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POLYCHAETES OF RAJAKKAMANGALAM, SOUTH WEST COAST OF INDIA

Education

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ABSTRACT

The polychaetes are one of the most common aquatic organisms found living in the depths of the ocean, floating free near the water surface and burrowing in the mud and sand of the beach, estuaries and backwater. In the present study a survey on the macrobenthic polychaete was carried out in 3 areas of Rajakkamangalam, where the riverlet "Pantiyar" joins the southern end of Arabian Sea. A total of 20 species belonging to 18 genera and 13 families were recorded from the study area for the first time.

KEYWORDS

Polychaetes, macrobenthic, estuaries, mangrove and marine ecosystem.

INTRODUCTION

Polychaete taxonomy is essential for the fundamental understanding of the biodiversity and its conservation. Because of man-made hazards, many species will become extinct before they are described and hence this study was made. Polychaetes occur through out the earth's water bodies at all depths, from surface to bottom. Benethic macrocpolychaete communities are important food source for most of the aquatic organisms, especially fishes in the marine ecosystem. Rajakkamangalam is a clean eco-sensitive zone where the “Pantiyar” river originating from Western Ghats joins the sea forming a big estuarine and mangrove ecosystem. Hence, an attempt was made to study the polychaetes with special reference to their systematics.

MATERIAL AND METHODS

The present study was carried out along the estuary, mangrove and sea shore of Rajakkamangalam during the year 2018. The collection areas are shown in Table 1. Samples were taken from 3 stations namely, Mangrove ground, Estuary and Sea bottom (Fig.1). Sediment samples were collected by using Peterson's grab with diameter 0.1m2×10=1m2 at all stations and were sieved through 500 micron mesh sieve and the fauna was preserved in 7% formalin for taxonomic study. Polychaetes were also collected by using scoop from an effective sampling area of 1m2. Samples were identified by using standard keys (Fabricius, 1780; Echlers, 1908; Southern, 1921; Favuel, 1953; Day, 1961, 1963a; Achari,1968) after drawing the figures using camera lucida and taking colour photos.

Table 1. Geographical position of the sampling sites

Station	Name of sampling sites	Latitude	Longitude
1	Estuary	8°08'N	77°45'E
2	Mangrove	8°03'N	76°20' E
3	Sea Bottom	8°08'N	76°24' E

RESULTS AND DISCUSSION

A total of 20 species as per the list given in Table 1, belonging to 17 genera under 13 families were found in the collections. All the 20 species were recorded for the first time from the study area.

Table 1 List of species recorded from Rajakkamangalam

Sl. No	Species Name	Family Name	Station I Estuary	Station II Mangrove	Station III Sea bottom
1	*Polydora capensis*	Spionidae	-	+	-
2	*Polydora onagawaensis*	Spionidae	+	-	-
3	*Eunice pennata*	Eunicidae	+	-	-
4	*Eunice indica*	Eunicidae	+	-	-
5	*Eunice schemacephala*	Eunicidae	+	-	+
6	*Marphysa coralline*	Eunicidae	-	-	+
7	*Aulleriella acicula*	Cirratulidae	+	-	-
8	*Nothria mannarensis*	Onuphidae	-	-	+
9	*Capitella capitata*	Capitellidae	+	+	+
10	*Pseudonereis variegata*	Nereididae	+	-	+
11	*Neanthes oxypoda*	Nereididae	+	-	-
12	*Laeonereis ankyloseta*	Nereididae	-	-	+
13	*Platynereis dumerilli*	Nereididae	+	+	-
14	*Scalibregma inflatum*	Scalibregmatidae	+	-	+
15	*Polycirrus rosea*	Terebellidae	-	-	-
16	*Acistrosyllis cf. consticta*	Pilargidae	+	+	-
17	*Oenone fulgida*	Oenonidae	-	-	+
18	*Fabricia bansei*	Fabriciidae	+	+	-
19	*Nephytys dibranchis*	Nephtyidae	+	-	+
20	*Harmothoe charlatta*	Polynoidae	+	-	+

Out of the 20 species recorded 14 species were recorded from the estuarine region, 10 from the sea bottom and 5 from the mangrove regions. Among these *Capitella capitata* was present in all the stations. More number of species were found in the estuarine region. Most of the polychaetes explored were from Nereididae, Eunicidae, and Spionidae families. The remaining species were from the families of Cirratulidae, Onuphidae, Capitellidae, Scalibregmatidae, Terebellidae, Pilargidae, Oenonidae, Fabriciidae, Nephtyidae and Polynoidae.

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