FIRST RECORD OF A PTEROBRANCH HEMICHORDATE FROM THE SEAS AROUND INDIA

IN the stomach contents of the marine cat-fish, *Tachysurus tenuispinis* from the South Kanara Coast, the authors came across twisted tube-like material often found attached to sand cocoons of tubicolous polychaetes as dominant food item of the fish. The tube-like material was found to be colonies of a pterobranch hemichordate of the genus *Rhabdopleura* and this is the first record of a pterobranch hemichordate from the seas around India.

The observations on trawl catches indicated that colonies of this pterobranch occurred in trawl catches at depths 10 to 30 m in sandy and muddy areas off Mangalore and Malpe (South Kanara coast) from April to June, the peak occurrence being in May.

The colonies are composed of basal horizontal tubes and upper vertical tubes. The horizontal tubes are twisted and entwined amongst themselves forming a matrix with sand grains and mud. The erect tubes arise from the horizontal tubes in a linear creeping fashion. The erect tubes appear greyish on cleaning. These tubes are distinctly annulated (Fig. 1).

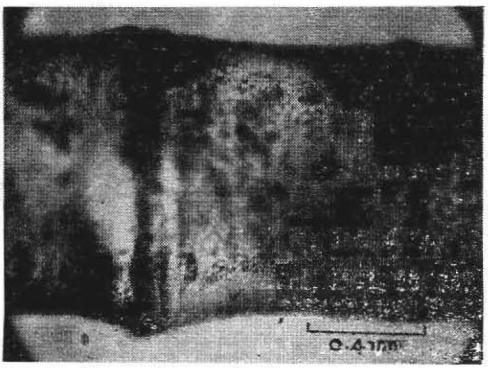

FIG. 1. Photomicrograph of a segment of the vertical tube of pterobranch colony.

though not at regular intervals. The distance between annulations varies from 0·51 to 1·08 mm, average being 0·81 mm. Between the annulations, thin transverse lines parallel to annulations are present. The annulations are not flared up. The mean diameter of the tubes is 1·02 mm and the maximum length of the erect tubes 6·5 cm The colonies are 10–12 cm long.

The creeping form of colonies, as found in the present material, is characteristic of *R. normani, R. annulata* and *R. striata*. The annulations are not flared up in *R. striata* and in *R, annulata* as also in the present material. The size of the colonies and dimensions of tubes in the present material are comparable to the 7 to 8 cm. long colonies of the giant of the genus *R. striata*. Therefore, the present material is assignable to *R. striata*.

Members of the Class Pterobranchia have been encountered by relatively few zoologists in contrast to the familiar acorn worms such as *Balanoglossus* and *Saccoglossus*. 21 known living pterobranchs are placed within three genera, *Cephalodiscus, Atubaria* and *Rhabdopleura. Cephalodiscus* contains the majority of species, most of which are found in cold waters of the Southern Hemisphere[3]. A few species have been reported from the tropical Indo-Pacific, one species from the Straits of Florida[2] and one from Japanese waters. All have been found at depths of 50 m or more. *Atubaria* contains a single non-tubicolous species dredged off Japan.

Of the four species of *Rhabdopleura, R. normani* is the most frequently collected pterobranch at several hundred metres depth off Greenland, in the Arctic, off Norway, Britain, the Azores, in the Mediterranean and in the Subantarctic and Antarctic. *R. compacta* has been recently described from specimens attached to shells dredged from British waters at 23 to 100 m[6], *R. annulata* is found off Australia and New Zealand at depths between 100 and 200 m[4]. *R. striata* was described only once from a coral reef off Ceylon in shallow water[5]. Rhabdopleuran pterobranchs are probably not as rare as the small number of records would suggest. Their minute size and the similarity of tubes to old hydroid skeletons make them easily overlooked[1]. The present report of occurrence of a pterobranch from the seas around India is the first for this region and the third for the occurrence of pterobranchs in coastal waters. Though generally known from great depths, the earlier two records of pterobranchs in shallow waters off Ceylon and Bermuda and the present one from India indicate that they abound in coastal waters as well.

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