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Fish Diversity of Bagh River, District Gondia, Maharashtra, India

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Abstract:

Fish diversity of BaghRiver in GondiaDistrictof Maharashtra, India was conducted to assess the fish fauna.The ichthyofaunal of a reservoir basically represents the fish faunal diversity.The present investigation deals with the Fish diversity in Bagh River, Gondia during the year January 2014 to December 2014. The results of present study reveal the occurrence of total 29 species were identified among those, 12 were of order Cypriniformes, 6 of Siluriformes, 04 of Ophiocephaliformes, 03 of Synbranchiformes, 02 of Perciformes, 01 each of Cyprinodontiformes and Clupeiformes.

Keywords: Bagh River, Fish diversity, Gondia district

Introduction:

The Districts of Bhandara and Gondia are in the North-Eastern extreme of Maharashtra State lies between 20° 39'and 21° 38' north latitudes and 79° 27' and 80° 42'east longitudes covering an area of 9280 sq. km. The Bhandara district lies entirely within the Wainganga basin. Three major tributaries of Wainganga-the Bagh, the Bawanthari and the Chulband drain the districts.The Wainganga and the Bagh are the main rivers, which drain along the valley and roughly divide the area into two parts.

Fishes are a precious source both as food and as material for scientific study (Marshell, 2000). Around the world approximately 22,000 species of fishes have been recorded out of which nearly 2,420 are found in India, of which, 930 live in freshwater and 1,570 are marine (Ubarhande *et al*, 2011).Economic importance and scope of fish and fisheries especially in Maharashtra, it is essential to study the distribution and the availability of fish from river, freshwater reservoirs and tanks (Shinde *et al*, 2009).Thus there is need to survey fish fauna associated with different fresh water habitats, which will help in planning methods for their production and effective exploitation. The freshwater ichthyofaunal diversity is changing and getting depleted fast as a result of the water pollution, destruction or degradation of habitat and invasion of exotic species (Revenga *et al*, 2005).

The present investigation was undertaken to study the fish diversity of BaghRiver. The objective of study was to give recent data regarding fish diversity of the Bagh River, aiming to contribute a better knowledge of the fish diversity and a tool for conservation planning of aquatic environments in this region.

Study Area

The Bagh River occupies the eastern part of the district. The Bagh River joins the Wainganga on its left bank as the later enters the in the Gondia district. The Bagh River flows at an average velocity of 18 km/hour, and has an overall length of about 166 Km.

Material and Method:

Fishes were collected from Bagh River Dist. Gondia (M.S) India with the help of local fishermen using different type of nets namely gill nets, cast nets, dragnets and bhor jal. Fishes were brought to laboratory and preserved in 10% formalin solution in separate specimen jars according to the size of species. Small fishes were directly placed in the 10% formalin solution. While large fishes were giving an incision in their abdomen and preserved. Species identification and confirmation were carrying out with the help of standard keys and books (Day, 1878, Jayaram, 1999 and Talwarand, 1991).

Result and Discussion:

During the study period different fish varieties can be observed in the Bagh River Dist. Gondia (M.S) India. Fishes belonging to 7 orders and 12 families were collected during the study period from January 2014 to December 2014. In the present fish biodiversity study 29 species of 12 families and 7 orders were recorded from the Bagh River during January 2014-December 2014. 7 orders representing by 29 fish species, order Cypriniformes was dominant group with 12 species in which *Labeo rohita, Catla catla, Cirrhinus mrigala, Cyprinus carpio, Puntius ticto, Rasbora daniconius* found most abundant. *Cirrhinus reba, Ctenopharyngodon idella* and *Nemacheilus botia* were found abundant form. *Chela phulo, Osteobrama cotio, Danio devario* are found less abundant.

Followed by order Siluriformes were species in which family Bagridae had 2 species in which *Rita rita* were found abundant. *Mystus seenghala* were found less abundant. Among family Siluridae had 2 species of which *Ompok pabda* and *Wallago attu* were found abundant. Family Clariidae had 1 species of which *Clarias gariepinus* was found more abundant. Family Heteropneustidae had 1 species i.e *Heteropneustes fossilis* was found more abundant. Followed by order Cyprinodontiformes had 1 species in which *Xenotodon cancila* of family Belonidae were found rare abundant. Followed by order Perciformes were 2 species in the assemblage composition in which *Nandus nandus* was found abundant while *Chandanama* were found rare abundant. Followed by order Clupeiformes were 1 species in the assemblage composition in which *Notopterus notopterus* were found less abundant. Among order Ophiocephaliformes were 4 species in the assemblage composition in which *Ophiocephalus marulius* and *Ophiocephalus orientalis* were found abundant form. *Ophiocephalus punctatus* and *Ophiocephalus striatus* were found rare abundant.

Followed by order Synbranchiformes were 3 species in the assemblage composition in which *Oreochromis mossambica* was found most abundant form. *Mastacembelus armatus* were found less abundant while *Mastacembelus aculeatus* was found rare abundant (Table 1).

Among the order Cypriniformes was most dominant constituting 36.66 % followed by order Siluriformes constituting 12.6 % Ophiocephaliformes constituting 9.4% Synbranchiformes constituting 4.3 % , Perciformes constituting 2.1 %, Cyprinodontiformes and Clupeiformes constituting 1% of the total fish species.

Table. 1- Ichthyofaunal biodiversity of Bagh River during January 2014- December 2014

Sr. No	Order	Family	Scientific Name	Common name
1	Cypriniformes	Cyprinidae	*Catla catla*	Catla
			Chela phulo	Minnow carp
			Cirrhinu mrigala	Mrigal
			Cirrhinus reba	Reba carp
			Ctenopharyngodon idella	Grass carp
			Cyprinus carpio	Common carp
			Danio devario	Sind danio
			Labeo rohita	Rohu
			Nemacheilus botia	Zipper loach
			Osteobrama cotio	Cotio
			Puntius ticto	Ticto
			Rasbora daniconius	Black line rasbor
2	Siluriformes	Bagridae	*Mystus seenghala*	Seenghala
			Rita rita	Rita
		Siluridae	*Ompok pabda*	Two stripe gulper catfish
			Wallago attu	Fresh water shark
		Clariidae	*Clarias gariepinus*	African mushi
		Heteropneustidae	*Heteropneustes fossilis*	Stinging catfish
3	Ophiocephaliformes	Ophiocephalidae	*Ophiocephalus marulius*	Bullseye snakeheaded
			Ophiocephalus orientalis	Walking snakeheaded
			Ophiocephalus punctatus	Spotted snake headed
			Ophiocephalus striatus	Striped snakehead
4	Synbranchiformes	Mastacembelidae	*Mastacembelus armatus*	Tire track eel
			Mastacembelus aculeatus	Spiny eel
		Cichlidae	*Oreochromis mossambica*	Tilapia
5	Perciformes	Nandidae	*Nandus nandus*	Mud perch
		Ambassidae	*Chanda nama*	Elongate glass-perchlet
6	Clupeiformes	Notopteridae	*Notopterus notopterus*	Bronze feather back
7	Cyprinodontiformes	Belonidae	*Xenentodoncancila*	Asian needlefish

Conclusion:

Fishing operations throughout year with so many different fish species catches in monsoon compared to post-monsoon and summer seasons. It is suggested that the fishery authorities should investigate and practice the proper management of fishery resources according to the ecological principle. It was concluded that further studies may be done to develop techniques for fish culturing. The use of illegal method to catch fishes should be banned in this area to prevent for the depletion of varieties of fishes. The fisherman's should make aware about fishing and scientific training methods which may help in high yield of fish production in the Bagh River.

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