



Plectropomus leopardus (Lacepède, 1802) (Pisces: Serranidae), an addition to the Indian ichthyofauna

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Original Article

Abstract

Leopard coral grouper *Plectropomus leopardus* (Lacepède, 1802) is being reported from Indian waters for the first time, its earlier record being from the western Pacific, from southern Japan to Australia (Queensland and Western Australia) and eastward to the Caroline Islands and Fiji, Hongkong, Vietnam, Philippines, Indonesia, Palau Islands, Papua New Guinea, New Caledonia and Tonga. Body measurements are compared with specimens from other locations.

Keywords: *Plectropomus leopardus*, Grouper, new record, Indian waters.

Introduction

In describing serranid species, *Plectropomus leopardus* (Lacepède, 1802) Heemstra and Randall (1993), Randall *et al.* (2003) and Forese and Pauly in Fishbase (2009) mention the geographical distribution as western Pacific, from southern Japan to Australia (Queensland and Western Australia) and eastward to the Caroline Islands and Fiji, Hongkong, Vietnam, Philippines, Indonesia, Palau Islands, Papua New Guinea, New Caledonia and Tonga. This species is not so far known from waters of Indian sub-continent.

Material and methods

In the course of taxonomic study on serranid fishes from

Visakhapatnam, middle east coast of India, we have come across a specimen of *Plectropomus leopardus* which agree with the brief description and figure of the specimen in Cuvier in Cuv. and Val., (1828), Fowler and Bean (1930), Katayama (1960), Fischer and Bianchi (1984) and Heemstra and Randall (1993). This is commonly called as 'leopard coral grouper'. *Plectropomus leopardus* was not so far included to date among serranid species reported from Visakhapatnam (Sujatha, 2004). This is the first occurrence of the leopard coral grouper in Indian waters.

This species is rare in the catches at Visakhapatnam, only one species was encountered on 10th January 2011 in trawl catches. Body measurements and meristic data were taken in fresh condition. Standard length (SL) was measured from the tip of the snout to caudal base. Colour was noted in fresh condition. Body measurements and meristic data are given in Table 1 and 2 to allow comparison with specimens described from other localities.

Results and discussion

Plectropomus leopardus (Lacepède, 1802)

476 mm TL specimen; Dorsal VIII, 11; Anal III, 8; Pectoral 16; Lateral line scales 98; Lateral line series 118; Lateral transverse

Table 1: Meristic characters of *Plectropomus leopardus* as compiled by different authors.

Authors	Dorsal	Anal	Pectoral	Caudal	Ventral	LI scales	LI series	Ltrs	Gillrakers
Cuvier in Cuv. and Val. (1828)	8/11	2/8	14	15	1/5	-	-	-	-
Fowler and Bean (1930)	VIII, 11-12	III, I, 7,1	-	-	-	73-81	108-115	20-21/34-44	6+10/11
Katayama (1960)	VIII, 11	III, 8	16	-	-	81-83	117-120	20-22/39	8-9+3-14 =21-23
Fischer and Bianchi (1984)	VIII, 10-11	III, 8	15-17	-	-	-	-	-	8-10
Heemstra and Randall (1993)	VII / VIII, 10-12	III,8	15-17	-	-	89-99	-	-	6-10
Present study	VIII, 11	III,8	16	16	1,5	98	118	18/49	9+1+10

Table 2: Comparison of morphometric data of *Plectropomus leopardus* from different regions.

Author / Morphometric characters	Present data	Heemstra and Randall (1993)	Fischer and Bianchi (1984)	Katayama (1960)	Fowler and Bean (1930)
Standard length (cm)	38.7	12-50	-	-	-
Body depth/SL	3.3	3.0-3.6	3.0-3.6	2.80-3.45	-
Head length/SL	2.9	-	-	2.93-3.04	3 1/8 - 3 1/3
Dorsal height/HL	3.7	3.2-4.2	-	3.50-4.22	2 4/5 - 3
Dorsal length/HL	2.9	2.2-2.7	-	2.04-2.30	-
Pectoral length/HL	1.9	1.9-2.2	-	1.78-2.05	-
Pelvic length/HL	2.1	-	-	1.67-1.86	-

scale 18/49; Gill rakers 9+1+10=20 (including rudiments).

Body measurements: As percentage of standard length: Total length 122.9; body depth 29.9; head length 33.8; predorsal distance 39.5; prepectoral distance 32.8; prepelvic distance 33.3; preanal distance 65.1; dorsal base 45.9; anal base 16.0; first dorsal spine height 4.1; third spine height 9.0; eighth spine height 5.9; soft dorsal height 11.3; pectoral length 17.5; pelvic spine height 6.9; pelvic length 15.5; anal spine height 6.4; soft anal height 13.6.

As percentage of head length: Head depth 6.7; head width 51.1; preorbital 37.4; postorbital 54.9; upper jaw 44.2; lower jaw 35.1; snout length 19.8; eye diameter 12.2; interorbital width 22.1; maxillary width 13.7.

Body elongated, slightly compressed and robust. Dorsal profile more convex than ventral upto anal origin and there is a small groove present in front of interorbital space. Maximum depth at dorsal fin origin. Mouth large, oblique, lower jaw projecting upward. Maxillary long with a step at ventral edge reaches below the middle of the orbit, its distal width slightly more than eye diameter and less than inter orbital width. Inter orbital space flat and edges rounded without scales.

Two nostrils small, rounded, close together. Anterior nostrils slightly smaller than posterior with a flap along their posterior margin. Three rows of teeth on upper jaw, outer row enlarged and pointed, inner two rows of teeth small and minute; two pointed teeth on either side of symphysis, behind each tooth a patch of longer, feeble teeth present. Two rows of teeth on lower jaw, equal in size, small compare to upper jaw; mid lateral part of jaw with four large canine tooth and two enlarged canine on lateral side on jaw. An arrow shaped patch of teeth on vomer, narrow band teeth on palatines. Minute teeth on roof and floor of pharynx. Tongue smooth. Preopercle rounded, the lower edge with four spines, three spines on upper margin. Inter and sub opercle smooth. Operculum with three spines, upper and lower spine covered with skin and scales; middle one pointed, situated close to lower spine. A pointed opercular flap present beyond the middle operculum spine. Maxillary scaled. Pelvic, first and second anal spines embedded with skin. Head and body covered with cycloid scales.

Colour: Body reddish brown dorsally and orange red ventrally upto caudal fin base with numerous blue colour spots. The blue spots less than orbital diameter. Blue spots present on head, inter orbital space, snout, maxilla, lower jaw and

opercle. Two dark colour blue spots present, one between first and second opercle spine and the other between second and third opercle spine. Blue spots present on dorsal, anal and pelvic fins. Blue spots present only at the base of pectoral fin. Caudal fin with small blue spots, the spots at the edges



Fig1. *Plectropomus leopardus* from Visakhapatnam

are very small. A dark brownish band present behind chin to pelvic origin (Fig.1).

The specimen description agrees with the description of Katayama (1960) except in subopercle and interopercle serrations. This species differs from other species of the genus *Plectropomus* in having four spines at lower margin of preopercle, presence of blue spots on dorsal, anal, caudal and pelvic fins and central gill raker longer than gill filament.

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References

- Cuvier, G. and A. Valenciennes. 1828. Histoire Naturelle des Poissons. 2. F.G. Levrault, Paris. 490 pp.
- Fischer, W. and G. Bianchi. 1984. FAO species identification sheets for fishery purposes. Western Indian Ocean (Fishing area. 1). Food and Agricultural Organization of the United Nations., Rome.
- Forese, R. and D. Pauly. Editors. 2009. *FishBase*. World Wide Web electronic Publication. www.fishbase.org.
- Fowler, H.W. and B.A. Bean. 1930. Contribution to the biology of the Philippine Archipelago and adjacent regions. *Bull. U.S. Nat. Mus.*, 100 (10): 334.
- Heemstra, P.C. and J.E. Randall, 1993. FAO Species Catalogue. Groupers of the world (Family Serranidae, Subfamily Epinephelinae). *An Annotated and Illustrated Catalogue of the grouper, rockcod, hind, coral grouper and detail species known to date*, 16: 382.
- Katayama, M. 1960. Fauna Japonica Serranidae (Pisces): Tokyo New Service, 189 pp.
- Randall, J.E., J.T. Williams, D.G. Smith, M. Kulbicki, G.M. Tham, P. Labrosse, M. Kronen, E. Clua and B.S. Mann. 2003. Checklist of the shore and epipelagic fishes of Tonga. *Atoll Res. Bull.*, Nos. 497-508.
- Sujatha, K. 2004. Grouper off Visakhapatnam, northeast coast of India. *J. Mar. Biol. Ass. India.*, 46(1) : 87-92.