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A SPINY LOBSTER *PANULIRUS ORNATUS* WITH ANTENNULE-LIKE OUTGROWTH IN THE PLACE OF EYESTALK

ABSTRACT

The note reports on the collection of a female specimen of the spiny lobster *Panulirus ornatus* (Fabricius) with antennule-like outgrowth in the place of one of the eyestalks.

PANULIRUS ORNATUS (FABRICIUS) is one of the commercially important species of spiny lobsters in the southeast coast of India. Along with *P. homarus* it constitutes a good fishery in certain places in the Gulf of Mannar. Kayalpattinam is one of such places where there is round the year fishery for these two species at varying intensities. During the course of regular observations on the lobster fishery at Kayalpattinam, a single specimen of *P. ornatus* with an antennule-like outgrowth in the place of its right eyestalk, was observed. The lobster which was a female measured a total length of 167 mm with a carapace length of 65 mm. The length of the outgrowth was 36 mm (Fig. 1). The specimen was collected from the gill net catches of lobsters landed at Kayalpattinam on 28th August 1985. On the day of the collection of the specimen, 35 numbers of *P. ornatus* were landed at the centre. The size of the lobsters landed on that day ranged between 134 and 322 mm in total length in the case of male and between 164 and 252 mm in the case of female.

Fig. 1. Panulirus ornatus with antennule-like outgrowth in the place of right eyestalk

The development of antennule-like structure in the place of eyestalk of the lobster *P. japonicus* has been reported earlier by Yosii from the wild and Radhakrishnan and Vijayakumaran (1984). On the otherhand, Radhakrishnan and Vijayakumaran observed the

outgrowth of antennule-like structure in the lobster *P. homarus* which was subjected to eyestalk ablation with a cauterizer. They conducted a series of experiments to find out the effect of eyestalk ablation on moulting and growth in *P. homarus* and reported that when ablated at the base of the eyestalk 90% of the lobsters developed the outgrowth of antennule-like structure after second or third moult. They also observed the structure to be in different forms either single, bifid or trifid. It is believed by them that the eyestalk contains Moult Inhibiting Hormone (MIH) and Gonad Inhibiting Hormone (GIH). Hence the removal of eyestalk results in some sort of hormonal disturbances leading to physiological and morphological changes. The lobster reported in the present investigation would have lost its right eyestalk accidentally during some phase of its life leading to similar changes in the physiology of the animal resulting in this outgrowth.

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BIOCHEMICAL STUDIES IN THE ESTUARINE CLAM *KATELYSIA OPIMA* FROM VELLAR ESTUARY

ABSTRACT

Studies on the changes in the biochemical constituents and calorific values have been carried out in the estuarine clam *Katelysia opima* (Gmelin) from the Vellar Estuary for the period of one year. Protein, carbohydrate and lipid were very low during spawning period and high in maturation period, the values are slightly higher in females than males. Mean calorific value found to be high in female than in males. Mean calorific value found to be high in female than in males. Changes in the biochemical components are mainly due to the reproductive cycle and also by food availability.

INFORMATION on the biochemistry of commercially important bivalves will be of use in cultural aspects. Various studies have been carried out on the biochemical constituents in relation to reproductive cycle in different bivalves. The present communication deals with biochemical changes in the estuarine clam *Katelysia opima* (Gmelin) collected from Vellar Estuary (11°30'N; 79°46'E) in relation to reproductive cycle.

Monthly samples of about 40-60 specimens of clams (30-35 mm size) were collected from the Vellar Estuary for one year from January to December 1987. The clams were allowed to remain in filtered estuarine water for one day to allow them to depurate. After the gonad examination, the animals were sorted into males and females and their soft tissues were used for biochemical estimations by using standard methods (Dubois *et al.*, 1956; Folch *et al.*,