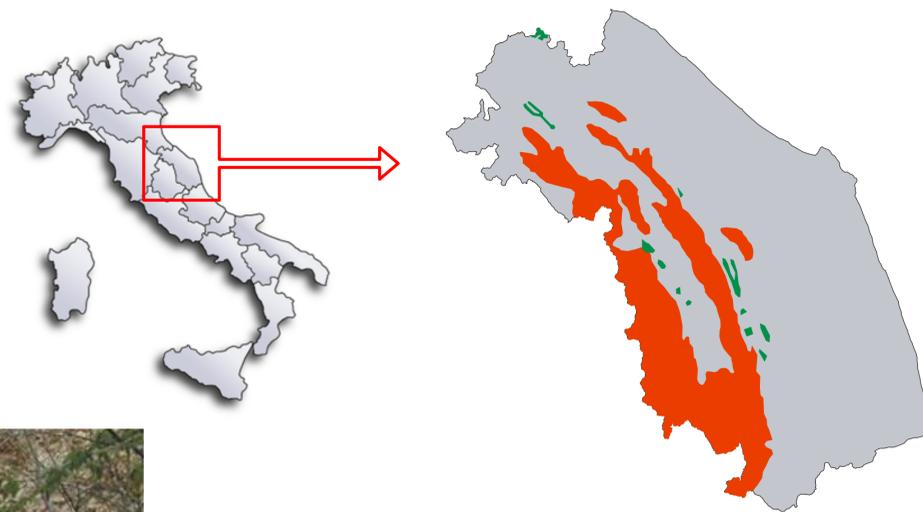


In the inside of the Marche Region, wide part of the mountain ridges are composed by **calcareous rocks**, arranged in two principal sub-parallel belts. Small **gypsum** outcrops are located in the hilly zones. The most important karst phenomena are represented by the closed Plans in the mountain ridges and by the karst underground systems of Monte Nerone, Frasassi and Acquasanta Terme, whole of high speleological interest.



The Karst 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 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 main areas of speleological interest

- Monte Nerone
- Monti Catria – Acuto -Tenetra
- Gole di Frasassi e della Rossa
- Piani di Montelago
- Gola del Rio Garrafo

The largest caves (>2000 meters) meters

Grotta Grande del Vento - Fiume - Sulfurea	> 23000
Buco Cattivo – Caverna del Tasso	> 7500
Grotta di Mezzogiorno - Grotta di Frasassi	> 4500

The deepest caves (>400 meters) meters

Grotta delle Tassare	438
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Cave Registry

Caves	655
Regional Registry Form	YES
Regional Law	12/2000
Topographic Reference System	Gauss-Boaga

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)



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.