



Seagrass or not Seagrass: additional clues from a foraminiferal assemblage from a Burdigalian sequence in India.

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A compilation of new results on microfossils of the Quilon Formation (early Miocene, Burdigalian) at the Channa Kodi section, Kerala, southern India is presented. The stratigraphy is updated, resulting in a position within the revised planktonic foraminiferal zone M3, in calcareous nannoplankton zone CN2/NN3, and larger foraminifera zone SBZ 25. The sediment is characterized by mesophotic taxa common at 60 to 70 meters water depth, containing a large amount of additional taxa which are characteristic for seagrass meadows at 20-30 m; thus suggesting intense down slope transport processes. Concerning larger foraminifera, operculinids, lepidocyclinids and miogypsinids are particularly abundant.

The depositional environment was long considered a seagrass meadow but we could finally prove there is no evidence from in situ seagrass based on the recovered assemblage. Most of the seagrass associated fauna has been in fact transported downslope and the differential preservation among the taxa investigated confirm this hypothesis. The Operculina assemblage is characterized by very high abundance, excellent preservation and relatively high diversity. 61 specimens have been investigated by computed tomography: this allowed the measurements of a number of biometric parameters obtained on equatorial and axial sections of the specimens as well as abundant information on the external ornamentation of each test.

Forty-one specimens of miogypsinids have been investigated by computed tomography: this allowed the measurements of a number of biometric parameters obtained on equatorial and axial sections of the specimens as well as abundant information on the ontogenetic changes of the chamber morphology which is of pivotal importance to differentiate the genera Miogypsina from Lepidosemicyclina. Additionally, the complete test geometry in both equatorial and axial sections is displayed for agamonts of both miogypsinids, which are very rare for the Indian taxa.

The fauna recovered is particularly rich in miliolid foraminifera, which are mostly badly preserved due to intense transportation.