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The diet of telescopium telescopium and brotia binodasa as indicated by fatty acid biomarker in mangrove area of Setiu Wetland / Deneswari Sivaguru.

Lihat sebelah

THE DIET OF *Telescopium Telescopium* AND *Brotia binodasa* AS INDICATED BY FATTY ACID BIOMARKER IN MANGROVE AREA OF SETIU WETLAND.

BY
DENESWARI A/P SIVAGURU

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

FAKULTI PENGAJIAN MARITIM DAN SAINS MARIN
UNIVERSITI MALAYSIA TERENGGANU
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PENGAKUAN DAN PENGESAHAN
LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui bahawa laporan penyelidikan bertajuk :

The Diet Of *Telescopium telescopium* and *Brotia binodasa* As Indicated by Fatty Acid Biomarker In Mangrove Area Of Setiu Wetland

Oleh Deneswari a/p Sivaguru ,No. Matrik UK9545

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 Biologi Marin Fakulti Pengajian Maritim dan Sains Marin, Universiti Malaysia Terengganu.

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ABSTRACT

Fatty acid compositions in the tissues of the gastropoda *Telescopium telescopium* and *Brotia binodasa* collected from Setiu wetland were compared with those organic particle in sediment in order to assess the gastropoda diet. In both species, the suspended mangrove detritus was high as indicated by the mean percentage of Palmatic acid (16:0), Heptadecanoic acid (17:0) The contribution of this marker in the *Telescopium telescopium* and *Brotia binodasa* are 41% and 47% respectively of total fatty acid concentration. SEM (Scanning electron microscope) analysis of sediment also shows that organic matter such as pyrite framboid occur in great amount in both station. These results indicate that mangrove detritus play a significant role in the gastropoda diet. The mean concentration of diatoms markers Eicosapentaenoic acid (20:5ω3) in both gastropoda tissues ranged from 0.6744 $\mu g\ g^{-1}$ and 2.7259 $\mu g\ g^{-1}$ suggested that diatoms contribute significantly to gastropoda diet beside detritus. SEM analyses also indicate the abundant of diatoms in the sediment of the gastropoda. The relative contribution by macroalgae markers (PUFAs 18:2ω6 and 18:3ω3) and dinoflagellates (PUFAs 22:6ω3) markers are very in gastropoda tissues ranged from 2% to 4.3%, suggesting that considerable macroalgae and dinoflagellates are not the major diet of gastropoda. Overall *Telescopium telescopium* and *Brotia binodasa* consumed same food resources but the level of most food sources was significantly higher in *Brotia binodasa* which was 10.225 $\mu g\ g^{-1}$ more higher compared to *Telescopium telescopium*.