



FIRST REPORT ON THE OCCURRENCE OF FOUR FISHES OF FAMILY : NEMIPTERIDAE FROM DIGHA ON THE EAST COAST OF INDIA

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INTRODUCTION

Fishes from family Nemipteridae are of the major component of fishery along Indian coast which consists of 24 species from 3 genera in India out of 64 species from 5 genera throughout the world (Barman and Mishra, 2009; Fishbase, 2010). These snapper-shaped fishes inhabitant of shallow coastal waters of the Indo-west Pacific region have considerable importance because of its edible value. Despite of its fishery importance, occurrences of this family is list reported throughout northern east coast of India. Digha being one of the major marine fish landing station of the state West Bengal as well as the East coast of India, several efforts were made regarding incidences of ichthyofauna of region (Manna and Goswami, 1985; Goswami, 1992). The latest updated list of the fish fauna of Digha coast was published by Chatterjee *et al.* (2000). Review of all previous works revealed report of only 3 species of family Nemipteridae in Digha waters. During the local surveys for ornamental faunal studies in the Centre, four more fish species of the family Nemipteridae was collected. Careful observations of distinguishing features of these species show that these species were not reported from the coast previously. The species identified are *Nemipterus nematophorus* (Bleeker, 1853), *Nemipterus randalli* Russel, 1986, *Parascolopsis aspinosa* (Rao and Rao, 1981) and *Scolopsis vosmeri* (Bloch, 1792). The paper describes the detailed characteristics of all the four

species which are recorded for the first time from Digha coast.

SYSTEMATIC ACCOUNT

Class : ACTINOPTERIGII

Order : PERCIFORMES

Family: NEMIPTERIDAE

1. *Nemipterus nematophorus* (Bleeker, 1853) Double-whip threadfin

1853. *Dentex nematophorus* Bleeker, *Nat. Tijdschr. Ned. Indie*, 5: 500.

1990. *Nemipterus nematophorus* Russell, *FAO, Fish Synop.* (125) 12: 45

Materials examined: 3 ex, SL 121-172 mm, Location: Digha Mohana, Date, 14.12.2010, Collection: Mr. P.C. Tudu & D. Ray, Identified: Dr. Prasanna Yennawar, Dr. A. Mohapatra & P.C. Tudu, Reg. No. F749.

Diagnostic Characters: D X+9, A III+7, P 17, V I+5, GR 12-14, LL 47-48, three rows of chick scales, Dorsal fin with first and second spines close together, almost fused and produced into a long filament which is the unique characteristics of the specimen (Fig.1), both pectoral and pelvic fins reach the level of anus, caudal fin forked and the upper lobe prolonged into a long filament. Body depth is 2.9 to 3.2 times in standard length and head length is 3.4 to 3.8 times in standard length. Upper part of the body pinkish to silvery white on ventral surface.

Distribution: The species is reported from western Indian-West Pacific from the east coast of India including Andaman Sea, Strait of Malacca, to the Philippines, South China Sea, Gulf of Thailand and Indonesia. From Indian waters the species is also reported from the Andaman Islands (Rajan, 2003), Andhra Pradesh (Barman et al., 2004), Chennai coast (Krishnan et al., 2007).

2. *Nemipterus randalli* (Russell, 1986)
Randall's threadfin

1986. *Nemipterus randalli* Russell, *Senckenbergiana Biol.* 67: 23,

Materials examined: 3 ex, SL 123-160 mm, Location: Digha Mohana, Date, 30.11.2010, Collection: Dr. A. Mohapatra, P.C. Tudu & D. Ray, Identified: Dr. A. Mohapatra & P.C. Tudu, Reg. No. F744.

Diagnostic Characters: D X+9, A III+7, P 15, V I+5, GR 13-15, LL 46-52, 3 rows of chick scales, snout length almost equal to eye diameter, Upper caudal fin filamentous with light reddish in colour, Pectoral and pelvic fins very long reaching the origin of anal fin, Dorsal fin transparent with pale yellow medial stripe and upper margin edged with red, Caudal fin yellow-orange, edged with pink and with yellow stripe along the upper margin, pectoral fins 1.11 to 1.26 in head length, and pelvic fins 1.08 to 1.26 in head length, body silvery-pink with 3-4 faint yellow stripes on each side below lateral lines (Fig. 2).

The species differs from the closely related species *N. japonicus* (Bloch, 1791) reported from the coast (Chatterjee et al. 2000) in having less numbers of stripes 3-4 instead of 11-12, both pectoral and pelvic fins comparatively long and reaches the anal fin origin and the colour of the anal fin filament.

Distribution: The species is reported from western Indian Ocean, Pakistan, Persian Gulf, Red Sea, Gulf of Aden, East African coast, Seychelles and Madagaskar. The original distribution of the *N. randalli* is Western Indian Ocean, from Western India (Russel, 1990). From Indian waters the species is also reported from the Andaman Islands (Mishra and Krishnan, 1992;

Rao et al., 2000), Andhra Pradesh (Barman et al., 2004), Gujurat coast (Barman et al., 2000), Chennai coast (Krishnan et al., 2007). This species is not yet reported from Odisha and this is the first report from Digha coastal waters of West Bengal.

3. *Parascolopsis aspinosa* (Rao and Rao, 1981)
Smooth dwarf monocle bream

1981. *Scolopsis aspinosa* Rao and Rao, *Proc. Kon Ned. Akad Wetensch (Series C, Biol. and Med. Sci.)* v. 84 (no. 1): 134, Fig. 1, 3.

1986. *Parascolopsis jonesi* Talwar, In: James, P.S.B.R. (ed), *Recent Advances in Marine Biology..*: 2, fig. 1.

1990. *Parascolopsis aspinosa*: Russell, *FAO fish Synop.*, (125)12: 67, fig. 117, pl. IVb. 1986. *Scolopsis jonesi* Talwar, In: James, (ed), . *Recent Advances in Marine Biology*: pp.1-12, i-xxx + 1-591.

Materials examined: 1ex, SL 102 mm, Location: Digha Mohana, Date, 29.11.2010, Collection: P.C. Tudu & D. Ray, Identified : Dr. A. Mohapatra & P.C. Tudu, Reg. No. F745.

Diagnostic Characters: D X+9, A III+7, V I+5, GR 10, LL 36, pectoral fin with 2 simple and 15 branched rays, Pectoral and pelvic fins long and reaching the level of anus, snout length less than eye diameter, head 2.91 in standard length, head scales reaching forward to between level of anterior border of eyes and nostril. Body rosy orange in colour, a black blotch at the base of dorsal fin between eighth spine and first ray. Dorsal fin with orange margin, Anal fin pale rosy, pectoral fins yellowish. Posterior margin of sub-orbital smooth. (Fig. 3).

Distribution: The distribution of the species is around Indian Ocean including the Persian Gulf, Gulf of Oman, Gulf of Aeden, Arabian Sea, Bay of Bengal. From Indian waters the species is also reported from Andhra Pradesh (Barman et al., 2004), Gujurat coast (Barman et al., 2000). This species is not yet reported from Odisha and this is the first report from Digha coastal waters of West Bengal.

4. *Scolopsis vosmeri* (Bloch, 1792)
White cheek monocle bream

1792. *Anthias vosmeri* Bloch, *Naturges. Ausland Fische*, 6: 120, pl. 321.



Fig. 1 : *Nemipterus nematophorus* (Bleeker, 1853)



Fig. 2. : *Nemipterus randalli* Russel, 1986



Fig. 3 : *Parascolopsis aspinosa* (Rao and Rao, 1981)



Fig. 4 : *Scolopsis vosmeri* (Bloch, 1792)

1990. *Scolopsis vosmeri* Russell, *FAO. Fish. Synop.*, (125) 12: 122.

Materials examined: 1 ex, SL 112 mm, Location: Digha Mohana, Date, 14.12.2010, Collection: D. Ray, Identified: Dr. P.L. Yennawar, Dr. A. Mohapatra, P.C. Tudu, Reg. No. F750.

Diagnostic Characters: D X+9, A III+7, P II+15, V I+5, GR 11, LL 42, Body depth 2.2 in standard length, snout length is little less than eye diameter, Antronose suborbital spine present below eye, head scales reaching beyond the anterior nostril, lower limb of pre-opercle scaly, Pelvic fin long reaching just behind the anus, Caudal fin forked. Four rows of scales between lateral line and the first dorsal spine. Body is brownish with a reddish-purple tinge; a broad white vertical bar extending from top of head to opercle. Opercular membrane is blood red in

colour. Body scales with dark spots. Pectoral fin moderate not reaching to anus and anterior part of anal fin is pale (Fig. 4).

Distribution: The species is reported from Indo-West Pacific from East African coast, Red Sea and the Persian Gulf to northern Australia. This species is reported from the Andaman Islands (Rajan, 2003), Odisha (Barman *et al.*, 2007), Andhra Pradesh (Barman *et al.*, 2004), Chennai coast (Krishnan *et al.*, 2007), Gujurat coast (Barman *et al.*, 2000).

Remarks: Record of four more species of fisheries importance from Digha further enriches the fish faunal diversity in the area. This also highlights the need of consistent monitoring of fish fauna in the area for updating the previous records of availability.

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