ABSTRACT

Foraminifers, which are microscopic protozoans, are basically marine organisms, but also inhabit diverse ecological habitats such as lagoons, saline lakes, estuaries, backwaters and even rock pools. Due to their wide distribution and environmental sensitivity, foraminifera have several applications and are of high utility. Tuticorin, on the south-east coast of Tamil Nadu, is a major port and, in recent years, has become as active as Chennai in the state of Tamil Nadu. As the area around Tuticorin is rather diverse in its ecological settings, it was, therefore, selected for the present study, to carry out detailed investigations on benthic foraminiferal taxonomy and ecology. Bottom water and sediment (from the sediment-water interface) samples were collected in three different environmental settings: mangroves, innermost shelf, and near a coral island (Muyal Theevu). Accordingly, 30 representative sediment and water samples were collected, 15 from the mangroves at Pazhaiyakayal, 5 more from mangroves close to the coast on the way to Vellaipatti, 6 from the inner shelf off Vellaipatti, and 4 from the littoral zone of Muyal Theevu (Hare Island), at water depths ranging from 1.0–1.5 m to nearly 15 m. The widely used foraminiferal classification proposed by Loeblich and Tappan (1987) has been used in the present study. Accordingly, 85 benthic foraminiferal species belonging to 42 genera, 23 families, 15 superfamilies, and 4 suborders are reported and illustrated. Among these, 6 species are arenaceous, agglutinated (suborder TEXTULARIINA), 37 are calcareous, imperforate, porcelaneous forms (suborder MILIOLINA), 9 are calcareous, hyaline forms (suborder LAGENINA), and 33 are calcareous, perforate taxa (suborder ROTALIINA). The ecology of Recent benthic foraminifera is presented with SEM illustrations with a note on the scope of future research.