Benthonic foraminiferal assemblages from the Calabrian deposits of Santa Maria di Catanzaro

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Abstract: The benthonic foraminiferal associations from the Calabrian of Santa Maria di Catanzaro indicate that deeper water elements were sedimentarily admixed to shallow water associations.

Introduction

In the recent literature on the type Calabrian deposits the mixture of shallow water and deep water foraminiferal species has been remarked by several authors. This observation has been the major reason to suppose that sedimentary environment was of considerable depth. As a consequence, many of the sediments were claimed to be of turbiditic origin.

Closer inspection of the exposures leads BROLSMA & MEULENKAMP (this volume) to doubt the deep water character of the Calabrian succession. Reworking of deep water elements is thought to give a better explanation. SISINGH (this volume) finds evidence for such reworking in the ostracodal fauna, some elements possibly being of Pliocene Age. On the basis of planktonic foraminifera GRADSTEIN (this volume) is even more explicit, since he recognizes the presence of unmistakable Pliocene species such as Globorotalia margaritae.

A number of key samples from the suite taken by BROLSMA & MEULENKAMP were analysed to check the opposing viewpoints from the benthonic foraminiferal associations. No detailed account of the determinations of the species will be given, they are all well known from the literature. The paleoecological implications of separate species will neither be presented. The author's line of reasoning will be reviewed in the concluding paragraphs of this paper.

The samples

The assemblage from the single Pliocene sample MC 11 contains a considerable number of benthonic species, all well preserved with thin and translucent test walls. The majority of the assemblage could well be autochthonous. Uvigerina peregrina is the predominant species, Bulimina inflata, Globobulimina glabra, Sphaeroidina bulloides, Nonion pompioides, Karrierella bradyi and small, translucent Siphonina specimens are frequent. The assemblage as a whole indicates an open marine muddy environment of considerable depth of at least 50 m, probably more. There is very little evidence of

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