



Paper ID 15647

Studies on Batoids Diversity off Rameswaram Island, Tamil Nadu

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Gulf of Mannar (GoM) and Palk Bay (PB) are two biodiversity rich ecosystems in the east coast of India as it occupies vast coral reefs, seagrass meadows, sandy and muddy bottoms. Rameswaram Island covers both GoM and PB in its south and north vicinities respectively. Month and season wise species diversity of batoids off the Rameswaram Island analysed. Based on the cyclic phenomena of meteorological events, three seasons are broadly indicated as month wise and they are (1) Pre –Monsoon (PRM) (June to September) (2) Monsoon (M) (October to January) (3) Post-Monsoon (POM) (February-May). The diversity indices calculated using the PRIMER package. In the Rameswaram Island waters, the number of batoid species recorded in various seasons was in the range of 11–40. While the maximum number of species was found in PRM (35), the minimum was found in POM (11). Totally, 40 species of batoids were recorded in the area. These included 21 species belonging to family Dasyatidae, 5 to family Rhinobatidae, 6 to family Mobulidae, 2 each to Rhinopteridae, and Aetobatidae 1 species to families Glaucostegidae, Rhinidae, Gymnuridae and Myliobatidae. *Neotrygon indica*, was the most dominant species followed by *Aetobatus ocellatus*, *R. javanica*, *Gymnura poecilura*, *Brevitrygon imbricata*, *Himantura uarnak*, *H. tulul*, *H. leopard*, *Maculabatis gerrardi*, *Taeniurops meyeri*, *Pateobatis bleekeri* and *Pastinachus ater* were observed in all seasons. The Shannon diversity was more in July (4.60) followed by August (4.45) and June (4.40). The Margalef species richness showed remarkable differences between July (6.12) and April (1.11). The evenness was comparatively more in February (0.97) than July (0.95). Highest Shannon diversity (4.75) and species richness (6.82) was observed in PRM. Species evenness was more in POM (0.94) and least during PRM (0.92). The variation in taxonomic distinctness index was more between PRM and POM (0.962 - 0.912). All three diversity indices in M were intermediate between PRM and POM. PRM and M formed a group with highest similarity percentage of 64.31 to which POM got linked at 32.86.

Keywords : Dasyatidae, Evenness, Margalef Species Richness, Season, *Neotrygon Indica* And Shannon Diversity