Stand structure of mangrove forest at Pulau Che Minah (South) Kelantan Delta, Tumpat / Farah Farhana Shaari.

Lihat sebelah

STAND STRUCTURE OF MANGROVE FOREST AT PULAU CHE MINAH (SOUTH), KELANTAN DELTA, TUMPAT

By

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Research Report submitted in partial fulfillment of
the requirement for the degree of
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Department of Biological Sciences
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk: STAND STUCTURE OF MANGROVE FOREST AT PULAU CHE MINAH (SOUTH), KELANTAN DELTA, TUMPAT oleh Farah Farhana binti Shaari no. matrik: UK 8771 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah Sarjana Muda Sains Gunaan- Pemuliharaan dan Pengurusan Biodiversiti Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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d	-	Diameter class
dbh	-	diameter at breast height
E	-	Evenness
G	-	Average basal area per hectare
g_{ij}	-	basal area in the *j*th diameter calss of the *i*th plot
GPS	-	Geographical Positioning System
H	-	Diversity
m	-	Number of diameter class in the plot
n	-	Number of plots in stand
R	-	Richness

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ABSTRACT

The study about the mangrove stand structure and composition is to determine the species composition and the stand structure of the mangrove forest. The study was conducted at Pulau Che Minah (South), Kelantan Delta, Tumpat. A quantitative study of mangrove vegetation (trees, saplings and seedlings) was recorded from 100 m^2 plot, include the species diversity, density and basal area. Overall, there were three species for trees were found, there were *Avicennia alba, Sonneratia caseolaris* and *Nypa fruticans.* While there were five species for sapling were found and only *Nypa fruticans* was found for the seedling. Pulau Che Minah is classified as Avicennia-Sonneratia forest type. The dominance species that recorded at this area were *Avicennia alba* and *Sonneratia caseolaris*. There was 8.045 m^2ha^{-1} total basal was recorded at Pulau Che Minah. The importance value that was recorded by *Avicennia alba* was 126.966 and Sonneratia *caseolaris* was 59.619. The density for the trees, saplings and seedlings was 2810 tree ha^{-1}, 1620 saplings ha^{-1} and 9000 seedling ha^{-1} respectively. The average richness, evenness and diversity for the tree was 16.7, 0.942 and 2.628 respectively. The average richness for the sapling was 5.0, the average evenness for the saplings was 0.449 and the average diversity for the saplings was 0.873. The mangrove vegetation of this island was related with the location of the island which located at the seaward zone and influence by tidal inundated. The baseline data from this study can provide a valuable comparison with other mangrove in Malaysia.

DIRIAN STUKTUR HUTAN PAYA LAUT DI PULAU CHE MINAH (SELATAN), DELTA KELANTAN, TUMPAT

ABSTRAK

Kajian mengenai dirian stuktur hutan paya laut adalah untuk mengetahui komposisi hutan dan dirian hutan tersebut. Kajian mengenai kuantitatif pertumbuhan di kawasan hutan paya laut (pokok, anak pokok dan biji benih) adalah direkodkan daripada plot yang berukuran 100 m^2. Ini adalah merangkumi kepelbagaian spesies, kepadatan dan luas pangkal. Secara keseluruhannya, hanya terdapat tiga spesies pokok dewasa yang dijumpai di kawasan kajian. Manakala lima spesies yang dijumpai di kawasan kajian adalah merupakan anak pokok. Hanya biji benih *Nypa fruticans* dijumpai di kawasan kajian. Jenis hutan yang terdapat di Pulau Che Minah adalah hutan jenis Avicennia-Sonneratia. Spesies yang dominan di Pulau Che Minah adalah *Avicennia alba* dan *Sonneratia caseolaris*. Luas pangkal adalah sebanyak 8.045 m^2ha^{-1}. Nilai kepentingan yang bagi *Avicennia alba* adalah sebanyak 126.966, manakala bagi *Sonneratia caselaris* adalah 59.619. Kepadatan pokok di Pulau Che Minah adalah sebanyak 2810 pokok m^2ha^{-1}, kepadatan anak pokok adalah sebanyak 1620 pokok m^2ha^{-1} dan kepadatan biji benih adalah sebanyak 9000 pokok m^2ha^{-1}. Purata kekayaan spesies, keseragaman,dan kepelbagaian spesies bagi pokok masing-masing adalah 16.7, 0.942 dan 2.628. Manakala purata kekayaan, keseragaman dan kepelbagaian spesies bagi biji benih masing-masing adalah 5, 0.499 dan 0.873. Hutan paya laut di Pulau Che Minah dipengaruhi oleh pasang surut air dan kedudukan pulau tersebut menyebabkan pulau ini hanya ditumbuhi oleh *Avicennia alba* dan *Sonneratia caseolaris*. Data yang diperolehi boleh digunakan sebagai rujukan untuk membuat perbandingan dengan kawasan hutan paya bakau di tempat lain.