



## Short Communication

# FIRST REPORT OF TWO JAWFISHES (PERCIFORMES: OPISTOGNATHIDAE) FROM NORTHERN EAST COAST OF INDIA

### INTRODUCTION

The jawfishes family Opistognathidae represents total 81 species throughout the world under 3 genera, of which genus *Opistognathus* Cuvier, 1816 comprises 65 species (Biswas *et al.*, 2013). In Indo-Pacific region comprises about 40 species of jawfishes some of them unidentified (Smith-Vaniz and Yoshino, 1985). In Indian coastal water only 7 species were reported (Smith-Vaniz, 2009, 2011 and Biswas *et al.*, 2013): *O. albicaudatus* Smith-Vaniz, 2011; *O. annulatus* (Eibl-Eibesfeldt and Klauswitz, 1961); *O. cyanospilotus* Smith-Vaniz, 2009; *O. nigromarginatus* Rüppell, 1830; *O. rosenbergii* Bleeker, 1856; *O. macrolepis* Peters, 1866; and *O. pardus* Smith-Vaniz *et al.*, 2012. Jawfishes are benthic marine fishes found at depths ranging from 0.3 to at least 375 m in most tropical seas but are absent from the Pacific Plate (except the islands of Belau and Samoa), eastern Atlantic Ocean, and Mediterranean Sea (Smith-Vaniz, 1997). Jawfishes are obligate burrow dwellers and male orally incubate their eggs (Hess, 1993). Due to their low dispersal ability and high level of regional endemism capability make them biologically very interesting and ideal for biogeographical study (Smith-Vaniz, 1997). Literature review indicates (Manna and Goswami, 1985; Goswami, 1992; Talwar *et al.*, 1994; Chatterjee *et al.*, 2000; Das *et al.*, 2007, Mohapatra *et al.*, 2007, Barman *et al.*, 2007) that no fishes of the family Opistognathidae was reported from Northern east coast (West Bengal and Odisha) of India. During local survey around Digha coast of West Bengal authors collected some specimens of *Opistognathus* and identified as *Opistognathus rosenbergii* Bleeker, 1856 (7 ex; 70.08-98.74 mm SL) and *Opistognathus macrolepis* Peters, 1866

(3 ex; 63.63-52.71 mm SL). This paper reports first record of the family Opistognathidae along with report of the species *Opistognathus rosenbergii* Bleeker, 1856 and *Opistognathus macrolepis* Peters, 1866 from northern east coast of India.

### MATERIALS AND METHOD

Specimens were collected from Shankarpur fishing harbour. Fishes were collected by trawl net at 65 nautical miles far (20.11 N & 088.46 E) from Digha coast of West Bengal at a depth of 62-65 m. Measurements and counts follow Smith-Vaniz, 2009. Measurements were carried out with a digital caliper with resolution of 0.01 mm. Abbreviations SL and HL represents standard length and head length. After identification fresh photograph was taken and specimens deposited to MARC, ZSI, Digha with registration details as MARC/ZSI/F2768 (seven specimens of *Opistognathus rosenbergii* Bleeker, 1856) and MARC/ZSI/F3471 (Three specimens of *Opistognathus macrolepis* Peters, 1866).

#### 1. *Opisthognathus rosenbergii* Bleeker, 1856

1856. *Opisthognathus rosenbergii* Bleeker, Nat. Tijds. Ned. Indie, **12**: 220 Nias; de Beaufort, 1951, Fishes Indo-Austr. Arch., **9**: 38.

1876. *Opisthognathus rosenbergii* Day, Fishes of India, Part II, p. 267.



Fig. 1. *Opisthognathus rosenbergii* Bleeker, 1856

### DESCRIPTION

D: X, 14; A: II, 13; P:21; V: I, V.

Small fish with elongate and tapering body (Fig. 1.), its depth at dorsal fin origin 21.78%-23.62% of SL and at anal fin base 11.46%-12.12.49% of SL. Head bulbous and large its length 33.63%-35.78% of SL. Eye large, 27.44%-28.61% of HL and its position high on head; interorbital space narrow, 8.44%-8.59% of HL. Post orbital jaw length 8.91%-10.5% of SL and post orbital head length 19.39%-20.79% of SL. Mouth large, maxilla extending well behind eye, maxilla 60.81%-62.89% of HL and 21.06%-23.06% of SL; snout blunt and short, 2.37-2.44 times to HL. Both jaws with a row of small curved teeth, behind it a band of anterior directed pointed conical teeth present. Single continuous dorsal fin 62.15%-64.72% of SL; its spinous part lower than soft part. Anal fin similar to dorsal and its base 34.38%-35.43% of SL. Pectoral fin 16.28%-16.92% of SL and ventral fin 20.04%-21.36% of SL. Caudal fin rounded; depth of caudal peduncle 10.06%-10.79% of SL and its length 8.54%-9.57% of SL. Lateral line incomplete, lateral line scales 68-69; Gill rakers 32-34 (9-11+23).

**Colour:** In fresh grayish yellow in colour with dorsal, anal and caudal fin margin black. Dorsal fin base with five dark blotches; caudal fin with middle white band; ventral fin tip black and base white; Opercle membrane and pectoral fin light yellow. In preserve colour become brownish.

**Distribution:** Indo West Pacific: Indonesia, Thailand and India. In Indian coast this specimen previously reported from Andhra Pradesh (Barman, *et al.*, 2004), Tamil Nadu (Krishnan *et al.*, 2007) and Andaman and Nicobar Island (Rao *et al.*, 2004).

#### 2. *Opistognathus macrolepis* Peters, 1866:

Big scales Jawfish

*Opistognathus macrolepis* Peters, 1866, *Monatsbericht der Koniglich Preussischen*

*Akademie der Wissenschaften zu Berlin:* 520 (Bangkok, Thailand).

### DESCRIPTION

D: XI, 12; A: II, 10; P: 21; V: I, 5.

Small, moderately elongate fish with posterior end tapering (Fig. 2). Body depth at dorsal fin origin 25.11%- 26.52% of SL and at anal fin origin 23.9%-24.03% of SL. Head bulbous and large its length 37.34%-38.30% of SL. Eye very large 29.1%-29.7% of HL, position of eye high on head; interorbital space 6.9%-7.8% of HL. Post orbital jaw length 25.2 %-25.7% of HL and post orbital head length 61.8%-62% of HL. Mouth large, maxilla reaching well behind eye, maxilla 23.2%-23.5% of SL and 62.3-62.4% of HL; snout blunt and short 17.28%-17.63% HL. A outer row of enlarge conical teeth present on both jaws, behind it a band of anterior directed pointed conical teeth present, no teeth on vomer. Dorsal fin single and continuous, its base 63.1%-63.6% of SL; anal fin base 25.2%-25.4% of SL; pectoral fin 20.4%-20.6% of SL; ventral fin 22.5%-22.8% of SL. Caudal fin rounded; depth of caudal peduncle 11%-11.3% of SL. Scale cycloid, lateral line incomplete; Gill rakers 30 (10+20).



**Fig.2.** *Opistognathus macrolepis* Peters, 1866

**Colour:** Body yellowish and darker on head region. Dorsal, anal and caudal fin blackish; pectoral and ventral fin pale. No ocellus or any spot on dorsal fin, opercle and chin.

**Distribution:** Indo-west Pacific, from east coast of India to Gulf of Thailand and Gulf of Carpentaria, Australia. In Indian coast this species was only reported from Tamil Nadu (Biswas *et al.*, 2013).

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