

On the Occurrence of a Colonial Ascidian, *Polyclinum indicum* (Sebastian, 1952) in Vellar Estuary, Parangipettai (Southeast Coast of India)

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Abstract: The occurrence of a colonial ascidian, *Polyclinum indicum* (Sebastian, 1952) was recorded estuarine environment at Parangipettai, southeast coast of India for the first time from Vellar estuary.

Key words: Colonial ascidian • *Polyclinum indicum* • Vellar estuary

INTRODUCTION

The ascidians, commonly called as “Sea Squirts” is a class in the Tunicata subphylum of sac-like marine filter feeders. ascidians are characterized by a tough outer “tunic” made of the polysaccharide tunicin, as compared to other tunicates which are much less robust. They are found all over the world, usually in shallow water, an important group of marine, sedentary organisms found distributed from the littoral zone to the deep sea. They are the major components of fouling community occurring on the hulls of ships, piers, pilings, test panels, buoys, floats, cables and various other harbor installations. From the evolutionary point view, ascidians occupy an interesting position between the invertebrate and chordate. They earlier workers have been reported. A new species of synascidian from Madras [5]. On *Polyclinum indicum*, a new synascidian from the Madras coast of India [6]. Dedifferentiation on the colony of *Policlinum indicum* [7]. Regeneration and growth of mutilated pieces of the colony of *Policlinum indicum* [8]. The Study of the effect of centrifuging on the larvae of *Policlinum indicum* (in) studies on an ascidian [9]. On the occurrence of a colonial ascidian, *Didemnum psammathodes* (Sluiter, 1895) from India [2]. The Indian ascidians [10]. Some ascidians from Indian waters [3]. On a occurrence of a colonial ascidian, *symplegma brakenhielmi* Michaelsen from tuticorin coast of india [4]. Settlement pattern of ascidian in harbor waters of Mumbai, west coast of India [11]. Occurrence and distribution of ascidians in Vizhinjam Bay, South west coast of India [1]. Is a new record from vellar estuary.

The taxonomical Position of *Polyclinum indicum* is as follows:

Phylum	:	Chordata
Subphylum	:	Urochordata
Class	:	Ascidiacea
Order	:	Enterogona
Suborder	:	Aplousobranchia
Family	:	Polyclinidae
Genus	:	<i>Polyclinum</i>
Species	:	<i>Indicum</i>

MATERIALS AND METHODS

The specimens were collected from the undersurface of seaweed raft culture at Vellar estuary during low tide (Lat 11° 29'N; Long 79°46'E), is one of the fertile estuaries in Tamil Nadu, occurring in close conjunction with a verity of biotopes as neretic, backwaters and Mangroves. The river vellar which originates from Shervaroyan hills in Salem district in Tamil Nadu after traversing a distance of more than 480kms forms estuarine system with Bay of Bengal at Parangipettai. The nearly 1.5km upstream from the mouth at the tidal zone and in the northern bank of the estuary, a mangrove plantation covering an area of 10ha. Was established in 1991 and the artificial mangroves stilt roots are located opposite to the marine biological stations parangipettai. The vellar estuary is an open type subjected to vivid changes in hydrobiological parameters due to the influence of tides and monsoonal rains (Fig.2).



Fig. 1: *Polyclinum indicum* (Natural size)

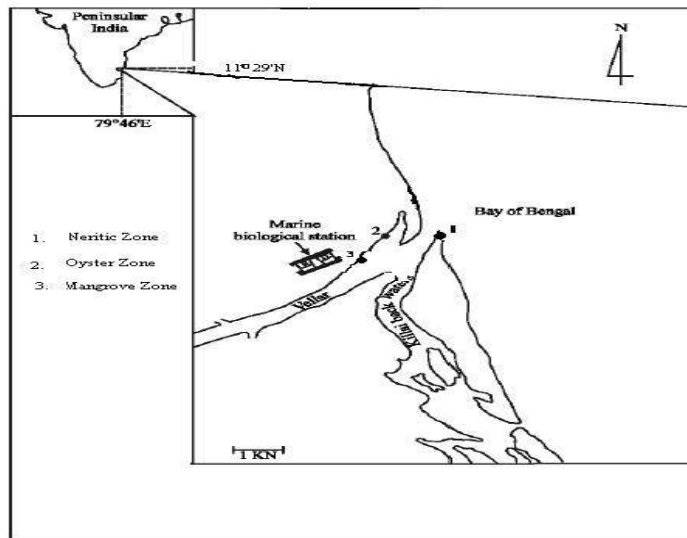


Fig. 2: Map Showing study sites in Vellar estuary Parangipettai

The Important Generic Characters of the *Polyclinum indicum*: The genus *Polyclinum* can be divided into two groups, those with zooids; arranged in circular common cloacal systems and those with zooids arranged in double rows radiating from the common cloacal opening other characteristics that aid in distinguishing the species are the overall shape of the colony, the distribution of sand within or on the test of the colony and characteristics associated with the branchial sac and the larvae.

The Following Are the Important Morphological Characters of the Species as Observed Are Briefly Given Below: The compound ascidians, zooids embedded within a common test. Outer surface is with a thin layer of sand. Colony is oval to umbrella-shaped; this specimen measures 12.5 cm in length. Systems: Regular, with common cloacal openings projecting on small outpushings of test. Test: translucent with a slight tinge of green or red, Mantle: Transparent with six pairs of

longitudinal muscle bands of different size, Zooids: large with thorax, abdomen and post-abdomen. Branchial sac: 13 to 15 rows of stigmata, each row with 14-16 elliptical stigmata. Branchial siphon six-lobed atrial opening, a wide space exposing a part of the pharynx. Atrial languet, leaf-like, but with blunt extremity having a few protuberances. Tentacles: simple, Dorsal lamina: a series of languets, Alimentary canal: below the thorax, stomach smooth walled Post-abdomen: below abdomen, Pedunculated. Contains epicardium, gonads and slantingly placed heart. Larva: eight anterior test vesicles, club-shaped, in two rows of four each.

Key to the Species of *Polyclinum Indicum*:

- Body divided into thorax, abdomen and post-abdomen.
- Atrial opening, a gap exposing pharynx; atrial languet leaf-like with blunt end having protuberances; eight anterior test vesicles in larva.

- Gonads and heart in a posterior abdomen.
- Gut loop small, twisted and usually horizontal, branchial papillae usually present.

ACKNOWLEDGEMENTS

The authors are thankful to Prof. Dr. T. Balasubramanian, Director CAS in Marine Biology, Annamalai University, Parangipettai, for the encouragement and facilities provided and Ministry of Earth Sciences (OASTC), New Delhi for the financial assistance.

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