

## Short Communication

# NEW RECORDS OF FOUR SQUIRRELFISHES (BERYCIFORMES : HOLOCENTRIDAE) FROM THE COASTAL WATERS OF WEST BENGAL, INDIA

### INTRODUCTION

The fishes of family Holocentridae (Order Berciformes) are characterized by having large eyes, brilliant colouration with red predominating and spiny squamation (Shimizu & Yamakawa, 1979). The family represented by 8 genera and 65 species throughout the world (Nelson, 2006), however, 19 species from 4 genera were reported so far in Indian waters (Talwar, 1991). The two subfamilies of this group, Holocentrinae (squirrelfishes) and Myripristinae (soldierfishes) are distributed worldwide from tropical to warm temperate waters in shallow water on coral reefs or rocky bottom. The family is well known for sound production and nocturnal habit, hide in caves during day and come out at night for feeding. These fishes are very hardy in aquariums and attractive for the bright colouration.

Various studies have been carried out to investigate the marine ichthyofaunal diversity of West Bengal coast (Manna and Goswami, 1985; Goswami, 1992; Talwar *et al.*, 1992; Chatterjee *et al.*, 2000; Das *et al.*, 2007;). The earlier works reported only single species from the family Holocentridae *i.e.* *Holocentrus rubra* (Forsskal, 1775) reported by Das *et al.*, 2007, which is presently valid as *Sargocentron rubrum* (Forsskal, 1775). During the survey of marine ornamental fauna around Digha coastal waters the authors have come across some examples of Holocentroid fishes which were further identified in to four species viz. *Myripristis botche* (Cuvier, 1829), *Myripristis murdjan* (Forsskal, 1775), *Ostichthys acanthorhinus* Randall, Shimizu & Yamakawa, 1982 and *Sargocentron praslin* (Lacepede,

1802) which were not reported from the coast. This paper describes four species of fishes from family Holocentridae which are new addition to the ichthyofaunal resource of West Bengal.

### MATERIALS AND METHODS

All the specimens were collected from fish landing centre Digha Mohona (21°37.843'N, 87°32.827'E). The detail morphometric measurements were taken in the field and the specimens were preserved in 10% formalin after taking the fresh photographs. Material details are given under each species and these specimens are housed at museum of Marine Aquarium and Regional Center of Zoological Survey of India, Digha.

### RESULTS AND DISCUSSION

The details of morphometric observations of all the fishes were presented in Table-1 and the species wise descriptions of different characters were given below.

*Myripristis botche* Cuvier, 1829:  
Blacktip soldierfish



Fig. 1. *Myripristis botche* Cuvier, 1829

1829. *Myripristis botche*, Cuvier in Le Règne Animal, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Edition 2. v. 2: i-xv + 1-406

**Materials examined:** 1 specimen (SL: 133mm); Date of collection: 07/07/2011; Regn. No: MARC/ZSI/F2169.

**Diagnosis:** D: X-I, 14; A: IV,12; P: 15; V: I,7; Lateral line scales (LL) : 28; Gill racker (GR): 34.

Body compressed, dorsal fin completely divided into two parts with deep notch between 9<sup>th</sup> and 10<sup>th</sup> spines. Inter orbital moderately narrow with 5.11 times in head length (Table-1). Two pairs of symphyseal tooth patches present at tip of lower jaw. No scales in axil of pectoral fins. 2½ rows of scale present between lateral line and middle of spinous dorsal fin, no spine at corner of

preopercle. Colour in fresh specimen reddish body, upper opercular membrane blackish, prominent black areas with bright white margins present in soft dorsal anal and caudal fins. Median fins red with white leading edges. Paired fins whitish. First gill arch with 13 gill rakers on upper limb and 34 gill rakers in total.

**Distribution:** Widely distributed in Indo-West Pacific (Chen *et al.* 1990). In Indian coastal water this species was reported from Andhra Pradesh (Barman *et al.*,2004 ).

***Myripristis murdjan*** (Forsskal, 1775):

Pinecone soldierfish

1775. *Sciaena murdjan* Forsskal, *Descript Animal*, P. 48

1986. *Myripristis murdjan*, Randall & Heemstra, in Smith & Heemstra, *Smith's Sea Fishes*, P. 424, pl. 22.

**Table 1.** Morphometric and proportional measurements

Character	<i>Myripristis botche</i> (n=1)	<i>Myripristis murdjan</i> (n=6)	<i>Ostichthys acanthorhinus</i> (n=1)	<i>Sargocentron prasinum</i> (n=5)
Standard length (SL)	133 mm	86-120mm	56 mm	128-138 mm
Head Length (HL)	46 mm	29-41 mm	25 mm	48-51 mm
Body depth (BD)	56 mm	37-51 mm	28 mm	49-53 mm
SL/BD	2.41	2.32-2.47	2	2.61-2.65
SL/HL	2.93	2.83-3.06	2.2	2.66-2.79
HL/Orbit diameter	2.42	2.13-2.47	2.8	2.68-3.06
HL/Interorbital space	5.11	4.00-4.39	4.80	3.92-4.36
HL/Snout	5.11	6.25-6.54	5.9	4.63-4.9
HL/longest dorsal spine	2.04	1.97-2.23		1.92-2.12
HL/Pectoral	1.53	1.36-1.46	1.56	1.59-1.63
HL/Pelvic	1.43	1.45-1.65	2.08	1.48-1.50
HL/Caudal	1.39	1.18-1.33	1.92	1.41-1.44
HL/longest anal spine	2.42	2.13-2.48	2.77	1.41-1.5



Fig. 2. *Myripristis murdjan* (Forsskal, 1775)

**Materials examined:** Total 6 specimens (SL 86-120 mm): 4 specimens; Regn. No: MARC/ZSI/F1839; Date of collection-10/06/11. & 2 specimens; Regn. No. MARC/ZSI/F1880; Date of collection-29/07/11.

**Diagnosis:** D: X-I, 14; A: IV, 13; P: 15; V: I,7; LL: 27-31; GR: 36-39. Body compressed, dorsal fin completely divided into two parts with deep notch between 9<sup>th</sup> and 10<sup>th</sup> spines. Inter orbital space broad 4.00-4.39 times in head length (Table-1). Lower jaw slightly projecting and single pair of tooth patches at symphysis of lower jaw. Lower one-fourth to three fourth of pectoral axil with small scales. There are 2½ rows of scale present between lateral line and middle of spinous dorsal fin, no spine at corner of preopercle. Colour silvery pink, edges of scales dark, submarginal band in each caudal lobes, upper opercular membrane and axil of pectoral fin black. Elevated parts of soft dorsal, anal and caudal lobes dark red.

**Distribution:** Common species and widely distributed in Indo-West pacific (Chen *et al.*, 1990). In Indian water this specimen found in Andaman and Nicobar Island (Rao *et al.*, 2000 & Rao 2004), Odisha (Barman *et al.*, 2007), Tamil Nadu (Krishnan *et al.*, 2000), Gulf of Mannar (Varghese *et al.*, 2011), Lakshadweep (Murty, 2001).

***Ostichthys acanthorhinus*** Randall, Shimizu & Yamakawa, 1982: Spinesnout squirrel fish

1982. Randall, Shimizu & Yamakawa, *Japanese journal of Ichthyology*, **29**(1): 1-26.

**Materials examined:** 1 specimens (SL: 56 mm); Date of collection:04/11/13; Regn. No: MARC/ZSI/F3323.

**Meristic Formula:** D: XII, 13; A: IV, 11; P: 16; V: I, 7; LL: 29; GR: 28.



Fig. 3. *Ostichthys acanthorhinus* Randall, Shimizu & Yamakawa, 1982

**Diagnosis:** Small sized fish with moderately deep body; dorsal profile of head convex. Mouth large; both jaws containing villiform bands of teeth, vomer and palatine also with villiform teeth; maxilla extending posterior end of eyes. Snout short; eyes very large and interorbital space convex. Anterior part of each nasal bones containing short, sharp and forward directed spines; preopercle with a sharp spine at the angle; a stout spine present on posterior part of opercle. 3<sup>rd</sup> dorsal and anal spine longest among dorsal and anal spine respectively; pectoral fin longer than pelvic fin. Entire body red in colour; pelvic fin pale red; base of interspinous part blackish.

**Distribution:** Indo-West Pacific; Australia, Indonesia, India, Gulf of Oman and Israel. In Indian coastal area this species reported only from Kerala (Randall, Shimizu & Yamakawa, 1982) and Gulf of Mannar (Padate *et al.*, 2014).

***Sargocentron praslin*** (Lacepede, 1802):

Dark-striped squirrelfish

1802. *Perca praslin* Lacepede, *Hist. Nat. Pois.*, **4**: 397, 418.

1986. *Sargocentron praslin*: Randall & Heemstra, in Smith & Heemstra, *Smith's Sea Fishes*, P. 420, pl. 21.

**Materials examined:** 5 Specimens (SL: 128-139 mm); Date of collection: 01/07/2011; Regn. No: MARC/ZSI/F2170.



Fig. 4. *Sargocentron praslin* (Lacepede, 1802)

**Diagnosis:** D: X-I, 13; A: IV, 9; P: 14; V: I,7; LL: 36; GR: 17-19. Body slightly robust and compressed, caudal peduncle in narrow and long. Inter orbital space broad 3.92-4.36 times in head length. Corner of preopercle with a sharp stout spine, longer than broad. Last dorsal spine the shortest, equidistant between penultimate spine

and first soft fin ray; lower jaw not projecting. Oblique row of scales on cheek 4. Body silvery white with longitudinal brownish red stripes; tips of spinous dorsal fin membrane white, below a dark red sub marginal band, followed by a wide whitish zone and dark red at base of fin; dark brown blotch at base of soft dorsal fin.

**Distribution:** Indo-West Pacific, from east coast of Africa to Andaman Islands (Rao *et al.*, 2000). In Indian coastal water it found in Lakshadweep (Pillai, 1995), Andaman and Nicobar Island (Rao *et al.*, 2000 & Rao 2004).

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