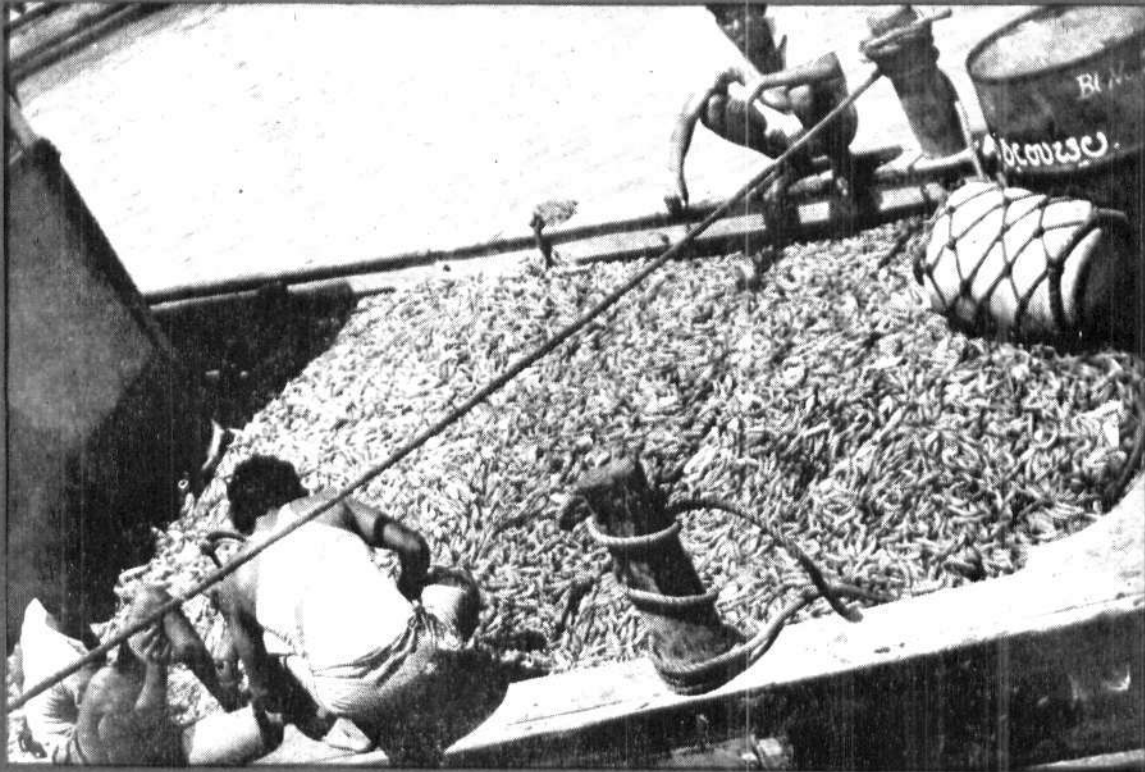




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THE MARINE FISHERIES INFORMATION SERVICE: Technical and Extension Series envisages the rapid dissemination of information on marine and brackish water fishery resources and allied data available with the National Marine Living Resources Data Centre (NMLRDC) and the Research Divisions of the Institute, results of proven researches for transfer of technology to the fish farmers and industry and of other relevant information needed for Research and Development efforts in the marine fisheries sector.

Abbreviation – *Mar. Fish. Infor. Serv. T & E Ser.*, No. 65: 1985

THE INDIAN WHITE PRAWN *PENAEUS INDICUS* IN THE PURSE SEINE CATCHES*

The sporadic occurrence of prawns consisting exclusively of *Metapenaeus dobsoni* ('Poovalan chemmeen') in the purse seine catch at Cochin mainly during pre-monsoon season has been reported earlier by Nair *et al.*, 1982 (*Mar. Fish. Infor. Serv. T & E Ser.*, 42: 9-13). On 23-5-'84, while monitoring the purse seine catch at the Fisheries Harbour at Cochin a purse seine landed 1.2 tonnes of the Indian white prawn *Penaeus indicus* ('Naran chemmeen') which was auctioned for Rs. 70,000/-. Since the capture of the species in such huge quantities in purse seines is quite unprecedented and has not been reported earlier, the results of the observations are given in the present communication.

On 23-5-'84, a white prawn shoal was sighted by purse seine fishermen about 20 km SW of Cochin at about 30-35 m depth, while steaming to the purse seine fishing grounds. They immediately shot the net and got the bumper catch. The catch was composed mainly of fairly large sized prawns numbering 25-30/kg of females and 30-40/kg of males (head on). The size ranged from 145 to 185 mm with the dominant modes at 151-155 and 166-170 mm for females and 135 to 170 mm with the dominant mode at 150-155 mm for males (Fig. 1). In the purse seine catch the sexes were of almost equal distribution; the females constituting 50.4% of the population. The females consisted almost exclusively of specimens with late maturing and mature gonads.

The occurrence of fairly large sized *P. indicus* in abundance in the inshore waters during pre-monsoon

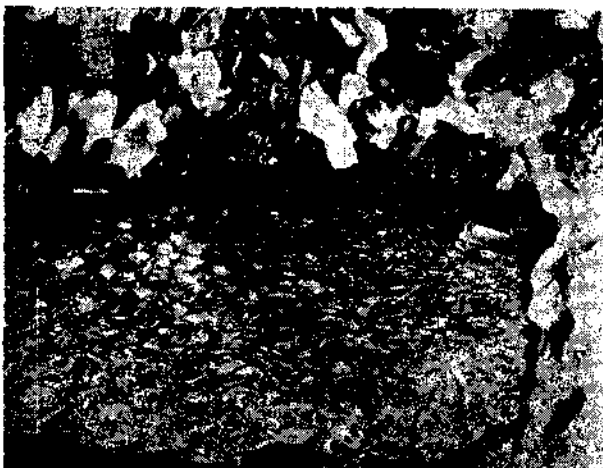


Fig. 1. Catch of white prawn *Penaeus indicus* landed by purse seiner at the Fisheries Harbour, in Cochin.

and monsoon periods along the southwest coast is now well known. In the indigenous fishery of Cochin, which occurs towards the beginning of southwest monsoon period more or less similar size groups of the species contribute about 35% forming the second dominant item of prawn landed by boat seines and bottom-set gill nets (George *et al.*, 1980, *Mar. Fish. Infor. Serv., T & E Ser.*, 18: 1-8). This species, in slightly smaller size-range, is also known to support the characteristic mud bank fishery of Ambalapuzha-Thottappally region

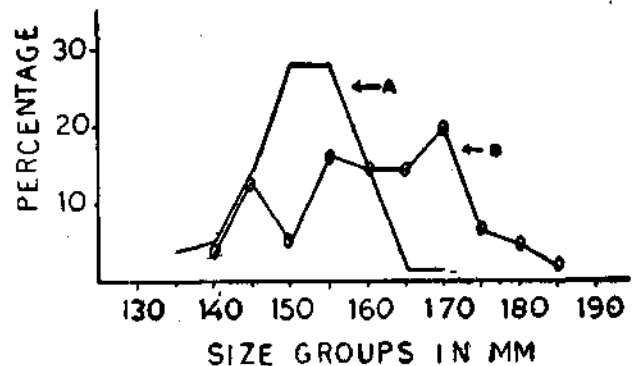


Fig. 2. Length-frequency distribution of *P. indicus* in purse seine catch at Cochin.

of Kerala coast in substantial quantities during monsoon period. In the trawl fishery of Sakthikulangara-Neendakara area the species occurs in peak abundance in June, and thereafter the fishery gradually declines, thereby indicating a temporary concentration of large sized prawns in the area. Further south, almost in the same period (monsoon), this species supports a lucrative seasonal fishery in the inshore waters of the coast of Kanyakumari District and it is believed that the recruitment into this fishery is taking place from the Kerala coast. This has later been confirmed by tagging experiments (*Mar. Fish. Infor. Serv., T & E Ser.*, 45: 1-9). All these point to the fact that *P. indicus* evinces shoaling behaviour and large scale migration to the nearshore areas from the offshore waters during the monsoon period, which are the natural habitat for the larger sizes. Probably this behavioural pattern of the species is triggered by environmental changes brought about by the upwelling phenomenon. In this context the present observation of unusual landings of fairly large sized *P. indicus* in abundance in the purse seines is especially interesting, which could have been the result of the large scale migration of the species into the columnar waters during premonsoon and monsoon.

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