



Note

First report of a simple ascidian – *Pyura spinosa* (Quoy and Gaimard, 1834) from Tuticorin Coast of India

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Abstract

Pyura spinosa a simple ascidian of the family Pyuridae is reported for the first time from Tuticorin Coast of India.

So far only three species of the genus *Pyura* – *Pyura emurensis* Das, 1940; *P. lanka* Herdman, 1906 and *P. vittata* Stimpson, 1852 have been reported from Indian waters by earlier workers (Das, 1940; Oka, 1915; Renganathan, 1984; Renganathan, 1986). A survey of the Tuticorin Harbour area and an analysis of the fouling ascidians of the pearl oyster cages of the Central Marine Fisheries Research Institute revealed the occurrence of one more species of the genus *Pyura* – *Pyura spinosa* as new record to Indian waters.

Pyura spinosa (Quoy and Gaimard, 1834) (Figs. 1,2)

Systematics: Class: Ascidiacea; Order: Pleurogona; Suborder: Stolidobranchia; Family: Pyuridae; Genus: *Pyura*; Species: *spinosa*

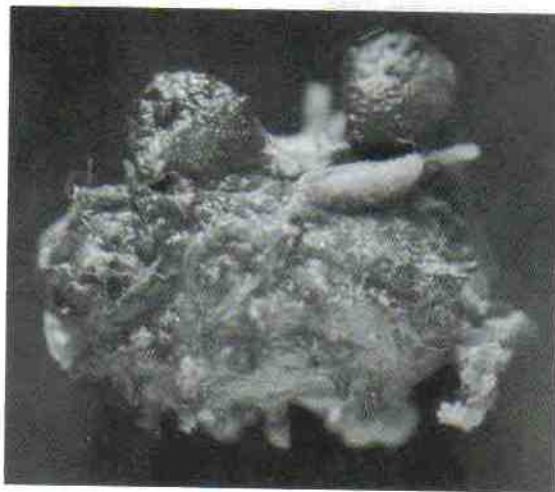


Fig. 1. *Pyura spinosa*

Occurrence: Collected from a depth of 5 metres from the Tuticorin Harbour area.

Distribution: New Record – India (Tuticorin Harbour) (8° 48' N and 78° 11' E). Previously recorded from Western Australia (Quoy and Gaimard, 1834; Kott, 1952), Victoria (Kott 1976, 1985), New South Wales (Herdman 1882, 1899), Tasmania (Kott, 1985).

External appearance: Specimen studied shows an impression, may be of a stalk in the anterior end in between the apertures, but the stalk was not included in the collection (Fig. 1). Individual upto 2.5cm in height and 3cm wide, kidney shaped. Apertures at the anterior end, directed anteriorly, siphons not ridged. Branchial siphon slightly longer than the atrial siphon. Test tough, hard with small pointed tubercles distributed on both sides of the body but absent from around and on the siphons. Test with spherical calcareous spicules, siphon lining with minute pointed overlapping spines.

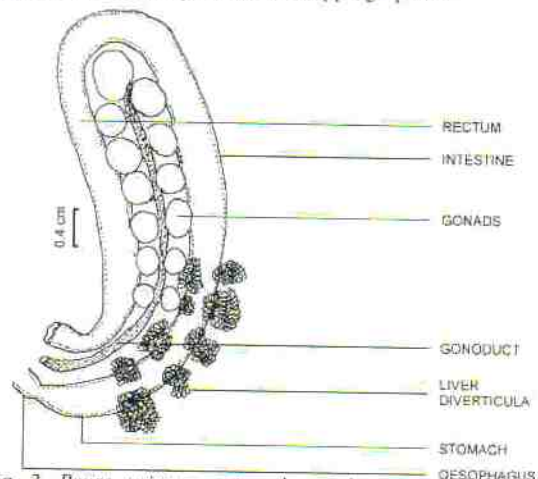


Fig. 2. *Pyura spinosa*, gut and gonads

Internal structure: Body wall very thin (Fig. 2). Strong longitudinal muscles from both siphons cross over to the sides of the body and form an irregular mesh over the posterior end of the body. Branchial tentacles have primary, secondary and tertiary branches but not very bushy. 16 larger tentacles with smaller ones in between. Prepharyngeal area narrow. Dorsal tubercle in the V-shaped peritubercular area, has a U-shaped slit directed anteriorly with one horn turned in. Dorsal lamina long, languets short and not crowded. Six branchial folds on each side with upto 19 internal longitudinal vessels on folds and 3 between them. Branchial formula of a 2.5cm long specimen E1 (11) 2(14) 3(19) 3(9) 3(18) 2(16) 2DL. 5-6 stigmata per mesh. Gut forms a J-shaped loop wide in its terminal half. 6 pairs of liver diverticula along the pyloric region of the gut, anal border with 6 short lobes. Central gonoduct with small rounded polycarp sacs, about 12-16 arranged on both sides and a terminal one. Sacs secured to the body wall. Left gonad entirely enclosed by the gut loop. Small endocarps present in the gut loop and on the free surface of polycarp sacs.

Remarks: The very hard, irregular test with tubercles, pointed spines and well-separated apertures as noted by Quoy and Gaimard (1834) are present in the specimens studied. This species can be easily distinguished by the position of the apertures and the globular spicules in the test. The specimen studied also resembles the description of *Pyura spinosa* Kott, 1985 but differs from it in the absence of a stalk.

The specimen studied has been deposited in the Ascidian collections of the Museum of the Department of Zoology, V.O. Chidambaram College, Tuticorin, Reg. No. (VOCM AS71).

Key to the species of *Pyura* recorded from India

1. Zig-zag arrangement of oviduct *P. lanka*
No zig-zag arrangement of oviduct 2
2. 6 internal longitudinal vessels on folds
..... *P. ennurensis*

- More than 6 internal longitudinal vessels
on folds 3
3. Sandy, no spines on the surface of the test
..... *P. vittata*
 - No sand, spines on the surface of the test
..... *P. spinosa*

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