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## Introduction

Benthos harbours a community of organisms including micro-organisms, animals and plants. The term meiobenthos fauna relate usually to multicellular animals with a size between 50 and 500  $\mu$ m [1]. The meiobenthos has so far mainly been studied in the context of the formation of sediments and ecotoxicology in marine environments and freshwater lakes [2-4]. However, it should also be an interesting subject for food web studies. The whole phylum currently contains some 20,000 species, of which about 4,000 species are free living marine forms. Meiofauna occupies about 80% of the total marine biomass and its of great importance in the marine ecology and the marine mineralogy [2]. Some of the meiofauna groups form a direct food for Macrobenthos, juveniles of demersal fishes and also of shrimps [5]. The meiofauna are primary consumers and found to feed on organic matter. Meiofauna are also known to be sensitive indicators of environmental disturbances and have great potential as pollution indicators. It is shown to have advantages that include their sessile habitat, high abundance, high species diversity, short generation time, direct benthic development and ubiquitous distributions of marine sediments. Very little work was done especially on the benthic species diversity. So the present study was attempted to investigate the benthic biodiversity in the coastal environments of south east coast of India.

## Materials and Methods

The field survey was conducted from September-2007 to August-2008 in the different stations. Station-1 Arukkattuthurai (10°23'30.51" N; 79°52'07.14" E), Station-2 Pointcalimere or Kodiakkarai (10° 18' N; 79° 51' E ), - Station-3 Mallipattinam (10° 16'

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\*Corresponding author:



normally occur in any environment that provides a source of organic carbon. In every soil type, under all climatic conditions and habitats that vary from pristine to extremely polluted. They do not rapidly migrate stressful conditions and many species survive dehydration, freezing or oxygen stress. Nematodes occupy a key position particularly in soil food webs. Nematodes were the most dominant at all stations in the present study that was followed by foraminifera's, Harpacticoid, Ostrocodes, Cumacea, Cnidarians and Turbellarians. Totally 42 species of nematodes were recorded in the present study. Mallipattinam had maximum number of nematodes rather than other stations (Tables 1 and 2). Out of this, 21 species are present in all five stations, (*Astomonema sp*, *Daaptonema oxycerea*, *Daaptonema conicum*, *Daaptonema sp*, *Desmodora pontica*, *Desmodora sp*, *Draconema sp*, *Enoploides sp*, *Halalaimus flum*, *Metapselionema s*, *Oxystomina sp*, *Polygastrophora sp*, *Prochaetosoma sp*, *Pselionema sp*, *Pseudolella sp*, *Quadricoma sp*, *Steineria sp*, *Teristus sp*, *Trichotheristus sp*, *Tricoma sp*, *Viscosia sp*). Observations in the nematodes from other parts of the world have related their occurrence to the type of sediments in which they occur [7,8]. The Mallipattinam is highly productive and mud flat areas are abundant in the top few centimeters of sediments where they are easily accessible to predators including fishes.

The second dominant species in the present study are foraminifera

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