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ORIGINAL ARTICLE

Ichthyofaunal diversity of Keleghai river at Medinipur district in West Bengal

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ABSTRACT

During the study period we recorded 20 species of fish from 9 Order, 17 Families and 20 Genera. Among the collected species Order Perciformes is the most dominant group contributing 30%, Cypriniformes 15%, Siluriformes 25% and Clupeiformes, Cyprinidontiformes, Osteoglossiformes, Ophiocephaliformes, Mastacembeliformes and Synbranchiformes each with 5% of the total species. Order Siluriformes contributed 5 Families to the total species, followed by Perciformes 4, Cypriniformes 2 and Cyprinidondiformes, Clupeiformes, Osteoglossiformes, Mastacembeliformes and Synbranchiformes each with 1 Family. Among the Genera, 3 are from Cypriniformes, 6 are from Perciformes, 5 are from Siluriformes and 1 from Cyprinidontiformes, Clupeiformes, Osteoglossiformes, Mastacembeliformes, Ophiocephaliformes and Synbranchiformes.

INTRODUCTION

Fishes form the most diverse and protean group of vertebrates; fishes are a treasured source both in terms of utility as food and as material for scientific study. [1] Fish are often a key element in environmental planning [2] and they appear to be good indicators of the status of aquatic environments. [3] In addition to being an important, palatable food item for human consumption, they are part of aquatic food chain, nutrient cycling and ecosystem services. Fish also generate employment, function as a genetic library for possible future use in medicine and aquaculture, stimulate human interest in nature, and provide aesthetic and recreational values. Ichthyofaunal diversity refers to variety of fish species; depending on context and scale, it could refer to alleles or genotypes within piscian population, to species of life forms within a fish community, and to species of life forms across aquaregimes. Fish biodiversity of river essentially represents the fish faunal diversity and their abundance. River conserves a rich variety of fish species which support to the commercial fisheries.

There are many rivers in West Bengal, one of these is Keleghai. Keleghai River originates at Baminigram, near Dudhkundi, under Sankrail police station, in Jhargram subdivision of Paschim Medinipur district in the Indian state of West Bengal. It flows past Keshiari, Narayangarh, Sabang and Patashpur to join the Kasai at Tangrakhali under Mahisadal police station of Purba Medinipur district. Keleghai River is geographically coordinates are 22^0 12′ North & 87^0 66′ East. It is 121 kilometres (75 mi) long.

STUDY AREA

Table 1: Study site

Sl. No.	Name of the sampling site	Distance (Km)
1.	Kalidahachara	3.5
2.	Paschimbarh	
3	Shiulipur	4.0

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MATERIALS & METHOD

The periodical survey of the ichthyofauna of the Keleghai was conducted for a period of 5 months (from January 2015-May 2015). Data were collected from three regions of the Keleghai river namely Kalidahachara, Paschimbarh, Shiulipur. Information about the fishes were collected from the local fishermen also collected from local fish markets located on the banks of the river. Immediately photographs were taken for the identification of fishes. Fishes were preserved in the Dept. of Zoology, Raja N. L. Khan Women's College for future research.

RESULT

During the study period we recorded 20 species of fish from 9 orders, 17 Families and 20 Genera. Among the collected species Order Perciformes is the most dominant group contributing 30%, Cypriniformes 15%, Siluriformes 25% and Clupeiformes, Cyprinidontiformes, Osteoglossiformes, Ophiocephaliformes, Mastacembeliformes and Synbran-chiformes each with 5% , of the total species. Order Siluriformes contributed 5 Families to the total species, followed by Perciformes 4, Cypriniformes 2 and Cyprinidondiformes, Clupeiformes, Osteoglossiformes, Mastacembeliformes and Synbranchiformes each with 1 Family. Among the Genera, 3 are from Cypriniformes, 6 are from Perciformes, 5 are from Siluriformes and 1 from Cyprinidontiformes, Clupeiformes, Osteoglossiformes, Mastacembeliformes, Ophiocephaliformes and Synbranchiformes.

The results revealed that, 10 species are found abundant, 7 are moderately found, 3 are rarely found in the river. Among the fish recorded 18 species are food fish, 11 species are ornamental value and 2 species are use in aquaculture. According to the CAMP (Conservation Assessment and Management Plan) And IUCN Red List categories, 2 are Near Threatened (NT), 2 are Not Evaluated (NE), 2 are Data Deficient (DD) and 14 are Least Concern (LC) ,Vulnerable (VU) and Endangered (EN) species are absent.

CONCLUSION

The present investigation thus helps to understand the ichthyofaunal diversity in river Keleghai. The river is very rich in food fish than ornamental fish. The result of the

present study revealed that, river Keleghai is the resources of rich and diversified fish fauna. However, fish diversity of this river is in declining mode due to several anthropogenic threats. During the period of survey, different types of crafts and gears were observed. In order to conserve these valuable resources, a holistic approach, integrating the concept of sustainable development and conservation measures should be measured. Present study provides a comprehensive data on biodiversity, conservation status and the gene pool of unique ichthyofauna of this river.

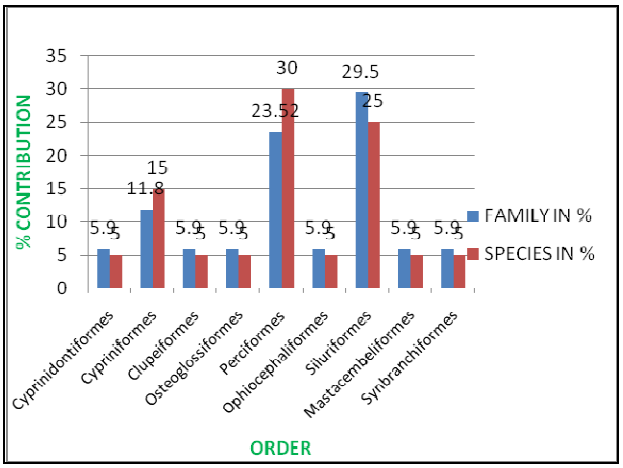

Fig 1: Percentage contribution of Family &Species under various Orders

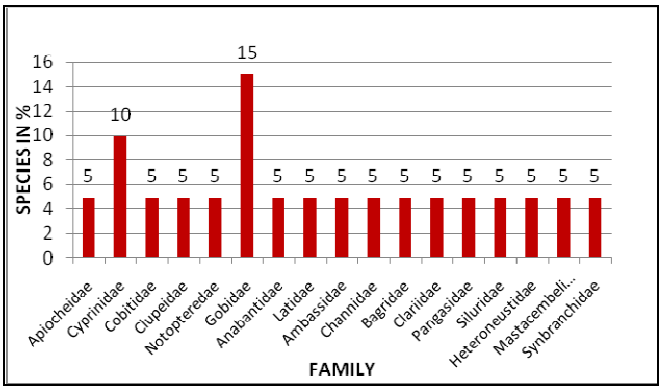

Fig 2: Percentage representation of a available species at Familly level in Keleghai river

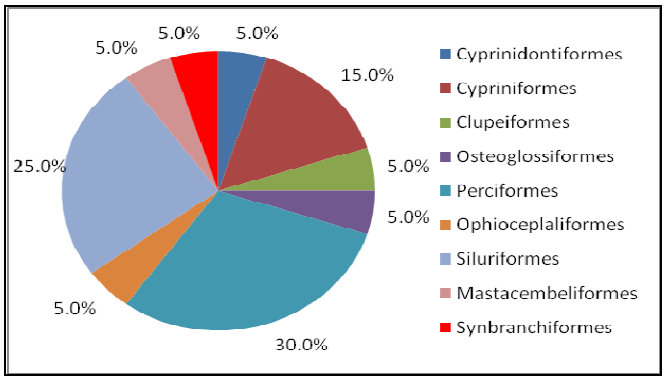

Fig 3 :Percentage representation of species at Order level in River Keleghai.

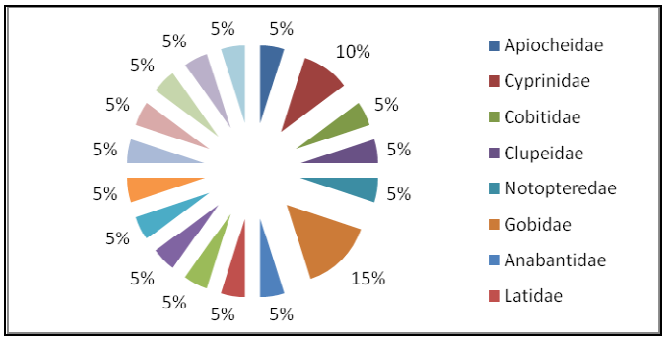

Fig 4: Percentage representation of species at family level in river Keleghai

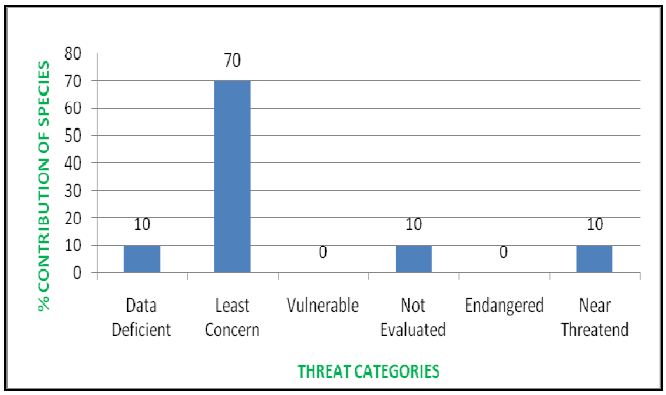

Fig 5: Percentage contribution of species under various Threat categories of CAMP & IUCN Red list.

Table 2: Fish species their Scientific name, Local name, Human use, Feeding habitat and Conservation status in Keleghai river.

Order	Familly	Sl. No.	*Scientific name*	Local name	IUCN	Human use	Feeding habitat
Cyprinidontiformes	Aplocheidae	1	*Aplocheilus panchax*	Kanapona	DD	Commercial	Herbivore
	Cyprinadae	2	*Salmostoma bacaila*	Chela	LC	Commercial	Herbivore
Cypriniformes		3	*Esomus danricus*	Darke	LC	Commercial	Herbivore
	Cobitidae	4	*Lepidosephalichthys guntea*	Guntey	LC	Commercial	Omnivore
Clupeiformes	Clupeidae	5	*Gudusia chapra*	Khaira	LC	Commercial	Herbivore
Osteoglossiformes	Notopteredae	6	*Nopterus notopterus*	Phulai	LC	Ornamental Aquaculture	Carnivore
		7	*Glossogobius giuris giuris*	Bele	LC	Ornamental Commercial	Omnivore
	Gobidae	8	*Pseudoapocryptes lanceolatus*	Chewa	LC	Commercial	Omnivore

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Order	Familly	Sl. No.	*Scientific name*	Local name	IUCN	Human use	Feeding habitat
Perciformes		9	*Odontamblyous rubicundus*	Lal cewa	LC	Commercial	Omnivore
	Anabantidae	10	*Anabus testudineus*	Koi	DD	Ornamental Commercial	Omnivore
	Latidae	11	*Lates calcarifer*	Bhetki	NE	Commercial	Carnivore
	Ambassidae	12	*Chanda ranga*	Chanda	NE	Ornamental Commercial	Omnivore
Ophiocephaliformes	Channidae	13	*Channa punctata*	Lata	LC	Ornamental Aquaculture	Carnivore
	Bagridae	14	*Mystus vittatus*	Tangra	LC	Ornamental Commercial	Carnivore
	Clariidae	15	*Clarias batracus*	Magur	LC	Ornamental Commercial	Carnivore
Siluriformes	Pangasidae	16	*Pangasius pangasius*	Pangus	LC	Ornamental Commercial	Carnivore
	Siluridae	17	*Wallago attu*	Boal	NT	Commercial	Carnivore
	Heteropneustidae	18	*Heteropneustes fossilis*	Singi	LC	Ornamental	Carnivore
		19	*Mastacembelus armatus armatus*	Pankal	NT	Commercial Ornamental	Omnivore
Mastacembeliformes	Mastacembelidae					Commercial	
Synbrachiformes	Synbranchidae	20	*Amphipnous cuchia*	Cuchia	LC	Commercial	Carnivore

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