

Limestone

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(Redirected from [Limestones](#))

For other uses, see [Limestone \(disambiguation\)](#).



Limey [shale](#) overlaid by limestone. [Cumberland Plateau, Tennessee](#)

Limestone is a [sedimentary rock](#) composed largely of the [mineral calcite](#) (calcium carbonate: CaCO_3). Limestones often contain variable amounts of silica in the form of [chert](#) or [flint](#), as well as varying amounts of [clay](#), [silt](#) and [sand](#) as disseminations, nodules, or layers within the rock. The primary source of the calcite in limestone is most commonly [marine organisms](#). These organisms secrete shells that settle out of the water column and are deposited on [ocean](#) floors as [pelagic](#) ooze or alternatively is conglomerated in a coral reef (see [lysocline](#) for information on calcite dissolution). Secondary calcite may also be deposited by [supersaturated meteoric](#) waters ([groundwater](#) that [precipitates](#) the material in [caves](#)). This produces [speleothems](#) such as [stalagmites](#) and [stalactites](#). Another form taken by calcite is that of [oolites](#) (oolitic limestone) which can be recognised by its granular appearance. Limestone makes up about 10 percent of the

total volume of all sedimentary rocks.

Pure limestones are white or almost white. Because of impurities, such as clay, sand, organic remains, iron oxide and other materials, many limestones exhibit different colors, especially on weathered surfaces. Limestone may be crystalline, clastic, granular, or massive, depending on the method of formation. Crystals of calcite, quartz, dolomite or barite may line small cavities in the rock. Folk and Dunham classifications are used to describe limestones more precisely.

Travertine is a banded, compact variety of limestone formed along streams, particularly where there are waterfalls and around hot or cold springs. Calcium carbonate is deposited where evaporation of the water leaves a solution that is supersaturated with chemical constituents of calcite. Tufa, a porous or cellular variety of travertine, is found near waterfalls. Coquina is a poorly consolidated limestone composed of pieces of coral or shells.

During regional metamorphism that occurs during the mountain building process (orogeny) limestone recrystallizes into marble.

Limestone is a parent material of Mollisol soil group.



Limestone with bivalve fossils



Various fossils collected from a limestone quarry, North Carolina USA. Clockwise from upper left: echinoids, bryozoans, and brachiopods



Water cooled limestone saw, Belgium

See also



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