

FISH FAUNA OF GUGAL BRIDGE CUM BARRAGE ACROSS KRISHNA RIVER, DEODURGA TALUK, RAICHUR DISTRICT

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ABSTRACT

The present study includes survey of the fish fauna of Gugal Bridge cum Barrage, across the Krishna river, Deodurga taluk, Raichur district. The study was undertaken for a period of one year from October -2015 to October-2016. The results of present investigation reveal the occurrence of fifteen fish (15) species belonging to 5 orders. The order Cypriniformes was dominant with nine (7) followed by order Siluriformes (4) Channiformes (2), Mastacembelidae and Osteoglossiformes each with one species.

KEYWORDS: Fish Fauna, Krishna River

INTRODUCTION

Fish constitute more than a half of the total number of all other vertebrate in the world. Out of 64,000 vertebrates, 32,900 species of fish had been described by November 2014(Froese and Pauly, 2014). India has offered a large variety of water bodies and habitats to aquatic life. Its coastal marine waters, river systems, streams, different wetlands, lake and pond of different water quality, at different altitude have favored the development of a specie-rich fish fauna with a large variety of adaptations. Therefore, India is today a mega diverse in fish fauna and occupies 9th position in terms of fresh water biodiversity. There are about 2,546 species of fishes (about 11% of the world species) found in Indian waters. Central India harbors a wide variety of freshwater fishes in its diverse water resources such as streams, rivers, reservoir, sub-terrain aquatic ecosystems, traditional lake and domestic ponds (Owais Ahmad Wani, Uma Shankar Gupta, 2015).

Fishes form one of the most important groups of vertebrates, influencing its life in various ways. Millions of human beings suffer from hunger and malnutrition and fishes form a rich source of food and provide a meal to tide over the nutritional difficulties of man.

Due to these multiple uses of fisheries resources, fishing has become a major industry and a large number of these aquatic communities are under a big threat of extinction. In addition, human alternation of many of the fish habitats (e.g., conversion of wetlands for cultivation natural tanks for irrigation for land filling, rivers for dams and hydroelectric power) has also lead to the disappearance. There is an urgent need to understand this alarming situation and try to provide mitigation measures, in order to prevent the possible loss of the groups of organisms (Vijaylaxmi, 2010).

In present study, an attempt has been made to highlight the fish fauna of Gugal Bridge cum barrage across Krishna River. The work will provide future strategies for development of fish species conservation.

MATERIALS AND METHODS

Study Area

Gugal sometimes spelled as Google, Gugal is a village in the Devadurga taluk of Raichur district in Karnataka state, India. Gugal is located on the banks of Krishna River. Gugal is famous for its cave temple dedicated to Sri Allama Prabhu. Legend has it that Gugal derives its name from kooguva kallu (singing stone), rocks that produce sound when river water strikes them. (Google search-2017) Gugal is 50 km from district headquarters Raichur, and lies in Northwest direction ($16^{\circ}28'30''N$ $77^{\circ}8'39''E$) (Fig-1 & 2).

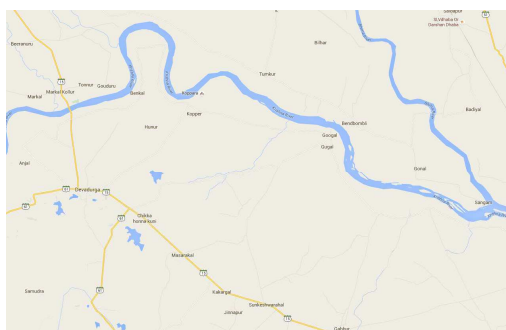


Figure 1 and 2: Bird Eye View of Gugal Birdge Cum Barrage

Sampling

The present work is an attempt to study fish fauna of Gugal Bridge cum barrage across Krishna River. Fishes were collected from different selected localities with the help of local fisherman using different types of nets namely gill nets, cast nets and dragnets. Immediately photographs were taken prior of preservation with 10% formalin, since formalin decolorizes the fish colour on long preservation. Fishes brought to the laboratory were fixed in formalin solution in separate jars according to the size of species small fishes were directly placed in formalin solution, while larger fishes were given an incision on the abdomen before they were fixed. The fishes collected and fixed were labeled giving serial number, exact locality from where collected. The common local name of fish used in this region was labeled in each jar containing the fish. Identifications were done based on keys of fishes of the Indian subcontinent (Day, 1958, Jayram, 1981, 1999, Talwar and Jhingran, 1991). Classification was carried out on lines of Day (1889), Nelson (1976) and Jayaram (1981). The identification of the species was done mainly on the basis of the colour pattern, specific spots or marks on the surface of the body shape of the body structure of various fins etc.

RESULTS AND DISCUSSIONS

The results of present investigation confirmed the occurrence of 15 fifteen fish species in Gugal Bridge cum barrage during Oct 2015 to Oct 2016. The fish species found in the river are of **Order Siluriformes** family Bagridae with (1) species, *Mystus gulio*, family Schilbeidae with (3) species *Ompok pabda*, *Ompok bimaculatus*, *Wallago attu*, **Order Channiformes** family channidae with (2) *Channa striatus*, *Channa punctata* species, **Order Mastacembeliformes** family Mastacembelidae with (1) species *Mastacembelus armatus* followed by **Order Cypriniformes** Cyprinidae family with (7) species *Cirrhinus reba*, *Cirrhinus mrigala*, *Labeo rohita*, *Labeo boggat*, *Catla Catla*, *Puntius sophore*, *Amblypharyngodona mola*, **Order Osteoglossiformes**, Notopteridae with (1) species *Notopterus notopterus* were found during sampling. The results of present investigation confirmed the occurrence 15 (fifteen) species belongs to 5 orders, Cypriniformes order was dominant with 7 (seven) species, followed by Siluriformes with 4 (four) species, Order Channiformes with (1) species, followed by order Mastacembeliformes and Osteoglossiformes with 1 (one) species each (Table 1).

Table 1: Showing Fish Fauna of Gugal Bridge Cum Barrage Krishna River, Raichur District

S. No 1	Order	Cypriniformes
	Family	Cyprinidae
	Species	<i>Cirrhinus reba</i> <i>Cirrhinus mrigala</i> <i>Labeo rohita</i> <i>Labeo boggat</i> <i>Puntius sophore</i> <i>Catla catla</i> <i>Amblypharyngodona mola</i>
2	Order	Siluriformes
	Family	Bagridae
	Species	<i>Mystus gulio</i>
	Family	Siuridae
3	Species	<i>Ompok bimaculatus</i> <i>Ompok pabda</i> <i>Wallago attu</i>
	Order	Channiformes
4	Family	Channidae
	Species	<i>Channa striata</i> <i>Channa punctata</i>
	ORDER	MASTACEMBELIFORMES
5	Family	Mastacembelidae
	Species	<i>Mastacembelus armatus</i>
	ORDER	OSTEOGLOSIFORMES
5	Family	Notopteridae
	Species	<i>Notopterus notopterus</i>

CONCLUSIONS

The present study largely focused on fish species richness of Gugal Bridge cum barrage. Due to multiple uses of fisheries resources, fishing has become a major industry and a large number of these aquatic communities are under a big threat of extinction.

Habitat loss and environmental degradation has seriously affected the fish fauna. Knowledge of available resources and the biological characters of species serve the base line information for further studies on resources conservation and maintenance.

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