Occurrence of ascidian *Molgula* sp. from the coastal waters of Visakhapatnam, India

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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 literature by Renganathan (1990), Venkat *et al.* (1995), Meenakshi and Senthamarai (2004, 2006) 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 and Ganapati (1971) studied the ascidian species among pelagic tunicates from the inshore waters of Visakhapatnam.

A single specimen of the ascidian was handpicked while collecting the seaweed *Caulerpa racemosa* from a rocky substratum on the intertidal area of Thotlakonda, Visakhapatnam (17°49'N, 83°25'E). It was preserved in 70% (v/v) ethanol. The body was translucent, light coloured and robust measuring 10 mm in length, and 8 mm in breadth. Test was thin, smooth with no adhering sand but stiff and quite opaque. This species had a curious external form, posterior end, 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 inconspicuous aperture at each extremity. 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

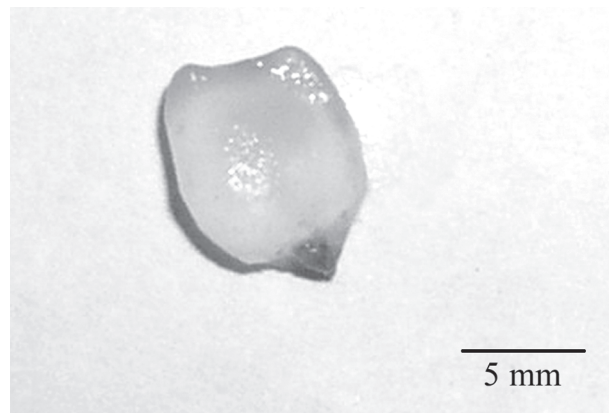

Fig. 1. *Molgula* sp.

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. The specimen was identified as *Molgula* sp. (Herdman, 1882). Class Ascidiacea, order Pleurogona and family Molgulidae.

Since the study here pertains to only a single specimen, identification needs to be further confirmed upto species level. Previous records on tunicates of Visakhapatnam region are mostly of Doliolidae and Salpidae families which occur as 5% of the benthic fauna (Vijaykumaran, 2003). 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 dominance in macrofouling community in this region after commencement of the operations at the port. 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 and ballast water discharge (Scheltema and Carlton 1984) for which Visakhapatnam is so famous for (Visakhapatnam Port Trust, 2009). A detailed study is needed to see the biodiversity loss as well as any addition of macrofouling fauna in Visakhapatnam region.