Late Ypresian (Cuisian) rotaliids (Foraminiferida) and their biostратigraphic potential

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One of the least known groups of larger benthic foraminifers of the Late Ypresian (Cuisian) is a number of as yet undescribed rotaliids, which commonly occur in shallow water deposits from the central North Sea. Their relative abundance and short distribution range in this biostратigraphic potential of these taxa is as yet unknown, mainly due to relevant taxonomic difficulties.

We present a selection of rotalid taxa from the Maikell Mtk. (Apulian domain, Central Italy) and NW Sicily (clasts from the Monte Bosco Fm., Pre-Pannonian domain) (Fig. 1). The investigated samples are attributed to the middle Cuisian (SBZ II of Serra-Kiel et al., 1998) on the base of the occurring alveolins and caviolinids.

In order to improve the biostратigraphic potential of Mediodi (PL II, Fig. 17), a biotic approach can be attempted. The Cuisian species are smaller than the typical forms described by Proft (1970) and by Hettinger (2007) from the late Middle Eocene of Iran (d1 mm). Small-sized Mediodi bayereri specimens are reported from the Ypresian of Serra Pantelleria, Southern Italy (Vecchi, 2003).

The Cuisian Mediodi may represent a new chronosequence, or anyway it is a biostatigraphically useful morphotype.

REFERENCES


The complexity of the text and the canal system in the Rotalia taxon and the necessity to investigate specimens from thin sections and the most common objects to investigate in detail these taxa. In the light of these difficulties, systematic description at the high qualitative standard level normally achieved in larger foraminifers may seem a daunting or unfeasible task.

Rotaliids are benthic hyaline foraminifers with calcite lamellar perforate test (Smout, 1954) and a system of apertural, intrasomatic, intrasomal channels. According to the suprageneric classification of Loblich (1967, 1919) the unidentified rotalid genus 1 should be included to the subfamily Cuvillieriinae because of the presence of an open canal system in both the ventral and dorsal sides of the test. Loblich (1967) suggests that the subfamily Cuvillieriinae is aperturate and assigns the genera with dorsally opened and natural canals to the Mesangiplacidae Sagl, 1965.

Unidentified rotalid genus 2 (Fig. 2) resemble the unidentified micelline 5 of Sirel (1999).

Fig. 1 - Location of the investigated sample.

Fig. 2 - Rotaliids from the Deconto outcrop (Maikell Mtk. 1-7). Unidentified rotalid genus 1: 1. axial section; 2. oblique section; 3. apertural section. 4-7. axial and oblique sections. 8. 7-200x OP. Test biconvex, biomat- rochal, trochastral, 2-3. chambers formed being a brownish, filled with pilar, foraminocans occur between the pilar, wall calcareous, lamellar and aperturally.

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Fig. 3 - Rotaliids from clasts in the Monte Bosco Fm. (Sicily). 1-2. Unidentified rotalid genus 2. 3. Unidentified rotalid genus 4.

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Fig. 4 - Unidentified rotalid genus 1 from the Monte Bosco Fm. (Sicily). 1-11. axial and oblique sections; 12. apertural section.

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