

Ario Caves Project Expedition – 2019

Report

Picos de Europa, Spain

6th – 16th September 2019

Report compiled by David Rose

The view from near the Refugio de Ario. Photo by Martin Hoff



The Ario Caves Project's Mission Statement

To facilitate and further the exploration of caves associated in the region of Vega de Ario and the hydrology of Cueva Culiembro.

To investigate the potential for a hydrologically integrated, 'super deep' (over 1500m) system in the Massif Occidental of the Picos de Europa.

To provide a central point for organising access and collating information to these ends.

Expedition Members

David Rose

Yuval Sobolyev

Mark Sims

Martin Hoff

Sandy Wright

Reuven Zakai

Phil Rose

Rory Rose

Acknowledgements

We are greatly indebted to the Federacion de Espeleologia del Principado de Asturias (FESPA) for their support with the permit application, and to the Picos de Europa National Park for granting permission for this expedition to proceed.

Aside from these, we would also like to thank Ignacio, the warden of the Refugio Vega de Ario, and all of his team. As ever, we are very grateful for their friendship and hospitality.

Summary

This was a small, lightweight reconnaissance expedition, which was in the field for only nine days. Nevertheless, the expedition was successful in achieving the following:

- Pushing the cave known as 27/9 through a tight rift which had to be widened, leading to a new series of pitches which should provide a connection to remote areas of Pozu Jultayu (2/7).
- Exploration of E23 past the snowplug which formerly blocked progress to new pitches, so demonstrating that climate change may now be opening access to caves that were previously closed.
- Investigation of strongly draughting entrances in the Valle Extremeru.

Background

Oxford University Caving Club (OUCC) began exploring the caves of the Picos de Europa in Northern Spain for 57 years. Since 1979, exploration has been centred around the Ario bowl of the western massif. Xitu was the first cave to be discovered in this region (area 5 in OUCC notation; hence, Xitu is 1/5). Over the next three years, it was pushed to a terminal sump at a final depth of -1135 m, the deepest cave in the world explored by a British team at that time and the first over one kilometre deep. OUCC has been one of the main driving forces behind the exploration of the caves in the Western Massif of the Picos de Europa, and the successful link between Xitu and Cueva Culiembro (first made in 2010 by members of the Cave Diving Group) was a significant step forward in their knowledge of the area.

This created a system with a total depth of 1264 m. However, dye testing has shown that the potential for further connections is considerable. In 2018, the Ario Caves Project, which has inherited the task of organising the Ario expeditions, connected the Sistema de la Verdilluenga (C3 – C4) to Pozu Jultayu, thanks to a dive by Tony Seddon of the sump at the bottom of C4. Upstream leads in C4 remain to be pushed to a conclusion, and these may lead to a connection with F64, a cave close to the summit of La Verdilluenga. Other leads in the river passage of Pozu Jultayu may lead towards a possible connection with Sil de Oliseda, near the Boca del Joon, and with the very high entrance known as F80, almost 2200 m above sea level. While digging Choke Egbert at the bottom of Pozu Jultayu is a daunting task, it is hoped that this may be made easier by the discovery of a new, lower entrance. If a link could be established between Cueva Culiembro and Pozu Jultayu, the depth from C3 - C4 would be more than 1,500 m. Further upstream

connections could increase the total depth to as much as 1800 m. The aggregate length would probably be around 50 kilometres.



Plate 1 – Location of the Picos de Europa

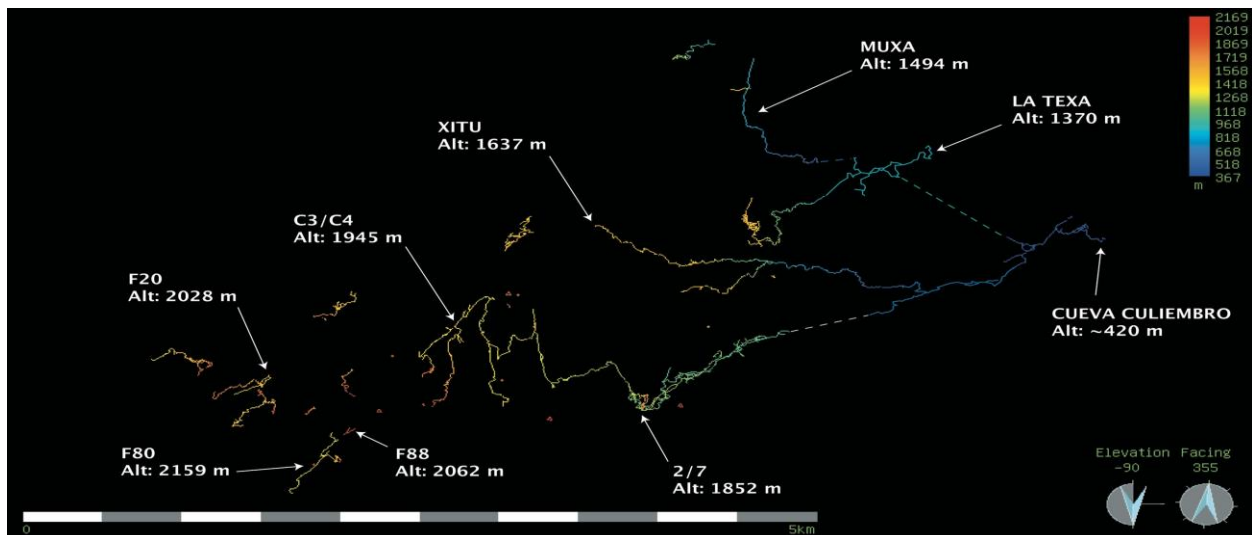


Plate 2 – The caves of the Ario bowl ('plan' survey by OUCC)

The Ario Caves Project is therefore a continuation of 50 years of Oxford University Cave Club's exploration in the Massif Occidental of the Picos de Europa. The "ACP" is an extension and expansion of this work, whose primary aim is to facilitate and further the exploration of caves associated with the Vega de Ario and the hydrology of Cueva Culiembro.

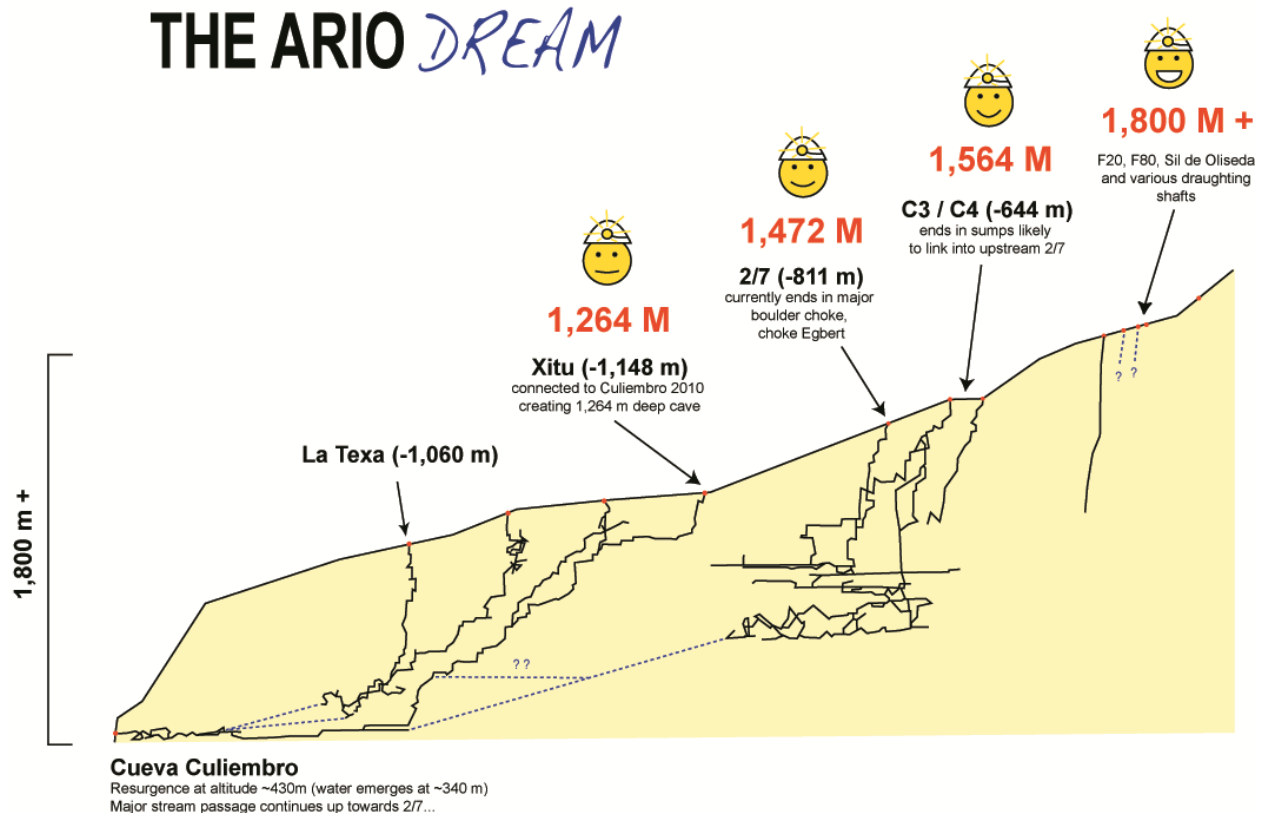


Plate 3 - The Ario Dream (pictorial representation based on OUCC surveys and compiled by Mike Bottomley)

The 2019 Expedition: Aims

The aims of the 2019 expedition were to investigate the strongly draughting cave known as 27/9, explored by OUCC down six pitches in the 1990s, to visit caves recorded as being blocked by snow, and to investigate possible lower entrances to Pozu Jultayu to give easier access to its terminal blockage, Choke Egbert.

Logistics

Most expedition members flew to Oviedo (Asturias) or Bilbao airports and then teamed up to hire cars to travel to Los Lagos de Covadonga. Some expedition equipment was brought out in additional hold luggage. In addition, one member drove from England via the Santander ferry.

Snowplug investigation

As with the rest of the world, the impact of climate change is evident at Ario. Snow levels are much lower, and this is most evident at La Jayada, the enormous open entrance visible from the path to the refugio. In 1980, when David Rose first looked at it, there was a flat surface of snow giving access to a large cavern. This has now become a steep 30 m rubble slope leading to a pitch. There was hope that La Jayada - which lies close to a major Pozu Jultayu inlet – might now be open. Unfortunately, after we rigged the entrance slope, we found that it was completely blocked by boulders at the bottom. However, in E23, on the slopes of Picu Gustuteru, we made more progress.



Plate 4 – David Rose on E23 entrance pitch. Photo by Martin Hoff

As Plate 4 shows, only a vestigial snowplug is now left in the entrance to this cave, which when last investigated during the 1980s was totally blocked by snow. We abseiled past the snow, 10 m below the entrance, and continued for a further 20 m to a solid floor. Beyond there was a walking passage with a strong draught. A second pitch of 7 m led to a further section of passage and finally a third 25 m pitch. In the big rift chamber at the bottom the draught emanated from a boulder choke, and for the time being at least, there is no way on. However, an important principle has been established: caves which were formerly blocked may indeed now lie open. Several potentially important sites now require further investigation. These include several entrances on the ridge between La Verdilluenga and Cuvicente, and F80, the highest known entrance in the area. In 1988 this was found to be blocked with snow at a depth of approximately 150 m, but the situation may well have changed – and if so, could lead to a connection with Sil de Oliseda and possibly an inlet to Pozu Jultayu.



Plate 5 – David Rose on the third pitch of E23. Photo by Martin Hoff



Plate 6 – David Rose in choked rift chamber at the end of E23. Photo by Martin Hoff

Exploration in 27/9

Also on the slopes of Picu Gustuteru is the cave known as 27/9. Expeditions in the 1990s and in 2017 explored this down six pitches to a narrow rift at a depth of about 150 m. The site seemed promising. It is a relatively easy 40-minute walk from the Refugio, and lies close to the C3 – C4 sump at the upstream end of Pozu Jultayu, which lies about 350 m below the surface. Merely to reach the normal Pozu Jultayu entrance involves a difficult walk of at least two hours. From the refugio it takes a day to reach the underground camp at the bottom of the entrance series, on a ledge above the bottom of the big shaft known as Just Awesome, where the main cave river enters. From there, round trips to the far upstream reaches took a minimum to 24 hours when the cave was being pushed in the 1990s. There were no suitable camp sites in the vicinity, but several promising inlets which may add substantially to the length and depth of the system if they can be explored more easily. Some may connect with other known caves,

including Sil de Oliseda. Hence, a connection between 27/9 and Pozu Jultayu would provide a useful 'back door' to permit further exploration of what until now has been a very remote area.

There is a strong draught in 27/9, and determined efforts to widen the terminal rift, Psychospeleogenesis, were made in 2017. These continued in 2019 over several days, spearheaded by Phil Rose, his son Rory, Rueven Zakai, Yuval Sobolyev, Sandy Wright and Mark Sims.



Plate 7 – Rory Rose in 10/9. Photo by Martin Hoff

Mark Sims and Sandy Wright finally broke through to the top of Foot Hang, a large, undescended pitch. They rigged this and descended for some 40 metres, split into two by a ledge. This pitch led to a further narrow rift, Ario Reality, but the pair managed to push their way through it on the day of discovery to reach the top of a further pitch of 12 m, Sound of Silence. Another pitch, Darkness My Old Friend, lay beyond, and appeared to be at least 50 m deep. This shaft was not descended, owing to lack of time.



Plate 8 – Mark Sims about to make the first descent of Foot Hang in 27/9. Photo by Sandy Wright



Plate 10 – Mark Sims on the ledge on Foot Hang, P 40, in 27/9. Photo by Sandy Wright

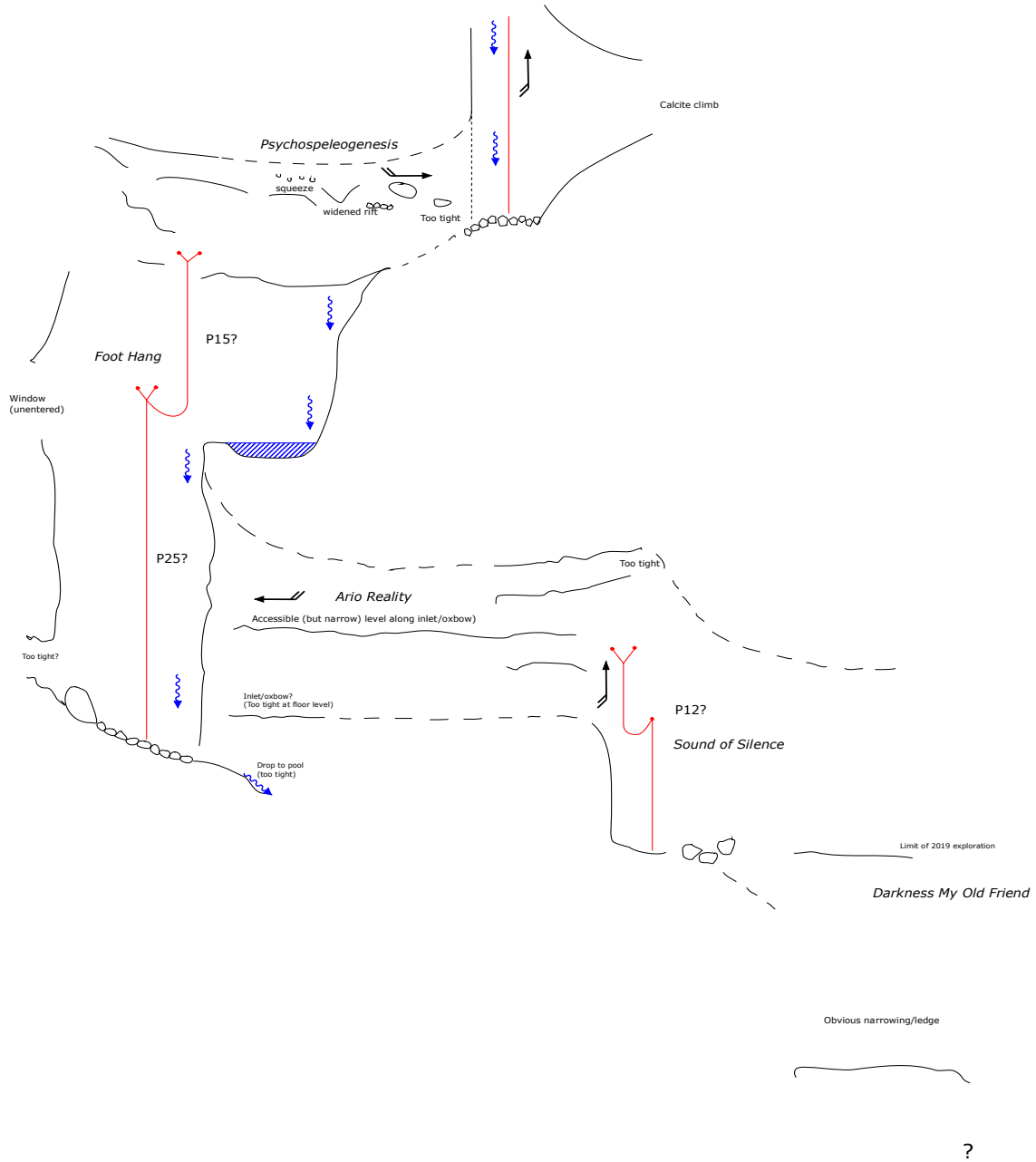


Plate 11 – Grade 1 survey of 2019 extensions in 27/9. Drawn by Mark Sims

Valle Extremeru

We also looked again at the strongly draughting, choked entrances in an area known as the Valley of the Dry Bones, which lies close to the downstream end of 2/7, and above the choke which has so far blocked a possible connection with the resurgence system. We concluded that if dug systematically, all would require an immense effort with uncertain rewards, and the use of large quantities of scaffolding. However, we did examine two entrances in the nearby Valle Extremeru, and both also emit a very strong draught, as does another cave on the hilltop above it, 10/9.

We felt all these caves might well repay further effort. OUCC explored 53/5 down a series of pitches to a conclusion in 1991, but the draught was lost in a big passage in the vicinity of the first pitch. It is possible that a bolt climb here may lead to a continuation. Elsewhere at Ario – notably in the Teresa Series in Xitu – old vadose and phreatic passages, presumably formed when the Cares Gorge was much less deep than today, have proved to be critical links between sections of vadose development. There is a large abandoned passage in Pozu Jultayu, The London Underground. A way on in 53/5 above the main pitches may be significant.

Objectives 2020

With 27/9 rigged and wide open, left at the top of an undescended pitch, it is hoped that this year, a connection will be opened up to Pozu Jultayu. Several important leads exist at the upstream section of its river tunnel in what was a very remote area of the cave, which may lead to possible connections with Sil de Oliseda and/or F80. The opening up of 27/9 will allow them to be accessed much more easily. The leads in the Valle Extremeru, especially in 53/5, will be pushed, in the hope that the large phreatic passage there may lead towards the downstream area of Pozu Jultayu, close to Choke Egbert. Finally, strong, unfinished leads remain in the Sistema Verdilluenga. An underground camp will be established in this cave as a base for completing bolt climbs and other leads in the further reaches of the system.

Further information

Further information can be found at the following links:

www.ariocavesproject.com

www.oucc.org.uk

www.facebook.com/ArioCavesProject

With thanks to Ignacio and all his staff for their superb hospitality!