

Texture/Fabric of Features

Texture describes the relationships of a rock's components to one another at the microstructural scale. A rock's texture records its origin and post-depositional (i.e., taphonomic) histories. For a sedimentary rock deposited in the presence of a microbial community, these components include grains, mineral crystals, aqueous precipitates, fossils, organic remains, and other rock fragments. Fabric refers to the spatial arrangement and geometric patterns of the visual components, such as grains, filaments, laminae, of a sedimentary rock that display some level of directionality. A rock fabric can be described by the orientation and pattern produced by single or multiple components of a sediment. Fabric is the relative orientation of multiple features (i.e., grains, filaments, laminae), including the appearance of the components of features (e.g., spatial and geometric pattern formed from all materials present). For example, stromatolites (laminated geobiological structures) can display distinctive fabrics and textures (such as laminated fabrics oriented parallel to the growth surface of a sedimentary deposit). The combination of those component parts may reveal biogenic attributes and visual patterns that can be diagnostic of various types of microbial input.