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Seasonal variation in polychaetes of intertidal mangrove area of Shirgaon, Ratnagiri, Maharashtra, India

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ABSTRACT

This study highlights the seasonal variation in polychaetes of intertidal mangrove area of Shirgaon, Ratnagiri, Maharashtra. All polychaetes sample was collected by stratified random sampling method during the lowest low tide of each month. A total of six polychaetes species viz; Nereis sp., Perinereis sp., Lumbrinereis sp., Marphysa sp. I, Marphysa sp. II and Unidentified polychaetes sp. were recorded. The abundance of polychaetes during pre-monsoon (3.5442 no m^{-2}), monsoon (2.5714 no m^{-2}) and post-monsoon (2.8571 no m^{-2}) was recorded among which Nereis sp. and Marphysa sp. were recorded consistently in all season while other polychaete species were sporadically distributed in all three seasons. Monthly variation in-situ parameter such as atmospheric temperature, intertidal water temperature, sediment temperature, dissolved oxygen of intertidal water, intertidal water pH, sediment pH, sediment organic carbon and intertidal water salinity were recorded during the study period.

Keywords: Mangrove, Intertidal, Polychaetes, Transect, Quadrate.

Introduction

Mangroves plants grow at the intertidal zones of sheltered shores, estuaries, tidal creeks, backwaters, lagoons, marshes and mudflats. They can also be found in substrates other than muddy soil such as coastal reefs and oceanic islands. In such areas, the mangrove plants grow on peat, derived from decayed vegetation. They find it difficult to colonize the coastal zone with waves of high energy and hence they normally establish themselves in sheltered shorelines (Kathiresan and Bingham, 2001). Mangroves preserve water quality and reduce pollution by filtering suspended material and assimilating dissolved nutrients (Bandaranayake *et al.,* 2002). Mangroves are found in more than 120 countries and territories around the world. The mangrove ecosystem covers only 0.037 per cent of the world's surface or 0.12 per cent of the Earth's land area (Ong *et al.,* 2004). In India, the total area.