COMMUNITY STRUCTURE AND MOLLUSCS DIVERSITY ASSOCIATED WITH MANGROVES IN LUNAMA AND KALAMATIYA LAGOONS

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by

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ABSTRACT

Mangals have affected to the great variation of biodiversity. Because the Kalamatiya and Lunama lagoons are interconnected, freshwater inputs can be changed the ecosystem. Therefore, diversity variation may indicator to check the present status of the lagoon with the focus of assemblage of molluscs around the mangals. The samples were collected from 10 sites and 3 subplots were selected for each place along the line transect that placed perpendicular to the shore. Freshwater Molluscs species were dominant in the lagoons. There were 10 freshwater species found according to dead shells. A total of 282 specimens of Molluscs belonging to 9 species and 8 families were recorded, of which *Thiaridae* was the most represented with 2 species. *Melanoides turberculate*, *Pila globosa,* and *Gyraulus hyptiocyclos,* were dominance there. They belong to family *Thiaridae* , *Ampullariidae* and *Planorboidae*.Freshwater species mostly occur site in Lunama lagoon was site 4 and that value in Kalamatiya was site 7. Eight Gastropod species were identified. They belong to family *Planorbidae* , *Ampullariidae, Thiaridae, Lymnaeidae, Ellobiidae, Bithyniidae,* and *Potamididae.* Two bivalves were identified that belong to the family *Venerida* and *Unionidae*. According to the Shannon diversity index, high Molluscs richness in the Lunama lagoon was site 4. Low Molluscs richness was site 9. High Molluscs richness in Kalamatiya was site 6 and low Molluscs richness was site 3. According to the Margalef diversity index, High Molluscan dominance in the Lunama lagoon was site 4 and low Molluscan dominance was site 9. High Molluscan dominance in Kalamatiya was site 7 and Low Molluscan dominance was site 3. According to Pielou equation values, Molluscan relative abundance in Lunama was high in site 4 and low in site 9. Site 6 and site 3 respectively High and low Molluscan abundance occurred in Kalamatiya Lagoon. High Molluscan abundance recorded in Kalamatiya lagoon's sites.Low Molluscan abundance sites recorded in Lunama lagoon.The frequency of Molluscan occurrence was high in *Exoecharia agallocha* roots,*Sonneratia caseolaris* roots, *Lumnitzera racemosa* roots, *Acrostichum aureum* roots, and *Typha angustifolia* leaves respectively. The information about the present status of the Molluscs diversity with the Mangals in Lunama-Kalamatiya lagoons can provide valuable information for the conservation of the Mangrove forest in this area.

Keywords: Abundance; Lunama-Kalamatiya; Shannon; Pielou equation; Margalef index