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Short Communication

Checklist of Molluscs in Nallavadu Lagoon, Puducherry, India

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The molluscs constitute a natural resource of sizable magnitude in many parts of the world. They are an age old group represented among the early fossils, a group of great diversity in size, distribution, habitat and utility. The range of their distribution is as extensive in space as in time for it covers terrestrial, marine and freshwater habitats.

Gastropod, bivalve and fishes are of sustenance nature and are used for edible purpose, source of lime, as decorative shells or for industrial purpose. The molluscs sustain regular and very productive fisheries in our waters. Only a few of the molluscs, clams and oysters are now generally eaten and even these are more a poor man's food (Murty and Balaparameswara Rao, 1977).

Lagoon are the body of comparatively shallow salt or brackish water is separated from the deeper sea by a shallow or exposed barrier beach, sand dune of marine origin or coral reef, the enclosed body of water behind a barrier reef or barrier sand dune.

Nallavadu lagoon was located in the coromandal coast lying between 11°51′-11°49′N and 79°48′-79°49′E and at a distance of about 14 km from Puducherry. Nallavadu, Poornankuppam, Andiarpalayam and Pillaiarthittu are the villages found along the lagoon boundary, yet major portion of it lies in Nallavadu village. The aerial length of the lagoon was about 3.44 km and waterway parallel to sea was about 4.35 km. The study area experiences mean annual temperature of 30°C and mean annual rainfall about 1311-1172 mm. The mean number of annual rainy days is 55, the mean monthly temperature ranges from 21.3-30.2°C. The climate is tropical dissymmetric with the bulk of the rainfall during northeast monsoon October-December (Indian Meteorological Department, Chennai).

Quantitative analysis of the lagoon molluscs were done by hand picking and dredging along the lagoon stretch, by transect 10×100 m and 5 quadrate of 30×30 cm size are used for collection. The hand digging is more preferable technique, without damaging the nearer area (Alfred *et al*., 1997). The species were identified using the Ramakrishna Molluscs identification manual (2003).

A total of 15 molluscs, nine species of Gastropods (6 families) and 6 species of Bivalves (4 families) were collected from Nallavadu lagoon, Puducherry, India (Tab.1). In Gastropods, Potomididae found to be dominant family with 3 species, followed by Ellobiidea with 2 species and remaining 4 families with single species. Bivalves- Arcidae and Veneridae were represented by 2 species and remaining two families with single species.

Table 1. List of molluscs in Nallavadu lagoon, Puducherry, India.

Molluscs	Family
Gastropods	
Assiminea beddomeana Nevill	Assimineidae
Cassidula nucleus Gmelin	Ellobiidae
Melampus ceylonicus Petit	Ellobiidae
Cerithidae obtusa Lamarck	Potomididae
Cerithidae cingulata Gmelin	Potomididae
Telescopium telescopium L	Potomididae
Dostia crepidularia Lamarck	Neritidae
Littorina scabra L	Vespoidae
Pythia plicata (Férussac)	Veneridae
Bivalves	
Anadara rhombea Born	Arcidae
Anadara granosa L	Arcidae
Meretrix casta Gmelin	Veneridae
Meretrix meretrix L	Veneridae
Pernia viridis L	Mytilinae
Crassostrea medrasensis Preston	Ostreidae

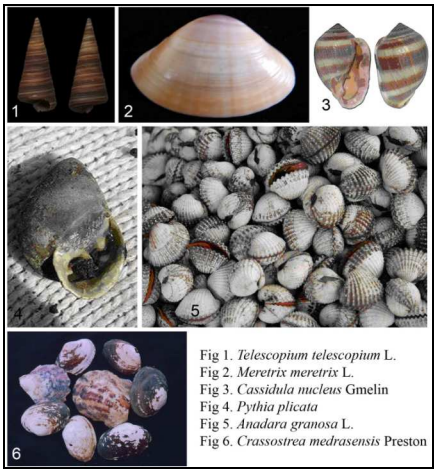

Fig 1. *Telescopium telescopium* L.
Fig 2. *Meretrix meretrix* L.
Fig 3. *Cassidula nucleus* Gmelin
Fig 4. *Pythia plicata*
Fig 5. *Anadara granosa* L.
Fig 6. *Crassostrea medrasensis* Preston

At the moment molluscs appear to be least endangered in the same sense as we observe in birds, mammals, reptiles and freshwater. Commercial exploitation accounts for the greater reduction of molluscs population in nature, pollution and environmental hazards also cause death of molluscs and to a lesser magnitude, the professional shell collection from wild. Indiscriminate fishing from natural bed may lead to depletion of stock of most of the molluscan resources (Kasinathan, and Shanmugam, 1988). Very little is known about the destruction of molluscs stock by pollution and collection of ornamental shells by professional collectors from Indian coast (Vermeij, 1980). The conservation of the native molluscs in lagoon requires a priority to conserve the integrity of the natural communities in coastal regions.

References

Alfred, J.B., R.K. Varshney and A.K. Ghosh (Eds.) 1997. *An assessment manual for faunal biodiversity in South Asia*. SACEP/NORAD publication series on Biodiversity in South Asia No. 1. 181 p.

Kasinathan, R. and A. Shanmugam 1988. Overexploitation of molluscan fauna in the Vellar estuary and Pitchavaram mangroves. *Galaxea* ***7*****:** 303-306.

Murty, A.S. and M. Balaparameswara Rao 1977. Studies on the ecology of mollusks in a South Indian Mangrove Swamp. *J. Moll. Stud*. ***43*****:** 223-229.

Ramakrishna, A Dey 2003. *Manual on identification of schedule molluscs from India*. Zoological survey of India. 40 p.

Vermeij, G.J. 1980. Drilling predation in a population of the edible bivalve *Anadara granosa* (Arcidae). *Nautilus* ***94*****:** 123-125.