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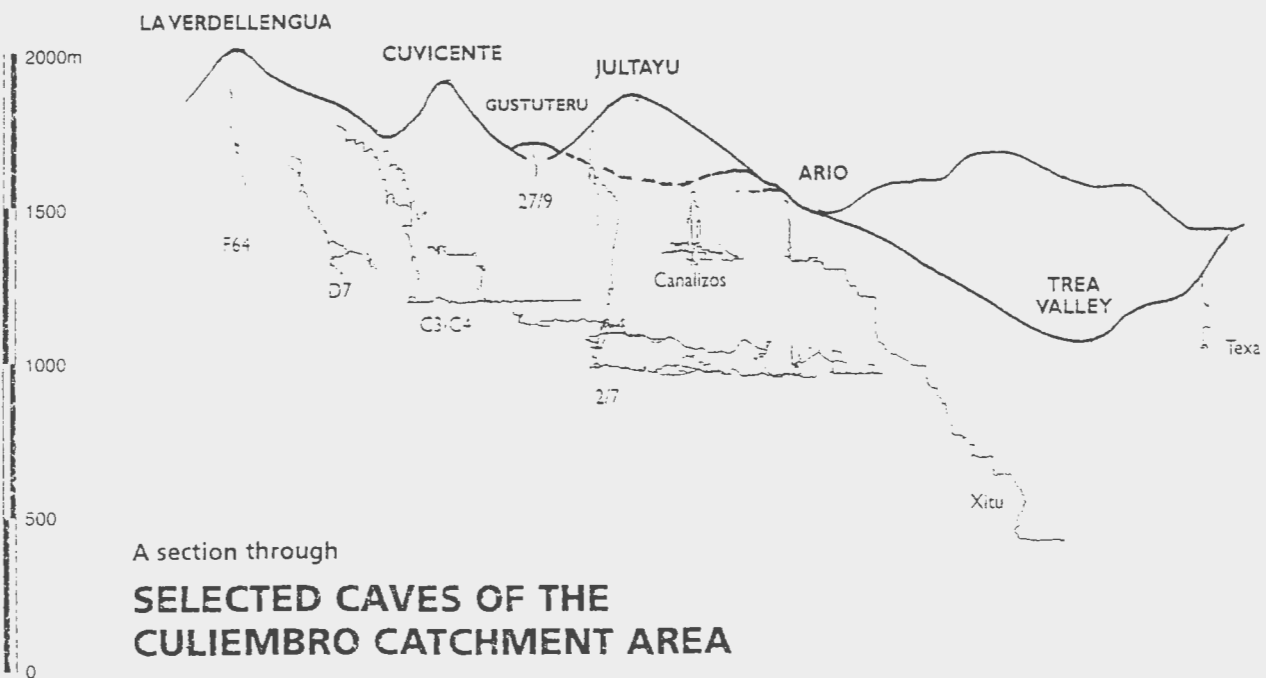
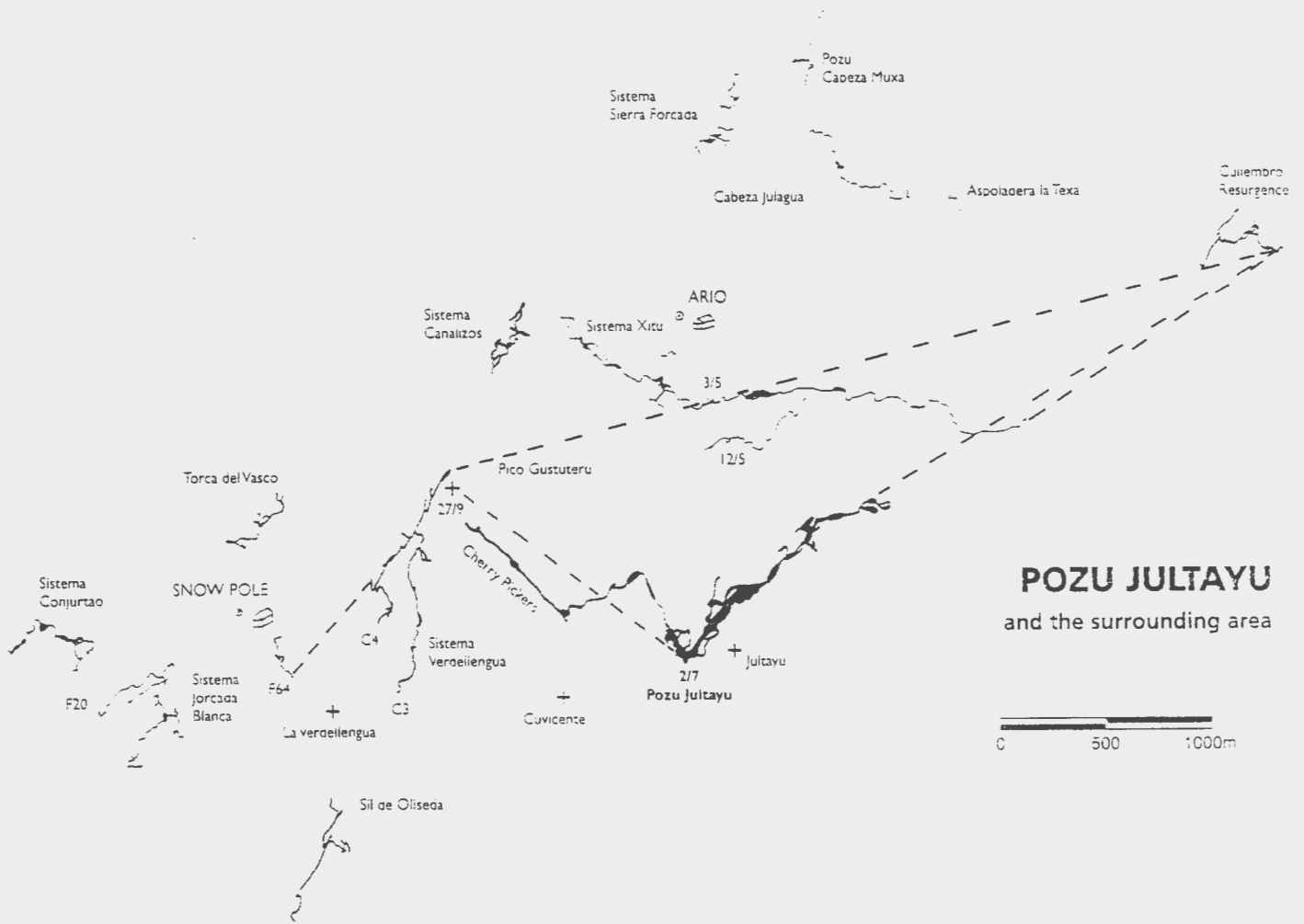
Oxford University Cave Club

Expedition to Northern Spain

July 1998



FINAL REPORT



Summary

Pozu Jultayu (2/7) is one of the most significant caves in the western Picos de Europa. After an entrance series of tight rifts and a 500m shaft series the cave opens out into a massive high level "The London Underground" overlying a large active main drain. Both the high levels and the stream end in a huge terminal boulder choke "Egbert" at a depth of 820m. With a further drop of 800m to the resurgence at Culiembro and wide-open upstream leads, 2/7 was the focus of exploration for the OUCC Jultayu 1998 Expedition.

Two underground camps were established, a 6-person camp near Egbert and a two person camp on "The Big Ledge" where the main drain is first met. The assault on Egbert consisted of investigating a number of drops, climbs in the high level passages preceding the choke as well as several digs in the choke itself. Tantalus, a promising, pitch in Soup Dragon, was re-discovered and surveyed, only to find it was an inlet back to the main stream. Bold climbs were made out of Postman Pat, Soupdragon and Bod, but only Bright Lights, a 60m bolt and mud slope climb, yielded promising new passage "Hunt the Crowbar". This too, however, ended as an inlet to the main drain. Closer to Egbert, climbing out of Pimpernel Streamway led into "Pixie Steps" an extension of the high levels in the area of Colostomy Choke. These passages, however, also choked downstream.

Egbert itself drafts strongly in a number of places, which suggests more passage beyond. We concentrated digging in three areas: Tim's Bit, The Flood Overflow, and The Calcite Choke. The Calcite Choke along the left-hand wall of Egbert proved solid and difficult digging, so was quickly abandoned. More progress was made in the muddy undercut at the end of Tim's Bit, the furthest point reached in the choke. The solid roof eventually gave out into cobbly hanging death so this too was abandoned. At the end of the expedition efforts concentrated on The Flood Overflow, a clean washed boulder filled passage directly beyond the two stream sinks. This consisted of a more or less solid roof and walls and an easily dug floor. About a meter of progress per day was made with the strengthening draft and sound of running water drawing us on. Only the end of the expedition and the need to go home prised us away from the dig, which now remains a very promising downstream lead with anything between 2m and 2km between us and the passage beyond.

Well over 1km of passage was found elsewhere in 2/7. The largest discoveries were made upstream where we found 700m of beautifully sculptured stream passage "Cherrypickers". This ended in a 10m waterfall "Viagra Falls" just after a large inlet. The climb round the waterfall will require only one or two bolting trips to pass and who knows what lies beyond. The survey suggests that this point lies less than 500m distant and 50m below the downstream limit of the 640m deep Sistema Le Verdulluenga (C3/C4), so the prize of connecting the caves of Ario and Top Camp may be within our grasp. New passage was also found in the entrance series. An alternative shaft series, "Tumbling Dice" had been left at a hammerable rift. When hammered it revealed another 40m of passage to an undescended pitch. Even if (as is likely) this intercepts the known cave it will provide a swifter, easier route to the depths of 2/7 by bypassing much of the entrance rifts.

On the surface, drafting digs were investigated in the Valley of Dry Bones and Valle Extremero, which lie above the London Underground. Most progress was made in Dry Bones where the treacherous surface layer was broken through to more stable ground below with incredibly windy passage ahead. Further afield the area between Cuvicente and La Verdulluenga received more attention than in previous years, with many new entrances found and old caves pushed. The most significant discovery was 27/9 on Gustuteru. This dropped in six pitches to a depth of around 100m with a strongly drafting tight continuation. The cave lies directly over the C3/C4 sump and was dye-traced to upstream 2/7 and to the Culiembro resurgence. This dye-trace again points to a connection between the two systems and the potential rewards of continued exploration in this area.

Overall, OUCC Jultayu 1998 was a highly successful expedition. 25 people contributed to downstream exploration with over 150 person days spent at the underground camps. The most promising downstream leads were thoroughly investigated with the Flood Overflow remaining the most likely route to passages beyond (given time). Elsewhere in 2/7, we have several exciting open leads and on the surface there are good prospects of dropping new entrances into both up and downstream ends of the cave.

Preface to OUCC Jultayu 1998 Expedition Report.

Nineteen consecutive years is a long time to be returning to the same piece of Spanish limestone and it is no accident that OUCC continues to make important discoveries in the Picos de Europa. Three factors in particular have contributed to the continued success of OUCC expeditions over the years: meticulous planning without becoming control freaks; massive enthusiasm to get things done; and an open, friendly welcoming attitude to newcomers, and at this point I'd like to give a huge thanks to those who have helped to make this expedition happen.

First of all my thanks to the expedition committee, Paul Mann and Jo Whistler for looking after the administrative and financial side of things, to Lev Bishop and Chris Densham for ensuring we had some nice gear to play with, and to Alison Waterfall and Tim Guilford for contacting sponsors and dealing with medical matters respectively. Thanks also Pauline Rigby and Nathaniel Mumford, who led the previous two expeditions for being a shoulder to cry on when things were not running too smoothly, and to Steve Roberts, for being a calm voice of experience.

I am particularly thankful to Oxford University Expeditions Council for financially supporting the expedition, and to the numerous bodies that have helped individual students to join us this year, including various personal university and college travel grants and the Ghar Parau Foundation with the Alex Pitcher Award. Thanks also to the Oxford University Expedition Committee and to the Royal Geographic Society for their advice on expedition organisation. Sponsorship is also a vital component to running the expedition and our thanks to Morning Foods Ltd. for breakfast cereals, to Thomas Tunnock Ltd, for their caramel wafers, R. Twining and Co. for their tea, to Thorntons Plc. for their fudge all of which have contributed to expedition morale. Thanks also to Bat Products, Dragon Caving Gear and Lyon Equipment for equipment sponsorship.

In Spain, Juan Jose Gonzalez-Suarez of the Asturian Caving Federation has been a tremendous help in arranging permission to cave in the Picos. Meeting Juan-Jose to discuss future plans and cave politics was one of the highlights of the summer for me (that and walking into 700m of unexplored beautiful stream passage). Our thanks also to the National Parks Authority for granting us permission to camp and cave in the Picos and to the staff at the Maria Rosa at Los Lagos and the Ario Refugio for making us so welcome in a foreign land.

Finally my thanks to everyone who came out to Spain for the expedition. I had a totally excellent time over the summer and I hope that you did too.

Cover picture: Rob Garrett negotiating a pitch head in 27/9.

Previous Page: The caves of the Culiembro catchment area showing positive dye traces and their relationship to surface features.

Expedition Members

JA Jamie "Daytripper" Alderson
LB Lev "Roberts" Bishop (*TechnoKing*)
JC Jonathan "Rabid" Cooper (*Leader*)
CD Chris "Are you looking at my pint?" Densham (*Tacklemaster*)
RD Richard "Househusband" Doyle
AdE Adam De Eyto (*LUCC*)
BFS Bill Ford-Smith
RG Rob "Flourescent Green Shit" Garrett
TG Tim "Dry Bones" Guilford (*Medical*)
AH Alec "Speed Caver" Hartley (*JCC*)
PH Pete "Testosterone" Hartley
KH Keith "Knob Twister" Hyams
HJ Huw "Normal" Jones (*BCC*)
DL Dave "Derigger" Lacey
ML "Hairy" Martin Laverty
RL Rebecca "Armstrong" Lawson (*CUCC*)
FL Fleur "4 Tacklebags" Loveridge
GL Gavin "Beach bum" Lowe
PM Paul "Pol" Mann (*Secretary*)
LMo Lou Morris (*SWCC*)
LMu Lynn "Handwarmer" Mullaly
NM Nathaniel "Duo-Boy" Mumford
PO Patrick O'Dennell (*LUCC*)
NP Neil "Sidreria" Pacey (*RRCPC*)
LS Lenik Saymo
TS Tony "Flipper" Seddon
NS Nancy Serrano
JS John Sherry (*LUCC*)
HS Harvey "Crowbar Novice" Smith
MS Martin "Proplus" Smith (*BPC*)
CS Christian Staunton (*LUCC*)
TT Tom Toomey (*LUCC*)
AW Alison "Pybus" Waterfall (*Sponsorship*)
BW Barry Watts (*LUCC*)
JWh Joanne "Shirt-ironer" Whistler (*Treasurer*)
JWi John Wilcock (*Dowser*)
RW Rhys "Optional Sausages" Williams (*SWCC*)

JCC: Jackpot Cave Club, *SWCC*: South Wales Cave Club, *BCC*: Brynmaur Cave Club, *BPC*: Bradford Pothole Club, *RRCPC*: Red Rose Cave and Pothole Club, *LUCC*: Limerick University Cave Club, *CUCC*: Cambridge University Cave Club (are a horse's arse)

Just Visiting

Paul "Pie-eater" Brennan
Jan Pratt
Kate Lane
Fred Wickham and a large number of schoolboys
The SIE
The Poles

Expedition Diary

When	Cave	What	Who
5 July		Van Rouge departs Oxford Advanced party (Pete) arrives at Lagos	
6 July		Van Rouge departs Plymouth	
7 July		Van Rouge arrives at Lagos. Set up base camp	
8-9 July		First carries and set up camp at Ario	
10 July	2/7	Rig to Seventh Heaven	PM, FL, LB, LMu
11 July	2/7	Rig to Graham's Todger Pitch	JC, RD, HJ
12 July	2/7	Rig to Pessimists.	PM, RW, LB, AW
	48/7	Bottomed.	FL, JC
13 July		No Carbide! Everyone carries.	
14 July	2/7	Rig to Armageddon	GL, FL, MS
	2/7	Carry tackle to Pessimists	JC, RD
15 July	2/7	Rig to Cemetery Gates	TS
	2/7	Porter to Armageddon Ledge	RW, LB, JW
	16/9	Mislabelled 25/9	JC, KH, LMu
16 July	2/7	Porter to Pessimists	RD, HJ, MS, LMu
	16/9	Shafts a,b,c,d etc. bottomed.	LB, AH, BFS
17 July	2/7	Rig to Just Awesome Big Ledge	GL, FL (!)
	2/7	First Camping Trip at Big Ledge	JC, TS
	2/7	Exploration in Shafts	LB, RW, HJ, AH
	16/9	Remaining leads finished Shaftbashing around Ario. Dowsing Extremero and Trea.	KH, PH AW, RD JWi
18 July	2/7	Porter to Pessimists Shaftbash and Dowse in Areas 5 and 9.	RD, KH, AW, PH LMu, BFS, JW
19 July	2/7	First Camping Trip to Primula Point	PM, LB
	2/7	Porter to Pessimists Shaftbashing in Extremero and Trea.	JW, Lmu, FL, BFS HJ, RW
20 July	2/7	Porter to Pessimists. Shaftbash/ Dowse Jultayu and Cuvicente.	PH, AH, HJ RD, KH, JW
21 July	2/7	Second Camp to Primula Point Shaftbash Area 9.	GL, FL (!!) HS, JW
22 July	2/7	Third Camp at Primula Point Shaftbash Area 9.	HJ, RD KH, JW, HS
	27/9	Bolt/push 27/9.	BFS, BW.
23 July	2/7	Fourth Camp at Primula Point.	RW, AH
	2/7	Porter to Pessimists	KH, JS, BW, PH
	27/9	Rig/Push	JW, BFS
	49/5	Bash	AW, LMu
24 July	2/7	Porter to Pessimists	TT, LMu, AW, HS
	2/7	Fifth Camp at Primula Point	TS, PH
	2/7	Find route through rifts	DL, NP, RG
25 July	2/7	Bounce Armageddon	KH, JS
	27/9	Rig/Push	JW, BW, BFS
	GG	Digging	DL, LB
26 July	2/7	Porter to Armageddon Shaftbash Area 9	JW, HS ML, LS

27 July	2/7	Sixth Camp at Primula Point	DL, NP, RG, LB
	27/9	Pushing on	CD, KH, GL
28 July	2/7	7 th Camp at PP	PM, JW
	27/9	Pushing on	CD, GL
	31/9	Taking a look	FL, KH
29 July	2/7	2 nd camp at BL	TS, AH
	2/7	8 th camp at PP	CD, JS
	2/7	Rig GSP	FL, HS
	27/9	Eating fudge	GL, HJ, KH
30 July	27/9	Hammer end	HJ, AW, KH
31 July	2/7	9 th camp at PP	FL, HS
	33/9	Digging	HJ
1 August		Miserable claggy day. No caving	
2 August	2/7	10 th camp at PP	GL, JC
3 August	2/7	11 th camp at PP	HJ, PH
	2/7	Rift trip	PO, CS, NS, AdE
	27/9	Digging	RL, NP
4 August	27/9	Hammering	RL, NP
5 August	2/7	Rift trip	RL, PO
	2/7	Bounce Big Ledge	CS, AdE
6 August	21/9	Bash Area 9	FL, NM, RL
		Bash Extremero and Trea	CD, LB
		Bash Dry Bones	TG, LMo, JW
7 August	2/7	Photocamp (12 th at PP)	PM, JW, RL, CD
	2/7	Rifts	TG, LM, NM
8 August	2/7	13 th camp at PP	FL, NM
		Digging in Dry Bones	TG, RG, LB, LMo
9 August	2/7	Solo Rig, push, derig	GL
		Bash Extremero and Trea	LB, RG
		Bash Dry Bones	LMo, TG
10 August		Place dye detectors at Culiembro	JC, RG
		Dig Dry Bones	LB, LMo, TG
11 August	2/7	3 rd Camp at BL	LMo, TG
	2/7	Porter from Big Ledge	GL
	2/7	4th (solo) camp at Big Ledge	JC
	27/9	Place dye	LB, HJ
12 August	2/7	Porter from Pessimists	PH
	27/9	Hammer	DL, RG, LB
13 August	2/7	Porter from Big Ledge	DL
	2/7	Derig Zazudska Way	LB, NM, JC
14 August	2/7	Derig to Armageddon	PH, RG, RL, JC
15 August	2/7	Derig to Pessimists	DL, LB
16 August	2/7	Derig cave	PM, JW, NM, CD, HJ, PH, RL, JC, RG
17-20 August		Carries down to Lagos	
19 August	27/9	Survey and Derig	RL, CD, RG
19 August	D16	Bottom and find D98	PH
21 August		Van Rouge departs Lagos/ Beach trip	
22 August		Frenchman (drunk) drives into trailer	
23 August		Van Rouge (minus trailer) arrives Oxford	
25-26 August		Trailer retrieved	PM

2/7 or not 2/7.

Every Picos expedition begins with a question, "Where shall we go this year?". Sometimes the answer is easy. If you have a 400m deep cave and turn back at a 50m pitch, then go back and drop that pitch. At the end of the summer of 1997, the answer to the question was not so easy. For the third consecutive year the lake at the bottom of C3 had been found to be a sump with no easy way over the top, and less predictably no other really tempting leads had been left elsewhere on the hillside. Buggar.

The answer to the question turned out to be quite simple, go back to Pozu Jultayu and find a way past choke Egbert, either climbing over the top or punching a way through the middle. Egbert had rebuffed all persuasion, cunning and guile for three years and had been abandoned in 1991 in search of less resistant leads, at first in the Ario region, then boldly returning to Top Camp to find Sistema La Verdulluenga. All the while, though, there were whispers. "When shall we go back to 2/7?" and "Who will be foolish enough to come with us?" El Regallon97 partly solved these riddles by bottoming all its good caves, and so the campaign gathered steam in the late summer of that year. Those, that had been to the bottom, felt the cave had been left at an unsatisfying conclusion (Big passage, boulder choke, 800m above resurgence) and were desperate to return. Those, that had cut their teeth on the Fierce Ladies of Cannock, were intrigued by Paradise Rift and tales of something more tasty beyond. Those that had not been to the Picos before knew no better. So 2/7 it had to be. There could be no other.



Derigging party at the entrance of 2/7. Left to right: Huw Jones, Chris Densham, Rob Garrett, Fleur Loveridge, Paul Mann, Nathaniel Mumford, Pete Hartley, Rebecca Lawson. Not pictured: Joanne Whistler, Jonathan Cooper.

2/7: Pozu Jultayu. The Road to Egbert

Main route only. A more detailed description with rigging guide and historical notes is available in Proc 13 and on Gavin Lowe's caving website.

Location

1 13' 48" W, 43 14' 00" N. Altitude: 1860m; Depth: 820m; Surveyed Length: pre-1998: 9215m, post-1998 11264m; Plan Length: 5915m. The entrance is approximately 30m below the eye-hole (el Ojo de la Bruja) on the Juracao ridge linking the peaks of Jultayu and Cuvicente. The best route from the Ario Refugio is to follow the cairned path as far as the Jou del Jultayu and then to cross the Jou, aiming a little to the west of the Jultayu summit. The cave is situated below the most easterly of two obvious notches in the ridge.

Entrance Series

The entrance is an impressive cleft in the hillside in a large shakehole. Almost immediately a 10m pitch lands on a very loose bouldery slope. Rocks from here fall straight down the second pitch. Originally, it was recommended that no-one move on this section while anyone was on the pitch below. Now, however, three years of use has gardened the slope to the point where, with care, it is possible to avoid dislodging the still-plentiful ammunition.

The second pitch lands on an earthy ledge next to a strongly draughting (hammered) slot 36m below the boulder slope. The pitch continues for a further 10m before ending in a boulder choke. Beneath the slot is a tight 3m climb below which is a 42m pitch, Seventh Heaven. A rope is best rigged above the slot, so that descenders may be attached before the squeeze. There is room in the climb to put on descending gear, although this situation is rather more exposed. The main hang, 10m down gives a free hang to the steeply sloping floor of a chamber. The slope is now very eroded by the repeated passage of most of OUCC, and a handline cum haul line is useful. At the bottom of the slope is a 3m climb, followed by the first of the squeezes in Paradise Rift: a vertical squeeze with few footholds.

From here a rift leads off which almost immediately becomes tight. The largest route is at ceiling level until a left hand bend when it is possible to descend the rift through a succession of squeezes. A line is useful on this section, for clipping tackle bags to (to guide their fall on descent, or to slide them up on jammers, with pauses for the extensive cursing necessary to aid their passage). The climb lands on a small ledge above a 20m pitch, the Flying Rébellés.

Rift Series

Flying Rébellés lands in a small chamber with a rift leading off. The original route was an easy, lined traverse through a squeeze to a thrutch along the rift. At an aven it is possible to redescend the rift. This is Pablo Pot, which although free climbable, is best rigged with a ladder. The current, easier route from Flying Rébellés is to follow the bottom of the rift, along a crawl, to the foot of Pablo Pot. A hole is passed on the left, down which the water disappears: this is believed to drop into G.S.P. and may be worth further exploration.

Pablo Pot marks the start of Popcorn Rift. The rift is at first easy to follow, with a couple of short climbs down. After a while, the rift becomes narrower, with various ways on. The easiest route is a narrow rift to the right, leading to a climb down to a small chamber (3m x 3m). From here a traverse along a piece of white rock reaches the head of Gripper Pitch (10m).

The pitch lands in a chamber with a 2m climb up. From here another squeeze, Stimulated Emission Squeeze, is followed by a right angled bend into Black Crystal Rift. A 6m climb is met halfway along the rift. The route leads back up through a hole in the rift to a wider section, which ends at a small chamber with a trench in the floor. The trench may be descended to a traverse, leading to the head of a fine 17m pitch, Graham's Todger Pitch. The original route descended the pitch fully and then climbed seven metres up the rift opposite the landing. The current route uses a Tyrolean tight line connecting the top of the pitch and the top of the climb; abseiling clipped to this line saves much effort.

The rift bends to the left to a small chamber (4m x 3m) with a trench in the floor. The trench may be descended for 5m to a wider section of rift. From here there are two possible ways on. A tight, awkward rift, Travellers' Scrabble, leads off horizontally. It is possible to avoid this by an exposed climb through a hole in the roof and a traverse above the tight rift until it becomes wide enough to descend. This reconnects with Travellers' Scrabble just before Ascension Pot, an 8m pitch. This pitch is now avoided by a lined traverse over the top and a climb down the rift on the other side. The rift here is narrow with a number of passable levels. The lowest route is the best. Care should be taken as the rift

ends at a 70m drop, Pessimists' Pot. High level routes in the rift open out directly above Pessimists' and are not recommended.

Shaft Series

From the small chamber at the foot of the climbs, a traverse slightly upward gains the head of Pessimists' Pot, the beginning of an impressive 400m shaft system. The initial short section bypasses the original belay ledge (The Fun Starts Here) and the main hang is a fine 70m drop: the longest freehang in the cave. Large pinnacles of rock are visible on a ledge on the opposite side of the shaft approximately 35m below The Fun Starts Here, and one wall has massive calcite crystals, round which detackling ropes can snag quite firmly. The pitch lands on a boulder strewn ledge, Supper Time, which has a supply of clean water entering from the inlet above Pessimists' Pot.

A short ascent up the ledge, using a traverse line, leads to the 31m pitch, Sing to the Devil. A short steep slope leads to the pitchhead; halfway down, the shaft splits, the route on being the larger and deeper of the two. From the bottom, a short traverse round a large hole in the floor leads to a spiky rock bridge from which the next pitch, The Bells, is reached. The pitch lands on a large (5m x 3m) wet ledge with a pool, a useful carbide fettling spot, from where it is possible to look down to the First False Floor, 140m below.

A 44m pitch, Armageddon, leads to another ledge, from where the next pitch descends in a series of drops, separated by small ledges. This pitch is awkward to rig as the walls slope outwards at approximately 5 degrees to the vertical. The pitch must be rigged near to the drips as, away from the water, the walls are coated in thick mud. The pitch lands on another wet ledge, from where a lined traverse leads to the head of a 22m pitch, landing on the First False Floor.

First False Floor to Just Awesome

The First False Floor is a fine chamber divided by a 5m ridge. Climbing up onto the ridge reaches a short pitch down to the other side of the chamber. From here, there are a number of possible ways on. A large rift enters from the right. This can be climbed for about 5m ending in a very steeply ascending muddy slope. Below the ridge, a short climb leads to a route through a very loose boulder pile to a 30m pitch, Great Expectorations. This lands in a rift with a stream running south to north. This rift was later explored, and lands back in the main shaft at the bottom of Rosy Crucifixion.

The main way on from the below the ridge is a route to the right which leads between boulders to the head of Rosy Crucifixion (38m). The head of the pitch is beneath a very large poised boulder. This pitch, is against a muddy, sloping wall. A number of deviations fails to prevent the rope becoming quickly clogged with mud. The pitch lands in a small chamber with a stream that disappears down a crack in the floor. This may be the same stream that flows down Great Expectorations. The way on is to traverse along a ledge 5m above the base of the pitch to reach the next pitch, Cemetery Gates. Part way down, a swing right onto a wall leads to the final 10m drop to the start of Gusamo Grovel. The 1988 extension was found at the bottom of Cemetery Gates where the water is left behind and a dry high level followed. A short climb down with the help of a handline attached to a large spike led to a roped climb up into Gusamo Grovel.

Following the draught through the sandy crawls and stoops of the Grovel, past the squalid 1988 campsite, soon produces results in the form of the noise of a very large amount of falling water. A descent down a dry muddy slope (rope useful) leads to a chamber, from where the first of the pitches into Just Awesome is rigged.

Just Awesome

A 17m pitch in a rift is followed by a lined (semi-tension) traverse onto a ledge. A large block forms the initial belay for the next pitch. The bolt for the main hang is just above a large undercut, making the changeover airy and somewhat strenuous. This 42m pitch lands on the Big Ledge. A very large stream (flow rate measured as 250 litres per second in 1989) enters the chamber on this ledge. The stream flows into a 2m wide passage and falls 50m down to the chamber floor, from a hole about 15m below the level of the ledge. From here, the full size of the chamber is apparent, if not visible. The chamber is 40m by 70m and over 120m high, the largest chamber by far at comparable depth in Spain. The Big Ledge is horseshoe shaped, and roughly 100m by 100m.

The descent from the Big Ledge is against the wall for about 10m to the final bolt. Here, the wall is sharply undercut, leaving the caver struggling in space 5m from the waterfall to accomplish the last changeover. 38m lower, this superb, very free-hanging drop lands in the boulder-strewn immensity of the base of Just Awesome. From here there are two ways on. The original route follows the stream;

the present route ascends the cemented boulder pile to the right, to the climb up to the London Underground.

The London Underground

The boulder pile in Just Awesome ascends for 30m to the base of a flowstone waterfall. A 40m bold climb up this (rope in place) reaches the enormous sloping sandy plain of Heathrow. This is an excellent vantage point for the Just Awesome Chamber. Following the well-trodden route on the left side of the passage (further damage to the sand and mud floor must be avoided) leads up to the base of a wide boulder slope. It is possible to go wrong here by heading too far right; if in doubt, follow a bearing of 40. At the top of the boulder slope a cairned route leads off down the 1000m length of the London Underground. The passage here is about 70m wide, and is sufficiently straight that lights can be seen 400m away in places. The route ascends and descends steeply in several places.

After 400m, the route bears slightly right, becoming narrower (about 10m width), and descends for 50m. One then passes a particularly large block, by which is a 20m diameter shaft (Marble Arch). Descent of this (15m) leads to the Piccadilly Line, another large boulder-strewn passage. Continuing along the London Underground, the route leads to Euston Choke. This is a steep strenuous ascent up loosely packed sand and rocks, first up the right-hand side and then crossing over to the left (the descent is easier on the return). A handline is now rigged most of the way up. The last steep section may be avoided by heading to the right, and ducking under some large boulders. Near the top of the handline, on the left hand side, a promising-looking rift leads off, but all routes here end in mud chokes.

Once over the top of Euston Choke, the descent is easy into a tall rift passage about 8m wide. A short walk leads to the base of Paddington Choke. A rope is rigged up the left-hand side, ascending about 20m. Alternatively, it is possible to ascend to this point by an "interesting" climb on the right-hand side. At this point, it is possible to penetrate the choke, and various routes have been pushed to no conclusion as yet. The most explored of these is Lost Paul's Rift. Another way on may be to continue the climb up the left-hand wall. Behind a large block at the base of Paddington Choke lies a hole in the floor, giving the entrance to Zasadka Way. Short, oversuit-ripping squeezes and rifts open out at the top of a series of six short, awkward pitches. The last of these lands in the stream just before Primula Point. It bypasses neither Drucilla nor Egbert, as its optimistic explorers hoped.

Primula Point to Pimpernell Streamway

Beyond Primula Point, the stream deepens in a tall 6m wide passage, and the easiest route is to traverse along ledges on the left-hand wall. A four metre pitch, with an irritating take-off at the top, leads up to the first of these. An easy walk (line for safety) reaches a broader ledge, and then a tension traverse to another ledge. Here, two routes diverge. From the junction described above, a rope ascends on muddy walls past a ledge to a 3m diameter rocky chamber about 2m high. From here, a window looks down onto the start of Choke Drucilla. Traversing past this reaches another small sloping chamber. Upslope a narrow exit emerges into a vast, steeply sloping, boulder-filled chamber (Postman Pat).

The route into Bod is a hole in the right hand wall, near the base of Postman Pat. A 'bold splits' across a drop emerges into a large boulder floored passage, about 10-20m across, and very reminiscent of the London Underground. The main route through follows the right hand wall, and is well cairned. At the top of a ridge, two routes diverge. The original route descends a 20m pitch over loose rocks on the right-hand wall. The main route from the ridge in Bod, is a short climb up the left hand wall. This reaches a descending traverse cum sloping pitch, onto a large ledge above Bod, Soup Dragon. In the left wall is a large hole, the entrance to Tantalus.

The route in Soup Dragon continues to the base of two small inlets, the White Inlets which flow down over moonmilk. Crossing to the right hand wall at the White Inlets, and passing behind a very large boulder, the route descends over muddy boulders to the top of a short pitch, Clanger Pitch. This drops back into the original route through Bod, much to the disappointment of the original explorers, who were expecting the passage to continue further. Continuing along Bod, a second pit is passed on the left. Continuing above the pot reaches the top of a muddy, sloping pitch, Pimpernell Pitch (P30), which lands on a rockpile in the streamway, halfway between chokes Drucilla and Egbert.

Pimpernell Streamway to Choke Egbert

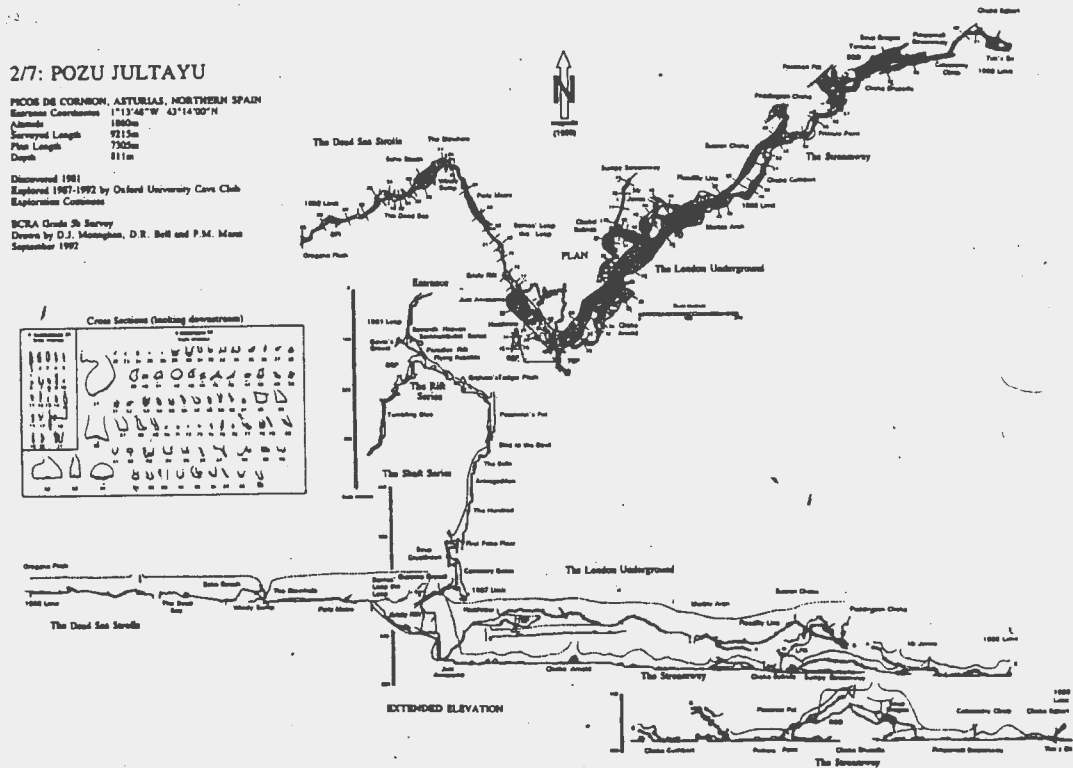
Upstream, a climb down from the rockpile lands in an 8m wide rift, carrying the stream. Easy progress in the stream or close to the walls in deep sections leads to the survey cairn on the downstream side of Choke Drucilla. Downstream, a route following first the right hand wall, then the left hand wall, descends to a small beach at stream level. The stream in the 3m wide, tall, rift is 2-3 feet deep, and the

wetting can be avoided, by a tension traverse along a muddy ledge on the left. At the end of this, crossing to the right hand side of the stream, reaches a beach, at the foot of Colostomy Climb.

From the base of Colostomy Climb, the stream continues about 4-5 feet deep. This can be avoided by recrossing the stream to the left bank, via a rock island. In wet conditions, a pendule or a deathslide can help to avoid the water, or can simply dunk the caver in the middle of the streamway. From here, a roped, semi-tension traverse leads to a beach. From the beach, the streamway cuts right, and completely changes character, becoming a phreatic tube, about 5m in diameter; previously the stream had run in a high rift, with the roof out of sight.

This soon reaches Choke Egbert: a dense and dangerous choke of small boulders. Just before Egbert, a low, wide crawl leads off from the right hand side of the stream to Tim's Bit. After several grovels in gravel, the passage splits. To the left is a series of very loose climbs up into a chamber in a boulder choke; several routes lead off but none go. Ahead, the passage continues as a low, wide, flat roofed phreas with boulders on the left. The passage ends at a boulder blockage which may be diggable. It is possible to climb into the choke at various places, but no way on was apparent. The stream splits in two, with both branches sinking. A Flood Overflow continues straight ahead, between the two branches. This leads into the choke for about twenty metres, to a short drop which needed some boulders removing from it. Just above this was a very dangerous chute, which had the annoying habit of dropping boulders onto unsuspecting diggers.

A caver at Choke Egbert is only 10m or so below the level of the camp, and about 700m metres above resurgence level, at an unusually remote and difficult barrier to exploration.



2/7 prior to 1998 showing up and downstream limits of exploration.

Isn't it dark?

I was supposed to be one of the veterans of 2/7, but this was only my second visit to the London Underground. In 1992, Tony Seddon and I had pirated the passage. By this I mean we had gone downstream when the expedition's aim was exploration upstream. At the time it seemed a smart move; the ropes were still in place, albeit circa 1989, Tony had a great lead in mind and I'd never seen the really big stuff as I'd had a life in '89, '90 and '91 when downstream exploration was going strong. The "great lead" turned out to be a bold rope climb on mud and choss out of Postman Pat, which led into a steeply ascending rift that eventually pinched out a good 50 to 60m above where we'd started. We had, however, left an undescended 70m pitch at the base of the climb.

This was one of our objectives on the return trip, six years later. We'd come down for the first underground camping trip of the expedition on The Big Ledge of the huge Just Awesome chamber, 100m long, 50m across and about 150m high. On the first evening, Tony free-climbed Dead or Alive, a greasy 30m climb out of the bottom of Just Awesome into Heathrow at the start of The London Underground, the short-cut to the end of the cave. My task was more mundane, but potentially more fraught with danger; washing up the pots and pans left over from the 1992 camp. Sorting out the very nasty Raven Meal packets that had not been split from the less nasty Raven Meal packets that had been split and were covered in green slime required levels of hygiene not possible at an underground camp, but at least it was nice to know that something finds them edible. Countless brews later, Dead or Alive was re-rigged and we could sleep on the next day's adventures.

It all came back to me like a bad dream. The London Underground: nearly a mile of huge passage, no roof and no walls, house sized boulders and a thin blue cord, marking the shortest or easiest route. I had to admit the place intimidated me and I was far from happy with the concept of leading from the front. Tony's tales of crawling back to the Big Ledge after a rock-fall did me no favours at this point. Our next job was to re-rig Zazudska (Polish for life's a bitch or something like that) Way, an awkward series of pitches that drop down from the end of London Underground back to the active stream. The team that pushed this had hoped to find themselves beyond Egbert (originally found by following the stream), or at the very least beyond Druscilla. To their horror and dismay, they had dropped straight into Primula Point, the downstream camp, providing a handy short-cut, but not the way on they desired. Perhaps because of this disappointment, little effort had been expended in rigging the pitches, so we set about re-bolting the pitches to make life easier for later exploration.

The evening was still young by the time we'd hit the streamway and the temptation to check out the high level leads strong. The '89 rope did not let us down and soon we were climbing around in the upper reaches of Postman Pat, to find mountains of boulder chaos, a decent looking pitch (Black and White Cat) though not the one we were after and a seriously gripping retreat. Our big lead must have been in Bod. Scrambling on choss, overhanging bottomless voids was beginning to fray the nerves, so it was with little sorrow that we called it a day (a grand day) and headed back to the Big Ledge and Sosmix surprise. The surprise was that sosmix does not make good soup.

The Downstream 2/7 Leads List

Descriptions of potential leads that were worth checking in the order that they are met in the cave. Each lead is given one to five stars, depending upon how good Gavin Lowe thought it was pre-1998.

Before Primula Point

[**] At the end of The London Underground, at the base of Paddington Choke, a rope is rigged up the left-hand side, ascending about 20m. Alternatively, it is possible to ascend to this point by an "interesting" climb on the right-hand side. At this point, it is possible to penetrate the choke, and various routes have been pushed to no conclusion as yet. The most explored of these is Lost Paul's Rift. Another way on may be to continue the climb up the left-hand wall.

May have been checked by Paul and Lev but not pursued fully

Between Camp and Pimpernell Streamway

[**] At the top of Postman Pat, there are various climbs, and routes down through boulders.

Bright Lights and Hunt the Crowbar

The most significant find in this area was Bright Lights, a 60m climb to the right of the main drain starting opposite the bottom of Postman Pat. Several bolting trips (PM, JW, TS, AH, CD, JS) reached a 45 degree muddy slope in a upwards heading phreas heading perpendicular to the main drain. This broke out into a muddy rift where a 30m pitch "Hunt the Crowbar", dropped into an attractive, small, active streamway. Two short pitches (3m, 12m) and a short, wet crawl reached the head an undescended 15m pitch. The stream was, however, heading directly back towards Druscilla so it was believed that this was yet another inlet (JC, GL). It may be possible to follow the inlet upstream either at stream level or traversing from the head of the 30m pitch. See survey opposite.

[**] In Bod, just before the climb into Soup Dragon, is a 10m diameter, 27m deep circular pot, Big Sloppy Job, dropping onto a flat, mud floor. A small cascade passage leads off at floor level. A 5m, overhanging climb leads down to a short pitch into a chamber with a suspended boulder roof. A tiny stream flows down a tight, muddy rift reminiscent of the top of Drucilla. The rift eventually closes down at a draughting hole from which comes the sound of roaring water.

[***] In the left wall of Soup Dragon, is a large hole, the entrance to Tantalus. A short pitch leads to a muddy, loose slope. Round the corner is a second, larger pitch of about 50m. Initially the descent is in a narrow rift, but soon opens out to give an exposed hang in a large chamber, with an inlet entering from one side. The pitch was not fully descended due to lack of rope.

Tantalus

X Fully rigged, bottomed and surveyed. Appears to be inlet back into main drain (PM, JW)

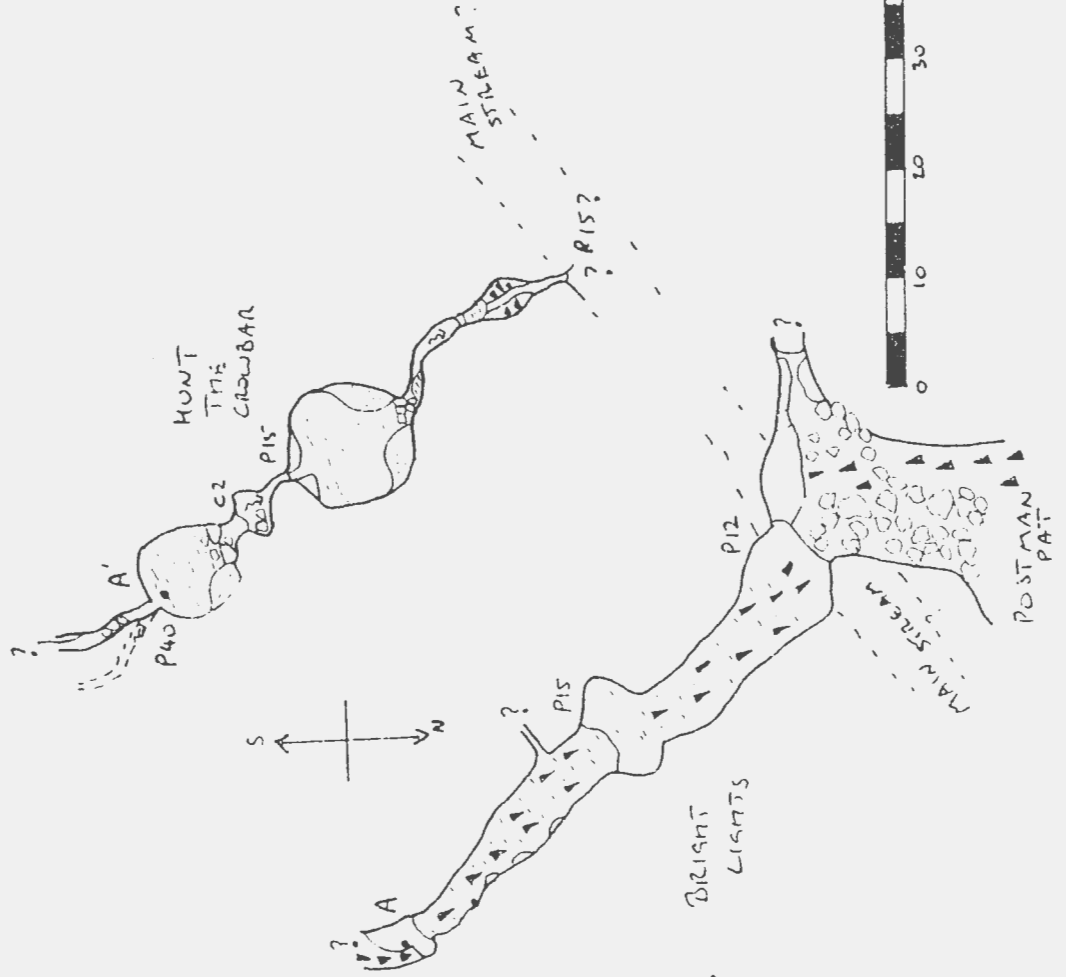
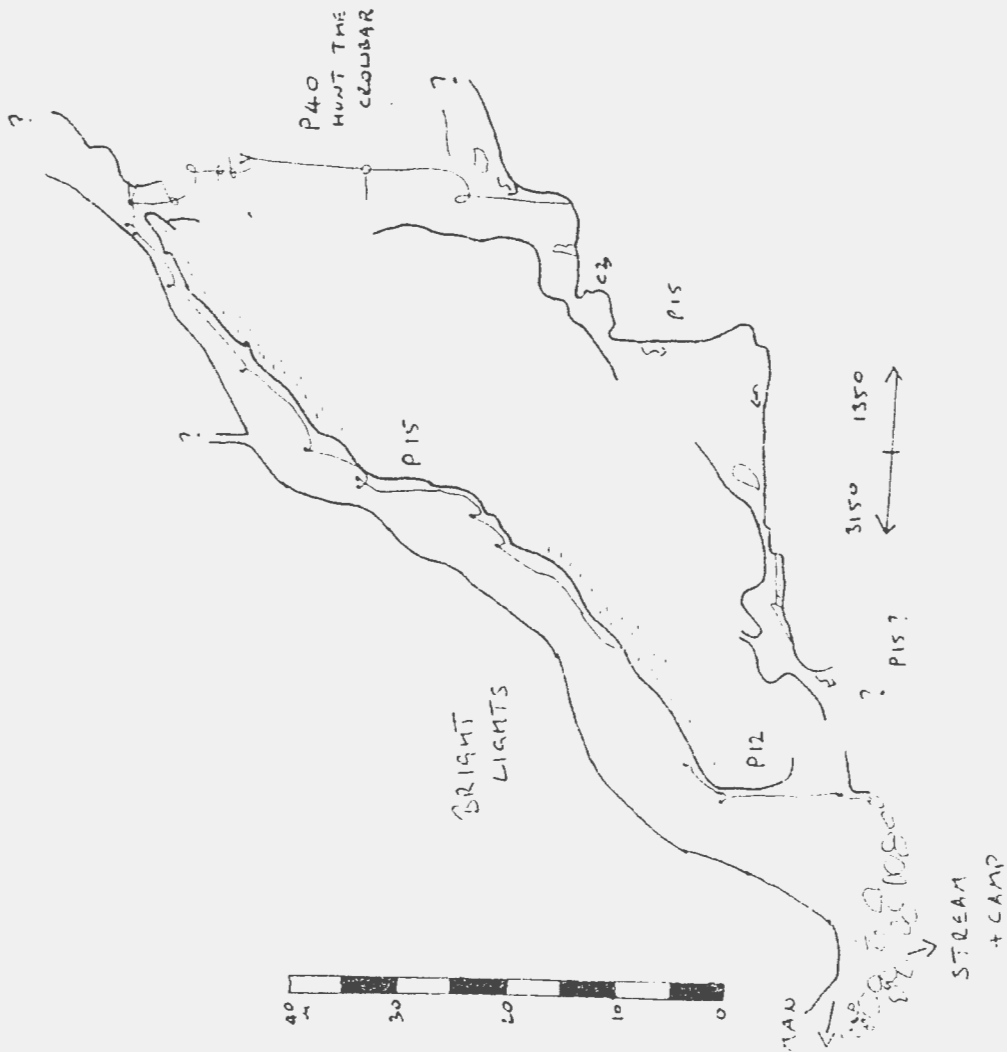
[**] The route through Soup Dragon passes the base of two small inlets, the White Inlets, which flow down over moonmilk. A ledge is visible at the top of these, which may be worth further exploration.

[**] Straight ahead from the White Inlets, reaches a short drop. Penduling across reaches a ledge at the bottom of a promising looking climb. However, on closer examination it was found to continue upwards, getting steeper and chossier, rather than gaining a higher level.

Neither of these appear to have been checked out thoroughly though a higher level was visible about 25m up (GL)

[****] Just before the descent to Pimpernell Streamway, a pit is passed on the left. This can be descended for thirty metres, to a floor from where a miserably small rift leads off. Alternatively, from half way down the shaft, penduling rightwards reaches a ledge form where a route over large boulders continues, unexplored.

X Both drop back into Pimpernell (HJ, RD 23/7/98)



Pimpernell Streamway

[**] Part way along Pimpernell Streamway, on the right hand side, just after the first traverse, is a beach, at the foot of Colostomy Climb. Colostomy Climb ascends for ten metres over two horrendous rubs, to a ledge, which can be followed, to a choke, Not Colostomy Choke. Alternatively, continuing up the rope for a further 25m reaches a platform of boulders, very similar in character to Bod. It is possible to see from here to Clanger Pitch, and so it is believed that this is a continuation of the old high level. Traversing round to the right, reaches a choice of two routes. A climb straight ahead reaches a further climb up to The Black Hole. This is unfortunately just a route over boulders, leading to a shaft back to the streamway. An inlet enters from above, but was not ascended. Alternatively from the foot of the climb, continuing to the right reaches Colostomy Choke, which draughts strongly, and which appears easily digable.

Pixie Steps

From beach at end of third traverse, holes visible 15m up, back on right. Bolt climb started. (GL, FL 23/7/98).

Hole reached - just a pocket. Possible climb up same fault, basically up side wall of main passage could attain point where substantial drip enters. (RW, RD 24/7/98).

From stream corner a rope leads in two sections up a 25m climb, the Pixie Steps; this provides safe access to Colostomy Choke. Various leads to examine (TS, AH, PH 30/7/98):

A: Follow rope as far as it goes. Go towards the big black space and sound of water. It may be worth bolting up from the high point (PH)

B: Up from the large boulder by the top of the rope. Not worth the bother. A further 10m up a small drafting chamber was reached with a ????? roof. Only way on was filled solid. Derigged. (PH)

C: Rift directly up above chockstone belay. You may die if you try this. And it didn't go anyway. (PH)

D: Colostomy choke. Its lovely and safe?? (PH)

E: Inlet too small to follow after 10m (TS)

F: Briefly looked at probable drop into streamway (TS)

[**] From the beach at the end of the second (*third!*) traverse, various muddy side passages lead off: most end in chokes, but further exploration may be fruitful.

[*****] From the beach described above, continuing straight ahead, a mud bank can be ascended to a climb into a loose choke; at the top it is possible to look through small holes into an open space beyond. This appears to be the continuation of the main rift.

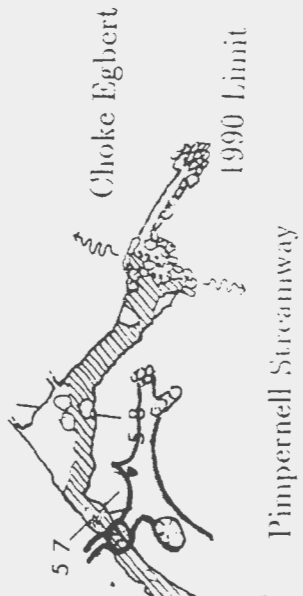
All routes at top are choked and do not draft. Perhaps try lower (HJ 24/7/98)

Committing (GL)

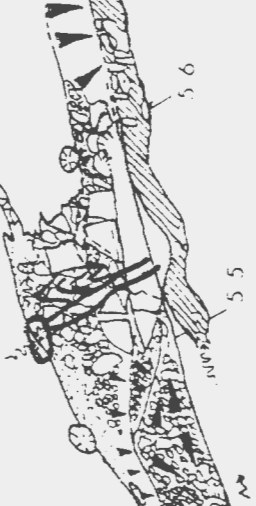
Facing Page: Downstream 2/7 between Primula Point Camp and Egbert, showing new finds in 1998.

270 + 40

Colostomy Climb



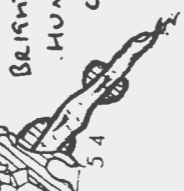
Soup Dragon



Postman Pat



BRIGHT LIGHTS/
HUNT THE
CROUSAR



54

53

Primula Point

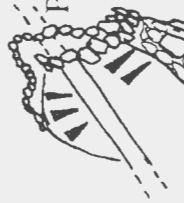
1990 Camp



52

51

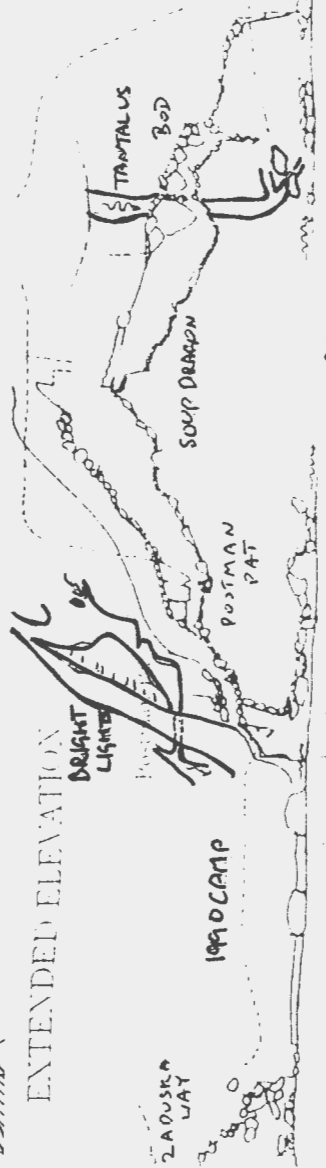
Paddington Choke



68

L.P.R.

EXTENDED ELEVATION



1990 CAMP

POSTMAN PAT

TANTALUS BOB

SOUP DRAGON

CHOKÉ DRUCILLA

PIMPERNELL STREAMWAY

COLOSTOMY CHOKÉ

CHOKÉ EGBERT

COLOSTOMY CLIMB PIXIE STEPS

Digs in and Around Egbert

[****] Just before Egbert, a low, wide crawl leads off from the right hand side of the stream, Tim's Bit. After several grovels in gravel, the passage splits. To the left is a series of very loose climbs up into a chamber in a boulder choke; several routes lead off but none go. Ahead, the passage continues as a low, wide, flat roofed phreas with boulders on the left. The passage ends at a boulder blockage which may be diggable.

Dig at end is cold, wet, miserable and very long term. Takes massive draft but not feasible as a going lead. Dig on left a short way back led to boulders. (DL)

More determined (and better prepared digging) took dig about 5m in where roof gave out to nasty cobbles that fall on your head. (JC, GL)

[**] It is possible to climb into the choke at various places, but no way on was apparent.

Passage opposite fourth traverse drafts and stream heard in Egbert. (HJ, AH 24/7/98)

Hopeless (DL)

[*****] The stream splits in two, with both branches sinking. A Flood Overflow continues straight ahead, between the two branches. This leads into the choke for about twenty metres, to a short drop which needed some boulders removing from it. Just above this was a very dangerous chute, which had the annoying habit of dropping boulders onto unsuspecting diggers.

Looks long term (GL, FL 22/7/98)

Serious walling needed. Nearly killed me (RW 24/7/98)

Dig through breakthrough to retrieve crowbar and wall up right hand side. Now reasonably safe for digging to continue (RW, AH 25/7/98)

Digging continues through clean washed boulders. Draft and sound of water getting stronger. Still a promising lead (JC, PH, HJ, NM, FL, CD)

Underground Camp Diary

When	Where	Who	What
17-20 July	BL	JC, TS	Rig JA 3 and Dead or Alive Rig/rerig Zazadska Way. Investigate Climbs in Postman Pat
19-23 July	PP	PM, LB	Push upstream and discover Cherrypickers. Rerig ropes from camp to high levels Investigate in Paddington and Postman Pat
21-24 July	PP	GL, FL	Rerig Route down and along Pimpernell Check Leads. Begin bolt climb into Colostomy (Pixie Steps)
22-25 July	PP	HJ, RD	Drop new pitch from Bod into Pimpernell Dig Flood Overflow Bolt Pixie Steps
23-27 July	PP	RW, AH	Dig Flood Overflow. Collapses on Rhys
24-27 July	PP	TS, PH	Climbs in Postman Pat
27-30 July	PP	DL, NP, RG, LB	Dig Tim's Bit. Get cold Get miserable
28-31 July	PP	PM, JW	Spot and Bolt Bright Lights Survey Tantalus Stash Some Food
29 July-2 Aug	BL	TS, AH	Bolt Bright Lights Explore Pixie Steps
29 July-2 Aug	PP	CD, JS	Bolt Bright Lights
31 July-3 Aug	PP	FL, HS	Survey Bright Lights
2-5 August	PP	GL, JC	Dig in Tim's Bit, Push and Derig Hunt the Crowbar Dig Flood Overflow
3-7 August	PP	HJ, PH	Dig Tim's Bit Derig Colostomy Dig Flood Overflow Find Paul's food stash
7-10 August	PP	PM, JW, RL, CD	Phototrip 1: Pimpernell Streamway, Phototrip 2: London Underground, Phototrip 3: Upstream with NM
8-12 August	PP	FL, NM	Dig Egbert. Derig Camp to Zaluska Way with CD
11-13 August	BL	LMo, TG	Derig Primula Point
11-14	BL	JC	Survey and push upstream with CD Derig to Big Ledge with NM and LB

Alex Pitcher Award

Lev Bishop's participation in Jultayu'98 was supported by The Alex Pitcher Memorial Award, an individual grant from the Ghar Parau Foundation to young cavers, in memory of Alex Pitcher, who lost his life in the Gouffre Berger. This report is a novice's eye view of the expedition.

This Summer I was privileged to receive an Alex Pitcher award, which I put towards participating in the 1998 OUCC expedition to the Picos d'Europa. This being my first foreign expedition I wasn't sure what to expect. I'd done long trips in Wales, and some vertical trips in Yorkshire, but I'd never camped underground or been very deep before. I'd also been hearing mixed reports on the severity of the "rift series" of 2/7, the cave which was to be the main aim of the expedition, so I didn't want to get any hopes up for being involved at the sharp end, lest I be disappointed. I did my best to wangle my way onto every early rigging trip as possible so as not to get left behind when the real caving started, and this must have worked as with some surprise and much delight I found myself comprising half of the pair going in to set up the downstream camp and do the first pushing at the bottom of the cave.

After abseiling down pitch after pitch, seeming to go further down than I could believe, we were able to hear the roaring of the waterfall in the "Just Awesome!" chamber. I'd heard a lot about this place - everyone I'd spoken to kept raving about the size of it, and I'd even seen photos of it, so I was expecting something impressive, but deep down I couldn't believe it would live up to the hype. I was wrong! It seemed big at first, but it was only about half an hour later, while I was paying out rope from the ledge on one side of the chamber to Paul on the opposite side (we chose to do this rather than carry the rope down and then up the 50m pitches in bags), that I realised how huge it was. Tony and JC, who were camping at Just Awesome! had found a way to traverse up in a rift and had appeared high above me shining a bright light around. Paul was also shining a bright light and with all this illumination, I finally grasped the scale of things. The rest of the trip was equally impressive with huge passages, awkward rifts, fun traversing, and lovely streamway, and apart from soaking my legs and dry socks at the camp by walking straight into the frigid streamway because the water was so clear I didn't notice it, I had a generally pleasant time.

I had two more deep trips into 2/7. One more pushing camp, spent mainly at a thoroughly miserable and ultimately pointless dig in freezing liquid mud, in a howling draught and generally getting very cold (it was fun, really), and one trip which was supposed to be in to Just Awesome! to pick up some bags and head straight out, but ended up being a 17 hour epic when we got Shanghaied into going much further into the cave to finish off some more derigging. The Rehidrat which Nobby and I shared in the shakehole as dawn started to break and we steeled ourselves for the walk back to camp was the nicest thing I've tasted for a long time!

Overall, I had a brilliant time on expedition. The scenery was stunning, the people were fantastic, and the caving far surpassed all my expectations. The only thing lacking was major success in exploration, but that didn't tarnish my experience. I can now see why 2/7 has something of a spell on many members of OUCC and why we keep going back to it!

Lev Bishop



Lev Bishop at the Ario Camp

Upstream Route Description

This has been put together by Gavin Lowe, who emphasised that he has not been there himself, based on accounts gleaned from the original explorers. These proved relatively easy to follow with a few allowances for translation. All of the ropes we used were already in place and have been there since 1992. There was little sign of wear, which is not surprising as they are placed well out of active water and have primarily been rigged as hand-lines rather than SRT pitches.

In addition to the rigging described to the described rigging, a handline would be useful on the climb up the flake before Barne's Loop the Loop. Its not difficult, but some of the holds are fragile. In addition to the three pitches of Barne's Loop the Loop, there was a short hand-line climb, shortly beforehand. The Blowhole was interesting.

The stream passage may be followed upstream, after wading across a waist-deep pool, in a tall 2-3m wide rift containing many clean-washed boulders. After about 100m, the way on is blocked by a large boulder over which the stream falls. A possible way on is visible about 8m up. The upstream passage may also be reached from the top of Just Awesome, by following a descending phreatic tube for about 40m to a short ladder climb. From here, the route continues in a narrow rift, traversing on jammed boulders high up in the rift upstream from the big ledge. A tight section, traversing over a large drop, is followed by wide bridging to jammed boulders, to where the stream is met, about 10m downstream from the large boulder described above.

Upstream begins at a 5m climb at the back of the Big Ledge camp, into The Forbidden Zone. At the top a window on the left looks back down onto the stream, but the way on is to climb up over car-sized boulders, until a spikey flake on the right hand wall is reached. This slopes up at about sixty degrees and provides another easy 5m climb. At the top of this climb the route moves to the left hand wall, where a scramble between boulders and a solid wall leads to the stream.

Straight ahead are two climbable cascades, but the best way up is to double back where the water is met and thrutch up in the narrowest part of the rift. This leads to the bottom of a 45m handline up a three stage climb to the top of the cascades. At this point the main route follows the water upstream through boulders into The Paris Metro, a large stream passage. Doubling back and following the rift back towards The Big Ledge leads, via Barnes Loop The Loop, to a fork. Straight on opens suddenly at a window where rocks fall for five seconds into Just Awesome. An easy but obscure climb goes up to large fossil passage which connects, after an exposed sloping ledge, with downstream end of The Paris Metro. The Paris Metro continues as a wide stream passage, with the driest route changing sides several times, until The Windy Sump is reached. Slightly downstream of the sump a window at chest height on the right leads into dry rift but becomes too tight. Directly above the sump, a chain of footloops make the climb up through The Blowhole reasonably straightforward, although the strong draught makes a working electric light necessary. Once through The Blowhole, a rift on the right, similar to the one downstream of The Windy Sump, but carrying a small inlet, also becomes too tight.

Upstream from The Blowhole a sump pool is met after 15m. This has been plumbed to a depth of 5 m, and, although a traverse over the pool is probably possible, the safest route is a handline protected climb up through a squeeze into a chamber. Climbing up on the upstream side of this chamber leads to a loose 20m pitch down into a very large chamber, with the stream flowing through the middle. This is Echo Beach. Following the water downstream leads back to the sump pool; upstream ends at a low arch where complete immersion might lead to a continuation. The way on is to climb up on the left of the chamber, where a route down through boulders leads to a static pool, The Dead Sea. This deep pool is passed by a climb up the left hand wall and a bold step across at the narrowest part onto a broad ledge, worse on the way back, which comes down to meet the floor of a fossil streamway. 15m along the passage there is pitch down to the stream.

Rather than descending to the stream, the way on is an exposed traverse around on the right into The Dead Sea Strolls, a continuation of the fossil level. This is 300m of passage on two levels: a fossil floor and a high level on boulders. The route is not always obvious. At the first inlet climb up on the right. At the second inlet climb down on the left and then traverse along the rift. Under a rock arch on the left the passage opens out again and the only remaining tricky bit is where the bouldery level suddenly ends. Circling round and down between the boulders is the least exposed way of regaining the solid floor. This ends with a 5m pitch, Oregon Pitch, at the bottom of which is a short series of disproportionately noisy cascades. Upstream two easy 2m climbs lead to wide stream. This is a temporary end to exploration.

Cherry-Picking: Upstream Exploration in Pozu Jultayu.

In 1998, exploration in 2/7 was supposed to concentrate on pushing downstream. Naturally some thoughts strayed to the wide open upstream leads, and the first opportunity to open a second front on 2/7 exploration fell ironically to Tony Seddon and myself, the pirates of 1992. There was an argument that this was well deserved. We'd achieved all we'd aimed to do in the first day and a half of the first underground camp of 1998. Tony had rigged Just Awesome down to the stream-way, then jumarred and free climbed Dead or Alive to regain the high levels of the London Underground on the far side. This was rigged on new rope as were the horrible Zazadska pitches down to the Primula Point campsite. We'd placed a good half dozen new bolts to make life easier on these pitches and dragged a decent amount of rope down to the campsite. We'd even tested out the 9-year-old ropes on the traverses and pitches up to Postman Pat and had a good look around with a bright FX5 for new ways on. Alternatively we could have argued that it was more efficient to check upstream from our Big Ledge campsite, rather than trudge downstream with little or no tackle to carry. In truth, we went upstream because we could and no one was there to stop us. We'd come prepared with the route description for upstream and the bonus of checking open leads had spurred us on to do so much in the first couple of days.

The route upstream starts with a short rope climb at the back of the Big Ledge campsite. Dave Lacey had had something of an epic negotiating the overhanging wall above the upstream pool to get to the same point, when he had made a direct approach along the stream way during his 1991 recce. The two routes meet at a boulder-strewn passage, with a climb up a flake in the right hand wall just before this grinds to a halt. The next section is Barne's Loop the Loop, a series of climbs and traverses in the rifts to avoid a waterfall, followed by a boulder choke. This was deceptively easy to pass on the way in. After the choke, the going is much more pleasant, along the stream as far as the Blowhole. This is a short climb through a smallish crack, which tends to grab gear and other dangly bits. A knotted rope helps avoid a soaking in the deep water below the climb, but a good clubbing with a crow-bar would generally make the experience more convivial.

Beyond the Blowhole, we found lost treasure in the form of a day-glo orange goon-suit. In principle, this is a water-prove immersion suit, which may help floating through deep waters. It had been taken to this point in the hope of finding a wet bypass to the Blowhole before it was hammered. It, nevertheless, may prove useful if more deep water was met further upstream. Our next obstacles were two more rope climbs, then a free climb through a couple of "squeezes" as suggested by the route description. In practise, these are far from tight bits of rift that lead up into a chamber overlooking Echo Beach, which is reached via an abseil in the right-hand corner. Echo Beach is immense, but with a clear path marked out in the sandy floor. Tony's memories of previous visits to this area was now proving invaluable, as the route across to the Dead Sea Strolls is not obvious and a number of short climbs and traverses have to be negotiated without dropping down to the stream far below.

After traversing over the Dead Sea itself, the Dead Sea Strolls alternate between beautifully carved fossil passage, and areas of bouldery breakdown. We were now in little visited territory with the best route not obvious and plenty of loose boulders to occupy the mind. Finally the fossil passage gave out at the limit of the previous survey. Either we dropped a sort 8m pitch down to the active stream or a bold step would reach the continuation of the high level. The bold step was tempting, but we'd need to put a rope on it, whilst the obvious way on would be to drop the pitch. The final pushing trip in 1992 had dropped into the stream, but then turned back at the next corner. Why had they done so? At the time Dave and Pauline had been less than enthusiastic, describing a couple of wet cascades and the prospect of a soaking. This was, however, the last pushing trip of the expedition and information from such trips is notoriously unreliable.

In the event, the in-situ bolts made the decision for us: badly positioned for the traverse; ideal for the pitch. We had 100m of rope that we'd found at the camp, which was more than plenty for the pitch, named Oregano in 1992, or Touching Cloth this year for reasons best left unsaid. The pitch was easy to rig, with a large flake for the main hang, backed up from the bolt and a huge natural. At the foot of the pitch, the short cascades were easily traversed to find smooth flowing shin deep water in what appeared at the time and still is to my mind the most beautiful stretch of stream passage that I'd ever seen. No formations, but amazingly shaped by the flowing water, like a tear drop, three to four feet across, tapering upwards with a smooth rounded floor. The walls were superbly well scalloped, with the

dark grey/black limestone contrasting with the blue-green water. The passage meandered in this fine style around a series of gentle bends.

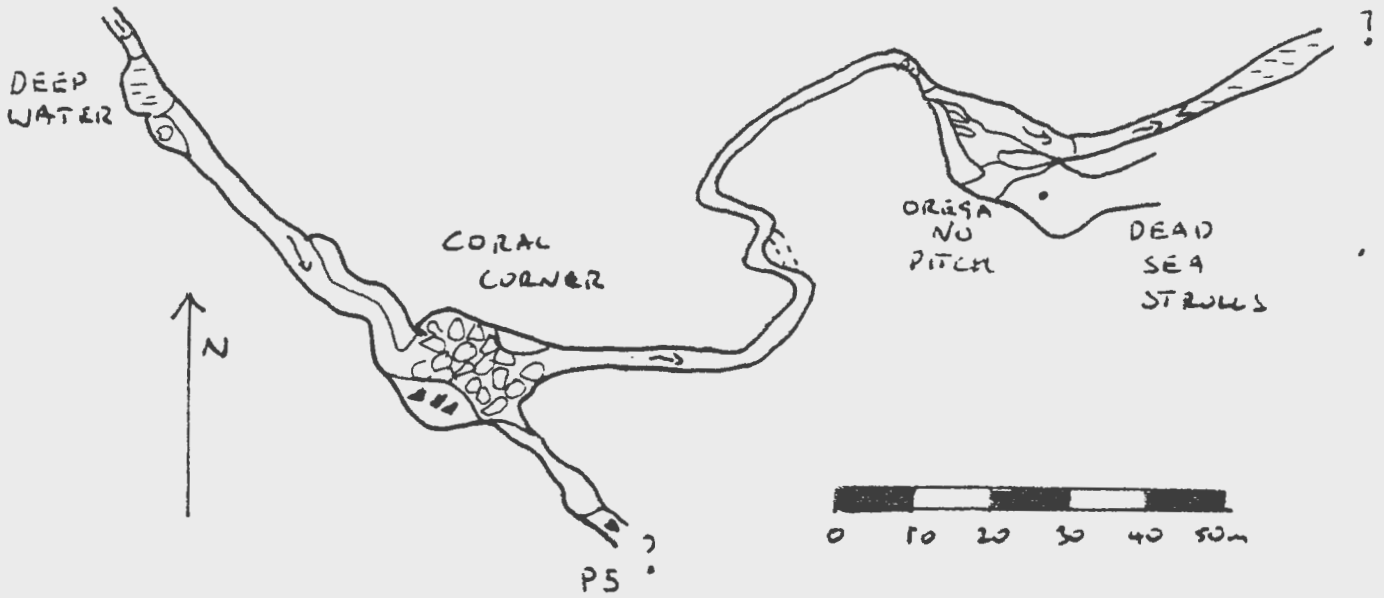
We took turns at the front, whooping as we turned each corner to find it still continued. At one point the roof curved over us, 10 or 15m above our heads suggesting the continuation of the fossil high levels, then opened up again as the passage seemed to get wider. Around the next corner, the roof lowered to head height, but these were only massive boulders jammed across the passage as a beneath a large round chamber. Beyond this chamber we could climb up into a fossil passages on the right-hand wall. These had been left like hanging oxbows, perfect mirror images of the tear-shaped active stream below. Around the next corner, a straight section, then a deep pool, before a long straight narrow rift. It was not clear how deep the pool would be and we did not fancy a soaking so we agreed to turn back at this point. We'd covered about 200m of easy walking passage and still had the large chamber to investigate.

Back at the chamber, it was easy to scramble on top of the boulders that now formed the roof of the stream passage, and then back down to the stream again. A shower-bath suggested an inlet coming far above our heads, but even with an FX5, it was hard to see where the water was coming from. We scrambled up the left-hand wall hoping to find a high level back over the Deep Water where we had turned back. This got us to a ledge about 10m above the chamber floor, but this pinched in before the limit of exploration. The ledge proved harder to get off than get onto, though it did afford a view into a large passage higher up the wall, heading back downstream. Tony managed to climb the wall up to this passage, which was about 5m across, with his progress only barred by a short 5m pitch down to more walking passage. With no rope this had to be left for another day and an interesting time was had getting back to floor level. It was now time to get back to camp. We were back at the pitch in a couple of minutes and whilst Tony re-rigged the rope for an easier take off, I checked out the downstream continuation. After a couple more short cascades, this too ended after 20m or so at deep water, similar to our upstream turning point, but again with open passage beyond.

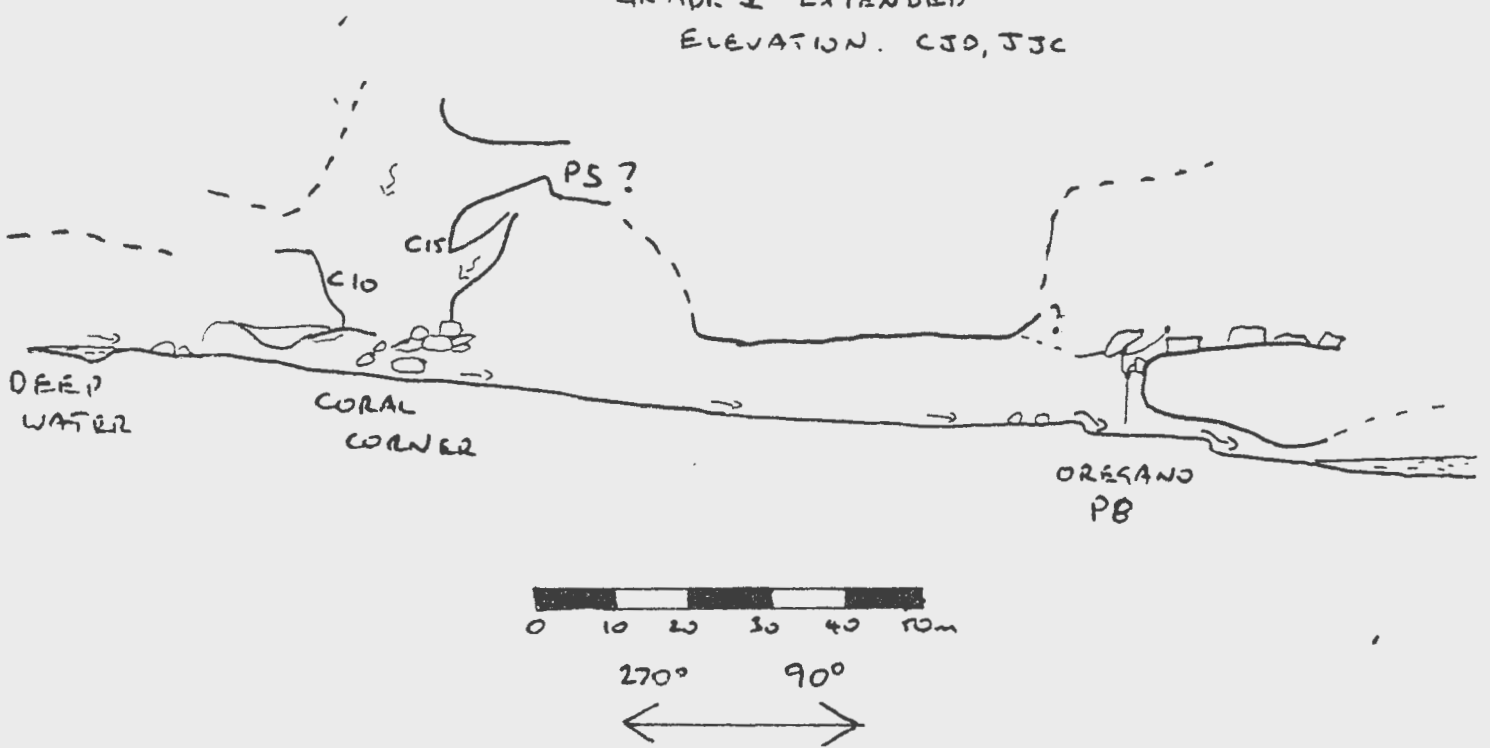
More familiar with the route, we took little time to make our way back downstream, checking out a number of inlets as we made our way up the Dead Sea Strolls. Some of these looked promising, with only the psychological support of a rope needed to press on. No route finding problems except for the choke above Barne's Loop the Loop, and missing one of the traverse levels down. This, however, was not a tragedy, as we found our way to the climbs up to the balconies overlooking Just Awesome. Careful use of at least 5 points of contact at any one time, meant we could climb up and up and up well above the level of the stream. By the time we were looking out over Just Awesome, we must have been over 100m above the campsite, a feeling that was reinforced by spotting Lev Bishop on the Big Ledge and Paul Mann on Heathrow.

Paul had carried a tail of rope from the across to Heathrow at the start of London Underground, so by some complicated whistle-blowing code, the rest of their ropes could be hauled across the chasm. It was a spectacular sight, albeit a noisy one. We rushed back down to camp (via the lined route) to catch them before they went. We were pretty happy to see them, having only had each other's company for the past two and a half days and were eager for news from the surface. They, however, seemed distinctly underdressed to see us, but that was understandable as they had resigned themselves to three or four more hours of work before seeing their pits at Primula Point. Even the offer of a cup of tea was scorned in favour of sack-hauling. We did, however, learn that Martin Smith had been struck down by kidney stones, though thankfully before he had set off for underground camp, and that the next teams were keen to get down here just as soon as they got news of how things were going. Well satisfied with the state of the world we settled down to tea, stew and sleep, as Lev and Paul's lights slipped into vastness of the London Underground.

CHERRY PICKERS
 GRADE V PLAN
 CJD, JJC



CHERRY PICKERS
 GRADE V EXTENDED
 ELEVATION. CJD, JJC





The Dead Sea Strolls

In the mad rush to push past Egbert the upstream limit got left until the final camping trip of the summer, so not only had no-one plunged the depths of the Deep Waters to see what was on the other side, but no-one had surveyed the new finds. Normally this task would fall to the original explorers who would survey as they broke into new territory, but we'd had no surveying kit (which was very bad!). The onerous task of tying up these loose ends again fell to me, but this time round it proved harder to find a willing accomplice. My original partner, Rob Garrett, had been struck by the green shits at the entrance of 2/7 and had run away. I'd then hoped to persuade Tim Guilford and Lou Morris to join me in my dark pursuits, but they had proved themselves to be true followers of the path of righteousness. By the time I reached the Big Ledge camp, they had rejected the easy pleasures of slipping into their pits and headed downstream to help Chris Densham and Fleur Loveridge pack up the Primula Point camp.

Come the morning, Tim and Lou decided that hauling tackle out of the cave was preferable to a day's easy pushing, so they bade farewell. Fortunately Chris was keen, though Fleur was less sure. They'd been the last team digging in Choke Egbert, then had derigged the downstream traverses, packed camp (the hardest job when you are knackered), and only made it back to the Big Ledge and sleep at 6 that morning. Under these circumstances the prospect of a day's rest and recovery before prusiking out of the cave was pretty tempting so only Chris and I pressed on upstream.

The new stuff was quickly surveyed, getting about 200m in just over 20 legs, then the Deep Waters were upon us. Chris fashioned a dipstick by clipping a crab to the end of the tape, and we found the water was just over 1m deep at most. It had looked (and still did) over head height so still we dithered. We'd picked up the goon suit for such a purpose, and now it seemed strangely over the top to put the thing on, the more so, for finding it was punctured in several places. Eventually, I took the plunge, edged out into the pool and found I was floating as my TSA trapped air around my legs and belly. I lunged for the far side and was over. Chris quickly joined me and we were away, only having left the surveying gear behind. The passage stretched in an uninterrupted straight line ahead of us, whereas the watery barrier suddenly seemed just too far to risk going back for the gear, so we crossed our fingers and pressed on upstream.

At this point, the passage was a thin rift, over the stream, which made traversing the simplest means of progressing, after 100m or so the passage widened slightly and there was some bouldery break-down to climb over. Beyond this the passage continued in a straight line, for another 100m or so until a more substantial area of breakdown. A boulder choke completely blocked the passage, with no obvious route over, under or through. No route either on the left hand wall, but a sideways step to the right got us into a parallel passage again seemingly choked. A climb up at this point could either be followed up and forwards to where boulders again block the way, or up and backwards, through a loose hole to break out into a massive chamber, Fear and Loathing in Las Brujas. The passage was about 10m wide at this breakthrough but obviously opening out to much larger dimensions in the direction from which we have come. We, however, were only interested in upstream, and gingerly found a way round a couple of large boulders, paying particular attention to where we had entered the chamber. This led to a gentle bouldery slope leading back to the stream, which was again wide open.

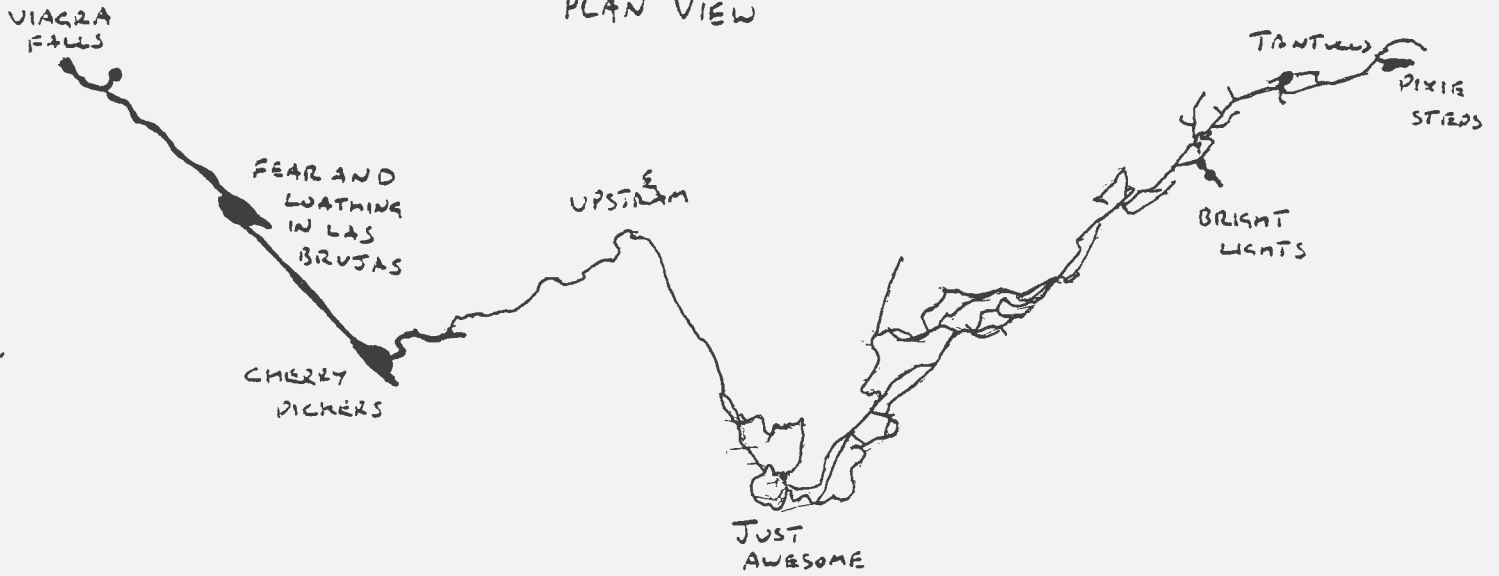
We took turns to take the lead. The passage was now quite wide with the stream meandering along it. The next significant feature was an inlet coming in at stream level on the right. This was level for 20m or so, then progress was halted at a 10m pitch upwards. Back at the main stream, the route was becoming more broken, with large boulders having to be negotiated to carry on. A cascade is met that can be climbed on its right hand side, before a final slow moving section, then a chamber and waterfall, Viagra Falls. Climbing around the edge of the chamber it was possible to get to an alcove on the opposite side of the chamber. This provided a good view of the waterfall, which should be easy to bolt around, and as tantalising glimpse of passage beyond. This seemed an excellent place to turn back as we had no means to tackle the waterfall. We paced out the route back which came out as about 500m of passage, which appeared to be generally heading north-west, which would suggest a connection with C4. It took less than two hours to get back to the Big Ledge from this point, even allowing for dragging the goon suit back and again losing the way in the boulder choke.

Facing Page: Plan and side view of 2/7 with the finds of 1998.

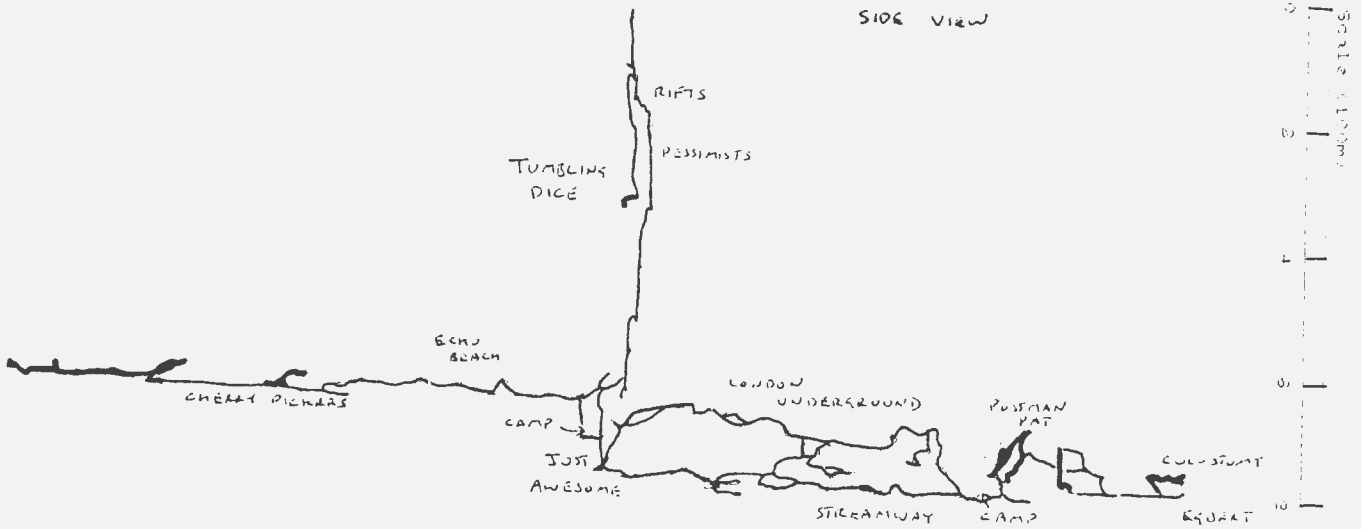
Scale (100m)

0 2 4 6 8

POZU JUTAYU PLAN VIEW



POZU JUTAYU SIDE VIEW



True Blue? The OUCC Picos Experience: 2/7 - Pozu Jultayu

Rebecca Lawson joined the expedition in preference to the (soft) Cambridge University expedition to Austria.

We've had outright defections before (Steve Roberts, Ursula, Chris Densham) but I just fancied a quick and dirty dalliance with Oxford in the Picos before plodding back to the CUCC fold before I was absolutely too old and past it. So last summer I gave Bad Aussee a miss and took the 24 hour coach down to the top end of Spain to go caving in the Picos de Europa. Bit worrying, this caving-with-strangers lark. So beforehand I swam a bit and even trotted off to the gym a few times. A few times too many for my crumbling body to take, as it turned out. After the fifth bout, my shoulder was aching and I couldn't clench my hand properly. Not a good start.

I arrived to the mist-bound squalor that is Lago de la Ercina (a surreal carpark-cum-cattlepen with a single bar and a thousand picnicking Spaniards soaking up the ever-present grass-hugging fog. The clank of cowbells, hoot of car-horns and traffic-jam chaos is punctuated only by the occasional wail of a poor innocent finding his tent shredded by beef in search of biscuits). Then onwards, upwards, with my unfeasibly large rucksack and a photocopied "map" with a squiggly line and the bare minimum of mystic symbols. Chris had said "you can't go wrong, you just keep following the path until you get there". What path? Where's there? Deadly destructions, I'd say.

Sweat-stained hours later, I emerged to the sun-baked rock bowl and scatter of faded scout tents that was Ario. And a fine spot it is too, with a sunset backdrop of the Central Massif and far off the long ridge with a deep cave entrance just visible, hooked below the edge. I asked if this was Oxford and got a grunted yes, so I sat down and felt a bit conspicuous, so hot and smelly and not knowing anybody in all that emptiness. I failed a few chat-ups lines, trying to recall people who gently told me that actually they were random Irish cavers who I could not possibly have met before. So I sat a bit more. I was told which trip I was scheduled for and on what date and with whom and what our objectives were which felt a bit odd. And people kept pottering around camp, hammering their carbide into bite-sized chunks, eating four breakfasts in quick succession after 72 hour pushing trips, flashing their muscles. Dear oh dear, it all looked like a proper Expo rather than CUCC's caving-for-softies.

Then Neil Pacey turned up after a spectacular sesh with the lads in the bar the night before and was keen on caving. This was a good thing as it was still several days off my timetabled entry to 2/7 (yes, ironically, the CUCC nerd-nurturers give their caves warm, cuddly and syllabically extravagant German names whilst the OUCC nerd-free-zone call theirs by succinct but entirely cryptic numeral-slash-numeral combinations that I could never get my head around).

My it was hot and dry out there. Not so many big, swallow-you-up-and-never-see-you-again holes and you could mostly track a straight line, unlike the Totes Gebirge. We popped down an entrance fresh this year, all rigged and ready to go. We did a bit of hammering in a skinny rift at the bottom and then came out again. It was almost Yorkshire so that was alright. Next, I did a practise trip down 2/7 with one of the Irish lads and it was fun but I was still (of course) worrying to myself about not being up to it, and being too fat and too feeble and too scared and it all being too deep and too cold, like you do when you are not sure.

Then all four of us trundled off on our big, bad, bottoming trip, -835m or bust. Actually, it was a photo trip. Now don't laugh, camera gear, very heavy stuff. And all that posing for photos in terribly, awkward exposed situations. Well, OK, it was all jolly and fun and civilised and it is the best way to see the sights (only bettered by surveying, which is taking things to unnecessary extremes).

The cave starts with some irritating, thrutchy rifts then lots and lots of big and beautiful shafts followed by a bit of scrabbling around. Then you pop out into a huge chamber. This has a clear, fresh, babbling brook running past the upper campsite. The stream then runs around the corner and drops down a spectacular waterfall whilst you watch it as you abseil from the huge ledge down the far wall of the chamber. The whole thing is magnificent. The stream then apparently grovels along under lots of collapses, but the usual "I'm glad some loon free-climbed up this and put a rope on it" pitch leads the cavers up to huge fossil passage at the height of the upper campsite. This trundles on forever until finally you get to a grotty pitch series and drop back to the stream. The second campsite is scenically situated on its sandy shores. The route then follows either besides or above the stream until it hits the final, as yet unpassed boulder collapse: Choke Egbert. This is just as warm, dry, stable and friendly-looking as you would expect in the circumstances - i.e. not. There were several digs burrowing into the wet and miserable gunnels of this beast. I was thwarted from further exploration by having to model enjoyment of a bar of Thornton's sponsorship fudge. Shucks. There was some upstream from the upper camp too. This was on a more human scale than the lower passage, but still beautiful, with clear,

coloured pools of water and smooth-washed canyon walls. Actually, it was all lovely, except for the entrance rifts, which were plain tedious in the way that caves can be.

We came out on the fourth day and the rest of the Expo was just drowning in rope. Off we went, plod up to the top of the ridge, through the rifts, then whizz down, down, down the shafts, and pull, pull, pull on a big, stiff, brown pile of the stuff. Then up a wee bit and haul, haul, haul. Repeat ad nauseum, until you are well nested-in on your ledge, waist-deep in rope. Actually, this was the first time I had played this particular paella game. It involves a sneaky trompe l'oeil effect which (perhaps because I spend my spare time looking at visual illusions) failed to take me in. Take four bits of rope (or, in this case, forty plus). Looks like a lot doesn't it? Here's the clever bit. Tie them all together and – ha! – a single length of rope: a near-instantaneous reduction in the amount of transportation work subsequently required. Not. We played this game for hours. Many, many hours. Probably more hours than was strictly necessary as nobody let on to me that the sneaky trip relies on the right knot to tie the ropes together. They spotted all my granny knots eventually. On the final trip, the rifts were awash with every last caver. Each was *just* out of sight of the next. Unintelligible shouts echoed past, so that we thought that we knew that we were not alone. Each stood stoically but feebly, bowed over for hour after shivering hour, listlessly holding their own short, limp lifeline of rope, and musing on the meaning of life and the many and varied turns of fate that had led them to this particular time and place.

All the rope came out and all the tacklesacks of knickknacks and some rather gruesome BDHs of plastic bagged excrement. It all went down the hill and all the camp was taken away too and people were really organised and did their fair share and more and all that sort of thing. Very wholesome. My knees got knackered. It is a long way down that hill with a big sack, especially having to barge through the gawping daytrippers. Not once but twice, I accidentally opened one of those gruesome BDHs to check on contents. Not too painful, you might think, having seen the natural and gradual decay of the stuff out there in the field. You try leaving it in plastic bags in a black container in the sun of a Spanish summer.

At some point most of us who had not already left got down to the hell that is Lago de la Ercina. We managed to pick up some Polish cavers and some Spanish cavers and some people who weren't even cavers at all and I got fiendishly drunk (like you do. Well, like I do anyhow). Then all the rope got washed and the van got packed and everyone went to Oxford and unpacked the van and dried the rope and checked it and marked it and ye gods that is inhumanely efficient. They only had two working sets of survey gear though, so at least they are not perfect. Except that apparently that was all Wookey's fault anyhow. Anyway, I'm going to Austria this year, to cook my bunions and waddle my way into old age. Thanks for a great trip to Spain, to Chris Densham who invited me, Jonathon Cooper who led the Expo, and all the many other bods I met out there (many non-OUCC too) for letting me tag along. Any heap of muscle fancy a go at Austria instead?

So here's the rundown on the Varsity match:

Food – OUCC wins hands-down, veggy heaven, big slops with real, live, kicking *herbs*

Water – you might snigger, but yes, there are places in the world which don't have an excess of water. Austria is not one of them. But Oxford have to wander around Ario with damn big plastic containers, getting dribbles out of the bottom of slurry-filled cattle troughs, so CUCC wins this.

Alcohol – I am afraid CUCC has to win this too. There is good, cheap Vino Tinto in Spain but since you have to walk up the hill with it, people don't seem to bother much. And the bars and beer are better in Austria. Not that I can actually remember very much about drinking in the Bar Maria Rosa at Lagos.

Caves – they are definitely different. OUCC have more deep caves and 2/7 was more attractive than those I have seen in Austria. But I felt there was more potential in Austria (fewer groups working nearby patches, more entrances around). A draw here.

Scientific Endeavour – OUCC goes in for regular dye-testing, so definitely scores over CUCC, who haven't done this in *my* memory's lifetime. However, OUCC were restricted to a single, portable computer, so there were no instant printouts to draw up surveys. Probably another draw. If we allow the Austria website into the equation though, then CUCC has to win on documentation.

Organisation – OUCC definitely has more of it.... so is that a good thing? Actually, that's unfair on both clubs because rigging a deep cave and setting up a couple of underground camps forces more organisation than does a bumble-fest. I'm sure CUCC could be organised if it wanted to.... well, maybe.... well, we could always have a go...

27/9. Bill's Cave or Cueva del Pastor Cantato

Description based on Log book entries with help from Keith Hyams.

Location: 065 to Cabeza Llabria, 118 to Jultayu, 156 to Cuvicente, 218 to La Verdulluenga.

Rectangular depression with rift entrance on east side of on the south-west upper slopes of Gustutero. Follow path from Martini pool, then climb up slope before reaching a large boulder. Spiky 10m entrance pitch to chamber (Bolt Y-hang with natural back-ups) with a horizontal squeeze through to 2s drop. Second 10m pitch leads immediately to a third 10m pitch in the same rift with progress barred at the bottom by a dig (BFS, Jo, Barry). This was dug into Rocking Horse Rift, where the cave becomes larger is just around the corner.

Boulders passed to enter "Rocking Horse Rift", with 20m pitch "The Chocolate River" reached through a small hole in the floor after 5m and named after the mud and calcite stream-way ahead (CJD, KH). A second hole in Rocking Horse Rift was pushed (AW, KH) leading to an 8m where a tight rift beneath boulders joins the base of Chocolate River. The two routes meet in a large chamber with the next pitch, The Singing Pasteur, in the corner. This is an impressive 35m pitch in a large rift. Care is needed at the pitch head, which appears to be solid, but is in fact very loose and you need to hide a surprisingly long way around the corner at the bottom to avoid ammunition. This lands in a large rift with a small stream.

Upstream, over boulders, leads to an exposed fee climb, leading to a high level phreatic running above the rift. A small, constricted inlet ("For Carbide's Sake") under a large boulder has not been fully explored but seems unlikely to go anywhere.

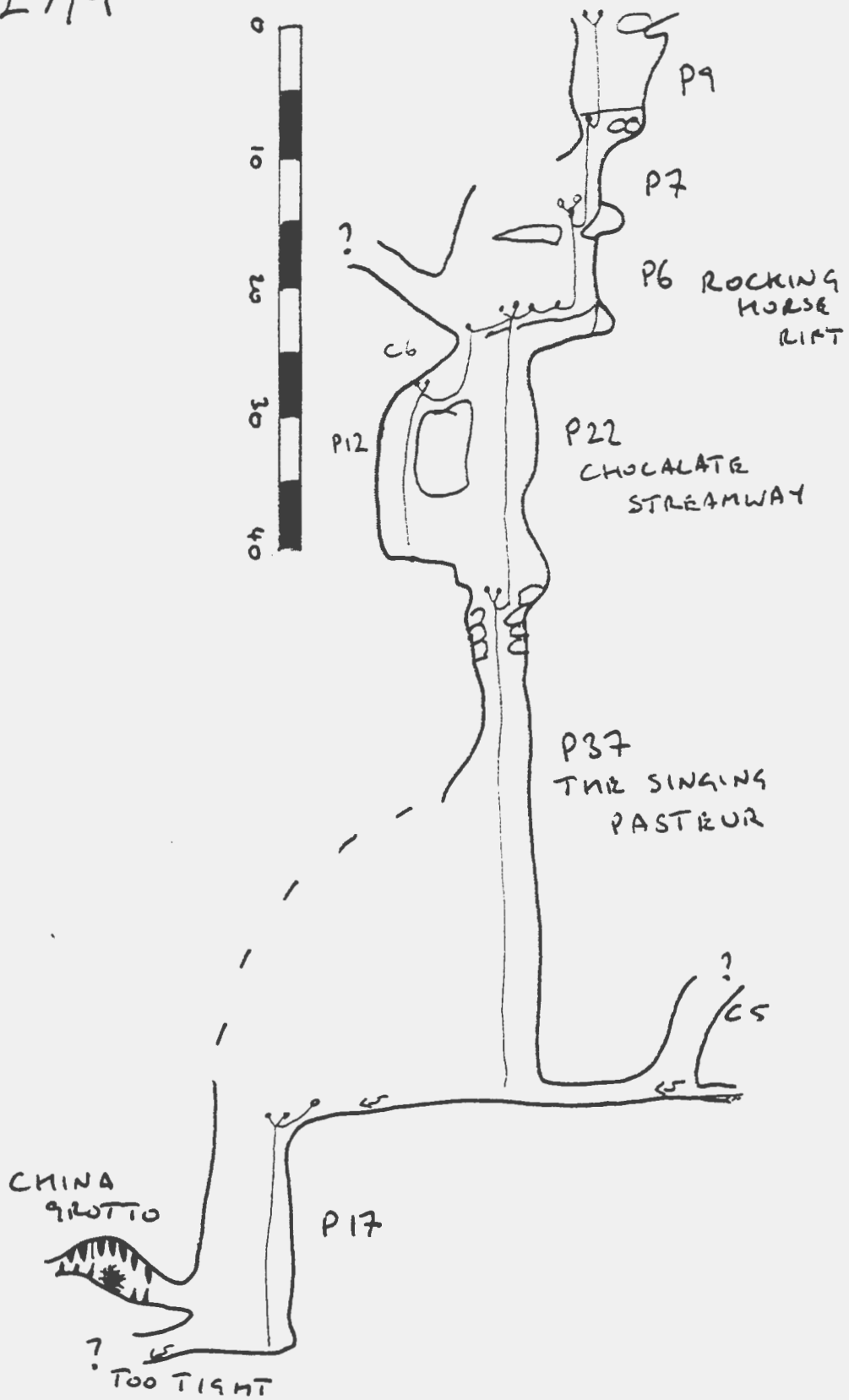
Downstream leads through pretty calcite formations to the head of the 6th pitch, another 20m drop, the final pitch. This is blind, but a few metres above the bottom, a rift can be entered via a short climb, ending when the combination of tightness and an awkward S bend prevent further progress. There is a decent draft at this point, and hammering may be worthwhile to gain the widening rift below (DL, LB). Alternatively climbing up the rift over calcite flow-stone "Nocilla Streamway" enters "The China Grotto" a superbly decorated chamber with crystal pools, "Chinese Flames" and plenty of stal. A way on may exist over the China Grotto, but this would certainly destroy the formations with no guarantee of reward (HJ, KH).

Pitch	Rope	Rigging
Entrance (P9)	10m*	Bolt Y-hang with natural back-ups.
2nd pitch (P7)	10m *	Y-hang from two wires around naturals. May need back-up before squeeze.
3 rd Pitch (P6)	10m*	Bolt Y-hang
Chocolate River (P22)	30m	
Chocolate Bypass (P8)	20m	
Singing Pasteur (P37)	45m	
Final pitch (P17)	20m	

*Can be rigged with a single 30m rope.

Facing page: Survey of 27/9, Cueva del Pastor Cantato. Surveyed to BCRA Grade V by Chris Densham and Rob Garrett. Drawn up by Jonathan Cooper.

27/9



New Caves Explored and Some Old Caves Revisited.

Description based in Log Book entries.

Area 5 including Valle Extremero.

60/5 (LB, FAL, DL, HS). A small descending vadose passage round base of cliff to the right of 8/5. Described as requiring someone small to push squeeze at end. Someone small (LB) was unable to get out of daylight. No draft.

70/5 The Grotty Grovel. (DL, LB). Squeeze passed to reach standing passage (!) and two 25 foot climbs to total choke. Thank Christ.

72/5. (GL). 0 to base of Jou de le Cistra. 276 to Gustuteru. On slope overlooking Jou de la Cistra, about 100m west of Jultayu path. 2m diameter pot. 5m deep. May have rift leading off at bottom.

73/5* (JW) Cabeza Llambria 065, Jultayu 143. Likely digging site in steeply descending rift at edge of Jou de la Cistra.

74/5* (JW) Jultayu 146. 1m square hole in centre of green depression in Jou de la Cistra, suitable for midgets who like flies and caterpillars. Hole filled with ferns and with a wide rillenkarren catchment to south west.

75/5 (labelled 72/5). (ML, Lenik) UTM ref 434E890N. 50-100m S of 27/5. Found by contouring east from Martini Pool. 2m high rift at base of shakehole with a small phreatic tube at top. Boulders removed to make accessible to thin cavers. Slight draft and bigger passage or chamber about 2m in.

Another 72/5. Therefore 76/5. (RG, LB) 30m E of 54/5. 1m diameter phreas ending in a calcite blockage. View to passage beyond.

Valley of Dry Bones.

Several drafting holes.

1. Steep sloping dig of yore. 5-10m from base of cliff. Has received much attention in past. Dug to reveal small rift into chamber with three drafts (TG, LM, Jo). Both left and right are diggable with extreme care but have been left for another day (TG, LM, RG, LB).

2. Pozu Jenga. Under cliff. Smaller of two holes with noisy draft coming from rift. Diggable. Cliff face demolished to gain entry to a 6m pitch "Gravity Crisis" in the rift. Squeeze through boulders including the chockstone reaches a very drafty chamber. Easy digging in this unstable area looks really promising.

3. Far end of valley. Last of drafting holes. Short climb down, then head steeply down to boulder dig.

Trea Area

14/10 (CJD, LB) Cabeza Llambria 052, Cueto-La-Requexada 126, 170 to spur between CLR and Jultayu. Walk down Trea path until junction between CLR and route down to Huerta del Rey. Entrance is found by heading up grassy slope towards local peak. Entrance below peak, under small sloping overhang. Body sized rift drops into body sized tube. This heads down for 3m to top of 3m pitch in rift. Rig using ladder from flake. This drops to a sloping, bouldery floor to diggable, calcited, drafting dig in rift. Digging revealed a continuation of the passage (CJD, BL) but more digging is necessary before it can be entered by cavers.



Lou Morris extracts herself from the entrance of Pozu Jenga

Oston Area.

10/13 The Windy Cave of Oston (RG, JC).

About 200m along the ridge W out of Oston towards Ario, a small drafting hole 10m to the left of the path. Sharp horizontal, triangular entrance enters a hading rift about 1m high. After 10m this opens to a chamber with old stal and choked passages ahead and to the left. To right, 3m climb to junction. Right leads to crawl after 4m. Left is more open and drafty and leads after 20-30m of easy going to crawling over fossil stal. Unexplored beyond.

Off Ario Path.

In valley to the left of head of Sod 2, by the alternative path. 20m W of drafting boulder collapse. Ladder pitch (ML).

Area 7

48/7 (JC, FL). 083 to Jultayu. 006 to Ario Refugio. Small entrance on slopes of Cuvicente overlooking Jultayu bowl. Slightly restricted shaft, that bells out into a chamber. 10m entrance pitch (not 20-30m as described in shaft bashing guide). No way on at bottom.

?/7 (BL, NP). Jultayu 144 and 10m W of 23/7 on Jou ridge. Small rift parallel to 23/7, 1m wide and 3m long. Stones rattle for 3-4s. 40m pitch?

Area 9

1/9 (JW) Large 300m diameter shakehole 200m SSE of TLJ, includes marked entrances of 7/9 and 8/9. Bearings of central boss of 1/9 shakehole. 172 and 191 to Cuvicente. 233 to La Verdulluenga. Gustuteru 316.

3/9 (JC, FAL). Also labelled 28/5. 020 to Ario Refugio. 130 to Cuvicente. Two shafts beside path that traverses scree slopes of Cuvicente. Higher shaft a 7m free-climbable but blind pot. Lower shaft known to be considerably deeper (see shaft bashing guide). Well positioned relative to upstream 2/7.

Unlabelled entrance (JC, FAL). Bottom of boulder filled ravine down slope and to true right of 3/9. Possible to drop between boulders into small chamber, but all ways on are choked.

7/9 (JW) 10m ESE (120) of central boss of 1/9.

8/9 (JW) 10m NNE (10) of central boss of 1/9.

10/9 (JW, KH, RD). 126 to Jultayu. 161 and 172 to Cuvicente. Below rillenkarren on west wall of rift valley between two rocky shakeholes. The valley runs N-S below summit of Gustuteru with view north to Lagos path and south to Cuvicente. Obvious hole above right of actual entrance goes nowhere. Small rectangular entrance into small chamber with very strong draft from narrow squeeze at far end of chamber. Ledge 2m below and quite large passage continues down. 2s rattle. 10m pitch lands on rocky floor with too tight rift. Hole in wall halfway down pitch leads to short walking passage with bones (Animal? Human?) to pitchhead with 1.5s drop (KH, AW, HJ). This is a 6m pitch landing in an awkward 3-4m high rift with a small stream. Possible to traverse along rift at various levels for about 20m to almost passable squeeze (LB, DL). Rift widens beyond and rocks tossed ahead land in with an echoing splish in a deep pool.

14/9 Bara Shigri. (KH, AW, HJ) Relocated but not where shaftbashing guide suggested. At end of valley containing 10/9, on SE slope of Gustuteru heading towards La Jayada and almost directly below 27/9. Large walk-in entrance, 4m high, 6m wide, used as an animal shelter. Phreatic tube in roof leads up for over 10m. Choked horizontal crawl to rear of entrance chamber drafts. This was dug to low arch into open passage. Rift 5m long, 1.5m wide and 1m high but choked (HJ).

23/9 (JC). 035 to Ario Refugio. 112 to Cuvicente. On karst above La Jayada, approximately 200m upslope and to left of spur from main ridge. Thin crack opens out to 5m free climb. Choked at bottom.

24/9. (LM, KH). 037 Ario Refugio. 114 Cuvicente. On karst above La Jayada, approximately 200m upslope and to right of spur from main ridge. Body-sized vertical crack needs hammering to reach a small chamber.

25/9. (JC, LM, KH). 037 Ario Refugio. 114 Cuvicente. Several shafts in depression just to the north of Cuvicente-La Verdulluenga ridge, roughly halfway between the two peaks. Subsequently identified as 16/9 but has been tagged 25/9 a-e.

25/9a*. Bridge Pot. Large open shaft with 3s drop to snow plug. 40m rope did not reach snow-plug, but 70m rope reached snow and allowed some progress between snow and walls before these pinched in (LB). A rock bridge part-way down the shaft leads to an alternative pitch which also lands on the snow-plug (PH, KH). May be interesting in lower snow conditions. Revisited towards end of expedition (NJM, FAL) but still snow-plugged.

25/9b*. Downslope of 25/9a and obvious continuation of the same rift. 10m pitch but choked.

25/9c*. Two shafts separated by a rock bridge down to a snow plug. This can be accessed by clambering through boulders from a depression down-slope from the shafts. No way round snow-plug.

25/9d. 10m open shaft to snow-plug. The bottom of the shaft can be reached from a depression upslope of the shaft. Upslope in the depression leads to a 5m crawl, then 10m of walking passage to a moon-milk decorated chamber with skylights to the surface. Rig a 20m hand-line from top of depression to climb down loose slope to reach the bottom of the snow-plug. From here a 20m pitch between boulders can be rigged (JC).

25/9e. Unentered smaller shaft to west of main group.

Keith's Lost Caves. (KH) On a line between 25/9 (16/9) and Gustuteru, roughly as you cross another (imaginary) line between La Verdulluenga and Ario, in an area of karst high up on the eastern of the valley below El Regallon. Two unentered holes in a small rifty valley.

26/9 a,b,c. (PH, KH) 162 to Cuvicente. 190 to La Verdulluenga. Three holes at the bottom of the northwesterly (southeasterly?) slope of Gustuteru located in the corners of 2 small rocky depressions.

*26/9a. Jultayu 134, Cuvicente 176, La Verdulluenga 226 (KH, FL). Short climb down in corner of higher depression to head of 10m pitch in rift. One way on at bottom choked, and others routes are choked, but a passage can be seen beyond and there is a slight draft. Half way down the entrance pitch a squeeze enters a continuation of the rift which can be free-climbed to a very (howling) drafty junction with a pitch down and a continuation of the rift blocked by a large boulder.

26/9b. Hole in opposite corner of depression from 26/9a. Possibly the same rift. Appears to choke but not thoroughly investigated.

26/9c. Hole in corner of a nearby depression in same rift line. Tight squeeze to probable boulder choke. Unentered.

27/9. Bill's Cave or Cueva del Pastor Cantato (LM, JW, BFS).
See elsewhere in report.

28/9 (JW, KH, RD) 067 to Cabeza Llambria. 124 to Jultayu. 168 to Cuvicente. 227 to La Verdulluenga. Large rillenkarren-ringed depression on south slope of Gustuteru, about 100m below obvious rock shelter. Small 2m deep rift blocked by rocks.

29/9 (JW, KH, RD). May be 5/9. 063 to Cabeza Llambria. 115 to Jultayu. 152 and 172 to Cuvicente. 236 to La Verdulluenga. 350 to Gustuteru. Large (30m x 40m) bouldery depression with rillenkarren on east slope of La Verdulluenga above Tras Le Jayada. Various ways into meandering rift with strong draft. Stones rattle for up to 10s (!) Rigged 10m pitch/climb in meandering rift to bouldery floor (KH, JW, HS). Rift continues over short traverse to a squeeze and tight 3m climb down. Rift at bottom too tight.

30/9 (KH, JW, RD). 120 to Jultayu. 144 and 169 to Cuvicente. 211 to La Verdulluenga. Shake hole by path from C3 col down valley on SW slope of Gustuteru, on right of path going down. Block-filled rift. Climb into rift and crawl under surface boulders. Looks into hole at top of meandering rift 1 to 2m deep. Too tight. Not worth talking about.

31/9 (KH, JW, RD). 059 to Cabeza Llambria. 120 to Jultayu. 175 and 185 to Cuvicente. 230 to La Verdulluenga. Drafting dig at bottom of a shakehole. Dug to reveal a pitch, down which a crowbar was lobbed. Ladder pitch for 5-7m to boulder floor and too tight rift. May be diggable (KH, FL). Not clear if crowbar was retrieved.

SIE Mark1. (KH, JW, RD). On path from C3 col on left hand side of valley slightly lower than TLJ. Within 5m of path on RHS going down. Circular shaft with snow plug.

SIE Mark2. (KH, JW, RD) 123 to Jultayu. 167 and 182 to Cuvicente. 229 to La Verdulluenga. Circular depression with rillenkarrén benches.

??/9 (BL, NP) On west of Jou ridge beneath the scree slopes. Cuvicente 192. Two small entrances in rift on either side of large boulder. Choked but diggable with slight draft.

??/9 (BL, NP). Found in clag on path between Jultayu bowl and 27/9. At lowest end of valley that has a cairn at its north end. Small entrance beneath boulders in left hand wall. View through boulders to continuing passage below. Hand-line may be needed.

33/9 (JW) Jultayu 130, Cuvicente 190 & 199, La Verdulluenga 237, Gustuteru 299. Below scree slope down from path leading from Jultayu to the La Verdulluenga valley. 2m square entrance leads to narrow rift with small draft. Needs digging or hammering.

34/9 (KH, FL). 1-2m open shaft with 2s drop. Cuvicente 154, La Verdulluenga 240. Undescended. Described as 33/9 in logbook.

Area C

C21. Found on near western col of Cuvicente-La Verdulluenga ridge whilst looking for 21/9. Near to C3 and C10. 10m pitch. Bottomed (FL, NM).

Area D

D16. (PH). Found by PH in 1997. 20+m pitch to snow plug and choked chamber with inlets. Possible connects with drafting squeeze in D17.

D98. (PH) Follow Aliseda path to cairn at turn off for Top camp. Head N (away from TC) and cave is found 250m N of cairn in direct line of sight to small peak. Where grassy slope meets lapiaz there is a group of down-dip entrances. Good draft into cave. Entrance leads to 15m pitch with continuing passage above, then free climbable pitches of 5m and 10m before undescended 10m pitch. Good prospect.

A Psychologist Solves the Riddle of the Tagging of New Discoveries.

The caves up on the La Verdulluenga-Cuvicente ridge that JC, Keith and Lynn found (25/9a, b, c,d) have been retagged. The cave that was 25/9a or 25/9c or possibly 25/9b or 25/9d has now been reinstated as 25/9a. This being the pot with the bridge that is not a bridge but is in fact a bridge and may warrant further exploration. 25/9a is also still 25/9c, or possibly 25/9b or 25/9d because the tag for 25/9c (or b or c) which was on what was and is now 25/9a could not be found, and therefore 25/9a is still also 25/9c or b or d. The cave that was not 25/9a, but was 25/9a for a day is no longer 25/9a but is not 25/9b or 25/9c or 25/9d either, because the tag on 25/9a when it was not 25/9a could not be found for this cave. Hopefully the other 2 caves are correctly tagged. I hope this clears up any confusion.

Dye Detectors

Dye detecting is one approach used to investigate underground hydrology. A fluorescent dye, such as fluorescein is placed in an active stream and its route traced by placing activated charcoal detector bags in underground stream or at resurgences. This year we investigated the possibility that the caves in Area 9 drain to the 2/7 main drain. We placed dye in the small stream in 27/9 and dye-detectors in up and down stream 2/7 and at the Culiembro resurgence:

Upstream 2/7. Bags placed in pool just upstream of Big Ledge camp.
Downstream 2/7. Bags placed in pebbly bit of stream 10m before stream sinks.
Upstream Culiembro. Bags tied to rocks beyond deep water upstream of resurgence
Downstream Culiembro. Bags to wire by resurgence.

Dye was placed in stream below third pitch of 27/9 on the 12/8/98. A thunderstorm broke about two hours later, by Lev Bishop. All the bags were placed by Jonathan Cooper, and most were retrieved by Jonathan Cooper or by people who had had no contact with dye. Bags were labelled and sealed in plastic bags on retrieval. Analysis was carried out by Jim Ramsden by soaking the bags in solvent (alcohol).

Location	Bags	In	Out	Trace
Up 2/7	2 Controls	1.8.1998	6.8.98	Negative
Up 2/7	1 Sample	6.8.98	14.8.98	Strong positive
Down 2/7	3 Controls	1.8.98	12.8.98	Negative
Up Culiembro	2 Samples	10.8.98	21.8.98	Weak positive
Down Culiembro	1 Sample	10.8.98	21.8.98	Weak positive

We, therefore, found that dye placed in 27/9 gave a strong positive trace to the upstream 2/7 within 2 days and a weak positive trace to both up and downstream detectors at Culiembro. The positive upstream trace at Culiembro would cause some concern except that water is known to resurge at a number of points slightly upstream of the main resurgence and that the detectors were not placed far enough upstream to avoid these. These show that at least some water in Area 9 drains to Culiembro via the 2/7 main drain. It also supports the hypothesis that the C4 stream may feed 2/7, since 27/9 lies roughly over the terminal sump of C4.

This opens up a number of exciting possibilities. Firstly, upstream exploration of 2/7 may push further into the mountain and reach the downstream end of the C4 sump. The unsurveyed passages found this year appears to head north west towards the C4 sump and the stream splits into two large feeders just prior to the limit of exploration. Secondly, 27/9 or other caves in Area 9 may provide an upstream entrance to 2/7, or even a high level link between upstream 2/7 and the C4 stream. It is not yet clear, whether, the 27/9 water joins the 2/7 stream as part of the hypothesised C4 water or as a separate smaller inlet. One interesting project for next year, may therefore be to carry out a trace from Area 9, with detectors at various locations along the 2/7 stream. Finally, it is already known that F64 and C4 drain to Culiembro, as dye placed in F64 in 1994 was traced both to the C4 stream and to Culiembro. There, therefore, is the possibility of a much larger system accessed either by 2/7 or via C4 and pushing upstream or by new entrances between the two known caves. Another interesting project, therefore, for future years is to carry out a trace from the Top Camp area (e.g. F2 or F7) to 2/7.

Accounts for OUCC Jultayu 1998.

<u>Income</u>	
Grants & Other Funds	£ 1,091.59
Float From 1997	£ 300.00
From Oxford University	£ 751.25 <u>Income</u>
Bank Interest	£ 40.34
Personal Contributions	£ 11,617.04
Deposit	£ 4,200.00
Kitty (payable in pesetas)	£ 2,308.50
Training	£ 192.00
Personal Insurance	£ 364.00
Travel with expedition	£ 1,300.00
Personal Equipment	£ 3,252.54
Sale	£ 419.40
T-Shirts and Postcards	£ 419.40
Total Income	£ 13,128.03

<u>Expenditure</u>	
Administration	£ 954.50
Float to 1999	£ 300.00
Officers' Expenses	£ 126.89
Training	£ 40.00
Personal Insurance	£ 364.00
Publications (report, proceedings)*	£ 123.61
Travel	£ 1,682.18
Van Hire & Insurance	£ 770.00
Ferry Ticket	£ 681.40
Fuel & Tolls	£ 230.78
Equipment	£ 6,807.20
Personal Equipment	£ 3,155.19
Ropes	£ 982.03
Rigging Gear	£ 1,308.34
Computer & Radios	£ 112.39
Surface Camping	£ 318.69
Underground Camping	£ 518.09
Surveying	£ 282.47
Photography	£ 130.00
Food	£ 2,290.02
Surface Food	£ 2,026.40
Underground Food	£ 263.62
Safety	£ 349.15
First Aid Kits	£ 148.76
Rescue Kits	£ 8.39
Rescue Practise/SRT Training	£ 192.00
Miscellaneous	£ 1,044.98
T-Shirts & Postcards	£ 426.46
Camping Fuels	£ 70.10
Trailer Recovery	£ 548.42
Total Expenditure	£ 13,128.03

Surplus Nil

* Not yet paid out, any surplus to repairs of trailer

In addition, independent travel to and from Spain was paid for individually, and amounts to a further £5,700 bringing the total budget to approx £18,700, with an average personal expenditure of £475.00.

