

Title:

OCCURRENCE OF ASCIDIAN *MOLGULA SP.* FROM THE COASTAL WATERS OF  
VISAKHAPATNAM, INDIA

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## ABSTRACT

A specimen of solitary ascidian *Molgula* sp., collected from seaweeds growing at Thotlakonda beach, Visakhapatnam is reported for the first time from Visakhapatnam coast of Indian waters.

KEY WORDS: Tunicata, Seaweeds, *Caulerpa*, biofouling.

## INTRODUCTION

Ascidians referred to as 'sea squirts' constitute a major component of biofouling community in coastal waters. Knowledge of diversity of ascidians in the waters around India is very less. Perusal of literatures by Renganathan (1990), Venkat *et al.* (1995), Meenakshi & Senthamarai (2004, 2006a, 2006b, 2006c) and Meenakshi (2005) indicate that there are about 300 species of ascidians belonging to 10 families and 38 genera reported so far from Indian waters comprising both colonial and solitary forms. Bhavanarayana & Ganapati (1971) studied the ascidian species among pelagic tunicates from the inshore waters of Visakhapatnam.

The algal biotope is considered to be an important microhabitat for many faunal species and considerable interest has been evinced on the faunal association of seaweeds in the recent past (Mohan Joseph 1978a, 1978b, 1978c; Leena & Prabhadevi 2004 and Padmakumar & Sindhu 2005). The present communication is intended to bring out the observation of single specimen of solitary ascidian *Molgula* sp. from the *Caulerpa* beds along the intertidal region of Visakhapatnam coast probably for the first time from Indian waters.

## MATERIALS AND METHODS

A single specimen of the ascidian was handpicked while collecting seaweeds *Caulerpa racemosa* from a rocky substratum on the intertidal area of Thotlakonda, Visakhapatnam (Lat. 17°49'32.71"N, Long. 83°25'0.11"E). It was preserved in a pet container with 70% (v/v) ethanol. The specimen was identified according to the report by Herdman (1882). For photographic documentation, an Olympus Canon Ixus 400 camera was used.

## RESULTS AND DISCUSSION

The body was translucent, light coloured and robust measuring 10mm in length, and 8mm in breadth. Test was thin, smooth with no adhering sand but stiff, and quite opaque. This species had a curious external form, posterior end, contrary to the usual rule, being narrow and pointed, while the anterior was broad and flat (Fig. 1). Body was pyriform, compressed laterally and was not attached. The anterior end was wide, straight, truncated, and had an aperture at each extremity, they scarcely projected, and were inconspicuous. The branchial aperture was rather the more anterior and prominent of the two, and was directed ventrally; the atrial aperture was quite sessile, and anteriorly pointed. The dorsal and ventral edges were both convex. The widest point was at about one-third of the length from the anterior end, and from this point the two edges tapered rapidly to the narrow posterior end. Intestine was firmly attached to the mantle on the left side which is rather characteristic of the Molgulid and it became clearly visible from the outer surface. As the specimen closely resembled with the key characters mentioned in the report given by Herdman (1882) the specimen was identified as *Molgula pyriformis*, Herdman, 1881.

The systematic position of the Ascidian specimen is as follows:

Class: Ascidiacea

Order: Pleurogona

Family: Molgulidae

Genus: *Molgula*

Species: *Molgula pyriformis*, Herdman, 1881

Since the study here pertains to only a single specimen, identification needs to be further studied and observation further analysed.

Previous records on tunicates of Visakhapatnam region are mostly of Doliolidae and Salpidae families which occur as 5% of the benthic fauna (Vijaykumaran 2003). Previously, a single specimen of this species was dredged off the coast of Buenos Aires, South America, at Station 320 on February 14, 1876; at a depth of 600 fathoms during the H.M.S. Challenger expedition (Herdman 1882).

The recovery of this specimen, though accidental, from the seaweed beds tends to focus on the fact that due to some disturbance like trawling, dredging and/ or shipping; the specimen may have dislodged off from its habitat and thus settled in the *Caulerpa* bed. Hence the presence of more numbers of this species in deeper waters along this region cannot be ruled out. This can be corroborated with the findings of Menon *et al.* (1977) that ascidians were absent in the fouling community at Mangalore Port prior to the commissioning of the harbour, and further confirmed by Venkat *et al.* (1995) by citing their dominant presence in macrofouling community in this region after the port's operation. Swami & Karande (1988) also attributed increased turbidity as the probable factor for lack of ascidian settlement. If introduction is the possible reason for the present observation of *Molgula* sp., one of the most likely sources could be the emigrants brought in by the shipping activity (Scheltema & Carlton 1984) for which Visakhapatnam is so famous for (Visakhapatnam Port Trust 2009). A detailed study is needed to see the disturbance,

loss of diversity of marine fauna and addition of macrofouling fauna in Visakhapatnam region caused due to some anthropogenic activities.

The present communication is intended to bring out the observation of single specimen of solitary ascidian *Molgula* sp. identified as *Molgula pyriformis* from the *Caulerpa* beds along the intertidal region of Visakhapatnam coast probably for the first time from Indian waters.

#### ACKNOWLEDGEMENTS

The authors thank Dr. G. Syda Rao, Director, CMFRI for his encouragements. Help rendered by Dr. Nadia Chebbi, Département Halieutique, Institut National Agronomique de Tunis (INAT), 43 Avenue Charles Nicole 1083 Tunis, Tunisie for confirming identification of the specimen is gratefully acknowledged. Field assistance rendered by Sri. Ch. Moshe is highly appreciated.

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Legends for Figures.

Fig. 1. *Molgula pyriformis*

