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Lihat sebelah

THE DISTRIBUTION OF RIPARIAN VEGETATION AT SUNGAI CHALOK, SETIU TERENGGANU

By

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To mak and oyoh,

Thanks for being in my life...

KUSTEM

JABATAN SAINS SAMUDERA
FAKULTI SAINS DAN TEKNOLOGI
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA

PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

A Preliminary Study of Distribution of Riparian Vegetations at Sungai Chalok, Setiu, Terengganu oleh **Siti Normasliana Binti Mohd Tarli, UK 7720** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Samudera sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains (Biologi Marin), Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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LIST OF ABBREVIATIONS/ SYMBOLS

SYMBOL	MEANING
DBH	Diameter Breast Height
PC-ORD	Multivariate Analysis of Ecological Data
DGPS	Digital Global Positioning System
km	Kilometer
m	Meter
%	Percentage
°C	Degree Celsius
S	Species Richness
E	Species Evenness
H	Species Diversity
∏	3.142
cm	centimeter

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ABSTRACT

The objective of this preliminary study was conducted to determine the riparian vegetation, distribution of riparian vegetation, and species richness (S), species evenness (E) and species diversity (H') along Sungai Chalok at Setiu, Terengganu. The transect line method with a systematic plot design was used in this inventory method to obtain and gather the information of tree species such as DBH (cm), height (m) and crown stem. A total of 18 plots were sampled. In total, 23 species vegetation were recorded and belonged to 15 families such as Myrtaceae, Palmae, Guttiferae, Lecythidaceae, Melastomataceae, Acanthaceae, Flagellariaceae, Leguminosae, Loganiaceae, Malvaceae, Meliaceae, Gleicheniaceae, Pteridaceae, Rhizophoraceae and Sonneratiaceae. The species vegetation comprised tree, palm, shrub, climber, fern and herb. Univariate and multivariate analysis were performed using the PC-ORD (Multivariate Analysis of Ecological Data) statistical package version 3.0. Three measures of indices were calculated for each to express diversity like number of species, species richness (S) and species evenness (E). For species analysis, *Barringtonia racemosa* indicates the highest value of species richness with 13.00 and species diversity (H') value with 2.170. For species evenness (E), *Xylocarpus granatum* had a greatest value with 1.000. The average of species richness (S), evenness (E) and diversity (H') were 3.00, 0.451 and 0.593, respectively. Overall, a large number of *Bruguiera sexangula* from family Rhizophoraceae, was found along Sungai Chalok.

ABSTRAK

Objektif kajian awal ini dijalankan untuk menentukan tumbuhan riparian, taburan tumbuhan riparian dan nilai 'species richness (S)', 'species evenness (E)' dan 'species diversity (H')' di sepanjang Sungai Chalok di Setiu, Terengganu. Kaedah inventori digunakan untuk mendapatkan dan mengumpul maklumat bagi spesies tumbuhan seperti DBH (cm), tinggi (m) dan bentuk batang. Secara keseluruhan, terdapat 23 spesies yang berada di bawah 15 famili telah dikenal pasti iaitu Myrtaceae, Palmae, Guttiferae, Lecythidaceae, Melastomataceae, Acanthaceae, Flagellariaceae, Leguminosae, Loganiaceae, Malvaceae, Meliaceae, Gleicheniaceae, Pteridaceae, Rhizophoraceae dan Sonneratiaceae. Spesies tumbuhan ini terdiri daripada 4 jenis bentuk tumbuhan iaitu pokok, palma, renek, memanjat, paku-pakis dan herba. Kewujudan tumbuhan riparian adalah berbeza bagi setiap plot analisis. Analisis 'univariate' dan 'multivariate' dijalankan menggunakan PC-ORD (Multivariate Analysis of Ecological Data) siri pakej 3.0. Tiga pengukuran digunakan untuk mengira diversiti seperti 'species diversity', 'species richness (S)' and 'species evenness (E)'. Untuk analisis spesies, *Barringtonia racemosa* menunjukkan nilai 'species richness' yang paling tinggi dengan nilai 13.00 dan nilai 'species diversity (H')' sebanyak 2.170. Untuk 'species evenness (E)', *Xylocarpus granatum* mempunyai nilai yang paling tinggi iaitu 1.000. Purata 'species richness (S)', 'evenness (E)' dan 'diversity (H')' adalah 3.00, 0.451 dan 0.593. Bagi keseluruhan Sungai Chalok, di dapati bahawa *Bruguiera sexangula* dari famili Rhizophoraceae mendominasi kawasan tersebut.