DISTRIBUTION OF EPIPHYTIC FAUNA ON SEAGRASS LEAVES

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By

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LAPORAN AKHIR PROJEK

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Dengan ini disahkan bahawa saya telah menyemak laporan akhir projek ini dan:

i) semua pembetulan yang disarankan oleh pemeriksa-pemeriksa telah dibuat, dan

ii) laporan ini telah mengikut format yang diberikan dalam Panduan PSF 499 - Projek dan Seminar, 1991, Fakulti Perikanan dan Sains Samudera, Universiti Pertanian Malaysia.

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15 April 1995

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(Tarikh)

DEDICATED TO:

My beloved family

Supervisor and co-supervisor

Friends

Colleagues of 1992-95

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ABSTRACT

The study of the seagrasss ecosystem specifically its epiphytic fauna was carried out in the Strait of Johore (Tg. Adang and Merambong Shaol) and in a narrow estuary at Terengganu (Gong Batu and Merchang). A total of 72 species of invertebrates were found to grow epiphytically and associated to the seagrass area at the four study sites. The distribution of the epiphytic fauna on the seagrass leaves was not random. Various epiphytes exhibit preferences for certain adhering location on the stems and the leaves. Most epiphytic algae generally confined to the leaf tips, whereas the molluscs and holothuroids were most common at the mid-region of the leaves or at the basal portion near the leaf junctions. The number of epiphytic species fauna were found to increase with the increasing leaf surface area hence supported a greater diversity of epiphytic species. The holothuroids *Pentacta quandrangularis*, bivalve's veliger and gastropods were common on the broader leaves species such as *Enhalus acoroides* and *Cymodoceae serrulata* while the narrow blades such as *H. spinulosa*, *H. ovalis* and *H. pinifolia* harboured small-sized gastropods. The most common gastropod species found on the smaller seagrass plants were *Nassarius* spp. and *Clithon oualinensis*. Other associated fauna found colonising the seagrass beds probably using the seagrass as their shelter and scarcely found on the leaves.

ABSTRAK

Kajian keatas ekosistem rumput laut khususnya ke atas epifitik fauna telah dijalankan di Selat Johor (Tg. Adang dan Beting Merambong) dan di muara sungai Terengganu (Gong Batu dan Merchang). Sebanyak 72 spesies invertebrat fauna yang hidup melekat dan bersama-sama rumput laut telah dijumpai pada kesemua empat kawasan kajian tersebut. Didapati taburan epifitik fauna diatas daun rumput laut tersebut adalah tidak rawak. Kebanyakkan epifitik fauna tersebut lebih gemar menduduki bahagian yang tertentu sahaja pada daun dan batang rumput laut itu. Biasanya epifitik algae akan dijumpai menduduki kawasan hujung daun, manakala bagi moluska dan holothuroids ianya lebih gemar menduduki bahagian tengah daun ataupun pada pangkal tengah daun. Jumlah epifitik fauna ini akan meningkat dengan peningkatan saiz daun rumput laut tersebut. Organisma invertebrat holothuroid *Pentacta quadrangularis*, peringkat veliger bivalvia dan gastropod selalunya dijumpai menduduki daun *Enhalus acoroides* dan *Cymodoceae serrulata*. Daun rumput laut yang lebih kecil seperti daun *H. spinulosa, H. ovalis* dan *H. pinifolia* kebanyakkannya diduduki oleh gastropod yang bersaiz lebih kecil. Kumpulan gastropod yang selalu dijumpai menduduki dauan rumput laut yang kecil itu adalah terdiri daripada *Nassarius* sp. dan *Clithon oualinensis*. Organisma invertebrat lain yang hidup di kawasan rumput laut tersebut adalah bertujuan untuk mendapat perlindungan daripada organisma pemangsa lain dan untuk mendapat makanan.