

Concretions

Sedimentary features

Concretions are hard local masses of mineral matter deposited within the interstices of a sedimentary rock, which differentiates them from the surrounding rock. The mineral matter is a cement which is precipitated from fluids circulating within the pores. The most common cements are calcium carbonate, iron carbonate, and silica, but other carbonates, sulphates, and phosphates can also be involved in the cement structure.

SEPTARIAN concretions are characterised by deformation within the concretion, with radial and polygonal cracks, often filled with calcite or other mineral, and are said to grow near the sediment-water boundary. CONE-IN-CONE or BEEF concretions include riffle like structures, which look like stacked ice-cream cones, and often show a beef-like top surface where the tops of cones are exposed at different levels.

Concretions are often restricted to a particular bed, and can occur within that bed over long distances, even when the bed changes from a shallow to deep water facies. They often occur near, but not on the base of the bed, and can be based on fossils or minerals, which are found in their centres. The commonest hosts are usually clayey horizons, but concretions can be found in sandy or limey beds, or even in volcanic ones. "Concretion" and "Nodule" are often used interchangeably, but "Nodule" should be confined to a small mass of hard mineral with little or no sedimentary clasts within it, whereas a "Concretion" contains mostly original rocky material.

THE COMMON HABITS OF CONCRETIONS



Egg shaped



Loaf shaped



Septarian



Cone-in-Cone