Planktonic foraminifera and the biostratigraphy of the Early Tertiary strata of the North Sea basin; a brief discussion

by Stephen Crittenden

with 1 figure

Abstract. The planktonic foraminifera have been neglected by commercial stratigraphers in the erection of biostratigraphic zonal schemes for the Early Tertiary of the North Sea Basin. This article briefly discusses some occurrences of planktonic foraminiferal faunas in Early Tertiary strata from the North Sea Basin and adjacent onshore areas as an attempt to stimulate further research on the planktonic foraminiferal faunas of the Early Tertiary strata of the North Sea Basin.

Introduction

In published biostratigraphical studies of the Tertiary strata of the North Sea Basin many authors have emphasised the use of the environmentally controlled benthonic foraminiferal faunas (KING 1983, Gradstein & Berggren 1981). This emphasis is essentially a result of:
1) The domination of the foraminiferal faunas by the benthonic species
2) The ease of identification of the benthonic species
3) The small size and relatively small number of the planktonic species, and in consequence
4) The relatively difficult and time consuming task of picking and identifying the planktonic species.

A biostratigraphical subdivision of the Tertiary strata encountered by commercial boreholes drilled in the North Sea is achieved by the use of benthonic foraminiferal faunas and index species. However a number of easily recognised age diagnostic planktonic taxa, in conjunction with other biostratigraphical markers (KING 1983) provide useful additional evidence for age determination (e.g. Globigerina daubjergensis Brotzen and Globorotalia pseudobulloides (Plummer) in the Early Palaeocene).

KING (1983, p. 3) states that for the Tertiary strata of the North Sea Basin “much additional study is required, especially of the planktonic foraminifera, to refine the biostratigraphy”. The inference is however, that in general, there is no commercial stimulus to study in detail

Author’s address: Stephen Crittenden, P. T. Panah Tiara, Jakarta, Indonesia, c/o Gearhart Geo Consultants Ltd., Howe Moss Drive, Kirkhill Industrial Estate, Aberdeen AB2 0GL, Scotland, U. K.

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