

### 30. NEW RECORD OF MANGROVE CLAM *GEOLOINA EROSA* (SOLANDER, 1786) FROM THE WEST COAST OF INDIA

(With a plate and a text-figure)

Prashad (1932) reported the occurrence of three species of mangrove clam belonging to the subgenus *Geloina* in the Indo-Pacific region. The species are *Geloina erosa* (Solander, 1786); *G. bengalensis* (Lamarck, 1818) and *G. expansa* (Mousson, 1849). Interestingly *G. bengalensis* has been reported from Sri Lanka (Preston 1911), Malay Archipelago (Bentham-Jutting 1954) and in Coleroon estuary on the south east coast of India (Natarajan 1976). A detailed literature survey revealed that except the report of Prashad (1932) no information is available on the occurrence of *Geloina erosa* from Indian waters.

During a routine collection of the benthic fauna of a mangrove creek, a single live specimen of *Geloina erosa* was collected from Chorao, a deltaic island located in the catchment of a Mandovi estuary (Lat.  $15^{\circ}31'$ , Long.  $73^{\circ}51'$ ; Fig. 1). The habitat is surrounded by thick mangrove vegetation of *Avicennia* spp., *Sonneratia alba* and *Rhizophora mucronata* (Jagtap *et al.* 1993). Sediment at the sampling site was composed of loose mud with very high percentage of silt and clay and rich in organic matter (Jagtap 1987). The specimen of *G. erosa* was found in sediment at a depth of c. 35 cm in a feeding stream. This stream usually gets drained for about 4 to 6 hours daily during the low tide and remains flooded for the rest of the day. Since the specimen is large in size (length: 105 mm) and was collected from a substantial sediment depth, it could be assumed that it must have been immersed in soft sediment for a long time. Avoiding the desiccation. Morton (1976) has reported *G. erosa* from the Singapore mangrove and, while discussing the general

biology he suggested that *G. erosa* is capable of <sup>long-term immersion. Further the exchange of</sup> water and suspended material with subterranean water, possibly takes place via the pedal gape.

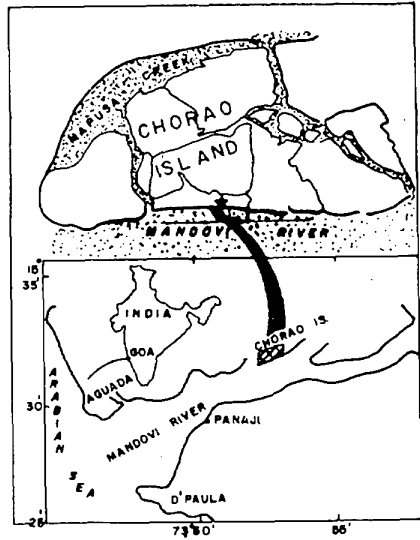
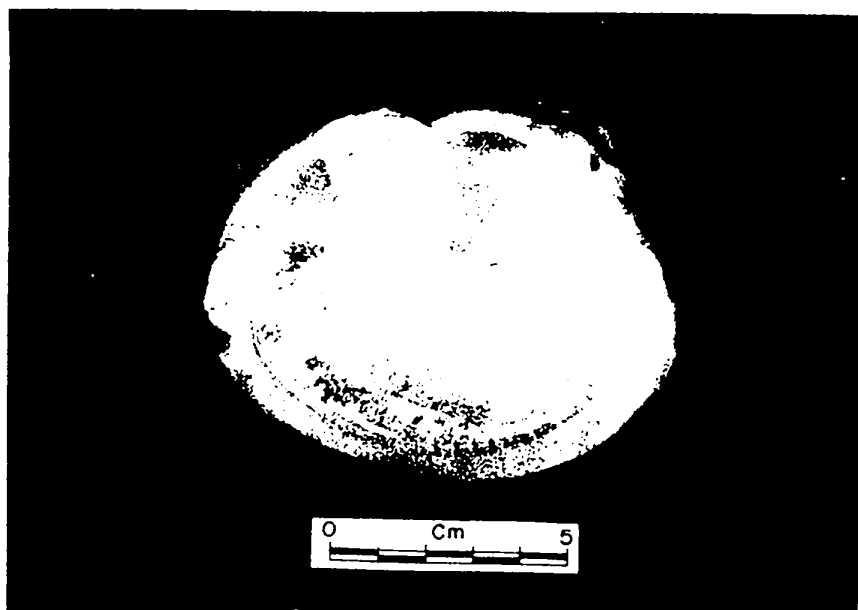


Fig. 1. Location of the sampling site at Chorao Island, Goa.

**Taxonomy:** As seen from Plate 1 the shell of *G. erosa* is thick, almost orbicular with concentric striae on the outer surface and a distinct characteristic flexure extending from the umbo to the mid-posterior margin (Plate 1a). The hinge teeth are strong, larger and antero-lateral tooth located close to the cardinal tooth (Plate 1b). Length (anterio-posterior axis) measures 105 mm; height (dorso-ventral axis) 88.5 mm and width (between the two valves) 56 mm. Ratio of width:height:length was



a



b

a. Outer surface of *Geloina erosa*, b. Internal characteristics of shell.

1:1.58:1.88. Ligament length measures 37.5 mm. The ratio between shell length and ligament length was 1:0.38.

Recently, Morton (1985) reviewed the genus *Polymesoda* (*Geloina*) from Indo-Pacific mangroves and suggested that among the three species reported by Prasad (1932), *G. erosa* is more widely distributed. However, as shown by Morton (1985; Fig. 5), *G. erosa* is mainly distributed in the central part of the Indo-Pacific region, especially in the Malay Archipelago. Since very little is known about the ecology and population dynamics of these ecologically important corbiculacean bivalves, attempts are being made to collect the smaller younger specimens to study their ecology. Secondly the

shells of the various species of *Geloina* are difficult to separate due to their morphological similarities (Morton 1985) and it has led to confusion in subsequent literature with regard to its identification. Therefore, a detailed study leading to taxonomy and ecology of the genus *Geloina* is necessary.

We thank the Director, National Institute of Oceanography, Goa for facilities.

March 28, 1994

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