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## Glossary

**Aeolian:** produced by, or borne by, the wind.

**Alabastrine:** gypsum of a very fine-grained massive nature, generally white in mass but may be tinted.

**Allochthonous:** refers to rock formed elsewhere and transported to place where now found.

**Anhydrite:** anhydrous calcium sulphate ( $\text{CaSO}_4$ ).

**Anoxic:** lacking in oxygen.

**Aphanitic:** a rock in which the individual grains or crystals cannot be seen by the naked eye.

**Arborescent:** tree-like.

**Authigenic:** a mineral formed in place in a sediment or rock either by replacing an earlier mineral or by displacive growth.

**Autochthonous:** refers to rock formed in place where now found.

**Azurite:** copper carbonate ( $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ ).

**Backreef or back-reef:** the environment lying landward of a linear reef, especially a barrier reef; can include the landward margin of a linear reef.

**Bafflestone:** a term used in a refinement of the Dunham system of limestone classification to denote a rock in which a sparse population of sessile benthic organisms caused grains to be deposited by functioning as baffles and thereby reducing current velocity.

**Barite (barytes):** barium sulphate ( $\text{BaSO}_4$ ).

**Benthic:** refers to the flora and fauna of the sea floor.

**Bindstone:** a term used in a refinement of the Dunham system of limestone classification to denote a rock (commonly laminated) in which the constituent grains were held together by encrusting organisms such as cyanophytes.

**Bioclasts:** whole or fragmented organic remains, generally transported, in a sediment or rock.

**Biota:** faunal and floral assemblage of a bed or other stratigraphical unit.

**Botryoidal:** a term used to describe a smoothly mammilar accretionary surface, commonly on the free side of an encrusting mineral, facing a cavity.

**Boundstone:** a term used in the Dunham system of limestone classification to denote a rock in which the primary grains or constituents were bound together during formation or deposition (e.g. as in an organic reef).

**Brash:** a litter of broken pieces of rock, commonly in thin soil on rock.

**Breccia:** a rock composed of angular fragments, generally of varied sizes, produced in a wide range of ways.

**Brockram:** a term used in Cumbria for a sedimentary breccia of Permo-Triassic age; commonly red or purple.

**Calcarenite:** limestone formed mainly of calcium carbonate fragments of sand size.

**Calcirudite:** limestone formed mainly of calcium carbonate fragments of gravel size.

**Calcite:** calcium carbonate ( $\text{CaCO}_3$ ).

**Celestite (celestine):** strontium sulphate ( $\text{SrSO}_4$ ).

**Chalcedony:** a cryptocrystalline variety of silica ( $\text{SiO}_2$ ), consisting essentially of fibrous or ultra-fine quartz, some opal, together with water trapped in its structure.

**Chalcocite:** copper sulphide ( $\text{Cu}_2\text{S}$ ).

**Chert:** cryptocrystalline silica ( $\text{SiO}_2$ ) which may be of organic or inorganic origin, occurring as layers or nodules in sedimentary rocks (mainly limestones).

**Chronostratigraphy:** system of dividing up the geological column into convenient portions of time, leading to age classification of rocks according to hierarchal groupings of Systems, Series, Stages and Sub-stages.

**Concretion:** a hard, subspherical, discoidal or irregular mass or aggregate of mineral matter, generally formed by orderly and localized concentration from aqueous solution in the pores of a sedimentary rock.

**Coquina:** as calcirudite, but with most fragments being bioclasts.

**Cyanophytic:** related to microbes, especially blue-green algae, and the part they play in the creation of some laminated carbonate rocks.

**Decollement (plane of):** a surface separating rigid rock (below) from overlying, more plastic strata that have been detached and folded.

**Dedolomite:** a rock that previously has been composed of dolomite but which is now limestone.

**Diachronous:** a term used to describe a continuous rock body that is of different age in different places.

**Diagenesis:** the mainly physiochemical processes affecting sediments and sedimentary rocks between and including burial and re-emergence, but excluding metamorphism according to some authors.

**Discontinuity:** a break within a rock sequence indicating a cessation of deposition at the time of formation.

**Dolomicrite:** a dolomite rock composed of mud- to silt-size particles or crystals of dolomite.

**Dolomite:** (a) a mineral, carbonate of calcium and magnesium ( $\text{CaMg}(\text{CO}_3)_2$ ) or (b) a rock composed mainly of the mineral dolomite; dolomite-rock.

**Evaporite:** a sedimentary rock composed mainly of minerals produced by chemical precipitation from a saline solution that became concentrated by evaporation of the solvent.

**Fasciculate:** as in a bundle of parallel rods.

**Fenestral fabric:** a texture characterized by very abundant primary or penecontemporaneous unsupported elongate cavities in a sediment or rock, generally carbonate; it may be open or filled with secondarily introduced sediment or minerals, commonly calcite or anhydrite.

**Flaser:** a sedimentary structure consisting of silt lenticles that are commonly aligned and usually cross-bedded.

**Flowstone:** a variety of travertine that coats existing surfaces (including the walls of caves and fissures) with laminar fine-grained deposits (generally calcium carbonate) precipitated from solution by trickling or slow-flowing mineral-rich water.

**Foundering:** the subsidence or collapse of strata overlying a sediment or rock that is undergoing dissolution.

**Framestone:** a term used in a refinement of the Dunham system of limestone classification to denote a variety of boundstone in which sessile skeletal organisms such as bryozoans construct a rigid or semi-rigid grain-trapping open framework.

**Galena:** lead sulphide (PbS).

**Geode:** a roughly equidimensional cavity up to a few centimetres across, in a rock; commonly lined with botryoidal deposits and/or inward-projecting crystals. Also called a vugh or vug.

**Grainstone:** a term used in the Dunham system of limestone classification to denote a carbonate rock composed of sand-sized grains in mutual contact and with no carbonate mud matrix.

**Grapestone:** a carbonate rock composed of grape-like clusters of silt-sized carbonate grains or crystals.

**Gypsum:** hydrated calcium sulphate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )

**Halite:** crystalline sodium chloride (rock-salt) (NaCl).

**Infauna:** the assemblage of fossil remains of organisms that lived below the sea floor, especially in sediments but also including some boring organisms.

**Kaolinite:** a clay mineral ( $\text{Al}_4\text{Si}_4\text{O}_{10}(\text{OH})_8$ ) of the kaolin group.

**Lamellar drapes:** thin layers of sediment, commonly laminated, that conform to substrate irregularities such as ripple marks.

**Liesegang banding, rings:** roughly concentric secondary rings or fronts caused in a sediment or rock by the rhythmic precipitation of pigmented minerals (commonly iron oxides) by groundwater.

**Lithostratigraphy:** the description, definition and naming of rock units. Units are named according to their perceived rank in a formal hierarchy, namely Supergroup, Group, Formation, Member and Bed.

**Malachite:** copper carbonate ( $\text{Cu}_2\text{CO}_3(\text{OH})_2$ ). Mammilar as botryoidal.

**Marl:** a loosely-used term properly applied to a calcareous clay but widely misapplied in geology to describe a thick-bedded claystone or mudstone, whether calcareous or not.

**Micrite:** a limestone composed of microcrystalline calcite.

**Microspar:** a mosaic of crystals of any mineral in the 4–50 micron range; commonly applied to calcite and dolomite in the context used here.

**Monomict:** refers to a breccia/conglomerate composed of clasts of a single rock type, generally locally derived and accumulated.

**Mucilage:** a layer or mass of organic matter, commonly coating the shells of marine organisms and some grains such as ooids.

**Muscovite:** the commonest form of white mica; a silicate of aluminium and potassium, with hydroxyl and fluorine ( $\text{KAl}_2(\text{AlSi}_3)\text{O}_{10}(\text{OH},\text{F})_2$ ).

**Mylonite:** a roughly laminated finely fragmental rock created at the mutual contact of two rock-masses that have been moved forcefully against each other.

**Olistolith:** a large coherent mass of rock that has been transported down a submarine slope by gravity sliding, and which forms part of a body of rock ('olistostrome') composed of similar masses in a varied fragmental matrix.

**Oncoid or oncolith:** a pisoid or pisolith of algal origin (= a subspherical algal stromatolite).

**Ooid or oolith:** a subspherical grain of sand-size, with or without a nucleus and with at least two concentric layers of roughly uniform thickness. Generally used to describe calcium carbonate grains but can be composed of other minerals.

**Packstone:** a term used in the Dunham system of limestone classification to denote a rock in which constituent grains in point-contact have mud-size carbonate grains in the interstices.

**Palaeosol:** a fossil soil.

**Patch-reef:** an isolated body of autochthonous reef-rock, generally 10–50 m across and 3–10 m thick in the sense used in this book.

**Pellicle:** a thin resistant coating on a grain of any size.

**Pelloid:** a sand-sized to granule-sized grain of finely crystalline carbonate of any origin, including pellets and ooids (or ooliths).

**Peritidal:** within or close to the tidal range; slightly broader than 'intertidal'.

**Pinnate:** leaf-like, with a central stalk.

**Polyzoan:** bryozoan.

**Proximal turbidite:** an obsolescent term used to describe a rock comprising an accumulation of coarse debris near the upslope limit of a submarine slump or slide. Now being replaced by 'debris flow'.

**Pycnocline:** a plane or thin transitional zone separating a dense lower layer in a density-stratified water body, from a less dense upper layer.

**Pyrite:** crystalline iron sulphide (FeS<sub>2</sub>).

**Ramose:** a term used for a fossil bryozoan or other sessile benthic organism with thin twiggy branches. Dendritic.

**Recessive:** forming a step-back or cleft in a cliff profile.

**Reef crest:** the junction between the basinward side of a reef flat and the top of the basinward reef slope (or reef wall, reef face).

**Reef slope:** the basinward slope (wall, face) of a shelf-edge or barrier reef.

**Regression, marine:** withdrawal of the sea from a large area of land.

**Reticulate:** having a net-like, equidimensional structure produced by rod-like frame elements crossing at right-angles and outlining square spaces or interstices.

**Sabkha:** a broad, very gently-sloping arid alluvial plain, generally understood to border a tropical or sub-tropical sea or lake and to have a high water table.

**Saccharoidal:** sugar-like, used to describe a carbonate rock formed of calcite or dolomite crystals of sand size.

**Saccolith:** a sack-shaped and sack-sized mass in a reef, thought to be a single colony of frame-building organisms such as bryozoans.

**Scalenoedron:** a crystal shape, essentially a twinned form of rhombohedra, especially in calcite, in which the twin plane is the basal pinacoid 0001.

**Sessile:** attached, applied to an organism that remains in one place during adult life.

**Siliciclastic:** a sediment or sedimentary rock comprising a high proportion of silica-rich grains or clasts.

**Slickensides:** parallel striations or scratches on the faces of a movement plane.

**Speleothem:** (= dripstone). A secondary mineral deposit, generally of calcium carbonate, formed in caves by deposition from saturated groundwater.

**Sphalerite:** zinc sulphide (ZnS).

**Stellate:** an aggregate of crystals in a star-like arrangement.

**Stromatolite:** a variously shaped (commonly domal) laminated, generally calcareous sedimentary structure, now mainly formed in a shallow-water, tropical environment under the influence of a mat or assemblage of sediment-binding blue-green algae (cyanophytes).

**Stylolite:** an irregular interpenetrant suture-like boundary, mainly in carbonate rocks, which is caused by pressure-dissolution; can lie at any angle relative to the bedding.

**Sucrosic:** a granular or crystalline texture resembling that of sugar.

**Talus:** an accumulation of rock litter at the foot of a slope, generally with a wide size-range (up to several metres) and ungraded; commonly used to denote debris shed from the high part of a reef slope and transported basinward by gravity ('reef talus', 'talus apron').

**Transgression, marine:** the invasion of a large area of land by the sea.

**Travertine:** see flowstone. Use of term broadened by some to include deposits of silica or other mineral formed in a similar manner.

**Trepostome:** an organism belonging to an extinct order of bryozoan.

**Vor-riff, vorreef:** an accumulation of debris near the basinward margin of a reef.

**Wackestone:** a term used in the Dunham system of limestone classification to denote a rock mainly of carbonate mud that contains more than 10%, but less than 50% of coarser clasts.

## [References](#)