

## RESEARCH ARTICLE

### THE STUDY OF FISH DIVERSITY OF WYRA RESERVOIR KHAMMAM DISTRICT, TELANGANA, INDIA

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#### ABSTRACT

The fish fauna of Wyra reservoir collected for the present study .the results of present study confirmed the occurrence of 26 species of fishes belonging to 21 genera, 11families and 7 orders. The order Cypriniformes was dominant with 8 species followed by order Perciformes were represented with 5 species and Siluriformes with 4 species, Channiformes with 3 species, Beloniformes with 2 species, synbranchiformes (2 species) and Osteoglossiformes, Mogiliformes was represented with one species each. Thus the reservoir was good potential for fish fauna.

**Key Words:** Fish Fauna, Wyra Reservoir, Fresh Water and Genera

#### INTRODUCTION

Aquaculture has acquired a special significance not only because of its contribution to food recourses but also from the point of view of its contribution to quality diet. Fish is an aquatic animal respire with gills and swims with the help of fins, and constitute a well defined and highly successful taxonomic group of vertebrates there are total of about 24,600existing species of fishes (Groombridge, 1992) out of which 41.2% inhabit the fresh water and remaining are in marine water. Water can also be cultivated to produce rich protein food. As described by Lone (1988) aquaculture is an underwater agriculture. "The fish as food for mankind" as the fish is an important component in the diet. The per capita food consumption of fish alone being 3.5kg. An old proverb recognize the food and nutritional value of fish "give a man a fish, he will live for a day, teach him to culture fish and he will have food for life" fish contains the cheapest animal protein and vitamin A and D. The Phosphorus and other elements present in it give good taste and are easily digestible hence; it is generally described as "poor man's food" in holy book Quran the reference of fish is seen at six places. Fishes of the inland water bodies of the Indian subcontinent have been a subject of study since last century, Hamilton and Buchanan (1822), Day (1878), Misra (1962), Jayaram (1981), Talwar and Jhingran (1991); Rao *et al.* (1999). Thus there is a need of knowing fish fauna of freshwater habitat which will help in planning scientific methods for their effective Exploitation for fish production.

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The basic objective of the present study is made to Document the fish fauna of Wyra reservoir in Khammam district, as there is no earlier study on the fish fauna of this reservoir; this is being the first attempt. The main scope of this lake is Irrigation, drinking water, recreation and fishing purpose.

#### MATERIALS AND METHODS

##### Study area

To evaluate the check list of fresh water fishes of the Wyra reservoir in Khammam district, Telangana, India, which lies between North latitude 17° 11 and East longitude 80° 22 covering the total catchment area of 19.14 sq.km. The climatic conditions of the study area include hot summer, cool winter and rainy season. This particular region gets most of its rainfall from south west monsoon. During the study period highest rainfall was observed in the month of June. The average rainfall of this study area is 793.06mm. The reservoir water is used for drinking, agriculture, boating (recreation) and supports fish culture.

##### Collection of fish sample

The fishes were collected from the Wyra reservoir from different stations during the year January 2010 to December 2011with the help of fishermen and examined for color pattern, preserved in 10% Formaldehyde and were identified by following the key given by , Lagler (1956), Datta Munshi and Srivastava (1968),

## RESULTS AND DISCUSSION

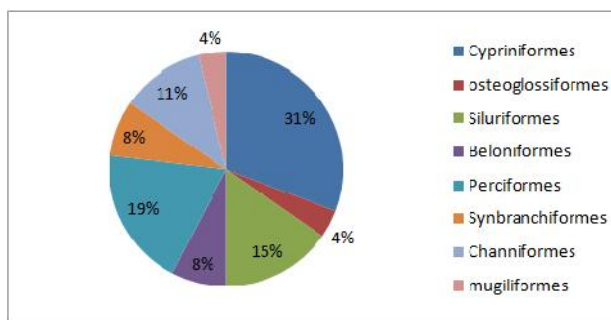
The Inventory of fish fauna collected from the Wyra reservoir, their population status, IUCN status, Camp status are presented in Table 1 A total of 26 species of fishes belonging to 21 genera, 11 families and 7 orders. The order Cypriniformes was dominant with (8 species) followed by order Perciformes were represented with (5 species) and Siluriformes with (4 species), Channiformes with (3 species), Beloniforme with (2 species), and synbranchiformes (2 species), Osteoglossiformes, Mogiliformes was represented by one species each.

The order wise percentage of fishes orders are presented in Figure 1. *Cypriniformes* 31%, *Perciformes* 19%, *Siluriformes* 15%, *Channiformes* 11%, *Beloniformes* 8%, *synbranchiformes* 8%, *Osteoglossiformes* 4% and *Mogiliformes* 4%. Seasonal dynamics of the fish population showed highest value of diversity during rainy season and lowest values during summer and winter seasons. Poor attention has been paid towards Wyra reservoir regarding systematic investigation on diversity of fish fauna. So it is felt that there is a need to generate information on diversity of Fish fauna of this reservoir.

**Table 1. Showing Fish Fauna of Wyra Reservoir, Khammam District**

Order and Family	Species	Common name	Local name	Population Status	IUCN Status	CAMP Status
Cpriniformes	1.Salmastoma bacaila (Hamilton)	Large razor belly minnow	Chandamama	A	LC	DD
	2.Chela laubuca (Hamilton)	Indian glass barb/Indian hatchet fish	Chal	C	LC	LRlc
	3.Parluciosoma daniconis (Hamilton)	Black line rosborra	Chinnaparaka	C	LC	DD
	4.Osteobramavigorsii(Hamilton)	Deccancotio/Bheemaosteobrama	koonaa	R	EN	NA
	5.Puntios sphore (Hamilton)	Stigma barb/soft fin barb	Buddaparaka	A	LC	LRnt
	6.Puntios ticto(Hamilton)	Tictobarb	Paraka	A	LC	LRnt
	7. <i>Catlacattla</i> (Hamilton-Buchanan )	Catla	botcha	C	LC	LRnt
	8. <i>Labeorohita</i> (Hamilton-Buchanan	Rohu	Ravvu	C	LC	LRnt
Osteoglossiformes	9. <i>Notopterusnotopterus</i> (Pallas)	Feather back	Vellenka	C	LC	LRnt
Notopteridae	10. <i>Mystusvittatus</i> (Bloch)	Stripped dwarf cat fish	Natta jella	A	LC	VU
Siluriformes	11. <i>Mystuscavasius</i> (Hamilton)	Gangiticmystus/dwar	Kodijella	A	LC	LRnt
	12.Aorichthyes seenghala(skyes)	Seperataseenaghala	Gangajella	A	LC	DD
Bagridae	13Wallagoattu (Schneider)	Boal/freshwatershark	Waaluga	C	NT	LRnt
Siluridae	14.Xenotodon concila(Hamilton)	Fresh water garfish	Kongamuthichapa	C	LC	LRnt
Beloniformes	15.Polyacanthus faciatus(Schneider)	Giant gourami	Jella	C	LC	LRnt
Belonidae	16.Macrognathuspunculus (Bloch)	Lesser spiny eel	ChinniPapera	A	LC	LRnt
Belonitidae	17.Mastacebelus armatus (Lacepede/Hamilton)	spiny eel	Papera	A	LC	VU
Synbranchiformes	18.Chandanama(Hamilton)	Elongate glassperchlet	Siravara	C	LC	NE
Mastacembelidae	19Pseudambassis ranga(Hamilton)	Indian glassy fish	Podugusiravara	M	LC	NE
Perciformes	20.Etrophlus suratensis (Bloch)	Green chromid	Pamplet	C	LC	NE
Ambassidae/Chandidae	21.Etrophlusmaculatus (Bloch)	Omagechromid	Pandiparaka	M	LC	NE
Cichlidae	22.Glossgobius giuris(Hamilton)	Tankgobi	Uskedonthi	C	LC	DD
Gobidae	23.Rhinomugil corsula(Hamilton)	Corsula mullet	Meedhikandalachapa	C	LC	NE
Mogiliformes	24.Channapunctatus (Bloch)	Spotted snake head	Motta pilla	C	LC	LRnt
Mugilidae	25.Channastritatus (Bloch)	Banded snake head	Bomme	C	LC	LRnt
Channi forms	26.Channaorientalis(Bloch)	Walking snake head	Malapankiri	C	NE	VU

A-Abundant (76-100% of the total catch), C- Common (51-75% of the total catch), M-Moderate (26-50% of the total catch), R- Rare (1-25% of the total catch),EN-Endangered, VU-Vulnerable LRnt- Lower risk near threatened, LRLc-Lower risk least concern, LC-Least concern, DD-Data Deficient, NE-Not Evaluated and NT-Near Threatened.



**Figure 1. Order- wise percentage composition of fishes in study area**

The present investigation was under taken to prepare check list of fishes from Wyra reservoir and it is the first effort in this direction. The survey of fish fauna has been done by number of workers. Sugunan and Yadava (1992) mentioned 40 fish species from Hirakhud reservoir of Orissa which plays a major role in commercial fishery. Sakhare (2001) reported the presence of 23 fish species belonging to 7 orders in Jawalgon reservoir in Solapur district of Maharashtra. Singh (2001) estimated a total of 27 fish species belonging to six families in Pong reservoir of Himachal Pradesh. Gopinath and Jayakrishan (1984) reported 17 species of fishes from Idukki reservoir of Kerala. Pisca *et al.*, (2000) identified a genera fish belonging to four orders and 28 species from Ibrahim bagh reservoir of Hyderabad. Sakhare and Joshi, (2002) noticed 28 fish species. Paik Tapaskumar *et al.*, (2003) showed 75 species of fishes belonging to 50 genera, 23 families and six orders in Subarnarekha River in Singbhum district of Jharkhand India. Salasker and Yeergi, (2004) observed 10 main fish species from Powai lake, Mumbai in Maharashtra. In this present investigation altogether 26 fish species belonging to 21 genera, 11 families and 7 orders have been identified in two years study (January 2010-December 2011) in Wyra reservoir of Khammam district.

### Conclusion

The present study shows more diversity of fish fauna in Wyra reservoir so that it is expected that the reservoir can be considered to be in good condition for fish production. As per the condition of diversity of fishes in this reservoir is concerned there is an urgent need to create awareness among local people, fisher man communities and the government organizations on the importance of the Wyra reservoir habitat and its fish fauna and the need to conserve them for future generations.

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