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FLORAL DIVERSITY OF SIX MANGROVE FORESTS ALONG THE NORTHWESTERN COASTLINE OF WET, INTERMEDIATE AND DRY CLIMATE ZONES OF SRI LANKA

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ABSTRACT - Although the primary role of mangrove vegetations as photosynthetic primary producers, they are the basis of a complex and productive ecosystem. The mangrove forests in the tropics are threatened due to the immense human pressure especially through infrastructure development and aquaculture. Therefore information on the change of mangrove species diversity in different climate conditions and in the location of the forest is useful for restoration and identifying the conservation needs. The species diversity of six mangrove forests of three different climate regions was examined in this study. Species diversity in bottom, hydromorphic fringe, non-hydromorphic fringe and upland segments of each forest was also studied. There was no clear species difference in different climate regions. The highest diversity was reported in Negombo Lagoon of wet zone followed by Chilaw Lagoon of dry zone. *Avicennia marina, Excoecaria agallocha, Lumnitzera recemosa* and *Rhizophora mucronata* were found in all six forests. *Aegicereas corniculatum, Bruigera gymnorrhiza* and *B. sexangula* were found only in wet and intermediate zones. The lowest species diversity was identified in the bottom segments having *R. mucronata, R. apiculata, Acanthus ilicifolius* and *Scyphiphora hydrophyllacea*. The highest diversity was recorded in the non-hydromorphic fringe segment where 14 out of 15 totally recorded species were found in that region. Several threats to the mangrove forests, especially due to infrastructure developments and shrimp farming were also identified.

KEY WORDS : Climatic zones; Diversity indices; Mangrove; *Scyphiphora hydrophyllacea*; Species diversity

INTRODUCTION

Mangroves are unique and highly produc- reefs (Ewel et al., 1998). It also plays a signifi-