

# Fish Biodiversity of Gomti River at Sultanpur District of U.P.

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**Abstract-** *An attempt has been made to study the fish fauna naturally occurring in the Gomti River at Sultanpur district of Uttar Pradesh. The survey was focussed mainly on fish biodiversity and undertaken during the year 2021. A total of 41 species of fishes belonging to 28 genera, 16 families and 8 orders were identified. Cyprinidae were found most dominant family represented by 10 species followed by Bagridae with 4 species, Ophiocephalidae with 3 species. Rest other families were represented by 2 or 1 species.*

**Indexed Terms-** *Fish diversity, Fish fauna, Gomti river,*

## I. INTRODUCTION

Rivers are vital and vulnerable freshwater ecosystem that are critical for the sustenance of all life. However, the declining quality of the water in these systems threatens their sustainability and is therefore a cause for concern. Rivers are waterways of strategic importance across the world, providing main water resources for domestic, industrial, and agricultural purposes. India is gifted with a river system comprising more than 20 major rivers with several tributaries and more than 50% of water resources of India are located in various tributaries of these river systems (Prakash, 2014).

The fisheries sector in India has third in the world in total fish production and contributes around 1.07 % of the country's GDP and 5.34% of the agricultural GDP. With the third position in fisheries, the country has high potential in this sector for rural development, nutritional security and employment generation (Prakash, 2021; Singh and Prakash, 2022). Uttar Pradesh, one of the largest states in India, has vast

potential of aquatic freshwater resources and offers a considerable scope of culture as well as capture fisheries development.

Prakash *et al.* (2015a, 2015b, 2015c), and Verma and Prakash (2016) studies the limnological parameters as well as biodiversity of fish fauna in the various lentic fresh water bodies of U.P. However, no attempt has been made so as far to explore the freshwater fish fauna of Gomti River of U.P. Therefore, the aim of the present study is to study the status of fish diversity of Gomti river at Sultanpur district of U.P.

## II. MATERIALS AND METHODS

Fishes were caught and collected for the present study from local freshwater bodies by hand-nets, gill nets, cast nets, hooks, drag nets with the help of local people and fisherman mainly during the time of fishing as well as also collected from local fish market. Investigations regarding fish capture and collection were conducted randomly throughout the year 2021.

Fishes were identified with the help of its shape, colour, the pattern of scales, fins, mouth pattern and other morphological characters and after following standard taxonomic keys for fishes (Day, 1889; Datta Munshi and Srivastava, 1988; Menon, 1992; Srivastava, 2002; and Jayaram, 2010).

## III. RESULTS AND DISCUSSION

During the study period, a total of 41 species of freshwater fishes belonging to 8 orders, 16 families and 28 genera were recorded from the Gomti River of Sultanpur district of U.P. The collected fish species including their order, family and zoological names are shown in the table given.

Table: Different fish species collected from Gomti River of Sultanpur district.

S.No.	Order	Family	Zoological name	
	Cypriniformes	Cyprinidae	<i>Catla catla</i>	
			<i>Labeo rohita</i>	
			<i>Labeo bata</i>	
			<i>Labeo dera</i>	
			<i>Cirrhinus mrigala</i>	
			<i>Cirrhinus reba</i>	
			<i>Amblypharyngodon mola</i>	
			<i>Tor tor</i>	
			<i>Barilius bendelisis</i>	
			<i>Puntius sophore</i>	
			<i>Puntius ticto</i>	
			<i>Puntius sarana</i>	
			<i>Rasbora daniconius</i>	
			<i>Danio devario</i>	
			<i>Oxygaster gora</i>	
	Siluriformes	Bagridae	<i>Mystus seenghala</i>	
			<i>Mystus tengara</i>	
			<i>Mystus vittatus</i>	
		<i>Rita rita</i>		
		Siluridae	<i>Wallago attu</i>	
			<i>Ompak pabda</i>	
			Sisoridae	<i>Bagarius bagarius</i>
			Clariidae	<i>Clarias batrachus</i>
		Saccobranchidae	<i>Heteropneustes fossilis</i>	
			Schilbeidae	<i>Ailia coila</i>
	Ophiocephaliformes		Ophiocephalidae	<i>Channa punctatus</i>
		<i>Channa marulius</i>		
		<i>Channa striatus</i>		
	Perciformes	Centropomidae	<i>Chanda nama</i>	
			<i>Chanda ranga</i>	
		Nandidae	<i>Nandus nandus</i>	
			<i>Badis badis</i>	
		Anabantidae	<i>Anabas testudeni</i>	
			<i>Colisa fasciatus</i>	
			Synbranchiformes	<i>Amphipnoidae</i>
	Clupeiformes	Notopteridae	<i>Notopterus notopterus</i>	
			<i>Notopterus chitala</i>	
		Clupeidae	<i>Gudusia chapra</i>	
	Beloniformes	Belonidae	<i>Xenentodon cancila</i>	
	Mastacembeliformes	Mastacembeleidae	<i>Mastacembelus armatus</i>	
			<i>Mastacembelus aculeatus</i>	

Fish fauna of the lake studied belong to 8 orders namely Cypriniformes, Siluriformes,

Ophiocephaliformes, Perciformes, Synbranchiformes, Clupeiformes, Beloniformes and

Mastacembeliformes, In present investigation Cyprinidae family was the most dominant group representing 15 species followed by Bagaridae family representing 4 species and then by Ophiocephalidae family representing 3 species and families. Families, Siluridae, Centropomidae, Nandidae, Anabantidae, Notopteridae and Mastacembeleidae were represented by 2 species each while rest families was represented by only one species. Present study is the first ever documentation of fish fauna of Gomti River of Sultanpur district of Uttar Pradesh. Though the Gomti River is affected by different anthropogenic. Therefore, there is an urgent need to understand the conservation priorities.

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