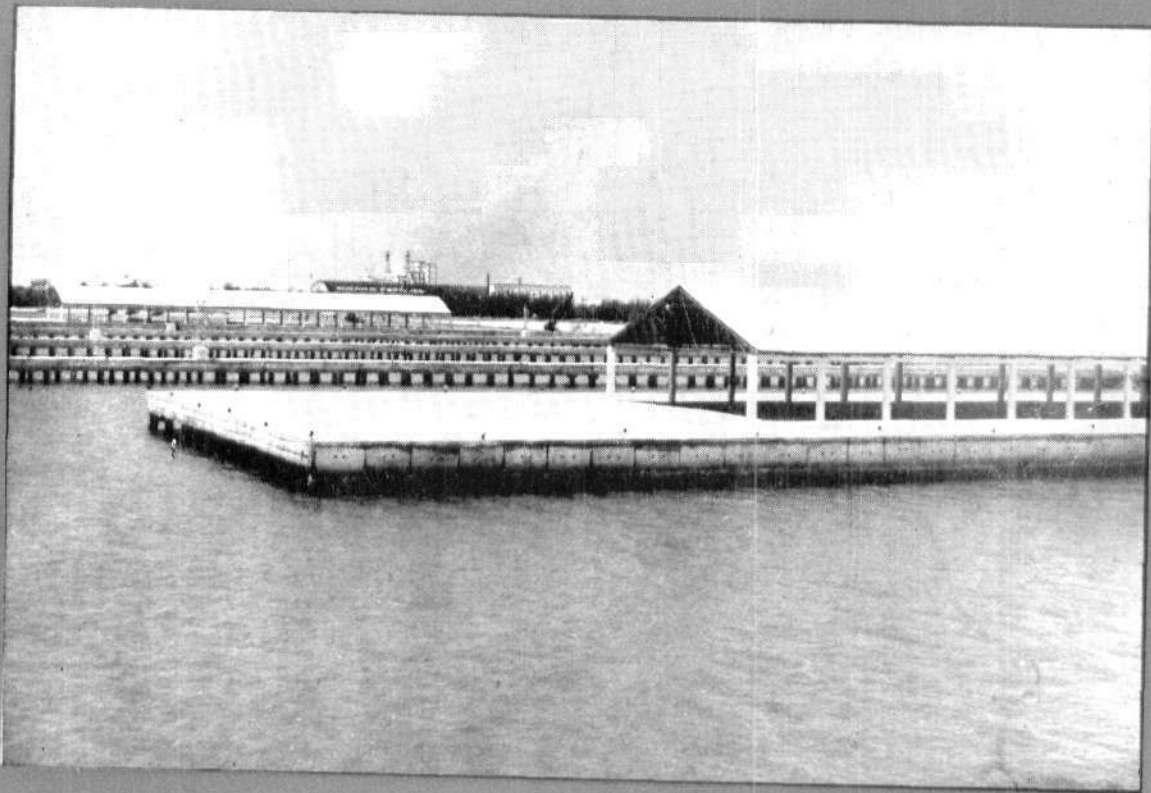




MARINE FISHERIES INFORMATION SERVICE



No. 83
MAY 1988

Technical and Extension Series

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

COCHIN, INDIA

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

STOMATOPOD RESOURCES OF THE SOUTH KANARA COAST DURING 1983-'86*

Introduction

Among the crustaceans exploited by commercial nets, perhaps, stomatopods are economically the least important. They are not consumed in our country at present due to their lesser flesh content as well as the presence of large number of spines on the body. The landings of stomatopods have been exceptionally high in Karnataka particularly along the South Kanara coast. Around 50% of the all India stomatopod catch is obtained from Karnataka alone.

In the sixties and early seventies, stomatopods, locally known as 'pucha' or 'puchi', were used to be thrown out into the sea by shrimp trawlers due to lack of space on board. Of late, it has been found that it is a good raw material for converting into fish meal, poultry feed and manure, and hence there is a lot of demand for the same by the fish meal plants. It also fetches a reasonable price in recent years. In the present account an appraisal of the fishery and utilisation of this valuable resource is attempted based on the data collected during 1983-'86.

Craft and gear

There is no craft or gear as such exclusively used for catching stomatopods. Generally, it is being obtained as incidental catches by mechanised boats while trawling for prawns.

Fishing seasons

Eventhough trawling commences in September, stomatopods start appearing in the catch only in November along the South Kanara coast and last till May or early June.

Stomatopod landing

Mangalore

The annual catch amounted to 2,649.5 t with a catch per boat day of 64.2 kg during 1983-'84 (Table 1). The following season witnessed 115% increase in stomatopod landings as compared to the previous season.

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The catch was to the tune of 5,495.2 t (97.9 kg/boat day) during this period. The 1985-'86 season registered a fall in stomatopod landings by 818.0 t and the catch was 4,677.2 t but the catch/boat day was 108.8 kg.

Table 1. *Monthwise stomatopod landings by shrimp trawlers during 1983-'84, 1984-'85 and 1985-'86 seasons at Mangalore*

Month	1983-'84		1984-'85		1985-'86	
	No. of units	Catch (t)	No. of units	Catch (t)	No. of units	Catch (t)
Sep.	2,627	—	4,995	—	338	—
Oct.	630	—	2,028	—	496	—
Nov.	2,713	1.0	4,123	14.1	2,130	90.0
Dec.	4,131	411.7	9,416	940.0	4,680	558.3
Jan.	7,174	748.7	9,585	1,595.7	7,626	952.8
Feb.	6,228	585.5	7,720	1,005.2	8,733	1,036.2
Mar.	6,240	318.9	7,325	886.3	6,732	687.6
Apr.	5,340	263.8	7,049	686.3	7,125	939.8
May	6,204	319.9	3,887	367.6	5,126	412.5
Jun.	—	—	—	—	—	—
Total	41,287	2,649.5	56,128	5,495.2	42,986	4,677.2

Stomatopods formed 24.8% (1983-'84 season) to 37.2% (1985-'86 season) of the trawl landings at Mangalore (Fig. 1).

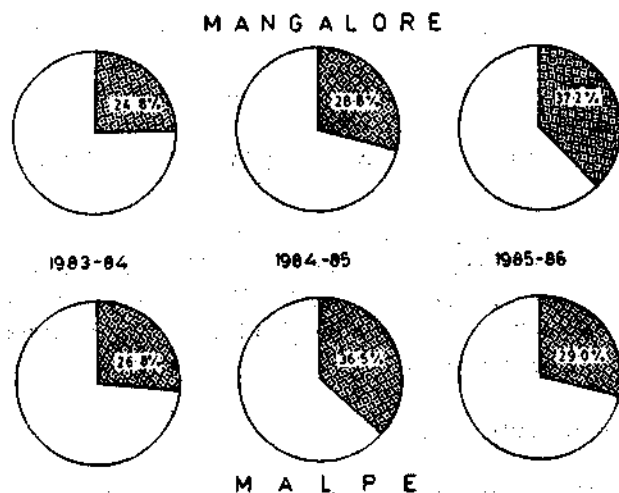


Fig. 1. Percentage contribution of stomatopods in total trawl landings during various seasons at Mangalore and Malpe Fisheries Harbour.

Eventhough stomatopods are landed from November to May, generally peak catches are obtained during November–February. The maximum catches were obtained in January '84 (747.7 t), January '85 (1,595.7 t) and February '86 (1,036.2 t) at this centre.

Malpe Fisheries Harbour

It is estimated that 1,729.2 t of stomatopods with a catch/boat day of 46.3 kg were landed at this centre during 1983-'84 (Table 2). The fishery registered 180% improvement during the following season (1984-'85) and the catch amounted to 4,847.5 t (103 kg/boat day). During 1985-'86 season, the fishery showed a fall by 36.0 % and the catch was to the tune of 3,102.3 t with a catch/boat day of 94.8 kg. It is seen that stomatopods contributed from 26.8% (1983-'84 season) to 36.5% (1984-'85) of the trawl landings at this centre (Fig. 1).

Table 2. *Monthwise stomatopod landings by shrimp trawlers during 1983-'84, 1984-'85 and 1985-'86 seasons at Malpe*

Month	1983-'84		1984-'85		1985-'86	
	No. of units	Catch (t)	No. of units	Catch (t)	No. of units	Catch (t)
Sep.	5,275	—	10,987	—	3,875	—
Oct.	450	—	4,030	—	1,560	—
Nov.	3,204	17.9	4,800	210.7	2,438	246.9
Dec.	3,553	500.3	5,150	911.5	3,300	325.5
Jan.	4,342	408.4	6,600	1,906.7	2,350	211.2
Feb.	4,121	238.1	3,520	655.7	3,294	257.3
Mar.	4,622	149.8	2,704	464.3	4,150	542.3
Apr.	4,163	242.6	4,725	517.7	6,450	906.2
May	7,622	172.1	3,308	180.9	5,310	612.9
Jun.	—	—	—	—	—	—
Total	37,352	1,729.2	45,824	4,847.5	32,727	3,102.3

Generally peak catches were obtained during December–February and in April. The highest landings were recorded in December '83 (500.3 t), January '85 (1,906.7 t) and April '86 (906.2 t) during the three seasons under study.

Species composition

The stomatopod fishery is exclusively supported by a single species namely *Oratosquilla nepa* all along the coast.



Fig. 2. Stomatopods - a close up view.

Disposal of the catch

At Mangalore, the entire catch in a boat is auctioned as a lot. It is usually purchased by some agents who in turn supply it to the fish meal plants at Ullal nearby.

At Malpe Fisheries Harbour, a few baskets are auctioned together or the whole catch is auctioned as a lot by fishermen themselves. Often it is seen that stomatopods are auctioned along with prawns (small varieties) to fetch a better price instead of sorting out and auctioning them separately.

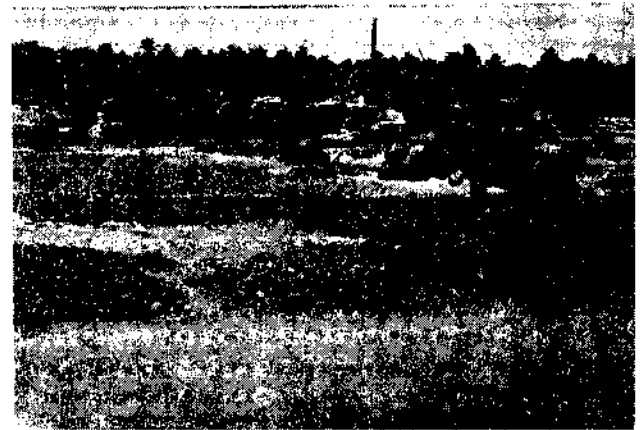


Fig. 3. Sun dried stomatopods packed in gunny bags ready for transportation at Malpe Fisheries Harbour.

Utilisation

The stomatopods are mostly sun-dried in the harbour premises (Figs. 2 & 3). After drying they are packed in gunny bags and sold as manure or to nearby fish meal plants for converting into poultry feed.

The price of stomatopods vary from Rs. 750 to 1,500 per tonne in the raw condition and Rs. 2,000 to 3,000 in the dried condition.

Eventhough the flesh content in squilla is relatively low, the protein content is very high, and hence the possibility of consuming it as food or converting it into food products may be seriously thought of.

Feasibility studies have been already carried out by Central Institute of Fisheries Technology, Cochin and Central Food Technological Research Institute, Mysore for extracting *chitosan*, a highly valuable

commercial product, from the exoskeleton of stomatopods in the recent past. Unfortunately, nobody has come forward to take up the production of *chitosan* on a commercial scale, perhaps due to the high cost involved in its production.

It is high time that researches are directed to evolve low cost technologies for the manufacture of cheap food products from stomatopods and also for the extraction of highly priced *chitosan* on a commercial basis thereby utilising this plentiful resource in an advantageous manner.

