

## ON THE LOCATION OF A POTENTIAL PRAWN FISHING GROUND OFF THE WEST BENGAL COAST

### ABSTRACT

The location of a potentially rich fishing ground for prawns off West Bengal during exploratory surveys by *M. V. matsya vigyani* is reported. The concentration of prawns appears to be at depths of 50 to 80 m. *Metapeneus ensis* (de Haan) forms an important constituent. *M. monoceros* (Fabricius) is also abundant. Commercial feasibility of outrigger trawl fishing is indicated and the need for intensive surveys is highlighted.

WHILE several reports on the prawn resources off the west coast of India are available there is very scanty information on the subject in respect of the east coast. It is more so in the case of the north eastern region. The earliest reports are based on the operational results of the *Kalyani I to V* between 1950 and 1962. Subsequent records pertain to the operations of the Government of India fishing vessels operating from Visakhapatnam from 1963 to 1968.

All the later information that is available, is the result of operation of the exploratory fishing vessels of the Government of India based at Paradeep and Calcutta from 1973 onwards. Information on the prawn resources off West Bengal

The area-wise effort, catch and catch/hr details are given in Table 1. The species represented in the catches are *Penaeus monodon* Fabricius, *P. semisulcatus* de Haan, *Penicillatus* Alcock, *P. indicus* Milne Edwards, *Metapenaeus dobsoni* (Miers), *M. monoceros* (Fabricius), *M. ensis* (de Haan), *Solenoceros indica* Nataraj. The percentages of big, medium and small prawns are given in Table 2. A detailed examination of the catches in voyage No. 3 (1977) showed that nearly 50% of the catch was composed of *M. ensis* which was of a slightly larger size than *M. monoceros* another important species in the catch. Muthu (1965) was the first to report the occurrence of *M. ensis* from the Bay of Bengal, from the catches of M. T. Ashok in December 1964. He noted that *M. ensis* was found in shallower areas (upto 50 m) and *M. monoceros* in deeper waters (60 to 80 m). However in the present catches, both the species appeared to be occurring together in almost all depths (personal communication from Sri Martin Vaz, Skipper).

TABLE 2. *Voyagewise details with the percentages of big, medium and small prawns*

Voyage No.	Catch (Kg)	Catch/Hr. (Kg)	Big		Medium		Small	
			Kg	%	Kg	%	Kg	%
M-77/01	344	6.8	203	59.0	136	39.5	5	1.5
M-77/02	1819	36.4	8	0.44	1735	95.4	76	4.2
M-77/03	1743	33.2	18	1.03	1681	96.5	44	2.5

Percentage-wise, the best result recorded prior to this survey was 2.2% in the eastern channel lat. 20-88/6A to 6C by the vessels *Kalyani*. Earlier the best catch/hr yield was recorded by the Government of India vessels from Visakhapatnam in the areas 20-88/6F (20 kg/hr) and 20-88/6B (5.1-10 kg/hr). In the present voyages the catch/hr yield of prawns was 35.62 kg with a highest value of 70.9 kg recorded in 20-88/6F in voyage No. 2, followed by 65.1 kg in 20-88/6E in voyage No. 3. The depth-wise distribution showed that the maximum amount of prawns were available between 50 and 80 m depth zone with the highest concentration in 60 to 70 m (Table 1).

Eventhough the catch/hr yield of prawns from the present operations does not appear to be spectacular, it has to be borne in mind that the gear tried on an experimental basis does not fully match the horse power of *Matsyavigyani*. From the operational point of view it is feasible to conduct outrigger shrimp trawling with two nets of the size of the experimental net. Therefore it is evident that shrimp trawling will give economic viability for a vessel of the size of *Matsyavigyani* as the catch/hr of prawns is likely to be around 70 kg which compares favourably with the results obtained by Exploratory Fisheries Project fishing vessels operating from other catches along the Indian Coast (Anon, 1976).

In conclusion, however it has to be mentioned that extensive survey for shrimp resources is essential to bring to light a more precise knowledge of the prawn resources in this area.

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