Palynology of some Cretaceous mudstones from southeast Aswan, Egypt: significance to regional stratigraphy

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Abstract:

Abstract The basal mudstones from the El-Nom borehole in the Gebel Abraq area in southern Egypt have yielded a diverse and relatively well preserved terrestrial palynoflora that includes Balmeisporites holodictyus, Crybelosporites pannuceus, Foveotricolpites gigantoreticulatus, Nyssapollenites albertensis, Retimonocolpites varioplicatus and Rousea delicipollis. These suggest an Albian–Cenomanian age and deposition in a fluvio-deltaic environment; no marine phytoplankton is reported. The fern-dominated palynoflora and the overwhelming presence of kaolinitic clays suggest a warm, humid palaeoclimate. According to available knowledge, the mudstones in the Gebel Abraq area, equivalents of the so-called “Timsah Formation”, might be correlated with an older rock unit, the Maghrabi Formation, based on the new palynological age assessment. This new definition of local stratigraphy implies that the Bernice sheet of geological map of Egypt [Klitzsch, E., List, F., Po’hlmann, G., 1987. Geological map of Egypt, sheet NF 36 NE Bernice, 1: 500000. Conoco and the Egyptian General Petroleum Corporation, Cairo] ought to be reconsidered.

Keywords:

Keywords: Terrestrial palynology; Stratigraphy; Cretaceous; Egypt

Published In:

Journal of African Earth Sciences, 47, 1–8