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Distribution of Molluscan fauna in *Coringa Estuarine* Mangroves, South East Coast of India

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ABSTRACT

This study was conducted in Coringa mangrove rehabilitation area on September 2014. The objective of the present study was to evaluate the diversity of Gastropods and Bivalves based on the different level of vegetation age of mangrove. During the present survey, 11 species of molluscs were recorded. Among them 8 of gastropods, viz.Telescopium telescopium Linnaeus (1758),*Cerithidea cingulata* Gmelin 1791,and *Fusinus colus*(Linnaeus,1758)4 species of bivalves namely, *Andara granosa*, *Mactra violaceae Gmelin*, 1791 *Gastrana polygona* (Gmelin,1791),and *Anapella cycladea* (Lamarck, 1818) were observed. Till now, no studies have been taken up so far in these aspects. So, the present study has been taken up to provide some basic information of the mollusca fauna of the Coringa mangrove.

Key words: Mangrove, Gastropods, Bivalves.

INTRODUCTION

The study area is the fertile estuarine ecosystem on the east coast of India, the Godavari estuarine ecosystem, consisting of Kakinada Bay and the surrounding mangrove vegetation. The river Godavari is the second largest river in India (1530 Km). The drainage area is about 2,90,400 km2. The normal run off from the Godavari is estimated at 4,60,316 million cusec. Meters (Govt. of India Report, 1987). The Kakinada Bay lies between 82014' E and 82022'E longitudes and 160.5' N and 170 N latitudes has an area of 132 km2. (Rama Sarma, 1965). The Kakinada Bay acts as the main reservoir for the riverine discharge from Godavari's distributaries. Annual flooding of the rivers during monsoon period is a characteristic feature of many tropical rivers. On account of this the estuaries near the river mouths experience extreme variations in physcio –chemical parameters and biological aspects.In India the marine molluscs are recorded from the diversehabitats. They occur in different habitats such as mangroves, coral reef, rocky coasts, sandy beaches, sea grass beds and also at greater depth in the sea, They are more diverse and abundant in the rocky intertidal zone along the coast. Sandy stones, inter tidal flats, mangrove areas [1]. Mangroves are one of the biologically diverse ecosystems in the world, rich in organic matter and nutrients and support very large biomass of flora and fauna [2]. Edible species of oysters, mussels, cockles, and gastropods are collected extensively for local consumption. Mangrove roots and lower parts of trunks provide substrate for oysters and mussels. Because these animals are filter feeders, they are confined to microhabitats below mean high water and are usually only abundant in areas adjacent to open water.

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MATERIALS AND METHODS

Study Area:

River Godavari bifurcates towards its lower reaches, and one of the branches, the Gautami Godavari, joins the Bay of Bengal at Bhairavapalem Kakinada bay is situated north of Gautami Godavari and is connected to

it by distributaries mainly Gaderu and Coringa. The Kakinada Bay lies between 82014' E and 82022'E longitudes and 160.5' N and 170 N latitudes has an area of 132 km2. (Rama Sarma, 1965). Bhairavapalem is also the southern limit of the Bay-Mangrove complex that covers a total area of ~350 km2 An important feature of this region is the location of Coringa Wildlife Sanctuary (250 km2) with high grown mangroves. The long and often branching mangrove creeks, where considerable lateral trapping of water occurs, serve as an excellent habitat and nursery for a wide range of invertebrate species and fish.

Survey of the Coringa mangrove conducted during the year 2014-2015. There was altogether 15 specimens collected from Coringa mangrove area. Mollusca shells were hand picked randomly from the exposed areas using qualitative and direct sampling methods. The collections are kept in dried form while some were preserved in 4% formaldehyde solution. All the samples collected were deposited in the Marine Biology Regional Centre, Zoological Survey of India, Chennai, and Tamilnadu. Screening of the collected material was carried out with stereo microscopes to assort it into species or higher taxonomic categories. After morphological analysis, all the shells collected, either death or alive were studied and identified using relevant literatures and registered. The classification followed is that of Vaught [6].

RESULTS

In the present study, 15 species of molluscs were recorded in the Coringa mangrove, which includes 10 species of gastropods and 5 species of bivalves. The gastropods have a significant ecological role to play in the mangrove ecosystems, also rocky habitats is suitable especially for gastropods. However very little information is available on the gastropod biodiversity of mangroves. Hence it is necessary to document the biodiversity of the group of threatened ecosystems. There in urgent need conservation and sustainable utilization of molluscan species.

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Figure-1. *Coringa mangrove*, Andhra Pradesh State, India.

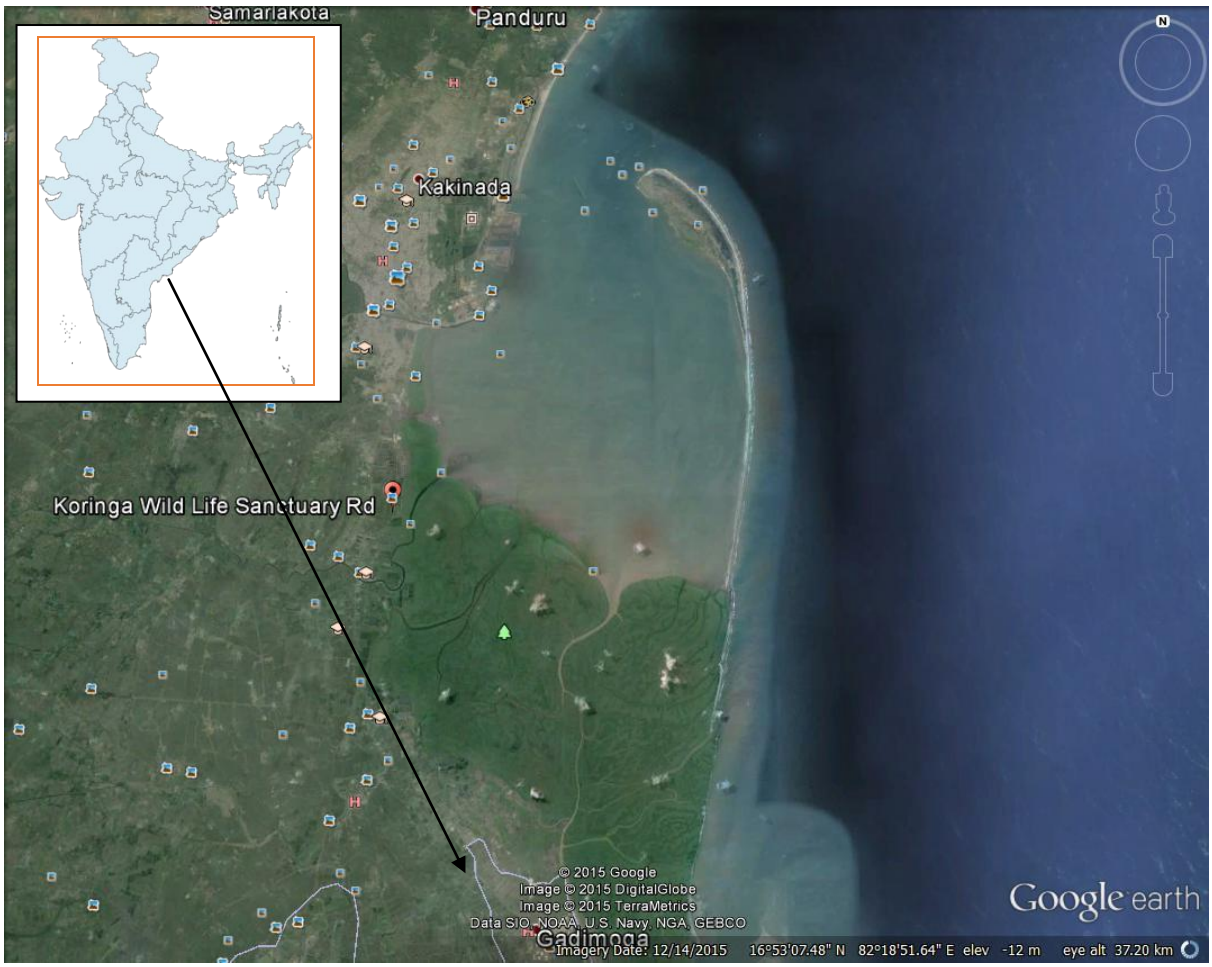

Table-1. The comprehensive list of molluscs found in the Coringa mangrove areas.

GASTROPODA	
Species	Authority
Telescopium telescopium	(Linneaus,1758)
Cerithidea alata	Philippi,1847
Cerithidea cingulata	Gmelin, 1791
Nerita polita	Linnaeus, 1758
Nerita undulata	Gmelin, 1791
Littoraria undulata	Gray, 1839Philippi,
Nassarius olivaceus	Bruguiere, 1789
Rhinoclavis aspera	Linnaeus, 1758
Fusinus colus	(Linnaeus ,1758)
Nassanus stolatus (Gmelin, 1791)	(Gmelin, 1791)
BIVALVES	
Anapella cycladea	(Lamarck, 1818)
Anadara granosa	(Linnaeus, 1758)
Mactra violaceae	Gmelin,1791
Gastrana polygona	Gmelin,1791)
Meretrix meretrix	(Linnaeus, 1758)
Gafrarium pectinatum	(Lirulaeus, 1758)
Solen brervis	Gray, 1842
Bactronophorus thoracites	Gould, 1856
Bankia bipennata	Turton, 1819
Bankia nordi	Moll and Roch, 1931
Bankia carinata	Gray, 1827
Bankia campanellata	Moll and Roch, 1931

Fusinus colus (Linnaeus ,1758)

Telescopium telescopium (Linneaus,1758)

Cerithidea cingulata Gmelin, 1791

Nerita undulata Gmelin, 1791

Mactra violaceae (Gmelin, 1791)

Gastrana polygona (Gmelin,1791)

Anadara granosa {Linnaeus, 1758)

Anapella cycladea (Lamarck, 1818)

Conflict of Interests

Authors declare that there is no conflict of interests regarding the publication of this paper.

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