

Paleoecological significance of newly discovered trace fossils near Gedaref town, eastern Sudan.

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Abstract:

Highly bioturbated beds encountered in small sedimentary outcrops have been reported from two localities near Gedaref town; namely Alhamra and Umkhanjar.

The trace-bearing beds are fine-grained, well sorted cross bedded sandstones associated with massive and laminated mudstones. The trace fossils were identified as Skolithos ichnofacies association namely: Skolithos, Diplocraterion, Conichnus and Thalassinoides. Based on the fore mentioned association, the studied sediments might have been deposited in the upper shoreface on a strand plain setting or somewhere in an estuarine environment.

The sedimentary succession of these outcrops is suggested to represent a further westward continuation of the marine transgression of Ethiopia which resulted in the deposition of the Antalo Limestone Formation during Mid-Late Jurassic time.

The bioturbated sequences are noticeably different from the Gedaref Formation as regards to lithofacies association, depositional settings and most likely the age of the sediments.

Keywords: Skolithos ichnofacies, paleoecology, Gedaref Formation, Sudan.