

UNIVERSITY OF MALAYA, KUALA LUMPUR
FACULTY OF MARINE STUDIES AND MARINE SCIENCE

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Study of density and diversity of benthic fauna at aquaculture
area of Semerak and Dendong, Besut / Noorul Ain Falah Ayob.



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PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

**STUDY OF DENSITY AND DIVERSITY OF BENTHIC FAUNA AT
AQUACULTURE AREA OF SEMERAK AND DENDONG, BESUT**

**By
Noorul Ain Falah Binti Ayob**

**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 and Marine Science
UNIVERSITI MALAYSIA TERENGGANU
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JABATAN SAINS MARIN
FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN
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Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

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LIST OF ABBREVIATIONS AND SYMBOLS

DO	Dissolved oxygen
m ²	Meter square
St.	Station
mg/L	Milligram per liter
%	Percentage
ppt	Part per thousand

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ABSTRACT

Samples of benthos and sediment collected at Semerak and Dendong aquaculture area were used to study the density and diversity of benthos and the alteration in species composition. Physico-chemical parameters such as water temperature, salinity, dissolved oxygen and pH also were recorded. From the study, total density of benthos inhabited Semerak ranged between 202.29 individual/m² to 1262.08 individual/m². Almost all stations were dominated by Annelida. Recorded indices were, Richness index, $d = 0.8548-1.5465$, Evenness index, $J' = 0.5636-0.8325$ and Diversity index, $H' = 1.1829-1.842$. Macrobenthos community at Dendong on the other hand ranged between 28.57 individual/m² to 188.82 individual/m². The reference station showed higher value of total density and was dominated by Arthropoda. However the diversity was lower than impacted stations. Recorded indices were, $d = 0.6730-1.043$, $J' = 0.2575-0.6855$ and $H' = 0.4024-0.6171$. The total density of meiobenthos showed higher density at reference station and totally dominated by Nematode. Unlike the pattern of diversity index for macrobenthos at same station, meiobenthos showed consistent value. Recorded indices were, $d = 1.0427-0.5639$, $J' = 0.8060-0.0.8337$ and $H' = 0.4024-1.300$. Semerak and Dendong sediment were characterized as fine sand. Multivariate analyses showed that Semerak and Dendong indicated each station had difference species of benthos and not resemble other station.