# NATURAL MONUMENT OF NACIMIENTO DEL RÍO PITARQUE. THE SOURCE OF RIVER PITARQUE.

The Maestrazgo region straddles the Iberian mountain range and the Depresión del Ebro (Ebro river Valley). Due to its wild relief and picturesque scenery, it was worthy of the declaration of four Natural Monuments which are located within the Parque Cultural del Maestrazgo (Cultural Park of Maestrazgo) and Geoparque del Maestrazgo (Geopark of Maestrazgo).

The purpose of the declaration of these four natural momuments in the Maestrazgo region is to conserve some of the most singular and precious places of its territory and contribute to a sustainable development subject to its natural resources.

The Nacimiento del río Pitarque was declared a Natural Monument in 2009 and has a surface of 114 hectares

In the Pitarque Valley, Secondary period carbonate rocks (limestone and dolomites) predominate. These rocks erode easily so within the inside of the rock mass there are numerous galleries and underground cavities which may contain water. The whole area works as an enormous underground reservoir and there, as a result of the union of carbonate rocks and impermeable clay, a large number of natural springs appear, like the source of river Pitarque. The main spring is known as the `Ojo de la Fuente' and its flow rate can reach up to 1,500 litres per second.

There are also other springs with a lower flow rate like `La Chimenea´ spring which emerges from the wall. With time, the limestone has expanded until a tufa buildup has appeared; during heavy rain periods water passes through it.





# THE GORGE OF THE RIVER PITARQUE

After rising from the rock, the river follows its way through a gorge (also called a canyon), which is a ravine of vertical rocky walls. The origin of this canyon lies in the progressive fluvial erosion of the river and the collapse of the pipes formed by the karst dilution which is used by the river flow to get into the canyon. That is why it is said that it has a fluvial-karstic origin.

Along the canyon, it is possible to appreciate whimsical shapes as a result of the combination of water erosion and the dilution of limestone.

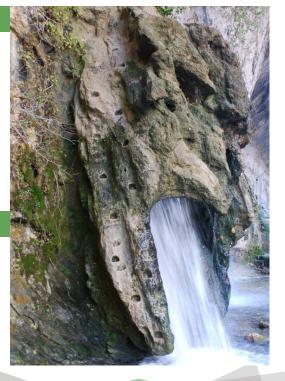
## **CALCAREOUS TUFAS**

Along both banks of the river, highly porous limestone rock `globs' with dead plants and animals remains, which are called tufas, can be found. These are tufas which were not eroded. These sedimentary rocks are originated when water that contains calcium carbonate at a high concentration, coming from the limestone dilution, cannot carry it any more when the conditions change and as a result it precipitates."













## **VEGETATION**

The dense riverside woodland of the Pitarque river consists of willows, black poplars and alders. It is possible to find gall oaks besides boxwood and serviceberry on the slopes. Only specialized vegetative structures are able to survive on the cliffs.

At the bottom of the vertical-walled gorge there is a microclimate where vegetation like rowan, hazelnuts or maples may grow, which are highly uncommon in this area.

## WILDLIFE

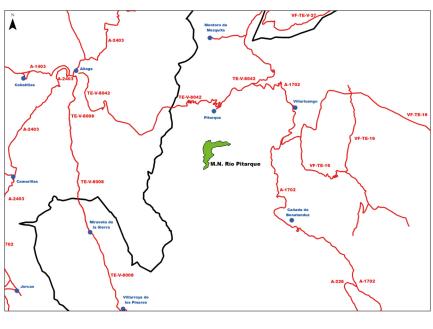
Due to the high quality of the river water (it is cold, clean and well-oxygenated) the brown trout, otters and crayfish, among others, can be found.

Besides, Spanish wild goats and griffon vultures have a significant presence on the limestone canyon walls.



Photos: Gobierno de Aragón y Comarca del Maestrazgo.





#### **INFORMATION OF INTEREST:**

The Nacimiento del río Pitarque trail (SL-TE 30) starts at the town centre of Pitarque village, going up until reaching the hermitage of the Virgen de la Peña. Then, it enters the canyon and continues along the left bank. At the head of the canyon there is a bridge which enables the visitor to cross over to the right bank of the river and access the various springs which give rise to it. The round trip is 10 kilometers.

#### ADDRESSES OF INTEREST:

Natural Monuments of Maestrazgo. Agriculture, Livestock and Environment Provincial Service of Teruel: C/ San Francisco, 27 – Teruel, Spain. Telephone: +34 978 64 11 45.

**General Directorate of Natural Environment and Forest Management**: Plaza San Pedro Nolasco, 7 - 50071 Zaragoza, Spain.



