

Investigating the Effects that Animals have on Sediment Properties

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Sediments are modified by the action of infaunal organisms in a number of different ways. Organisms use sediments as a place to live, but also as food. The modification of sediment texture by infaunal organisms, known as ichnofabric, changes the physical characteristics of the sediment itself. It has the potential to both increase and decrease connectivity between permeable horizons, to augment and destroy reservoir potential.

This study focusses on both the physical and bio-geochemical effects that organisms have on sediments through an experimental neo-ichnological approach. A number of modern taxa have been cultured in experimental tanks with known geochemistry and sediment-type. The experimental tanks are studied using a dedicated CT-scanning facility. Data collected includes pore volume calculations for bio-pores, geochemistry of clay-grade material, burrow morphology and organism-sediment interactions.