Applicant UNESCO Global Geopark

Armorique Geopark, France

Geographical and geological summary

Location of Armorique Geopark in Europe.

General map of Armorique Geopark.
1. Physical and human geography

The Armorique Geopark is located at the western end of France, facing the Atlantic Ocean. Confined within the mainland boundary of the Armorique Regional Nature Park, it is made up of 47 municipalities (1,587 km²). Located in the administrative region of Brittany, the Geopark is in the immediate vicinity of the urban centre of Brest (319,947 inhabitants, 2016). Due to its geographical location, the Armorique Geopark is the 1st Geopark on the French Atlantic shoreline and completes the interpretation of geoheritage in France.

A distillation of Brittany, the region is distinguishable for its Armorican identity and its rural and maritime nature. It supports a rich ecosystem and is culturally diverse, combining contrasting landscapes and terroirs. Its landscapes can be distinguished by three major areas:

- The Crozon Peninsula, with a strong maritime character and high coastal cliffs;
- The Brest Bay, a real inland sea and the River Aulne estuary, an area of transition between sea and "mountain";
- The Arrée Mountains, evidence of the old Hercynian chain of mountains, whose crests stood along an intercontinental rift between 350 and 300 million years ago. The mountain tops now have an elevation of 385 metres.

The climate in Brittany is categorized among the temperate oceanic climates of the European Atlantic shoreline, contributing to the creation of the Geopark’s varied landscape environments.

Lastly, with a total population of 104,298 inhabitants, the density in the region is low but uniform, with 73 inhabitants per km². The quality of the transport infrastructure facilitates mobility in the region, with highly-active and attractive businesses.

2. Geological features and geology of international significance

The Armorique Geopark displays various lithological, structural and paleontological formations, characteristic of the central domain of the Armorican Massif, mainly sedimentary and plutonic.

In the Crozon Peninsula, west of the Geopark, a sedimentary pile, from late Neoproterozoic to Devonian in age, is remarkably and continuously exposed through several beautiful coastal cross-sections. Note also the presence of interbedded Ordovician effusive (peperites and pillow lavas) and explosive volcanic products.

The Châteaulin Basin, south of the territory, shows a Carboniferous infilling of slate schists. Among the fossiliferous associations, the most noteworthy one is undoubtedly the coral complex of the Plougastel-Daoulas Peninsula, which is the best preserved Devonian reef in Europe. This sedimentary succession was deformed through the Hercynian events, during which the granitic plutons of L’Île Longue, Commana, Ponthou, and Huelgoat emplaced. The northeast-southwest trending Arrée Mountains, structured during this orogenesis, form the backbone of the Geopark. There, amazing and wild landscapes can be contemplated. The Brest Bay schist-sandstone formations are crosscut by a dense igneous hypabyssal network, including the famous kersantites. This rock appellation, coming from the name of the hamlet Kersanton in Loperhet, has become an official term in the international systematics of magmatic rocks.

The post-Hercynian times are represented by pre-Atlantic dolerites, Jurassic in age, Tertiary raised beaches and superficial formations, which have recorded the Quaternary climate changes.