



FORAMS 2006

## **Recent benthic foraminiferal assemblages in the nearshore inner shelf in and around Alang shipbreaking yard, Gulf of Khambat, India**

Sabyasachi Majumdar<sup>1</sup> & Amalesh Choudhury<sup>2</sup>

<sup>1</sup>*Kendriya Vidyalaya Sangathan, Fort William, Kolkata 700 021, India*

*sabyasachimajumdar@yahoo.com*

<sup>2</sup>*S D Marine Biological Research Institute, Sagar Island, India*

Coastal, estuarine and other marginal marine environments are recipients for various kinds of anthropogenic wastes, resulting in severe negative impacts on the resident biota. Due to their abundance and better preservative potential, foraminifera serve as one of the most sensitive and inexpensive tracers in evaluating environmental stresses in the marginal marine environment.

Recent benthic foraminiferal studies were carried out during winter (December) and the pre-monsoon time (April) for 15 stations along 5 transects in and around the Alang shipbreaking yard, the largest of its kind in the world. Two control transects (TI and TV), one each at the northern and southern ends of Alang, as well as three other transects (TII, TIII and TIV) were selected within the core zone to study benthic foraminiferal assemblages from the intertidal to areas 5km offshore. The shipbreaking activities induced considerable ecological inhospitability due to pollution from heavy metals, oil and tar. Additionally, high tides and large suspended solids were also found to be unfavourable for the benthic foraminifera.

A total of 49 species of Recent benthic foraminifera belonging to 25 genera, 13 families and 3 suborders were identified. Poor faunal density and diversity, poor health, absence of agglutinated forams, and formation of a 'foram dead zone' depicted the magnitude of environmental perturbation from the study sites. Of the five transects, the TII transect emerged as the most ecologically hostile, whereas the TI (control) transect was the most healthy.

*Ammonia beccarii*, *Bolivina striatula*, *Elphidium simplex*, *Florilus schapha*, *Nonionellina turgida*, *Quinqueloculina seminulum* and *Triloculina brevibentata* were the most abundant species. *Ammonia beccarii* and *Nonionellina turgida* appeared to be the opportunistic species of this stressed marginal marine environment, managing to withstand the ecological crisis with a reasonable amount of success.