

**IDENTIFICATION OF BENTHIC MACROINVERTIBRATE FAUNA
IN MANGROVES, MANDATHIVU AREA, JAFFNA,
SRI LANKA.**

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ABSTRACT

Species abundance and diversity of mangrove macrobenthic invertebrate fauna and their relationship to environmental conditions are important to understand the structure and function of mangrove ecosystems. Mangrove litter fuels the mangrove food webs and macrobenthic invertebrates act as intermediate organisms assisting the breakdown of particulate organic material. For the identification of macrobenthos of mangrove ecosystem, a mangrove patch from Mandathivu, Jaffna was selected. Sediment sampling was made weekly from 10th August 2019 to 07th March 2020. A metal quadrat (25 cm ×25 cm ×25 cm) was used to collect sediment samples from the site. Weekly samples were collected up to 10cm depth in triplicates. After recovering, macrobenthos were identified and documented with the water depth they found. At the end of 30 weeks of sampling, altogether 19 species of macrobenthic invertebrate fauna were collected. The mangrove macroinvertebrates were identified using standard taxonomic keys and literature based on the morphological features. Macrofauna were mainly composed of deposit feeders dominated by molluscs (56%), polychaetes (18%), arthropods (24%) and others (2%) including 9 gastropods, 1 bivalve, 4 polychaetes, 4 arthropods, 1 poriferan species. These benthos helps in nutrition recycling and in turn promote primary productivity of the adjacent environments. A complete study on the species richness and the associated environmental parameters is warranted to conclude on the health of this eco system.

Key words: Mangroves, Macrobenthic invertebrate fauna, Taxonomy