

A NOTE ON THE OCCURRENCE OF THE PUERULUS  
OF THE SPINY LOBSTER *PANULIRUS POLYPHAGUS* (HERBST)  
IN ZUARI ESTUARY IN GOA

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ABSTRACT

The occurrence of the puerulus larvae of the marine spiny lobster, *Panulirus polyphagus* (Herbst) is reported from the estuarine waters of Goa.

*Panulirus polyphagus* (Herbst), widely distributed in the Indo-Pacific region, is the most important species of spiny lobster in the Maharashtra coast, inhabiting up to a depth of 50 fathoms (Deshmukh 1966). In the Goa coast this species along with *P. ornatus* is caught in stray numbers in trawl and gill nets. Despite its economic importance, the information on its life history is fragmentary. The occurrence of the juveniles of *P. polyphagus* ranging between 102 and 127 mm in total length was reported from Cochin backwaters by Balasubramanyan (1969). Subsequently, Rao and Kathirvel (1971) reported the occurrence of puerulus, postpuerulus and early juveniles from these backwaters during October to February when the salinity varied between 28‰ and 31‰. Since no phyllosoma larvae were noticed, they concluded that those stages had entered into this region with the incoming tides. The present account deals with the record of puerulus stage for the first time in the Zuari estuary, Goa.

While engaged in a study of the estuarine prawn fishery during 1972 and 1973, I came across 173 post larvae of the spiny lobster in the stakenet catches at Agacaim, situated in Zuari estuary, at a distance of 8 km from the sea. These were taken alive to the laboratory and were identified as the puerulus of the spiny lobster *P. polyphagus*, with the help of the key provided by Deshmukh (1966). It was possible to keep the pueruli alive for 24 h in polythene bags partially filled with estuarine water.

The pueruli were caught during April-May. But their presence in appreciable numbers were noted only during April. On one occasion (30-4-1972), as many as 65 larvae could be collected from one net. Afterwards their number decreased gradually and by the end of May they totally ceased to appear. The salinity in this estuary is reported (Dehadrai 1970) to vary from 32 to 34 p.p.m. during this period. Since the Zuari estuary with its wide opening, is considerably exposed to the tidal action of the sea it is likely that these free-swimming larvae have been swept in with the incoming currents.

Measurements of 65 larvae collected on 30-4-1972 showed that the carapace length ranged from 8 to 11 mm, with a mode at 9 mm.

I am thankful to Dr S. Ramamurthy, Scientist, for critically going through the manuscript and offering valuable suggestions.

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