Short Communication

First record of the family Plesiopidae in the Bay of Bengal, Bangladesh coast

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Abstract. The family Plesiopidae is reported for the first time from the marine waters of Saint Martin’s Island, Bay of Bengal Bangladesh coast based on the record of the species Plesiops coralicora (Bleeker, 1853). The findings added a new distributional range for this kingfish (roundhead family) from Northern Bay of Bengal and an important addition of ichthyofauna to marine fishes of Bangladesh.

Keywords: Marine Fishes, Plesiops coralicora, Bay of Bengal

The family Plesiopidae (Günther, 1861) is generally known as kingfish (roundheads). The Plesiopidae is a reef-associated fish family distributed in small tropical and subtropical areas across the Indo-Pacific region (Mooi 1993). They inhabit in rocky and coraline reefs and tide pools from nearshore to a depth of 30 m, sometimes deeper (Mooi, 1993). The family Plesiopidae comprises two subfamilies: Plesiopinae (Günther, 1861) which includes 34 valid species and Acanthoclininae (Günther, 1861) which has 17 species worldwide (Fricke et al. 2021).

The marine fish diversity of Bangladesh coast is encouraging. In the last three years, several marine fish species have been added to the country’s fish inventory and are still being added to the existing list of fish fauna of Bangladesh. There are approximately over 750 marine fish species recorded in the marine waters of Bangladesh (Ahmed et al. 2020, Hasan and Parvej 2020, Hanif et al. 2020, Hossain et al. 2020, Islam and Habib 2020, Islam et al. 2020a, 2020b, Naznin et al. 2020, Siddik and Hanif 2020, Habib and Islam 2021, Habib et al. 2021a, 2021b, Hanif et al. 2021, Islam et al. 2021, Saha et al. 2021, Sarkar et al. 2021, Sharifuzzaman et al. 2021a, 2021b, 2021c, Siddiqueki et al. 2021). However, there is no record of any species of the family Plesiopidae from the northern Bay of Bengal, Bangladesh. Moreover, three species from the family Plesiopidae have been recorded from India, Acanthoplesiops indicus, Plesiops coeruleolineatus, Plesiops coralicora (Mooi 1995, Frose and Pauly 2021), and one species Plesiops auritus from Myanmar (Psomadakis et al. 2019). Hence, the present article is the confirmation of the family Plesiopidae into the northern Bay of Bengal, Bangladesh.

Sample collection, preservation and identification: The specimens were collected from local angler of Saint Martin’s Island, Bangladesh, coordinate 20.59391° N, 92.32361° E (Fig. 1), by Md Rasel Mia on 5 January 2021. Two specimens were preserved (Specimen voucher no. F2005SM-19, F2005SM-19) in Aquatic Bioresource Research Laboratory (ABR Lab.), Sher-e-Bangla Agricultural University, Dhaka and Marine Park of Saint Martin’s Island. The specimens were identified by the morphological study followed by Mooi (1993) and Psomadakis et al. (2019). All measurements were taken with a Vernier caliper to 0.1 mm.

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A species *Plesiops corallicola* (Bleeker, 1853) from the family Plesiopidae was identified in the present study. Diagnostic characters of this species are given below:

Family: Plesiopidae  
Genus: *Plesiops* Oken, 1817  
Species: *Plesiops corallicola* Bleeker, 1853  
English name: Bluegill longfin (Fig. 2 A, B, Table I)

**Diagnostic characters.** Body elongates and oval, compressed. Dorsal profile convex, dorsal origin just above pectoral base or opercle; fin pointed posteriorly; spines increasing in size to tenth, dorsal fin has black membrane with a blue stripe. Ventral profile weakly convex, sloping in straight line from snout to pelvic; snout bluntly pointed shorter than eye; mouth slightly oblique; maxilla reaching behind orbit; posterior nostril just before orbit; lower half of opercle with a round dark bluish spot, usually with a narrow light border. Pectoral fin with an orange tip; caudal with narrow white margin; pelvic fin dark, without spots. Pectoral fin rounded; inserted just below midline of side. Pelvic inserted before base of pectoral; spine sub-equal to longest dorsal spine. Anal origin opposite tenth of dorsal spine; shape similar to that of dorsal; longest soft anal subequal to longest soft dorsal ray. Caudal fin rounded.
Table I. Morphometric measurements and meristic counts of *Plesiops corallicola*

<table>
<thead>
<tr>
<th></th>
<th>F2005SM-19</th>
<th>F2005SM-19 (01)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morphometric measurements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Length</td>
<td>169</td>
<td>168</td>
</tr>
<tr>
<td>Standard length</td>
<td>131</td>
<td>129</td>
</tr>
<tr>
<td>Percentage of standard length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body depth</td>
<td>26.92</td>
<td>26.48</td>
</tr>
<tr>
<td>Dorsal fin base length</td>
<td>53.05</td>
<td>52.79</td>
</tr>
<tr>
<td>Pectoral fin length</td>
<td>21.16</td>
<td>20.25</td>
</tr>
<tr>
<td>Pectoral fin base length</td>
<td>8.00</td>
<td>8.12</td>
</tr>
<tr>
<td>Pelvic fin length</td>
<td>34.43</td>
<td>34.19</td>
</tr>
<tr>
<td>Pelvic fin base length</td>
<td>3.92</td>
<td>3.80</td>
</tr>
<tr>
<td>Anal fin length</td>
<td>27.18</td>
<td>26.43</td>
</tr>
<tr>
<td>Anal fin base length</td>
<td>18.74</td>
<td>17.91</td>
</tr>
<tr>
<td>Caudal fin length</td>
<td>28.99</td>
<td>27.22</td>
</tr>
<tr>
<td>Caudal fin base length</td>
<td>18.30</td>
<td>17.15</td>
</tr>
<tr>
<td>Caudal peduncle length</td>
<td>13.51</td>
<td>12.79</td>
</tr>
<tr>
<td>Head length</td>
<td>35.11</td>
<td>34.11</td>
</tr>
<tr>
<td><strong>Percentage of head length</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-orbital length</td>
<td>22.09</td>
<td>7.43</td>
</tr>
<tr>
<td>Eye diameter</td>
<td>20.76</td>
<td>6.74</td>
</tr>
<tr>
<td><strong>Meristic counts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorsal-fin spines</td>
<td>XII</td>
<td>XII</td>
</tr>
<tr>
<td>Dorsal-fin soft rays</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Pre-dorsal scale</td>
<td>9</td>
<td>9</td>
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<tr>
<td>Pectoral-fin soft rays</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Pelvic-fin spine</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Pelvic-fin soft rays</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Anal-fin spines</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Anal-fin soft rays</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Caudal-fin soft rays</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

**Distribution:** They are distributed in the Eastern Indian Ocean, Indo-Pacific: Madagascar to the Line Islands; north to southern Japan, western Pacific: Andaman Sea, Christmas Island and Cocos-Keeling Islands east to Howland and Baker islands and Suwarrow (Cook Islands), north to Ryukyu Islands, south to Queensland (Australia) (Frick *et al.* 2021, Froese and Pauly 2021).
The description of the studied species agrees with the description of *Plesiops corallicola* and distinguished from its closely related species *P. nigricans* (Ruppell 1828) and *P. coeruleolineatus* (Ruppell, 1835) by dark blue ocellus of slightly less than eye diameter on ventral portion of opercle, and small blue spots throughout the head, body, and caudal fin. Previous distribution of *P. corallicola* was Eastern Indian Ocean to western Indian Ocean, including northwest pacific, eastern and western central pacific (Frick *et al.* 2021, Froese and Pauly 2021) (Fig 1). However, there was no valid record of any species from the family Plesiopidae in Bangladesh waters. Therefore, the report of *P. corallicola* from St. Martin’s Island confirms the presence of the family Plesiopidae for the first time in Bangladesh waters and as well as from the Northern Bay of Bengal.

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