



ON THE OCCURRENCE OF CRIMSON SNAPPER, *LUTJANUS ERYTHROPTERUS* (PERCIFORMES: LUTJANIDAE) FROM WEST BENGAL, INDIA

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INTRODUCTION

The snappers (Perciformes: Lutjanidae) are important food fishes throughout its range of occurrence including India. Their flesh is of delicate taste and highly esteemed, but some species have been reported to cause ciguatera poisoning. These fishes usually found near the bottom in tropical and subtropical seas from shallow water to depths of about 550 m. The snappers comprise 17 genera with about 106 species worldwide (Nelson, 2006; Moura and Lindeman, 2007). Indian species of snappers were last reviewed by Talwar and Kacker (1984), wherein Caesionids were erroneously grouped together under family Lutjanidae. Subsequently Talwar (1991) stated that the snappers in Indian water are represented by 9 genera and 41 species. Considerable developments in the taxonomy of snappers have been put forth worldwide (Allen, 1985; Randall *et al.*, 1987; Allen, 1995) over the period, with at least 4 more species including *Lutjanus bouton* (Lacepede) (Dhandapani and Mishra, 1993) added to the list of Lutjanids of India.

A perusal of literature on snappers of West Bengal reveals that Misra (1962) has reported occurrence of 8 species of snappers, *viz.*, *Lutjanus argentimaculatus* (Forsskal), *L. bengalensis* (Bloch), *L. johnii* (Bloch), *L. russelli* (Bleeker) (now *L. indicus* Allen *et al.*), *L. kasmira* (Forsskal), *L. rivulatus* (Cuvier), *L. sanguineus* (Cuvier) and *L. vaigiensis* (Quoy & Gaimard) (= *L. fulvus*). However, Talwar *et al.*, (1992) observed that the reports of *L. kasmira*, *L.*

rivulatus, *L. sanguineus* and *L. vaigiensis* from West Bengal by Misra (1962) are without material confirmation and, therefore erroneous, whereas doubtfully included *L. carponotatus* (Richardson) and *L. guilcheri* Fourmanoir. Reports of *Aprion virescens* Valenciennes and *Lutjanus fulviflamma* (Forsskal) by Goswami (1992) also need to be verified. *Lutjanus holocentrum* (Bleeker) in Goswami (1992) is a wrong combination for *Priacanthus holocentrum* Bleeker (= *Priacanthus tayenus* Richardson) in the family Priacanthidae. Supporting the observations of Talwar *et al.*, (1992), Chatterjee *et al* (2000) recorded only first four species from Digha coast. But Das *et al.*, (2007) listed all these species except *A. virescens* and added two more names, *viz.*, *L. lutjanus* (Ruppell) and *L. malabaricus* (Bloch and Schneider) to the list.

It has been well observed that adults of some species of the genus *Lutjanus* (at least 10 species) show different colour pattern in contrast with their colouration in juvenile stages. Barman *et al.* (2004) studied the morphological changes during the development of the juveniles of marine fish species occurring in West Bengal. However, occurrence of *Lutjanus erythropterus* was also not observed during that study. On the course of the study of the fishes belonging to Lutjanidae from West Bengal, the authors happened to collect 5 juvenile specimens of the Crimson Snapper during a recent visit to Digha Mohana, West Bengal. On critical examination the identity of these specimens revealed to be *Lutjanus erythropterus* Bloch that can be well distinguished from juveniles of *L. malabaricus*, a similar species.

A brief description of the species with its geographical distribution, maximum size, Interest to fisheries and habitat and biology and its affinity with its related species is discussed below to note its first record from West Bengal coast.

***Lutjanus erythropterus* Bloch, 1790
(Crimson snapper)**

1790. *Lutjanus erythropterus* Bloch, *Naturl. ausland. Fische.*, 4: 115 (Japan).

1985. *Lutjanus erythropterus*, Allen, *FAO Fish. Synop.*, (125) 6: 78-79.

Materials examined : 5 ex., 105 to 144 mm SL. Regd. No.: ZSI F-10618; Locality: Digha Mohana, West Bengal, India; Collected by R.P. Barman and party; on 26.ii.2012.

Diagnostic features: D X-XI, 12-14; A III, 9; P. 15 to 17; V I, 5; LL 52-53; Gr. 6-7 + 12-13. Body moderately elongate to deep and flattened. Body depth 2.21 to 2.38 and head length 2.57 to 2.61 times in standard length. Head profile convex in adults. Eye diameter 3.62 to 3.70 times in head length. Interorbital space strongly convex, 4.55 to 5.0 times in head length. Margins of preopercle finely serrate. Preopercular notch and knob poorly developed. Preorbital region between mouth and eyes without scales but scale present on cheek and preopercle. Mouth relatively small, length of upper jaw smaller than the length between last dorsal and anal fins rays. Teeth in both jaws in bands with an outer row of stronger teeth, 2 or 4 moderate canines in front of upper

jaw. Teeth on vomer in a triangular patch without a median posterior extension. Caudal fin truncate or lightly emarginate. Hind part of dorsal and anal fins almost rounded. Longitudinal scale rows above and below lateral line oblique. Soft dorsal and anal fins with a scaly sheath.

Body crimson red coloured. Juveniles with a broad, oblique, black band extending from snout to origin of dorsal fin. A large black blotch, not touching ventral profile, at base of caudal fin with a white stripe extending from dorsal profile of caudal peduncle to just below lateral line anterior to the blotch.

Geographical distribution: Widely distributed in the Indo-West Pacific: from the Gulf of Oman, through India to Western Pacific, north to southern Japan, south to northern Australia.

Maximum size: It attains 60 cm, but usually found up to 45 cm in total length.

Interest to fisheries: It is an excellent food fish, generally found along its entire range of occurrence but in small quantities.

Habitat and biology: This species inhabits shallow coastal waters to about 60 m depth. It feeds on bottom living invertebrates and fish.

DISCUSSION

The Crimson Snapper, *L. erythropterus*, is similar to Malabar red-snapper, *L. malabaricus* in several accounts including the colour pattern (both the species are red in colour) and appearance of juveniles. The juvenile specimens



Fig. : *Lutjanus erythropterus* Bloch (Juvenile)

of both the species have two common features: one is dark vertical band on the caudal peduncle and another a dark band arising from snout to origin of the spinous part of dorsal fin passing through the eyes. The dark band on the caudal peduncle extends from dorsal profile to below lateral line, but not touching the ventral profile, and a white border anterior to it from dorsal profile to just below lateral line in *L. erythropterus* versus the dark band extends throughout the caudal peduncle from upper to lower parts on sides and have white borders on both the anterior and posterior of it in *L. malabaricus*.

L. erythropterus may be further distinguished from *L. malabaricus* by the possession of the following combination of characters: (i) maxilla length distinctly less than the distance between bases of last rays of dorsal anal fins (versus almost equal), (ii) interorbital width less than 5 times in head length (versus more than 5 times) in larger specimens, (iii) some longitudinal scale rows below lateral line rising obliquely in posterior

direction toward dorsal surface. In *L. malabaricus* longitudinal scale rows below lateral line horizontal although some scale rows may be oblique in juveniles (Allen, 1985).

It is possible that juveniles of *L. erythropterus* may sometimes be mistaken for those of *L. malabaricus* due to the similarities stated above. At this juncture, occurrence of *L. malabaricus* along West Bengal coast as stated in Das *et al* (2007) needs further verification. Owing to having similarities in both juvenile and adult stages in colouration and morphology, the occurrence of this species along West Bengal coast might have evaded observation of earlier workers, and therefore herein it is reported as first record from West Bengal.

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