

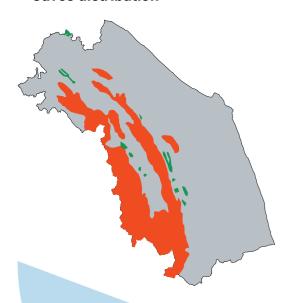
# MARCHE SPELEOLOGICAL



Wide part of the mountain ridges are composed by calcareous rocks, arranged in two principal sub-parallel belts. Small gypsum outcrops are located in the hilly zones. The most important karst p henomena are represented by the closed Plans in the mountain ridges and by the karst underground systems of M. Nerone, Frasassi and Acquasanta Terme



#### **Caves distribution**





#### THE MAIL AREAS WITH SPELEOLOGICAL INTEREST

Monte Nerone

Monte Catria - Acuto -Tenetra

Gole di Frasassi e della Rossa

Piani di Montelago Gola del Rio Garrafo

Clubs associated with the Marche Speleological Federation	
Gruppo Speleologico Urbinate (AN)	
Gruppo Speleologico CAI Senigallia (AN)	
Gruppo Speleologico Marchigiano CAI Ancona (AN)	
Gruppo Speleologico Agugliano (AN)	
Gruppo Speleologico CAI Jesi (AN)	
Associazione Speleologica Genga San Vittore (AN)	
Gruppo Speleologico CAI Fabriano (AN)	
Associazione Speleologica Gruppo Grotte Recanati (MC)	
Gruppo Autonomo Speleologico Portocivitanova (MC)	
Centro Ricerche Speleologiche "Nottoloni" - Macerata	
Gruppo Speleologico Alta Valle del Potenza – Pioraco (MC)	
Associazione Speleologica Acquasanta – Acquasanta Terme (AP)	

CADASTRE DETAIL		
NUMBER OF CAVES IN CADASTRE	655	
REGIONAL REGISTRY FORM	Yes	
REGIONAL LAW	12/2000	
TOPOGRAPHIC REF. SYSTEM	Gaus Boaga	

The longest caves ( > 2000 meters )		
Grotta grande del Vento - Fiume - Sulfurea	>23000 m	
Buco Cattivo - Caverna del Tasso	>7500 m	
Grotta di Mezzogiorno - Grotta di Frasassi	>4500 m	
The deepest cave (> 400 metri)		
Grotta delle Tassare	- 438 m	

## KARIS WATERS

The karst water-bearings represent the most important reserves of underground waters of the region, and they are fully used for drinkable purpose. The recharge happens for diffused absorption with few

sinkholes. The water flows are fast in the vadose zone, thanks to a net of karst channels, generally of small dimensions. The leading flow in acquifer is slow and constant instead, with redoubts seasonal variations of the



chemical-physical parameters. It's Common the upwelling of sulfidic waters, to which is tied up important caves.

## THE EPIGENIC CHVES

The epigenic caves, originate from the infiltration meteoric water, are common in the whole region. On the calcareous ridges are located small wells systems with temporary water circulation. At the foot of the ridges ones, on the folds sides, there are narrow phreatic tunnels, often active, with source functions.



### THE HYPOGENIC CAVES

The region's greatest underground systems are hypogenic, originated from waters coming up from the deep. It's essential the sulphidic waters upwelling, whose oxidation causes the intense corrosive actions. The Frasassi and Acquasanta Terme underground systems are the best examples, but a similar origin is also supposed for other caves. The hypogenic caves differentiate for the large dimensions and the typical morphologies.

