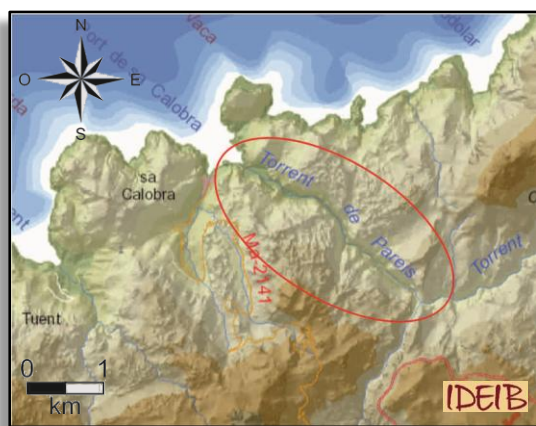


MA09GE

644004

Karstic canyon of the Torrent de Pareis

Location



Municipality:

Sóller

U.T.M. coordinates
(31N ETRS89):

X: 485757
Y: 4409563



Difficulty and duration



60 min

Access

The best-known access begins at the houses of Escorca, at p.K. 25,2 of the Ma-10 road between Lluc and Sóller. This is a marked path that descends from the houses to the bottom of the Torrent de Lluç in the vicinity of S'Entreforc, the start of the Torrent de Pareis.

Reaching S'Entreforc takes about 1 hour, and the total duration of the excursion is 3-4 hours.

Principal interest

Geomorphological

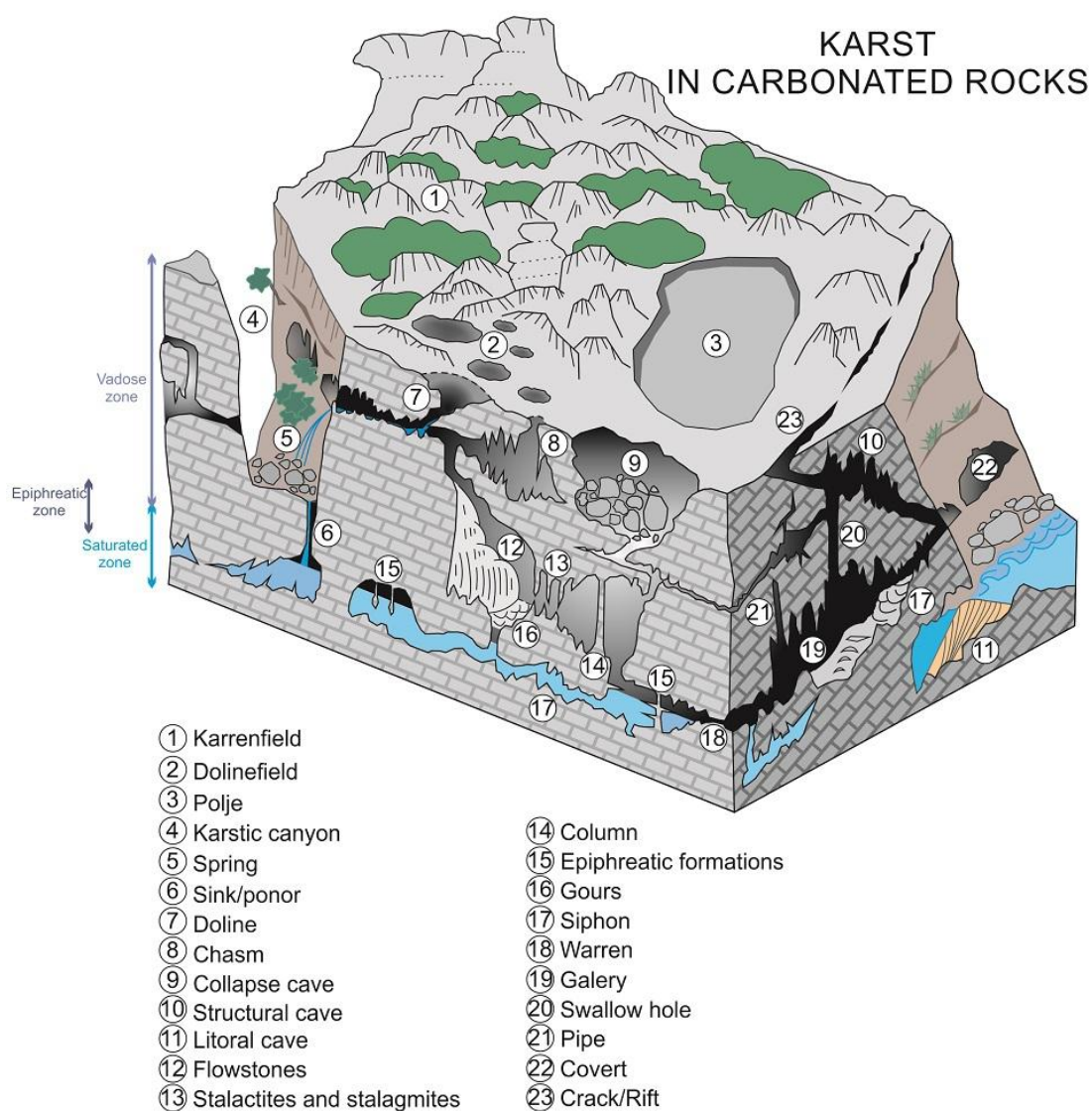
Secondary interest

Tectonic, stratigraphic, paleontological

Description of the locality

The Torrent de Pareis constitutes one of the classic excursions of the island of Mallorca because of its scenic beauty and natural values. Geologically speaking, it is very remarkable as it is the largest karstic canyon in the Balearic Islands.

The Serra de Tramuntana is formed by limestone rocks whose main component, calcium carbonate, tends to be diluted through the fractures by rainwater. This gives rise to a special landscape called karst, with an abundance of caves, chasms, karren and dolines.



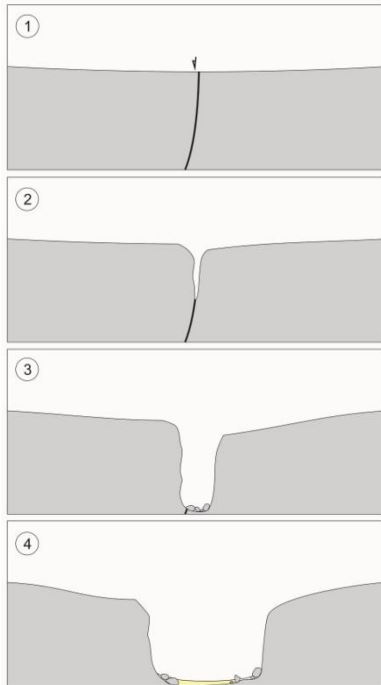


Diagram of the formation of a karstic canyon.

Torrents crack in the rock, taking advantage of the fissures. With the passing of many thousands of years they finally excavate gorges with vertical walls called karstic canyons (see the diagram of their formation). This category includes the Torrent de Pareis, located in the karst of Escorca with walls composed of limestones of the Lower Jurassic (200-185 Ma).

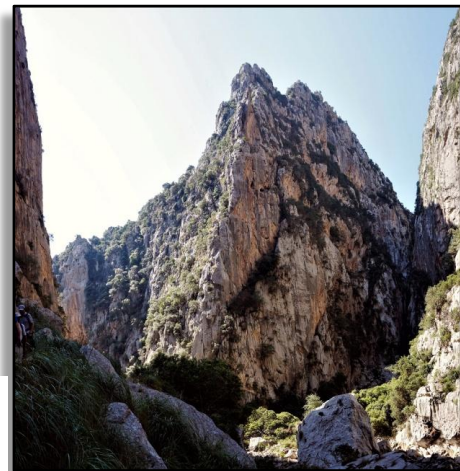
Although karstic canyons are relatively common structures in Mallorca, especially in the Serra de Tramuntana, the Torrent de Pareis has dimensions that surpass all the others because it derives from the union of two important watercourses: the Torrent del Gorg Blau, coming from the southwest, and the Torrent de Lluc coming from the east.

In the route from the zone of S'Entreforc (start of the stream bed) to S'Olla (its end), we can not only admire its impressive walls but also observe a set of geological features typical of the karstic torrents of the Serra.

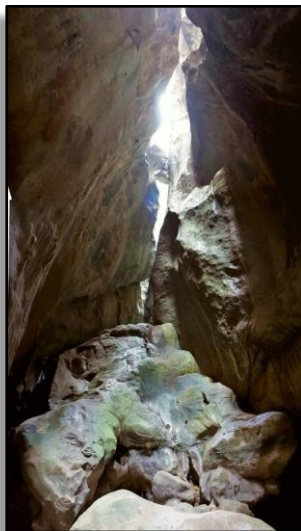
There follow a comments on some of them, as they appear along the route.

S'Entreforc: it corresponds to the confluence zone of the Torrents del Gorg Blau and Lluc (also named d'Aubarca). This is the birth of the Torrent de Pareis.

This is one of the zones where erosion has had most impact, sculpting some of the tallest walls of its route, some of which reach 250 m. Observing carefully the limestones that form the cliffs, it is not difficult to detect the vertical striations caused by rainwater corrosion.



Panoramic view of S'Entreforc, with the Torrent de Lluc (left) and the Torrent del Gorg Blau (right).



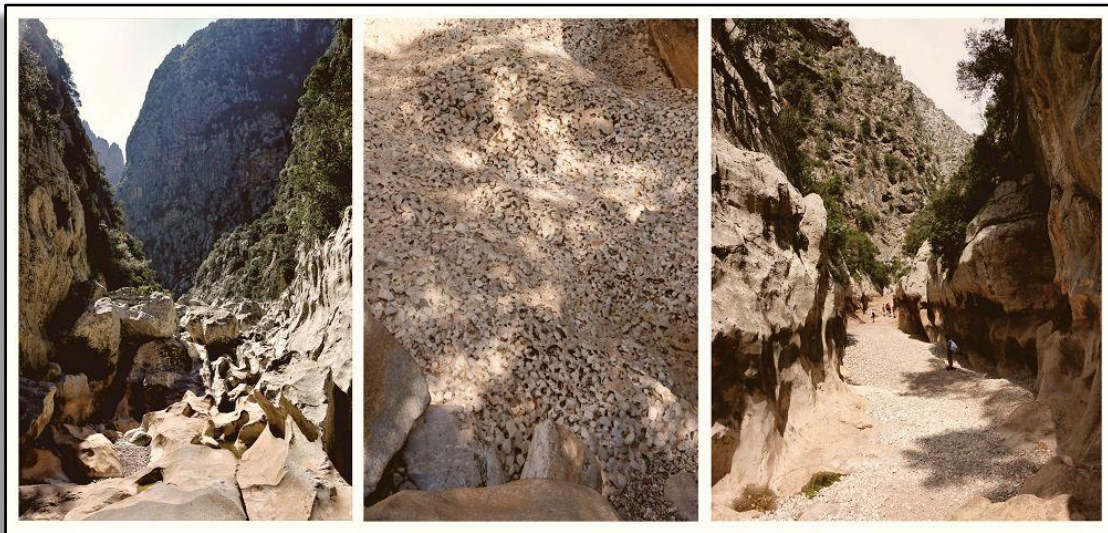
Sa Fosca: walking some 5 minutes in the Torrent del Gorg Blau we will reach the final section of Sa Fosca. Its name ("the dark") refers to the fact that the sunlight never enters it directly, being in penumbra even at midday. This is due to the narrowness of the bed, combined with the depth and verticality of its walls, which even come together at some points.

In addition to the grandeur of the place, a notable feature is a large parietal flow that covers the fallen blocks in the stream bed.

Final section of Sa Fosca, with a spectacular parietal flow.

From this point on, the route becomes more difficult because we have to clamber over and around the large blocks that have fallen into the bed from the cliff walls flanking it.

Gorg des Capellà: this gorge is one of the many along the route, its features being common to all of them. These are zones where the stream bed narrows and the large blocks of rock suddenly disappear, leaving the substrate visible. This tends to be the limestone itself, stripped bare and polished by the action of the water currents, leaving a typical pattern formed by concave morphologies called gouge marks. In some zones this substrate corresponds to a conglomerate, rock formed in turn by fragments of other rocks. This tells us that in the past the stream must have been inactive for a sufficiently long time for the pebbles that then dotted its bed to become cemented. As we continue onwards, the substrate is covered with a large accumulation of small pebbles, similar to those forming the conglomerates. In the walls of the gorge we can observe the water level reached in flood periods.



Start of the Gorg des Capellà, with gouge marks, detail of the conglomerates and intermediate zone filled with gravels.



Cova des Romegual: this is a cave with a wide entrance situated on one side of the stream bed. Its name comes from the *romeguera*, a bramble that grows in the area. The mouth has a characteristic fig or pear shape, very narrow and prolonged upwards and wide at the base.

This is a cave that developed from a vertical fracture of the rock affected by the karstic processes, which weak the rock and cause rock falls. It is a collapse cavity like many others we will see along the route.

Cova des Romegual and its characteristic pear shape.

El Degotís: it is an emergence of water through a crack in the rock where a small travertine concretion has formed. This type of spring is frequent in the walls of karstic canyons. Due to the drastic lowering of the pressure of CO₂, the calcite precipitates developing travertine.

S'Olla: this zone constitutes the end of the torrent. In strong contrast with the narrow landscapes that precede it, at S'Olla the land widens out considerably, forming a large, flat valley surrounded by vertical walls that give the place its name ("saucepan").

At this point the substrate consists of pebbles carried along the stream bed which finally accumulate in S'Olla because the energy of the water decreases.

Reaching the coastline, the walls narrow again. It is at this point that the stream bed ends in a pebble barrier (called a *codolar*) which normally separates the stream bed from the sea. However, after periods of heavy rain the flow reactivates and breaks through the barrier to enter the sea.



Karstic emergence of Es Degotís



Zone of S'Olla and mouth of the Torrent de Pareis

In addition to these particular features of each zone described above, along the route it is very common to observe potholes, hollows in the rock formed in places where one or more stones have been trapped by the current, spinning around and finally eroding the substrate to the point of perforating it.



Various potholes along the route

For more information

Mateos, R.M.; Ezquerro, P.; Azañón, J. M.; Gelabert, B.; Herrera, G.; Fernández-Merodo, J. A.; Spizzichino, D.; Sarro, R.; García-Moreno, I. & Béjar-Pizarro, M. 2018. Coastal lateral spreading in the World Heritage Site of the Tramuntana Range (Majorca, Spain). The use of PSInSAR monitoring to identify vulnerability. *Landslides*. DOI 10.1007/10346-018-949-5.

Recommendations

It is advisable to wear a hat and footwear with good grip because the rocks are sometimes slippery (preferably hiking boots). It is essential to take plenty of water, especially if making the visit in summer.

The route is marked but it is relatively easy to get lost, which can be very dangerous. If you don't already know the route, it is advisable to have a map of the zone that marks it.

The route can be walked at any time of year, but because it is a torrent, it must not be done under any circumstances if there is a risk of heavy rain in or near the area. At the mouth of the Torrent you can enjoy a relaxing swim at the beach.

Don't miss the opportunity to visit the nearby SGI of Cala Tuent or to follow the Itinerary of Geological Interest of Sa Calobra-Sa Costera.