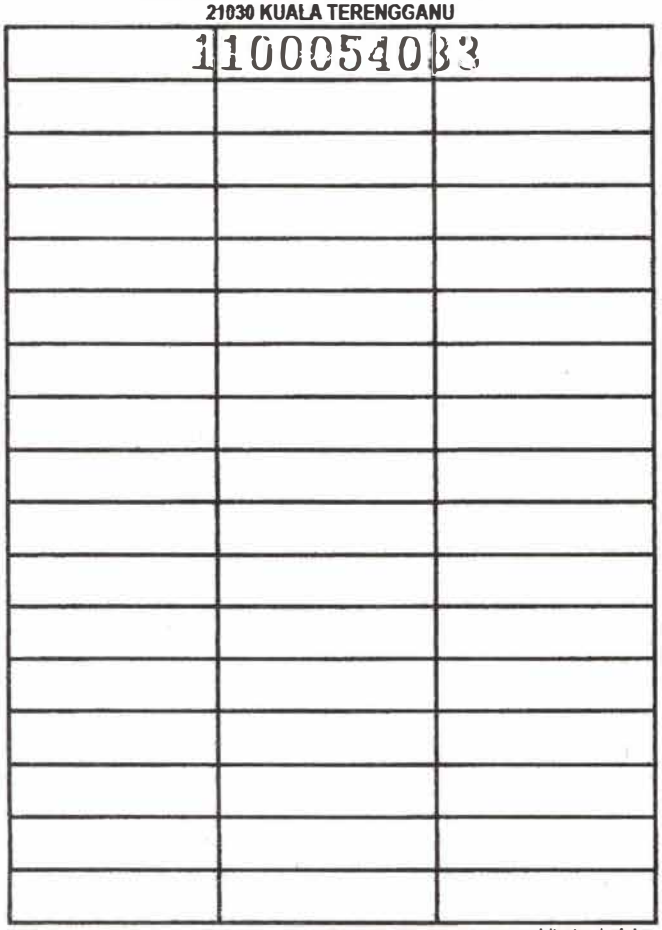
Density and diversity of macrobenthos on seagrass beds in Sungai Pulai Estuary, Johor / Amira Suhaili Rozlan.



Lihat sebelah

DENSITY AND DIVERSITY OF MACROBENTHOS ON SEAGRASS BEDS IN SUNGAI PULAI ESTUARY, JOHOR.

By
Amira Suhaili binti Rozlan

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

Department of Marine Science
Faculty of Maritime Studies & Marine Science
UNIVERSITI MALAYSIA TERENGGANU
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JABATAN SAINS MARIN
FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
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LIST OF ABBREVIATIONS

Abbreviation	Explanation
S	salinity
‰	part per thousand
DO	dissolved oxygen
mg/L	milligram per liter
T	temperature
°C	degree Celcius
ind/m^2	individual per meter square
Q	quadrate
t or T	transect
%	percentage

ABSTRACT

Research on benthic fauna communities inhabiting seagrass meadow and their abundances received little attention in Malaysia. This present study aims to address this issue, determining the density and diversity of macrobenthos on seagrass beds in Sungai Pulai estuary, Johor. Sampling was done in December as the sampling sites were experienced the lowest tide during this period. Data was analyzed for density of macrobenthos (individual m^{-2}), diversity index (H') of Shanon-Weinner (1949), richness index (d) of Margalef (1958) and evenness index (J') of Pielou (1975) by using PRIMER software package. Overall, a total of 1798 macrobenthos individuals were collected in 81 cores and the densities of macrobenthos at study sites ranged from 207.1563-3841.808 ind/m^2. The highest density of macrobenthos was recorded in Merambong (1807.91 ind/m^2 to 3841.808 ind/m^2) followed by Tanjung Pelepas (470.8098 ind/m^2 to 1186.441 ind/m^2) and Sungai Duku (207.1563 ind/m^2 to 621.4689 ind/m^2). In terms of diversity, the highest diversity index was encountered at Tanjung Pelepas (H'= 2.0627), followed by Merambong (H'= 1.4187) and Sungai Duku (H'= 1.3912). It is shown that the macrobenthos were mostly comprised of polychaetes, mollusks, and crustaceans. Physical and environmental factors are thought to be responsible for the large variation in macrobenthos assemblage structure within sites. Values obtained in this study fall within the broad limits of macrobenthos density found elsewhere in the Indo-Pacific region. Further qualitative and quantitative studies are suggested to enable a more comprehensive account on seagrass benthic communities.