
NOTES ON DISTRIBUTION OF FISHES IN MANIMALA RIVER

Dr. Mathews Plamoottil¹ and Dr. G. Suvarnakumar²

¹Department of Zoology, Govt. College, Chavara, Kerala

²Govt. College, Elanthur, Kerala

Corresponding Author: mathewsplamoottil@gmail.com

Abstract: Ninety seven species of fishes were collected from 20 stations of Manimala River of Kerala, India. Distribution of all these species was found out. Cyprinids and Silurids were found to be widely distributed. Among cyprinids species of *Puntius* came to first in the number of places they occur. Among Silurids, species of the genus *Mystus* outnumbered others in distribution. *Barilius bakeri*, *Dawkinsia filamentosa*, *Xenentodon cancila* and *Pseudetropluss maculatus* were collected from all 20 stations. Studies were also conducted on various aspects of habitat influenced distribution.

Keywords: Fish Diversity, Distribution, Freshwater fishes, Cyprinids, Silurids

INTRODUCTION

The diverse inland water bodies of Kerala, occupying an area of 3,55, 037 hectares are represented by about 44 rivers, 30 brackish water estuaries, 25 reservoirs, several freshwater lakes and innumerable number of ponds constituting 5% of India's total freshwater wealth. These water bodies harbor a variety of untapped potential ornamental and edible fish resources. The natural source of freshwater fishes in Western Ghats are rich and diversified.

Study of distribution of various freshwater fishes in different water bodies is important. It is helpful for taxonomists to conduct more studies on particular types of fishes found only in specific areas; it may help to describe or redescribe many unknown or little

known freshwater fishes. Fish culturalists can collect fishes and their young ones from freshwater bodies if they know their distribution.

MATERIALS AND METHODS

From the map received from The Kerala State land Use Board, primary knowledge about the Manimala River and its various locations acquired. Different stations and 'Kadavus' of the river were visited many times and an understanding of the fishery potential was gained by direct observation and also from competent fishermen engaged actively in fishing. After this preliminary survey, 20 different locations were selected for fish collection. Places with 4- 5 kilometers apart were selected for this purpose; care was taken to include stations of high level, mid level and low level

areas of the river. Experimental fishing operations were carried out in these areas in every months round the year 2011-2012. From each station sampling was carried out using appropriate gears of required mesh size; cast net and gill net were mainly used for collecting fishes. Scoop net was used in certain areas; employed handpicking method in some high level areas with rocky bottom. For the identification of the fishes Day^{1, 2, 3}, Talwar & Jhingran⁴, Jayaram^{5, 6, 7}, Jayaram & Dhas⁸ and Jayaram & Sanyal⁹ etc were used.

RESULTS AND DISCUSSION

Ninety seven species of fishes were collected from Manimala River. Cyprinids and Silurids preponderated catches in various parts (Table 1). Among cyprinids various species of *Puntius* came to first in the number of places they were present. Among Silurids, species of the genus *Mystus* outnumbered others in distribution. *Barilius bakeri*, *Dawkinsia filamentosa*, *Xenentodon cancila* and *Pseudotroplus maculatus* were collected from all 20 stations.

Pristolepis malabarica, the Guenther's percoid fish, was collected from almost all stations of the river. It is an interesting fact that *Pristolepis malabarica* was considered as a synonym of *Pristolepis marginata* of Mananthavady River of Wayanad. But

the present study proved^{10, 11} that *Pristolepis malabarica* is a distinct species and possess many differences including the number in anal spine and dorsal spine counts. Moreover a number of its specimens were collected from Mundakkayam, its type locality, from where it had been collected originally by Francis Day¹. During the field survey to locate *Pristolepis marginata* from its type locality, several specimens of it were collected from Mananthavady River of Wayanad, from where it was collected firstly by Jerdon¹². *Labeo dussumeri* was collected from all stations downstream of Kottayam district; in all the places above Vallakkadavu, it was found absent. *Tetradon travancoricus* described firstly from Pamba River¹³ was collected during the present study from Manackachira, a low level region of Manimala River. *Channa orientalis* was also found to be present only at Manackachira. *Bhavana australis* (Mundakkayam), *Pseudotroplus mitchelli* (Karuthavadasserikkara), *Mystus malabaricus* (Kottangal), *M. vittatus* (Thelapuzha), *Parambassis thomassi* (Manackachira), *Puntius vittatus* (Kuttoor), *Amblypharyngodon melettinus* (Komalom), *Systemus pinnauratus* and *Systemus chrysopoma* (Keezhvaipur) were collected from only one site of Manimala River.

Table-1: Distribution of fishes in different locations of Manimala River

Sl.No.	Fishes	Locations*																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	<i>Megalops cyprinoides</i>															+		+	+	+	+
2	<i>Anguilla b. bengalensis</i>	+				+		+				+	+		+						+
3	<i>Anguilla b. bicolor</i>	+				+				+	+									+	
4	<i>Dayella malabarica</i>										+		+				+		+	+	
5	<i>Salmostoma boopis</i>					+	+	+	+	+	+			+	+	+	+		+		
6	<i>Barilius bakeri</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
7	<i>Danio aequipinnatus</i>						+		+	+	+										
8	<i>Danio malabaricus</i>	+	+		+	+	+	+	+	+	+	+	+	+		+					
9	<i>Rasbora dandia</i>	+	+	+		+	+				+	+				+	+				
10	<i>Amblypharyngodon melettinus</i>																+				
11	<i>Amblypharyngodon microlepis</i>												+	+						+	
12	<i>Cyprinus c. communis</i>																	+		+	+
13	<i>Osteobrama bakeri</i>														+	+	+				+
14	<i>Puntius amphibius</i>										+		+					+			
15	<i>Puntius chola</i>											+						+	+		+
16	<i>Puntius dorsalis</i>													+		+					
17	<i>Puntius madhusoodani</i>																	+		+	
18	<i>Puntius mahecola</i>															+		+			
19	<i>Puntius parrah</i>																			+	+
20	<i>Puntius vittatus</i>										+		+							+	
21	<i>Puntius viridis</i>																				+
22	<i>Puntius nelson</i>																			+	+
23	<i>Puntius hamiltoni</i>																				+
24	<i>Pethia ticto</i>											+		+			+	+	+		
25	<i>Pethia punctatus</i>														+		+				
26	<i>Haludaria fasciatus</i>																+	+	+		+

57	<i>Wallago attu</i>							+	+			+	+	+	+	+				
58	<i>Pseudeutropius mitchelli</i>																+			
59	<i>Pangasinodon hypothalamus</i>															+		+		+
60	<i>Glyptothorax elankadensis</i>	+				+	+													
61	<i>Clarias dussumieri</i>											+		+	+		+	+	+	+
62	<i>Clarias gariepinus</i>															+	+			+
63	<i>Arius subrostratus</i>																			+
64	<i>Heteropneustes fossilis</i>											+	+						+	+
65	<i>Hyporhamphus limbatus</i>											+	+			+	+	+	+	+
66	<i>Hyporhamphus xanthopterus</i>																			+
67	<i>Xenentodon cancila</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
68	<i>Strongylura strongylura</i>																		+	
69	<i>Aplocheilus lineatus</i>							+	+	+			+				+	+		+
70	<i>Macrogathus guentheri</i>											+		+		+	+			+
71	<i>Macrogathus fasciatus</i>																+			
72	<i>Macrogathus albus</i>											+	+							
73	<i>Mastacembelus armatus</i>	+				+	+	+	+	+	+	+	+	+	+	+	+			+
74	<i>Ambassis commersoni</i>															+		+		
75	<i>Parambassis dayi</i>							+		+					+					
76	<i>Parambassis thomassi</i>																	+		
77	<i>Nandus nandus</i>											+	+				+	+	+	+
78	<i>Lates calcarifer</i>																			+
79	<i>Gerres filamentosus</i>																		+	
80	<i>Pristolepis malabaricus</i>	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+		+
81	<i>Pristolepis rubripinnis</i>																			+
82	<i>Pseudeutropius maculatus</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
83	<i>Etroplus suratensis</i>				+		+	+		+	+	+	+	+	+	+	+	+	+	+
84	<i>Oreochromis mossambica</i>						+	+									+			
85	<i>Osphronemus gorami</i>																	+		
86	<i>Glossogobius giuris</i>							+	+			+	+	+		+		+	+	+

CONCLUSION

Some of our freshwater fishes are widely distributed. But remaining fishes are found only in particular areas. Some freshwater fishes are residing in rapidly flowing shallow waters; some others in slowly flowing deep water bodies. Distribution of fishes shows many particularities related with altitude, bottom substratum, salinity and other associated features. Study on the distribution of fishes in the Manimala River revealed the disappearance of some fishes from the water body. *Puntius denisonii* was described firstly by Francis Day¹ from Mundakkayam of Manimala River. But the present study revealed that no *Puntius denisonii* occurs now in its type locality. It may be due to the over exploitation and contamination of the water body mainly by the local people living by the riverside at Puthenchantha and nearby areas. Population of *Hereopneustes fossilis* has declined greatly in the river; their distribution limited to certain locations only. *Channa gachua* which was once abundant in the river has now limited to 4- 5 stations. *Channa orientalis* was found in only one place. If proper conservation measures are not adopted, many fishes' presence may be disappeared in near future from this river.

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