

PRELIMINARY OBSERVATIONS ON THE DECAPOD AND STOMATOPOD LARVAE OF THE WALTAIR COAST*

ABSTRACT

The note embodies observations on the occurrence and the abundance of decapod and stomatopod larvae in Lawson's Bay, Waltair, for the periods October-May (1954-1955) and August-May (1956-1957). Collections were made both during day and night to understand the diurnal variations in the abundance of decapod and stomatopod larvae in the plankton.

Few studies are available on the taxonomy and distribution of planktonic decapod and stomatopod crustacea from the Indian water (Menon, 1933, 1937 and 1940; Pillai, 1955; Alikunhi, 1951). However, there are some references to the distribution of the decapod larvae in accounts on the seasonal distribution of planktonic organisms in the inshore waters along the coasts of India (Bal and Pradhan, 1945; George, 1953; Ganapathi and Murthy, 1955).

The present note embodies observations on the distribution of the decapod and stomatopod larvae in Lawson's Bay, Waltair, based on the surface plankton collections made with a half meter organdie tow-net during the periods, October-

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May (1954-'55) and August-May (1956-'57). The day collections were made between 7.00-8.00 a.m. and the night collections between 7.00-8.00 p.m. at weekly or bi-weekly intervals. The net was towed from a catamaran for a ten-minute duration and the collections were fixed in 4% formalin after examining the contents in live condition in the laboratory. No day collections were made during 1956-57 and they were suspended during bad weather.

The different groups of decapod and stomatopod larvae were counted separately in each sample and their averages for each month were calculated. The day and night collections were treated separately to distinguish any differences in the samples.

Seasonal distribution: The common larval forms encountered in the plankton were those of Natantia (*Lucifer*, *Alpheus*, *Penaeus*, *Metapenaeus*, *Leptochela*, *Latreutes*, *Ogyrides*, *Leander*, *Synalpheus*, *Solenocera*, *Acetes* spp.) followed by Anomura (pagurids, *Hippa*, *Albunea*, *Porcellana*, *Callinassa*, *Upogebia* spp.), Brachyura (crabs), Reptantia (*Panulirus*, *Scyllarus* spp.) and Stomatopoda (*Squilla*, *Lysiosquilla* spp.). They were observed throughout the period, but were maximum during January-March (1954-55), August, October-November and February-March periods (1956-57) (Fig. 1 and Table 1).

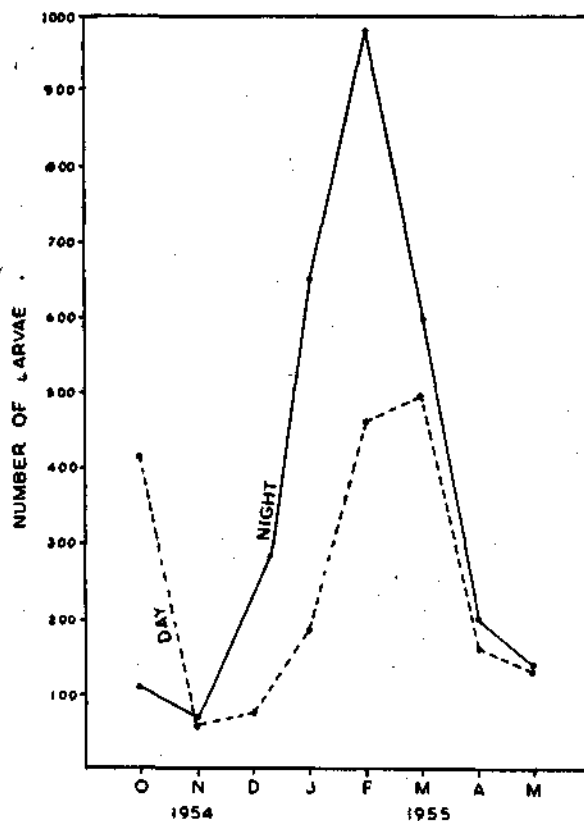


Fig. 1. Diurnal variation in the no. of Planktonic decapod and stomatopod larvae.

TABLE 1. Seasonal distribution of decapod and stomatopod larvae along the Waltair coast (1956-57) (Night observations)

Group	Average Number/haul										Total No.	Per cent in total
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May		
<i>Stomatopoda</i>	—	6.0	—	0.2	0.2	—	4.7	1.0	—	—	12.1	0.23
<i>Natantia</i>	631.0	98.0	639.0	867.4	35.7	49.5	548.3	842.0	240.5	—	3951.4	76.72
<i>Reptantia</i>	9.0	—	0.5	23.6	1.2	0.5	49.0	19.0	9.2	—	112.0	2.17
<i>Anomura</i>	69.0	3.0	1.0	68.2	11.2	11.5	304.7	66.7	20.7	—	556.0	10.80
<i>Brachyura</i>	40.0	7.0	15.5	81.0	2.2	13.5	72.3	249.3	38.2	—	519.0	10.08
Total	749.0	114.0	656.0	1040.4	50.5	75.0	979.0	1178.0	308.6	—	5150.5	

NOTES

This distributional pattern is in conformity with similar observations made by Menon (1933) along the Madras coast, Bal and Pradhan (1945) along the Bombay coast, George (1953) along the Calicut coast and Ganapati and Murthy (1955) at Waltair.

Diurnal variation : Observations from the day and night collections in 1954-55 indicated that the larval forms are normally rich at night when compared with the day collections (Fig. 1). The richness of night collections appeared to be mainly due to the occurrence of postlarval stages of several groups, particularly those of penaeids, *Acetes* sp., *Lucifer* sp., *Leptochela* sp., glaucothoe stages and megalopae of crabs and alima and juveniles of stomatopods. The reverse picture noticed in October is, however, the result of the appearance of swarms of *Lucifer* and *Acetes* protozoal stages in the day collections. A similar swarming behaviour in case of other larval stages in crustacea is reported from Madras coast (Menon, 1933).

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