

Pibeste Nature Reserve geology

by Gabriel Capestan

Located halfway between Lourdes and Argelès-Gazost, the Pibeste massif has been classified as a "Nature Reserve" since 1994. The steepness of the slopes, the presence of steep cliffs and vast forests make it a wonderful area for flora and fauna.



Aerial view of Pibeste massif

The summit of Pic de Pibeste (1349m) is a superb belvedere from which the plain of Lourdes , Gave de Pau valley and some Central Pyrenees summits (Pic de Midi de Bigorre, Monte Perdu, Vignemale, Balaitous) can be admired.



The Pyrenean landscape from the top of Pibeste

Pibeste Massif southern flank is made up of Jurassic geological formations which are based on a more recent Cretaceous formation. This phenomenon is explained by the presence of an overlapping fault that separates the North Pyrenean zone. This fault is considered to be the limit between the Iberian plate and the European plate.

During our ascent, our guide told us the story of a man, Raymond de Carbonnières who, in 1802, reached the summit of one of the most famous mountains of the Pyrenees: Mont-Perdu. At the top, this man made an exceptional discovery: at 3355 meters above sea level, he picked up a fossil of an underwater species! He therefore deduced that in the past, some Pyrenean territories had once been part of a seabed!



*Louis Raymond
De Carbonnières*



The Mont-Perdu

During the hike, we could note the presence of several types of characteristic rocks, thousand-year-old witnesses of an important seismic and climatic activity.

First, there are the large erratic boulders, such as the granite transported by the Quaternary glaciers. The last being visible on the course at more than 1100m, we can think that the glacier could reach 900m thick!



Erratic boulders

Dolomite, then, which is a massive, dark, almost black rock. When you break it, you can smell a characteristic rotten egg. The rock was deposited (163 million years ago) in a lagoon or shallow and poorly oxygenated sea. The dark colour is due to the abundance of organic matter (algae or other organisms). Generally porous, they can constitute petroleum reservoirs.



Dolomite

A little higher in the ascent, we could also find dolomitic breccias, which resemble natural mosaics made of sedimentary materials, transported over short distances.



Dolomitic breccias

Strongly resembling the dolomitic breccias, we could find light gray limestone with pink variegations. This limestone is characteristic and marks the transition to the upper Lias (-200Ma).



Multicoloured limestone

But in this environment so characteristic of prehistoric ages, man settled in order to tame this nature, which is sometimes hostile. Thus, we passed by a stele reminding that a landslide had devastated part of the village. On December 17, 1906, torrential rains caused a landslide, and a gigantic flow of mud and rocks descended on Ouzous village. Two houses and their inhabitants were entirely buried two other houses were three-quarters destroyed. Nine people died in what the people of the village still call "a disaster" today.



The stele recalling the disaster