THE ABUNDANCE OF CRABS AT UNIVERSITI TEKNOLOGI MARA SABAH BRANCH AND KOTA KINABALU WETLAND CENTRE MANGROVES

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ABSTRACT

THE ABUNDANCE OF CRABS AT UNIVERSITI TEKNOLOGI MARA SABAH AND KOTA KINABALU WETLAND CENTRE MANGROVES

A study was conducted in February to July, 2017 on the abundance of crabs at Universiti Teknologi Mara (UiTM) Sabah Branch and Kota Kinabalu Wetland Centre (KKWC) mangroves. Organic content of soil consisted of both living and dead organic matter. Soil particles can be classified into sand, silt and clay where each of these varies greatly in sizes. The objectives of this study were to determine the effects of soil organic matter, soil particle size and physicochemical factors to the abundance of crabs for both mangrove locations. The soil particle size was determined by using sieving method while the soil organic matter was determined by using the loss-on-ignition (LOI) method. Meanwhile, YSI Multimeter was used to measure the physicochemical factor which were pH, salinity, temperature and dissolved oxygen. Statistical analysis consisted of normality test, two-way ANOVA, Friedman test and Wilcoxon signed rank test were conducted by using IBM SPSS Version 22. Based on the statistical analysis, the abundance of crab between the two mangroves were the same. The soil organic matter properties between the two mangroves were different and it affected the abundance of crab. The soil particle size properties between the two mangroves were also different and it affected the abundance of crab. Meanwhile, the physicochemical factors properties between the two mangroves were different and it affected the abundance of crab. For future study, separate correlation between the soil particle sizes, soil organic matter and the physicochemical factors can be conducted to determine which variables will affect the abundance of crab the most.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Mangroves forest is an ecosystem that have unique characteristic which mostly found along sheltered coasts and grow abundantly with saline soil and slightly salty water. Mangrove soils are seen to be mainly clay loam soil types. Moving further inland sees a decrease in amounts of silt and increase in the two amount of clay in the soil. This is attributed to the sediments being taken in by the tide and being deposited on the mangrove surface (Lim *et al.*, 2012). Mangrove forest is characterized by its unpleasant smell condition despite as a dynamic and productive ecosystem. The multifunctional functions are essential to its surrounding habitats and as a resource for coastal communities (WWF Malaysia, 2015).

Soil particles can be classified into sand, silt and clay where each of these vary greatly in size. The finest to the largest soil among these soils is clay then, silt and followed by sand. The form where these elements may exist is it is either in roundish granules, cube-like blocks, flat plates or other

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