

Glossary of Geological Terms

anticline—An upfold of strata the center of which is the "axis." The strata dip away from the axis like the roof of a house. The core of the fold contains stratigraphically older rocks. The opposite of a syncline.

bedding plane—A characteristic of sedimentary rocks. Bedding planes are subparallel planes along which individual beds may separate.

clastic rock—Sedimentary rock consisting of fragments derived from preexisting rocks that were broken down and then transported to another place of deposition.

columnar section—A drawing or graphic representation showing in a vertical column the sequence of rock units found in a specified area.

cuesta—A ridge with one slope long and gentle and the other slope steep. *Cuesta* is a Spanish word meaning flank or slope of a hill. Cuestas are caused by dipping rock strata.

dip—The angle at which a rock stratum or fault surface is inclined from the horizontal. Dip is always at right angles (90°) to the strike of a stratum.

epoch—Subdivision of a period of time. Rocks formed during an epoch constitute a series.

era—Greatest of all geologic time divisions. Consists of two or more geologic periods.

erosion—The natural process of weathering, disintegration, dissolution, and removal of rock and earth material, mainly by water and wind.

fault—A fracture or a zone of fractures in rock with displacement of the sides relative to one another either horizontally, vertically, or both.

flood plain—A relatively flat area close to a stream. It is made of sediment carried over the stream banks during times of flood.

fold—A curve or bend in rock strata, usually as a result of deformation.

formation—The fundamental stratigraphic unit used for geologic mapping. It may include several rock types. Formations sometimes are divided into members and beds.

fossil—The remains or traces of an animal or plant that have been preserved by natural causes in the Earth's crustal rocks. The term does not include an organism that has been buried during historic time.

geologic time—History of the Earth divided into eras, periods, and epochs.

group—Two or more formations with similar characteristics or other affinities.

hogback—The outcropping edge of a cuesta. Its slopes are roughly equal.

igneous rock—Rock formed by cooling and solidification of hot molten material called magma. Magma that flows onto the surface of the earth (lava) cools rapidly to form fine-grained rocks, whereas magma that solidifies several miles beneath the surface cools slowly to form coarser grained rocks.

joint—A fracture in rock along which no displacement has occurred.

marine—Of or belonging to the sea.

member—*see* formation

metamorphic rock—Rock that has been changed through intense heat, high pressure, or contact with chemically active fluids from magma. Slate and phyllite are examples of metamorphosed shale, quartzite metamorphosed sandstone, and marble metamorphosed limestone.

nonclastic rock—A sedimentary rock whose deposition was caused by chemical or biological action.

organic deposits—Deposits formed from the remains of living matter such as plants and animals.

orogeny—A movement or movements of the Earth's crust (folding and faulting) that cause mountains to form.

paleobotany—The science of fossil plants.

paleontology—The science of fossils, both plant and animal.

paleozoology—The science of fossil animals. Its two divisions are vertebrate and invertebrate paleozoology.

period—Subdivision of an era. Rocks formed during a period constitute a system.

sediment—Bits of rock, often the result of weathering, that accumulate in layers. Sand, gravel, silt, and mud are some examples of sediment, which can be transported or deposited by air, water, or ice.

sedimentary rock—Rock formed by the compaction and cementing of sediments deposited in water or from air. Sediments may consist of rock or mineral fragments of various sizes (mud, sand, gravel), the remains of animals or plants, the products of chemical action or evaporation, or mixtures of these materials. Sedimentary rocks typically have a layered structure known as bedding or stratification.

series—*see* epoch

slump—A mass of rock or unconsolidated material of any size that has slipped downward by gravity from its original position.

stratum—A single sedimentary bed or layer. The plural form is strata.

strike—The direction or trend of a rock stratum or fault surface as it intersects the horizontal.