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GEY204 ASSIGNMENT

Bioturbation
This refers to particle mixing within unconsolidated sediments through the activities of biological organisms, most commonly at, or close to, the water-sediment interface. The implications of this process go far beyond simply mixing the substrate as sediment particle preservation, food availability, and geochemical composition within the substrate are all affected. Bioturbation activity can also increase the size of the effective sediment-water interface contributing to enhanced chemical fluxes between the sediment and the water column. Some organisms enhance chemical exchange by flushing their burrows with the overlying waters, a process termed bioirrigation.
Bioturbation provides researchers with information about sediments, and thus about the geology and history of the sediments and the area. For example:
• Bioturbation can suggest that a particular area is likely to be rich in petroleum or other natural resources.
• Bioturbation can provide clues to ancient life in the form of fossilized animal and plant remains.
• Bioturbation can provide information about life cycles, dietary habits, and migration patterns of contemporary organisms.

Bioirrigation
This refers to the enhanced transport of solutes across the sediment-water interface induced by the activities of bottom-dwelling organisms.

Burrowing organisms involved in biological processes of Diagenesis
1. Crabs
2. Clamps
3. Shrimp
4. Earthworm
5. Walrus
Burrowing marine animals such as crabs, clams, and shrimp, can radically change sedimentary layers. These animals burrow into the sand, creating tunnels and moving materials from one sedimentary layer to another. If the tunnels are sturdy enough, they may later be filled with material formed at a later time.
Earthworms digging through soil can shift older materials to higher layers. They can also leave behind traces of their activity in the form of fecal matter which, over time, lithifies.