

Diversity and Size Distribution Study of Mantis Shrimp (Crustacea: Stomatopoda) from Karachi Coast Sindh, Pakistan

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ABSTRACT

Shellfish is a major component of global seafood production. Stomatopod species are predatory marine Crustacea commonly known as mantis shrimps belong to the Order Stomatopoda. In this study the spatial and temporal variations in species diversity and distribution of Mantis shrimps were determined from the Pakistan coast.

Keywords: Diversity, Size Distribution, Mantis Shrimp, Karachi Coast, Stomatopod sp.

INTRODUCTION

Marine ecosystems mainly depend on crustaceans, which are significant marine animals with about 67,829 species (Ghafor, 2020). Stomatopods have significant commercial value and offer a significant quantity of high-quality proteins for human consumption. A total of 486 species worldwide are mantis shrimp or stomatopods (Order Stomatopoda Latreille, 1817) (Ahyong, 2012). The ecological and economic significance of crustaceans in world fisheries has grown in tandem with the collapse of fish supplies (Wicksten, 2023). They exhibit a cosmopolitan distribution across tropical and subtropical coastal waters, inhabiting a diverse array of environments such as the continental shelf, slope, and intertidal zones, extending to depths of approximately 1,500 meters; additionally, some species are located in the cooler temperate regions of sub-Antarctic waters (Kodama *et al.*, 2024; Vadher *et al.*, 2022). In coastal nations, particularly in several Asian nations, mantis shrimp (Stomatopoda) are well-known as significant and economically valuable fishery resources (Kodama *et al.*, 2024; Davranoglou *et al.*, 2023).

MATERIALS AND METHODS

The research was conducted from October 2021 to September 2024. Mantis specimens were gathered from Karachi Fish Harbours, Identification was done through the available identification key of (Saha, 2021); (Wicksten, 2023). Morphometry of all the collected individuals was performed.

RESULTS

A total of 621 specimens pertaining to seven species of Genus *Oratosquilla* *interrupta*, *Erugosquilla* (*E. hesperia* and *E. woodmasoni*), *Miyakea nepa*, *Harpiosquilla* (*H. annandalei* and *H. raphidea*), *Cloridopsis scorpio* species were identified in the yearly collection. *Erugosquilla hesperia* and *Erugosquilla woodmasoni* were found in abundance during the study period. The size distribution was observed and was different for all the seven species. Maximum size range was 17.2 inches and minimum range was 5.9 inches.

CONCLUSION

This investigation aimed to delineate the diversity and size parameters of the various genera, *Oratosquilla*, *Erugosquilla*, *Miyakea*, *Harpiosquilla*, *Cloridopsis* of *Stomatopods* from Karachi coast, Pakistan waters.

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