AN EXPERIMENT ON THE CULTURE OF *PENAEUS INDICUS* (MILNE EDWARDS) IN AN ESTUARINE POND AT MANGALORE

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ABSTRACT

The culture of *Penaeus indicus* in the estuarine regions of Mangalore holds bright prospects in view of its fast rate of growth. The present investigations revealed that a size of 118 mm is reached within a span of six months

In the estuarine regions of Mangalore, several species of prawns are known to spend their early life (Ramamurthy 1972). Of these, *Penaeus indicus* attains comparatively larger size and hence this species was selected for culture purpose. The results of this study conducted from February-June 1974 are presented here.

A pond (12.5 X 5:0 m) was chosen adjacent to the river *Netravathi* about 2 km from the bar (Fig. 1). It was deepened and the bunds were strengthened. This pond was situated adjoining another pond which was used for the culture of *Sillago*. Pipes were fixed at suitable heights to ensure free inflow of tidal water and outflow of excess water. A nylon netting (3 mm stretched mesh) was tied to both the ends of the pipes to prevent the entry of predators and dirt. The depth of water in the pond was usually about a metre at high tide and 0.25 m at low tide. The nature of the bottom was muddy. The predators were weeded out before the release of prawns.

Seeds of *P. indicus* were collected in the neighbourhood by hand-dipnet and drag net (*kairampani*) on 1-2-1974. Before they were released into the pond their total lengths grouped in 5 mm intervals were recorded. Precautions were taken to eradicate periodically the scum and predators (crabs) which accidentally get inside.

Fishing was resorted to once a month during the receding tide, by using a single piece of *kairampani* to assess the growth of prawns in the pond. The prawns were released back into the pond after taking measurements.

The pond was rich with detritus, algae, polychaetes and crustaceans and as such no regulated feeding was resorted to. Temperature was recorded at 8-00 A.M. and 2-00 P.M. daily and salinity once a week.

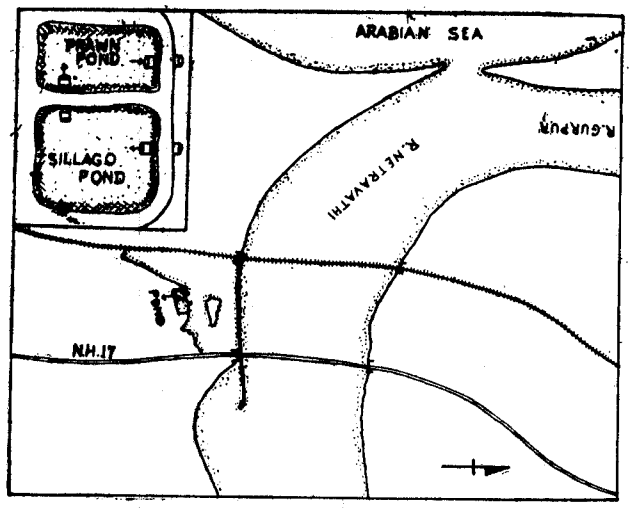

FIG. 1. Diagrammatic sketch of the location of culture pond (pond in inset).

The mean temperature and salinity of the pond during the different months are given below.

	Temperature (° C) 8-00 A.M.	2-00 P.M.	Salinity (‰)
February, 1974	25.6	32.0	24.15
March, "	27.6	33.3	29.67
April, "	28.4	34.5	31.60
May "	—	—	—
June "	32.3	—	23.96

The details of the size range, modal size and weight of prawns released on 1-2-1974 and caught by subsequent fishings are given below. In March, enough numbers could not be caught probably because they were lying buried in the mud. The final fishing was done on 26-6-1974 owing to the onset of monsoon.

	Nos. released	Nos. caught	Size range (mm)	Mode (mm)	Mean size (mm)	Range in weight (g)	Mean weight (g)
February '74	187	—	37-78	53	51.2	0.3-2.5	0.6
April "	—	96	57-94	63,78	69.6	0.8-5.0	1.7
May "	—	24	57-88	68,83	76.6	0.9-4.5	2.5
June "	—	55	53-118	58,88,118	87.0	0.7-10.0	4.5

According to Subrahmanyam and Rao (1968), the juveniles of *P. indicus* measuring about 60 mm are two months old. Assuming that the prawns released in February 1974 are of the same age, it is evdient that these attain a size of 118 mm during the next four months which indicates a faster rate of growth compared to that observed by those authors (*op. cit.*). However, Ghosh *et al* (1972), in their experiments, stocked *P. indicus* of bigger size (average 84 mm) and observed that these reached an average length of 144 and 159 mm during the next 3 and 5 months respectively.

The poor catch at the end of the present experiment might be due to insufficient depth of water at low tide, high water temperature during the day. and declining salinity. In addition, cannibalism and predation and poaching to a certain extent could not be ruled out. However it is felt that with proper regulation of water, better yield could be obtained from the culture of *P. indicus*.

The authors thank Drs. R. V. Nair and K. V. Sekharan for the encouragement given during this study. They are thankful to Shri K. H. Mohamed for his comments on the manuscript. The co-operation extended voluntarily by Shri M. H. Dhulkhed during this study is greatly appreciated.

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NEW RECORDS OF THREE RARE MARINE DIATOMS FROM THE WEST COAST OF INDIA

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ABSTRACT

The present note records *Amphitetras punctata* Grev., *Biddulphia* (*Amphipentas*) *punctata* Brightw. and *Biddulphia turgida* W. Sm. for the first time from the Indian coasts.

In the course of planktonic investigations during 1973-1974, three new diatoms were found from the coastal waters of Gulf of Kutch. The salient features, drawn from the three specimens are given below.