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DIVERSITY OF PENAEID SHRIMPS IN THE TRAWL FISHERY OF SOUTH-WEST COAST OF INDIA

Apsara S. Krishnan and Pramod Kiran, R.B.*

Department of Aquatic Biology and Fisheries, University of Kerala, Thiruvananthapuram- 695581, Kerala
**Email: pramodkiranrb@keralauniversity.ac.in*

Abstract: The family Penaeidae includes the most economically valued shrimps.The present study was carried out in Neendakara and Sakthikulangara twin fishing harbours in Quilon district, Kerala which are among the major fish landing centres of the state. Twenty species of penaeid shrimps were identified from the trawl landings during the study period including a new distributional recordof species *Metapenaeopsis toloensis*. Out of the 20 species obtained, 17 were of high economic value.

INTRODUCTION

The family Penaeidaeis the largest family of shrimps under the suborder Dendrobranchiata Bate, 1888. So far, a total of 226 species under 26 genera have been reported from India(Jayachandran, 2008), among which 90 species under 14 genera are of commercial importance.Even though the global distribution of Penaeid shrimps is vast, most of them are geographically limited to the shallow tropical and subtropical waters. The Penaeid shrimps are heterosexual and the life span is very short. They live upto one year, within which, most of them are captured for fishery purposes. The shrimp fishery forms the backbone of the seafood export industry of India and frozen shrimp is the most important commodity. In Kerala, the twin fishing harbours in Neendakara and Sakthikulangara, Quilon, Kerala contributes the bulk of the shrimps landed in the state. The diversity of shrimps landed in the twin fishing harbours is presented here.

MATERIALS AND METHODS

The specimens for the study were collected from Neendakara and Sakthikulangara fishing harbours of Quilon District, Kerala from January 2009 to September 2013.Photos of fresh specimens were taken using digital camera.The specimens were then fixed in 70% ethanol for taxonomic studies after recording the colour and morphometric measurements. Using digital calliper the length measurements were rounded off to the nearest mm and weight was measured to the nearest mg using electronic balance.The preliminary identification of the shrimps to the species level was done following Chan (1998), Fischer and Bianchi (1984) and Kurien and Sebastian (1986). The identification of doubtful specimen were confirmed with the help of experts in Kerala (K.V. Jayachandran of KUFOS, Panangad, Cochin)

RESULTS AND CONCLUSIONS

The survey of shrimp species in the landings of trawlers operating from Sakthikulangara and Neendakara fishing harbours of Kerala coast revealed 35species representing 9 families and 18 genera. Among this, 20 species of shrimps under 9 genera belonged to the family Penaeidae.The survey also revealed the first distributional record of *Metapenaeopsis toloensis* Hall, 1962 from the south-west coast of India (Apsara *et al*,2013). Previous distributional records of M. toloensis were limited to Chennai (Ramaseshaiah and Murthy, 1991) and Kakinada (CMFRI, 2012) in south India.The species *Metapenaeopsis stridulans, M. toloensis*, *M. ensis*, *M. moyebi, Parapenaeopsis acclivirostris, P. cornuta* and *P. longipes* were recorded in stray catches. The remaining 13 species recorded were of high economic value forming the backbone of Indian Seafood Industry. The list of species obtained are presented in Table 1.

Table 1. List of Penaeid shrimp species obtained from the trawl catches of Neendakara-Sakthikulangara fishing harbours.

Sl.No.	Species	Average total length (mm)	Average total weight (mg)	Remarks
1	*Metapenaeopsis stridulans* Alcock	F 81	F 4.31	CV
2	*Metapenaeopsis toloensis* Hall	F 94	F 3.6	CV, FR
3	*Metapenaeopsis andamanensis*x Wood –Mason	F 119	F 5.02 M5.11	CV
4	*Metapenaeus affinis* H. Milne Edwards	M 105 F 146	M 3.62 F 11.82	CV
5	*Metapenaeus dobsoni* (Miers)	M 118 F 126	M 6.25 F 7.36	CV
6	*Metapenaeus ensis* DeHaan	M 114	M 2.62	CV
7	*Metapeneus monoceros* (Fabricius)	M 156 F 202	M 9.63 F10.28	CV
8	*Metapenaeus moyebi* (Kishniouye)	F 126	F 3.94	CV
9	*Parapenaeopsis acclivirostris* (Alcock)	M 37 F 72	M 0.20 F 1.13	CV
10	*Parapenaeopsis cornuta* (Kishinouye)	M 42 F 80	M 0.92 F 1.94	CV
11	*Parapenaeopsis coromandelica* Alcock	F 103	F2.94	CV
12	*Parapenaeopsis maxillipedo* Alcock	M 106 F 134	M5.73 F 10.48	CV
13	*Parapenaeopsis stylifera* (H. Milne Edwards)	M 90 F 100	M 2.76 F 4.41	CV
14	*Parapenaeus longipes* Alcock	F79	F 4.27	CV
15	*Fenneropenaeus indicus* (H. Milne Edwards)	M 184 F 187	M17.24 F 24.40	CV
16	*Melicertus canaliculatus* (Olivier)	M 194 F 217	M 25.73 F 28.59	CV
17	*Penaeus monodon* Fabricius	M 235 F 262	M37.54 F49.01	CV
18	*Penaeus semisulcatus* De Haan	F 164	F 32.24	CV
19	*Trachysalambria curvirostris* (Stimpson)	M81 F105	F 3.25 M 5.21	CV
20	*Megokris sedili* (Hall)	M51	M1.86	CV

CV = Commercially Valuable; FR= First Report in South-west coast of India.

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