



## RELICT FAUNAL TESTIMONY FOR SEA-LEVEL FLUCTUATIONS OFF MYANMAR (BURMA)

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### ABSTRACT

The distribution and ecological significance of the relict benthic foraminiferal assemblage found in the study area off Myanmar is discussed here. Of the 126 surface sediments studied for foraminiferal content, relict foraminiferal assemblage comprising the genera *Operculina-Amphistegina-Calcarina-Alveolinella-Heterostegina* were encountered at 22 different locations nearly parallel to the west coast of Myanmar. Soft coral sclerites, coral rubble and calcareous algae were found associated with this assemblage. These signatures confirm the existence of fossil patch reefs in the region, which were never reported before. A conceptual framework is proposed to explain the proliferation of coral patches at different depths during different times in the geological past. Radiocarbon AMS dating of 7 select samples representing different depths revealed different ages at different depths. To derive a sea-level curve, the sea level was assigned to 17.5 m above the depth of finding the relict fauna as deciphered from soft coral assemblage. On the basis of the faunal ecology and chronology, for the first time a sea level curve for the past 16,000 radiocarbon years is proposed for the west coast of Myanmar. This study suggests an episodic sea-level rise in the region. A comparison of this sea level curve with the ones proposed for the East and West coasts of India indicates that in addition to the global Holocene sea level rise, tectonic vertical displacement is the cause of the destruction of the soft coral patches off west coast of Myanmar.

**Keywords:** Relict Foraminifera, soft coral sclerites, AMS dates, sea level, subsidence, Myanmar