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Abstract:

Detail field, litho- and bio-stratigraphic studies on the Upper Cretaceous-Lower Paleogene rocks exposed in the Eastern Desert of Egypt have provided an opportunity to evaluate the stratigraphy and the geological evolution of the sedimentary basin. Lithostratigraphically, seven rock units; Quseir, Duwi, Sudr, Dakhla, Tarawan, Esna and Thebes formations, are considered after amending and dropping various used rock units names. Rakhiyat Formation in the north is changed and amended into Quseir Formation which has been used and consolidated in all sectors. Duwi Formation in the south is time-equivalent to the lower part of Sudr Formation in the north. Sharawna Member at Gabal Oweina and Hamama Member at Gabal Qreiya in the south (previously related to Dakhla Formation) are changed and amended into Sudr Formation which extends laterally as a tongue toward the south due to the marine transgression during the Late Campanian-Early Maastrichtian age. Similarly, Owaina Member at Gabal Oweina and Beida Member at Gabal Qreiya in the south are changed and amended into Dakhla Formation. Upward Tarawan, Esna and Thebes formations are resting on the Dakhla Formation all over the study area. Biostratigraphically, the studied successions are subdivided into 23 planktonic foraminiferal zones covering the interval from Campanian to Ypresian age. Sedimentation processes of the studied sections are interrupted by several synsedimentary tectonic episodes related to the collision between African/Arabian and Eurasia plates during the closure of Tethys Ocean. The relative sea level in the study area and global eustatic one together with the synsedimentary tectonic episodes is associated together.

Keywords:
Lithostratigraphy, Biostratigraphy, Upper Cretaceous, Lower Paleogene, Synsedimentary Tectonic Events, Sea-Level Changes

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