

Title of the Ph.D. Thesis: **Comparative study of foraminiferal Biofacies along the east and west coast of India**

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ABSTRACT

The present study examines the taxonomy, abundance and diversity of the foraminiferal population along India's east and west coast. Surface sediment samples were collected from fifteen stations over a year from both the regions. A total of eighteen species from the east coast and thirty five species from the west coast have been identified. The east coast is dominated by *Haynesina germanica*, *Criboelphidium* spp., *Asterorotalia trispinosa*, *H. depressula*, and *Ammonia tepida*. The most dominant species of the west coast are *Rotalidium annectens*, *Elphidium crispum*, *Pararotalia nipponica*, *Eponides repandus*, *Quinqueloculina seminulum*, *Cibicides refulgens*, *Nonion* cf. *commune* and *Ammonia tepida*. The taxonomic comparison of both the coasts shows that only seven species are common. They are *Rotalidium annectens*, *Haynesina depressula*, *Quinqueloculina seminulum*, *Pararotalia nipponica*, *Ammonia tepida*, *Ammonia beccarii* and *Elphidium advenum*.

Total Foraminiferal Number (TFN) shows an overall higher abundance of foraminiferal assemblage in the west coast compared to the east coast. The test size of the benthic foraminifera is larger in diameter in the west coast (>125 μ m) than east coast (<125). The abundance and diversity of the foraminiferal assemblages are lower in the east coast. Abiotic factors such as salinity and temperature are correlated with the foraminiferal assemblages. The salinity is lower in the east coast (22‰-30‰) compared to the west coast (35.99 ‰ -36.64 ‰). Two distinct foraminiferal biofacies zones are proposed for both coastal regions.

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