# NATURAL MONUMENT OF THE GRUTAS DE CRISTAL DE MOLINOS. NATURAL CAVES, MOLINOS TOWNSHIP.

The purpose of the declaration of these four natural momuments in the Maestrazgo region is to conserve some

The rock formations inside the Cueva de las Graderas (Graderas Cave), or also named Grutas de Cristal, are singular and of great beauty and are extremely uncommon in the Aragonese territory.

## **ORIGIN**

The rocks in the area are calcareous and of great thickness. At the end of the Tertiary period, there was heavy rain and besides, erosion had left surfaces highly flattened thus, a significant amount of water leaked through the rocks.

Limestone dissolves easily, leading to the formation of karst landscapes like caves and underground caves.

In this natural monument, the network of galleries are connected to the outside through the following caves and chasms: Cueva de las Graderas (also called Grutas de Cristal), Cueva de Baticambras, Sima de Ogesa superior (Ogesa upper chasm), Sima de Ogesa inferior (Ogesa lower chasm) and Cueva de Pallarés.

When the main cave was originally discovered in 1961, it was called 'de las Graderas'due to the entrance steps formed from the limestone strata (now hidden under the current stairs to ease the visit to the cave).

In 1978, it was set up for tourism under the name of Grutas de Cristal due to the delicateness of its rock formations.

Water flows through limestone and carries calcium carbonate. When water finds holes or small cracks in rocks, the environment changes and it adapts to it releasing part of this chemical component which precipitates leading to whimsical formations. These rock formations are called speleothems or cave formations: stalactites (hanging from the ceiling), stalagmites (growing vertically from the caves floor), columns (union of both stalactites and stalagmites), curtains (stalactites formed along a cleft), etc.

In the Grutas de Cristal, we can highlight as a curiosity the large number of helictites (also called eccentric stalactites), whose growth is horizontal instead of vertical. This cave is one of the best places in Spain to observe this kind of rock formations



# WILDLIFE

The Cueva de Baticambras was declared a Site of Community Importance (SCI) for giving shelter to a large population of Chiroptera or bats. There are some vulnerable species among these to be protected like bat (Rhinolophus ferrumequinum), greater horseshoe Mediterranean horseshoe bat (Rhinolophus euryale) and the lesser horseshoe bat (Rhinolophus hipposideros). This cave is an important hibernation location for the Mediterranean horseshoe bats (about 250 individuals) and breeding colonies of this species have been detected during the summer period.

Due to conservation reasons, the Cueva de Baticambras is closed to public.









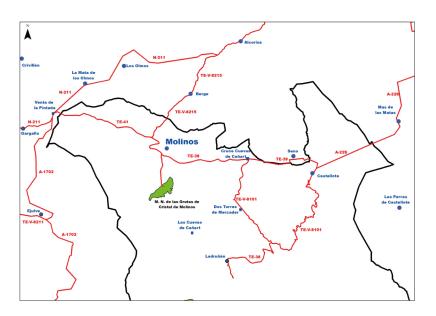


# **HUMAN REMAINS**

For many years, within the Grutas de Cristal, there was a hidden Upper Pleistocene epoch archaeological site. As a result of prospecting work, 100,000- year-old fossils and two burial sites with human remains were found. One of them was first dated to 25,000 years ago but recent research carried out by the University of Zaragoza shows that its age is approximately 5,100 years old.



Photos: Gobierno de Aragón, Álvaro Gajón y Comarca del Maestrazgo.





### **INFORMATION OF INTEREST:**

**Grutas de Cristal – Cueva de Baticambas trail (SL-TE 28)** starts at the Grutas de Cristal parking area, it follows the road and reaches the Barranco de las Baticambras (Baticambras ravine), where the cave entrance is located. The round trip is 3.2 kilometers.

# **ADDRESSES OF INTEREST:**

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