Rec. zool. Surv. India: Vol. 121(4)/511–520, 2021
DOI: 10.26515/rzsi/v121/i4/2021/154542

ISSN (Online) : 2581-8686
ISSN (Print) : 0375-1511

Notes on Carangids (Carangiformes: Carangidae) from West Bengal Coast with new records

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Abstract

Carangid diversity along West Bengal coast is discussed with additional record of five more species, viz, *Alepes melanoptera, Carangoides talamparoides, Decapterus macrosoma, Seriolina nigrofasciata* and *Ulua mentalis* along with taxonomic account from this region. With these reports of these five species the West Bengal state represents 41 species of carangids along the coast. Status of *Caranx carangus* (Bloch) from Indian coast discussed.

Keywords: Diversity, First Report, Food Fish, New records, Ichthyofauna

Introduction

Members of the family Carangidae are morphologically very diverse group of fishes among the order Perciformes (currently Carangiformes). Most of them are schooling species, widely distributed in all tropical and subtropical seas. They are ecologically and economically very important group because most of them are important food fishes, though, some species also known to cause ciguatera poisoning (Smith-Vaniz, 1984; Jacobina *et al.,* 2014). The family Carangidae was earlier placed among the perch-like fishes of the order Perciformes, but with the progress in molecular studies the family is now treated under a new order Carangiformes (Betancur-R *et al.,* 2013; Nelson *et al.,* 2016). Globally carangids comprise 151 species in 30 genera (Fricke *et al.,* 2020) and in Indian waters they are represented by 66 species belonging to 20 genera (Gopi & Mishra, 2015). Coastal waters of West Bengal, having 210 km long coastline and vast area of Sundarbans of which about 1,700 km^2 area is occupied by water bodies in the forms of river, canals and creeks as potential zone for fishery resource, is stated to have 25 species under 16 genera of Carangidae as per the report of the State Biodiversity Board (Sanyal *et al.*, 2012). However, further literature survey and present study gives us an idea that the coastal waters of West Bengal harbors as many as 41 species belonging to 18 genera.

During the survey of Ichthyofauna from northern east coast of India in the years 2012-2018, five more species of fishes of the family Carangidae have been collected and confirmed their distribution along West Bengal coast, viz, *Alepes melanoptera* (Swainson, 1839), *Carangoides talamparoides* Bleeker, 1852, *Decapterus macrosoma* Bleeker, 1851, *Seriolina nigrofasciata* (Rüppell, 1829) and *Ulua mentalis* (Cuvier, 1833). All these five species of the family Carangidae are reported here for the first time from West Bengal coast. Systematic accounts of all these species are provided in this paper to document their first record from the state.

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Article Received on: 26.08.2020 Accepted on: 07.09.2021

Material and Methods

All the specimens were collected from Digha Mohona and Shankarpur during local survey by the first author, (Dipanjan Ray) from fishermen. The collected specimens were usually known to have captured by bottom trawl nets from the Exclusive Economic Zone off West Bengal state. Identification, measurement and counting were carried out following Talwar and Kacker, (1984); Smith-Vaniz, (1984, 1999) and Joshi *et al.,* (2011). Photographs were taken in fresh condition. After correct determination, the specimens were preserved in 10% formalin. The preserved specimens were deposited in the museum collections of Marine Aquarium and Research Centre (MARC), Zoological Survey of India (ZSI), Digha, West Bengal.

Abbreviations used: D – Dorsal fin; A – Anal fin; P – Pectoral fin; V – Pelvic fin; LL – Lateral line scales; GR – Gill rakers; SL – Standard length; HL- Head length.

Details of voucher specimens of carangid species examined from Digha coast during the study period are given in Table 1.

Results

During the study a total of 27 species from the family Carangidae were collected (Table 1) from the West Bengal coast, of which 5 species are being reported hereunder for the first time from the State. Detail taxonomic account of those 5 species with material evidence is given here confirming their occurrence along West Bengal coast.

Alepes melanoptera (Swainson, 1839): Black fin scad (Figure 1)

1839. *Trachinus (Alepes) melanoptera* Swainson, *Nat. Hist. Classification*, **2**: 248 (type-locality: Vizagapatnam, India).

Diagnosis: D VIII+I, 24; A II+I, 21; P 21; V I, 5; GR 30; LL scutes 52. Body depth 2.6 in SL; HL 3.2 in SL; eye diameter 3.9 in HL, second dorsal fin base 2.5 in SL. Dorsal and ventral profile of body equally convex; adipose eyelid well developed on the posterior half of the eye; supramaxilla small without spine like anterior projection; both jaws with single row of numerous close-set small teeth. Body coloured bluish-grey dorsally and

Table 1. Materials of the family Carangidae studied from Digha coast

Sl. No.	Species	Registration Number	Ex.	Standard Length (in mm)	Date of collection
1.	*Alectis ciliaris* (Bloch, 1787)	MARC/ZSI/F1949	01	188	13.10.2011
2.	*Alectis indicus* (Ruppell, 1830)	MARC/ZSI/ F1867	01	172	05.10.2011
3.	*Alepes djedaba* (Forsskål, 1775)	MARC/ZSI/F1702	08	71-108	26.06.1995
4.	*Alepes kleinii* (Bloch 1793)	MARC/ZSI/F2652	02	110-116	18.07.2011
5.	***Alepes melanoptera* (Swainson, 1839)**	MARC/ZSI/F2653	01	121	02.09.2012
6.	*Atropus atropos* (Bloch & Schneider, 1801)	MARC/ZSI/F1742	01	85	11.04.2011
7.	*Carangoides armatus* (Rüppell 1830)	MARC/ZSI/F2703 MARC/ZSI/F2885	01 01	88-102	03.10.2012
8.	*Carangoides coeruleopinnatus* (Rüppell 1830)	MARC/ZSI/F1616	04	119-135	03. 12.1992
9.	*Carangoides ferdau* (Forsskål 1775)	MARC/ZSI/F1743	04	62-114	01.04.2011
10.	*Carangoides hedlandensis* (Whitley 1934)	MARC/ZSI/F2345	01	138	18.02.2012
11.	*Carangoides malabaricus* (Bloch & Schn., 1801)	MARC/ZSI/F2944	02	71-94	22.03.2013
12.	*Carangoides praeustus* (Anon. [Bennett], 1830)	MARC/ZSI/F2975	02	71-77	18.03.2013
13.	***Carangoides talamparoides* (Bleeker, 1852)**	MARC/ZSI/F2884	01	98	02.09.2012

14.	*Caranx heberi* (Bennett, 1830)	MARC/ZSI/F2061 MARC/ZSI/F2293	01 01	163-172	07.11.2011
15.	*Caranx sexfasciatus* Quoy & Gaimard, 1825	MARC/ZSI/F1744	01	76	01.04.2011
16.	***Decapterus macrosoma* (Bleeker, 1851)**	MARC/ZSI/F2651	06	132-147	24.10.2011
17.	*Decapterus russelli* (Ruppell, 1830)	MARC/ZSI/F1912	06	121-132	08.06.2011
18.	*Elagatis bipinnulata* (Quoy & Gaimard, 1825)	MARC/ZSI/F2320	02	194-223	15.02.2012
19.	***Gnathanodon speciosus* (Forsskål, 1775)**	MARC/ZSI/F3778	01	76	16.07.2014
20.	*Megalaspis cordyla* (Linnaeus, 1758)	MARC/ZSI/F2291	01	125	11.02.2012
21.	*Naucrates doctor* (Linnaeus, 1758)	MARC/ZSI/F2784	01	112	02.12.2012
22.	*Parastromateus niger* (Bloch, 1795)	MARC/ZSI/F2448	01	109	03.05.2012
23.	*Scomberoides commersonnianus* Lacepede 1801	MARC/ZSI/F1773	04	102-116	18..204011
24.	*Selaroides leptolepis* (Cuvier 1833)	MARC/ZSI/F1771	04	72-81	18.04.2011
25.	***Seriolina nigrofasciata* (Ruppell, 1829)**	MARC/ZSI/F1899, MARC/ZSI/F2168 MARC/ZSI/F2283	01 02 02	158-210	01.08.2011 02.12.2011 10.02.2012
26.	***Ulua mentalis* (Cuvier, 1833)**	MARC/ZSI/F2062	01	152	07.11.2011
27.	***Uraspis helvola* (Forster 1801)**	MARC/ZSI/F2898	01	86	03.03.2013

silvery ventrally; spinous dorsal fin distinctly dark black; other fins light yellowish; opercular margin with a dusky blotch (Figure 1).

Figure 1. *Alepes melanoptera* (Swainson, 1839).

Distribution: Widely distributed in tropical Indo-west Pacific, from Persian Gulf, through India, Sri Lanka, eastward to Gulf of Thailand, South China Sea, Indonesia and the Philippines (Smith-Vaniz, 1999). From Indian coast this species was reported from Tamil Nadu, Karnataka, Kerala, Andhra Pradesh and Andaman Islands (Joshi *et al.,* 2011), Maharashtra (Barman *et al.*, 2012), Gujarat (Barman *et al.,* 2000).

Remarks: The present report forms the first record of *Alepes melanoptera* (Swainson, 1839) from West Bengal coast. This species can be distinguished from its congeners that occur in this region by distinguishable black colouration of the spinous dorsal fin which is absent (mostly hyaline) in all other *Alepes* species.

Carangoides talamparoides Bleeker, 1852**:** Imposter trevally (Figure 2)

Figure 2. *Carangoides talamparoides* Bleeker, 1852.

1852. *Carangoides talamparoides* Bleeker, *Verh. Batav. Genoot. Kunst. Wet.*, **24**: 91 (type locality: Sibogha, western Sumatra, Indonesia).

Diagnosis: D VIII + I, 22; A II, I+18; P 19; GR 29 (including rudiments); LL scutes 27. Body depth about

1.5 in SL; HL 3.4 in SL; eye diameter 3.4 in HL; dorsal profile of head elevated to nape, adipose eyelid feebly developed; both jaws with a band of minute teeth; rough, triangular patch of teeth present on vomer. Breast from anterior part of pectoral fin (including pectoral fin base) to behind the pelvic fin without scales, naked area extends to above pectoral fin base. Dorsal part of body silvery blue and ventral part silvery white; upper margin of opercle with a small black spot; 2nd dorsal and anal fin dusky; caudal fin yellowish with dark margin.

Distribution: Indo-West Pacific: from Gulf of Aden, Gulf of Oman, through Sri Lanka eastward to Gulf of Thailand, Sumatra, the Phillipines, east to Guam, New Guinea, north to Japan and south to Australia (Froese & Pauly, 2020). From Indian coast this species was reported from Andhra Pradesh, Tamil Nadu, Kerala (Joshi *et al.,* 2011), Karnataka (Barman *et al.,* 2013), Maharashtra (Barman *et al.,* 2012) and Gujarat (Barman *et al.,* 2000), Andaman and Nicobar Islands (Rajan & Mishra, 2020).

Remarks: The present record forms the first report of *C. talamparoides* from West Bengal coast. This species closely resembles *Carangoides malabaricus* (Bloch & Schneider 1801) in having naked breast from behind pelvic fin to pectoral fin base and a naked area above pectoral base and is also occur in this region. However, *C. malabaricus* differs in having lesser body depth (43–55% of SL vs 55–77% SL in *C. talamparoides*) and more gill rakers on first arch (33–37 vs 27–30) (Joshi *et al.*, 2011).

Decapterus macrosoma Bleeker, 1851: Short fin scad (Figure 3)

1851. *Decapterus macrosoma* Bleeker, *Natuurk. Tijdschr. Ned.-Indie*, **1**(4): 358 (type locality: Jakarta, Java, Indonesia).

Diagnosis: D VIII, I + 34–35 + 1 (finlet); A II, I+ 29–30 + 1 (finlet); P 20–21; V I, 5; GR (9–10) + (35–37). Body depth 6.5–6.7 in SL; HL 3.7–3.9 in SL; eye diameter 4.1–4.4 in HL. Body nearly rounded, not distinctly laterally compressed. Adipose eyelid well developed. Posterior end of upper jaw concave dorsally and rounded below. Lateral line slightly curved, curved portion longer than straight part, becoming straight below 15th soft dorsal ray; straight part of lateral line with 18-24 scales and 29–32 scutes, height of largest scute less than eye diameter. Shoulder girdle margin is with two papillae. Dorsal and anal fin with a terminal detached finlet. Colour: Dorsal part bluish green, silvery below; fins light yellow; tongue whitish.

Distribution: Indo-Pacific and Southeast Atlantic: Knysna to Natal, South Africa to Persian Gulf and the Red Sea, east to Hawaiian Islands, north to Japan, south to Australia, New Caledonia, Tonga; eastern Pacific from Galapagos Islands to Gulf of California and Peru (Fricke *et al.,* 2020). From Indian coast this species was reported from Andhra Pradesh, Kerala, Karnataka, Tamil Nadu (Joshi *et al.*, 2011), Maharashtra (Barman *et al.*, 2012), Gujarat (Barman *et al.*, 2000) and Andaman and Nicobar Islands (Rajan & Mishra, 2020).

Remarks: *Decapterus macrosoma* is herewith reported for the first time from West Bengal. This species can be distinguished from its congeners in having posterior end of upper jaw concave above (vs straight in all congeners) and straight part of lateral line with 14 to 29 scales (*vs* 0 to 15 scales in other congeners) (Smith-Vaniz, 1999). The other species in the genus *Decapterus* reported from West Bengal coast is *D. russelli* (Rüppell, 1830). Apart from the upper jaw character stated above, *D. russelli* differs in having lesser scales (0-4) on straight part of lateral line, and longer pectoral fin, that extending to level of second dorsal fin origin (fin length 76-97% of HL *vs* 61-75% of HL in *D. macrosoma, i.e.,* not reaching to level of second dorsal fin origin) (Smith-Vaniz, 1999).

Figure 3. *Decapterus macrosoma* Bleeker, 1851.

Seriolina nigrofasciata (Ruppell, 1829): Black banded trevelly (Figure 4)

1829. *Nomeus nigrofasciatus* Rüppell, *Atlas Reise nördl. Africa. Fische Rothen Meeres*: 92, pl. 24, fig. 2 (type locality: Massawa, Eritrea, Red Sea).

Diagnosis: D VII + I, 31; A I, 17; P 17; V I, 5; GR 7-8 (mostly rudiments). Body depth is 3.6-3.7 in SL; HL 3.1-3.4 in SL; eye 4.1-4.4 in HL. Upper jaw broadly rounded posteriorly and vertically reaching below posterior margin of eye; adipose eyelid feebly developed, forming a rim only. Anal fin base distinctly shorter than dorsal fin base; cutaneous keel present on caudal peduncle; caudal peduncle groove present on both upper and lower side. Lateral line slightly elevated over pectoral fin, without

scutes. Colour: dorsally bluish grey and ventrally silvery white. Seven dark oblique bands present on upper part of body; spinous dorsal fin dark, soft dorsal and anal fin dusky brown with white tip; caudal, pectoral and pelvic fin yellowish.

Distribution: Indo-West Pacific: Red Sea and East Africa to Japan, Australia and Solomon Island. Southeast Atlantic: southeast coast of South Africa (Froese & Pauly, 2020). From Indian coast this species was reported from Andaman Islands, Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Maharashtra (Joshi *et al.* 2011), Lakshadweep Islands (Rajan *et al*., 2021), Gujarat (Barman *et al.*, 2000), and Odisha (Roy *et al.*, 2017).

Remarks: The genus *Seriolina* Wakiya, 1924 is monotypic, known by single species. The present record forms its first report from West Bengal coast. This species is clearly distinguished from other genera of the family by having elongated maxilla vertically extending to below posterior margin of eye, 4 to 10 numbers of mostly rudimentary gill rakers on first arch, absence of lateral line scutes and anal fin base shorter than dorsal fin base.

Figure 4. *Seriolina nigrofasciata* (Ruppell, 1829).

Ulua mentalis (Cuvier, 1833): Longrakered trevelly (Figure 5)

1833. *Carasx mentalis* Cuvier (*ex* Eherenberg), in Cuvier and Valenciennes, *Hist. nat. Poiss*., **9**: 124 (type-locality: Massawa, Eritrea, Red Sea).

Diagnosis: D VIII, I + 21; A II, I + 18; P 20; GR 24+56; LL scutes 32. Body depth is 3.8 in SL; HL 3.5 in SL; eye diameter 3.3 in HL. Lower jaw longer than upper jaw; maxilla reaches below the middle of eye; adipose eyelid feebly developed, forming a rim and covering outer margin of eye. Jaws with row of small teeth; vomer and palatines with villiform teeth; teeth absent on tongue; gill rakers long, feather-like, projecting into mouth along side of tongue. Scales absent on breast from behind pelvic fin origin to pectoral fin base. Colour: Bluish green dorsally and silvery white ventrally; lower jaw whitish; corner of mouth with a dusky patch. First dorsal fin semi transparent, other fins whitish.

Distribution: Indo-West Pacific: East Africa, Madagascar, Red Sea, eastward to Taiwan, Philippines and Australia (Froese & Pauly, 2020). From Indian coast this species was reported from Andaman Islands, Andhra Pradesh, Tamil Nadu, and Kerala (Joshi *et al.,* 2011). It is also listed from Lakshadweep Islands by Rao (1991) as *Ulua mandibularis* (Macleay).

Remarks: The present record forms the first report of *U. mentalis* from West Bengal coast. This species can be distinguished from other carangids occurring in this region by distinctive long feather-like gill rakers that project into mouth along side of tongue, which is more than 70 in number (vs less than 62 in other *Ulua* species known) (Smith-Vaniz, 1999).

Figure 5. *Ulua mentalis* (Cuvier, 1833).

Discussion

A cursory survey of literature reveals that Misra (1962) has reported 23 species of carangids (Table 1) including *Caranx carangus* (Bloch), *Caranx sansun* (Forsskål), *Scomberoides sanctipetri* (Cuvier) and *Scomberoides lysan* (Forsskål), while former two species are synonym of *Caranx ignobilis* (Forsskål) (Barman *et al.,* 2013; Kottelat, 2013) and last two species are conspecific as *S. lysan* (Forsskål) (Smith-Vaniz, 1999). After laps of three decades, Talwar *et al.* (1992) listed 25 species from coastal waters of West Bengal, of which *Carangoides chrysophrys, Scomberoides commersonnianus* and *Uraspis uraspis* are three confirmed additions, while five additional species, viz., *Alepes vari* (Cuvier), *Carangoides praeustus* (Bennett), *Caranx melampygus* Cuvier, *Gnathanodon speciosus* (Forsskål) and *Uraspis helvolus* (Forster), were doubtfully

included with question mark. In another simultaneous publication, Goswami (1992) listed only 13 species including *Alepes vari* and *Carangoides praeustus*, of which five species, *i.e.*, *Carangoides coeruleopinnatus*, *C. ferdau, C. hedlandensis, Naucrates ductor* and *Scomberoides tol*, are additional records to carangid fauna of West Bengal. Das *et al*. (2007) gave a list of 31 species of caragid fishes from West Bengal with the additional name of *Selaroides leptolepis* (Cuvier). Joshi *et al*. (2011) additionally stated occurrence of *Caranx sem* Cuvier 1833, a junior synonym of *Caranx heberi* (Bennett, 1830) (Smith-Vaniz, 1999), along West Bengal. Chaterjee *et al.* (2000) recorded only five species of carangids from Digha coast, while Yennawar *et al.* (2017) listed 17 species from the same area with the report of *Caranx hippos* (Linnaeus). Sanyal *et al.* (2012) provided a list of 25 species of carangid fishes from West Bengal coast, including the species doubtfully included by Talwar *et al.* (1992).

Workers usually confused over identity of *Caranx carangus* (Bloch) reported from India. Yennawar *et al.* (2017) probably followed Smith-Vaniz and Carpenter (2007) to report *Caranx hippos* against the reported species *Caranx carangus*. Day (1875) described *Caranx carangus* having 'breast scaleless except for a patch in front of ventral fin and no opercular spot' and *Caranx hippos* having 'completely scaled breast and small opercular spot'. *Caranx hippos* of Day (1875) should be referred as *Caranx sexfasciataus* Quoy and Gaimard (Talwar & Kacker, 1984; Barman *et al.,* 2013). Barman *et al.* (2013) also observed that 'distinction of *C. carangus* and *C. ignobilis* in Talwar and Kacker (1984) as well as Talwar and Jhingran (1991), where a lower count of lateral line scutes for *C. ignobilis* has been recorded, is erroneous' and at the same time they inferred that Indian records of *C. carangus* should be considered as *C. ignobilis* (Forsskål). Joshi *et al.* (2011) distinguished *C. carangus* having "breast completely scaled and a small, black spot present on the upper margin of the opercle", similar to the characters mentioned for *C. hippos* in Day (1875) and placed in the same couplet with *C. sexfasciatus*. Further, they have not considered the fact that *Scomber carangus* Bloch is now treated as *Caranx hippos* (Linnaeus) (Smith-Vaniz & Carpenter 2007), which is an Atlantic species.

Thus, only 36 species were reported from West Bengal till date (Table 2). The present paper records five more species, namely, *Alepes melanoptera, Carangoides talamparoides, Decapterus macrosoma, Seriolina nigrofasciata* and *Ulua mentalis,* for the first time from West Bengal coast and confirming occurrence of *Gnathanodon speciosus* as well, increasing total carangid diversity of the coastal waters of the state to 41 species under 18 genera.

Table 2. Carangid species available along West Bengal coast with corresponding reference

Sl. No.	Species	Reference	Recorded as
1.	*Alectis ciliaris* (Bloch, 1787)	Misra (1962): 233 Talwar *et al.* (1992): 286 Joshi *et al.* 2011: 35-42	*Alectis ciliaris* **(Bloch)**
2.	*Alectis indicus* (Ruppell, 1830)	Misra (1962): 234 Talwar *et al.* (1992): 286 Goswami (1992): 131 Joshi *et al.* (2011): 43-48	*Alectis indicus* **(Ruppell)**
3.	*Alepes djedaba* (Fabricius, 1775)	Misra (1962): 236 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 49-56	*Sellar djedaba* **(Forsskål)** *Alepes djedaba* **(Forsskål)**
4.	*Alepes kleinii* (Bloch 1793)	Misra (1962): 237 Das *et al* (2007)	*Sellar kalla* **(Cuvier)** *Alepes kalla* **(Cuvier)**
5.	*Alepes melanoptera* (Swainson, 1839)	**Present Paper**	
6.	*Alepes vari* (Cuvier 1833)	Talwar *et al.* (1992): 286 Goswami 1992: 131	? *Alepes vari* **(Cuvier)** *Alepes vari* **(Cuvier)**

7.	*Atropus atropos* (Bloch & Schneider, 1801)	Misra (1962): 233 Talwar *et al.* (1992): 286 Goswami (1992): 131	*Atropus atropus* **(Schneider)**
8.	*Atule mate* (Cuvier, 1833)	Misra (1962): 237 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 83-88	*Sellar mate* **(Cuvier)** *Atule mate* **(Cuvier)**
9.	*Carangoides armatus* (Rüppell 1830)	Misra (1962): 238 Joshi *et al.* (2011): 92-98	*Citula armata* **(Forsskål)** *Carangoides armatus* **(Rüppell)**
10.	*Carangoides chrysophrys* (Cuvier, 1833)	Talwar *et al.* (1992): 286	*Carangoides chrysophrys* **(Cuvier)**
11.	*Carangoides coeruleopinnatus* (Rüppell 1830)	Goswami (1992): 131	*Carangoides coeruleopinnatus* **(Rüppell)**
12.	*Carangoides ferdau* (Fabricius 1775)	Goswami (1992): 131	*Carangoides ferdau* **(Forsskål)**
13.	*Carangoides hedlandensis* (Whitley 1934)	Goswami (1992): 131	*Carangoides hedlandensis* **(Whitley)**
14.	*Carangoides malabaricus* (Bloch & Schneider, 1801)	Misra (1962): 238 Talwar *et al.* (1992): 286 Goswami (1992): 131 Joshi *et al.* (2011): 152	*Citula malabaricus* **(Schneider)** *Carangoides malabaricus* **(Bloch & Schn.)**
15.	*Carangoides oblongus* (Cuvier 1833)	Misra (1962): 239 Joshi *et al.* (2011): 159	*Citula oblongus* **(Cuvier)** *Caranx oblongus* **(Cuvier)**
16.	*Carangoides praeustus* (Anonymous [Bennett] 1830)	Talwar *et al.* (1992): 286 Goswami (1992): 131	**?***Carangoides praeustus* **(Bennett)** *Carangoides praeustus* **(Bennett)**
17.	*Carangoides talamparoides* Bleeker, 1852	**Present Paper**	
18.	*Caranx heberi* (Bennett, 1830)	Joshi *et al.* (2011): 229	*Caranx sem* **(Cuvier)**
19.	*Caranx ignobilis* (Forsskål, 1775)	Misra (1962): 239 Misra (1962): 240 Talwar *et al.* (1992): 286 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 195 Joshi *et al.* (2011): 202 Yennawar *et al.* (2017): 7	*Caranx carangus* **(Bloch)** *Caranx sansun* **(Forsskål)** *Caranx ignobilis* **(Forsskål)** *Caranx carangus* **(Bloch)** *Caranx carangus* **(Bloch)** *Caranx ignobilis* **(Forsskål)** *Caranx hippos* **(Linnaeus)**
20.	*Caranx melampygus* Cuvier 1833	Talwar *et al.* (1992): 286	*Caranx melampygus* **Cuvier**
21.	*Caranx sexfasciatus* Quoy & Gaimard, 1825	Misra (1962): 240 Talwar *et al.* (1992): 286 Goswami (1992): 132 Joshi *et al.* (2011): 236	*Caranx sexfasciatus* **Quoy & Gaimard**
22.	*Decapterus macrosoma* Bleeker, 1851	**Present Paper**	
23.	*Decapterus russelli* (Ruppell, 1830)	Misra (1962): 234 Talwar *et al.* 1992: 286 Joshi *et al.* 2011: 264	*Decapterus russelli* **(Ruppell)**
24.	*Elagatis bipinnulata* (Quoy & Gaimard, 1825)	Misra (1962): 241 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 333	*Elagatis bipinnulata* **(Quoy & Gaimard)**
25.	*Gnathanodon speciosus* (Forsskål, 1775)	Talwar *et al.* (1992): 286	**?***Gnathanodon speciosus* **(Forsskål)**
26.	*Megalaspis cordyla* (Linnaeus, 1758)	Misra (1962): 235 Talwar *et al.* (1992): 286 Goswami (1992): 131 Joshi *et al.* (2011): 283	*Megalaspis cordyla* **(Linnaeus)**

27.	*Naucrates ductor* (Linnaeus, 1758)	Goswami (1992): 132	*Naucrates ductor* **(Linnaeus)**
28.	*Parastromateus niger* (Bloch, 1795)	Misra (1962): 300 Talwar *et al.* (1992): 289 Joshi *et al.* (2011): 289	*Parastromateus niger* **(Bloch)**
29.	*Scomberoides commersonnianus* Lacepede 1801	Talwar *et al.* (1992): 286 Yennawar *et al.* (2017): 8	*Scomberoides commersonnianus* **Lacep.**
30.	*Scomberoides lysan* (Fabricius 1775)	Misra (1962): 242 Misra (1962): 242 Talwar *et al.* (1992): 286 Goswami (1992): 133 Joshi *et al.* (2011): 368	*Scomberoides lysan* **(Forsskål)** *Scomberoides sanctipetri* **(Cuvier)** *Scomberoides lysan* **(Forsskål)**
31.	*Scomberoides tala* (Cuvier 1832)	Misra (1962): 243 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 374	*Scomberoides tala* **(Cuvier)**
32.	*Scomberoides tol* (Cuvier 1832)	Goswami (1992): 133	*Scomberoides tol* **(Cuvier)**
33.	*Selar crumenophthalmus* (Bloch 1793)	Misra (1962): 236 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 301	*Selar crumenophthalmus* **(Bloch)**
34.	*Selaroides leptolepis* (Cuvier 1833)	Das *et al* (2007) Yennawar *et al.* (2017): 8	*Selaroides leptolepis* **(Cuvier)**
35.	*Seriolina nigrofasciata* (Ruppell, 1829)	**Present Paper**	
36.	*Trachinotus baillonii* (Lacepède 1801)	Misra (1962): 243 Joshi *et al.* (2011): 387	*Trachinotus baillonii* **(Lacepède)**
37.	*Trachinotus blochii* (Lacepède 1801)	Misra (1962): 244 Talwar *et al.* (1992): 286 Joshi *et al.* (2011): 393	*Trachinotus blochii* **(Lacepede)**
38.	*Trachinotus botla* (Shaw 1803)	Misra (1962): 244 Joshi *et al.* (2011): 407	*Trachinotus russellii* **Cuvier** *Trachinotus botla* **(Shaw)**
39.	*Ulua mentalis* (Cuvier, 1833)	**Present Paper**	
40.	*Uraspis helvola* (Forster 1801)	Talwar *et al.* (1992): 286	**?** *Uraspis helvolus* **(Forster)**
41.	*Uraspis uraspis* (Gunther 1860)	Talwar *et al.* (1992): 286	*Uraspis uraspis* **(Gunther)**

Acknowledgement

The authors are thankful to the Director, Zoological Survey of India, Kolkata for facilities and permission.

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