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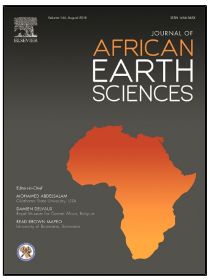

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Resolution enhancement of foraminiferal biostratigraphy of the Campanian-Maastrichtian interval: a case study from the Eastern Desert, Egypt

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Abstract

The Campanian-Maastrichtian (C-M) rocks exposed at the Southern Galala Plateau, North Eastern Desert of Egypt are represented by Sudr Formation, which consists of snow white chalky limestone, rich in planktonic and benthonic foraminifera. The major C-M transgression resulted in a deposition of Sudr Formation in outer neritic environment with high diversity and abundance of species, which led to defining nine planktonic foraminiferal zones and establishing the stage boundaries. In comparison with the foraminiferal zones of the GSSP of the C/M boundary, the lowest occurrence of *Rugoglobigerina scotti* is here considered to be the only marker for this boundary. In contrast, the other species (e.g. *Contusotruncana contusa*) that used to define this boundary at the GSSP is a diachronous and not save to depend on it in definition of the C/M boundary. Therefore, the present study helps in refinement of the C/M boundary definition not only in the study area, but also elsewhere.

Keywords: Campanian, Maastrichtian, foraminiferal biostratigraphy, Sudr Formation, Eastern Desert, Egypt.

1. Introduction

The biostratigraphy of the C-M transition have been studied by many microfossils workers (e.g. Bolli, 1966; Postuma,1971; Caron, 1985; Li and Keller 1998 a,b). They used the highest occurrence (HO) of *Radotruncana calcarata* (Cushman) to define this boundary. Li *et al*. (1999) used the Lowest Occurrence (LO) of *Rugoglobigerina hexacamerata* (Brönnimann) as the bioevent for the C/M boundary based on the biostratigraphic correlation with the geomagnetic time scale of Gradstein *et al.* (1995). In 2001, the GSSP for the C/M