FISH FAUNA OF THE PADMA-MEGHNA RIVER CONFLUENCE OF BANGLADESH

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Abstract

Finfish fauna investigation of the Padma-Meghna confluence, the biggest river-confluence of Bangladesh at Chandpur, was made on monthly basis from June 2014 to February 2015. During the study period, a total of 1053 catch-samples of fishes by 13 different gears (viz. gill net, seine net, set bag net, lift net, cast net, drag net, traps, barriers, hooks and lines) was examined. A total of 101 finfish species belonging to 12 orders, 36 families and 78 genera was identified. Maximum number of finfish species was recorded under the family Cyprinidae (25 species) followed by Bagridae (7 species). Among the recorded finfish species six are critically endangered, fifteen endangered, eleven vulnerable, one least concern, and five species with data deficient. One finfish species, *Glossogobius aureus* was the new record from inland waters of Bangladesh. The study shared the fin fishes of both the rivers along with migratory and other resident fishes. They are marine migrants (e.g. *Tenualosa ilisha*, *Polynemus paradiseus* and *Ilisha megaloptera),* estuarine migrants (e.g. *Glossogobius aureus*, *Oxyurichthys microlepis*, *Parapocryptes batoides* and *Otolithoides pama),* confluence and riverine residents (e.g. *Rhinomugil corsula* and *Canthophrys gongota),* riverine migrants (e.g. *Catla catla*, *Labeo rohita*, *L. calbasu* and *Cirrhinus mrigala),* catadromous migrant (e.g. *Anguilla bengalensis).* Two exotic species, *Aristichthys nobilis* and *Cyprinus carpio* were also recorded from this confluence area. Together with the earlier works, 199 fish species in the entire confluences (Padma and Meghna) were recorded. To protect the fish diversity, Padma-Meghna river confluence and its fishery resources should be conserved for enhancement of the economy as powerful bioresource of the country.

Keywords: Fish fauna, Padma-Meghna river confluence, fish diversity, IUCN status.

INTRODUCTION

The Padma-Meghna confluence is very important ecologically and from fisheries point of view as it is the mixing zone of a lot of catchment areas conjunctioned from some biggest rivers (i.e. Padma, Meghna, Jamuna, Surma and Kushiara) of Bangladesh. Padma is one of the major biggest transboundary rivers of Bangladesh and a main distributary of the mighty river Ganges (in Indian region) which enters Bangladesh from India near Chapai Nababganj (Rajshahi District). It meets the river Jamuna near Aricha, finally meets with the Meghna confluence (Padma-Meghna river confluence) near Chandpur after traversing 120 kilometers. The river Meghna is formed above the Bhairab Bazar by rejoining the Surma and Kushiyara rivers. Surma (Northern side) and Kushiyara (Southern side) are originated by the result of bifurcation of the transboundary river Barak (in Assam, India) at the entering point into Bangladesh. The river Meghna, from Bhairab Bazar to Chandpur, is known as Upper Meghna which traversed 80 km before joining with the Padma at Chandpur (Padma-Meghna confluence). After that it is referred to as the lower Meghna and traversed 160 km before empties into the Bay of Bengal in Bhola district via four principal mouths, named Tetulia (Ilsha), Shahbazpur, Hatia, and Bamni.

Padma-Meghna river system flowing through Bangladesh plain drains an area of some 1.5 million square kilometers. Numerous channels of the Padma-Meghna point, its distributaries, and smaller parallel rivers that flow into the Bay of Bengal are referred to as the Ganges-mouth. The Padma (120 km within Bangladesh territory) is the habitat of the richest freshwater fish fauna of Bangladesh (Jones *et al.*, 2003) and also believed to be an important spawning and feeding ground for riverine fish species of northwestern Bangladesh (Hossain, *et al.* 2012). Padma river is also the habitat of a rich variety of non-commercial and commercial fish species which are captured by the small and large scale fishers throughout the year (Hossain *et al*. 2009). Meghna is the largest and longest river (240 km) in Bangladesh and also the widest (12 km near Bhola) river among those that flow completely inside the

boundaries of Bangladesh. The prime river systems, Padma-Meghna formed the biggest confluence of Bangladesh. This confluence is home for the Hilsa sanctuary, Hilsa spawning ground, inland fish capturing; and trading center of Bangladesh. As per literature reviewed, studies on Ichthyofaunal diversity were not made on the Padma-Meghna river confluence. A few works on fish diversity, abundance and distribution of fin fish were done only in the upper region of Padma river, Meghna river and its estuary area, and in other rivers of Bangladesh (Kibria *et al.* 1979, Islam and Hossain 1983, Hossain and Haque 2005, Bhuiyan *et al*. 2008, Hossain *et al.* 2012, Rahman *et al*. 2012, Mohsin *et al*. 2013, Mia *et al.* 2015, Azadi and Arshad-Ul-Alam 2013, 2014, 2015).

Francis Hamilton is the pioneer for the study of freshwater fish fauna of Indian subcontinent as a historical works on the fishes of the Ganges in two volumes. The volumes contain scientific descriptions of 271 species of fishes. The next scientific account of the fish fauna of the Indian subcontinent was published in two volumes by Day (1889) in which he described over 1400 species. Other authors who contributed significantly to the study of the freshwater fish faunal taxonomy of Bangladesh and India were Shaw and Shebbeare (1937), Ahmad (1953), Bhuiyan (1964), Shafi and Quddus (2001), Talwar and Jhingran (1991), Jayaram (1981, 1999) and Rahman (2005).

The present investigation was undertaken to document the fish fauna of the Padma-Meghna river confluence area in Chandpur district. With a view, this study will be of much useful to researchers, fishery biologist, fishery managers and policy makers.

MATERIAL AND METHODS

Sampling Area

Fish samples were collected from three stations, namely Station 1 (S_1), Station 2 (S_2) and Station 3 (S_3) covering entire Padma-Meghna river confluence (Table 1 and Fig. 1). All the three stations were situated in Chandpur Sadar Upazila at Chandpur District, Bangladesh. Chandpur is one of the most important river ports of Bangladesh. The rivers Padma and Meghna are the major riverine systems in this delta. The joining of these two largest and longest river systems built Padma-Meghna River confluence. This confluence has a great tributary name 'Dakatia River' which is 207 km in length. Most of the river waters of the country are being discharged in this confluence. The confluence is important for Hilsa spawning, navigation route, fish production and fish trading ground. The locations of the sampling stations were determined by the help of GPS (Geographical Positioning System) tools (Table 1).

Table 1. Location of three sampling stations (S_1, S_2 & S_3) in the Padma-Meghna river confluence.

Station	Location	Latitude	Longitude
S_1	Kollanpur, Chandpur- Upstream of the river Meghna.	23º26′78.675″N	90º65′35.914″E
S_2	Tarabunia, Chandpur-Mouth point of the river Padma.	23º24′67.48″N	90º60′45.06″E
S_3	Sakhua, Chandpur- Downstream of the river Meghna.	23º19′64.079″N	90º65′35.914″E

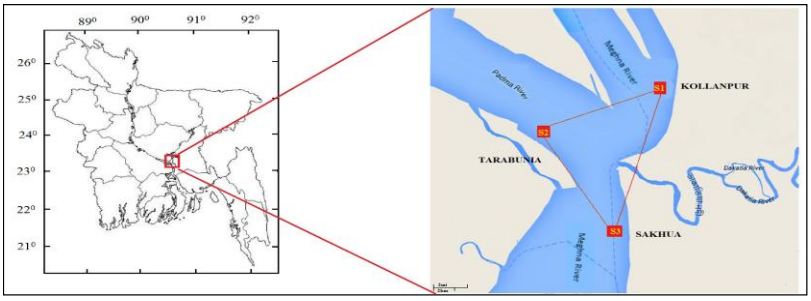

Fig. 1. The confluence of Padma-Meghna river in Chandpur district showing three sampling stations (S_1, S_2 and S_3).

Distance between the Station 1 and Station 2 is 3.75 km, while Station 1 and Station 3 is 5.5 km and Station 2 and Station 3 is 4.12 km. This is a tidal covered confluence area. The Padma-Meghna river confluence is a powerful mixing zone of lot of major water basins of Northern region of the country. The collected fishes were arranged chronologically to identify species under the headings of order, family, scientific names, habitat preference, status and habit for interpretation.

Sampling Period

Sampling was made monthly from June 2014 to February 2015 at the confluence of the Padma-Meghna river. No sampling was made during March, April and May 2015 as fishes during these three months has been banned in this confluence since the year 2005. This decision has been taken for facilitating the spawning of *Hilsa.* Due to the formation of *Hilsha* spawning ground, Bangladesh Government has declared Hilsha Sanctuary (fishing restricted zone) from Shatnol of Chandpur district to Char Alexander of Laxmipur (100 km of lower Meghna estuary). Monthly samplings were made during full moon or new moon time in each of the three stations (S_1, S_2 and S_3). Lunar cycle was followed for sampling due to the reason that fish catch rate was found higher during the full moon or new moon time.

Sample Collection and identification

Monthly fish samples were collected from the selected Stations (S_1, S_2 and S_3) in the Padma-Meghna river confluence by using nine types of non-selective and selective fishing gears (viz. gill net, seine net, set bag net, lift net, cast net, drag net, traps, barriers, hooks and lines). They were traditionally found in the sampling area. Fish samples were collected from the fishermen catch as well as by the researchers using non-selective gears with the help of old fishers during the monthly sampling period. Photographs of fishes were taken in fresh condition by a Sony Cyber Shot Compact Camera (DSC-HX9V). They were noted with their external features and colour patterns. Collected specimens were immediately kept in the insulated ice box and carried to the Fisheries Lab, Zoology Department, Chittagong University. They were kept in 7% formaldehyde solution for further study. The fish specimens were identified by following Day (1889), Munro (1955), Bhuiya (1964), Jayaram (1981, 1999), Shafi and Quddus (2001), Rahman (2005), Kabir *et al.* (2007) and Azadi and Arshad-Ul-Alam (2013). Scientific names of all the genera and species listed in accordance with the rules and principles as set forth in the international code. Known vernacular names were also provided. 'Fishbase' website was consulted for information on synonyms. IUCN Bangladesh (2000) was followed to determine the national biodiversity threat status of the identified fish species. Systematic index with local name, common English name, habitat preference, and ecological role were provided.

RESULTS AND DISCUSSION

During the present study (June 2014 to February 2015), a total of 101 finfish species under 12 orders, 36 families and 78 genera was identified from the confluence of the River Padma and Meghna. Systematic index, distribution, IUCN status and ecological role of the identified fin fishes are presented in the Table 2. Out of the 101 finfish species identified under 36 families, maximum number of species was found under the family Cyprinidae (25 species) followed by Bagridae (7 species). Highest number of species under the family Cyprinidae were also recorded from the River Padma (43 species) by Hossain and Haque (2005); from the Sangu (26 species) by Azadi and Arshad-Ul-Alam (2014) and from the Halda (19 species) by Azadi and Arshad-Ul-Alam (2013, 2015). Rahman *et al.* (2012) studied biodiversity of finfish species by the commercial catch collected from a short distance area of the upper Padma River and documented 80 finfish species.

Table 2. Status, distribution and ecological role of 101 fin fishes in the 'Padma-Meghna River Confluence' during the study period from June 2014 to February 2015.

Order	Family	Scientific Name	Local name	English Name	Habitat preference	IUCN Status	Habit
Osteoglossiformes	Notopoteridae (2)	*Chitala chitala*	Chital	Humped Featherback	FR, OFB	EN	Predator/ Carnivore
		Notopterus notopterus	Foli	Grey Featherback	FR, B	VU	Predator/ Carnivore
Anguilliformes	Anguillidae (1)	*Anguilla bengalensis*	Bamosh	Indian Longfin Eel	FR, Et, S	VU	Predator
	Moringuidae (1)	*Moringua raitaborua*	Rata Boura	Purple Spaghetti Eel	ET	NO	Small predator
	Ophichthidae (1)	*Pisodonophis boro*	Chelloch	Boro Snake Eel	S, ET	NO	Carnivore
Clupeiformes	Clupeidae (6)	*Corica soborna*	Kachki	Ganges River Sprat	FR, L, ET	NO	Carnivore
		Gonialosa manmina	Goni Chapila	Ganges River Gizzard Shad	S, ET	NO	Plankton Feeder
		Ilisha megaloptera	Chokka	Bigeye Ilisha	FR	NO	Detrivore
		Pellona ditchela	Kharchuna	Big-eyed Herring	S, ET	NO	Plankton feeder
		Tenualosa ilisha	Illish	Hilsa Shad	S, ET	NO	Detrivore
		Gudusia chapra	Chapila	Indian River Shad	WFB	NO	Omnivore
	Engraulidae (1)	*Setipinna phasa*	Phaissha	Gangetic Hairfin Anchovy	ET	NO	Omnivore
Channiformes	Channidae (4)	*Channa marulius*	Gajar	Bullseye Snakehead	B	EN	Predator
		Channa orientalis	Gachua	Walking Snakehead	B	VU	Insect Feeder
		Channa punctata	Taki	Spotted Snakehead	B	NO	Carnivore
		Channa striata	Shol	Stripped Snakehead	B	NO	Predator
Cypriniformes	Cyprinidae (25)	*Amblypharyngodon microlepis*	Mola;	Indian Carplet;	WFB	NO	Omnivore
		Amblypharyngodon mola	Mola;	Mola Carplet;	WFB	NO	Omnivore
		Aristichthys nobilis	Bighead	Bighead Carp	WFR(ext)	NL	Plankton feeder
		Catla catla	Catla	Catla	FR, B	NO	Surface dwellers
		Chela cachius	Chepchela	Silver Hatchet Chela	WFB	DD	Larvivore
		Cirrhinus mrigala	Mrigal	Mrigal	FR, B	NL	Algal Feeder
		Cirrhinus reba	Bhagna	Reba	FR, B	VU	Plankton Feeder
		Cyprinus carpio	Carphu	Common Carp	WFB	NL	Omnivore
		Danio rerio	Anju	Zebra Danio	WFB	NL	Larvivore
		Esomus danricus	Darkina	Flying Barb	WFB	DD	Insectivore, Detrivore
		Labeo calbasu	Kalibaus	Kalbasu	FR, B	EN	Herbivore
		Labeo gonius	Goni	Kuria Labeo	FR, B	EN	Herbivore, Detrivore
		Labeo rohita	Rui,	Rohu	WFB	NO	Herbivore

		Osteobrama cotio	Dhela	Cotio	FR, B	EN	Omnivore
		Pethia conchonius	Kanchan Punti	Rosy Barb	FR, B	NO	Herbivore
		Pethia gelius	Gili Punti	Golden Barb	WFB	DD	Carnivore
		Pethia phutunio	Phutani Punti	Spotted Barb	FR, B	NO	Herbivore, Detrivore
		Pethia ticto	Tit Punti	Ticto Barb	FR, B	VU	Herbivore, Detrivore
		Puntius chola	Punti	Swamp Barb	FR, B	NO	Herbivore, Detrivore
		Puntius sophore	Jat Punti	Spotfin Swamp Barb	FR, B	NO	Herbivore, Detrivore
		Rasbora daniconius	Darkina	Common Rasbora	FR, B	NO	Detrivore
		Rasbora rasbora	Lezza darkina	Slender Rasbora	FR, B	NL	Detrivore
		Salmostoma bacaila	Narkali Chela	Large Razorbelly Minnow	FR, B	NO	Insect Feeder
		Salmostoma phulo	Fulchela	Finescale Razorbelly Minnow	FR, B	NO	Insect & algal Feeder
	Balitoridae (1)	*Acanthocobitis zonalternans*	Balichata	River Loach	FR	DD	Insectivore
	Cobitidae (2)	*Lepidocephalichthys guntea*	Gutum	Guntea Loach	FR	NO	Detrivore and Insectivore
		Canthophrys gongota	Poia	Gongota Loach	FR	NO	Insectivore
Siluriformes	Bagridae (7)	*Batasio tengara*	Tengra	Dwarf Catfish	FR	EN	Detrivore, Larvivore
		Mystus cavasius	Gulsha	Gangetic Mystus	FR, B	VU	Detrivore
		Mystus tengara	Bujuri	Stripped Dwarf Catfish	FR, B	NO	Larvivore, Detrivore
		Mystus vittatus	Tengra	Asian Stripped Catfish	FR, B	NO	Herbivore
		Rita rita	Rita	Rita	FR, BR	CR	Detrivore, Carnivore
		Sperata aor	Ayre	Long-whiskered Catfish	FR, B	VU	Predatore
		Sperata seenghala	Guijja Ayre	Gaint River-catfish	FR, B	EN	Predator
	Siluridae (3)	*Ompok bimaculatus*	Kani Pabda	Butter Catfish	FR, B	EN	Peaceful Omnivore
		Ompok pabda	Madhu Pabda	Pabdah Catfish	FR, B	EN	Peaceful Omnivore
		Wallago attu	Boal	Freshwater Shark	FR,B	NO	Voracious Predator

	Schilbeidae (6)	*Ailia colia*	Kajuli	Gangetic Ailia	FR	NO	Carnivore, Detrivore
		Clupisoma garua	Ghaura	Garua Bacha	FR,WFB	CR	Foul Feeder
		Eutropiichthys murius	Muri Bacha	Murius Bacha	FR	NO	Voracious Feeder
		Eutropiichthys vacha	Bacha	Bacha	FR	CR	Voracious Feeder
		Pseudeutropius atherinoides	Batasi	Indian potasi	FR	NO	Omnivore
		Silonia silondia	Shilong	Silond Catfish	ET	EN	Voracious Carnivore
	Pangasidae (1)	*Pangasius pangasius*	Pangas	Pungas	ET, FR	CR	Foul Feeder
	Sisoridae (5)	*Bagarius bagarius*	Baghair	Gangetic Goonch	FR	CR	Predator
		Gagata cenia	Cenia	Indian Gagata	FR	NO	Larvivore
		Gagata gagata	Gang Tengra	Gangetic Gagata	FR	NO	Detrivore
		Hara jerdoni	Kutakanti	Sylhet Hara	FR	NO	Detrivore
		Nangra nangra	Gang Tengra	Meghna Nangra	FR	NO	Bottom Feeder
	Claridae (1)	*Clarias magur*	Magur	Walking Catfish	WFB	NO	Scavenging Omnivore
	Heteropneustidae (1)	*Heteropneustes fossilis*	Shing	Stinging Catfish	WFB	NO	Omnivore Predator
Cyprinodontiformes	Aplocheilidae (1)	*Aplocheilus panchax*	Choukkani	Panchax Minnow	B	NO	Larvivore
Synganathiformes	Synganathidae (2)	*Microphis cuncalus*	Kumirer Khil	Crocodile Tooth Pipefish	FR, ET	NO	Omnivore
		Microphis deocata	Kumirer Khil	Deocata Pipefish	FR	EN	Plankton feeder
Perciformes	Ambassidae (3)	*Chanda nama*	Nama Chanda	Glass-Perchlet	WFB, BR	VU	Larvivore
		Pseudambassis baculis	Kata Chanda	Himalayan Glassy Perchlet	B	DD	Larvivore
		Parambasis ranga	Chanda	Indian Glassy Fish	B	VU	Primary Feeder
	Sciaenidae (2)	*Johnius coitor*	Koitor	Coitor Croaker	FR, B	NO	Predator
		Otolithoides pama	Poa	Pama Croaker	FR, ET	NO	Plankton Feeder
	Nandidae (2)	*Nandus meni*	Meni	Mud Perch	WFB, B	NL	Predator
		Nandus nandus	Meni	Mottled Nandus	WFB, B	VU	Predator
	Pristolepidae (1)	*Badis badis*	Koi Bandi	Badis	FR, B	EN	Vegetable Detrivore
	Mugilidae (1)	*Rhinomugil corsula*	Khorsula	Corsula Mullet	FR, ET	NO	Omnivore
	Polynemidae (1)	*Polynemus paradiseus*	Taposi	Paradise Threadfin	FR, S	NO	Predator
	Gobiidae (5)	*Apocryptes bato*	Bele Chewa	Goby	FR, ET	NO	Carnivore
		Glossogobius aureus	Bele	Golden Flathead	FR, ET	NO	Voracious Feeder

				Goby			
		Glossogobius giuris	Bele	Tank Goby	FR, B	NO	Voracious Feeder
		Oxyurichthys microlepis	Nuna Baila	Fine Scale Arrowfin Goby	FR, B	NO	Parasitivore
		Parapocryptes batoides	Dali Chewa	Goby	FR, ET	NO	Plankton Feeder
	Gobioididae (2)	*Odontamblyopus rubicundus*	Lal Chewa	Rubicundus Eelgoby	FR	NO	Detrivore
		Taenioides buchanani	Raja Chewa	Burmese Goby Eel	ET	NO	Minor Predator
	Eleotridae (1)	*Eleotris fusca*	Kulu	Dusky Sleeper	FR,ET	NO	Minor Predator
	Anabantidae (1)	*Anabas testudineus*	Koi	The Climbing Perch	B	NO	Herbivore, Detrivore
	Osphronemidae (3)	*Colisa fasciata*	Khoilsha	Stripled Gourami	B	NO	Omnivore
		Colisa lalia	Lal Khoilsha	Dwarf Gourami	B	NO	Herbivore, Larvivore
		Ctenops nobilis	Neftani	Indian Paradisefish	FR, B	EN	Larvivore
	Mastacembelidae (3)	*Macrognathus aculeatus*	Tara Baim	Spotted Spiny Eel	FR, B	VU	Larvivore, Detrivore
		Macrognathus pancalus	Guchi Baim	Striped Spiny Eel	FR, B	NO	Detrivore
		Mastacembelus armatus	Sal Baim	Tire-track Spiny Eel	FR, B	EN	Predator
Pleuronectiformes	Cynoglossidae (1)	*Cynoglossus arel*	Kukur Jeeb	Large-scale Tonguesole	FR, ET	NO	Bottom Carnivore
	Soleidae (1)	*Brachirus orientalis*	Kathal Pata	Oriental Sole	ET	NO	Bottom Carnivore
Beloniformes	Belonidae (1)	*Xenentodon cancila*	Kaikkya	Freshwater Garfish	FR, B	NO	predator
	Hemiramphidae (1)	*Hyporhamphus limbatus*	Ek Thuita	Congaturi Halfbeak	FR, ET	NO	Plankton Feeder
Tetraodontiformes	Tetraodontidae (1)	*Tetraodon cutcutia*	Potka	Common Puffer fish	FR, B	NO	mollusks and Crustaceans feeder

[**Habitat preference**: FR-Freshwater Rivers, BR- Brackish water River, WFB-Wide Freshwater bodies, Et-Estuaries and Tidal Rivers, S-Sea, B-Flood plains, Beels, Haors, Baors, Ponds, lake, Ditches. **IUCN Status**: CR-Critically Endangered, EN-Endangered, VU-Vulnerable, DD- Data Deficient, NO-Not Threatened, NL- Not Listed by IUCN]

Mohsin *et al*. (2013) observed 69 species of fin fishes in the three Kilometer-area of the upper Padma river. Bhuiyan *et al.* (2008) identified 73 species from the upper Padma river, Rajshahi. Harun-Or-Rashid (2012) recorded 26 species from the floodplain of the Padma river. Hossain *et al.* (2012) reported 53 fin fish species from the Meghna river estuary while Kibria *et al.* (1979) reported 50 species of fin fishes from Meghna river and estuarine zone of the upper Bay of Bengal. Mia *et al.* (2015) identified 23 species of finfish from Meghna river at Ashuganj upazilla under Brahmanbaria district. In the present study finfish species richness (101 species) in the Padma-Meghna confluence was identified as 'higher' in comparison to the results of the above mentioned studies. This was due to the confluence and mixing zone characters of two great river-flows of Padma and Meghna. The earlier workers collected fish samples from the fish market or from a limited three to four kilometer area of upper zone or the lower estuary of the rivers, where habitat preference by the fishes was low. When considered long area in Padma river (56 km from Godagari to Charghat Upazilla) and studied for three consecutive years (2000-2003).The study was thorough and more detailed. Then the species richness was found 'higher' (134 fish species) (Hossain and Haque 2005). However, their collection was not on the spot catch basis, but included fish from different fish markets.

Padma-Meghna confluence is not only the permanent ground of the fish species of two largest rivers, but also the habitat of various types of migratory fishes, such as marine migrants (e.g. *Tenualosa ilisha*, *Polynemus paradiseus* and *Ilisha megaloptera)*, estuarine migrants (e.g. *Glossogobius aureus*, *Oxyurichthys microlepis*, *Parapocryptes batoides* and *Otolithoides pama),* confluence residents and riverine (e.g. *Rhinomugil corsula* and *Somileptes gongota)*, riverine migrants (e.g. *Catla catla*, *Labeo rohita*, *L. calbasu* and *Cirrhinus mrigala)* and catadromous migrant (e.g. *Anguilla bengalensis)*.

Of the 101 finfish species recorded in the present study, six belonged to critically endangered, fifteen endangered, eleven vulnerable, one least concern, five data deficient and six species were not evaluated by the IUCN Bangladesh (2000). The finfish species, *Glossogobius aureus* recorded from this confluence as the 'first record' for the inland waters of Bangladesh (Fig. 2). This species was not reported by the earlier researchers (viz. Day 1889, Shafi and Quddus 2001, Rahman 2005 and IUCN Bangladesh 2000) from the water bodies of Bangladesh. However, in IUCN Red list (International) Larson (2012) mentioned that this species occurs in Bangladesh. The author did not put any reference.

Fig. 2. *Glossogobius aureus* (Akihito and Meguro, 1975) newly reported from the inland water of Bangladesh.

Two exotic fish species, *Aristichthys nobilis* and *Cyprinus carpio* were also found in the study area. Exotic fishes were also reported from other inland open waters of Bangladesh, viz. from Dogger beel of Chandpur (Siddiq *et al.* 2013), floodplain of the Padma river (Harun-Or-Rashid 2012), Halda river (Azadi and Arshad-Ul-Alam 2013) and Sangu River (Azadi and Arshad-Ul-Alam 2014).

The fish fauna of the small scattered areas of the rivers Padma and Meghna has been reported by different workers. No researcher included the entire Padma and Meghna rivers-point (i.e. the Ganges entering point into Bangladesh as Padma to the ending point at the Bay of Bengal as Meghna estuary) to represent the total fish fauna of the entire area. Analyzing the present study and other five studies (viz. Hossain *et al.* 2012, Mia *et al.* 2015, Rahman *et al*. 2012, Hossain and Haque 2005 and Mohsin *et al*. 2013) on Meghna and Padma rivers the statement of the total finfish species in the entire 'Padma and Meghna Rivers' was found to be 199. This number was more than the number recorded in other single water body.

This confluence (Padma-Megna river area) provides ecosystem services to economic importance for commercial fisheries as well for navigational importance. This discharges waters to favoure in creating huge catchment area (Bashar and Khan 2015).

The diversified fish fauna of the Padma and Meghna is now under severe threat due to anthropogenic causes, i.e. making barrage, dam; and pollution, siltation and erosion. Among the man-made causes, the Farakka barrage on the mighty river Ganges in Indian region reduced the water flow significantly in the river Padma, and the Tipai Mukh dam in Indian region on the river Barak. These barrages will severely reduce the water flow in the Meghna via Surma and Kushiyra. Proper steps at national and international levels should be taken immediately to protect and sustain the renewable bioresources of Padma-Meghna river and its confluence for maintaining the livelihood of the peoples of the country.

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