Planktonic foraminifera from the upper Eocene of northern Saudi Arabia: Implications for stratigraphic ranges

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Abstract

Planktonic foraminifera from the Rashrashiyah Formation of the Sirhan Basin in northern Saudi Arabia were examined for their biostratigraphy and stratigraphic ranges. Assemblages are well-preserved and diverse, with forty species and eleven genera. All samples are from the Priabonian *Globigerinatheka semiinvoluta* Highest Occurrence Zone (E14). The excellent preservation coupled with high diversity allows us to re-examine the stratigraphic ranges of many taxa. Our study reveals that several species of *Globoturborotalita* including *G. barbula, G. cancellata, G. gnaucki, G. paracancellata*, and *G. pseudopraebulloides* evolved earlier than previously proposed. Additionally, older stratigraphic occurrences are found for *Dentoglobigerina taci* and *Subbotina projecta*. Our revision to the stratigraphic ranges has implications for the phylogeny and indicates that the tropical/subtropical diversity of planktonic foraminifera in the late Eocene was higher than previous studies have documented.

Keywords: Biostratigraphy, Priabonian, planktonic foraminifera

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