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A study on recruitment and early growth of green lipped mussel (Perna viridis) in Muar Coast / Mohd Luthfi Omar.

A STUDY ON RECRUITMENT AND EARLY GROWTH OF GREEN LIPPED MUSSEL (*Perna viridis)* IN MUAR COAST

By

Mohd Luthfi bin Omar

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
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:
A Study on Recruitment and Early Growth of Green Lip Mussel (*Perna viridis*) in Muar Coast oleh Mohd Luthfi Bin Omar, No. Matrik UK 10697 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

Muar area is the mussel culture area especially in culturing green lipped mussel (*Perna viridis*). The availability of wild seed of green lipped mussel, this makes it easily to culture on the rope collector at the mussel platform. This study investigates the recruitment and early growth of *Perna viridis* at the rope collector and at the sea bottom. For rope collector, it divided into three parts which is upper, center and bottom part. Recruitment of *Perna viridis* spat in Muar coastal water shows highest peak on the beginning of August (24,900 indv/m^2) and it slowly decrease on the next month until the end of September shows the minimum recruitment (222.22 indv/m^2). The next month shows the recruitment slowly increases. While for the early growth shows the acceleration of growth rate increases 0.11 mm/$week^{-1}$ or 0.0002 mm/day^{-1}. When rope divided to three parts, the recruitment on the center part shows highest settlement (35,000 indv/m^2) compared to the upper part (27,500 indv/m^2) and the bottom part (12,200 indv/m^2). For the early growth, on the initial 11 weeks shows highest growth of *Perna viridis* at the upper part, after 11 weeks the upper part shows declining on growth and the *Perna viridis* at bottom part shows increasing growth. The recruitment and early growth of the *Perna viridis* is affected by several factor either physical or biological factor. According to the study on the sea bottom shows that sediment structure which is soft sandy and muddy area are not suitable for spat settlement in the Muar coastal water area.