

# A note on the eight bar grouper, *Hyporthodus octofasciatus* (Griffin, 1926) (Pisces: Serranidae) from Indian waters

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## Abstract

A single specimen of a serranid fish *Hyporthodus octofasciatus* of length 213 mm TL was collected during a commercial trawl operation off the South western coast of India, during March 2011 from a depth of 200 m. The present paper provides description, morphometric and meristic features of specimen and comparative account with earlier descriptions.

**Keywords:** Eight bar grouper, *Hyporthodus octofasciatus*, Indian waters

## Introduction

*Hyporthodus octofasciatus* (Griffin, 1926) commonly known as eight bar grouper is said to be distributed in the Indo-West Pacific region from Somalia and South Africa to Australia and New Zealand except for Japan, China and Korea and habitats in rocky reefs at depth of 100 to 400 m (Heemstra and Randall, 1993; Froese and Pauly, 2010). Even though the fish is said to be distributed in Indian waters, there has been no clear records or counts of specimens. Since the present sample has been collected from the south-west coast of India, morphometric counts and description is given in the present communication.

## Material and methods

The present specimen (Fig. 1) was collected from a commercial trawl operation in the Arabian Sea off Kollam (Fig.2) on the south western coast of India in March 2011 from a depth of about 200 m. Measurements were made from the fresh specimen collected with Mitutayo Digital caliper to the nearest millimeter (0.1 accuracy). The specimen has been deposited in the National Biodiversity Referral Museum of CMFRI (GB.31.139.30.1).

## Results and discussion

### *Hyporthodus octofasciatus* (Griffin, 1926)

*Epinephelus octofasciatus* Griffin, 1926. Descriptions of New Zealand Fishes. *Trans. N. Zealand Inst.*, 56:540, Pl. 95 (Arid Island).

*Epinephelus compressus* Postel, Fourmanoir and Guézé, 1963. Serranidés de la Réunion. *Mém. de l'Inst. français d'Afrique Noire No.*, 68:364, fig. 8 (type locality: Réunion).

**Distinctive characters:** *H. octofasciatus* is readily identified by the eight dark bars on the body-one on nape, five below dorsal fin and last two at caudal region. The colour of the

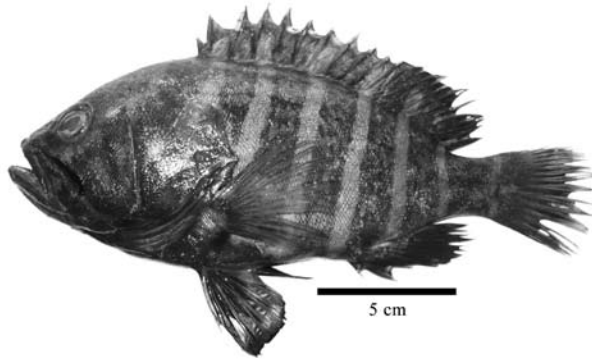


Fig. 1. *Hyporthodus octofasciatus*

specimen fades to brown in formaline preservation.

**Description:** D XI, 14; A III, 8; P 16; V I, 5; LI 66-68; Gr 7+14.

**Body proportions as % SL:** Head length 45.85; head width 37.12; head depth 28.07; body depth 40.94; snout length 14.16; eye diameter 8.62; inter orbital 8.05; pre orbital length 8.30; post orbital length 28.13; lower jaw length 14.78; upper jaw length 19.17; pre dorsal length 42.21; pre pelvic length 43.86; pre pectoral length 42.29; pre anal length 72.26; depth of caudal peduncle 11.65, length of caudal peduncle 36.89, length of fourth dorsal spine 15.79. Fin length- pectoral 26.29; pelvic 23.53; dorsal 68.71; anal 25.75; caudal 26.27. Fin base-pectoral 12.59; pelvic 3.66; dorsal 55.68; anal 16.59; caudal 13.76.

**Body proportions as % HL:** Head width 80.95; head depth 61.22; snout length 30.88; eye diameter 18.81; inter orbital 17.56; pre orbital length 18.10; post orbital length 61.32;

lower jaw length 32.24; upper jaw length 45.65.

Body deep, depth 2.4 times in SL; head length 2.1 times in SL; dorsal profile of the head convex; mouth big, terminal to slightly superior; maxilla reaches to below rear half of eye; a fleshy protuberance on front of upper lip; eyes prominent. Snout naked, its length 3.2 times in head length. Pre-operculum serrated, with 3 small spines at lower edge; serrations at angle slightly enlarged; operculum with 2 undeveloped spines; five to six branchiostegal rays below operculum. Single dorsal fin, fourth dorsal spine longest, 2.9 times in head length; first dorsal spine 2.4 times in fourth spine; pectoral, pelvic and anal fins 3.8, 4.2 and 3.8 times in SL respectively. Caudal peduncle length 1.9 times in head length; caudal fin rounded. Scales on body ctenoid.

**Colour:** Body greyish black with eight broad dark bands; one on nape, five below dorsal fin on mid-body and two on caudal peduncle; second to fifth band is extended up to half of the dorsal fin from second to tenth dorsal fin; sixth and seventh band extends to dorsal fin rays and anal fin; eighth bar at the tip of the caudal peduncle. Pelvic fin and free end of dorsal and anal soft rays brown. Caudal fin greyish, posterior margin of caudal fin narrow white.

Craig and Hastings (2007) proposed a revised classification of the tribe Epinephelini and recognized eleven genera in family Serranidae. Genus *Hyporthodus* is resurrected for eleven species of deep bodied groupers. *Hyporthodus octofasciatus* is the only species of this genus which is reported from Indian waters; reports available are only in the distribution map of the species from Lakshadweep (Heemstra and Randall, 1993). *H. octofasciatus* is listed as Data Deficient because of a paucity of fisheries data and population information (IUCN, 2010). Three species which are similar to *H. octofasciatus*

Table 1: Differences and similarities between four species

Characters	<i>H. octofasciatus</i>	<i>H. septemfasciatus</i>	<i>H. mystacinus</i>	<i>H. ergastularius</i>
Body depth	Deep body	Less body	Deep body	Deep body
Gill rakers	(7-9) + (15-17)	(7-9) + (15-17)	(8-10) + (14-16)	(7-9) + (14-15)
Lateral line scales	65-71	63-70	58-69	63-70
Pelvic fin	Sub equal or longer than pectoral fin	Shorter than pectoral fin	Shorter than pectoral fin	Shorter than pectoral fin
Caudal fin	Rounded	Rounded	Rounded	Truncate or emarginated
Dark bars on body	Eight	Seven or Eight	Eight or Nine	Seven
Pale interspace between bars in body	All equal in size	Space between fifth and sixth bars narrow than others	Width of dark bars equal or less than the width of pale interspaces.	Pale interspace between second, third and fourth, fifth bars narrow than third, fourth and fifth, sixth.
Interspace between bars below soft dorsal	Two	Three	Two	Two



Fig. 2. Map showing collection locality

are *H. septemfasciatus*, *H. mystacinus* and *H. ergastularius* (Table 1). *H. septemfasciatus* differs from *H. octofasciatus* in having comparatively lesser body depth and slender caudal peduncle; six dark bars below dorsal fin and three interspaces between bars below soft dorsal fin (5 dark bars below dorsal fin and 2 interspaces between bars below soft dorsal fin in *H. octofasciatus*). *E. mystacinus* differs by a shorter pelvic fin than pectoral fin and narrow dark bar on the body. *H. ergastularius* is readily distinguished from *H. octofasciatus* by the truncate to slightly emarginated caudal fin (rounded in *H. octofasciatus*) and broad pale margins of the fins; the white interspaces between second, third and fourth, fifth bars are narrow than third, fourth and fifth, sixth bars (all the spaces are in same size in *H. octofasciatus*) (Heemstra and Randall, 1993; Randall et al., 1993). The meristic and morphometric measurements of the present specimen matches well with that of Heemstra and Randall (1993) (Table 2). Since no detailed account of this specimen is available from Indian waters, the occurrence of this fish can be taken as a new record from Indian waters.

Table 2: Comparison of present specimen with FAO specimen.

	Heemstra and Randall, 1993	Present specimen
Dorsal fin	XI, 14 or 15	XI, 14
Anal fin	III, 9	III, 8
Pectoral fin	18 or 19	16
Lateral line	65-71	66
Gill rakers	7-9 + 15-17	7 + 14
Body depth in SL	2.2-2.7	2.4
Head length in SL	2.4-2.5	2.1
Longest dorsal spine in HL	2.5-2.9	2.9

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