



OCCURRENCE OF A REEF FISH, *PARAMONACANTHUS JAPONICUS* (TILESIIUS, 1809) IN VELLAR ESTUARY, SOUTHEAST COAST OF INDIA

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INTRODUCTION

Paramonacanthus japonicus is a coral reef fish belonging to the family Monacanthidae of class Actinopterygii and the order Tetraodontiformes. Even though it occurs in marine waters, its origin is originally from reef region (<http://www.zipcodezoo.com>). Some members of this family are used for aquarium trade also. There are approximately 22 species reported in this genus (<http://www.zipcodezoo.com>). Among the various group of this family, *P. japonicus* is found to be common in reef regions, lagoons and soft bottom areas of the sea. In the present study, this species was recorded for the first time as shoal in the Vellar estuary and there is no earlier report available for their distribution in Indian estuaries.

MATERIAL AND METHOD

In a routine survey of fishes made from the Vellar estuary revealed that a large number of *P. japonicus* (Fig. 1) was recorded. The fishes were found in the upper reaches of the Vellar estuary on 15th march, 2009 and further, no specimen was found in the subsequent days. The fish were collected by encircling the net and immediately after collection they were transported to the hatchery and accommodated into a glass tank filled with fresh and filtered estuarine water and artificial aeration was given. 20 nos. of fishes were collected, in which the largest fish measured 60mm in length, 45mm body depth and 6.85 gm in weight. The water sample was also collected from the fishing site and the physicochemical parameters were recorded. The salinity was 25ppt, Dissolved Oxygen 6mg/lit., temperature 28°C and pH 7.8.

SYSTEMATIC ACCOUNT

Order TETRAODONTIFORMES
 Family MONACANTHIDAE

Paramonacanthus japonicus (Tilesius 1809)

Description of the Animal

The body is laterally compressed. Head and the body covered with leathery skin and very dark and brown in color and have three dark distinct bands on the body in up ward direction. The caudal fin is wedge shaped and anal fin with rudimentary spines with 2-3 dark brown vertical bands. The first dorsal fin has one strong spine with invert sensation of 8-10 small spines. The second dorsal and anal fins are soft rays which commence from opposite and extending almost to caudal fin base. The snout is piggy shaped and the eyes are distinct which is situated just below the first dorsal spine. Gill slits have very small opening. Upper jaw has distinct three teeth. The color of the fish was observed to change during rearing in captive condition (Fig. 2). Some fishes become fully dark black and faint, if any object come together. This is the peculiar adaptation of these fishes and because of this, the aquarist prefer these fishes.

Fin Formula: D1-I; D2-26; P-12-13; C-12; A-27-29.

Morphometric characters :

Characters	Measurements (in cm)	Characters	Measurements (in cm)
TL	63	SL	49
1 st DFH	21	2 nd DFH	0.7
PcL	0.7	AFL	0.6
T	14	PcFB	0.3
2 nd DFB	1.7	AFB	1.6
PDD	1.9	HL	1.9
ED	0.4		

Table : 1. TL : Total length, 1st DFH : 1st Dorsal fin height, PCL : Pectoral fin length, T : Tail length, 2nd DFB : 2nd Dorsal fin base, HD : Pre dorsal distance, ED : Eye diameter, SL : Standard length, 2nd DFH : 2nd Dorsal fin height, AFL : Anal fin length, PFB : Pectoral fin base, AFB : Anal fin base HL : Head length.

Distribution : The fishes are distributed widely in Bay of Bengal, East and west China, Great Barrier Reef, Gulf of Thailand, Hong Kong, Indian Ocean, Indonesian Sea, Indo-West Pacific, Southern Japan and North West Australia to Papua New Guinea, Malaysia and Taiwan and other parts of the world (<http://www.zipcodezoo.com>).

Remarks : Monacanthidae fishes are very common in coastal and reef waters of Indian and Western Pacific Ocean. *Paramonacanthus japonicus* was reported first time from the Gulf of Mannar region of Indian waters by Senthil Kumar (2001). This species inhabits the vicinity of reef environment, hide themselves among

various plants or attached with animals (Mohasin and Ambak 1996). It feeds on wide variety of benthic invertebrates, corals or zooplankton (<http://www.fishbase.com>; Masuda et al., 1984). Machavanpillai (1971) reported in his study, on the occurrence of juvenile *P. choirocephalus* in the Gulf of Mannar area especially in the reef region. In another study conducted by Masuda et al. (1984) reported that the juveniles some times move towards the seaweed and sea grass beds in shallow water region. The moderate salinity of the estuarine water and the abundance of coastal vegetation, particularly mangrove may be the possible regions of this fish into the estuary.

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Fig. 1. *Paramonacanthus japonicus*.



Fig. 2. Color changing behavior of fish *Paramonacanthus japonicus* in the rearing tank.