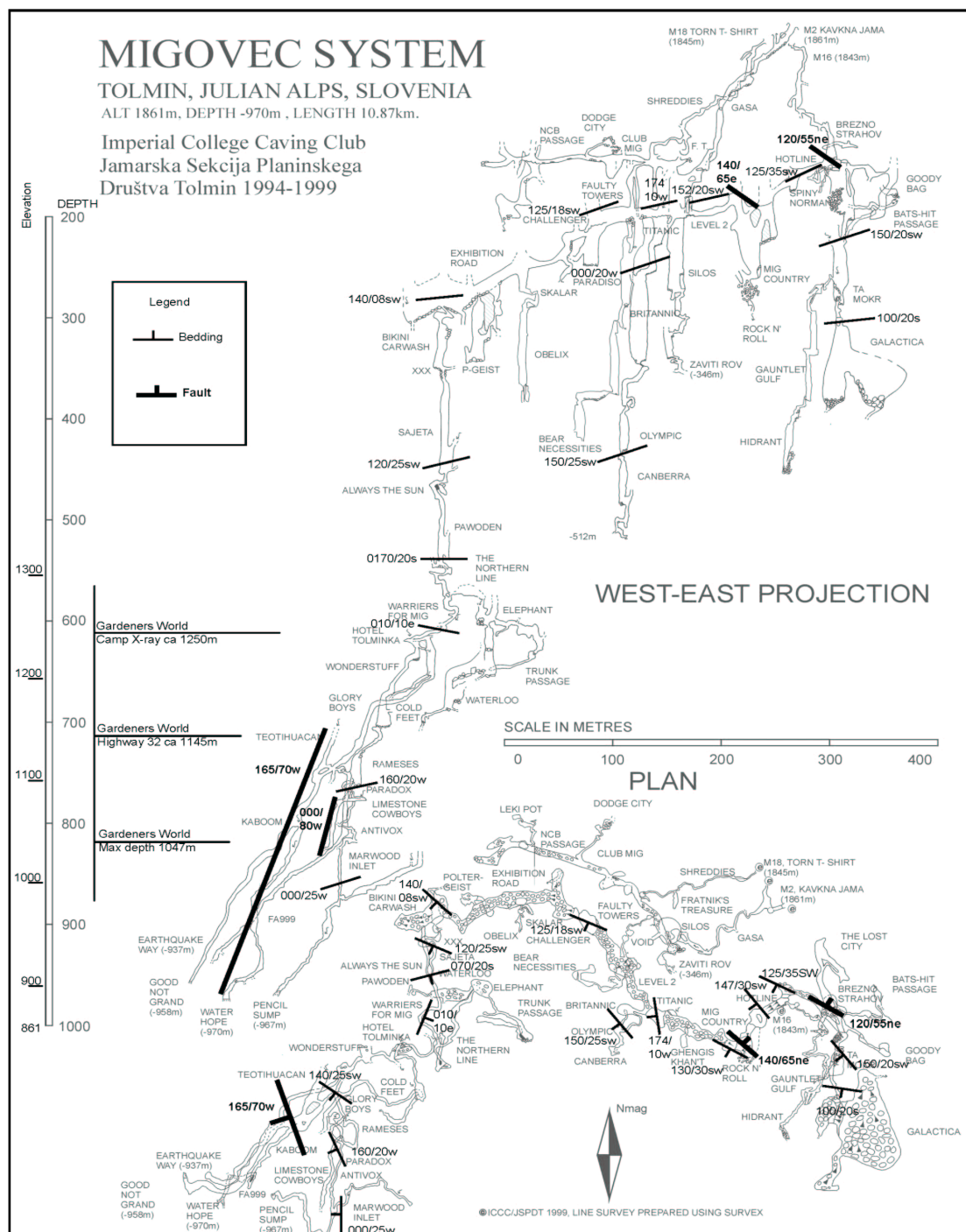


Figure 11: Migovec Cave System survey map and cross-section with summary geological bedding and major fault observations. The major horizontal passage development elevations of the cave Gardeners' World are also plotted.

3 System Migovec Cave Passage Description

The cave can be divided into a number of zones that have broadly similar passage characteristics and, it is believed, timings and styles of genesis. However, this zonation may largely reflect the exploration of the known connected passages. It is clear that speleogenesis has a long and complex history with a number of different phases being identifiable. Passages from these different phases cross cut one another to form a complex 3D network.

Zone 1: M16 Entrance series

Pitch series

Zone 2: M18 Entrance series – Shreddies series

Tight vadose streamway with pitches – sharp rock

Zone 3: Level 1 (NCB – Goody Bag)

NCB and Goody Bag are two separate passages but appear to align as a single trend, defining a horizontal level.

Zone 4: Level 2 (Exhibition Road; Hotline to Bikini Carwash)

Wide horizontal passage with boulder floor.

Zone 5: Vertical Shafts (Galactica, Mig Country, Titanic, Challenger, XXX-Sajeta)

The two main 'horizontal' levels are intersected by a number of large, 10-15m diameter, roughly circular shafts that extend both upwards and downwards. These shafts are vertical and have depths of 40-80m. Many of the shafts form descending series of several shafts linked by short vadose streamways. Shafts are commonly near-circular with smooth, sometimes scalloped walls. Where shafts intersect other passages, the shafts have generally been explored downwards but not always to a termination. The difficulty in exploring these shafts upwards, which has not been seriously attempted, leads to a dominance of downward mapped shaft passages. This results in probably the most artificial distribution of the cave zones. Shafts are known throughout the cave system down to zone 6. Many of the surface depressions are shafts that have been largely infilled with scree. In the cave many passage floor pits and pitches are often directly aligned with roof avens.

The shafts are often 'wet' ranging from a water film on the rock surface through drips to small trickles of running water. In Level 2 some avens have associated blind pits that are 2-3m deep. Some shafts are spaced very closely with only a thin wall of rock between them and may coalesce downwards. Mig Country and Galactica are believed to have formed multiple coalesced shafts that have been modified by major collapse to create large chambers with boulder floors.

The walls of the shafts contain many side passage openings including phreatic looking circular tubes to vadose looking trenches and rifts. The phreatic tubes are up to ca 50cm in diameter and are sometimes elongate parallel to bedding or vertically. They are nearly always infilled with red mud/silt. The vertical rifts are often of the order of 10's cm wide and are commonly filled with limestone boulders and pebbles, sometimes cemented.

It is interpreted that the shafts, with linking streamways, are vadose in origin. The water is thought to relate more to low volume percolation of seepage water down fractures from the surface than vertical drops of larger volume flowing streamways. Condensation water may also be significant. The shafts are believed to be younger than the passages they intersect, and possibly the most recent phase of speleogenesis.

Zone 6a: Vadose Passages (Warriors for Mig – Northern Line - Cold Feet)

Below the shaft Pawoden, the balance between shaft and vadose streamway changes to become dominated by streamway punctuated by shorter vertical shafts, generally 10 - 40m. Unlike the true shafts (passing both upwards and downwards) in Zone 5, the floor pits/pitches often have continuous roof levels from the streamway, having no associated avens. The first major streamway, with 10's cm³ of water, is encountered near the top of this level at Hotel Tolminka. A couple of streamways have been followed to sumps.

Zone 6b: Dipping Rift Shafts (Teotihuacan – Earthquake way)

One of the streamways intersects a major fault. This feature controls the passage creating a steeply inclined linear passage/pitch series down to a sump, Good Not Grand. Three sumps have been reached, Good Not Grand, -958m, Water Hope, -970m, and Pencil Sump, -967m. The sumps all show recent evidence of significant flooding, with mud covered walls some way above the sump levels. Given the large number of cave passages that exist it is felt that all the main passages are probably inter-connected. The difference in depth of 12m between sumps, is felt to be a combination of changing sump level responding to rain between survey measurements and survey error, rather than separate perched sumps. The intermediate depth, and that of the closest pair of values, of -967m is taken as the 'averaged' sump depth. A cave depth of -967m equates to an elevation above sea level of approximately 890m.

4 Other Tolminka Valley Caves

Gardeners' World - Four zones can be defined in the cave Gardeners' World:

Zone 1 Entrance Series

Series of pitches and shafts. A small stream flows from Laurel to Swing and then reappears halfway down Space Odyssey and can be followed to the base of Fistful of Tolars.

Zone 2: The Pink Series from Pink pitch to Zimmer

Small pitches in breakdown fault breccia.

Zone 3: Horizontal Level A: (Camp X-ray – Friendship Gallery)

Dry horizontal passage undercut by an active vadose stream.

Zone 4: Horizontal Level B (Highway 32 – No more Potatoes)

This series starts truly horizontal with Highway 32, before changing into a series of down and up inclining passages. It is thought that this series may represent a phreatic level of lifts.

Gardeners' World – Migovec Country Comparison

Gardeners' World Horizontal Level A corresponds with the approximate depth of the top of Migovec System Zone 6 (Hotel Tolminka) which defines the base of the main vertical shaft system. This may reflect a geological control and/or a specific phase or change of speleogenesis related to a water table level. More significant is the depth of Gardeners' World Horizontal Level B which occurs at a depth in the middle of the Migovec Dipping Rift series. This indicates that the cave system is not simply a younger vadose zone beneath Migovec Level 2 to the current water table, but that there may be a number of 'old' horizontal phreatic levels throughout the mountain that have not yet been discovered. Across which continual vadose shaft development in the higher levels has occurred.

Pološka Jama

Pološka Jama is situated on the right (west) bank of the Tolminka valley opposite Migovec. The bottom entrance is at a height of ca 750m, almost 150m deeper than the sumps in Migovec. The cave is still in the Triassic limestone of the thrust sheet which outcrops at a lower elevation due to dip up valley. The cave passage appears to be phreatic in nature (I only investigated it for ca 50m) but is now clearly abandoned. This indicates there may be a relatively recent phreatic cave level being developed at present at ca. 600m, to the west of the Tolminka, corresponding to the present day valley floor. To the east, under Migovec, this phreatic level may still be flooded, a higher water table being kept in place by the dipping aquiclude shales beneath the thrust.

Zadlaška Jama (a.k.a. Dantejeva Jama)

Zadlaška Jama is an abandoned dry alpine cave (Knez & Slabe 1999), located on the southern slope of Kalec hill above the confluence of the Tolminka and Zadlaščica rivers, some 5km to the south of Migovec. Three entrances are present at an elevation of 310m, about 80m above the river level at the confluence. The cave is 1140m long with a height difference of 41m, climbing into the hill from the entrance, having a horizontal development of anastomosing passages. The cave entrance is situated in Cretaceous limestones, beneath the main Slatna thrusts, but is interpreted from the presence of fossil fragments, to penetrate Triassic Limestones up dip.

5 Cave Sediments

Breakdown

The large passages at the higher levels of the cave, such as Exhibition Road and NCB passage, and the larger shafts all contain extensive breakdown / collapse material along their floors. Nearly all of this material appears to derive from the roof, controlled by bedding planes and fractures.

White Sand

Forms partial passage fills in the upper abandoned levels and occurs in small volumes as layers and patches on wall shelves in younger abandoned and presently active streamways. It is unknown whether this 'sand' material is clastic or carbonate, but probably carbonate erosion product. If clastic, it indicates a preserved type of material no longer observed on the surface of the high mountains. White sand occurs in thick layers on the base of some fossil passages and as small volumes or patches on wall shelves in active streamways.

Sand/grit

Mixed sand and grit of brown colour. Occurs in small volume layers and patches on wall shelves in active streamways.

Gravel

Well rounded gravel grade pebbles of dark limestone and possibly some chert. No units of this facies have been observed within the Triassic section. The source limestones for the gravels could be Jurassic / Cretaceous Formations that have been eroded from the mountains, or from glacial tills, though there is no evidence of glacial material currently preserved on the hill tops.

False Floors

False floors have been noted, though no detailed observations are recorded. These could record reactivation of passageways and multiple fill and erosion events.

Red mud & silt

Occurs infilling enlarged fissures and small, 10's cm passages and tubes that appear to be phreatic in origin. Occurs extensively below Level 2 (Exhibition Road) in side passages to the big shafts. Impression that the red muds are being washed out at the present day. The muds are typically homogenous looking with a stiff clay like consistency. Laminations have been seen in some passages and occasional limestone fragments can be present. Occasionally the muds are cemented and hard. Thought to be phase of cave infilling early in cave development when passages had not developed beyond embryonic stage of early phreatic network development. Possible sources for the red muds/silts are: Triassic bauxites (and cherts); Jurassic/Cretaceous red Flysh deposits (found on south flank of Krn mountain); Any Tertiary Flysh / Loess (much of central Europe covered by Pleistocene Loess; Post deposition staining – solution of iron by biogenic acids from weathered surface sediments or early pre-glaciation warmer climate vegetation and soil cover. After the earthquake of 1998, local cavers report that the Tolminka flowed red for a couple of days afterwards. This red colouration could be caused by the red muds being washed out from some of the infilled passages in the cave system. This indicates that the earthquake caused sufficient rock displacement to open up new water pathways and at least temporarily reactivate some of the abandoned passages.

Brown Muds

Soft dark brown mud coating cave passage surfaces for approximately 20m vertical height above surveyed sump depths - clearly recent deposits from cave flooding as the sumps have backed-up

Black Powder

Occurs as a thin mm layer covering the tops and sometimes sides of passage floors and boulders. Typically covers a layer of mud or soft white calcite (moonmilk?). The layer does not cover passage roofs or underhangs on boulders, but does cover the tops of boulders beneath. Occasionally 'shadows' of non deposition are seen to the side of some boulders. This deposit is observed in the upper passages, mainly in Level 1 passages associated with a strong air flow. It is possible that this deposit is soot from forest fires.

6 Cave formations

Moonmilk

A soft white paste like substance is observed in some of the higher passages of Level 1, often covered by a black powder, possibly soot. It is thought that this deposit is calcite moonmilk.

Hard Calcite Formations

Very little in the way of hard calcite formations have been described from throughout the cave system. No stalactites and stalagmites have been recorded. Thin nodular, cauliflower, calcite sheets have been observed in the upper 'horizontal' passages of level 2, both preserved on the walls and on breakdown boulders, suggesting that they formed early after passage abandonment, prior to collapse. The nodules are aligned both vertically and parallel to the inclination of the passage.

7 Geological controls on cave passage & Speleogenesis

Geological surveys were made on a number of trips into System Migovec over several years by a couple of geologists. These trips cover the whole range of the system, however, many parts of the cave have not been visited and measured. A summary of observations are presented in Figure 11, showing bedding measurements and fault and fracture measurements. Throughout most of the cave, rock bedding is very clear, through visible differences in rock, differential erosion or lines of collapse. However, in places the bedding is almost or completely undetectable. Many of the bedding surfaces show tectonic deformation and brecciation from bed parallel slip, which may have aided solution and speleogenesis. The rock is virtually all carbonate, assumed limestone. Occasional 10 – 30cm thick greenish shales have been observed. Usually in the roofs of vadose streamways. The lateral extent of these shales and therefore their likely influence on speleogenesis has not been established.

Geological control of cave passages is clear throughout the system and in all the different styles of passage. Phreatic and vadose passages alike are usually aligned along bedding surfaces and fault or fracture zones, and typically along the intersection of fractures with bedding. Shafts and pitches commonly occur at the intersection of differently orientated fractures.

In the larger passages, particularly the two sub-horizontal levels, the passages have been extensively modified by breakdown so that the original form of the passage is no longer discernable and thus it is much harder to identify controlling features and the nature of speleogenesis. In Level 1 (zone 3) the passage is horizontal and appears to follow the strike (horizontal line) of bedding (as observed on the surface and provided by indirect reports. No direct underground observations). In map view Level 2 – Exhibition Road mirrors Level 1 apparently following the strike of bedding, but is overall inclined downwards from the SE around to the NW end. In detail Horizontal Level 2 has a central SE-NW section from Mig Country to Challenger which is near horizontal and follows the strike of bedding. The two ends trend NE-SW and are inclined down to the SW, orientated down maximum bedding dip. The difference in overall orientation of Level 1 and Level 2, horizontal to inclined respectively, may reflect a number of controls: 1. geological control alone (both in the phreatic zone) 2. be influenced by the palaeo hydrological conditions at formation of either, at the water table or in the deep phreatic zone, 3. It is also possible that the difference reflects complete reorientation of the whole rock massif due to uplift and tilting associated with mountain building over millions of years.

The large shafts occurring from the ground surface down to Zone 6 appear to have a complex evolution, either as a series of periodic phases of development with abandonment of one system and development of a new, or as continuous development with ongoing formation, capture and abandonment of shafts. In a number of places through the cave major fault zones have controlled cave development by focussing and aligning passages into the plane of the fault, i.e Zone 6b (Teotihuacan – Earthquake Way). In other areas, particularly in the areas of large shaft development, i.e. Ta Mokr – Galactica and Mig Country, faults have influenced late cave modification by facilitating large scale roof and wall collapse to create merged chambers and boulder halls.

Phreatic passages are often aligned along bedding surfaces and sometimes show a vertical teardrop section of upward solution of a roof fracture parallel to the passage, indicating inception along the bedding fracture intersect. Vadose trenches and streamways typically follow bed strike or dip and are often seen to follow the line of a fracture. These passages frequently change direction, often through nearly 90 degrees, from bed strike to bed dip orientation.

Pitches in the streamway are often located at these changes in direction, commonly marked by intersection fracture lines. In many vadose passages early phreatic roof passages or anastomosing tubes can be identified. These forms are highly ellipsoid, located at and elongate along a bedding surface. They are often meandering cross cutting fracture orientations and display deep pitting and anastomosing tubes. The underlying vadose trenches and streamways often go through sharp direction changes sometimes deviating away from the overlying phreatic 'tube'. These observations indicate that, in the phreatic zone, bedding is the dominant control. While in the vadose zone, where gravity is more influential, the fracture network becomes the more prevalent control.

8 Cave Hydrology

Present Day Hydrology

Present-day rainfall and snow melt water drains directly into the fissure network and cave system of the bare limestone. No streams are present and no evidence for palaeo-streams has been identified. Small valley like features are present but are interpreted as glacial erosion features.

Most of the upper passages in the system are abandoned and dry. Occasionally a small active stream, though usually only a trickle, is intersected in a stream passage or tiny rift which can not be followed for any distance, or often even entered. All active waterways and interpreted recent cave passages are of two main types: 1. vadose running water drainage consisting of pitches linked by short stream passageways and deeply trenched phreatic roof tubes. 2. vadose 'percolation' water which appears to have generated the system of deep shafts cross cutting all other passages. In these shafts water is rarely seen as running streamways but rather as drips or water films coating the shaft walls. From Zone 6 down, significant streamways are encountered with flow volumes of the order of 10's cubic centimetres. Many of the deeper pitches also take flowing water. All flowing water is in steeply descending passage way or pitches. No significant horizontal active stream development has been discovered.

Three sumps have been reached, Good Not Grand, -958m, Water Hope, -970m, and Pencil Sump -967m. All are located in the deepest section of the cave in the south-west, inclined into the Tolminka Valley. Given the large number of cave passages explored and expected to be present, it is believed that all the main passages are probably inter-connected and link a common water table, at least in this part of the mountain massif. The difference in depth of 12m between sumps, is considered to be a combination of changing sump level, responding to rain or drainage between survey measurements, and survey error, rather than separate perched sumps. The intermediate depth of -967m is taken as the 'averaged' sump depth. All three sumps show recent evidence for significant flooding, with fresh mud-covered walls some way above the observed sump levels. This indicates that they respond to seasonal or storm waters. It is unknown how far the sumps may drop during late winter when water inflow is expected to be at its lowest as heavy snow then covers the mountains. The sump level at -967m, equates to an approximate elevation of 890m.

Work to identify the cave resurgence has been undertaken with a programme of dye testing. This work is described elsewhere (see page 108). In summary, the testing has not provided any indication of the resurgence. No bed-rock springs or resurgence locations have been identified hampering focussed test placement. Test placements in the main river are believed to have been swamped by extreme rainfall and runoff during the test period. Potential resurgences are discussed from analysing the topographic and geological maps.

In discussing the water table and possible resurgences it will be initially assumed here, for simplification and within the accuracy of the measurements, that the water table is horizontal and projected from the lowest point of the intersection of the aquiclude (thrust fault top to the Jurassic / Cretaceous shaley interval) and the topography, or the lowest elevation in the appropriate section of the valley. Many of the measurements are estimated from a variety of topographic and geological maps and have an accuracy of maybe 10's metres at best.

No resurgence has yet been confirmed for the cave system. Three possible resurgence areas have been identified, being the head of the Tolminka Valley to the west, the Zadlaščica Valley to the south east, and the head of the Savica Valley, by Lake Bohinjsko Jezero to the north. Potential resurgence levels are estimated to be 550m in the Tolminka, 550m in the Savica and 950m in the Zadlaščica, with distances of 2km, 6km and 1.5km respectively. The lower part of the entered cave is heading towards the Tolminka Valley.

In the Tolminka Valley the most likely resurgence area and level is at the head of the valley, a little to the north of Pl. Na. Prodih, where the valley turns abruptly to run NW-SE. The upper NW-SE part of the valley is aligned along a major NW-SE fault line, Fault 3 (Figure 4). This fault downthrows the Triassic Carbonates to the NE. To the SW of Fault 3 the Slatna Thrusts underlain by the Cretaceous shales dipping to the NW runs down the east side of the valley to cross the valley floor at an elevation of ca. 550m (Figure 7). Assuming the shales are the regional aquiclude then this location will control the water table 'spill-point' into the valley.

In the west side of the valley, on the upthrown (SW) side of Fault 3, is the lower entrance to the cave Pološka Jama in the Triassic limestones at an elevation of ca. 750m. This lower entrance passage is probably phreatic in origin but is now dry and abandoned. Presumably the present day water table in the lower, western Tolminka, below Fault 3, is deeper than the lower Pološka Jama passage level. Immediately adjacent to Pološka Jama, the valley floor is at an elevation of 500m. The lower Pološka Jama passage is 140m deeper than the Migovec System sumps to the east of the valley on the downthrown (NE) side of Fault 3. Suggesting that the combination of dipping shales 'sealing' the eastern lower valley wall and Fault 3 offsetting the shale depth, control the resurgence levels around the valley.

The base of the Tolminka Valley is filled by scree and river deposits with no bed rock outcrops. Although focussed areas of water rising through the debris have been found no definitive bed rock springs have been identified. This has made the placement of water testing equipment difficult, and largely restricted to the main river, which probably has too high a flow volume to detect the tracer used. The cave sump elevation, 890m, is some 390m above the possible horizontally projected water table level, 550m, in the Tolminka that might be expected from the key geological controls (Figures 4, 6 & 7). Alternatively, this equates to a water table dip of 11 degrees down to the NW.

A second possible resurgence area is in the Zadlaščica Valley. To the east of the village Tolminske Ravne are a couple of shallow valleys orientated up towards Migovec. Along one of these valleys runs a major fault, Fault 3 (Figure 4). This is the same fault as controlling the aquiclude level in the Tolminka Valley. Fault 3 down-throws the Triassic limestones to the NE, against the Jurassic and Cretaceous shales of the hill Grusnica. The geological map marks the downthrown Slatna Thrust and Cretaceous shales in the NE to be at about 850m elevation at the bottom of the valley, but covered by talus and therefore unproven. While in the upthrown block to the SW, on the SE side of Grusnica hill, the Slatna Thrust is at an elevation of ca. 1300m. This compares to an elevation of 550m in the Tolminka Valley 2.5km away, giving an apparent dip to the NW of 16 degrees.

Some way up the side valley from the path contouring around from Tolminske Ravne is the water source for a hydroelectric scheme. The valley is floored by massive blocks of limestone scree, the water take point being covered by a concrete block house at about 950m. To justify the hydro scheme, it is assumed that the water is a permanent flow, and therefore a deep source spring. This spring could represent a major resurgence for the Migovec Plateau. If it is assumed that the take point is located at or near the spring this places the resurgence at ca. 950m. This is above the Slatna Thrust control in the NE downthrown block of Fault 3 and below the thrust control to the SW upthown block. It is also 60m above the Migovec cave sump level.

If the resurgence is taken as -950m, this equates to a water table dip to the cave sumps, some 1500m away, of 2 degrees to the NW. If the resurgence is taken as 1300m (the upper thrust level) this equates to a water table dip of 15 degrees to the NW. If the main resurgence level is taken as 850m (the lower thrust level) then the water table dip is 1.5 degrees to the SE. Compared to a dip of 11 degrees to the NW from the cave sumps into the Tolminka valley.

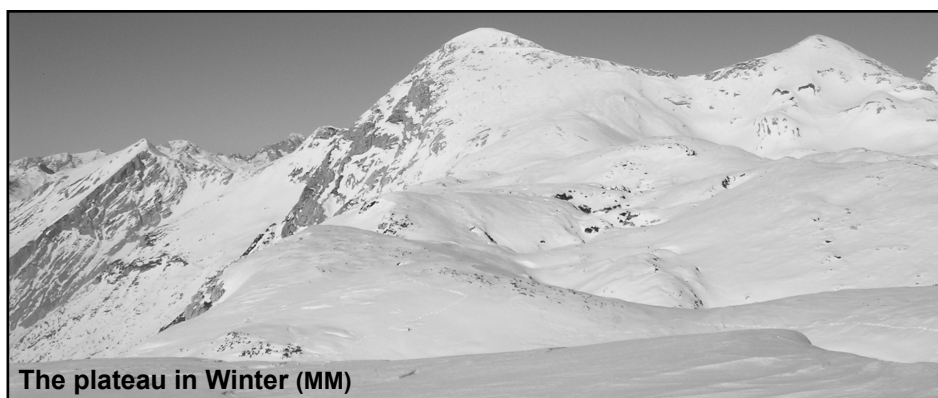
Combining the observation from the Tolminka and Zadlaščica valleys it is possible to postulate an inclined water table from the SE down to the NW into the Tolminka Valley. The water table being supported to the south by the thrust and shales, and dipping to the NW following the dip of the thrust and shales and reflecting the deeper incision and valley floor at the outcrop of Fault 3 in the Tolminka Valley (550m) over the Zadlaščica Valley (850m).

An alternative interpretation to the single inclined water table in a homogeneously permeable limestone massive is that the water table is actually a complex pattern of different catchment areas at and within the phreatic zone, defined by significant faults. These faults being sufficiently permeable on a 'long' time scale to allow cross flow but strong enough baffles to support water level changes across them. Another complexity of independent control is the presence of dolomite layers within the carbonate massive. These dolomite layers may be impervious to water and thus control local water base level and dip, and thus cave formation. Such lithological control on water tables and speleogenesis within carbonate thrust massifs on the Kanin massif has been described by Casagrande et al (1999).

The third potential resurgence area at the head of the Savica Valley has not been visited by the expedition. The area of potential resurgence has been considered too large and therefore too time consuming to warrant a comprehensive testing programme at this stage of exploration. It is not known whether the large lake in the flat bottomed valley at ca. 550m indicates the regional water table or is a perched level in impervious glacial deposits. The valley floor is about the same elevation as the interpreted resurgence level in the Tolminka Valley, but is several more kilometres further away. So it would fit with a regional deep water table level but its distance suggests it would not be the immediate resurgence of the majority of the water from Migovec. However, from discussions with local cavers a number of resurgences are reported around the head of the valley but at unknown elevations. Some postulate that the Migovec resurgence is in the SW corner of the valley.

Palaeo Hydrology

Palaeo water table levels and resurgence areas will have been controlled by earlier erosion levels in the Tolminka, Zadlaščica and Savica valleys and by how deeply the Cretaceous shale aquiclude beneath the Slatna Thrust to the SW was incised. Preliminary observations such as; the cliff lines around the valleys, the presence of bands of cemented talus on the steep slopes, and breaks in slope, indicate that several valley down-cutting episodes can be identified. No detailed work has been done on investigating the geomorphology. Some work has been undertaken and reported in Lipušček (1993), but no English translation is known. It could be useful to compare the surface geomorphological features with the cave character and passage levels.



The plateau in Winter (MM)

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Slovenian: Lipušček Radovan (editor?). *Alpski mladinski raziskovalni tabori*, Tolmin 1988-1990. 1993. *Dolini Tolminke in Zadlaščica*, Zbornik. ZOTK Slovenije – RO gibanje Znanost mladini. Triglavski narodni park.

English: Lipušček Radovan (editor?). *The alpine youth research camps*, Tolmin 1988-1990. 1993. *The valleys of Tolminka and Zadlaška*, Proceedings. Triglav national park.

There is an extensive geological 'route/tour with observation points' in the area, the route of which is marked on the topographic map. Locally, the route passes from Tolmin up the Zadlaščica valley road to the village Tolminske Ravne from where it traverses around the lower mountain side to the south of Migovec to Pl. Razor and onwards. No details or literature of the route have been obtained. At the time of this work, it was understood that the guide had not yet been written. A possible contact for the guide is Dr Stanko Buser, Geology Department, University of Ljubljana.

Maps

Geological map: Buser, S. 1987. Tolmin in Videm. *Carta Geologica*, 1:100,000. Ljubljana.

Topographic maps:

Posojce. Izletniška Karta. Freizeitkarte – Carta Turistica – Leisure Map. 1 : 50,000. Geodetski Zavod Slovenije. 1998. (contains markers and locations for the geological trail)



Bila nekoč je složna klapa...

*Bila nekoč je složna klapa,
ki v jame je zahajala.
Po Migovcu se je podila
in Kavkno jamo tam našla.*

*Bili so dnevi, član,
ko v Kavkni jami,
tam v meandrih smo zabili
vsak svoj dan.*

*Bilo nas ni nič strah,
ne brezen, ne pasaž,
ne vode,
ki škropila je na nas.*

*Spet si pripravil bom nahrbtnik
in vso svojo kramo
noter dal.
In spet odšel bom
s svojo klapo
med sive škraplje Migovca.*

*Bilo nam ni nič mraz,
ker grelo je srce,
ki bilo je za našo sekcijo.
In bije še za njo,
saj stkane so vezi,
ki se ne dah jih
več pretrgati.*

*Leta pa minevajo brez konca
in nosijo s seboj minule dni,
klapa stara več se ne povrne,
postala je del preteklosti.*

*A v nas še zdaj živi
spomin na minule dni,
na dneve, ko še skupaj smo bili.
Ko polni upanja in
željni novih zmag,
iskali smo izziv nevarnosti.*

Rutar – Fratnik, September 1981

A Brief Note for Non-Cavers

The 'English' used in this publication is of a very idiosyncratic nature, full of seemingly general terms used in a very specific way - some of these uses are only found within ICCCI (see page 156) This page intends to be a crash course in modern alpine caving techniques.

The caves on Migovec were explored almost exclusively with SRT (Single Rope Technique), whereby a single rope is attached (belayed) to the rock, generally by use of a 13mm self-drilling rock anchor (known as a 'spit' - as they are made by the Spitz company). This little sliver of metal is about the size of a Rook from a rather small chess board with a mean-looking series of teeth on the drilling end.

In order to drive this into the rock, one uses a hammer and a 'driver' which has a threaded end to fit the spit, and a dedicated light-weight 'bolting' hammer. Once the spit is drilled sufficiently deep (producing a very recognisable 'tap,tap,tap...tap,tap,tap...' as the driver is rotated thrice anti-clockwise between hammer blows to stop the teeth getting clogged, then clockwise back to the beginning), a small metal 'cone' (which are very easy to lose, and of which you only get a small number of spares) is inserted into the end of the spit. The spit is then hammered straight into the rock, the wedge of the cone splaying open the deep parts of the spit and providing a sufficient purchase (hopefully!).

When the rock is poor, it can split apart, generally while drilling the pilot hole, though sometimes only when first loaded by a person's weight! We, of course, try and ascertain whether the rock is sound - generally by hitting with the bolting hammer - but this doesn't always prove a definitive test. When a such a bolt fails, it is said to have 'popped' - a term seemingly designed to lighten the mood. The process of inserting a spit can take anything from ten minutes to a full hour, depending on many factors. During this time, your caving partner is liable to get very cold. Once the spit is successfully inserted, a 'plate' or 'hanger' is attached, which has an 8mm bolt which goes directly into the spit, and is formed with a bend to hold the rope away from the wall, and a eyehole for the maillon. A maillon is a loop of metal with a screwed (by spanner) gate. The rope is then tied to the maillon. Alternatively, one can find 'natural' belays - generally by wrapping sling material (a strong nylon webbing) or wire around a suitable rock nodule or passing it through a window in the rock.

With the rope attached, one can abseil down, using one's Bobbin (a 'Go') or a Petzl Stop. The Stop is an auto-lock descender, meaning that one has to constantly squeeze in a big red handle with one's left hand to move. Though generally preferred for teaching novice cavers, they are considered rather cumbersome (they are heavier and the red handle often stabs you in the stomach in confined spaces) by the most experienced, and slower. Often the rope does not go clear of the wall, leading to a rub-point. These are the most dangerous aspect of SRT, and can cause the rope to be abraded extremely quickly. To guide the rope away from the wall, a 'deviation' is used where the rope is not knotted to another anchor point, but simply passed freely through a karabiner (see diagram two pages earlier). Every twenty metres or so, it is preferable to reattach (rebelay) the rope. This reduces the amount of bounce (and therefore abrasion) in the rope, and allows one to have full lateral control of the path of the descent.

To ascend the rope, at least two 'jammers' are used which allow the rope to pass through in one direction only, biting with sharp metal teeth when weight is applied in the other direction. Muddy rope and non-vertical sections severely reduce their ability to do this - with the risk of the jammer slipping. By standing in a foot-loop attached to one's 'hand-jammer', one can go up in a 'frog' motion. This motion is known as 'prussiking'.

A part of the cave requiring such rope and abseiling is known as a 'pitch'. 'Passages' are generally corridor-like regions of mostly-horizontal cave, 'rifts' or 'meanders' are narrow stream-cut passages typified by their sharp edges and mantle-piece like edges to walk or slither along, sometimes interrupted by narrow and difficult (but generally small) pitches.

Jarvist Frost

Sponsorship and Thanks...

Many thanks are owed to the following organisations, companies and people who have supported the Migovec expeditions over the years. Apologies to anyone left off the following lists.

Harlington Trust,
Imperial College Exploration
Board, Goldsmiths,
Royal Geographic Society,
Royal College of Science
Association,
University of London
Convocation (Dunsheath)
Award, Imperial College Union,
Imperial College Trust,
The Rectors Trust,
Imperial College Health Centre,
Old Centralians Trust,
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assorted chocolate bars), Spring Fine
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Pasta), Westmill foods Ltd (Flour),
Katsouris Bros (Pulses), St Ivel (Spreads),
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and chocolate bars).

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and around Tolmin (for be so welcoming to
the annual influx of dirty English cavers).

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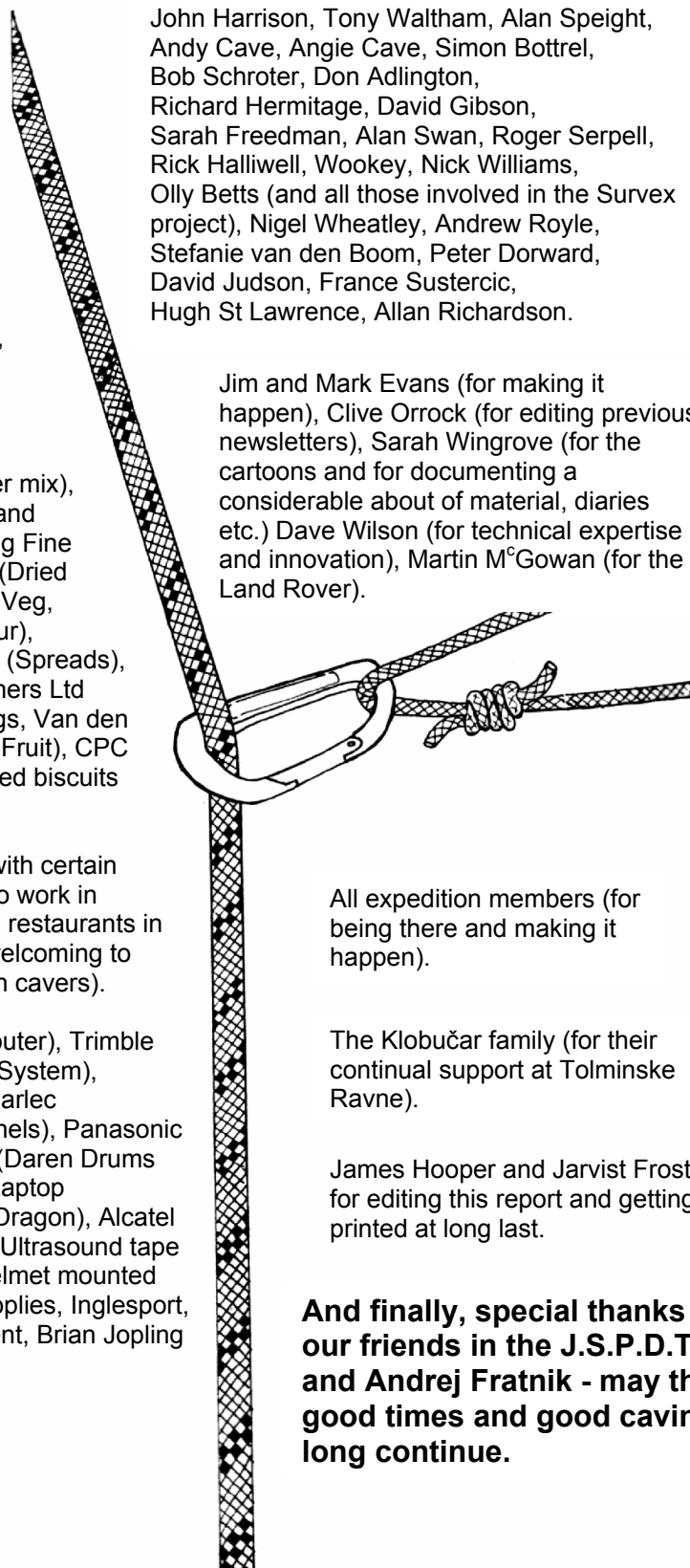
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continual support at Tolminske
Ravne).

James Hooper and Jarvist Frost
for editing this report and getting it
printed at long last.

**And finally, special thanks to
our friends in the J.S.P.D.T.
and Andrej Fratnik - may the
good times and good caving
long continue.**



The famous (successful) sponsorship letter



Imperial College

Migovec'96

Imperial College Caving Club
Imperial College Union
Prince Consort Road
London SW7 2BB

Ann Wiseman
International Distillers and Vintners Ltd
05/07/96

Dear Ms Wiseman

The following fax is with reference to my phone call on the fifth of July. I am seeking support through either donations or discounts on food for the high profile *1996 Imperial College Caving Club Expedition* which leaves for Slovenia on the fourteenth of July. The expedition is supported by the Royal Geographic Society and the University of London as well as the National Caving Association. I enclose the expedition proposal.

Founded in 1962, the *Imperial College Caving Club* is amongst the most established, experienced and respected of the clubs in Britain. We have an excellent expedition record with major expeditions throughout Europe, Morocco, Nepal, Haiti, Canada, and Peru - finding the deepest cave in Southern America. The 96 expedition is a continuation of two years exploration and study of the Migovec plateau in Slovenia, we will be performing scientific studies and following up dramatic cave discoveries we made last year.

The present expedition is gaining publicity through various local press releases, through a number of articles in the national caving magazine and to London and other University magazines. We are also giving presentations, for example to *Royal Geographic Society*, *Cotswold Camping* and at the *National Caving Conference*. At the presentations and in the press releases, we will give details of what we have experienced, eaten, and used. Any support that we receive will be acknowledged on these and all other opportunities. We have two experienced photographers on the expedition, so we can also supply photographs if required of any products we receive being consumed whether in camp or underground.

The following products that your company supplies have shown to be favourites on previous expeditions and tours:

42 litres of vodka

Any help you can give us will be gratefully received and I look forward to hearing from you.

Yours Sincerely

Alva Gossan.

To Migovec, Always!

The publication of this report has been put off for many years, waiting for a suitable conclusion such as reaching that magic 1000m mark or discovering the elusive connection between Gardeners' World and System Migovec. However, exploration, like life, is not that simple and there remain many unanswered questions on Migovec, just as there remain many ragged edges to this report. Many apologies, once again, for any unintentional errors that have crept into this journal, for missing out any important information or stories and for any overly zealous editing (rewriting) of articles. Little did we know when we started this endeavour that it would end up being such a lengthy and demanding task.

As to the future, this report was sent to the printers with less than two weeks to go before the departure of the summer 2007 expedition. A new generation of IC students are preparing for their first summer on Migovec, as are a new generation of JSPDT cavers. It is our belief that there remains much new cave to be discovered. What is certain, however, is that the area of limestone between Kuk and Migovec will forever be a special place where good conversations and strong friendship will endure amongst those who stay there a while. Long may the adventures continue!

James Hooper and Jarvist Frost



Quote Unquote

"On Migovec, we found a way that open hearted people can follow for generations."

Andrej Fratnik, Migovec Caver 1974 - Present Day

"'In here!' screeched the silk-monkey, and she disappeared completely into the rock. Then Sniff saw that it was a cave, a real cave, such as he had always dreamed of finding. Its mouth was rather small, but inside it opened out into a big room. The rocky walls rose smoothly up to a gap in the roof which let in the sunlight, and the floor was covered with smooth white sand.

...

'Don't disturb me,' said Sniff solemnly. 'This is the biggest moment of my life so far, and it's my first cave.' "

Tove Jansson, *Comet in Moominland*

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Useful Weblinks

<http://www.union.ic.ac.uk/rcc/caving/>
http://jspdt.esmartweb.com/s_uvod.html
<http://www.jamarska-zveza.si/>
<http://kras.zrc-sazu.si/>
<http://www.ap-ljubljana.si/>
<http://www.slo-zeleznice.si/>
<http://www.slovenia.info/>

Imperial College Cave Club site
 JSPDT site
 Speleological Association of Slovenia
 Karst Research Institute
 Slovenian bus timetables
 Slovenia train timetables
 Slovenian Tourist Board

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