

## A checklist of Fishes and Fisheries of the Padda (Padma) River near Rajshahi City

Farjana Habib<sup>1\*</sup>, Shahrina Tasnin<sup>1</sup> and N.I.M. Abdus Salam Bhuiyan<sup>2</sup>

<sup>1</sup>Research Scholar, <sup>2</sup>Professor

Department of Zoology, University of Rajshahi, Bangladesh

\*Corresponding Author E-mail: [habibfarjana@gmail.com](mailto:habibfarjana@gmail.com)

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### ABSTRACT

*The present study was carried out to explore the existing fish fauna of the Padda (Padma) River near Rajshahi City Corporation area for a period of seven months (February to August). This study includes a checklist of the species composition found to inhabit the waters of this region, which included 82 species of fishes under 11 orders and two classes. The list also includes two species of prawns. A total of twenty nine fish species of the study area are recorded as threatened according to IUCN red list. This finding will help to evaluate the present status of fishes in Padda River and their seasonal abundance.*

**Key words:** Exotic, Endangered, Rajshahi City, Padda (Padma) River

### INTRODUCTION

Padda is one of the main rivers of Bangladesh. It is the main distributary of the Ganges, flowing generally southeast for 120 kilometers (75 mi) to its confluence with the Meghna River near the Bay of Bengal<sup>1</sup>. The name Padma is given to the lower part of the course of the Ganges (Ganga). The river Ganga originates in the Gangotri Glacier of the Himalaya, and runs through India and Bangladesh to the Bay of Bengal. The Ganges enters Bangladesh at Shibganj in the district of Chapai Nababganj. West of Shibganj, the Ganges branches into two distributaries, the Bhagirathi and the Padda river. Further downstream, in Goalando, 2,200

Kilometers (1,400 mi) from the source, the Padma is joined by the Jamuna (Lower Brahmaputra) and the resulting combination flows with the name Padma further east, to Chandpur. Here, the widest river in Bangladesh, the Meghna joins the Padma, continuing as the Meghna almost in a straight line to the south, ending in the Bay of Bengal. Main stream goes through Chapai Nawabganj, Rajshahi, Pabna, Kushtia, Faridpur, Rajbari and Chandpur districts of Bangladesh. The Padda (Padma) is the second longest river of Bangladesh. Its length in Bangladesh is 366 kilometers<sup>2</sup>.

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In the year of 2007-2008, a total of 9392 metric tons (mt) of fishes were harvested from the Padda which was 6.87% to the total fish captured from rivers of Bangladesh<sup>3</sup>. Catch composition was major carps (113 mt), other carps (18 mt), catfishes (969 mt), hilsa (3432 mt), large prawn (100 mt), small prawn (375 mt) and others (4385 mt)<sup>3</sup>.

According to Islam and Hossain<sup>4</sup> there were 110 species of fishes under 59 genera, 28 families, 12 orders and 2 classes. But recent studies have revealed that the diversity of fishes has decreased in this river as recently only 73 species of fishes (under 44 genera, 22 families, 10 orders and 2 classes) and 11 non-fish species (under 4 classes) were recorded<sup>5</sup>. In another research, there was recorded 57 small indigenous species of fishes under 23 families and 11 orders<sup>6</sup>. Many researches have been carried out in different water bodies of Bangladesh for determining the diversity of fishes as well as other aquatic organisms of economic importance.

The present study is carried out to determine the present status of fishes of Padda River and their seasonal availability near Rajshahi City Corporation area. The city

of Rajshahi is situated on the banks of the river Padda<sup>2</sup>. The geographical position of the area lies close to 24°50' N to 88°50' E latitude and longitude respectively. The area has a great seasonal fluctuation in temperature, turbidity, water content, rate of flow of water and other environmental factors. In the months of May to September, water level increases and in winter month's water level falls.

## MATERIALS AND METHOD

The study was made from February to month of August. The data and information were collected personally from the area of study. The information about fish species, fish abundance, fishing methods and marketing system near Padda River were collected from the local people, fishermen, riverside settlers, and the knowledgeable person from the study area. Samples of different fish species were collected as well.

A survey was conducted in the study area and the data were collected through survey. Sampling methods used in the survey. Visits were made at least twice a week during the study period. Interviews of different people were taken.



Map.1: Rajshahi city map

## RESULTS AND DISCUSSION

In the present study only one species of Chondrichthyes *Trygon sp.* was found. From Osteichthyes 81 species of fishes are listed. Two species of prawns was also recorded (Table-1). Fisheries resources in the study area of the

Padda river are mostly captured fishes. In the present investigation the fish species are recorded with their relative abundance. Some piscivorous vertebrates are also found in the study area.

**Table-1: The local name, scientific name, seasonal availability and red list status (2000) are given below**

S. No.	Scientific Name	Local Name	Seasonal availability	Red List Status (2000)
1	<i>Trygon sp.</i>	Sankuchmach	R	NT
2	<i>Hilsa ilisha</i> (Hamilton)	Ilish	SN	NT
3	<i>Corica soborna</i> (Hamilton)	Kachki, uramach	A	NT
4	<i>Notopterus notopterus</i> (Pallas)	Phali	A	VU
5	<i>Notopterus chitala</i> (Hamilton)	Chital	A	EN
6	<i>Setipinna phasa</i> (Hamilton)	Phasa	A	NT
7	<i>Setipinna taty</i> (Valentines)	Tely-phasa	R	NT
8	<i>Chela cachius</i> (Hamilton)	Chep chela	A	NT
9	<i>Chela laubuca</i> (Hamilton)	Kash-khoira	R	EN
10	<i>Oxygaster bacaila</i> (Hamilton)	Chela	A	NT
11	<i>Oxygaster phulo</i> (Hamilton)	Chela	A	NT
12	<i>Barilius bendelisis</i> (Hamilton)	Joia, Tila	R	EN
13	<i>Barilius bola</i> (Hamilton)	Bhol, Bol	R	EN
14	<i>Rasbora daniconius</i> (Hamilton)	Darkina, darka	A	NT
15	<i>Dani odevario</i> (Hamilton)	Banspata	A	NT
16	<i>Osteobrama cotio</i> (Hamilton)	Dhela, Mauwa	June to July	NT
17	<i>Esomus danricus</i> (Hamilton)	Darkina	A	NT
18	<i>Amblypharyngodon mola</i> (Hamilton)	Mola, moa	May to August	NT
19	<i>Amblypharyngodon microlepis</i> (Bleeker)	Mohula, mola	VA	NT
20	<i>Puntius sarana</i> (Hamilton)	Sar-punti	VR	CR
21	<i>Puntius ticto</i> (Hamilton)	Tit-punti	A	VU
22	<i>Puntius phutunio</i> (Hamilton)	Punti	March to July	NT
23	<i>Puntius gonionotus</i> (Hamilton)	Thai sarputi	A	NT
24	<i>Puntius sophore</i> (Hamilton)	Jatpunti	A	NT
25	<i>Aspidoparia jaya</i> (Hamilton)	Pioly	A	NT
26	<i>Aspidoparia morar</i> (Hamilton)	Morari	A	NT
27	<i>Labeo rohita</i> (Hamilton)	Rui	A	NT
28	<i>Labeo culbasu</i> (Hamilton)	Kalbaus, Baus	A	EN
29	<i>Labeo bata</i> (Hamilton)	Bhangon, Bata	VA	EN
30	<i>Labeo boga</i> (Hamilton)	Bhangon-bata	R	CR
31	<i>Catla catla</i> (Hamilton)	Katla	A	NT
32	<i>Cirrhinus reba</i> (Hamilton)	Raikhor	VA	VU
33	<i>Hypophthalmichthys molitrix</i>	Silver carp	A	NT
34	<i>Ctenophanogodon idella</i>	Grass carp	A	NT
35	<i>Wallago attu</i> (Bloch)	Boal	A	NT
36	<i>Ompok pabda</i> (Hamilton)	Pabda	A	EN
37	<i>Ompoc bimaculatus</i> (Bloch)	Kani-pabda	A	EN
38	<i>Pangasius pangasius</i> (Hamilton)	Pangas	A	CR
39	<i>Clupisoma garua</i> (Hamilton)	Ghaira, Ghaura	A	CR
40	<i>Clupisoma murius</i> (Hamilton)	Muri-bacha	R	NT
41	<i>Clupisoma atherinoides</i> (Hamilton)	Kantapatasi	A	NT
42	<i>Eutropiichthys vacha</i> (Hamilton)	Bacha	A	CR
43	<i>Ailiichthys punctata</i> Day	Banspata	A	VU
44	<i>Heteropneustes fossilis</i> (Bloch)	Sing	A	NT
45	<i>Clarias batrachus</i> (Linnaeus)	Magur	R	NT
46	<i>Mystus aur</i> (Hamilton)	Air, Ar	A	VU
47	<i>Mystus seenghala</i> (Sykes)	Garo-air	A	EN
48	<i>Mystus tengara</i> (Hamilton)	Tengara	VA	NT
49	<i>Mystus vittatus</i> (Bloch)	Gulsatangra	VA	NT
50	<i>Rita rita</i> (Hamilton)	Rita	A	CR
51	<i>Batasio batasio</i> (Hamilton)	Tengra	R	NT

S. No.	Scientific Name	Local Name	Seasonal availability	Red List Status (2000)
52	<i>Batasio tengara</i> (Hamilton)	Tengra	R	EN
53	<i>Bagarius bagarius</i> (Hamilton)	Baghair	A	CR
54	<i>Gagata youssoufi</i> Rahman	Gang tangra	RS	NT
55	<i>Gagata nangra</i> (Hamilton)	Gang tangra	RS	NT
56	<i>Sisor rhabdophorus</i> Hamilton	Sisor	A	CR
57	<i>Erethites pussilus</i> Muller and Troschel	Kutakanti	A	NT
58	<i>Chaca chaca</i> (Hamilton)	Chaca	R	EN
59	<i>Xenentodon cancila</i> (Hamilton)	Kakila	A	NT
60	<i>Rhinomugil corsula</i> (Hamilton)	Corsula	A	NT
61	<i>Mugil oligolepis</i> Bleeker	Keski, Bata	R	NT
62	<i>Mugil corsula</i> (Hamilton)	Halla, Khalla	R	NT
63	<i>Sicamugil cascasia</i> (Hamilton)	Lorhia	R	NT
64	<i>Channa punctatus</i> (Bloch)	Taki	A	NT
65	<i>Channa striatus</i> (Bloch)	Shol	A	NT
66	<i>Channa gachua</i> (Hamilton)	Chang	R	NT
67	<i>Channa orientalis</i> (Schneider)	Cheng	R	VU
68	<i>Pseudorhombus arsius</i> (Hamilton)	Sarbati	A	NT
69	<i>Anguilla nebulosa</i> McClelland	Bamoch	R	NT
70	<i>Chanda nama</i> Hamilton	Chanda	A	VU
71	<i>Chanda ranga</i> Hamilton	Lalchanda	A	VU
72	<i>Chanda baculis</i> Hamilton	Chanda	A	NT
73	<i>Anabus testudineus</i> (Bloch)	Koi	R	NT
74	<i>Ctenops nobilis</i> McClelland	Neftani	A	EN
75	<i>Colisa latius</i> (Hamilton)	Lalkholisha	R	NT
76	<i>Colisa chuna</i> (Hamilton)	Chuna	R	NT
77	<i>Nandus nandus</i> (Hamilton)	Bheda	R	VU
78	<i>Pama pama</i> (Hamilton)	Bhola	A	NT
79	<i>Mustacembelus armatus</i> (Lacepede)	Baim, Bam	A	EN
80	<i>Mustacembelus pancalus</i> (Hamilton)	Gunchi	A	NT
81	<i>Chelodon potca</i> (Hamilton)	Potca	A	NT
82	<i>Tetraodon cutcutia</i> Hamilton	Potca	A	NT
83	<i>Macrobrachium lamerrai</i>	Chingri	RS	–
84	<i>Macrobrachium rosenbergii</i>	Chingri	RS	–

R-Rare, VR-Very rear, SN-Small number, A-Abundant in all season, VA-very abundant in all season, RS-Rainy season  
CR-Critically endangered, EN-Endangered, VU-Vulnerable, NT-Not threatened.

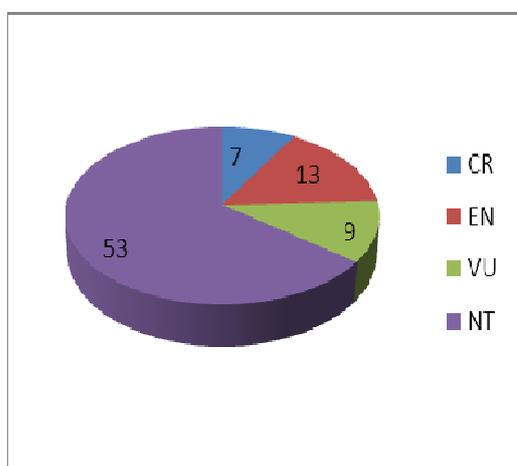


Fig. 1: graphical presentation of number of threatened fishes

Fifty four fish species of Bangladesh were declared threatened by IUCN Bangladesh<sup>7</sup>. Among them 29 species were found in the study area. There threatened categories were found critically endangered, endangered and vulnerable.

Eight types of fishing crafts were recorded in the study area. Among the non-mechanized craft dingi nauka and hoat nauka are available use for fishing purpose. The Kosa nauka, Badhi nauka, Konao digdi, Bachari nauka, Donga, Rafts etc are also used. Seven fishing gears were recorded from the study area including five fishing nets and two fishing traps. The fishing nets were Ber

jal, Khepla jal, Tana jal, Thela jal and Fas jal. The fishing traps were Doair and Kholson.

In the survey on fish marketing system the Shaheb bazaar, Laxmipur bazaar, Uposhohor bazaar and New market bazaar found to play a vital role in the Rajshahi fish marketing system. These places also play vital role on fish marketing of the adjacent districts. The basic channel for fish marketing system was found out to be:



### CONCLUSION

Once, our water bodies were full of fishes. But scenario has changed nowadays. In most freshwater bodies' diversity and abundance of fishes decreasing every year because of unplanned construction of flood control dam, unplanned irrigation project, construction of roads and bridges for transportation and communication, indiscriminate exploitation of fishes of any size is leading to loss of fishes from our natural water bodies<sup>8,9,10,11</sup>.

The present research finding also indicates that the species diversity is decreasing much than previous years, which is clear by comparing the present findings against the findings of several researchers who worked in the same river. Inclusion of exotic fish species was very prominent in the catch made from Padda River. The inclusions of exotic fishes were made in the recent years. A considerable portion of the recorded fish species were found in the Red List of the fishes of Bangladesh and their abundance is found at stake. However, from all the findings following recommendations are suggested.

Research effort on conservation of threatened fishes should be carried out. Research should be conducted to find out the impact of fishing gears on available species. Research attempt should be made to determine suitable fishing practices by developing species-specific or size specific fishing gears should be initiated. Further research on the impact of recently inhabited exotic fishes and their impact on native species should be made.

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