Short Communication

First Record of *Seriolina nigrofasciata* (Ruppell, 1829) (Perciformes: Carangidae) from Odisha Coast, India

Sanmitra Roy¹, S. Dash¹ and Subhrendu Sekhar Mishra²*

¹Estuarine Biological Regional Centre, Z.S.I., Gopalpur-on-Sea, Odisha – 761002, India
²Marine Fish Section, Zoological Survey of India, Kolkata – 700016, India

Abstract

The paper reports *Seriolina nigrofasciata* (Ruppell, 1829) (Perciformes: Carangidae) first time from Odisha coast with description of material collected from the Rushikulya estuary. Photographic evidence on occurrence of reef associate *Apolemichthys xanthurus* (Bennett, 1833) and *Chaetodon decussatus* Cuvier, 1829 in the sea near Gopalpur, Odisha is also provided in this paper.

Keywords: Carangidae, First Record, Reef ridge, Odisha Coast

Introduction

Fishes of the family Carangidae are well known for their commercial importance as many of them are very important food fishes. They are represented by 20 genera and 66 species in Indian waters (Gopi and Mishra, 2015). But their occurrence along the east coast of India is numbered at 20 genera and 47 species (Mishra, 2013). However, there are only 28 species of Carangids belonging to 14 genera are known from Odisha coast (Barman *et al.*, 2007). The genus *Seriolina* Wakiya, 1924 is monotypic and known by only one species, *S. nigrofasciata* (Ruppell, 1829) worldwide. From taxonomic point of view, this species is clearly distinguished from other genera of the family in having longer maxilla extending to below posterior margin of eye, 4 to 10 numbers of mostly rudimentary gill rakers on first arch, anal fin base distinctly shorter than soft dorsal fin base, pectoral fins shorter than head; and in absence of lateral line scutes and finlets.

One specimen of interesting fish has been collected from the mouth of the Rushikulya River hitherto not known from the region. The specimen was later identified as a young specimen of *Seriolina nigrofasciata* (Ruppell, 1829) (Figure 1). A systematic account of the species is detailed hereunder reporting it as first record from coastal waters of Odisha state, India.

Figure 1. *Seriolina nigrofasciata* (Ruppell, 1829) (127 mm FL) from Rushikulya River mouth.

Materials and Methods

During a local survey trip to the Rushikulya River mouth one specimen of an interesting carangid species unfamiliar to local fishermen was collected. The specimen was photographed soon after collection to note the colouration and later preserved in 10% formalin after bringing to laboratory for further identification. Measurements were taken in mm by dial calipers up to 0.1 mm accuracy. The specimen was identified using standard literature (Talwar and Kacker, 1984; Smith-Vaniz, 1984, 1985).

* Author for correspondence

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1986, 1999) and deposited with the Estuarine Biological Station, Zoological Survey of India, Gopalpur-on-Sea, Odisha with registration number EBRC/ZSI F 8938.

**Results**

The collected specimen was identified as a juvenile stage of *Seriolina nigrofasciata* (Ruppell) (Perciformes: Carangidae), a first record from Odisha coast.

*Seriolina nigrofasciata* (Ruppell, 1829)


*Material examined:* EBRC/ZSI F 8938, 1 ex., 127 mm FL, Rushikulya River mouth, 05.xii.2016, Sanmitra Roy.

*Description:* D VII + I, 31; A I, 17; P 17; GR 2+5 = total 7. Body elongate, laterally compressed; body depth 3.4 in fork length; head profile with a steep rise from snout tip to anterior part of eye and gently convex to dorsal fin base. Upper jaw rounded posteriorly, extending to below posterior end of eye; its length about 2 times in head length. Head length about 3.6 times in fork length, slightly less than body depth. Height of dorsal fin lobe slightly longer than pectoral fins and 17.6% of fork length; length of anal fin base 2.3 times in second dorsal fin base; pelvic fins longer than pectoral, 1.6 times in pectoral fin; pectorals short, 57.1% of head length. Caudal peduncle with a low lateral fleshy keel on each side; dorsal and ventral grooves present before commencement of caudal fin. Scutes on lateral line absent. Body bluish grey dorsally, whitish ventrally; 7 dark oblique bands and blotches on upper part of body; spinous dorsal fin black; second dorsal and anal fins dusky brown, tips of anterior lobes white; caudal and pelvic fins black. All measurements in mm are given in Table-1.

*Distribution:* Southwest coast of South Africa in the Atlantic; from east Africa to Red Sea, through southern coasts of India to Indonesia in Indian Ocean; north to Japan and south to Australia in western Pacific. From Indian waters this fish has been reported from the maritime states such as Andaman and Nicobar Islands, Andhra Pradesh, Tamil Nadu, Kerala, Karnataka and Maharashtra (Joshi et al., 2011) and Gujarat (Barman et al., 2000).

**Table 1.** Morphometric measurements of the specimen collected

<table>
<thead>
<tr>
<th>Characters</th>
<th>Actual in mm</th>
<th>%FL</th>
<th>%HL</th>
</tr>
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<tbody>
<tr>
<td>Total Length</td>
<td>142</td>
<td></td>
<td></td>
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<tr>
<td>Fork Length (FL)</td>
<td>127</td>
<td></td>
<td></td>
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<tr>
<td>Standard Length</td>
<td>110</td>
<td>86.61</td>
<td></td>
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<tr>
<td>Body depth at dorsal fin origin</td>
<td>48</td>
<td>37.8</td>
<td></td>
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<tr>
<td>Body depth at anus</td>
<td>36</td>
<td>28.35</td>
<td></td>
</tr>
<tr>
<td>Height of Dorsal fin</td>
<td>22</td>
<td>17.32</td>
<td></td>
</tr>
<tr>
<td>Length of soft Dorsal fin base</td>
<td>57</td>
<td>44.88</td>
<td></td>
</tr>
<tr>
<td>Length of Anal fin base</td>
<td>27</td>
<td>21.26</td>
<td></td>
</tr>
<tr>
<td>Head Length (HL)</td>
<td>35</td>
<td>27.56</td>
<td></td>
</tr>
<tr>
<td>Pectoral fin Length</td>
<td>20</td>
<td>15.75</td>
<td>57.14</td>
</tr>
<tr>
<td>Pelvic fin Length</td>
<td>32</td>
<td>25.2</td>
<td>85.71</td>
</tr>
<tr>
<td>Snout Length</td>
<td>11</td>
<td>8.66</td>
<td>31.43</td>
</tr>
<tr>
<td>Post-orbital Length</td>
<td>12</td>
<td>9.45</td>
<td>34.3</td>
</tr>
<tr>
<td>Eye Diameter</td>
<td>08</td>
<td>6.3</td>
<td>22.86</td>
</tr>
<tr>
<td>Maxilla (upper jaw) Length</td>
<td>18</td>
<td>14.17</td>
<td>51.43</td>
</tr>
<tr>
<td>Mandible (lower jaw) Length</td>
<td>16</td>
<td>12.6</td>
<td>45.7</td>
</tr>
</tbody>
</table>

*Discussions:* Barman et al. (2007) enlisted 605 species of fishes belonging to 138 families and 27 orders from marine and estuarine waters of Odisha coast with just 28 species belonging to the family Carangidae. Since then, only few species have been reported from Odisha coast, viz., *Parexocoetus mento* (Valenciennes) by Mishra et al. (2010), *Acanthurus triostegus* (Linnaeus) by Mohapatra et al. (2013), *Monodactylus kottelati* Pethiyagoda by Mohapatra et al. (2014), *Acanthurus bariene* Lesson by Ray et al. (2014), *Diagramma pictum* (Thunberg) by Seth and Sahoo (2014) and *Cephalopholis sonnerati* (Valenciennes) by Behera et al. (2015). However, *Seriolina nigrofasciata* is hitherto not recorded from this coastal region and this report forms its first report from Odisha coast. Even the local fishermen expressed that this species was not seen earlier.

This species is a non-schooling, usually solitary species rarely seen close to shore and most commonly inhabit offshore reefs near continental shelf at depths of 20 to 150 m (Smith-Vaniz, 1999). A ridge reef has been
observed close to Gopalpur (Mohana Rao et al., 2001) and there recorded 25 gorgonid species (Thomas et al., 2004) and about 70 species of sponges (Thomas et al., 2002). This indicates that the near shore zone at 25 to 35 m depth along Ganjam coast (particularly near Gopalpur) is rich in coral associate fauna. The third author received two fish photographs during the year 2010 from this particular region showing presence of reef associate fishes such as Apolemichthys xanthurus (Bennett, 1833) (Figure 2) and Chaetodon decussatus Cuvier, 1829 (Fig.-3) which were also not recorded earlier. For obvious reason, there is likelihood that Seriolina nigrofasciata do occur in this region and the juvenile might have drifted to the river mouth by wind and wave action.

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Figure 2. Apolemichthys xanthurus (Bennett, 1833).

References


