THE DISTRIBUTION AND ABUNDANCE OF MEIOFAUNA AT INTERTIDAL ZONE PANTAI MANIS, PAPAR, SABAH.

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ABSTRACT

THE DISTRIBUTION AND ABUNDANCE OF MEIOFAUNA AT INTERTIDAL ZONE PANTAI MANIS PAPAR, SABAH

A study on miofaunal distribution and abundance was carried out at Pantai Manis Papar, Sabah was conducted from July 2014 until November 2014. Five transect line perpendicular to the beach were setup. Along the transect line, three station follow the tidal level (High tide, Middle tide and Low tide). The sediment and meiofauna was sampled using modified syringe 2.5 cm diameter and saveral physico-chemical characteristics was measured such as temperature, acidity, and Dissolve Oxygen determined using YSI Multiparameter (556MPS model) in the intertidal zone was measured. The distribution pattern in intertidal Pantai Manis Papar, Sabah is patchy distribution pattern. The abundance of meiofauna is between 1106 – 1424 individuals while meiofauna dominant taxa is nematode (489 ± 10 ind. 10^{-1} cm^2) followed by gastrotricha (233 ± 3 ind. 10^{-1} cm^2) followed by turbellarian (221 ± 3 ind. 10^{-1} cm^2) followed by copepod (199 ± 11 ind. 10^{-1} cm^2) and the lowest is oligochaeta is (173 ± 4 ind. 10^{-1} cm^2). Through regression analysis, show the coefficient relationship in pH (0.134 for gastrotrich, 0.234 for turbellaria, 0.254 for copepod, 0.134 for oligochaeta) while Dissolve Oxygen, DO (0.225 for nematode, 0.057 for turbellaria, 0.229 for copepod, 0.028 for oligochaeta) were positively has relationship with the distribution and abundance of meiofauna. the distribution and abundance of meiofauna found at Pantai Manis Papar, Sabah is influence by pH, and Dissolve Oxygen. While temperature and salinity show negative relationship towards the distribution and abundance of meiofauna.

CHAPTER 1

1.0 INTRODUCTION

1.1 Background of Study

Meiofauna has been studied long time ago before the terms are introduced to science (Kowalesky *et al.,* 1901). Researches on meiofauna have become one of the topics that were discussed in international conference level. On 1-11 July 1969, one of history made when the conference held in Tunis. According from Huling and Gray (1971) about seven countries were invited and assembled to review the status of the systematics and ecology of meiofaunal taxa, the ecology of meiobenthic communities, and technique of faunal and environmental analysis.

This was continued on past of decade when a huge increased interest in this fauna, which benthic animals are often dominant in term of numbers and also species richness. It is because this species richness will play important roles towards the community and ecosystem hierarchy. Robertson *et al.*, (2000) and Rundle *et al.*, (2002) suggested that