

YCR 1999

CAVE LEADERS REPORT

Following on the success of YCR '97 it is almost inevitable to ask was YCR '99 better; but this of course is not a helpful line of questioning. Each expedition was different; each had its good points and its bad points. The important fact is that in caving terms there has been a progression, an increase in knowledge – new caves visited, new contacts made and a better understanding gained of the response of the caves to rain.

The transport problems of last year were greatly reduced by having an extra vehicle (a minibus with 9 seats) as well as the land cruiser at our service. For most of the time we also had a car belonging to one of the Romanians available. Combined with a smaller group size this made planning much easier.

The initial plan was to divide the 12 students and 7 leaders into three different groups every couple of days. One group was to work on a long-range project – camping away from base. Another group working on a short range project returning to base each night; and the other group on camp duty or working on the geography projects, or visiting some short local caves. This system worked reasonably well, except for the second week when several of our Romanian guides had to leave us for a few days.

Several new areas were investigated, and are described on the following pages:

1. The southern part of the Banat area.
2. Polovragi gorge area.
3. Sohodoli gorge area.
4. Pestera femeii (upper section of Topolnita)
5. Pestera Curecea.

Several caves visited previously on the last trip (descriptions of these caves are available in YCR'97 report) saw repeat visits:

1. Pestera Closani (of course!!!)
2. Pestera Lazului. (the end of the survey was reached, and further passages investigated)
3. Pestera Martel. (sumped some distance after the pitch)
4. Pestera Bulba. (entrance passage sumped)
5. Pestera Zaton. (mud pit full of water)
6. Ripa Vinata.
7. Cioca cu Brebeni.
8. Pestera Vacilor.
9. Topolnita through trip.
10. Pestera Le de la Salitrari

Water levels were generally higher than in 1997. Whether this is normal for the month of June, is un-certain. We were told that there had been heavy rain during May. However this did give us a chance to observe the caves responding to different water levels. The biggest disappointment was that we could not enter the Bulba system at all. Several attempts were made on this resurgence cave, but the water levels and flow rates made access impossible, but it was good fun trying in lovely warm water. Interestingly, at the start of our visit, lake Zaton (a Turlough), which supplies the cave, was half full and the water coming from the cave was clear. Later as the lake emptied, the water became extremely sediment laden, like 'liquid chocolate'! We assumed that this was due to the streams feeding the lake cutting channels in the lakebed sediment as the lake emptied.

In the same area, the mud pit in Zaton cave, was found to be half full of water at the beginning of our visit. Although this is the lowest point in this high level cave, it must still be someway above the active levels. (perhaps some unusual hydrology in action!!)

The Motru Sec valley was never dry, as it was in 1997, but the entrance series to P.Martel, was always open, although there was water in one section on the last trip. Further in the cave was sumped at the siphon-cu-emissar, the level dropping slowly over our stay. P.Lazului also had static water in some places, although the short section of streamway was not in flood. The pools of water were extremely cold, and these levels also dropped slowly over our stay. It would appear that these caves are affected by annual regional water levels, more than local run off. It is assumed that Martel must have an active level of immature passage, below the main passage. The response of Ripa Vinata (an active stream cave) remains unknown as we cancelled a trip to this cave after heavy thunderstorms.

No underground science projects were undertaken on this expedition, but support was given to Siliviu Constantin (Bucharest Institute of Speleology), in collecting stalagmite samples for dating purposes. Samples were taken from many of the caves visited, which caused some lively debate amongst the participants.

GEOLOGY AND CAVES IN MEHEDINTI AREA, ROMANIA.

The Carpathian Mountains of Romania form part of the Alpine mountains extending through Europe from Spain and France. These mountains have all been formed by movements of the earth's crust and are known as fold mountains. The process which has formed these mountains began 60 million years ago when the African continental plate drifted north and collided with the European plate. This slow collision has fractured and twisted many types of rock and pushed them upwards to form "fold" mountains.

In the Mehedinti area of S.W. Romania the mountains are formed mostly of granite and limestone. Granite is an igneous rock formed by the cooling of a large mass of molten rock deep below the earth's surface, the granite here was formed during an even older period of mountain building. All the overlying rocks were eroded away until the granite was exposed at the surface. In the Cretaceous period (about 100 million years ago) the exposed granite was submerged below a shallow sea. Limestone was formed on this sea bed from the bones and shells of the creatures living in the sea, before both the old granite and the new limestone were folded and fractured by the Alpine movements 60 million years ago.

The area around Closani village is still geologically active, in 1994 there was an earthquake measuring 5.4 on the Richter scale. These are the last rumbles of the formation of the mountains, of the great pressures and faults that have cracked the earth's crust and pushed areas of granite and other rocks to the surface in a mosaic like pattern with the limestone. The underlying geology can often be recognised by distinctive vegetation and landscape features.

While these earth movements continue and the mountains are being pushed upwards, the processes of erosion also continue to wear away the landscape. The deep wooded valleys of this area have been formed by rivers slicing through the slowly emerging mountains over millions of years. The granite and other rocks form the catchment areas for rivers and when these rivers reach limestone areas the water will begin to dissolve the limestone and so begin the process of cave formation, these are called allogenic rivers.

With the passage of time rivers will continue to cut downwards and valleys deepen. Often caves are left as dry or fossil caves high up on the valley sides, eg P. Closani was formed by the Motru river but is now 70 metres above the present river level. This cave may be 2 million years old and represents a fragment of the river's course at that time. It is often possible to recognize a sequence of caves on the side of a valley which may indicate several stages of the formation of the valley, eg P. Brebeni - almost on the hilltop; P. Closani - on the valley slope; and P. Vacilor - a semi active cave at the present Motru river level.

Where there is a thick sequence of limestone a single river may form a multi-level cave. A series of passages may form at the initial river level, erosion of the landscape outside, or uplift of the land surface produces a lowering of the water table. This allows the river in the cave to cut down to a new level where a lower series of passages will be developed. The different levels can sometimes be dated by speleothems. In P. Topolnita there are 25 km of passage developed on four interconnected levels by the confluence of two rivers.

The size of a cave passage is determined by several variables particularly volume of the river and time. In this region the rivers are often large fast flowing mountain rivers, especially in spring when the snow melts and can move large amounts of boulders and gravel. This bedload adds considerably to the erosive power of the river within the cave and the cave will develop by mechanical as well as chemical breakdown of the rock.

DESCRIPTIONS

PESTERA DIN DEALUL CURECEA

LOCATION - About 25-km southwest of Baia d'Arara, close to the village of Balta, and about 80 minutes drive from Closani. From Baia d'Arara, follow the road past p.Bulba and p.Zaton to the village of Balta. A right turn onto a rough road crosses a vast meadow after 2km. A 10-minute walk to the southwest across the meadow passes a couple of small sinkholes, before starting to rise onto a small hill. The entrance is on a large shake hole on this hill.

DESCRIPTION

The entrance is a 10m pot, which can be easily climbed with just a lifeline, this enters a large phreatic tunnel leading in two directions. To the right, in an upstream direction, a passage 2m high and 5m wide leads past mud banks and waist deep pools for 200m to a boulder choke close to the sinkholes on the surface.

The main part of the cave is to the left in a downstream direction. The passage quickly assumes impressive dimensions upto 8m diameter. The floor is coarse gravel and small boulders. Initially there is a lack of stalactites, but this changes about 300m from the entrance where a higher level chamber can be reached by a free climb from either side of the main passage. A short distance further along the main passage Bulls balls passage leads off to the right (named after a distinct stalactite formation in the main passage) this is a short side passage becoming too tight. The main passage continues to get larger until it divides into two levels, the higher level passage on the left rejoining at a 4m tricky freeclimb after 200m. Shortly after this deep static water signals the last section of the cave. Without bouancy aids or wetsuits and uncertain as to how long this section was we made a tactical withdrawal (it seems there is about 100m of deep water altogether). If the lakes are crossed it is possible to swim out of the resurgence.

PESTERA FEMEII (TOPOLNITIA SYSTEM)

LOCATION - This cave is located about 30-kms southwest of Baia d'Arara and is about 2 hours drive from Closani. From Baia d'Arara, follow the road past p.Bulba and p.Zaton to the village of Balta continue through the village for another 10 km to where a right turn leads to the Topolnita area.

Topolnita is the third longest cave in Romania at 25 km length and contains passages on 4 levels. Pestera Femeii is a separate cave on an upper level and overlies many other passages. The entrance is located about 10 minutes walk from the road following a precipitous path 80 m up on the cliffs overlooking the blind valley of the Topolnita river where it enters the spectacular main entrance.

DESCRIPTION

The original walk in entrance has been walled up leaving just a bat grill and a small locked hatch entrance. The lock is very complex and takes about 30 minutes to open. It leads into a walking sized passage through some small chambers to a bridge! This was fitted after a caver died on the traverse over a lower passage. Easy passage leads on through 3 large chambers, the last chamber requires a climb and exposed traverse on the wall at La Coarda. Beyond this is the start of an enormous passage – Galerie Racovita

stretching on for 3km and averaging about 15m high and 10m wide. It is superbly decorated, especially with stalagmites and curtains; each section of the cave seemingly more beautiful than that before. Many of the stalagmites are spectacularly tall and thin, especially the “Marea Luminari” *The Big Candle*. This is about 6 mtrs and only 20cms thick. Visitors should bring a good supply of water for drinking and for carbide. Total trip time: 6 hours in cave.

PESTERA MUIERILOR (WOMANS CAVE)

LOCATION - Polovragi is a small village about 40km east of Tirgu Jiu, and it is about 2 hours drive from Closani. P. Muierilor is a show cave about 5km west of the village in the first valley.

DESCRIPTION

A well decorated show cave. As the visitor walks along, there are some quite low passages, the visitor is sometimes forced to the verge of crawling before coming into some spectacular chambers which are well decorated. The formations in the chambers are very old and very dry. There are two distinct levels to the formation of the cave. The lower level is about 10 meters below the show cave section, and is still active. We did not visit this section of the cave due to water level conditions. The show cave is a fossil passage.

P. muierilor plays host to a huge bat colony, thus there is a vast amount of guano deposited along the cave. In one of the chambers, the visitor is subjected to a wall of steam as they enter it. The cave also displays the remains of a brown bear that once inhabited its domain. Bones of a pre-historic woman were also found in the cave, but the bones are now on display in Bucharest.

The cave derives its name from when the Turks were in battle with the Romanians. Whilst the men fought in the conflicts, the women would hide in the cave with their children, and knit jumpers for their spouses.

Overall, the trip into the cave is very pleasant, and it gives a good insight into the show caves of Romania. (There is only one guide however, and a visitor to the cave may find himself or herself waiting for up an hour before the guide can take them on a trip. Bring plenty of sun-cream!!)

POLOVRAGI (INFINITE CAVE)

LOCATION - Polovragi is a small village about 40km east of Tirgu Jiu, and it is about 2 hours drive from Closani. P. Muierilor is a show cave about 5km west of the village in the first valley.

In the same direction, there is another show cave called Polovragi. This cave is in a spectacular gorge, which cannot be missed. At the foot of the gorge there is a convent. Just before the convent, there is a high road to the top of the gorge. The cave entrance is gated. A key may be obtained from the Emil Racovita Institute, Bucharest.

DESCRIPTION

Another show cave with both an active and inactive level. Most of the cave beyond the show cave section consists of low passage where the visitor is frequently forced to their knees. The floor is uncomfortable, so knee pads are advisable!

On journeying through the cave, there is an abundance of cave coral and in some places, spectacular cave pearls and crystalictites can be seen. The cave is a maze so route finding is quite difficult at times. Another problem for route finding is the fact that the survey of the cave is not quite accurate, and once inside the cave, there are 100's of arrows showing the way on! (To where sometimes is quite un-known!)

The Infinite cave gets its name from legend, where a dog travelled from the entrance of the cave to Transylvania, some 300km away!!!

At one stage the passage comes to a tee-junction to the right the passage is known as "suffocation passage" due to the fact that CO2 levels are very high. The original explorers of the passage came back with tales of nausea and headaches; we took the left branch! On entering the cave it would be advisable to go with a good guide as due to the nature of the cave and the inaccuracies of the survey (what survey?) it is very easy to get lost. The through trip of the cave takes about 4.5 hours and the exit is about 1 km further up the gorge although the exit is gated it is possible for a caver to squeeze out between the bars. (John Sweeney says he won't go back!)

BANAT AREA

This is the largest limestone area in Romania, and is located in the southwest of the country, stretching north from the Danube to the town of Resita. In the north are the extensive caves of P.Comarnic and P.Buhui. However in the south, the cave systems are not as well developed. The area is quite remote consisting of large areas of beech covered hillside. Locating the caves without a local guide would be impossible! Silviu Constantin has spent many years studying the geology and karstic development of this area. The nearest town is Moldova Nua on the Danube, which is a 5 hours drive from Closani. A short drive inland, leads past a huge opencast copper quarry. Our campsite was a further 5kms up a rough track. Four caves were visited, and are described below, however detailed descriptions of their locations are not given.

GAURA HAIDUCEASCU (OUTLAWS CAVE)

A small stream leads into a blind valley containing a large cave entrance, 10m wide and 5m high. The cave passage continues with similarly large dimensions with several high level ox-bows and a "suspended" passage. Lots of guano indicate a large bat population. The sand has a beautiful sparkling appearance due to mica washed in from crystalline rocks in the stream's catchment area. The stream passage shows a dramatic change about 150m into the cave where the limestone changes to a less soluble type and the passage reduces to crawling size. This can be followed for 500m through to a resurgence.

PESTERA CU LACURI (CAVE OF THE LAKES)

A resurgence cave located above an impressive tufa dam waterfall. Between the dam and the cave the stream meanders over a flat valley floor and has formed a series of open-air gour pools. The entrance is a wriggle over a pool into a series of ascending phreatic passages; the route is not obvious with a series of short narrow rifts, leading up into higher levels. The end is a deep sump where the water level is 5m above the entrance. There are some lovely formations; Silviu took two of them!!!!

PESTERA POLLEVA

In the valley of the same name, which begins as a broad flat-floored granite valley but then changes to a narrow wooded gorge as the river crosses onto limestone. The water sinks into a choked swallet, which feeds the cave. A surface survey was made from here along the gorge to the resurgence to ascertain the possibility of extending the cave. The cave itself is about 800m long, the first 100m from the resurgence being of stooping size in clean white limestone. This leads to a larger passage with a lot of meanders and formations. Silviu showed us some very thin stalagmites, some obviously less than the theoretical 2.5cm diameter limit. More photographs and samples taken.

GAURA CU MUSCA

Located just above the main road beside the Danube, about 30km down river from Moldova. Two short large phreatic passages, with a small misfit stream of unknown origin. Total length: 250m, its main feature seems to be a large bat population.