

# ZONATION AND ABUNDANCE OF MACROFAUNA ON A MANGROVE SHORE, PHUKET ISLAND

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## ABSTRACT

The zonation and abundance of macrofauna were studied throughout mangrove, sand and mud flat biotopes at Ao Nam-Bor shore, Phuket Island, Southern Thailand, and the findings related to environmental conditions characteristic of each biotope. Each biotope was dominated by different taxa and that of the mangrove was found to be predominantly peculiar to it. Of 103 species found within the mangrove biotope (consisting predominantly of polychaetes, crustaceans and molluscs), 77 species ( = 74.6 % ) were exclusive to it.

The mangrove macrofauna was similar in composition to that described for other mangrove localities in the Indo-West Pacific region with families, genera and even species being common throughout; thus, emphasising the characteristic nature of a mangrove macrofauna.

Distribution of macrofauna was limited in extent and/or density within the three biotopes by substrate conditions (particle size, consolidation, organic and moisture content) and/or tidal factors. Comparisons between four zones within the mangrove biotope showed that whilst macrofaunal compositions were similar in all four zones, species diversity and its abundance were notably higher within the forest than in areas with less vegetation. Thus, conditions resulting from the presence of a mangrove forest such as shade, moister substrate, attachment points and, by far the most important, an abundance of organic detritus as food provides a habitat suitable for colonisation by a large number of animal species, due to an availability of greater microhabitat diversity rich in foods.