



## Short Communication

# First report of *Priacanthus prolixus* Starnes, 1988 (Perciformes : Priacanthidae) from the West Bengal Coast

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## Abstract

Present study reports *Priacanthus prolixus* Starnes (1988) for the first time from West Bengal coast. The species is reported here on the basis of five specimens were collected from Digha Mohana, West Bengal, and Bay of Bengal. The species is characterized with elongated and laterally compressed body, a unique character of Priacanthidae is head bears large eye, scales in lateral line series is about 74-84 and scale rows between dorsal fin origin and lateral line is 10-11.

**Keywords:** New Record, Priacanthidae, West Bengal

## Introduction

The family Priacanthidae (Bigeyes) comprises 5 genera (Eschmeyer, 2017) and 21 valid species (Eschmeyer and Fong, 2017) worldwide. The members of this family are characterised by extremely large eye with wide pupils, deep body, rough scales and bright orange red colour (Philip, 1994). The genus *Priacanthus* represents the maximum numbers of valid species (12 species) in the family (Eschmeyer, 2017). The fishes of family Priacanthidae are generally epibenthic in habitat and usually found associated with rocks or coral reefs whereas a few are often trawled from the open bottom areas (Starnes, 1988).

The family Priacanthidae is represented in India by six species viz. *Priacanthus hamrur* (Forsskål), *Priacanthus blochii* Bleeker, 1853, *Priacanthus sagittarius* Starnes (1988), *Priacanthus tayenus* Richardson, 1846, *Priacanthus macracanthus* Cuvier, 1829 (Nair and Geetha, 2006) and *Priacanthus prolixus* Starnes (1988).

Recently during local survey and collection at Digha Mohana, West Bengal five specimens of the genus *Priacanthus* were collected and later identified as *Priacanthus prolixus* Starnes (1988). The COI sequence of *Priacanthus prolixus* Starnes (1988) has been done by Bineesh *et al.* (2015) by collecting fishes from Kolkata

Market and no specific collection site and morphometry has been reported. This paper reports the occurrence of *Priacanthus prolixus* Starnes (1988) for first time from the West Bengal coast, East coast of India with its morphometry.

## Material and Methods

Five specimens were collected from Digha Mohana, West Bengal and subsequently identified as *Priacanthus prolixus* Starnes (1988). Specimens were caught in a trawl net by local fishermen. The collected sample identified using the identification key of Starnes (1988) and registered and deposited in Marine Aquarium and Regional Centre, Zoological Survey of India, Digha, Reg No. MARC/ZSI/F4975. After collection of fish's photography and the detail morphometric measurements were taken, then preserved in 10% formaldehyde solution. All measurement was made by digital callipers. Scales in lateral series, lateral line scales and also gill rakers were counted with the help of Leica EZ4.

## Systematic Account

Class ACTINOPTERIGII  
Order PERCIFORMES

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Family PRIACANTHIDAE

***Priacanthus prolixus* Starnes, 1988**

Common name **Arrow bulleye**

1988. *Priacanthus prolixus* Starnes, *Bulletin of Marine Science*, **43**: 117-203.

**Description:** D X+15, A III+15, P 19, V I+5, GR 29-31, LL 76-84. Body elongated and laterally compressed. Extremely adherent, modified cycloid scales cover the body. Head relatively broad and about 2.7-3 in standard length. Mouth strongly oblique and large, head bears a unique character of Priacanthidea that is large eye which is 8.6-8.9 in standard length and 2.9-3.2 in head length. Lower jaw projecting upwards both upper and lower jaw contains small conical teeth. A pair of nostrils located just below of eye. Anterior nostril rounded and posterior nostril like a transverse slit. Preopercle have slightly serrated margin and a serrated spine, caudal-fin margin concave. Scales in lateral line series is about 74-84 and

scale rows between dorsal fin origin and lateral line is 10-11. The details of morphometrics is given in Table1.

**Colour:** Body, head and fins dark orange red coloured. Pectoral fins reddish yellow; pelvic fin light dusky to dark, especially distally, with a black spot basally on dorsal surface (Figure1). After preservation colour turned into silvery white. Seven dark red spots present on lateral line. Caudal fin with narrow black margin posteriorly.

**Discussion:** Genus *Priacanthus* represents six species in India that is *Priacanthus hamrur* (Forsskål), *Priacanthus tayenus* Richardson, 1846, *Priacanthus sagittarius* Starnes (1988) *Priacanthus macracanthus* Cuvier, 1829, *Priacanthus prolixus* Starnes (1988) and *Priacanthus blochii* Bleeker, 1853. Out of this six species only two species *Priacanthus hamrur* (Forsskål) and *Priacanthus tayenus* Richardson, 1846 were reported from West Bengal coast (Kar *et al.*, 2017). Present study reports first time *Priacanthus prolixus* Starnes (1988) from the West Bengal. These six species are distinctly separated from each other

**Table 1.** Morphometric and meristic characters of specimens of *Priacanthus prolixus* Starnes, 1988

Characters	Ratio in Standard Length (SL)				
	1	2	3	4	5
Pre-dorsal Length	3.4	3.3	3.4	3.4	3.3
Preanal Length	1.6	1.7	1.8	1.8	1.8
Depth at 6th dorsal spine	3	3.1	3	3.1	3
Head Length	2.7	2.7	3	2.9	2.8
Eye diameter	8.8	8.6	8.9	8.6	8.6
Inter orbital space	14.6	14.1	14	14	13.5
Snout Length	10.1	10.4	10.3	10.3	10.7
Pectoral Fin Length	5.5	5.5	5.2	5.3	5.5
1st dorsal Spine Length	16.5	18.3	17.8	damage	17.3
2nd Doral Spine Length	11	12	11.9	damage	12
10th Dorsal Spine Length	7.3	7.8	7.3	7.3	8.2
1st Anal Spine Length	11	12.48	10.7	10.3	12
2nd Anal Spine Length	8.2	10.4	9.2	9.1	9.7
3rd Anal Spine Length	7.3	8.9	8.2	8.6	8.6
<b>Ratio In Head Length (HL)</b>					
Eye diameter	3.2	3.1	2.9	2.9	3
Snout Length	3.7	3.7	3.4	3.5	3.7
Pectoral Fin Length	2	2	1.7	1.8	1.9
Inter orbital space	5.3	5	4.6	4.8	4.7



**Figure 1.** *Priacanthus prolixus* Starnes, 1988 from the West Bengal coast, East coast of India.

with number of different characters specially gill rakers. *Priacanthus sagittarius*, *Priacanthus hamrur*, *Priacanthus tayenus*, *Priacanthus macracanthus*, *Priacanthus prolixus* and *Priacanthus blochii* having total gill rakers on first arch 19-22, 24-26, 21-24, 23-29, 28-31 and 17-22 (Starnes, 1988). Focusing on gill rakers *Priacanthus prolixus* 28-31 (Starnes, 1988) which is nearly equal to the other two species of the genus *Priacanthus* which is *Priacanthus arenatus* Cuvier, 1829 and *Priacanthus meeki* Jenkins, 1903 having 28-32 and 30-33 (Starnes, 1988) number of gill rakers. These two species shows overlapping gill rakers count with *Priacanthus prolixus*, but also shows some differentiating characters. *Priacanthus arenatus* distinguished from *Priacanthus prolixus* by its body depth, where *P. arenatus* shows 2.6-2.8 and *P. prolixus* shows 2.9-3.1 (Starnes, 1988). *Priacanthus meeki* also can

be differentiated from *P. prolixus* by its scales in lateral series, where *P. meeki* contains 104-120 and *P. prolixus* have 86-93 (Starnes, 1988). *P. prolixus* is also closely related to *P. arenatus*, *P. harmer*, and *P. meeki* with group sharing characters such as crescentic caudal fin and higher counts of dorsal-fin and anal fin rays (Bineesh *et al.*, 2015). *Priacanthus harmer* also distinguished from *Priacanthus prolixus* by its lower gill rakers counts which is ranging from 24-26 (Starnes, 1988). The body colour in fresh specimen was similar in all three species except that *P. prolixus* has a reddish-yellow pectoral fin (Motomura *et al.*, 2001).

**Distribution:** *Priacanthus prolixus* was originally described on the basis of 12 samples from the Arabian Sea (Off Somalia) and is endemic to that area (Starnes, 1988). Bineesh *et al.*, (2015) collected *Priacanthus prolixus* from Tuticorin, Chennai and Kolkata and conclude that *Priacanthus prolixus* is not endemic to the Arabian Sea but is widely distributed in the Indian Ocean, including the Bay of Bengal. In India, *Priacanthus prolixus* was reported from West Coast of India (Malpe & Mangalore, Karnataka, Trivandram and Kerala) (Motomura *et al.*, 2001). Present study confirms the presence of *P. prolixus* in West Bengal, East coast of India.

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