

# Plant fossils in clay schists

Metamorphic rock

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The geological setting of the Aosta Valley tends to be hostile for the presence of fossils. In fact, they are found very rarely in the region, because the rocks found here are almost exclusively metamorphic, meaning that they have been subjected to high temperatures and pressure during the evolution of the Alps.



(Photo MRSN)

This rise in temperature and pressure nearly always removes any **fossil remains originally present in the rock**. However, a few rare areas that have been less affected by the metamorphism do exist, and fossils are sometimes found inside these rocks.

An example of this is the plant remains found inside the clay schists (rocks stratified in very thin layers) at the Little St. Bernard Pass, which have

a distinctive black colour due to the abundant presence of organic matter. These were formed by layers of sediment laid down during the **carboniferous period**, when the explosion of plant life led to the accumulation of huge amounts of plants and trees in the lakes and bog lands.

In the right conditions, these deposits of organic material can create deposits of carbon or hydrocarbons such as oil.

The layers of sediment can offer us **perfect prints of plant life**, like the leaves preserved in the slate layers on the Little St Bernard, dating back to around 330 million years ago.

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