

## PEARLS OF THE WINDOWPANE OYSTER, *PLACUNA PLACENTA*

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### ABSTRACT

Small pearls of fairly good lustre are produced by the windowpane oyster, *Placuna placenta*. A very large population of this species occurs in the Nauxim Bay Goa. About 35% of the population was found to contain pearls. The pearls recovered were either ivory or white in colour. Many of them were perfectly spherical or nearly spherical.

The pearl oyster fishery of the Gulf of Kutch on the west coast and the Gulf of Mannar on the east coast of India are well known for centuries (Alagarwami and Qasim, 1974; Rao and Rao, 1974). Recently in India, pearls of high value have successfully been cultured in *Pinctada fucata* (Alagarwami, 1974; Alagarwami and Qasim, 1973, 1974). Apart from the true pearl oysters of the genus *Pinctada*, the marine bivalve, *Pteria penguin*, the gastropod, *Haliotis discus*, the fresh water mussels, *Hyriopsis schlegeli* and *Unio margaritifera* are also known to produce commercial pearls of good quality.

The occurrence of large number of small pearls in the windowpane oyster, *Placuna placenta* collected from the Nauxim Bay of Goa, is reported here. Presence of natural pearls in small numbers in this species has been reported from other regions of the Indian coasts (Hornell, 1949; Jones, 1970; Bhavanarayana and Raghunath, 1973; Murty, 1976).

*P. placenta*, locally known as 'Methy' has a restricted distribution in the coastal waters of Goa. A very large population of this species inhabits the Nauxim Bay of the Zuari estuary which is situated about 1.5 km away from Dona Paula.

The oysters occur in groups of 4 or 5 and lie one above the other in the silty-clay column of the substratum. A rough estimate showed the density of about 350-400 animals/m<sup>2</sup>.

Pearls of different sizes are found in the mantle of a large number of oysters (Fig. 1). These pearl bearing oysters ranged between 89.5 and 132 mm in length. About 35% of the 385 oysters examined had pearls in their mantle. Most of them had only one pearl but quite a few had 2 or 3 and a maximum number of 8 pearls were seen in a specimen measuring 131 mm. It was found that the frequency of occurrence of pearls increased with the increase in size of the specimens. In oysters where more number of pearls occurred, they were distributed in the mantle and only in one individual they were found in a row.

The minimum diameter of the pearl recovered was 0.4 mm and the maximum diameter was 2 mm. But more than 65% of the pearls were within the range of 1.5 to 2 mm. It was observed that the size of the pearls increased with the size of the oyster. These pearls had a good lustre. They were either ivory or white in colour. They showed different shapes but a good number of them were spherical or nearly spherical (Fig. 2). Perfect spherical natural pearls are rarely seen because the pearl depends on the



Fig. 1. A Windowpane oyster showing pearl inside the mantle. Arrow indicates the position of pearl.

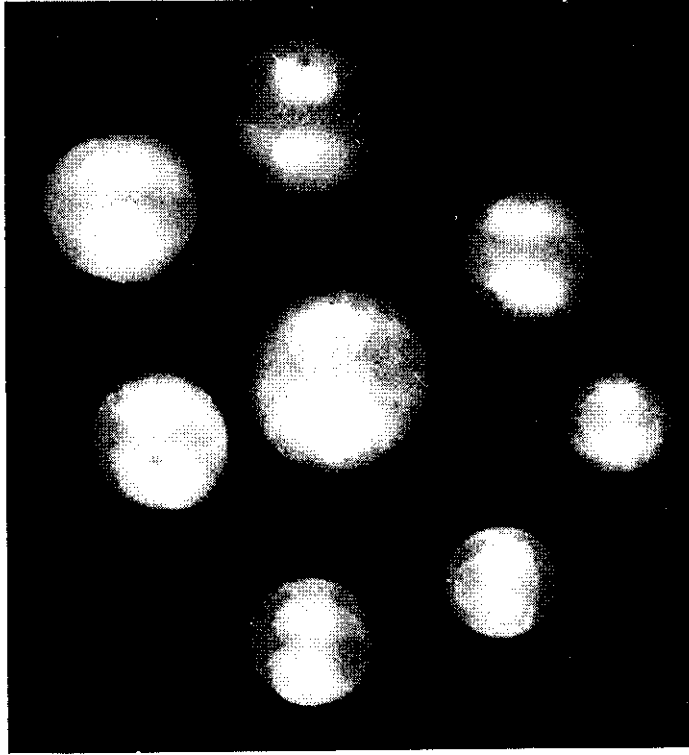


Fig. 2. Pearl recovered from windowpane oysters ( $\times 12$ )

shape of nucleus (Alagarwami and Qasim, 1974). These pearls, though smaller than the ones produced by the true Indian pearl oyster *Pinctada fucata*, are being widely used in the preparation of indigenous medicine. Most of the recovered pearls were spherical with good lustre which may have some ornamental value also.

The windowpane oysters are exploited regularly from the Nauxim Bay for food except during the monsoon season when their population declines. The shells are used as decorative pieces and also in the preparation of lime. Fishing is done during the low tide by hand picking. About 8,000 to 10,000 oysters are being fished by the local population practically every day. This indicates that the potential resource of this species in the Nauxim Bay is fairly high.

The restricted distribution of windowpane oyster in the coastal waters of Goa may largely be due to its preference to the substratum. It is quite likely that this species may also be present in other muddy bays of Goa.

At present the windowpane oyster is being fished only for its meat and shell and the pearls are not being recovered from them. Because of the possible utility of the pearls, it is suggested that the windowpane oyster beds may be surveyed in Goa and the pearls may be recovered before their meat is utilised.

#### ACKNOWLEDGEMENTS

We are thankful to Dr. S. Z. Qasim and Dr. T.S.S. Rao for their encouragement and suggestions.

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