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Fisheries Species Diversity Except Aquatic Weeds In ChalanBeel, Natore, Bangladesh

Nahid Sultana*, M. Nazrul Islam
Department of Zoology, Faculty of Life and Earth Science, University of Rajshahi, Rajshahi-6205, Bangladesh
***Correspondence:** (E-mail: nahid.ru86@gmail.com)*

Abstract: *With a view to gather information on the diversity, habitat and residentialstatus of fisheries species diversity except aquatic weeds of Chalanbeel in Natore district, a systematic field study was conducted for a period of July 2011 - June 2014. A total of 47 of fisheries species except (aquatic weeds), belonging to 8 species of annelids, 5 species of Arthropods, 13 species of Mollusks, 5 species of Amphibian, 16 species of Reptiles were recorded.*
Keywords: *Fisheries species diversity, Chalanbeel, Natore, Bangladesh.*

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I. INTRODUCTION:

The Chalanbeel in Bangladesh lies between 24.23° north latitude and 89.05 to 89.18° east longitude. It is the largest wetland in Bangladesh (Galib et al. 2009a). The Chalanbeel is a large drainage system. This vast drainage network endows rich diversity of fisheries items providing livelihood for large number of people living in remote areas of Chalanbeel.

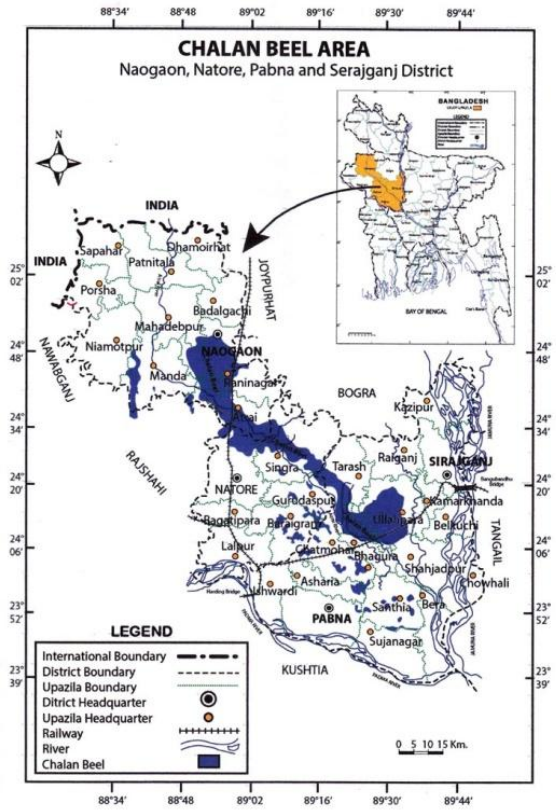

Figure 1: The location map of Chalanbeel.

Biodiversity probably is the most boring issue in news and public media now-a-days. The emphatic conversation with this affair among people is going on from United Nations to more or less all countries. The very consciousness and awareness about environment in the world-has drawn considerable attention to this matter.

For community study of flora and fauna, species diversity is a function of the number of different species, the number of individuals per species, and the total number of individuals of all species present in that community at a definite time period (Southwick 1979). Beel is the landscape ecosystems of water and the processes have dominated the formation and characteristics, which are largely controlled by water. During the rainy season there is an accumulation of animal dung rotating vegetation and other materials became the nutrients for the living organism of the water bodies. During the earlier stages of flooding these nutrients combined with river bone silts carrying minerals supports rapid growth of plants, insect's, fish and other forms of aquatic life (Rahman, 1989). The monsoon inundated flood plain as a seasonal-habitat plays the most important role in the continuation and sustenance of a large number of prawn species (Ali, 1991).

Bangladesh is blessed with an abundance of inland water bodies filled with a diversity of aquatic species. At present Bangladesh supports 430 sp. of mollusks (Hossain, 2004). Biodiversity decreasing in Chalanbeel area day by day. A few years ago fisheries items are available in Chalanbeel area. Some species of fishes are endangered or threatened.

Fisheries iteams diversity is a part of biodiversity. It deals with annelids, arthropods, mollusks, amphibian and reptiles. During last the last decades or so the wild life of the different parts of Bangladesh has been studied by different workers (Hussain 1974), 1996; Islam and Islam 1997; Sarkar and Sarker 1988; Rahman 1995; Das 1964; Khan 1985; 1987; Hussain and Rahman 1978; Khan 1995, 1996, 1998, Chakma 1995; Jahan 1995; Jaman 1996; Khanam 1978; Akter 1997; Mannan et al., 1998).

A literature survey shows that no recent work has been done on the fisheries species diversity except aquatic weeds in Chalanbeel, Natore, Bangladesh. The present work therefore was undertaken to describe the existing aquatic weeds fauna of Chalanbeel in Natore district with special reference to their habitats, abundance and residential status, which will provide some basis information for future in-depth studies and conservation of the fisheries species in the study area.

II. METHODOLOGY

Random survey was made throughout the beel area during the years July 2011-June 2014. The study was based on direct observation with the help of the local inhabitants. The fisheries iteams were collected with the help of fishermen and retailers. Fisheries species were also collected form the landing center near by the Chalanbeel. The arrangement of families and orders was based primarily on Berg (1940) with modification bared on recent taxonomic accounts. The local Bengali names were also given.

III. RESULT AND DISCUSSION

There are about 8 speciesof annelids, 5 species of Arthropods, 13 species of Mollusks, 5 species of Amphibiam, 16 species of Reptiles present in the Chalanbeel and its adjacent area.

Annelids of Chalanbeel Area

Aquatic Oligochaetes are major permanent fauna of water bodies and from an important secondary product in food chain. Only available knowledge of the oligochactes fauna of Bangladesh has been due to the works of Stephenson (1923) and Ali (1973), Ahmed, M.F. (2003). During the study period a total of 8 (major species 3 orders under 2 classes (Oligochaeta and Hirudinaria) were identified (Table-1).

Table-1: A list of Annelids of the Chalanbeel area.

Class/order/family	Scientific name	Common name	Abundance
Class- Oligochaeta	*Lampitomauritii*	Earth worm	F
Order- Neo-oligochaeta	*Perionyxexcavatus*	Earth worm	F
Family- Megascolecidae	*Metrephireposthuma*	Earth worm	V.C
Family- Glossoscolecidae	*Pontoscolexcorethrurus*	Earth worm	C
Family- Microchactidae	*Glyphidrilustuberosus*	Earth worm	F
Family- Octochaetidae	*Dichogasterbolaui*	Earth worm	F
Order- Archioligochaeta	*Tubetexsp*	Small slender worm	F
Class- Hrudinaria Order- Gnathobdellida	*Hirudomedicinals*	Jok	V.C

Note: F-Few; C-Common; V.C-Very Common

Arthropods of Chalanbeel Aria

In the present study there are about 5 species, 2 orders under the 2 classes (Crastacea, Insecta) important arthropods present in the study area (Table-2).

Table-2: A list of Arthropods of Chalanbeel area.

Class/order/family	Scientific name	Common name	Abundance
Class-Crustacea Order-Decapoda Family-Palaemonidae	*Macrobrachiummalcolmsonii* *Mocrobrachiumdayanum* *Macrobrachiumlamarrci* *Cancer pagurus*	Golda chingri Chingri Gurachingri Kakra	F C V.C
Class-Insecta Order-Hemiptera	*Belostoma*sp.	Giant water bug	C

Note: F-Few; C-Common; V.C-Very Common

Mollusks of Chalanbeel area

The mollusks is the largest but second phylum of the animal kingdom. About 5000 fresh water gastropods species are of economic importance. They are playing most extensive role as food and medicine for human, fish and poultry feed, and as source of calcium carbonate on ornamentations (Hodashi, 1989, Saha, 1989). Almost all the permanent and temporary water bodies of Bangladesh, vis. rivers, ponds, lakes, canals, haor, baor, ditches and paddy fields with abundant vegetation are excellent habitats for fresh water snails. The presence of a total of 18 species of fresh water mollusks under 7 families, viz. Ampullariidae, Hydrobiadae, Vaviparidae, Assimieidae, Melannidae, Lymnaidae and Planonbidae together with some ecological notes has been confirmed by Jahan (1993) from Bangladesh which is as similar as present work.

In course of investigation a total of 13 species of fresh water mollusks under 2 classes, 5 order, 5 families were encountered in habitat of the Chalanbeel area, which are as follows (Table-3).

Table-3.A list of Mollusks of the Chalanbeel.

Class/order/family	Scientific name	Common name	Abundance
Class-Gastropoda Order-Mesogastropoda Family-Pilidae	*Pilaglobosa* *Pilatheobaldi*	Shamuk Shamuk	V.C V.C
Family-Viviparidae	*Ballamyabengalensis* *Ballmyadissimilis*	Chotoshamuk Chotoshamuk	V.C F
Order-Basommatophora Family-Lymnaiidae	*Lymnaeaaccuminata* *Lymnaealuteola*	Pond snail Pond snail	F R
Family-Planorbidae Order-Stytommatophora Order-Neogastropoda	*Indoplanobisexustus* *Gyrausconvexiusculus* *Helix* sp. *Limax*sp.	Coiled stug Coiled stug Garden snail Gray stug	F R F R
Class-Pelecypoda Order-Eulamellibrachiata Family-Unionidae	 *Lamellidensmarginalis* *Parreysiapernodulosa* *Parreysiadaccaensis*	 Jhinuk Jhinuk Jhinuk	 V.C F R

Note: F-Few; C-Common; V.C-Very Common, R-Rare

Amphibian of the Chalanbeel area

The amphibians constitute an important part of our fauna. Boulengers (1890). Fauna of “British India” is the only important and extensive work on the amphibian fauna of “British India” in which only occasional references could be found to the area that now forms Bangladesh. There are about 22 different species, 14 genera under 4 families amphibians present in Bangladesh. During the study period a total of 5 species of amphibians were identified, distributed among 2 families and 1 order which has shown in (Table-4).

Table-4: A list of Amphibian of Chalanbeel area.

Order/family	Scientific name	Common name	Abundance
Order-Anura Family-Ranidae	 *Ranatigrina* *Ranahexadactyla* *Hoplobatrachustigrina* *Euphlyctiscyanophlyctis*	 Sona bang Kola bang Mini kola bang Kotkoti bang	 V.C V.C R R
Family-Bufonidae	*Bufomelanostictus*	Kuno bang	V.C

Note: V.C-Very Common, R-Rare

Reptiles of Chalanbeel area

There are about 109 different species under 15 families reptilian present in Bangladesh. Besides 12 species morine snakes and 5 species marine further are also present. During the study period a total of 16 species of reptiles were identified, distributed among 7 families and 2 orders, which has shown in (Table-5)

Table-5: A list of reptiles of Chalanbeel area

Class/order/family	Scientific name	Common name	Abundance
Order-Chelonia			
Family-Emydidae	*Kachugatechtum*	Kachim, Bura	R
	Hardellathurgi	Kachim, Bura	R
Family-Trionychidae	*Trionyxgangeticus*	Kachim, Dura	F
	Trionyxhurum	Kachim, Dura	R
	Chitraindica	Kachim, Dura	R
Order-Squamata			
F-Colubridae	*Natrixpiscator*	Dhorashap	V.C
	Rhabdophissubminiata	Laldhora	C
	Atritiumchistosum	Metaishap	V.C
	Elapheradiata	Dudraj	C
Family-Varanidae	*Varanusbengalensis*	Kalogui	V.C
	Varanusflaviscens	Shona gui	V.C
Family-Elapidae	*Najanaja*	Crokhara	C
	Bangarusfasciatus	Sonkini	R
	Ptyasmucosus	Banondudraj	C
Family-Scincidae	*Mabuyadissimilis*	Anjon	C
	Calotesversicolor	Girgity	C

Note: F-Few; C-Common; V.C-Very Common, R-Rare

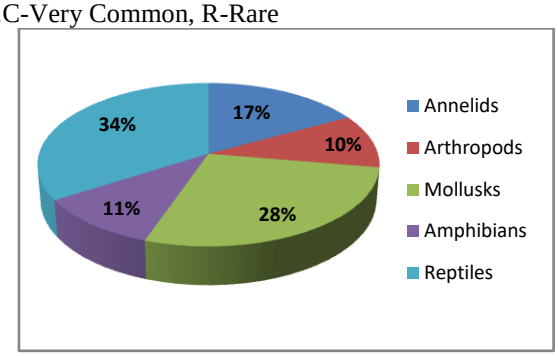

Fig. 2: Percentage distribution of fisheries species of Chalanbeel area.

IV. CONCLUSION

Although the study area harbours a considerable number of fisheries species were identified during the study period. The major threats were illegal fishing by fishermen and local people. Some general considerations need attention for protecting fisheries species from the above mentioned threats. It is therefore recommended that further intensive studies need to be conducted on the protection and conservation of fisheries species of Chalanbeel, in Natore district in the near future.

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