FEEDING BEHAVIOUR OF PARROTFISHES OF THE GENUS Scarus IN REDANG ISLAND

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FACULTY OF MARITIME STUDIES AND MARINE SCIENCE UNIVERSITI MALAYSIA TERENGGANU

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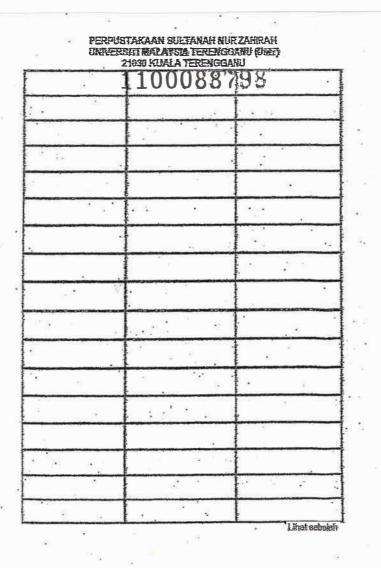
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FEEDING BEHAVIOUR OF PARROTFISHES OF THE GENUS Scarus IN REDANG ISLAND

By

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Research Report submitted in partial fulfillment of the requirements for the degree of Bachelor of Science (Marine Biology)

Department of Marine Science Faculty of Maritime Studies and Marine Science UNIVERSITI MALAYSIA TERENGGANU

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DEPARTMENT OF MARINE SCIENCE FACULTY OF MARITIME STUDIES AND MARINE SCIENCE UNIVERSITI MALAYSIA TERENGGANU

DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled: Feeding behavior of parrotfishes of the genus *Scarus* in Redang Island by Goh Hui Xin, Matric No. <u>17252</u> have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the <u>Degree of Bachelor of Science (Marine Biology)</u>, Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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LIST OF ABBREVIATIONS

cm	-	centimeter
km	-	kilometer
m	-	meter
⁰ C	-	degree celcius

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ABSTRACT

This study was conducted to determine the feeding rate of Scarus sp. at different time period in a day, correlation between the abundance of Scarus sp. and bethic composition and to identify the species of seaweed collected from their grazed substratum. The sampling for this study was conducted at 4 sites located at Long beach, Redang Island. As for the feeding rate study, 3 individuals for each chose adult species (S. ghobban, S. rivulatus and S. niger) and juveniles at different time periods (9 am, 12 pm and 4pm). Overall, the feeding rate is not significantly different (P >0.05) between species but showed significant different (P < 0.05) when compared to different time periods. A total of 8 species of the genus Scarus were encountered and identified throughout 4 sampling sites and the relationship between the abundance of Scarus sp. and benthic composition was determined using Spearman rank correlation. It was found that the abundance of both adult and juvenile Scarus sp. is significantly correlated with the percentage of dead coral with algae (DCA) ($r_s = 0.4168$, P = 0.0428) but showed no correlation with the percentage of live coral ($r_s = -0.019$, P = 0.94283) in all sampling sites. A total of 20 identified genera from 12 families were identified from the seaweed collected from the grazed substratum by both adult and juvenile Scarus sp.

ABSTRAK

Kajian ini terdiri daripada 3 bahagian utama yang meliputi penentuan kadar makan Scarus sp. pada waktu yang berbeza, hubungan antara bilangan Scarus sp. dengan komposisi bentik dan mengenalpasti spesis rumput laut yang telah dikumpulkan dari substrata yang telah dimakan oleh Scarus sp. Kajian ini telah dijalankan di 4 lokasi yang terletak di Pasir Panjang, Pulau Redang. Kadar makan 3 individu untuk setiap spesis dewasa iaitu S. ghobban, S. niger, S. rivulatus dan juga anak Scarus telah ditentukan pada tempoh masa yang berbeza (pukul 9, pukul 12 dan 4 pm). Secara keseluruhan, kadar makan didapati tidak signifikan (P > 0.05) antara sepsis tetapi menunjukkan perbezaan signifikan apabila dibanding dengan tempoh masa yang berbeza. Sebanyak 8 spesis dari genus Scarus yang didapati di seluruh keempat-empat lokasi sampling. Korelasi rank Spearman telah menunjukkan bahawa bilangan Scarus sp. adalah berkorelasi dengan peratusan karang mati dengan alga (DCA) ($r_s = 0.4168$, P = 0.0428) sedangkan tidak berkorelasi (r_s = -0.019, P = 0.94283) dengan karang hidup di semua lokasi sampling. Di samping itu, sebanyak 20 genera dari 12 famili rumput laut yang telah dikumpul dari subtrata yang telah dimakan oleh Scarus sp. telah dikenalpasti.