

Midnight Snapper *Macolor macularis* (Perciformes: Lutjanidae)—a new record of snapper from Indian waters

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The Midnight Snapper Macolor macularis, is reported for the first time from the Indian exclusive economic zone based on the two specimens collected from Cochin Fisheries Harbour, Kerala on the south-west coast of India on December 2012 and October 2013. Morphometric and meristic data of the specimens are presented and discussed.

Keywords: family Lutjanidae, Midnight Snapper, south-west coast of India

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INTRODUCTION

The family Lutjanidae (snappers) includes 109 species in 17 genera which are mainly confined to tropical and subtropical marine waters, with few occurring in estuaries (Allen, 1985; Eschmeyer, 2013). The genus *Macolor* Bleeker is represented by two valid species: *M. niger* Forsskål, 1775 (black and white snapper) and *M. macularis* Fowler, 1931 (Midnight Snapper). *Macolor macularis* inhabits mostly coral reef areas and is widely distributed in the Indo-Pacific (Anderson & Allen, 2001). *Macolor macularis* is widely distributed on the coasts of the western Pacific to Western Australia, north Australia to Taiwan (Kishimoto *et al.*, 1987; Eschmeyer, 2013), Fiji (Allen & Steene, 1988), Madagascar (Webster & McMahon, 2002) and the Maldives (Randall & Anderson, 1993) in the western Indian Ocean. Only *M. niger* has been reported off Indian waters (Jones, 1969; Allen, 1985). The report of two specimens of *M. macularis* on the south-western coast of India represents a considerable range extension from its previously known localities.

MATERIALS AND METHODS

Two specimens of *M. macularis* (Figure 1) of standard length (SL) 312.19 mm and 266.56 mm were purchased from the Cochin Fisheries Harbour on the south-west coast of India in December 2012 and October 2013. The fish were caught by gill net in a depth of 50–80 m off the Kerala coast (9°29'57"N 74°48'05"E and 9°51'05"N 75°26'23"E) (Figure 2). Morphometric measurements were taken to the nearest millimetre using digital calipers according to the method of Hubbs & Lagler (1958).

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RESULTS

SYSTEMATICS

Order PERCIFORMES

Family LUTJANIDAE

Genus *Macolor* Bleeker, 1860

Macolor macularis Fowler, 1931

MATERIAL EXAMINED

Two specimens of *M. macularis* Fowler, 1931 of SL 312.19 mm and 266.56 mm were collected by gill netters operating at 50 m depth off Cochin. The specimens are deposited at the National Marine Biodiversity Referral Museum at the Central Marine Fisheries Research Institute, Kochi, India with the Accession No. GB. 31.88.8.5.

DESCRIPTION

Dorsal fin X, 13–14; anal fin III, 10–11; pectoral fin rays 16–17; lateral line scales 54–55; gill rakers (39–45) + (74–76). Dorsal profile convex, body deep with a deep notch in operculum, elongated pectoral fin and emarginate caudal fin. Colour uniformly black with a yellow iris.

Body deep, laterally compressed depth 1.8–2.1 in SL; head length 2–2.4 in SL; dorsal profile of head convex; snout blunt; eyes big, high on head, diameter 4.3–5.1 in head length (HL); mouth large, terminal, with a row of conical teeth in jaws; lower jaw protruding slightly when mouth closed; maxilla ends on a vertical through, middle of eye; preoperculum serrated with a deep notch just above lower edge; operculum with a flat inter opercular spine. Dorsal-fin spine sharp, slender, fin distinctly notched; 4th–5th dorsal spine longest, length 2.8–3.7 in HL; posterior portion of soft dorsal and anal fin long, pointed; longest dorsal-fin spine 1.6–1.9 in longest dorsal-fin ray; longest anal-fin spine 1.9–2.2 in longest dorsal-fin ray. Pectoral fin long, falcate, length 2.3–2.5 in SL; pelvic fin 1.7–1.9 in pectoral fin;



Fig. 1. *Macolor macularis*: total length, 361.88 mm.

caudal peduncle moderately deep, depth 2.8–3.3 in HL. Caudal fin emarginate.

brown to black with small white spots; pectoral and pelvic fins darker.

COLOUR

Body brownish black above with faint white spots, yellowish below; head with bluish irregular wavy lines, lines becoming wider in operculum region; dorsal, anal and caudal fins dark

DISCUSSION

Forsskål (1775) described *Sciaena nigra* based on an adult specimen from Djidda, Red Sea; that species was

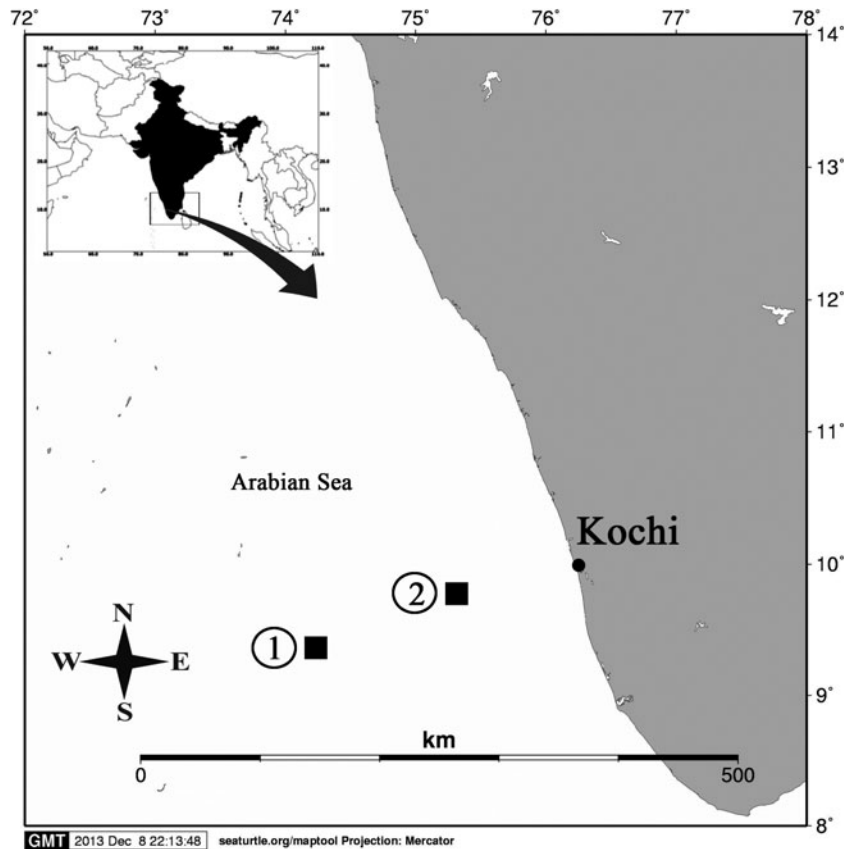


Fig. 2. Map showing the capture locations of *Macolor macularis* (black boxes).

Table 1. Comparison of morphometric characters of *Macolor macularis* from Kochi with previous records (Kishimoto *et al.*, 1987).

Parameters	(Kishimoto <i>et al.</i> , 1987) locality: Japan		Present specimens locality: Kochi, India (N = 2)
	Neotype	Non-types (N = 11)	
Standard length in mm	218	102–430	266.56–312.19
In % of total length:			
Body depth	2.84	2.81–2.99	2.27–2.88
Head length	3.38	3.25–3.67	2.48–3.29
Pectoral-fin length	3.43	3.16–3.59	2.87–3.35
Pelvic-fin length	4.66	2.89–5.51	5.44–5.82
In % of standard length:			
Body depth	2.17	2.18–2.38	1.80–2.13
Head length	2.59	2.53–2.83	2–2.43
Pectoral-fin length	2.63	2.43–2.81	2.27–2.47
Pelvic-fin length	3.57	2.22–4.56	4.30
Predorsal length	2.30	2.27–2.62	1.72–2.12
Dorsal-fin base	2.05	2.00–2.21	1.60–2.03
Anal-fin base	5.57	4.76–6.04	4.40–5.26
In% of head length:			
Postorbital length	2.16	1.89–2.28	2.06–2.10
Snout length	2.86	2.46–3.54	4.50–4.91
Interorbital width	2.71	2.59–2.95	3.25–3.29
Orbit diameter	3.63	3.35–5.06	4.53–5.23
Upper-jaw length	2.14	2.08–2.78	2.14–2.52
Caudal-peduncle length	1.92	1.58–2.09	3.29–3.33
Caudal-peduncle depth	2.64	2.59–3.23	2.78–3.25
Longest dorsal-spine length	2.31	1.63–3.03	2.80–3.67
Penultimate dorsal-spine length	2.60	2.52–3.42	2.68–3.23
Longest dorsal-soft ray length	1.54	1.07–1.74	1.80–1.92
Longest anal-spine length	2.32	2.16–3.51	3.45–4.23
Longest anal-soft ray length	1.48	1.02–1.79	1.87–2.03
Pectoral-fin length	1.02	0.91–1.04	1.02–1.16
Pelvic-fin length	1.38	0.79–1.70	1.77–2.19
Caudal-fin length	1.12	1.03–1.27	1.6–1.74
Pectoral-fin length/pelvic-fin length	1.36	0.80–1.66	1.73–1.88
D.s.r.l./D.sp.l	1.50	1.53–1.95	1.55–1.82
A.s.r.l./A.sp.l	1.68	1.39–2.11	1.7–2.26
D.sp.l./A.sp.l	1.08	1.01–1.32	1.2–1.55
D.s.r.l*/A.s.r.l*	0.96	0.96–1.14	0.97–1.12

D.s.r.l., longest dorsal-soft ray length; D.sp.l., longest dorsal-spine length; A.s.r.l., longest anal-soft ray length; A.sp.l., longest anal-spine length.

subsequently placed in *Macolor* by Fowler (1931). *Macolor macularis* was described on the basis of two distinct species of the genus collected from the South China Sea and Japanese waters. The holotype of *M. macularis* was presumed to be lost, so a 306 mm SL paratype was designated as neotype and redescribed in detail (Kishimoto *et al.*, 1987). The meristic and morphometric characteristics of the specimens agree with that of neotype and other non-types (Table 1). However, *M. niger*, which is the only other species in the genus, differs from *M. macularis* by having 87–107 gill rakers (110–122 in *M. macularis*); anal fin mostly III, 11, rarely III, 10 (mostly III, 10); lateral line scale ranges from 49–58 (vs 50–55). Dorsal fin is slightly notched in *M. niger* (deeply notched in *M. macularis*); rounded, short pelvic fin (vs pointed, long pelvic fin, mostly reaches the anal-fin origin). The colour pattern of adult *M. niger* and *M. macularis* after death is very similar, both having dark coloration. However, freshly collected specimens of *M. niger* can be distinguished by having a uniform brown black head with a reticulate pattern of blue lines

(*M. macularis* has a yellowish-brown head with blue round spots and short lines).

Macolor macularis has been recorded from different parts of the world, but not from India's exclusive economic zone. This is the first report from these waters.

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