ROCK GARDEN

Rock Garden

Representation of Andorra's geodiversity, in the Sorteny Valley Natural Park.

What is geodiversity?

Geodiversity refers to the part of nature that is not alive, both on the surface and inside the planet. By geodiversity, we mean the Earth's minerals, fossils, soils, sediments, mountains, topography and hydrological features such as rivers, streams and lakes. The term 'geodiversity' also includes the processes that create and modify these features.

ROCK GARDEN

ANDORRA RECERCA + INNOVACIÓ

Sorteny Parc natural

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Rock Garden

Located in the Sorteny Valley Natural Park, in the Rock Garden you will find at the same place a representation of all the rocks that outcrop in Andorra. The Rock Garden is accompanied by a series of panels which will allow you to learn more about rocks in general, rocks in Andorra and some of their uses.

The rocks

Rocks are natural materials constituted of one or more types of minerals. In nature we find three types of rock: igneous or magmatic rock, sedimentary rock and metamorphic rock.

Constantly and slowly, rocks change. Each of the three types of rock can turn into either of the other two, or another rock of its own type. This whole set of transformations is called “the rock cycle”.

Panel “The rocks”

Rocks in Andorra

Andorra is located in the geological nucleus of the Pyrenees, in the so-called Pyrenean axial zone, where the rocks are the oldest.

The rocks in Andorra have a complex geological history when we realise especially the fact that they have suffered two orogenesis processes (formation of a relief through the lifting action of the earth's surface).

The rocks in Andorra can be divided generally into rocks of magmatic origin and rocks of sedimentary origin. Most, however, have been subjected to metamorphism.

Panel “Rocks in Andorra”

The use of the rocks

Each rock has its own physical properties and components which characterise it. It is precisely these properties and elements that man has taken advantage of in using the rock.

We have several examples in Andorra, such as Romanesque architecture or granite architecture. Another of the most significant examples in Andorra is presented below: the art of dry stone.

Panel “The use of the rocks”

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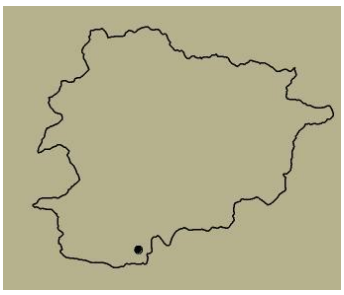
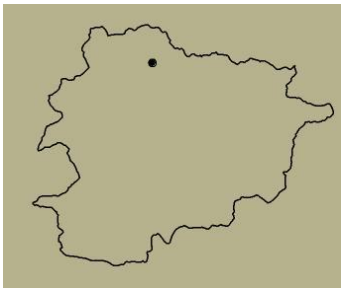
Content of the Rock Garden

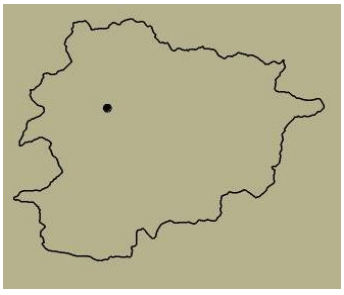
These are the rocks that surface in Andorra that you will find in the Rock Garden located in the Sorteny Valley Natural Park.



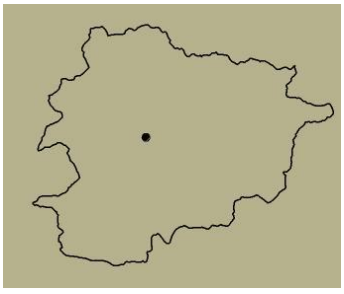
1. Conglomerate
Conglomerate is a detritic sedimentary rock, composed by rounded grains measuring over 2 mm.



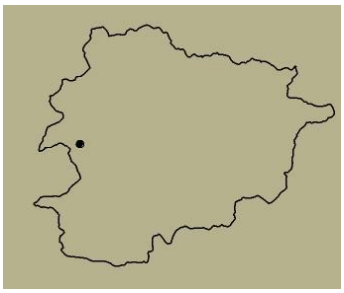
2. Quartzite
Quartzite can be a metamorphic rock of silica composition which comes from sedimentary rocks such as quartzarenite and conglomerates.



3. Travertine
Travertine is a rock resulting from the precipitation of calcium carbonate, often around stems, branches and leaves, in river areas or lakes, or around waterfalls.

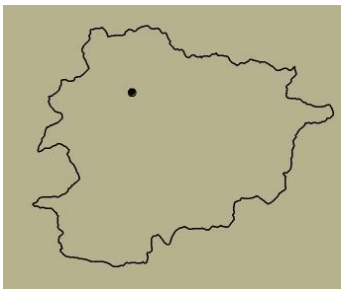


4. Limestone
Limestone rocks contain more than 50% of calcium carbonate. They are of very different origins, chemical, biochemical and biological. They normally contain many fossils.



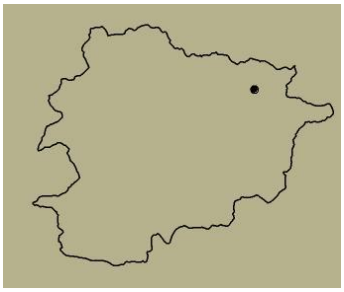
5. Phyllite

Phyllite is a metamorphic rock, of low metamorphism, derived from clayey sediments. It has a silky appearance and a foliated texture. It is intermediate between slate and schist.



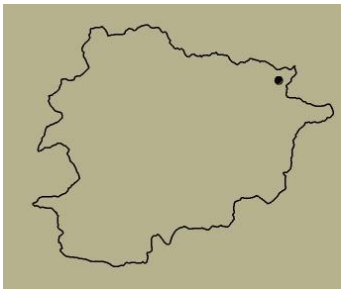
6. Slate

Slates are rocks of sedimentary origin (detritics with very fine grain) which have been through a very low grade metamorphism. They have a foliated structure. In Andorra, the slates of Silurian have been an object of exploitation to obtain iron.



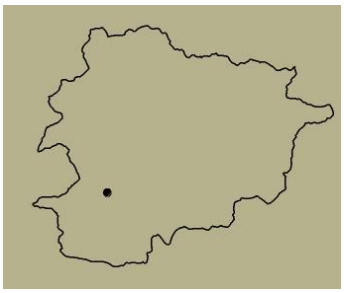
7. Schist

Schist is a metamorphic rock of low to medium grade, derived from sedimentary rocks such as lutites and, from time to time, basic igneous rock (poor in silicon).



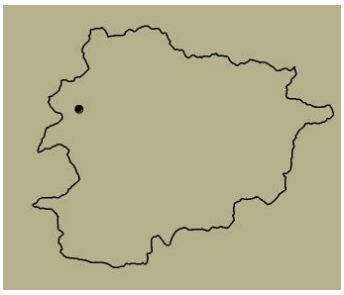
8. Gneiss

Gneiss is a metamorphic rock which has been subjected to strong compression and high temperatures. It can be of sedimentary or igneous origin. It is composed of potassic feldspar (forming large crystals), quartz and biotite.



9. Granodiorite

Granodiorite is a plutonic rock rich in silicon, composed of quartz, feldspars, and biotite mica.



10. Volcanic tuff

In Andorra there are few volcanic rocks, the best place to observe them is in the Natural Reserve of the Comapedrosa Valleys. There, some rhyolitic tuffs outcrop, composed by immersed phenocrysts of quartz in a matrix of quartz, plagioclase, chlorite and muscovite.

Credits

The Rock Garden is owned by Andorra Research + Innovation, and is located in the Sorteny Valley Natural Park, with the collaboration of the Ordino town.

- Rocks and panels: Property of Andorra Research + Innovation.
- Location of the Rock Garden: Sorteny Valley Natural Park.
- Design of the Rock Garden panels: Jordi Pinós and Sisco Ribó.
- Photos and scientific texts of the panels: Andorra Research + Innovation.
- Text of the panel "The use of the rocks": Based on the exhibition "The dry stone in Andorra" - Government of Andorra.
- "The Use of Rocks" panel illustration: © La Magenta Studio.