

Abstract

Meiofaunal recolonisation patterns were investigated in restored *Rhizophora mucronata* forests by assessing their density, community composition and diversity. This was done in five- and ten-year reforested mangroves, with natural and degraded controls. MDS and ANOSIM of meiofaunal community composition separated the natural and the ten-year reforested sites from the five-year reforested and degraded sites. Nematodes were the dominant meiofaunal taxon at all the sites, accounting for >90% of the meiofaunal densities. The natural and the ten-year reforested sites were rich in silt/clay sediments and organic matter, and had the highest meiofaunal (1201 ± 197 and 1379 ± 369 meiofauna.10 cm⁻² respectively) and nematode (1142 ± 196 and 1320 ± 341 meiofauna.10 cm⁻² respectively) densities. The degraded site had a significantly higher Shannon Diversity index than all the other sites, which was linked to the higher dominance by nematodes in the natural, five- and ten-year old reforested sites. The study showed that degradation of mangroves leads to changes in habitat with concomitantly impoverished meiofaunal communities in terms of their density and community composition. It was also evident that recovery of meiofaunal communities, particular of the nematodes, occurs after five to ten year's reforestation.