# Speleology

Bulletin of the British Cave Research Association Issue 3, September 2003





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Carbon Dioxide in Limestone Caves and its Effect on Cavers

LED lighting: the Lumiled 'Luxeon'

Expedition Report: Matienzo, Spain 2002 Hidden River Expedition: China 2002 Book Reviews: Online Publishing



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Corrections & Clarifications

Front: Matienzo 2002. Clockwise from top:
Cubija Valley (Terry Whitaker)
Skyhook Passage, Cueva Vallina (Phil Papard)
Bill Nix at site 1740 (Juan Corrin)
Jenny Corrin & drip formation, site 1743 (Juan Corrin)

Back: Hidden River Expedition 2002. Clockwise from top:
Green pools in far reaches of Dashiwei Cave (Andy Eavis)
The way into Bai Dong (Pete Hall)
Jon Riley on rope in Fong Yen Dong (Stewart Muir)
Chen Lixin in the tree-rimmed shaft of Lao Ying (Simon Brooks)

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# Expedition Report: Matienzo, Spain 2002

Juan Corrin reports on the ongoing exploration in northern Spain. Also see front cover photos, and the Matienzo stand at *Hidden Earth 2003*.

An early Easter, but the weather was kind and fifty people turned up, including a group of five Danes. The highlights of exploration at this time included Martin Holroyd surveying 600m in downstream Cueva Vallina through five sumps, significant inlets being discovered in Cueva Hoyuca, Cueva Helechales being bottomed, and Hidden Hole being pushed close to Cueva Cefrales. Over 2.1km of new passages were surveyed.

In common with most of Europe, the summer weather was quite dismal. Near the end of August, it rained enough in 12 hours to bring the main river up from a low level to flooding the fields and producing a torrent from the mouth of Cueva Arenal. Despite the weather, over 2.7km of new passage were surveyed: the main extensions were in Cueva Vallina (1.33 km) and Hidden Hole (320 m).

Further speleological activities took place in October, November and over Christmas / New Year to bring the total passage length in the area to more than 237km spread over 1843 sites.

## Four Valleys System

Cueva Hoyuca saw a fair bit of activity at Easter, with pushing trips in two inlets, one at the start of the Gorilla Walk and the other, Windy Inlet, near the end. The first is found on the right of the passage before dropping into the water. A draughting dig through boulders leads to a 4m climb up. The passage trends upwards passing over the Gorilla Walk and ending about 30m above water level and 70m west of the starting point. Windy Inlet is a strongly draughting inlet about threequarters of the way along the Gorilla Walk. The passage is generally small to a 6m climb. Beyond is an excavated rift that leads to an aven that has been climbed to where the passage appears to finish close to site 253. The series is described as requiring SRT kit for 5m and 30m climbs.

Site **253**, a tight draughting rift, was subsequently excavated and work continued during the summer. Eventually, the cave 'went' to a dismal small passage with inlets that became too small after 100m or so. The cave did not drop much but has still to be surveyed. If an entry is achieved here, two or three hours might be cut off the lengthy trips to the end. The length of the Four Valleys System increased by 378m to 43,329m and then to 43,437m when the new *Roof Passage* was surveyed in the entrance series during the summer.

A lot of interesting, if small, under and above ground exploration was carried out above Cueva Hoyuca and Cueva Riaño during the wet summer. One area investigated centred around site 253 and a set of sinks and resurgences above the Gorilla Walk in Cueva Hoyuca. During a flood, a large quantity of water was seen to sink at site 1789, uphill of site 253. A small, draughting sink (site 1674), also below the main flood sink, was partially dug. Near to Chestnut Hole (site 102) and also above the Gorilla Walk, site 1793 was excavated to reveal a 5m deep pot, 3m diameter, with a bedding at the top connecting to a second entrance. A nearby draughting slot (1792) was dug for some 4m where continuations appear small. At Easter some work took place at site **1672**, on the side of a shakehole near to a shrine. This site was cleared of sandstone blocks to reveal a 7m pitch to an eye-hole. This is also likely to be an inlet to the Cueva Hoyuca.

A second area of investigation, higher up the hill to the south-east, centred on the two resurgences above sink **1618**. Thirty metres inside site 1617 a low passage was dug to open up a tight crawl into a chamber where progress could be made through calcited boulders. The second resurgence (1666), 50m to the NE, was pushed and surveyed (in inappropriate clothes) to where progress required flat-out crawling either in water or on a mud false floor. The possible sinks for these resurgences were discovered some 300m to the north and about 20m higher up the hill (sites 1787 and 1788). At an altitude 60m higher an open shaft (site **1790**) was found to choke 5m down and, above the

# An Invitation to Matienzo

If you haven't been caving in Matienzo yet, then you should! Original exploration and survey along with tourist / photography trips at all levels of length and / or difficulty are arranged during Easter and the summer, when the activities are backed up with an extensive library and computing facilities. Digging and walking (looking for new entrances) are also favourite activities. Most aspects of speleology are catered for whether people turn up in organised (club) groups, or solo.

For more information look at our web site www.matienzo.org.uk or email me – juan.corrin@matienzo.org.uk.

road, the boulder cap of shaft 1791 was removed and it was found to be 5m deep. The next valley north of 1788 holds site 1807, a low rock shelter. About 200m north, at site 1810, a 2.5m drop entered a small streamway and 4m of walking passage to a pool with no way out.

A number of holes were discovered around the downstream end of **Cueva Riaño** (site 105). The water in downstream Cueva Riaño drains into a sump and is next seen in the resurgence (site 575) some 300m to the west. After 150m on the surface the water then sinks into the top entrance of **Cueva Espada** (site 103).

A couple of sites were excavated just east of the reinvestigated upstream passages in Cueva Espada: site 1801 (a choked crawl) and site 1800, where a few boulders were removed to reveal a 10m pitch with a slope down to water.

Five further sites were investigated over the area where the sumped Cueva Riaño passages are thought to be. Site 1803 is a 1m high cave entrance to a 3m deep slot in the floor and a choke 6m in. A nearby, deep, vegetated depression has yet to be entered. In the valley running down to the resurgence, a depression under a chicken shed held an open, walk-in rift (site 1804). This dropped and turned left to a narrow, calcited, 5m high rift. The constriction was excavated to a couple of squeezes into the continuation that again became too small, with calcite deposits. The site could be relatively easily opened up with a generator and chisel. Thirty metres further down the valley at site 1805, a small drop is hidden by a wall and vegetation. At the draughting base, a few boulders were removed to enter a 10m long chamber, where various routes down a tight rift may be engineered in the future. Just north of the road in the same valley is site **1809**, where a small chamber has ways on that require enlarging.

Woman Cave (1630) in Riaño. Moving south-east along the base of the hill-side, site 644 was deemed draughting and diggable, and 50m further into the corner, site 1799 may have a possible way on under a right hand wall at the base of a 2m drop. The bouldery mess in the south-east part of Cueva de los Tres Niños (site 565) was reinvestigated without revealing any more passage.

In site **1289** near **Carcavueso** sink, the talus cone near the entrance was investigated and pottery was removed.

## North Vega, El Naso, Las Calzadillas and Cobadal

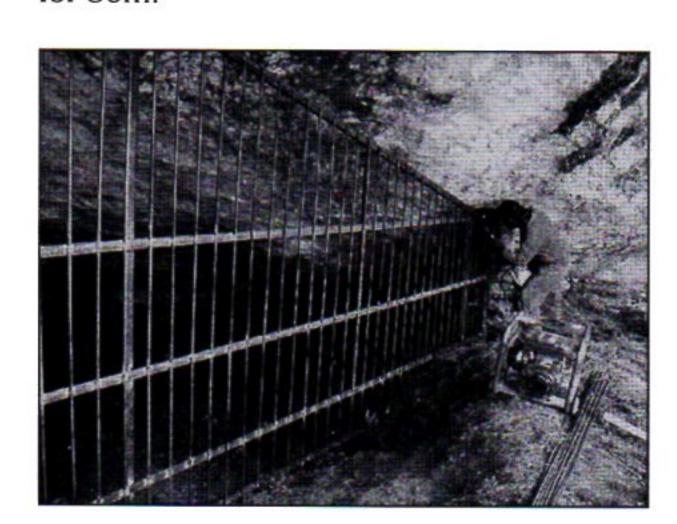
A small amount of activity took place on El Naso. In **Cueva ABI** (site 58), a complete resurvey was carried out. Some 250m south-west from the top quarry car park, site **1811** appears to be choked about 4m down but requires boulders to be removed for a proper investigation. Sites **1812** and **1813** are possible digs and site **1814** is a choked rift.

Digging continued in the **415** corner: **Pile of Pants** (site 1655) had some shoring installed and the survey for site **715** (some 60m to west) was completed.

A number of the pitches in **Torcón de** la Calleja Rebollo (Toad in the Hole) were bolted for SRT and 16m surveyed brought the length to 6486m. At Las Calzadillas, above the end of Toad in the Hole, site 1429 was excavated into two small chambers and Cueva Selvijo, site 1209, drops 15m with a length of 25m and may be worth digging. Further down the road towards La Cavada, site 1815 was exposed by road workings. No way on was found after the significant boulder-floored entrance passage split into a number of passages and choked in all directions. Immediately above this site, a depth of about 30m was reached in a free-climbed rift at site 1816.

The entrance to **Cueva Cofresnedo** (65) was gated at Christmas by Roy Mundy with a smart, welded, iron rod construction.

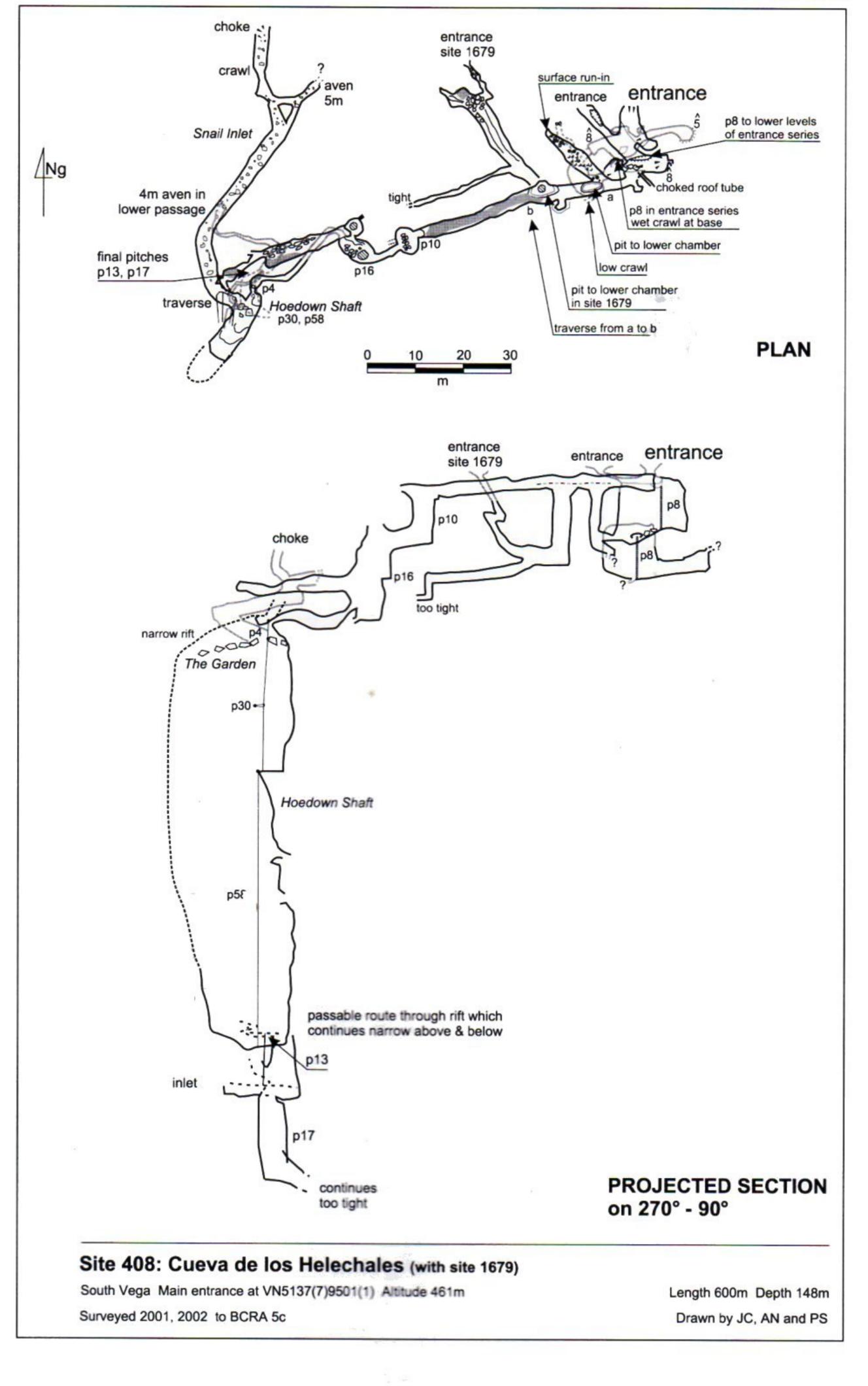
In Cobadal, the GPS was used to place some sites which are off our 1:5000 maps, including the main sink (**553**) and another nearby cave (site **1725**) which was also dug and explored in draughting passage for 80m.



After thousands of years of hunter-gatherer, iron age and medieval activity, Roy Mundy welds together the gated barrier for Cueva Cofresnedo. Photo: Juan Corrin.

# South Vega, Seldesuto and Alisas

Early on in the Easter trip, **Cueva de los Helechales** (site 408) was tackled up
with the prospect of linking down to **Coterón** (site 264) or going west into the
unknown. After pushing *Snail Inlet* above
the 88m *Hoedown Pitch* for 83 m, the
explorers found the base of the pot
became too tight after pitches of 13 and
17m. The cave ended in a disappointing
fashion, still 80m above Coterón.



Hidden Hole (site 458) continued to provide passage. A 32m pitch in the Sherwood Forest area dropped down to a short length of passage each side of the pitch and a further 8m drop to end at the deepest point, some 130m down at an altitude of 215m. Rather more substantial passage was found at the main level (about 255m altitude) where the Slip Sliding Away series rose up to the northwest over mud banks and a long false floor, to a chamber with tubes, further explored in the summer. This is close to the upper entrance pitches of Cueva Cefrales (site 42) and that cave was subsequently dug on a number of occasions, but no connection was made. Hidden Hole was

extended by 657m through the year bringing the length to 1368m.

The summer saw three trips into **Cueva Cantones** (TV Mast Cave). The aim here was to have a new team try to push down at the ends. However, more time is required for familiarisation before any new passage can be found and surveyed.

In Cueva-Cubio de la Reñada (site 48), various new explorations occurred. Mark Smith & Gavin McPherson dived in the upstream sump just after the Rub-a-Dub-Dubs gaining about 100m of underwater passage by the end of the summer. This is described as heading due west for about 100m and continuing in an

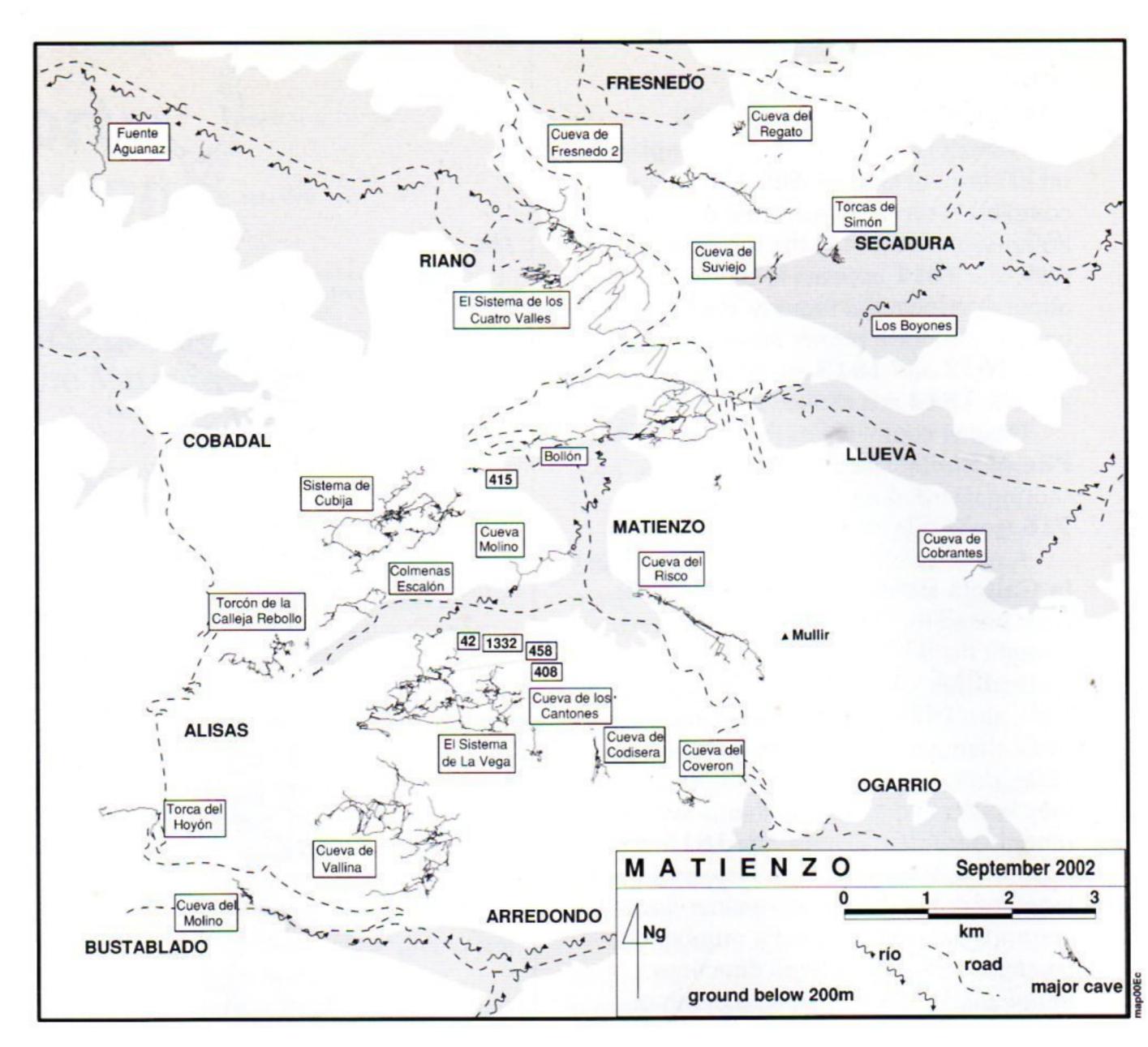
impressive oval passage 3m high x 5m wide with a sandy floor. Exploration in known passage 'behind' this sump revealed that there was a lot more water flowing out of this main sump than in any streams further in. Some checking out was done in the Castle Hall area: entry to a high level passage would involve a 10m climb but it can be seen to slope up with a rift going off; some 'new' passage was entered at stream level and on the Ramp. The stream passage was surveyed in the summer: Castle Hall now has the Moat of Doom with a length of 117m. Avens opposite Bootlace Passage entrance have attracted some attention as they are quite near to a possible connection to Coterón and possibly more passage heading west. Climbing continues around Itchy Crutch. The total length of the SVS is now 26287m.



Andy Quin in the Moat of Doom, Cueva Cubio de la Reñada. Photo: Pete Smith.

On the hillside above, various drops were checked out, continuing activity started at Christmas 2001 when Tiano showed a number of holes. Site 1715 was surveyed to a 40m long, sloping chamber with some reasonable formations. Shaft 1722 was revealed as a 35m deep pot. Site 1719 was excavated to reveal an 18 m-deep hole that requires further work. A 21m shaft (site 1713) choked at the base and site 1712 also choked, at 10m deep. The draught from site 1708 is supposed to melt snow in winter, but further work is required to enter small passage seen from the third small chamber. Site 1714 choked 9m down. The **Twin Streams** dig (1390) and Volcano dig (1391) continue to hold promise but require further work. Other small sites were explored: 1704, 1709, 1716, 1717 and 1719, where a 2m high, bottom entrance climbed up to a top entrance through 25m of passage.

At Alisas, well above Seldesuto at around 525m altitude, a number of sites were examined. The large shaft of **Torca del Rayo**, site 1305, was finally bottomed after a couple of visits. A 15m entrance pitch leads to a slope down to –25m. A further pitch at the base of the entrance



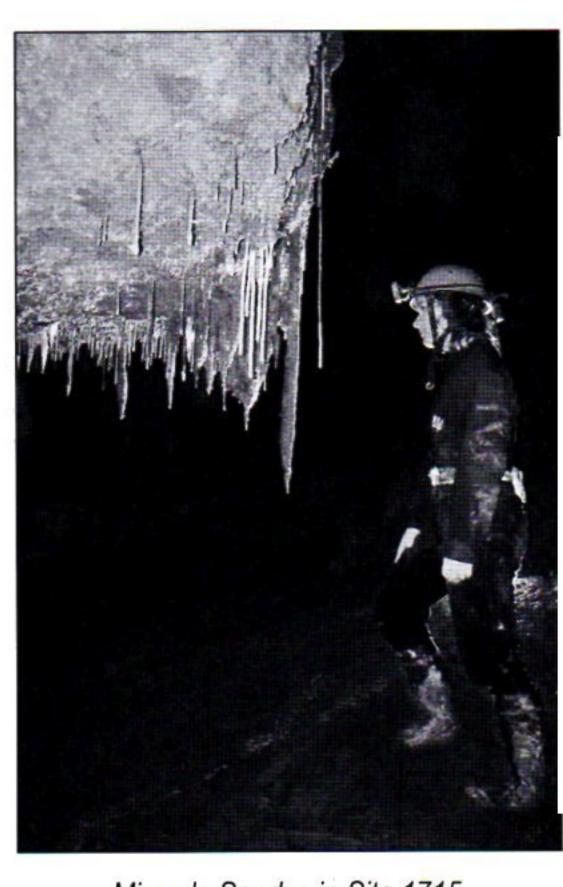
rope is a tighter 18m pitch that chokes at –33m. The newly discovered draughting shaft, site **1817**, sounds promising as stones dropping through a tight section below a 5m climb down produce a satisfying boom some 20m below. Shaft **1818** was explored down a 10m pitch in a 5 x 3m rift to a depth of 13m with a shallow side chamber with stal. The well-decorated chamber (site **1819**) was documented.

### Arredondo

On the other side of the hill, towards Arredondo, some exciting explorations occurred in **Cueva Vallina** (site 733). Above water, *Breakthrough Chamber* gave 96m of passage and, close to the bottom entrance- on the right hand side, *The Secret Series* revealed over 200m of cave at Easter and about the same in the summer. Also in the summer, 335m of 'new' passage were surveyed to the left of the lower entrance passages, linking to the pitch from the upper series.

At Easter a team of 22 sherpas helped Martin Holroyd to dive the downstream sump and continue Phil Papard's explorations beyond sump 2 to end up with 500m of passage above water (with some nice stream passage up to 15m high) and three more sumps. At the current end, the underwater passage is getting larger and descending, but a large, muddy inlet was explored above water until it split and became small.

A group of Swedish cavers in Vallina seem to have entered unexplored passage high above a bouldery chamber at the start of the summer explorations. This couldn't be found on a later trip but the team did start to push a 40m bolted climb around and up out of FN Passage. Albert's Grand Passage heads south east for 200m, where a pitch drops back into the middle level. Skyhook Passage continues beyond the drop with various ups and downs until



Miranda Sandys in Site 1715. Photo: Juan Corrin.

comfortable walking-size passage is reached that continues for 100m to a large shaft about 15m in diameter. This is likely to drop back into the middle Vallina level (it also continues upwards) but the phreatic level can be seen continuing on the other side of the shaft. The length of Cueva Vallina rose by 2.3km from 26,676m before Easter to 28,988m by the end of the summer.

A strongly draughting dig (1730) some 40m west of Vallina top entrance was excavated at Easter and summer but the way on appears to be too tight without further work. The Water Tank Dig (1820) further to the west was also enlarged over three days.

In **Cueva Molino** (site 727) a 15m bolted route was climbed up a calcited wall in a large chamber halfway along the cave. It ended at 3m of passage with a choked drop down.



Above & right: Skyhook Passage in Cueva Vallina. Photos: Phil Papard.

# Ozana and Muela / Mullir

In **Sima-Cueva del Risco**, engravings near the end of the *Pinto Gallery* were photographed. These are in the area where the remains of a giant deer *Cervus megaceros*, a mono-bevelled assegai point and possible prehistoric faunal remains have been found. (The passage chokes at a probable collapsed entrance.)

On the lower, western slope of Mullir, in Ozana a number of small holes were investigated: cave **1729**, **One Sock Pot** (1726), **JCB Pot** (1727) and **Probable Pot** (1728).

More substantial discoveries were found 200m above. On one particular trip, a team set out to explore known, but unexplored, holes. However, the destination was not reached because of ten unknown sites found on the way. These were sites 1731 to 1740. Site 1734 was a 25m shaft, site 1738 a 41m shaft, and sites 1739 and 1740 were about 26m deep.

Before the summer expedition, the new Sociedad Espeleológica Alto Duero (SEAD) website was seen and the various caves and shafts mentioned 'integrated' into the Matienzo database and descriptions. Some of the sites on Muela / Mullir are undoubtedly original explorations by SEAD but a number are repeats of explorations carried out by

Matienzo cavers years ago. The sites have been numbered 1762 to 1785. The locations are being checked, as a number of these appear inconsistent with the altitude. One walk in the summer around the Hoya de Yusa on Muela failed to find a number of them and indeed found one 200m away from its stated location. However, two sites were positively identified as 'old' sites - the Torca de Yusa (site 116, explored in 1975) is SEAD's M-11, which they have surveyed and extended, and site 135 (probably explored in 1980) is SEAD's M-14. On the same walk sites 1794 to 1798, five shafts up to 10m deep, were located but remain unexplored.

At the Ozana / Vega junction, in the small hum, **Torca de Casa Blanca** (site 1808) was excavated and explored down an 11m pitch to a low streamway with inlets. The end becomes very low at a possible choke / dig giving a length of 106m and a depth of 22m. The cave is similar to the nearby **Cueva del Mazo** (312), which also runs down over dipping sandstone beds. Both caves should resurge at site **368** on the northern side of the hum.

On the Llueva side of Muela, above the track that goes to San Miguel from the farm house, site **1743** dropped down



chamber. Twenty metres above, another wide open shaft (site **1821**) was only 10m deep and immediately choked. Further down the track, sites **1591** and **1592** were documented. Just uphill of the farmhouse a small cave (site **1786**) was entered down man-made steps. There were domestic utensil remains in a small pit beyond what appears to be wooden decking. To one side, nearer the entrance, is a straight 10m pitch to a 2 × 1m floor littered with more utensils and the remains of three rifles. There is also ammunition on the floor among the remains and boulders.

# Other areas 628

In Rada, near the northern end of the San Miguel valley, Mark Smith and Gavin McPherson explored through the sump at Easter into reasonable passage that gave a total length of 402m.

At the **Nacimiento de Campiezo** (site 1106), Gavin McPherson pushed beyond the end of Rupert Skorupka's line through an awkward squeeze into a chamber above. This soon became tight and the site now looks less promising.

Once more, there were more questions raised for the next year than were answered during 2002.



The entrance to site 1823. Photo: Juan Corrin.

### Conclusions

Over 210 sites were extended or newly discovered over Easter and summer, or had surveys updated, entrance photos added or entrances repositioned with a GPS. The documented sites now include sites 1745-1760 that are 'new' sites investigated in the area south of the Alisas-La Piluca ridge and documented by the French in Sous le Plancher 4, 1989. There is also mention of some of them by AEC Lobetum in Actividades Espeleológicas En Ruesga in Calar 5, 2000 published by Federación Castellano-Manchega de Espeleología. Torca de Blas (1760) has a full survey in that publication. Although out of 'our' area, these sites will have some interest to Matienzo cavers, particularly sites 1745 (with a 207m pitch close to Cueva Vallina) and 1760, another reasonable system with pitches, close to Cueva Vallina.

### Acknowledgements

We were welcomed by Pablo at Bar German and the expedition is grateful for the camping facilities and the use of the restaurant for computing and drawing up surveys. Unifix supplied the expeditions with SS 12 mm bolts and the Ghar Parau Committee recommended a substantial grant.

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### www.matienzo.org.uk

Matienzo 2001: Speleology 2, May 2003.

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Matienzo 1999: Caves & Caving 87, Spring 2000

Matienzo 1998: Caves & Caving 83, Spring 1999

Matienzo 1997: Caves & Caving 79, Spring 1998