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RESEARCH ARTICLE

A preliminary survey on the ichthyospecies diversity of Hasila Beel, Urpada Beel, Kumri Beel, Sidli Beel and Seksekia Beel in the Goalpara district of Assam, India.

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Abstract

In the present piece of work, a preliminary survey on the fish species diversity have been carried out in the five different Beels of Goalpara district of Assam, India during December 2014 to May 2015. The ichthyospecies diversity revealed, 30 species of fishes from Hasila Beel (where fishes belonging to order Cypriniformes (40%) is dominating the others) ; 27 species from Urpada Beel (Perciformes (40%) is dominant order and Beloniformes the least), 26 species from Kumri Beel (Cypriniformes (38%) the most abundant), 29 Species from Sidli Beel (Cypriniformes (48%) is the most abundant and Beloniformes (4%) the least and 31 fish species from Seksekia Beel (39% of the fishes belongs to Cypriniformes, 3% belongs to Beloniformes and Osteoglossiformes.). From the present study, The fishes belonging to the order Cypriniformes have been recorded as the most abundant and Beloniformes the least in all the Beels except Urpada Beel where perciformes were dominating over others.

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Introduction

The fresh water ecosystem includes lakes, wetlands, rivers, streams etc. Wetlands are the transitional zones between the terrestrial and aquatic environment. These habitats perform major ecological role in biosphere. The wetlands are a highly productive ecosystem that contributes fishery resources of the state and their socio-economic, commercial and ecological values are well established. In Assam floodplain wetlands are also known as Beels. The study area i.e. Goalpara district is located approximately 25° 33' to 26° 12' N latitude and 90° 7' to 91° 5' E longitude. Hasila Beel is located very near (about 1.70 km) to the Goalpara town of Goalpara District of Assam (26° 10' 28" N and 90° 36' 23" E). It is a riverine wetland and considered to be dynamic system in which living plants and animals not only interact but also influence the habitat profoundly. Urpada Beel lies between the latitude and longitude of 26° 05' 34.42" N and 90° 34' 08.31" E respectively. It is located about 9.15 km from the Goalpara town. This Beel is riverine in origin and covers an area of about 1000 hectare of land. The wetland has already been included in wetland directory (Scot, 1989) due to its aquatic avifaunal diversity. The sidli Beel is situated on the south bank of Brahmaputra River. The Beel is connected by a channel to another Beel i.e. the Seksekia Beel. On the ichthyological diversity of this Beel in which the local people's livelihood dependent. The maximum effective length of the Beel is about 2.0 km and the maximum width is 37.0 m (Saha S. & Bordoloi S. 2009). The Seksekia Beel is situated in the south bank of Brahmaputra River. The Seksekia Beel has two parts, the southern part is known as bigger Seksekia and the northern part is smaller Seksekia. The maximum length of the bigger Seksekia is about 0.5 km and maximum width is 38.0 m. The maximum length of the smaller Seksekia is about 0.75 km and the maximum width is 38.0 m (Saha S. & Bordoloi S. 2009). Kumri Beel It is situated about 7.9 km from the Goalpara town. It is one of

the popular tourist spot of Goalpara district due to presence of abundance biodiversity around the Beel as well as in the Beel.

MATERIALS AND METHODOLOGY

A thorough survey of the aqua-bodies of the study area was done and various data and information were collected by physical verification and interview with the local fishermen of the study area.

The fishes were sampled by following standard procedures using cast net, gill net, drag net, etc., of required dimensions and meshes (Jayaram, 1981, 1999, 2010; Dey, 1981; Kar, 2007) and were identified after standard literature and keys (Day, 1878, 1889; Menon, 1974, 1999; Jayaram, 1981, 1999; Sen, 1982; Sen, 1985; Vishwanath, 2000, 2002; Dey, 1973; Dutta Munshi and Srivastava, 1998; Talwar and Jhingran, 1991; Kar, 2007; Kara and Sen 2007).

RESULTS AND DISCUSSION

The field survey has been carried out from December 2014 to may 2015 in the five different Beels of Goalpara district of Assam, India. A total of 30 species under 26 genera, 15 families and 6 orders have been recorded from Hasila Beel (Table 1). Among them, fishes of the order Cypriniformes (40%) have been recorded as the most abundant, Beloniformes (3%) and Osteoglossiformes (3%) the least (fig.1). From the Urapad Beel, a total of 27 species under 21 genera, 13 families and 6 orders have been recorded during the study period (Table 1), among all the orders, Fishes of Order Perciformes (40%) have been found to be dominating over others (fig 2). Similarly, 26 species under 21 genera, 13 families and 5 orders have been recorded from Kumri Beel (table 1) and 29 species under 24 genera, 13 families and 5 orders have been recorded from Sidli Beel (Table 1). In both the wetlands, the fishes of the order Cypriniformes dominated over other orders (38% (fig 3) and 48% (fig 4) respectively) and fishes in the order Beloniformes is recorded as the least abundant. From the Seksekia Beel, a total of 31 species under 25 genera 15 families and 6 orders have been recorded during the study period from December 2014 to May 2015 (Table 1). Among all the fishes, maximum number has been recorded from the order Cypriniformes (39%) and least number of species (3%) have been recorded from the order Beloniformes and Osteoglossiformes (fig 5).

During my present study, from December 2014 to May 2015, a total of 37 species under 27 genera, 17 families (Notopteridae, Cyprinidae, Cobitidae, Channidae, Siluridae, Schilbeidae, Clariidae, Heteropneustidae, Belonidae, Mastacembelidae, Ambassidae, Badidae, Anabantidae, Nandidae, Osphronemidae, Bagridae, Gobiidae) and 6 orders (Osteoglossiformes, Cypriniformes, Siluriformes, Beloniformes, Synbranchiformes) have been recorded from the five different Wetlands in Goalpara district of Assam, India. The study indicates the Goalpara district of Assam is still rich in fish species biodiversity and need to have taken care of for the conservation of the fish species.

Table 1. Ichthyospecies diversity of the five different Beels in Goalpara district of Assam.

Sl No.	Name of fishes	Hasila beel	Urapad beel	Kumri beel	Sidli beel	Seksekia beel
1	<i>Notopterus notopterus</i>	P	P	P	A	P
2	<i>Amblypharyngodon mola</i>	P	A	P	P	P
3	<i>Cabdio morar</i>	P	A	A	P	A
4	<i>Cirrhinus mrigala</i>	P	P	P	P	P
5	<i>Cyprinus carpio</i>	A	P	A	P	P
6	<i>Labeo rohita</i>	P	P	P	P	P
7	<i>Labeo calbasu</i>	P	P	P	P	P
8	<i>Labeo gonius</i>	P	A	P	A	A
9	<i>Puntius chola</i>	A	P	A	P	P
10	<i>Puntius sarana</i>	P	P	P	P	P
11	<i>Puntius sophore</i>	P	P	P	P	P
12	<i>Rasbora daniconius</i>	P	P	P	P	P
13	<i>Botia rostrata</i>	P	A	A	P	P
14	<i>Lepidocephalichthys guntea</i>	P	A	A	P	P
15	<i>Channa gachua</i>	P	P	P	P	P

16	<i>Ompok pabda</i>	P	A	A	A	A
17	<i>Ailia coila</i>	A	A	P	P	P
18	<i>Clarias magur</i>	P	P	P	P	P
19	<i>Heteropneustes fossilis</i>	P	P	P	P	P
20	<i>Xenontodon canila</i>	P	P	A	P	P
21	<i>Macroganthus aral</i>	P	P	P	P	P
22	<i>Chanda nama</i>	P	P	P	P	P
23	<i>Parambassis ranga</i>	A	P	A	A	P
24	<i>Badis badis</i>	P	P	P	A	A
25	<i>Anabus testudineus</i>	P	P	P	P	P
26	<i>Channa punctatus</i>	P	P	P	P	P
27	<i>Channa marulius</i>	A	P	A	A	P
28	<i>Channa straita</i>	P	P	P	P	P
29	<i>Salmophasia bacaila</i>	P	A	P	P	A
30	<i>Mastacembalus armatus</i>	P	P	P	P	P
31	<i>Nandus nandus</i>	P	P	P	P	P
32	<i>Colisa fasciatus</i>	A	P	P	A	P
33	<i>Mystus tengara</i>	P	P	P	P	P
34	<i>Glossogobius giuris</i>	P	A	A	P	P
35	<i>Catla catla</i>	P	P	P	P	P
36	<i>Ompok bimaculatus</i>	P	A	A	A	A
37	<i>Macroganthus pancalus</i>	P	P	P	P	P

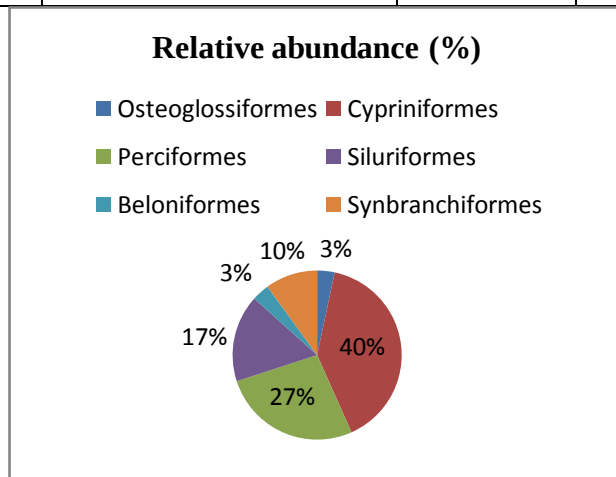


Fig.1.Distribution of fishes in Hasila Beel

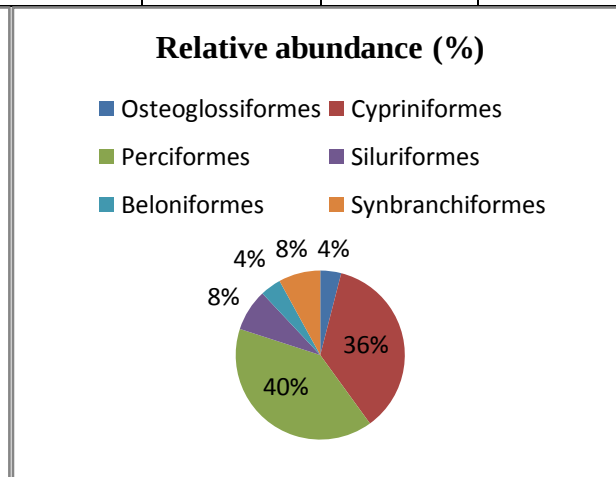


Fig.2.Distribution of fishes in Urpad Beel

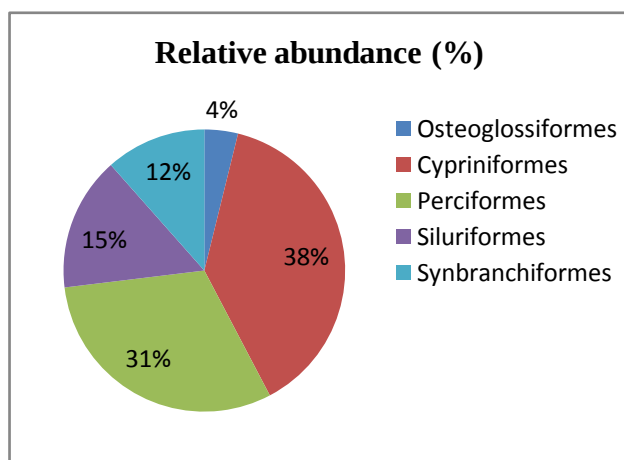


Fig.3.Distribution of fishes in Kumri Beel

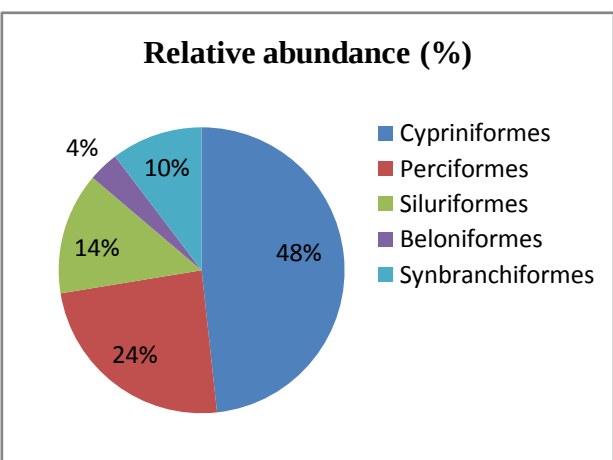


Fig.4.Distribution of fishes in Sidli Beel

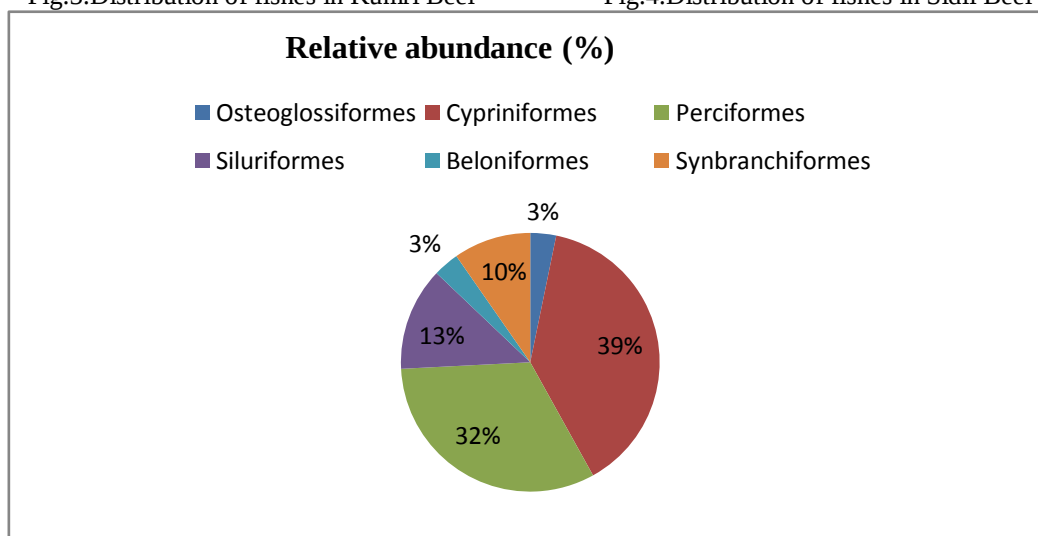
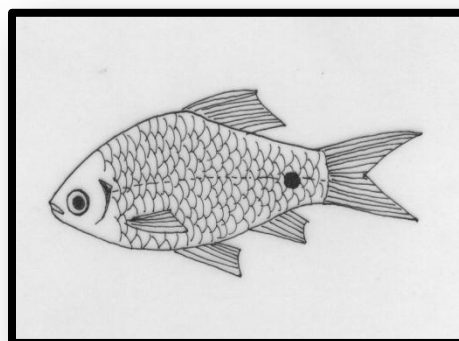


Fig.5. Order wise distribution of fishes in Seksekia Beel

PLATE 1. *Puntius ticto*

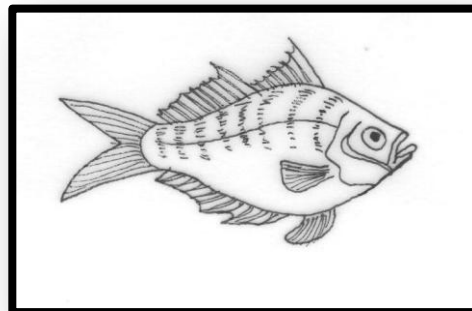
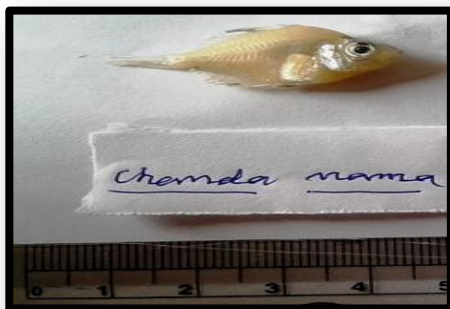
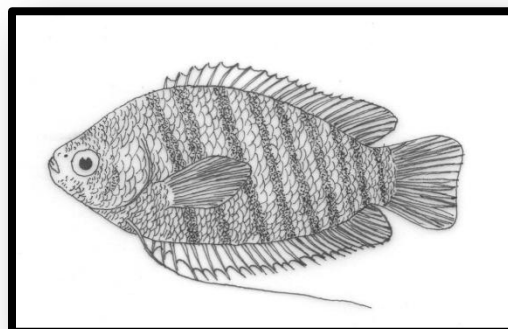
PLATE. 2. *Chanda nama*PLATE 3. *Trichogaster fasciata*PLATE 4. *Nandus nandus*PLATE.5. *Anabas testudineus*

PLATE 6. *Badis badis*

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