

Structure and composition of floral at mangrove forest in Pitas Sabah Malaysia

ABSTRACT

The aim of the study was to determine and record mangrove species composition and diversity at Pitas mangrove forest, Sabah. Mangrove forest occurs in waterlogged, salty soils of sheltered tropical and subtropical shores. It is usually found along the coastlines throughout the world, usually between 25° N longitude and 25° S latitude. This study was conducted in Pitas district (N 06°43', E 117°04') which is located at the northern tip of Sabah, Malaysia. Whereas, Pitas district has an approximately 38,564 ha of the mangrove area. In this study, the mangrove location covered an area ranging from Malawali island (N 07°02.023', E 117°16.883'), Tobo island (N 07°01.070', E 117°19.008'), Layak-layak island (N 06°56.587', E 117°14.323'), Mapan-mapan (N 06°51.608', E 117°14.861'), and Jambongan island (N 06°45.016', E 117°25.816'). The random sampling method was done with simple plots sizes of 20m x 20m to determine the species' biodiversity, composition and structure. As a result, 13 mangrove species have been identified in all study locations namely known as *Sonneratia caseolaris*, *Ceriops tagal*, *Bruguiera gymnorhiza*, *Rhizophora mucronata*, *Aegiceras corniculatum*, *Avicennia marina*, *Rhizophora apiculata*, *Sonneratia alba*, *Bruguiera cylindrica*, *Lumnitzera littorea*, *Pemphis acidula*, *Scyphiphora hydrophyllacea*, and *Scaevola taccada*. The result shows that the Shannon-Wiener biodiversity index (H') at the island and disturbed mangrove areas is less diverse (H' below than 1.5) compared to the undisturbed mainland areas with ($H'=1.95$). *Sonneratia caseolaris* is the dominant mangrove species in the island with the highest value of Important Value Index (IVI) with 144.77% compared to all species in the study location. These areas show the importance of ecological aspects within the forest ecosystem. Therefore, the protection and conservation of this mangrove in this area is a necessity.