

# Diversity of Ornamental Fish species in Neamati areas of Jorhat District, Assam, India

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## ABSTRACT

Extensive survey for ornamental fishes of Neamati was conducted from April, 2020 to March, 2021. The Neamati area is located near the River Brahmaputra. These wetlands or the flood plain lakes of the Brahmaputra basin are the major sources of air breathing and ornamental fish fauna. During the survey period, a total of 62 nos. of ornamental fish species were identified belonging to 34 genera, and 21 families. Exploring these prospects in a methodical and scientific manner would help generate jobs and foreign currency. This paper deals with the ornamental fishes found in the wetland areas of Neamati of Jorhat District Assam

*Key words:* Neamati, Ornamental Fish, Wetland

## Introduction

Assam, forming 30% of the North eastern region of India, is known for its ichthyic faunistic richness and heterogeneity. The state has Brahmaputra and Barak river systems and their numerous tributaries, a large number of wetlands and swamps, ponds and tanks, low laying paddy field etc. Apart from different types of commercially important food fishes, there are also various groups of fishes which have relatively low market value. These low valued fishes are rather more beneficial for people of the low economic group. Some act as scavengers still others are used as medicine by the villagers specially by the fisherman folk. Moreover, many of this trash, small sized species have tremendous value as ornamental or aquarium species.

Fishes are preserved as the most beautiful, cheerful, and fascinating among the aquatic creatures, so it is no surprise that they find a place in many homes and different public places as decorative items in addition to playing a significant role in hu-

man diet since the dawn of human civilization (Kaushik *et al.*, 2017; S.P. Biswas, 2005). Studies revealed that there are about 150 different fish species in this part of the country and one third of which can be regarded as ornamental fish (Biswas, 1986). Some of these are very beautiful and some are of course very dull in colours. According to the new definition, a species with unique look, peculiar habit and nature and rare distribution is considered as ornamental fish. Significantly the mighty Brahmaputra connects almost all the second, third, fourth and even higher order streams and the upper stretches of the Brahmaputra river system is prolific, harbouring a number of rare and endemic ornamental fish species.

About 150 species from Assam have been documented to have decorative value, and more than 50 of those species are in high demand abroad (Biswas and Boruah, 2000). Assam is blessed with several large water bodies known as beels (Jhingran and Pathak, 1987). People mainly from the surrounding areas are solely dependant on these sources of fish..

A significant portion of Assam's fish production is about 25%, comes from beels (wetlands). However, because to excessive siltation and weed growth, many areas have been deemed unproductive, and only around 33% of the potential is being used for fisheries (Chakravartty *et al.*, 2012). However, in recent years, the number of fish species produced has decreased, and the fishing communities in and near wetlands believe that is due to the Beel's deterioration. Therefore, it is crucial to catalogue all of the attractive fish species found in the wetlands. The present paper deals with the diversity of the ornamental species in the Neamati area of Jorhat District Assam.

### Study area

The climate of this region is sub-tropical. Average annual rainfall is around 2800 mm with nearly 75% of the rainfall occurs during the monsoon months. According to the characteristics of the climate it is divided into four distinct seasons, viz. pre-monsoon (March-May), monsoon (June-September), post-monsoon (October-November) and winter (December-February). The temperature is fluctuated throughout the year (2021) and it raises maximum in June to August and attained 39 °C and declined to 10 °C in December to January.

### Materials and Methods

The specimens pertaining to the present study were

collected from 3 different water bodies in Neamati Areas, i.e Kokila, Borsola and Potiasola beel located in the Jorhat district, Assam. Jorhat District (26°40-26.51N and 94°12-94°14 E) is located in upper Assam bounded by River Brahmaputra.

The fish were caught with the assistance of experienced local fishermen using a variety of fishing equipment, including cast nets (Khewali Jal), dip nets (Dhekijals), langi nets (Langi), tongi nets (Sip nets), drag nets (Gill nets), local bamboo traps, i.e Chepa, hooks, Jakoi, Polo, Hapa, Juluki, dolongas etc.

The collected specimen were kept in 5% formalin solution in the Zoology Dept of Bahona college and some live specimen were also kept in Dept Aquarium for Identification and later this specimen were identified by following the standard literatures (Jayaram, 1999; Nath and Dey, 2000; Talwar and Jhingran, 1991; Vishwanath, 2002). Survey was done in both evening and morning hours. On the other hand, the website [www.fishbase.org](http://www.fishbase.org) also complied with the most recent scientific names of the fish species. Digital cameras are used to take pictures (Sony DSC-W710). The IUCN search engine on the internet provided information about the status of fishes.

### Results and Discussion

The study reveals that the closed type of wetlands, which do not have connection with near by river are

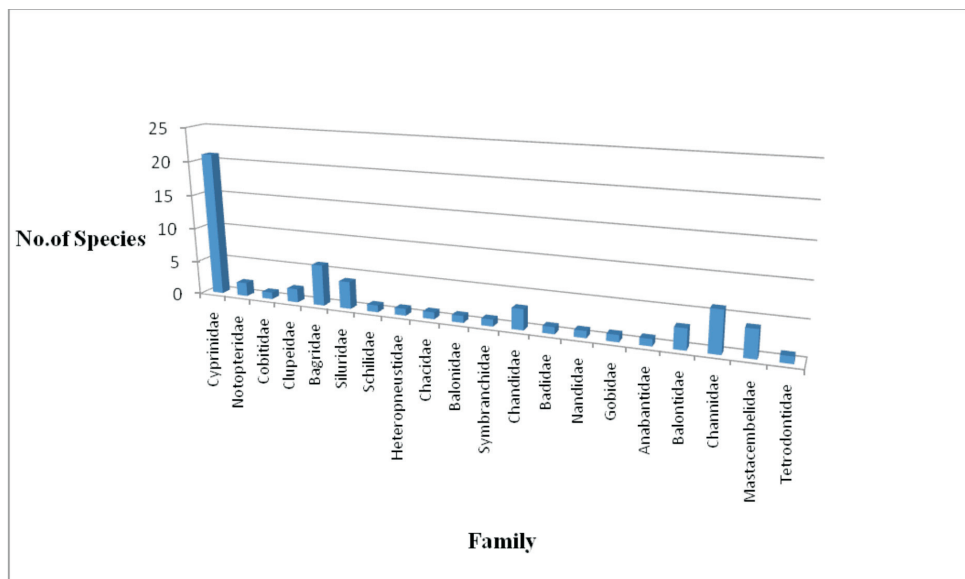


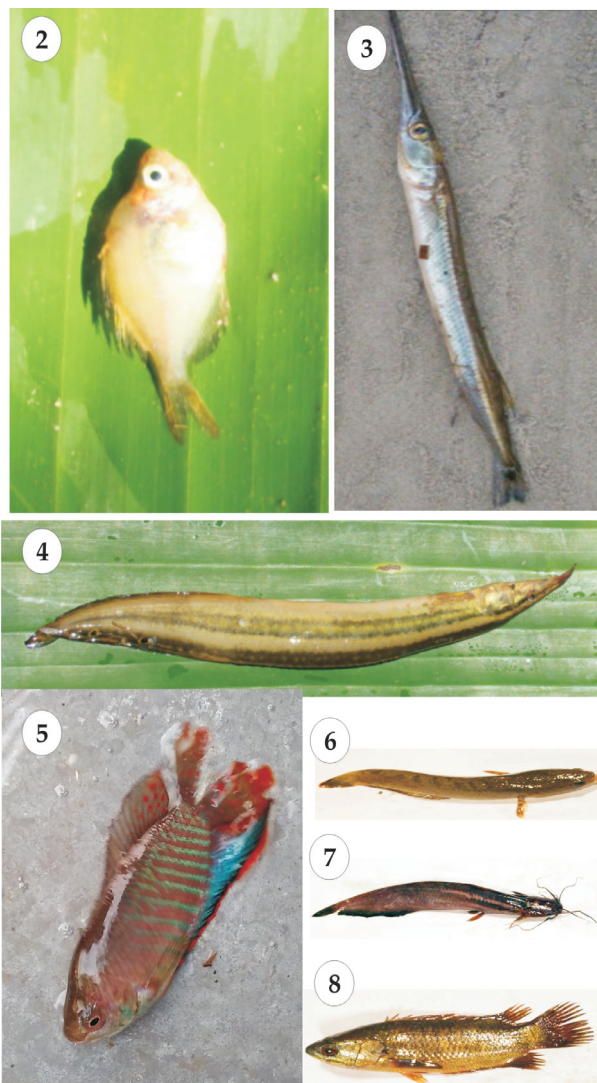
Fig. 1. Graphical representation of no. of species in each family

**Table 1.** Fish species composition in Neamati Area of Jorhat District

Family	Scientific Name	Common Name	Status	
1.	Notopteridae	<i>Chitala chitala</i> (Ham)	Chital	Common
		<i>Notopterus notopterus</i> (Pallas)	Kanduli	Very common
2.	Clupeidae	<i>Gudusia chapra</i> (Ham)	Koroti	Common during Summer
		<i>Hilsa ilisha</i> (Ham)	Ilish	Common
3.	Cyprinidae	<i>Amblypharyngodon mola</i> (Ham)	Mowa	Very common
		<i>Pseudeutropius atherinoides</i>	Bordua	Common
		<i>A. morar</i> (Ham)	Boriala	Occasional
		<i>Catla catla</i> (Ham)	Bahu	Common
		<i>Chela atper</i> (Ham)		
		<i>Cirrhinus mrigala</i> (Ham)	Mirika	Very common
		<i>C.reba</i> (Ham)	Bhangun	Common
		<i>Esomus denricus</i> (Ham)	Dorikona	Very common
		<i>Labeo rohita</i> (Ham)	Rahu	Very common
		<i>L.beta</i> (Ham)		Common
		<i>L.boga</i> (Ham)		Comon
		<i>L.calbasu</i> (Ham)	Mali	Common
		<i>L.goniuis</i> (Ham)	Kunhi	Very common
		<i>Punctius chola</i> (Ham)	Cheni puthi	Common
		<i>P.phutunio</i> (Ham)	Chokori puthi	Very common
		<i>P.sarana</i> (Ham)	Kani puthi	
		<i>P.sophore</i> (Ham)	Puthi	Very common
		<i>P.ticto</i> (Ham)	Henduri puthi	Common
		<i>Rasbora daniconius</i> (Ham)	Dorikona	Common
		<i>Ctenopharyngodon idella</i> (Valenciennes)	Common carp	Common
	<i>Cyprinus carpio communis</i> (Linn)	Silver carp	Common	
4.	Cobitidae	<i>Botia dario</i> (Ham)	Gethu	Common
5.	Bagridae	<i>Aorichthys aor</i> (Ham)	Ari	Common
		<i>Mystus bleekeri</i> (Ham)	Singara	Common
		<i>M.cavasius</i> (Ham)	Lalua singara	Very common
		<i>M.tengra</i> (Ham)	Singara	Common
		<i>M.vittatus</i> (Bloch)	Singara	Common
		<i>Rita rita</i> (Ham)	Ritha	Common
6.	Siluridae	<i>Ompok bimaculatus</i> (Bloch)	Bami	Common
		<i>O.pabda</i> (Ham)	Pavo	Common
		<i>O.pabo</i> (Ham)	Pavo	Common
		<i>Wallago attu</i> (Schneider)	Borali	Common
7.	Schilbeidae	<i>Alia colia</i> (Ham)	Kokila	Common
8.	Badidae	<i>Dario dario</i> (Ham)	Gatho	Common
9.	Symbranchidae	<i>Monopterusuchia</i> (Ham)	Cuchia	Common
10.	Heteropneustidae	<i>Heteropneustes fossilis</i> (Bloch)	Singi	Common
11.	Chacidae	<i>Chaca chaca</i> (Ham)	Kurkuri	Common
12.	Belonidae	<i>Xenentodon cancila</i> (Ham)	Kokila	Common
13.	Chandidae	<i>Chanda nama</i> (Ham)	Chanda	Common
		<i>Parambassis ranga</i> (Ham)	Chanda	Very Common
		<i>P.baculis</i> (Ham)	Chanda	
14.	Nandidae	<i>Nandus nandus</i> (Ham)	Gadgedi	Common
15.	Gobidae	<i>Glossogobius giuris</i> (Ham)	Patitmutura	Common
16.	Anabantidae	<i>Anabus testudinius</i> (Ham)	Kawoi	Very common
17.	Belontidae	<i>Colisa fasciata</i> (Schneider)	Kholihona	Very common
		<i>C.lalia</i> (Ham)	Kholihona	Common
		<i>C sola</i> (Ham)	Kholihona	Common

**Table 1.** Continued ...

Family	Scientific Name	Common Name	Status
18.	Channidae	<i>Channa barca</i> (Ham)	Futuki senga
		<i>C gachua</i> (Ham-Bloch)	Sengali
		<i>C marulius</i> (Ham)	Saal
		<i>C punctatus</i>	Goroi
		<i>C stewarti</i> (playfair)	Sol
		<i>C straitus</i> (Bloch)	Sal
19	Mastacembelidae	<i>Macrognathus aculeatus</i> (Bloch)	Tora
		<i>M.puncalus</i> (Ham)	Jati tora
		<i>Mastacambelus aral</i> (Bloch& Schneider)	Tora
		<i>M.puncalus</i> (Ham)	Tora
20.	Tetrodontidae	<i>Tetrodon cutcutia</i> (Ham)	Gangatup



**Figs (2-8).** *Chanda nama*, *Xenentodon cancila*, *Macrognathus aculeatus*, *Colisa fasciata*, *Channa gochua*, *Anabus testudinius*.

rich source of ornamental fish species. Out of the total 62 nos of fishes of 34 genera and 20 families (table-1) identified in these areas more than 50% species may be used as ornamental fish.

### Conclusion

The study reveals the importance of the closed beels as a habitat of potentially valuable ornamental fish species. However, a number of man made activities, such as the introduction of foreign fish species, habitat degradation, pollution, and unreasonable fishing, are endangering this wetlands fish population, particularly ornamental fish. So Conservation of this valuable habitat is very much needed from biodiversity point of view.

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