FACULTY OF MARITIME STUDIES AND MARINE SCIENCE
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Role of fiddler crab from an intertidal flat of Setiu Wetland on the fate of sedimentary fatty acids / Mohd Rosaendi Rosli.

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Lihat sebelah

ROLE OF FIDDLER CRAB FROM AN INTERTIDAL FLAT OF SETIU WETLAND ON THE FATE OF SEDIMENTARY FATTY ACIDS

By

Mohd Rosafendi Bin Rosli

Research Report submitted in partial fulfillment of
The requirements for The Degree of
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Department of Marine Science
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JABATAN SAINS MARIN
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PENGAKUAN DAN PENGESAHAN

LAPORAN PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

Role of fiddler crab (*Uca annulipes*) from an intertidal flat of Setiu Wetland on the fate of sedimentary fatty acids. oleh Mohd Rosafendi Bin Rosli, No. Matrik UK10382 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.

Disahkan oleh:

.....

DR. ZAINUDIN BACHOK
Lecturer
Department of Marine Science
Faculty of Maritime Studies and Marine Science
Universiti Malaysia Terengganu (UMT)
21030 Kuala Terengganu.

Penyelia Utama

Nama: Dr. Zainuddin Bachok

Cop Rasmi:

Tarikh: 25/4/2007

.....

Penyelia Kedua (jika ada)

Name: Dr. Ahmad Shamsudin Ahmad

Cop Rasmi:

Tarikh: 25/4/2007 .

DR. AHMAD SHAMSUDDIN BIN AHMAD
Ketua
Pusat Pembangunan dan Kebajikan Pelajar
Bahagian Hal Ehwal Pelajar dan Alumni
Universiti Malaysia Terengganu
21030 Kuala Terengganu.

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LIST OF ABBREVIATION

μ	micro
ω	omega
FA	fatty acid
SAFA	saturated fatty acid
MUFA	monounsaturated fatty acid
PUFA	polyunsaturated fatty acid
EFA	essential fatty acid
DHA	docosapentanoic acid
GC	gas chromatography
TLC	thin layer chromatography
HPLC	high performance liquid chromatography
GC-FID	gas chromatography flame ionized detector
FAMEs	fatty acid methyl ester

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ABSTRACT

Fatty acid compositions of fiddler crabs, *Uca annulipes* collected on a tropica intertidal flat at two sampling station in Setiu Wetland, Terengganu, were analysed as well as the surrounding surface sediments of their burrows, their food pellets and their feces. *Uca annulipes* tissue in Station A (Pengkalan Gelap) exhibited a higher concentration of fatty acids than Uca annulipes in Station B (Pengkalan Che Hamid). Food pellets revealed a higher contribution of saturated fatty acids and lower amount of polyunsaturated fatty acids and branched fatty acids than in the surface sediments samples. These differences of fatty acids compositions suggest an initial selection of food before the particles sorting in the buccal region. *Uca annulipes* feces also contains high amount of fatty acids, indicate that *Uca annulipes* play significant role in the fate of these lipids in intertidal flats. Comparative analysis of the fatty acids compositions of the different samples indicates that these fiddler crabs actively sorted bacteria in order to ingest them.