

Survey of Sadar Bazaar Fish Market of Munger District, Bihar

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Introduction

This world is comprised of variety of organisms depending on each other for food and habitat. This dependency leads to formation of a very complex network known as food web. Only plants and some bacteria are able to synthesise their own food. The omnivore, human beings are dependent on plants and animals for their need of food. Fishes are the cheapest source of protein, which are easily affordable and digestible. They are also rich in unsaturated fatty acids which have very beneficial effects for humans. This quality is leading to more and more consumption, culture and demand of fishes. Munger district of Bihar has vast potential of aquatic resources and offers considerable scope for inland fisheries development and aquaculture. Aquatic resources are available in the form of 45 km of Ganga River, 165 ha of dams, and 2000 ha of tanks, ponds and dams. Total number of tanks, ponds and dams are 705 out of which 205 are government ponds and 500 are private ponds. The total fish production from all resources in the district is 9.1 thousand tonnes against the demand of 10.0 thousand tonnes (2018-19) (Source-DFO, Munger).

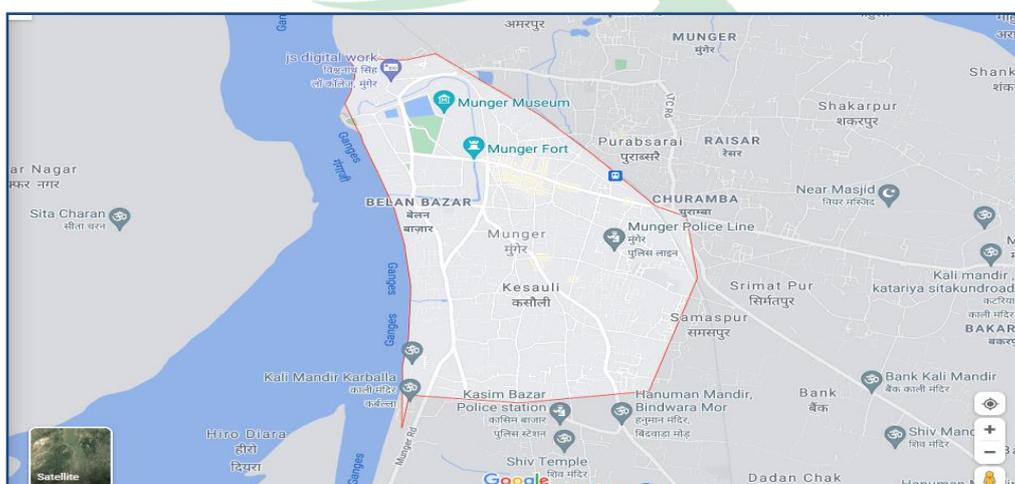


Figure 1. Map of Munger District

Fish market survey

The data were collected with the help of local fishermen's, fish farmers and vendors. The fish in the market comes from ponds, lakes, river (Ganga). Ganga is the main river from capture fishery point of view in the district. The fish market survey has been done to collect the information during the month of December and the data regarding fish species available and their prices near Sadar bazaar fish market were collected.

Fish species present in market

The freshwater fisheries resources of Munger district consisted exclusively of culture fishery from seasonal, perennial and culture ponds and capture fishery from rivers and lakes. During present study, total 22 species, belonging to 17 genera, 10 family and 4 orders were identified. Analysis of data showed that Order Cypriniformes (10 species) contributed maximum as compared to Siluriformes (8 species). Perciformes shared 3 species while osteoglossiformes shared 1 species.

Order Cypriniformes present abundantly with 45% (Fig. 3) and the Family Cyprinidae comprised *Aristichthys nobilis*, *Catla catla*, *Cirrhinus mrigala*, *C. reba*, *Ctenopharyngodon idella*, *L. bata*, *L. calbasu*, *L. rohita*, and *Puntius sarana*. Order Siluriformes contributed 8 species (36%). Among Siluriformes, Family Bagridae contributed 9% of total fish species followed by Schilbeidae 9%, Clariidae 4%, Siluridae 4%, Heteropneustidae 5% and Pangasiidae 5% while Perciformes contributed 3 species (14%). Among Perciformes, only Channidae family is present. In the culture ponds, *Labeo rohita*, *Catla catla*, *Cirrhinus mrigala*, *Ctenopharyngodon idella*, *Hypophthalmichthys molitrix* and *Cyprinus carpio* were very common species in the district. In the rivers and ponds, Indian major carps and catfishes was also recorded frequently.

Table 1: Available fishes in the fish market

Order	Family	Scientific name	Local/common name
Osteoglossiformes	Notopteridae	<i>Chitala chitala</i>	Moi/ knifefish
Cypriniformes	Cyprinidae	<i>Catla catla</i>	Catla
		<i>Cirrhinus mrigala</i>	Naini/ Mrigal

		<i>Cirrhina reba</i>	Reba
		<i>Ctenopharyngodon Idella</i>	Grass carp
		<i>Cyprinus carpio</i>	Common carp
		<i>Hypophthalmichthys molitrix</i>	Silver carp
		<i>Labeo bata</i>	Bata
		<i>Labeo calbasu</i>	Kalmansh
		<i>Labeo rohita</i>	Rohu
		<i>Puntius sarana</i>	Barb/ Olive barb
		<i>Aristichthys nobilis</i>	Wicket/Bighead
Siluriformes	Bagridae	<i>Mystus tengra</i>	Tengara
		<i>Mystus vittatus</i>	Striped dwarf catfish
	Siluridae	<i>Wallago attu</i>	Pahin/ Wallago
	Schilbeidae	<i>Ailia coilia</i>	Patasi
		<i>Silonia silondia</i>	Siland
	Clariidae	<i>Clarias batrachus</i>	Mangur
	Heteropneustidae	<i>Heteropneustes fossilis</i>	Singhi
Pangasiidae	<i>Pangasius pangasius</i>	Pangas/ silan	
Perciformes	Channidae	<i>Channa marulius</i>	Sauri
		<i>Channa striatus</i>	Sauri
		<i>Channa punctatus</i>	Sauri

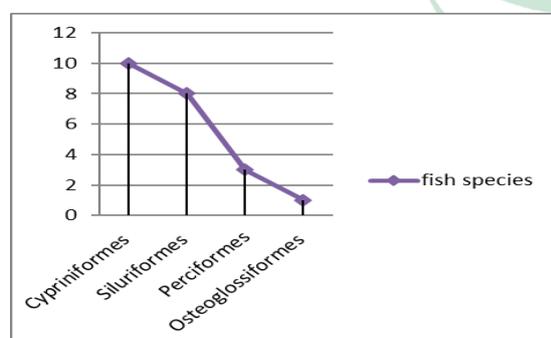


Fig. 2: Order-wise distribution of fish species

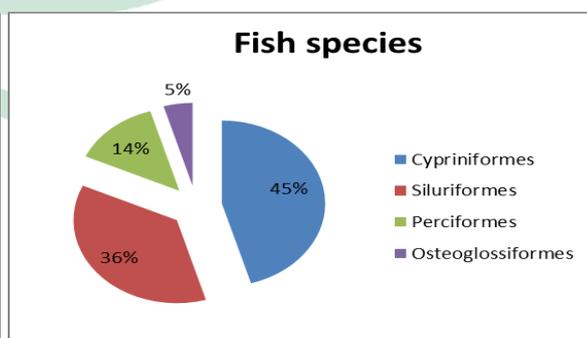


Fig. 3: Diagrammatic representation of percentage contribution in each Order

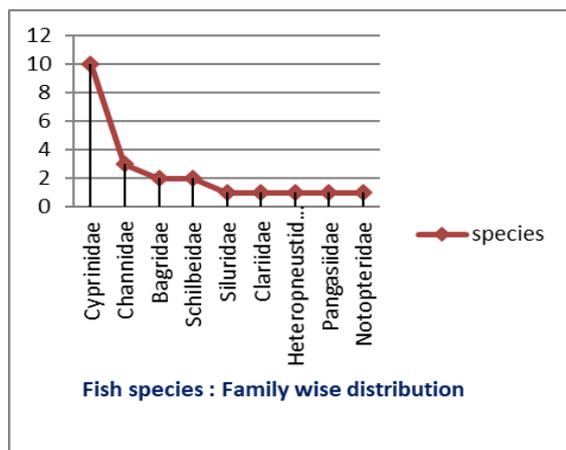


Fig. 4: Diagrammatic representation of the % number of species occurring in each Family

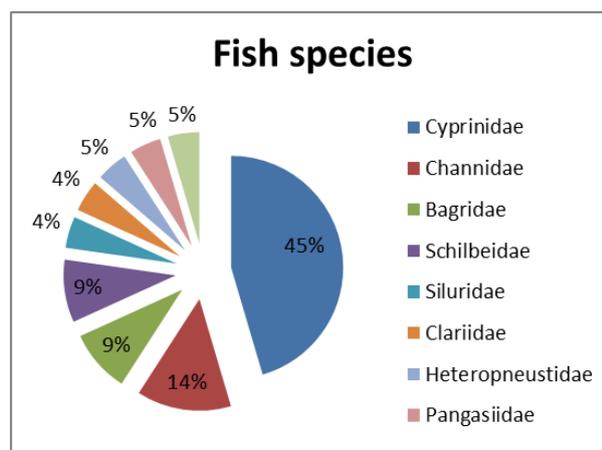


Fig. 5: Diagrammatic representation of the contribution in each Family

Fish price and availability

The fish price data was collected from 25-30 fish venders. Analysis of the data showed that Notopterus sp. has higher price (350 Rs./kg) among all followed by Catla (300 Rs./kg) and Rohu (250 Rs./kg). Pangas species price came out to be pocket friendly (170-180 Rs./kg) among all. But Rohu is the most preferable species followed by Catla. The major availability of fish in the fish market comes from the Ganga River followed by culture fish ponds. A few portions are also come from other states like Andhra Pradesh.

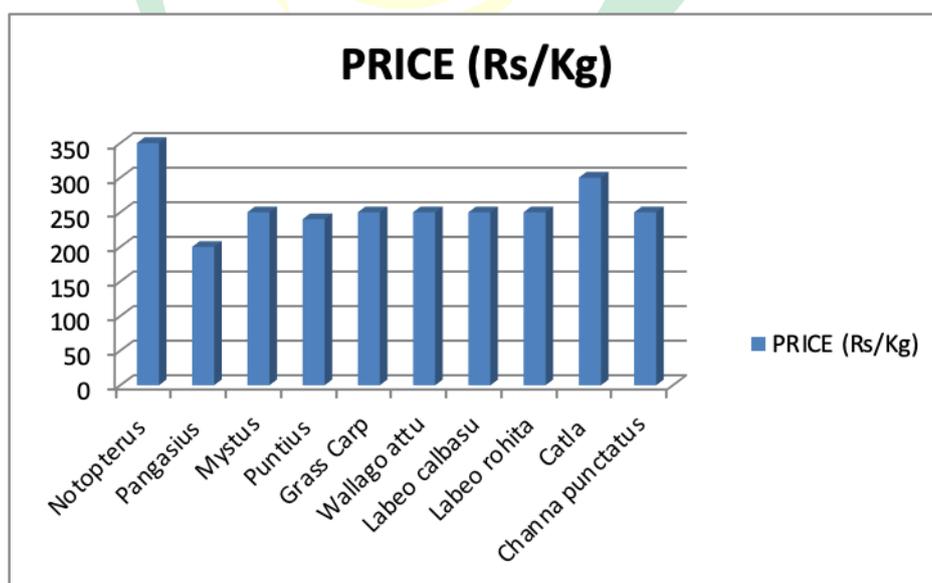


Fig. 6: Diagrammatic representation of prices of different fish species.

Conclusion

This article provides information about various fish faunas and their prices available in the fish market of district Munger. This district has a resources and potential for fish culture. Fish production must be increased to meet the demand for fish consumption. Cyprinidae family fishes are the major demand of fish-eating population. Rohu is one of the most consumed fish in this area along with Catla. The people prefer to consume the fresh fish rather than stored-iced one. Most of the farmers are marginal and have agriculture as a support for income. The women however are not much participating in the business and hence it should be promoted more in the district.

