

LITHOLOGIC CHANGES CAN MASK THE IDENTIFICATION OF VERTICALLY-TO-SUBVERTICALLY ORIENTED TRACE FOSSILS

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ABSTRACT

Changes in lithology can affect the identification of vertically-to-subvertically oriented trace fossils and lead to incorrect assumptions regarding the presence or absence of former trace makers. This is demonstrated at the Campbell Mountain road cut in Clarke County, Alabama (U.S.A.), where bioturbated sediments in the Meridian Sand Member and an overlying, unnamed clay layer (both Eocene - Tallahatta Formation) are exposed. Within the Meridian Sand, highly visible and abundant clay-filled burrows (i.e., endichnial traces) contrast sharply in lithology and color with the white, micaceous, quartzose sand. The overlying clay appears to only have widespread *Gyrolithes* traces. Based on the visible presence or absence of endichnial traces, it would appear that major changes occurred in the ichnofacies and specific ichnotaxa between the two lithologic units. However, a closer examination indicates that the difference is a matter of lithologic contrast. An awareness of the interplay between matrix lithology and trace composition can aid in understanding possible changes in ichnofacies and specific ichnotaxa, and caution is urged where lithologic changes occur.