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Universiti Malaysia Terengganu

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A preliminary study of mangrove distribution at Sg. Haji Dorani, Sabak Bernam, Selangor / Nor Hapidah Osman.

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A PRELIMINARY STUDY OF MANGROVE DISTRIBUTION AT SG.HAJI DORANI, SABAK BERNAM, SELANGOR

By

Nor Hapidah binti Osman

Research report submitted in partial fulfillment of
the requirement for the degree of
Bachelor of Science (Marine Science)

Department of Marine Science
Faculty of Maritime Studies and Marine Science
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JABATAN SAINS MARIN
FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN
UNIVERSITI MALAYSIA TERENGGANU

PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah dengan ini diakui dan disahkan bahawa laporan penyelidikan bertajuk :
A Preliminary Study of Mangrove Distribution at Sg.Haji Dorani, Sabak Bernam, Selangor oleh **Nor Hapidah binti Osman**, No. Matrik: **UK 10336** telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Marin sebagai memenuhi sebahagian daripada keperluan memperolehi Ijazah **Sarjana Muda Sains (Sains Samudera)**, Fakulti Pengajian Maritim dan Sains Marin, Universiti Malaysia Terengganu.

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LIST OF ABBREVIATIONS/SYMBOLS

Symbols	Meaning
DBH	Diameter of Breast Height
GPS	Global Positioning System
PC-ORD	Multivariate Analysis of Ecological Data Software
Km	kilometres
m	metre
cm	centimetre
%	percentage
Num	number
S	Species richness
E	Species evenness
H'	Species diversity
Π	3.142

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ABSTRAK

Objektif kajian ini dijalankan adalah untuk mengenalpasti taburan komposisi spesis hutan paya laut di Sg.Haji Dorani yang terletak di kawasan pantai barat Semenanjung Malaysia dan untuk mengkaji kekayaan spesis, kesamaan spesis dan kepelbagaian spesis bagi ekosistem hutan paya laut. Bagi mencapai matlamat kajian ini, kaedah inventori telah digunakan di mana bilangan individu spesis, DBH, tinggi pokok dan kategori batang dicatatkan. Sebanyak 15 plot telah didirikan di atas 15 transet di sepanjang 1 km menghadap ke laut. Secara keseluruhannya, terdapat 7 spesis hutan paya laut yang telah dikenalpasti dan telah dibahagikan kepada dua jenis bentuk tumbuhan iaitu kategori pokok dan renek. Dengan menggunakan perisian statistik PC-ORD versi 3.2, kekayaan spesis, kesamaan spesis dan kepelbagaian spesis bagi setiap spesis dapat diketahui. Spesis *Avicennia marina* mencatatkan kekayaan spesis(15), kesamaan spesis (0.947) dan kepelbagaian spesis (2.565) yang tertinggi. Manakala, 6 jenis spesis hutan paya laut telah dikenalpasti mencatatkan kekayaan spesis, kpelbagaian spesis dan kesamaan spesis terendah. Spesis tersebut ialah anak pokok *Avicennia officinalis*, anak pokok *Hibiscus tiliaceus*, anak pokok *Lumnitzera racemosa*, anak benih *A.marina*, anak benih *Excoecaria agallocha* dan anak benih *Hibiscus tiliaceus.*Kehadiran dan jumlah bilangan individu setiap spesis adalah berbeza mengikut plot masing-masing. Walaubagaimanapun, bagi keseluruhan spesis yang terdapat di Sg.Haji Dorani, *Avicennia marina* adalah spesis yang paling kerap dijumpai dan secara tak langsung mendominasi kawasan tersebut.

ABSTRACT

The objectives of this study was conducted to identify the compositions abundance of mangrove species at Sg. Haji Dorani, which is located at the west coast area of Peninsular Malaysia and to study the species richness, species evenness and species diversity of mangrove ecosystem. Method of inventory that used like recorded the number of species individuals, DBH, height of tree and stem category in each plot. There were 15 plots built over 15 transects along 1 km seaward. Overall, there were mangroves species identified and divided into two types of life form, tree and shrub. By using PC-ORD statistical software version 3.2, species richness, species evenness and species diversity for each species will be known. *Avicennia marina* showed the highest species richness (15), species evenness (0.947) and species diversity (2.565). Meanwhile, there were six species identified as the lowest species richness, species evenness and species diversity. The species were sapling of *Avicennia officinalis*, sapling of *Hibiscus tiliaceus*, sapling of *Lumnitzera racemosa*, seedling of *A.marina*, seedling of *Excoecaria agallocha* and seedling of *Hibiscus tiliaceus.* However, for overall species at Sg.Haji Dorani, *Avicennia marina* was the most frequent species found and indirectly dominated the area.