Canal del Montico 2008

Expedition Report

Oxford University Cave Club
Equip de Recerques Espeleològiques del Centre Excursionista de Catalunya
Ed. Chris Rogers

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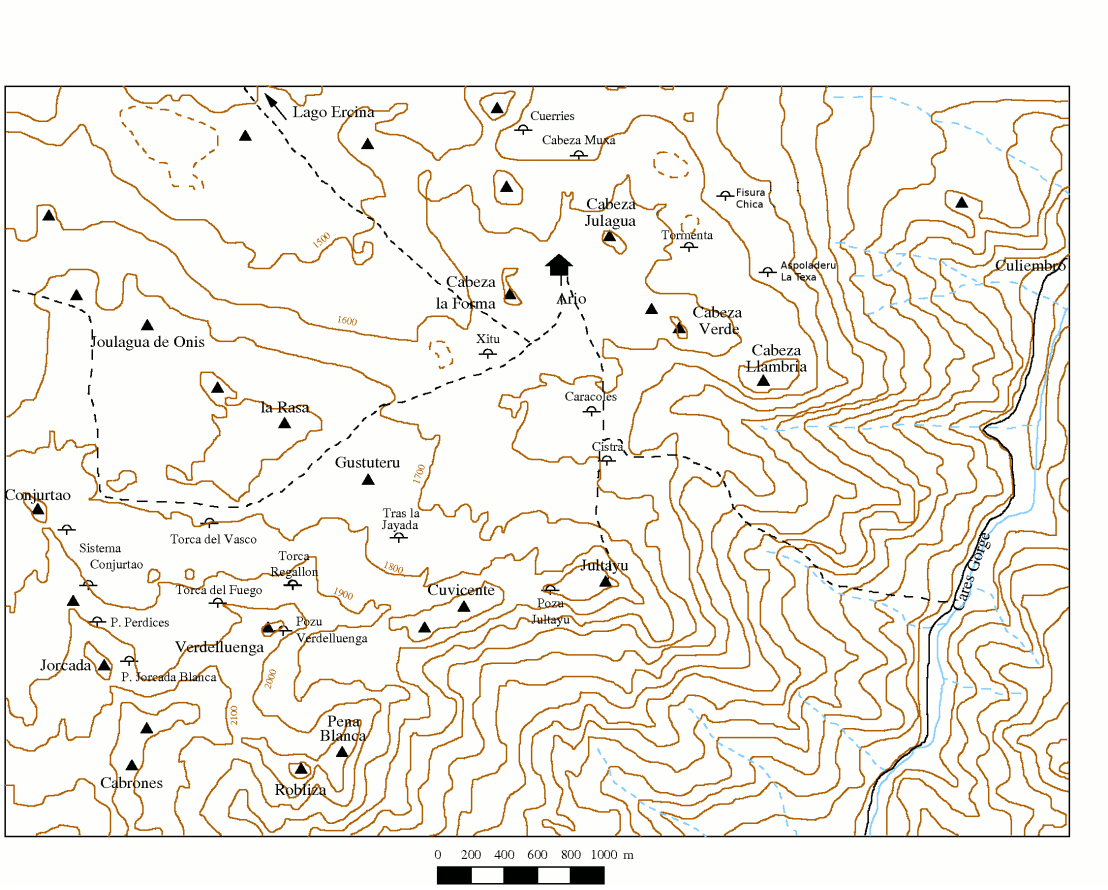
Introduction

In July of 2008, OUCC once more ventured into the deep caves of the Western Massif of the Picos de Europa mountains of Northern Spain. In partnership with our sister expedition, Julagua 2008, we sought to explore the caves surrounding the Culiembro resurgence. Canal del Montico's main aim was the exploration of Fisura Chica, known affectionately as *ChicaGo,* a pothole on the flanks of Cabeza Chica overlooking the Canal del Montico.



The Ario area in the Picos de Europa.

Fisura Chica was discovered in 2003 and was pushed in parallel with exploration in Sistema Julagua. The exploration of Chica was somewhat irregular; the cave was declared finished in 2004, only to be re-examined in 2005 leading to the discovery of a continuation. The 2006 and 2007 expeditions focussed on Chica, adding several hundred metres of depth to the cave. In 2007 exploration led down a magnificent pitch, Flawless, to an impenetrable boulder choke. A window above the boulder choke led into a section of rifts over several blind pots. The 2007 limit was a pot down which stones rattled for several seconds several hundred metres below the surface.

This year, we returned to examine this area. Our team arrived and, together with Julagua 2008, established Ario camp in parallel with a series of efficient rigging trips. The cave was rigged to the limit of exploration within six days of arrival in Spain.

The first exploration team entered Fisura Chica on the 8th July, and dropped an approximately 20 m pitch to find an awkward section of rift in sandy and chossy rock that appeared to close down. Subsequently two further teams entered the cave to examine the final reaches. The first team aimed to re-examine the 2007 limit in more detail, while the second team sought to find a way through the boulder choke at the bottom of Flawless and place dye for hydrological studies . Unfortunately, a way on could not be found and the decision was taken to derig the cave. Within just 2 weeks of our arrival in Spain, the cave had been rigged, bottomed and about 1 km of rope removed from the cave and brought back to camp.

The expedition focussed on two aims after this point; the exploration of new caves near the surface and the support of the expedition in Julagua. In surface work, we concentrated on the areas near to the peak of La Verdeluenga and around Cabeza Gustuteru. Several sizeable entrances are known near to the peak of La Verdeluenga, some undescended and some descended to snow plugs, which it is thought may become passable due to global warming. Many of these shafts were descended and explored, while some new shafts were discovered.

Exploration of a pitch in 14/9.

On Cabeza Gustuteru, two known entrances were examined and extended, 27/9 and 14/9. 27/9 was a known 100 m deep pothole dropping several pitches leading to a very tight section of rift. Over a course of several trips the terminal rift was attempted at various levels. Some progress was made but further work will be needed. 14/9 was also a known entrance, carrying a strong draught a few metres to a boulder choke. In this case, the careful removal of boulders in the entrance enabled progress to approximately 100 m of passage and chambers, which was surveyed.

In addition we supported the Julagua expedition. This enabled some of our younger cavers to gain essential experience in deep caving and underground camping, as well as giving them the opportunity to explore at depth. Several trips were undertaken in Sistema Julagua, both pushing and derigging.

The conclusion to exploration in Fisura Chica was disappointing for us; the cave finished some 300 m above known, nearby potholes, at the bottom of a sizeable pitch series. It is in the nature of exploration that we just don't know what is around the next corner, and in this case it was not what we expected or hoped for. We aim to return next year to continue exploration of other deep caves in the area and hope to have more luck.

Expedition Members

Yifan Huang (Leader)

Lorna Wilson (Deputy Leader)

Nick Edwards (Treasurer)

Chris Rogers (Secretary)

Gavin Lowe

Pippa Rogers

Gareth Phillips

Dave Legg

John Pybus

Paul Savage

Fumie Yamaguchi

Marc Rubinat

Frances 'Kiku' Rubinat

Daniel Ferrer

Expedition Diary

Date	Cavers	Activity
04/07/08	LW, FY	Rigging Chicago to Don't Stop!
04/07/08	NE, RA*	Rigging to Wild West
05/07/08	GL, NE	Rigging to The Boys Are Back In Town
06/07/08	GL, LW	Rigging to Crystal Ship
07/07/08	NE, GP	Rigging to Vamos
07/07/08	PS, FY, RA*	Portering Trip in Chicago
08/07/08	PS, GL	Rigging to the limit in Chicago
08/07/08	JP, LW, FY	Photo trip to Wild West
09/07/08	NE, GP	Chicago – pushing at the limit
11/07/08	GL, LW, FY	Area E
11/07/08	NE, RA*, GP	Area E
11/07/08	JP, PS	Area 12
12/07/08	LW, FY, GL	Area E
13/07/08	GL	Area E
13/07/08	NE, RA, LW	Chicago – to camp and back
13/07/08	GP, FY	Area 9
14/07/08	GP, GL, JP	Chicago – derig to Monkey Panic
16/07/08	CR, NE, LW, RA*, FY	Chicago – derig to near Laissez Faire
16/07/08	GP	Area 9
17/07/08	GL, JP, GP	Chicago – derig to surface
18/07/08	PR, DL, GL	27/9
20/07/08	NE, CR, PW*, AS*	Asopladeru La Texa – photo trip and pushing from camp
20/07/08	OK*, GL	27/9
20/07/08	PR, RP*, AS*	14/9
21/07/08	AS*, MR, KR, DF	Area 4
22/07/08	WS*, RB*, OK*	Asopladeru La Texa
22/07/08	RG*, GL, PR	Area E
22/07/08	AS*, MR, KR, DF	Area 4
23/07/08	GL, RP*, MA*	Area E
23/07/08	MR, DF, KR	Chicago – Wild West
23/07/08	PR, MB*, PW*	27/9
24/07/08	MR, DF, KR	Chicago – Wild West
24/07/08	GL, MA*	27/9
25/07/08	CR, PR, Svet*, PW*, OK*	Asopladeru La Texa – get bags from Camp Rosa
26/07/08	PW*, GL	27/9
26/07/08	PR, MB*, AW*	Asopladeru La Texa – bags from Camp Rosa

*Members of Sistema Julagua 2008 expedition

Fool's Gold

Nick Edwards describes exploration in the final reaches of Fisura Chica.

Drifting out of sleep after a night of experimenting with the warm Spanish hospitality is always a painful experience. When this coincided with Gavin declaring that the cave was dead, but needed a second look, the pain was doubled. My day had suddenly gotten a lot harder.

A few hours later Gareth and I were setting off over the ridge towards the Chicago entrance. I was feeling slightly apprehensive as Gareth powered up the hill at breakneck speed while I trotted along behind trying to keep up. My previous deepest trip was spent rigging down to the top of Vamos only two days earlier, so this would be my deepest and probably longest caving trip to date.

Once kitted up and into the cave we made efficient progress – Gareth slightly more efficient than me, to the extent that by the time I passed *Monkey Panic* Gareth was already at the bottom of *The Boys are Back in Town*. I had only been further down than this once before, and on that occasion we had struggled to find the way. Now on my own, with Gareth able to help only by shouting up the pitch, finding the way became even more difficult. Apprehensive about the 60 m drop somewhere in the distance, I spent half an hour going backwards and forwards through the rift trying to find the right level. Eventually I gave up in frustration, sat down and began to unpack some chocolate. Even as I did so, I realised that the place I had sat looked familiar - I had found the way on.

After this slight hiccup progress was swift, as we were eager to get to the limit of known cave. The two long pitches at the bottom, *Vamos* and *Flawless*, were vast beyond my experience. Whizzing down almost 200 metres of rope, Gareth's light shining faintly beneath me, was an exuberant experience; although even as I descended I realised the prussik back out would not be quick.

At the bottom of *Flawless* it took us a while to find the way on. Gareth had scouted out the bottom of the shaft, and had somehow missed the roped climb up into the *Popcorn Series*. We briefly looked at climbing the pile of boulders on the other side of the shaft, before I eventually spotted the rope leading up the 4m climb. Once up we traversed the blind pot and swung into *Please Please me Passage*. Passing the first hole, the entrance to the blind *Fool's Gold Series*, we slid down the muddy slope.

Down here the character of the cave changed massively. Everything became much tighter, and dry and sandy rather than wet and muddy like the rest of the cave, more reminiscent of a tight Welsh cave. We first stopped to check out an undescended hole in the floor. Gareth gave me the chance to go in front – my first taste of true exploration caving. I nervously peered down into the darkness, my cave light showing an indistinct floor a few metres below. Gingerly clambering down the bendy tube, only just big enough to negotiate easily, I manoeuvred past large flakes and knobbly popcorn that ripped at my oversuit. A small crawl way led off from the climb's base. Could this be the long dreamed-of Way On, the path to depth and glory? Dropping to

my knees and tilting my head I saw the passage close down to a sandy floor, with no way on.

Back up at the top we set off to examine the pitch that Gavin had written-off the day before. It was nice to crawl along sandy passage after so much time on pitches or climbing on scratchy popcorn. What the rigging guide had described as a possible 50m pitch with massive draft was much less impressive in real life – the passage opened out into a rift, just too wide to jam yourself into but a bit too tight to move around in comfortably.

Moving through awkward passage

Gareth rigged the top from some naturals and set off down, before calling for me to follow. The rift closed off about 10m down, but a window a few metres up from the bottom at the far side of the pitch looked like it might just go. Cursing as he went, Gareth swung back and forth before finally finding a perch, from where he could bolt. Meanwhile I hung at a rebelay halfway down the rift, trying to find some way to wedge myself in. Unfortunately neither I, nor the rift, were made to fit together.

An hour later and Gareth hadn't made much progress with the bolt, the walls being thick with moonmilk, and the rock underneath crumbly. I was getting pretty cold and sore by this point, so went up and down the rope a bit to warm up. Eventually Gareth managed to get a bolt in, and invited me to swing over to where he sat with the rest of the rigging gear. I attempted to traverse across as Gareth had done, bridging between the walls of the rift, but it was too wide and the walls slick with mud that prevented me from getting a good footing. The rift floor was coated in crystals that I was desperate to avoid damaging, so once I'd slipped down below the level of the window the only option was to let go of the walls and swing down to vertically below the top of the rope, prussik up and start all over again. After four attempts I finally made it over to the narrow window where Gareth was, and after another ten minutes of wriggling I finally found somewhere to wedge myself where I couldn't fall back.

Gareth set about rigging and descending the next pitch. After a few moments he came back up. His face told the whole story - it closed up mere metres below where we'd been. The final rift was tight and unpromising, leading me to wonder how anyone could have thought it seemed a good lead. Tired, and bitter with disappointment, we de-rigged back to the top of the rift and set off to the surface.

Prussiking is always a slog, but after such an end to the cave, each pitch seemed harder. Half way up the 60 m single hang of *Flawless* it seemed that I had been prussiking forever, and that real life was just a dream I occasionally had. Eventually I could make out the indistinct reflection of the rebelay above me. Perhaps the real world did exist. As we neared the entrance thoughts of a warm bed and a hot meal helped me quicken my pace and the warm earthy smell of life surrounded us. We emerged to a beautiful, starlit Picos night, and after changing we began the slow walk back to camp.

Fisura Chica – Cave Description and Rigging Guide

The last sections of Fisura Chica, from the bottom of Flawless to the end of the cave, is described below. Other parts of the cave are described in the 2007 expedition report.

Popcorn Series

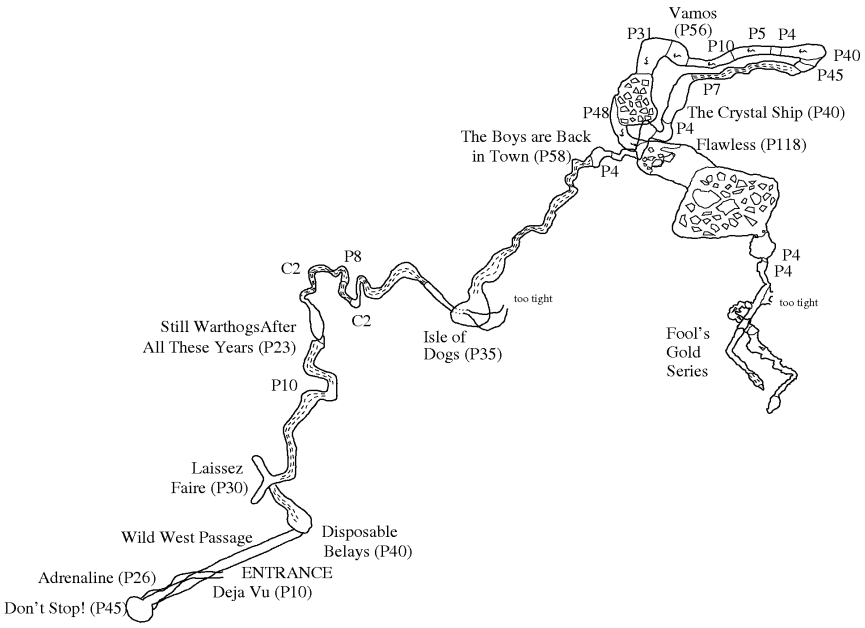
In the chamber at the bottom of *Flawless* the water disappears into the cracks in the boulder floor. The way on is to climb over a 4m high wall of mud and small stones (the wall was originally bolt-climbed, and gear has been left *in-situ*). The wall is 1.5m wide and the top should be rigged with a traverse line. The wall forms one side of a blind pot, which must be swung across to gain access to a window on the opposite side. From the window a 4m pitch lands at the start of *Please Please Me Passage*, a 30m long passage with four routes leading off it.

[At the bottom of the P4 a 1m diameter hole in the floor leads to a 5m climb down and ends in a small boulder chamber with no routes on.] [5m along the passage a 2m climb up on the left leads to two free-climbable avens, which become too tight with no way on.]

Descending into a hole in the floor after 10m leads immediately to a P10, the entrance to *Fools' Gold Series*. The pitch lands at the head of a fossil inlet, which can be followed down free-climbable dry cascades, broken by a P4, before climbing up to a 5m long section of walking passage. At the end of this passage a 12m pitch lands in a small mud sump with no way on.

[Passing over the hole in the floor after 10m leads past a column along a muddy fossil gallery, which must be traversed across an awkward slope for 10m before the floor is once again reached. The passage turns a corner and continues for a further 10m past a constriction, before emerging at the top of a muddy rift. This can be descended for 15m before a swing into a window on the far side about 2 metres above the floor. Through the window the rift continues 5m down before closing at a muddy floor.]

Pitch	**Rope**	**Rigging**
Wall-climb (C4)	15m	Traverse line across the top of the wall from the bolt at the top of *Swinger's Paradise* to bolt on opposite wall; bolt on the floor; bolt rebelay on the wall at -1m.
Swinger's Paradise (P6)	20m	Backup to traverse line; bolt Y-hang; bolt rebelay at -3m.
Pitch (P4m)	"	Backup to previous pitch; bolt on prow; spike belay.
Fools' Gold 1 (P10)	15m	Chock stone backup; column belay.
Fools' Gold 2 (P4)	10m	Thread backup; bolt belay; spike deviation.
Fools' Gold 3 (P12)	15m	Bolt backup; bolt Y-hang.
Fossil gallery	20m	Chock stone backup; column belay.
Final rift	35m	Thread + chock stone Y-hang. Spike rebelay. Pendule to spike + bolt.



Plan of Fisura Chica to 2008 limit

Plausible Leads in Fisura Chica

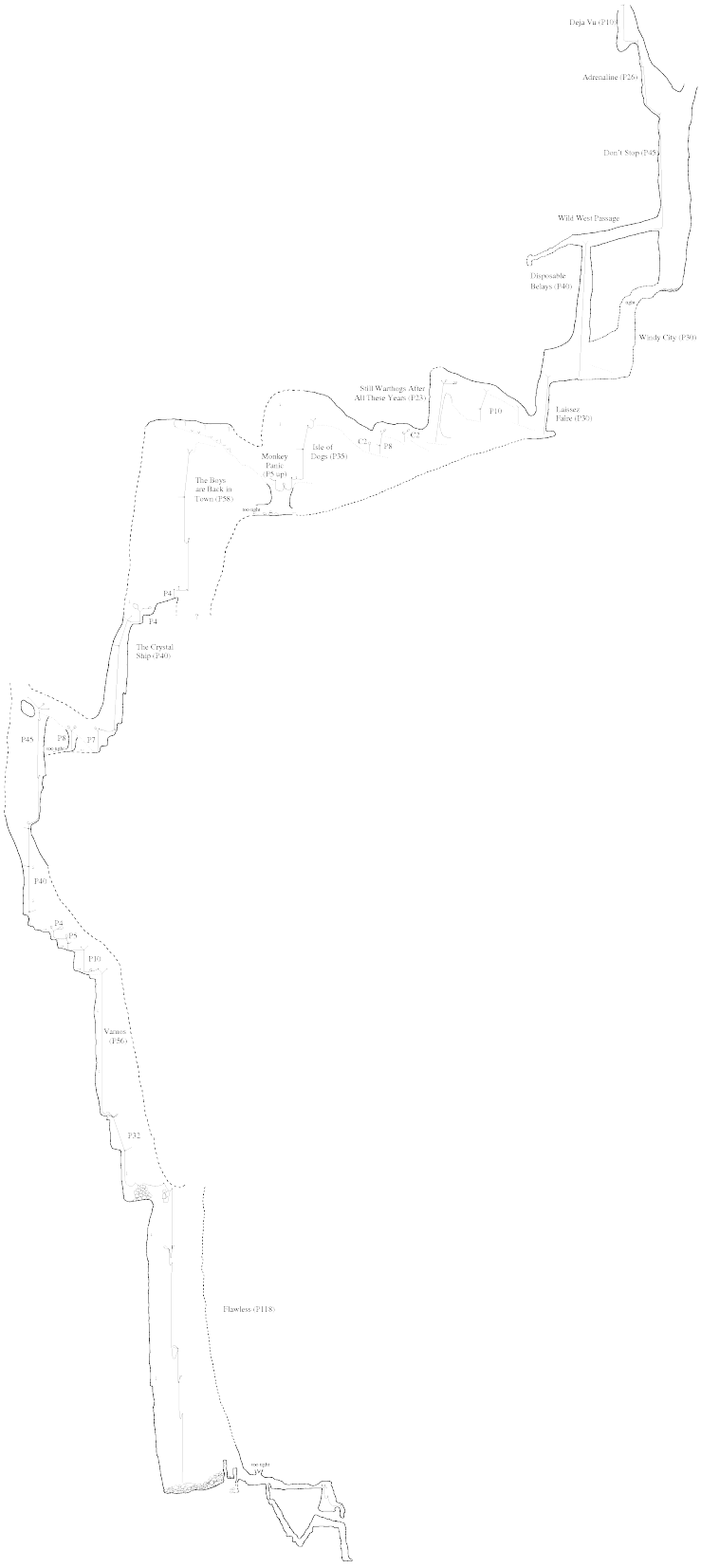
There are two plausible leads that might give further discoveries in Fisura Chica. Neither lead was considered viable by this expedition.

Two windows were reported on *Vamos* pitch by previous explorers. However, we saw no evidence of these windows this year. It possible that we had poorer lights than previous explorers, so that the windows were beyond the range of our vision, or that we had superior lights, so that what appeared to be a window to previous explorers were revealed to be merely alcoves to us. It is also possible that we missed them, although we were looking out for them. (Contact: Gavin Lowe, Chris Densham, Dave Legg, Marc Rubinat).

The pitch at the bottom of *The Boys are Back in Town* was never explored. It is thought highly likely that this pitch re-enters at the 2006 camp site. A small stream sinks at the bottom of *The Boys are Back in Town*, while a similar size stream enters from an aven at the 2006 camp; and *The Boys are Back in Town* is more-or-less directly above the 2006 camp.

Dye-Tracing

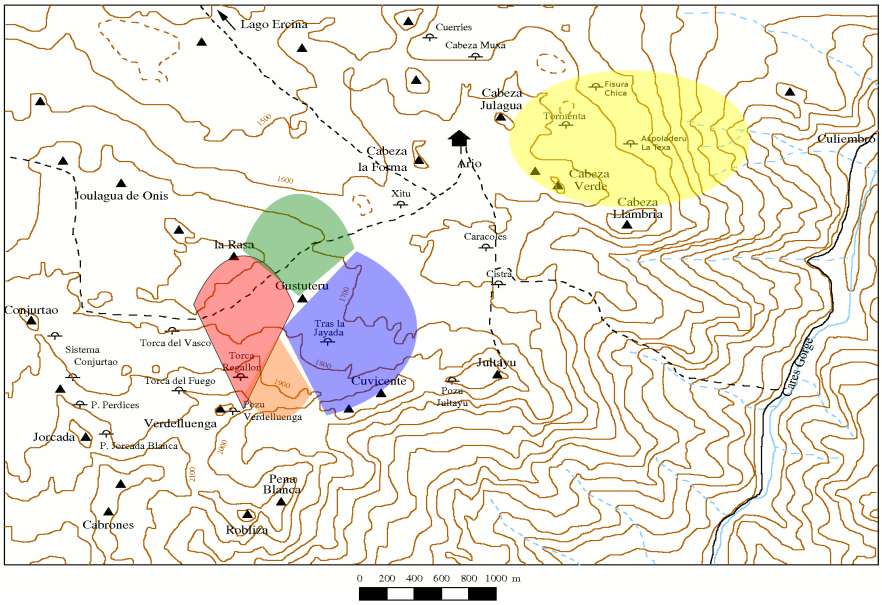
Dye was placed in the small stream that sinks at the bottom of Flawless, and detectors were placed in Asopladeru La Texa and Culiembro. A full report will be made by the Sistema Julagua Expedition.



Extended elevation of Fisura Chica to 2008 limit.

Exploration of New Caves

A significant amount of effort went into working shallow or previously unknown caves during the 2008 expedition. The high limestone of the Picos de Europa is characterised by shakeholes of varying sizes. Many of these shakeholes contain entrances, but due to weathering at the surface, most are hopelessly choked. In order to discover new entrances, it is necessary to check each shakehole. Any entrances that are discovered are rigged and explored, although the vast majority are choked before they reach any significant depth.



The Ario region of the Picos de Europa. Areas highlighted are: (red) area E (orange) Area C; (blue) area 9; (green) area 8; and (yellow) area 4.

In 2008 we focussed effort on Area E and Area 9. Area E lies above the upstream end of the C3/C4 streamway, where the limit is a waterfall. This streamway is quite flat in nature, and so access to the area upstream of the waterfall may enable further exploration towards the Top Camp area. Area E is also of interest because a number of entrances have been logged as choked with snow. Previous experience has shown that snow levels in the cave do vary year-on-year, giving access in some years and not others, and anecdotal evidence suggests that snow levels are receding.

Area 9 lies above the downstream end of the C3/C4 streamway and the upstream end of the 2/7 streamway. Flow measurements, dye tracing and survey positioning indicate that these caves are likely to connect, but a sump separates the two caves. It is hoped that an entrance in Area 9 may either drop into a dry route above the sump, or provide easier access for further exploration in this area.

Significant progress was made in a number of caves, and several new entrances were logged, which are detailed below. All GPS coordinates given are in UTM square 30T.

Area 4

Area 4 is the area over the ridge to the east of Ario.

⊗ 78/4

Location: NW-facing cliff just above steep crag. 0344937 4789727.
Description: Constricted entrance with sharp rock leads to a 2–3m climb down to a pebble-flooored chamber, covered in snails. A number of too-tight passages lead off the main chamber.

⊗ 79/4

Location: About 15m NE of 78/4
Description: 1m wide, low entrance leads to a flat pebble-flooored chamber, about 1.5m high by 2–3m wide. A number of other ways to the surface lead out. No obvious routes further in to the cave.

∅ 80/4

Location: 0345089 4789779, alt. 1431m. Slot, 15m long, running N–S with a rock bridge in the middle and a tree growing out of north end of slot on east side.
Description: 2–3m wide, about 10m deep. Possible continuation at south end of slot.

O 81/4

Location: 0345130 4789758, alt. 1400m.
Description: 3m round hole on limestone pavement underneath overhang. Not investigated due to small of rotting fleesh. Looks and sounds like it might go.

Area 8

Area 8 is the area between Gustuteru and the Xitu col.

∅15/8

Location: 0343021 4788612, alt. 1752m. In small valley at NE side of Gustuteru.
Description: Rift heading into side of cliff. Climb down a metre or so to a short undescended pitch. This could be the same as 9/8.

Area 9

Area 9 is the area around and above Gustuteru.

∅14/9, Bara Shigri

Location: At end of valley containing 10/9, on SE slope of Gustuteru heading towards La Jayada and almost directly below 27/9. Formally known as B1. 0343019 4788506, alt. 1739m. Originally explored in the early 1980s.

Description: Large walk-in entrance, 4m high, 6m wide, used as an animal shelter. Phreatic tube in roof leads up for over 10m before closing down. Choked horizontal crawl to rear of entrance chamber drafts. This was dug open, and broke out into a steeply-descending chamber. After 25m, the slope eases, and the passage enlarges to 5.5m wide and 4m high. A large stal on the right provides a boss belay for a 5m sloping pitch. Near the stal, on the left, a climb up to a crumbling bridge leads to a window, which enters a small, ascending, immature rift, which leads nowhere. Beyond the pitch, the floor slopes down at around 30 degrees in an abandoned phreatic passage with small gour pools. After 45m, the ceiling joins the floor in a solid choke.

∅ 27/9

Location: 065◦ to Cabeza Llambria, 118◦ to Jultayu, 156◦ to Cuvicente, 218◦ to La Verdelluenga. Rectangular depression with rift entrance on east side of the south-west upper slopes of Gustuteru, about 100m from summit in direction of Cuvicente. 0342983 4788514, alt. 1620m.
Description: Spiky 10m entrance pitch to chamber (Bolt Y-hang with natural back-ups) with a squeeze through to 2s drop. Second 10m pitch leads to a third 10m pitch in the same rift. Boulders passed to enter Rocking Horse Rift, with 20m pitch The Chocolate River reached through a small hole in the floor after 5m. Next pitchhead is very loose but opens into a finne 35m shaft The Singing Pastor. This lands in a large rift with a small stream. Downstream leads through pretty calcite formations to the head of the 6th pitch, another 20m drop. At the base is a very tight rift. Alternatively climbing up the rift over calcite flowstone Nocilla Streamway enters The China Grotto, a superbly decorated chamber with crystal pools, Chinese Flames, and plenty of stal.
The cave was originally explored in the late 1990s. A return was made this year, to try to force a way through the tight rift at the bottom. Over the course of about 8 trips, the rift was enlarged. Initially, the bottom of the rift was hammered, but this lead to a 10cm diameter hole. Starting at a point about 4m above the floor, a way leads into a small in the rift. A way was hammered up and forward to a right hand corner. The corner was passed, and then widened further by capping. Ahead, the way drops about 2m, but requires more hammering or capping. The rift appears to be passable below.

∅ 42/9

Location: Near the Cuvicente–Verdelluenga ridge, in area of karst. About 50m to eastern col, bearing 150◦ . 0342840 4787670, alt. 1915m.
Description: Crack leads down to squeeze above short drop: not pushed. Looks unpromising.

⊗ 43/9

Location: 0342888 4787814, alt. 1855m. 115◦ to Cuvicente, 250◦ to Verdelluenga. Hole at bottom of small shakehole. True left of a small hear of rock and below another larger one.
Description: Climb down 7m. No way on.

Area C

Area C is the NE flank of Verdelluenga.

∅ C24

Location: 0342583 4787727, alt. 1932m. 240◦ to Verdelluenga, 120◦ to second peak of Cuvicente. About 50m north of C20. Near small shakehole above a larger shakehole to the east.
Description: A 5m pitch lands on a boulder slope, followed by a 2m drop. This is followed by an undescended pitch, with a 2 second drop.

O C25

Location: 0342889 4788211, alt. 1776m. 235◦ to Verdelluenga, 065◦ to Llambria. On a ridge heading down towards Ario from Area C.
Description: Large green shaft. 2 or 3 second rattle.

Area E

Area E is the north flank of Verdelluenga. There are lots of 30m deep shafts containing snow. The area is well placed: caves in this area are likely to drop into the upstream continuation of the C3–C4 system.

∅ E9

Location: About 40m upslope from E10. Two large entrances, about 20m apart.
Description: From the more northerly entrance, a 20m pitch lands on snow. (Alternatively, it is possible to pendule, climb and scramble to a chamber below the other entrance, looking down on the same point.) A snow slope descends along the rift to a more vertical descent past snow and ice, leading to a junction. Both routes choke with rocks and snow. In the right hand route, a climb up leads to a window overlooking the left hand route. Might be worth another look in a low-snow year.

∅ E10

Location: High on the flank of Verdelluenga, about 150m WSW of an obvious dolomite nobble with a limestone cap. 0342079 4787785 ±15m,
alt. 1960m.
Description: A large, descending passage, with snow. It is possible to descend to the snow, where light comes in from E26. Worth another look in a low-snow year.

⊘ E18

Location: High on the flank of Verdelluenga, above an obvious dolomite nobble with a limestone cap, about 30m south of the nobble. 0342191 4787792 ±5m, alt. 1962m.
Description: This cave was originally found in 2005; it was descended in 2006 and again this year. A 5m pitch lands on snow. It is possible to descend a further 5m down a hole in the snow, but no passable way on. It might be possible to get past the snow in low-snow years.

⊗ E19

Location: 40m SW of E18; a hole by the snow field, and two shafts about 10m up the rock slope above.
Description: The shafts connect with the lower hole; no way on.

⊘ E20

Location: 100m SW of dolomite nobble described above. 0342107 4787766, alt. 1979m.
Description: 30m hang off a jammed boulder (deviation near top) lands on snow in a N–S rift, about 1m wide. To the north, a ramp slopes down to an underground chamber with an ice column, also reached from E26. In the middle of the rift, it would be possible to descend a 45◦ slope between rock and snow, but this looks unpromising. At the south end, a small chamber, just big enough to stand in, does nothing. To its side is Popsicle Passage, a short crawl over crushed ice, which reaches a clear ice flow in a small chamber with no way on. Might be worth another look in a low-snow year.

⊘ E22

Location: Part way down the sea of limestone below E10, many grikes converge to a gulley, which leads to a 20m long shakehole. 0342056 4787862 ±12m, alt. 1910m.
Description: No obvious way in, but draughts strongly. Was dug in various places, but nothing looks like it is going to go easily.

⊘ E25

Location: 100m SE of dolomite nobble, on the right hand side of a scree slope, at the base of two rock towers. A door sized entrance overlooks a shaft, with a large chockstone above. Very close to the E20–E26 rift, but apparently independent.
Description: 20m entrance shaft, rigged from chockstone (needs a deviation near top). At the bottom, a way leads into a blind 3m diameter, ice-floored chamber. The way on is a climb down through a snow squeeze (two natural belays). This leads to a snow slope, another snow squeeze and another snow slope to a junction by an ice column. To the right at the junction, a climb down past chocked rocks and snow (natural belays) leads to a horizontal squeeze past snow, and then a low hole through snow. A snow slope (natural belay) drops to an ice-covered floor. Ahead and down chokes.

Above is a possible climb, but it doesn't look promising. To the left is a hole down through the boulders, which seems to open out below; this was dug partially open, but a lot more rocks need to be removed to make it safe. To the left from the junction, another snow slope lands on a rock floor. A climb up leads to a decent size rift, which leads to the bottom of an 8m pitch, not ascended. Just before the climb, a tight drafting slot leads up; this is just-about passable, but ahead it becomes much too tight.

⊘ E26

Location: In the same fissure as E10 and E20, and between those two entrances.
Description: SE-most entrance (E26a) is a 15m shaft past ledge to snow. Further down and round the corner over boulders reaches an ice column. Visible connection to E20 to SE, and E10 to NW. Second entrance (E26b) is 20m NW: a long slit into the fissure, not descended.

5

Caves E27 to E36 are lower than the earlier caves, in the sloping bed of limestone below the NW ridge of Verdelluenga.

⊗ E27

Location: Shakehole with snowplug. 0342406 4788218
Description: Gap at side of snowplug is blocked with boulders about 1m down.

O E28

Location: 0342432 4788143
Description: 20cm high, 50cm high hole in rock near top of a series of shakeholes. Stones rattle for about 3s. Nearby to the right is a 1m diameter hole in the rock, but this is blind.

⊗ E29

Location: 0342417 4788134. Fissure at bottom of a shakehole.
Description: Tight, no draft, blocked by boulders.

⊘ E30

Location: In gulley up from E5 on (true) left hand side.
Description: 6m deep shaft ends in snowplug. Worth a look in a low-snow year.

⊗ E31

Location: Near top of valley on RHS. Just off top edge of grassy slope, but in the rock. 0342027 4787967.
Description: Rift in rock, blocks up quickly.

⊗ E32

Location: To the left of E14, a bowl with a few promising looking holes, which look unpromising on closer inspection. 0342049 4787932. Description: Snow-filled hole on top RHS (true LHS), with good draft but blocked. A parallel shaft, unblocked, is too tight.

⊗ E33

Location: At bottom of bowl containing E32.
Description: Hole blocked by boulders.

⊗ E34

Location: At top LHS (true RHS) of bowl containing E32.
Description: Snow filled and unpromising. Probably connects with E32.

∅ E35

Location: About 20m to the left of E32 bowl. A complex of holes in the stone, somewhere SW of grassy slope. 0342032 4787937. Description: Large hole about 14m deep down to snowplug. Snow continues under buttress on top side of hole. Current way becomes blocked by snow a few metres under buttress. A parallel side rift is clear but would need extensive hammering. "If it were on Mendip it would get hammered, but here it's probably not worth it."

∅ E36

Location: A little under 10m to the west and slightly up from E35.
Description: A fissure leads in and down. The obvious way down is blocked by snow. About 2m in, a side rift is accessed over the top of a spike. This goes down about 2m before becoming too tight, but could easily be cleared by a hammer and large chisel. The floor is then blocked by boulders, but these could probably be moved with a crowbar. Stones indicate a drop of about 10m. Worth returning to.

∅ E37

Location: Above E20, and just below the ridge, in rock to the right (true left) of scree. Dolomite nobble 43◦ , Verdelluenga 120◦ , 0342085 4787720, alt. 2011m. 3m climb up to small entrance.
Description: 2m crawl to where way is blocked by boulder. Passage continues beyond. Looks like easy digging.

O E38

Location: Just below the NW ridge of Verdelluenga, 50–100m down ridge from subsidiary summit. Dolomite nobble 72◦ , Snow Pole 342◦ , 0342003 4787763, alt. 1994m. In shakehole.
Description: 5m narrow shaft, undescended. Looks unpromising.

A Tale of Two Expeditions

Chris Rogers describes relations between the Julagua and Montico expeditions.

It is an awful lot of work to get an expedition together. Even with the well-established OUCC expeditions, getting 20 people with the necessary kit out to the Picos is pretty tough. So when Hilary Greaves told us that she wanted to organise a diving expedition, without a source of gear or cavers, we were impressed. The Sistema Julagua 2008 expedition aimed to rig 1 km of cave and dive 3 sumps. Despite these challenging aims, the expedition was more successful than could have been hoped.

On principle, we decided that if folks wanted to go caving, then they deserved support. We asked people to take personal kit to Spain to make space in the Landrover, and offered to share as much equipment as we could.

Surface space at Ario was at a premium. While we thought we had enough surface camping equipment, it turned out that one of our scout ridge tents did not fit the tent poles. After the purchase of a saw and with a modicum of jury-rigging, we prevailed. Once Julagua's underground camp was prepared, surface camping conditions eased.

An OUCC caver teaches Julagua members the basics of cave surveying.

The two expeditions got on well on a personal level. The extra cavers at Ario made for some sociable evenings after a hard day's shaftbashing, and we appreciated the extra help with carrying food and gear up and down the hill. The presence of the Julagua team was a valuable asset when Fisura Chica closed down. We were able to give some of our younger cavers the experience of camping and pushing at depth, while Julagua leant us some manpower for surface work.

On a more serious note, the presence of a large number of highly able cavers at Ario made for a safer expedition. This became clear when one of the Julagua expedition's team decided that he was too exhausted to exit the cave. This gave us a good chance to exercise our emergency routines, and the two expeditions worked well together. Gavin Lowe of the Montico team joined Hilary Greaves as first wave, while a mix of Montico and Julagua team members made up the second wave. Indeed, when the rescue stood down, those of us who were changed and ready to cave decided to take the opportunity for a tourist trip. A full account of the rescue will appear in the Julagua 2008 report.

Overall, the presence of two expeditions served to ease many of the logistical problems, the complementary nature of the two expeditions' aims made for a good range of caving trips and the presence of a larger group at Ario made for a more enjoyable and safer expedition than would otherwise be possible.

Officer's Reports

Equipment Officer's Report

As a policy, the expedition asked members to maintain their own personal equipment that they carried with them as they progressed through the cave. This was necessary from both a practical and a safety viewpoint and accounted for the main expenditure of the expedition as a whole.

The expedition continued to replace and update our stock of group caving and camping equipment as it became worn out. The fixed aids in the cave as well as underground camping equipment are all shared costs between the expedition.

The main group expenditure this year was on replacing the expedition's stock of tacklesacks. These hard-wearing equipment bags are used to kick, drag and (in particularly wide passage) carry rope and camping equipment through the cave. Due to the arduous nature of expedition caving, our current supply of bags were becoming quite badly worn and so a new stock of about 20 bags was purchased.

In addition, we kindly received a donation of a significant amount of rope. This donation enabled both the Julagua and Chicago caves to be rigged simultaneously, and without this donation we would have struggled.

We continued to maintain our surface camping equipment stocks, in particular ensuring that the trailer that is used to transport equipment to Spain was well maintained and replacing the tarpaulins that are used to make a temporary shelter for cooking.

Medical Officer's Report

Training: In accordance with the Oxford University Expeditions Council rules, all members of the expedition had in-date first aid qualifications approved by Dr. Tariq Qureshi. One prospective member of the expedition was unable to make the training sessions and gain a valid qualification, and was therefore unable to join the expedition in the field. This unusual occurrence may have been avoided but for an error by the Medical Officer, which resulted in a training session in February 2008 not taking place. This session was arranged in November 2007 and, having been heavily publicised from then onwards, would have been attended by all expedition members requiring first aid training. Instead training was organised piecemeal over sessions in Hilary and Trinity terms which were not well publicised far in advance.

To ensure that all expedition members receive appropriate training, the first aid training session should take place during Hilary term, having been organised in early Michaelmas term. Training sessions should be widely and repeatedly publicised to all members of OUCC, and to a selected list of members of other caving clubs who might reasonably be expected to join the expedition. It is important to organise the session well in advance, as some expedition members requiring training may be in full time

employment and not resident in Oxford. A single session organised well in advance is less stressful for Dr. Qureshi, the expedition members and the Medical Officer.

The expedition Medical Officer should be kept up-to-date with all changes to the expedition's membership. In 2008 the Medical Officer was not informed of late additions to the expedition's membership, which could have caused the expedition to inadvertently breach the Expedition's Council rules on first aid training. In the event the member had in-date qualifications, so this issue was luckily avoided.

Medical Equipment: The 2008 expenditure on medical equipment was substantially larger than in previous years, as the greater part of existing medical supplies had passed its expiry dates. This included both dressings and drugs, most of which will now not need replacing for at least 3 years. The contents of all medical kits were reviewed and new inventories were made.

To speed up the process of inventorying the medical supplies and ordering replacements in future years, it would be useful if a spreadsheet were created detailing the contents of each kit when fully stocked, the current contents in the kit, and the expiry date(s) of all drugs and dressings.

Medical Incidents: No serious medical incidents occurred either during training in the UK or whilst the expedition was in the field. All minor incidents occurred on the surface.

One member aggravated an old ankle injury whilst carrying equipment from Los Lagos to Ario, which required a few days rest before they were able to undertake caving trips.

Another expedition member received a shallow cut on the foot whilst crossing rocks in sandals; this was cleaned and dressed.

Some expedition members suffered from mild dehydration and were treated with re-hydration solution.

Treasurer's Report & Accounts

Thanks to the kind support of the funding bodies, trusts and companies who supported us, the expedition accounts were balanced.

Expedition members made a contribution of £70 student/unwaged and £90 waged towards the costs of expedition. Members were also responsible for arranging and paying for their own travel to expedition, and contributing to the camp kitty for food and camp supplies. This meant participating in the expedition for 3 weeks cost around £250, in addition to the cost of personal caving kit. All of the student members of the expedition gained additional personal funding of about £50 from the AC Irvine fund to cover these costs, and the cost of kit purchase. Donations in-kind from our sponsors, with an estimated value of about £2000, are not included in these accounts.

Many of the costs of the 2008 expedition were shared with the "Julagua 2008" expedition, a separate caving expedition to the same area. This made many of the

costs lower than in previous years, although this was offset by the need to replace much of the club's expedition medical supplies which had become outdated.

Costs in the field for food and general supplies for base camp were shared between the two expeditions, with expedition members contributing €30 per week. The aim was to break even on this area of expenditure. A small deficit occurred, and this was split between the two expeditions.

Item	*Income*	*Expenditure*
Travel		
Fuel[1]		339.03
Ferry[1]		90
Tolls[1]		23.64
Landrover tyre repairs[1]		36
Equipment		
Camping stove		54.75
Gas for underground stoves		16.2
Trailer Repairs		105.18
Underground camp equipment hire		84.8
Dye Tracing Equipment		4.5
Petrol to collect donated rope		70
Tarpaulins & Gaffa Tape		105.96
Tacklesacks and Slings		449.93
Personal Kit		3385.22
Medical		
1st Aid Supplies		647.07
Admin & Printing		67.30
Publications		
OUEC		200
Expedition report		50
OUCC Proceedings[2]		100

Item	*Income*	*Expenditure*
Kitty		
Member's contributions to kitty	898.23	
Kitty expenditure		963.73
Income		
Ghar Parau Fund Grant	400	
Oxford University Society Grant	200	
Expedition council	1000	
Members Contributions	830	
Personal Kit Payments	3385.22	
Personal Medical Kit Payments	120	
Total Expenditure		6793.31
Total Income	6833.45	

1 – Cost shared between Canal del Montico 2008 and Julagua 2008 expeditions. Cost shown here is half the total cost, ie the amount contributed by this expedition

2 – Contribution to costs of producing OUCC's journal proceedings

Summary

OUCC returns from another expedition in the Picos De Europa mountains in a certain amount of debt. Firstly, a significant amount of beer is owed to the Sistema Julagua expedition, after we rather badly lost our bet for “who would get to Culiembro first”. Secondly, a significant debt of gratitude is owed to those who have supported the expedition, enabling us to return to one of the world's great areas for caving and cave exploration.

The long walk home.

Although another lead has been ticked off, the area continues to provide us with new challenges, new experiences, and sometimes new cave. Already plans are afoot for a return to the region, to examine leads left by the Sistema Julagua expedition. We can hope for better luck; but in the end, the mountain will decide.