

**DISTRIBUTION AND ABUNDANCE OF SEASHELLS
BETWEEN TANJUNG ARU BEACH, KOTA KINABALU AND
MELINSUNG BEACH, PAPAR IN SABAH**

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ABSTRACT

DISTRIBUTION AND ABUNDANCE OF SEASHELLS BETWEEN TANJUNG ARU BEACH, KOTA KINABALU AND MELINSUNG BEACH, PAPAR IN SABAH

Seashells are found abundantly on sandy beach where their distribution can vary between beaches. This study aims to identify the relationship of soil organic matter (SOM) and heavy metal concentration to the distribution and abundance of seashells between Tanjung Aru Beach and Melinsung Beach. Three samplings were conducted from July until September 2019 by using line transect and quadrat sampling method. Soil Organic Matter was determined by using the Loss-On-Ignition (LOI) method. The concentration for Iron (Fe), Magnesium (Mg) and Potassium (K) was determined by using Atomic Absorption Spectrophotometer (AAS) machine (Agilent Technologies 200 Series AA). There were 4 and 15 species of seashells at Tanjung Aru Beach and Melinsung Beach, respectively where they were randomly distributed. There was a significant difference of soil organic matter ($n = 162$, $z = -8.472$, $p < 0.001$), Fe concentration ($n = 162$, $z = -8.21$, $p < 0.001$) and Mg concentration ($n = 162$, $z = -5.18$, $p < 0.001$). Soil organic matter was higher at Melinsung Beach than Tanjung Aru Beach. For the heavy metal concentrations; Fe was higher at Tanjung Aru Beach than Melinsung Beach and Mg was higher at Melinsung Beach than Tanjung Aru Beach. For the distribution and abundance of seashells and K concentration, it showed no significant difference between the two beach locations. The distribution and abundance of seashells was not affected by SOM and heavy metal concentration. There was no difference in the distribution and abundance of seashells at both beach locations but other factors (SOM, Fe and Mg) still had differences and these factors had no role in affecting the distribution and abundance of seashells. For recommendation, further studies on seashells and soil organic matter should be increased, more advanced AAS machine should be used to get more accurate result and more awareness programme should be conducted by the authorities.