

## NEW RECORDS OF FIVE SPECIES OF MARINE MOLLUSCS FROM MANDAPAM AREA

### ABSTRACT

Five species of marine molluscs, two prosobranch gastropods, *Strombus (Euprotomus) aurisdianae aurisdianae* (Linné) and *Distorsio reticulata* (Röding) and three species of pelecypods *Cardium coronatum* Spengler, *Chione squamosa* (Linné) and *Cultellus maximus* (Gmelin) have been recorded for the first time from Mandapam area. The diagnostic features of the species have been given.

MANDAPAM area with shallow coastal waters and a chain of islands and coral reefs is rich in marine molluscan fauna (Hornell, 1916, 1951 ; Gravely, 1927 ; Satyamurthi, 1952, 1956 ; Rao, 1961, 1970 ; Rao and Alagarwami, 1960). During the course of

biological collections from this region, five species of molluscs reported here are found to be new records to the area. The diagnostic conchological features of these species are presented in this communication. The species have been deposited in the Reference Collection Museum of the Regional Centre of the Central Marine Fisheries Research Institute, Mandapam Camp (Reg. No. M-344 to M-348).

The authors express their thanks to Shri. K. Nagappan Nayar and Shri. S. Mahadevan for critically reading the paper.

CLASS : GASTROPODA

SUB-CLASS : PROSOBRANCHIA

Order : Mesogastropoda

Family : *Strombidae*

***Strombus (Euprotomus) aurisdianae aurisdianae* (Linné)**

Shell solid, rugose, with a posterior projection of the upper lip and strongly recurved siphonal canal. Nuclear whorls three, rounded, light brown. First three post-nuclear whorls well-rounded, reticulate. Succeeding whorls with numerous axial, knobbed ribs crossed by uneven spiral thread-like thickenings. Shoulder of body whorl with eight short knobs. Below this two rows of poorly developed nodules present. In the basal portion of the shell there are numerous closely disposed spiral cords. Parietal side glazed cream and extends up to five whorls of the spire. Columella straight, glossy and smooth except in the upper portion where there are some lirae and wrinkles. Inner lip brownish orange and bordered by a band of cream colour. Outer lip rounded and glazed. Posterior projection of outer lip extending half way in the height of spire. Siphonal curve recurved about 90 degrees and slightly twisted to the right. Operculum strongly arched with seven serrations (Plate I A).

Abbott (1960) stated that *S. aurisdianae aurisdianae* is a shallow water species occurring from low tide mark to a depth of 3 m but the collection of a live individual from a depth of 34.7 m in the Gulf of Mannar 32 km southwest of Chinna Ervadi indicates its occurrence in deeper waters also. The subspecies has a wide range of distribution from Central East Africa to Solomon Island and Ryukyu Islands south to Queensland, Australia. It has been earlier recorded from Andaman Islands by Subba Rao (1970).

Family : *Cymatiidae*

***Distorsio reticulata* (Röding)**

Spire high, sixth, seventh, eighth and body whorls alternatively more inflated on one side. Narrow spiral ridges present on the whorls. These are crossed by transpiral ridges. Edge of outer lip thin. Inner margin of outer lip bears eight teeth. Inner lip has two well developed teeth at the upper end and ten smaller ones at the lower end. Anterior canal short. Perisotracum well developed of brown colour (Plate I B).

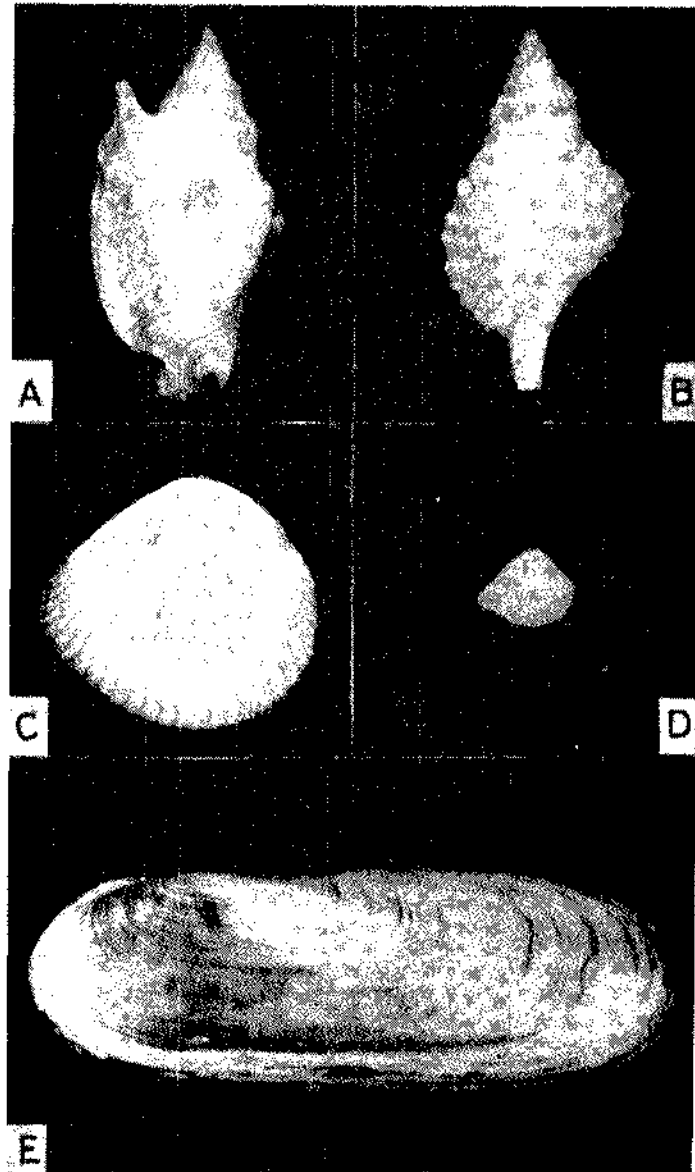


PLATE I. A. *Sirocopia* (*Euprotomus*) *ambisalariae ambisalariae* (Lamyé), B. *Distorsia* *venustus* (DeLong), C. *Cochium* *coronatum* Spengler, D. *Chione* *squamosa* (Lam. & F.), E. *Coltralis* *maximus* (Gmelin).

Specimens measuring 44.8 to 50 mm in shell length and 24 to 27 mm in shell width were collected from Palk Bay off Mandapam at a depth of 12 to 13 m by trawl nets.

The species has been recorded by Hirase (1954) in Japanese waters from Wakayama-ken.

CLASS : PELECYPODA

ORDER : EULAMELLIBRANCHIA

Sub-order : Heterodonta

Family : *Cardiidae*

*Cardium coronatum* Spengler

Valves moderately thick, equivalve, inequilateral, shape cordate, with a slight rounded projection at the posterior side, radial ribs well developed. Umbones directed inwards. Adductor scars conspicuous, pallial line entire, hinge ligament external. Cardinal and lateral teeth present. Shell light buff or light brown in colour (Plate I C).

Live cockles were collected from the trawl catches off Mandapam in Palk Bay and Gulf of Mannar and off Rameswaram. The size range of the species was from 22.4 mm to 36.3 mm in length from 25 to 34 mm in height. About 20 to 80 cockles were landed by a trawler and they were found to be more abundant during January-June. At present these cockles are dried and used in the manufacture of poultry feed. They can also be used for human consumption. The species has been recorded by Gravely (1941) from Madras Coast where shells are washed ashore.

Family : *Veneridae*

*Chione squamosa* (Linné)

Valves small in size, trigonal in shape and produced as a projection posteriorly, equivalve, inequilateral, moderately thick, moderately inflated, umbones directed inwards. Hinge teeth present. Radial ribs flattened, concentric striations present on surface. Pallial sinus present. Margin of inner surface denticulate, outer surface of valves light rosy brown and inner surface light brown in colour (Plate I D).

Shells of the species were collected from Mandapam beach, Palk Bay. The length of valves ranged from 11.3 mm to 17.0 mm and height from 9.0 mm to 12.8 mm. The species was recorded by Hirase (1954) from Nagasaki-ken, Japan.

Sub-order: Adapedonta

Family: Solenidae

*Cultellus maximus* (Gmelin)

Valves nearly thrice as long as high, elliptical in shape, equivalve, inequilateral, fairly thick, anterior and posterior margins rounded, dorsal and ventral margin straight. Hinge tooth of left valve more prominent than that of right valve. Adductor scars and pallial line prominent. Concentric striae present on outer surface of valves. Outer surface of valves yellowish green, inner surface white (Plate I E).

The species measuring 133.4 mm to 145.0 mm in length and 46.6 mm to 50.9 mm in height have been collected from trawl catches from Palk Bay landed at Mandapam.

The species has been reported previously by Crichton (1941) from Madras.

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