

GLOSSARY (see also the [objectif-terre](#) glossary)

Accretionary prism: a very large pile of sediment scrapped from the sea floor (lower plate) during the subduction process and accumulated in front of the upper plate

Asbestos: a heat-resistant fibrous silicate mineral that can be woven into fabrics, used also for fibrous and supple material. Minerals of the serpentinites (chrysotile).

Ash, lapilli: small fragments of magma projected by volcanoes (*ash* < 2mm, *lapillis* between 2 and 30 mm).

Asthenospere : a partially liquid part of the upper mantle allowing for the vertical movement of the plate

Basalt: see metabasalt

Breccias: a sedimentary rock made of angular elements in a fine grain matrix or cemented without matrix.



breccia without matrix →

breccia with matrix →



Calcareous tufa: a porous rock composed of calcium carbonate and formed by precipitation from water, e.g., around mineral springs.

Calcschists: a metamorphic rock of sedimentary origin, mainly limestone, (with some micas, clay and quartz) a former mixture of limestone, marl and sand. ↓



Clastic rocks: rocks derived from the erosion of reliefs, made of rock grains or particles and sedimented as conglomerates, sandstones, siltstones or mudstone.

Conglomerate: a sedimentary rock made of boulders cemented in a finer grain matrix. ➔

Continental basement or crust: large terrains forming the crust of continents, mainly granitic in nature, underlying younger sedimentary sequence.

Cornieule: a yellow to orange calcareous rock with some dolomite, vacuolar in aspect, often associated to thrust faults.

Continental shelf or platform: shallow (< 200m) large, generally marine area bordering continents, characterised by kilometre thick accumulations of sediments. Upper part of the continental margin.



Continental margin: the transition between continents and oceans, where the continental crust has been reduced in thickness by rifting.

Crystalline rocks: magmatic rocks crystallised deep in the Earth's crust, or metamorphic rocks with recrystallised minerals.

Dolomite: a sedimentary rock composed of magnesium carbonate, often associated with limestone or evaporitic rocks (gypsum, salt).

Eclogite: a high pressure metamorphic rock, that may contain garnet or jadeite.



↑ dolomite



↑ eclogite

Flysch: a sequence of stratified sedimentary clastic rocks (sandstone, silt, shale, sometime with some limestone), deposited in deep basins by submarine avalanches (turbidites). ➡

Geological age: divisions of the geological time scale or stratigraphic table, expressed in millions of years

(abbreviated Ma). The eras such as the Paleozoic, Mesozoic and Cenozoic are divided into periods: Jurassic, Cretaceous, Tertiary, Quaternary, in turn divided in numerous stages.



Gabbro: see metagabbro

Gneiss: a massive metamorphic rock whose foliation is marked by layers of micas. It corresponds to a metamorphic granite – orthogneiss, or metamorphic sandstone – paragneiss. ➔



Granite: a crystalline acid rock of deep origin (10 to 30 km) composed of quartz, feldspath and micas, constituting most of the continental crust.

Green rocks: see ophiolites

Gypsum: a sedimentary rock due to sea water evaporation made of hydrated calcium sulfate.

Limestone: a sedimentary rock composed of calcium carbonate (calcite, ± dolomite, ± aragonite, ± siderite). Often containing clay, abundant amount produces a marly-limestone.

Marble: recrystallized limestone due to metamorphism ➔

Metabasalt: a metamorphic basaltic lava flow, often derived from the sea floor and composing the top part of the oceanic crust. Below pillow-lava. ↓



Metagabbro: a metamorphic basic crystalline rock of deep origin, similar in composition to the basalt and made of crystals of feldspath and pyroxenes. Oceanic gabbro ↓ gabbro from Mt Collon ↓



Metamorphism: transformation of the rocks and their minerals at depth (>5-10 km), due to high temperature and pressure.

Mineral (crystal): a naturally occurring inorganic solid that composes rocks, and whose atoms are arranged in a regular pattern forming crystals.

Nappe: a voluminous sequence of coherent rocks, displaced (thrust) by tectonic movements over other sequences, originally far from each other (> 10 km).

Oceanic basement or crust: a layer up to 10 km in thickness formed of basalts at the top and gabbro underneath, forming the ocean floor and covered by pelagic sediments. The oceanic crust is produced at the mid-oceanic ridge by volcanism.

Oceanic sediments: sedimentary material deposited on the ocean floor either by gravity or by currents, they are often called pelagic sediments, composed of clay, fine sand particles, small shells, plankton and algae. Divided in two categories, siliceous (radiolarites) or calcareous in nature (pelagic limestone).

Ophiolites: a sequence of rocks of the oceanic crust (basalt, gabbro) and upper mantle (peridotite), thrust over the continental crust and common in

mountain belts. Rocks forming ophiolites are often called green rocks, the colour is due to metamorphism that changed the peridotite into serpentinite.

Pelagic sediments: see oceanic sediments

Pillow lava: lava flow made of stacked elongated pillows, corresponding to basaltic flows emplaced under water. See metabasalt for picture.

Marble: a metamorphic (recrystallised) limestone.

Prasinite: a metamorphic volcanic rock of basaltic composition (metabasalt) derived from submarine ashes (tuff), and transformed into green schistose rock. ➡

Quartzite: a metamorphic recrystallised sandstone, made of quartz and white mica. ↓



Rock: solid material made of minerals of all sizes distributed in all direction oriented or not.

Schist: most metamorphic rock are schists due to the formation of layers of minerals during this process, giving a schistosity to these rock.

Schistes lustrés: a french word for metasediments of the oceans or continental margins, metamorphosed and schistose and lustrous due to the presence of micas. In the Alps they are of Jurassic to Cretaceous age.

Sedimentary cover: a sequence of sedimentary sediments deposited on an older crystalline basement, and often detached from the latter to form nappes in the Alps.

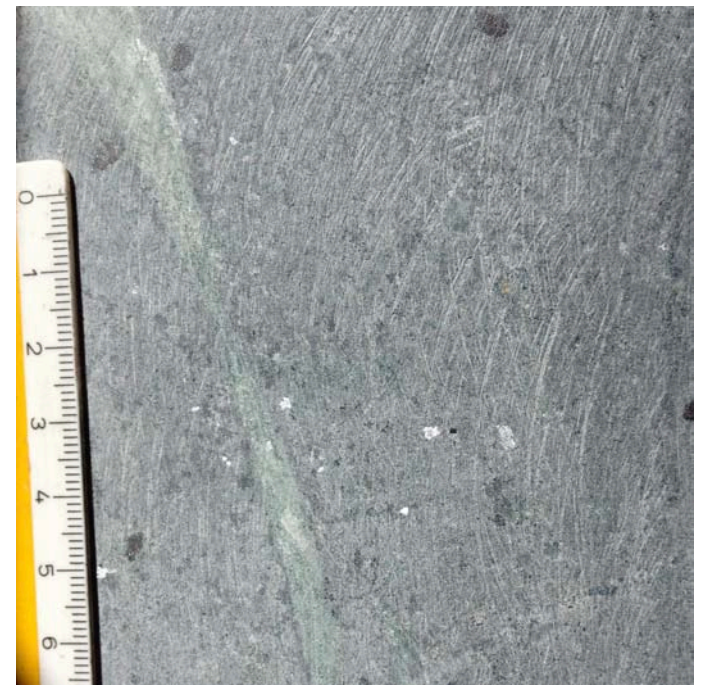
Series: this word refers to a set of rocks usually sedimentary in origin and having a common history, synonym of sequence.

Serpentinite: a lustrous green rock coming from the transformation of peridotites, deep rocks from the Earth's mantle, rich in asbestos and transformed in the mid-oceanic region during seafloor spreading. ➡



Slate: a fine-grained metamorphic rock easily split into smooth, flat pieces used for roofing (usually calcshists, prasinites or quartzites).

Soapstone (pierre ollaire in french, the scientific name is steatite): a variety of schistose serpentinite, whitish and talcose, very soft and tender used for building stove and oil lamps. ➡



Talcschists: a metamorphic schists rich in talc, associated to serpentinites, and desintegrating into white fibers.

Tectonics: a branch of geology dedicated to the study of rock deformation and emplacement after their formation.

Volcanic tuff: a type of rock consisting of consolidated volcanic ashes ejected from volcanoes during a subaerial or underwater eruption.

In the Alps, these after metamorphism are called prasinites (metatuff)