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ON THE OCCURRENCE OF *PARAPENAEOPSIS STYLIFERA* IN THE STAKE NET CATCHES AT COCHIN BAR MOUTH*

Earlier studies on *Parapenaeopsis stylifera* indicate that this species is one of the few important penaeid prawns of India which complete their whole life-cycle in the marine environment. Occurrence of the species in the backwaters at Azhikkal and Thevara near the Cochin bar mouth has been reported to be irregular and insignificant. Though *P. stylifera* is exploited mainly by trawlers, small quantities are reported to be landed by indigenous gears such as boat seine, shore seine, cast net and drag net from the shallow coastal waters of Alleppey and Cochin. In a recent sampling of the stake net fishery at the Cochin bar mouth, good quantities of the species have been noticed in the catches in certain months. This being quite significant, is reported here.

Gear and season

Penaeid prawns in the late juvenile stage are exploited in fairly good quantities from the Cochin bar mouth

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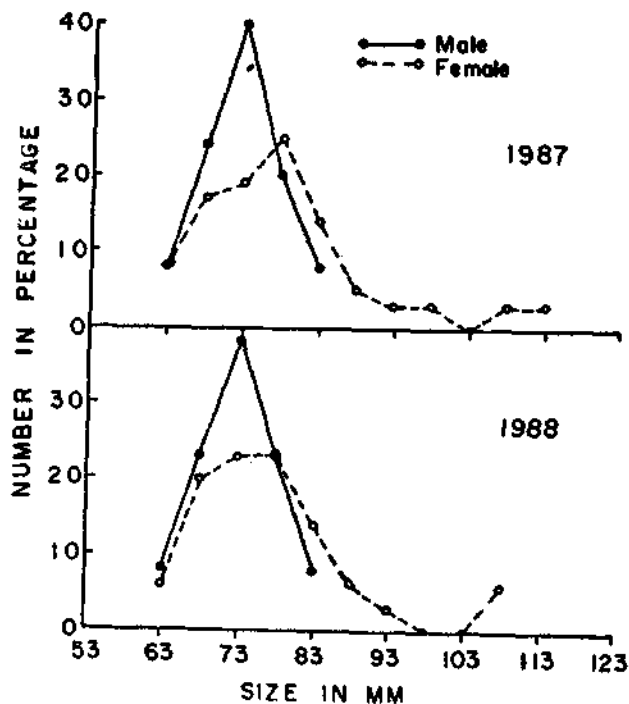


Fig. 1. Size - frequency distribution of *P. stylifera* in the catches of stake nets operated near the Cochin bar mouth in September, 1987 and 1988.

Table 1. Estimated total landing (in kg) of penaeid prawns by stake nets from near the bar mouth at Cochin

Month	1987			1988		
	No. of Units	<i>P. stylifera</i>	Total penaeid prawns	No. of Units	<i>P. stylifera</i>	Total penaeid prawns
January	—	—	—	1,860	N	3,720
February	1,820	146	12,034	3,750	142	9,375
March	3,420	N	46,295	2,200	N	3,420
April	3,150	N	20,550	1,760	N	2,640
May	3,990	318	22,701	3,100	N	15,500
June	8,250	2,920	56,376	15,000	N	64,500
July	1,8600	N	66,262	11,510	134	33,519
August	19,995	N	51,460	10,075	N	25,769
September	8,900	4,985	24,199	9,000	10,564	33,750
October	8,060	N	18,289	5,250	N	13,700
November	7,500	N	14,847	3,900	N	10,725
December	2,325	N	5,579	—	—	—

N = Negligible

region. Stake net is the major gear used for the exploitation of this fishery although cast net and dip net are also used occasionally. Observations show that stake nets are operated round the year with peak landings of prawns during the southwest monsoon period. On an average about 6,970 units per month are operated during the period of study extending from February, 1987 to November, 1988. During the full moon and new moon phases the nets were operated twice a day during low tide.

Fishery

Total landing of penaeid prawns during February to December, 1987 was 338.6 t and during January to November, 1988 was 216.6 t (Table 1). *P. stylifera* was represented in comparatively good quantities in September, 1987 (5 t) and September, 1988 (10.6 t). The species contributed to 1.2, 1.4, 5.2 and 20.6% of the total penaeid prawn catches in February, May, June and September, 1987 respectively. The percentage composition in February, July and September, 1988 was 1.5, 0.4 and 31.3 respectively. It is of interest to note that in the other months of the year representation of the species in the catches was in stray numbers.

P. stylifera landed in September ranged in size from 61–65 to 81–85 mm with a modal size at 71–75 mm for males, in both the years. Females ranged in size from 61–65 to 111–115 mm with a modal size at 76–80 mm in 1987 and from 61–65 to 106–110 mm with a modal size at 71–80 mm in 1988 (Fig. 1). About 44 and 46% of the females fell within the size-range of 71–80 mm in 1987 and 1988 respectively. Females predominated the fishery in both the years contributing to 59% of the catches in 1987 and 57% in 1988.

Remarks

According to George *et al.* (*Indian J. Fish.*, 10 (2): 460-499, 1963) all the important species of penaeid prawns other than *Metapenaeus dobsoni* in the fishery off Cochin move to deeper waters as a result of upwelling taking place in these waters during the southwest monsoon period. Occurrence of *P. stylifera* which does not have an estuarine phase in its life-cycle, in the stake net catches near the Cochin bar mouth where there is wide fluctuation in salinity during the monsoon and post-monsoon periods is interesting from the point of view of the local movement of the species and requires further studies based on intensive sampling.

